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Izet Masic

Biographical Lexicon of Medical Informatics

BIOGRAPHICAL
LEXICON
OF MEDICAL
INFORMATICS

AVICENA
SARAJEVO

IZET MASIC

THIRD EDITION

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PREFACE

DICTIONARY

Dictionary indicates the totality of words and assemblies word (expression) of a language or system (e.g. dictionary of Bosnian language, medical dictionary, dictionary of laboratory medicine), but also a physical track in which the words are collected and stored together with a description of their use, origin, meaning, and sometimes pronunciation. The words in dictionaries generally are ordered in alphabetical order for the easier possibility of their finding.

Dictionaries are issued in the form of a books or booklets, but now increasingly as machine-readable records to electronic information carriers, such as medical dictionaries on diskettes and compact discs, dictionaries associated with word processing programs, dictionaries on the Internet etc.

Published dictionaries are sometimes called glossaries because they are primarily expected interpretation of concepts (semantics), not syntax words of the system.

Records that are structurally similar to dictionaries are **lexicons and encyclopedias**. Lexicons are generally more extensive, with a detailed review of the terms of dictionaries, encyclopedias until called works that give an overview of the total knowledge areas covered. Due to the speed of progress of medical science, medical encyclopedias today very quickly become obsolete because of the time needed to prepare a comprehensive encyclopedic edition so that the record already in the time of issue does not contain a significant number of new medical facts. In contrast, the electronic editions of encyclopedia in smaller scale are becoming more popular due to the use of multimedia, i.e. the comparative data display text, stationary and moving images (movies) and sound. Such issues still are primarily intended for the popularization of science, and have greater professional and scientific value.

LEXICON

Lexicon (Greek) represents lexicographical book or dictionary of subjects that provides an overview of the total, general knowledge (general lexicon) or review of the knowledge from a certain profession (professional lexicon). Sometimes the word has the same meaning as encyclopedic dictionary, and sometimes for the dictionary. It processes units (keywords) from the standpoint outside of the language vocational, technical, cultural, historical and similar content.

The name derives from one such book, Lexicon totius latinitatis by Egidio Forcellinia from 1711. Keywords in the lexicon are listed in the alphabetical or methodical order and briefly processed in a number of short articles that present and interpret concepts, famous people and geographical names, historical events, scientific and professional terms, foreign words or collection of words from a certain language..

CONVERSATIONAL LEXICON

Type of lexicographical manual that attempts to draw from vast amount of available knowledge list the knowledge that best suits the needs of modern man and as wide as possible range of users.

General lexicon deals with nouns (names of people, geographic names and other names), terms and concepts from many professions and a certain number of foreign words, which particular source language take from foreign languages, as well as many historical events, political, religious, ideological, social and artistic directions.

General lexicon was developed from the outdated notion conversational lexicon, which was originally brought the knowledge from all areas necessary for the successful conduct of the talks.

Conversational lexicon was developed in the nineteenth century in Germany to meet the needs of the urban population for knowledge. First German manual was Real State and Newspaper Lexicon (Germ. Reales Staats und Zeitungs Lexicon) by Johann Hübner published in 1704 and was based on a lexicographic manuals from the Age of Enlightenment. Renatus Gotthelf Löbel with his work Conversational Lexicon with special reference to modern times (Germ. Conversations-Lexikon mit vorzüglicher Rücksicht auf die gegenwärtigen Zeiten, I-VI, 1796-1808) paves the way for the creation of the modern lexicon. Modern conversational lexicon finished taking shape thanks to Brockhaus releases, but also more recent German manuals such as Meyer's (since 1840), Herder's (since 1854), Bertelsmann0s (since 1953). Over time, large lexicons grew into manuals with more than twenty volumes and which are now regarded as encyclopedias.

BIOGRAPHICAL LEXICON

Biographical lexicon is a collection of biographies of selected individuals, usually listed in alphabetical order, which seeks to give a rounded view of the given period, geographical area or certain communities with which individuals are linked. Biographical lexicons can be national or international, general or professional and special (for specific occupations); retrospective (limited to the dead) or flow (limited to a live person). Bibliographic lexicons (Bio-bibliography) besides biographies also include literature of listed persons. Very few bibluiographic lexicons were published in a lot of scientific areas in several countries in the world during 19th century. Only in Germany in 19th century printed more than 10 medical editions called "Zentralblatt". Femous German's gynecologists Heinrich Fritsch (1844-1915) and Hermann Fehling (1847-1925) in the year 1877 started with publishing Zentralblatt fur Gynekologie, two years before John Show Billings estab-

lished femous Index Medicus. But, their biographies and names of other scientists who worked in writing important bibliographic lexicons are not included in this lexicon.

OTHER TYPES OF LEXICONS

According to the coverage of material the lexicon can be national or international lexicon. National lexicon process entries from cultural-historical, social, scientific and sociological aspects essential for national cultural identity of individual countries in the world. Technical and vocational lexicons are limited to a narrow area (profession, a special technique). Thus we distinguish between legal, sports, marine, medical, mythological, movie, music, philosophy, agriculture, forestry, economic, mathematical, chemical, as well as mechanical engineering, shipbuilding, electrical, construction and other examples of technical dictionaries. In addition to encyclopedic (real) data related to terms (words) and the names lexicon can partially (e.g. only terminology) or provide detailed display also lexicographical or lexis of the given language and then it is a case of encyclopedic dictionary.

BIOGRAPHICAL LEXICON OF MEDICAL INFORMATICS

The idea to start preparing the first edition of the book "Biographical Lexicon of Medical Informatics" was born in the summer of 2014 when I was preparing the book "Contributions to the History of Medical Informatics" which is printed in August 2014 and promoted during the 25th Congress of Medical Informatics – MIE 2014, held in Istanbul in August 2014. When writing the Chapter "The Most Influential Scientists in the Development of Medical Informatics" I managed, by my own choice, to collect resumes–the most significant scientific and environmental activities of the 50 most cited scientists, researchers and experts in Medical Informatics, which recognizes the entire academic community dealing with this and related scientific disciplines.

Daring endeavor on which many envied me, but also contrite commented that this is an undertaking that can have a definite impact on me personally, because of the criteria for the Top 50 in above mentioned book which I personally chosen and by which collected bibliographic information on the most significant individuals that have marked the current development of Medical Informatics in the world. In order not to make a mistake and not displease some of my colleagues and friends, I announced this lexicon which should contain biographical details all major experts, scientists and experts who deal with this young but propulsive scientific discipline, for which the esteemed Edward Ted Shortliffe on MIE 2012 Congress in Pisa (Italy) during the Closing Ceremony, declared that we are changing previous names from Health and Medical Informatics in Biomedical Informatics, because the field of research and action of our profession entered the pores of the whole biomedical field.

Pioneers of Medical informatics: Morris F. Collen (1913-2014), Francois Gremy (1929-2014), Peter L. Reichertz (1930-1987), Philippe Louis-Dreyfus (1925-)

The main objective of this Lexicon is to provide as comprehensive as possible overview of the development of biomedical informatics through biographies of men and women who, through their discoveries, achievements, projects shaped its overall development that takes almost a hundred years.

Unfortunately, the book is edited and published during the year when the world has left two of the pioneers of Medical Informatics – Morris F. Collen and Francois Gremy, the initiators of the huge wheel of an imposing biomedical discipline, founders of everything that is known in this discipline today and which is accepted by all scientific academia and in large part implemented in practice.

All this development and its pace would be unthinkable without the development of related scientific disciplines – mathematics, physics, molecular biology, chemistry, astronomy, nuclear medicine, librarianship and especially computer sciences. When preparing this First edition of the Medical Informatics Lexicon, we tried to include the most prominent experts in this field who have made a significant contribution to the development of this young scientific discipline.

In this edition is covered by about 400 biographies of experts in Medical Informatics from over 50 countries and from all continents. Emphasis is placed on the biographical work of scientists, mainly retrieved from the web sites of scientific associations in which there are descriptions of these scientists' biographies or from websites of institutions in which these scientists are currently working. Certain number of scientists personally delivered their biographical information and photographs, according to template that we provided. Biographies of some of the scientists, unfortunately, are not sufficiently illustrative and comprehensive so when authors submit new biographical information the existing will be updated. The scientific contribution of some Medical Informatics experts in this book is greater and of some smaller.

In the Lexicon are mainly scientists who have so far received some scientific awards for their scientific contribution in the field of Biomedical Informatics (Nobel Prize, "Morris Collen" prize or "Francois Gremy" etc.) and also several of those who are currently leading scientists and teachers from Medical informatics in their countries or are members of the board of the international Association of Medical Informatics, invited lecturers at the congresses of Medical Informatics, etc.

Biographical determinants of scientists are provided in alphabetical order according to their surnames. The problem was with those scientists who have several names or

surnames (or middle names), and scientists who have prefixes von (for German-speaking authors), de (for French-speaking authors), while in case of female authors we used their maiden names. A particular problem represented determinants of birth origin, or national or state affiliation of scientists, especially for those who are born in one country and worked or died in another country. For living scientists was left an opportunity to decide on this component personally.

Finally, where no data are indicated are listed the years of birth or death of the aforementioned scientists. If it is stated that a scientist had education in certain town then it refers to the university or college. Awards and medals are just listed in exceptional cases but only for the most prestigious, mostly Nobel, Collen and Gremy awards. For scientists - experts in Medical Informatics educated at the technical universities were used terms from those disciplines as well as measurement units (if mentioned) from the International System of Units and Laws that are internationally recognized in the literature of technical disciplines.

In bibliographic literature is ilustrative and usefull sentence: "Every good biography, autobiography, or memoir should include the date and place of person's birth". We tried to fellow this recommendation.

Information sources are numerous and heterogeneous, while mostly used are those of the "open source" type, so that none of the authors cannot complain that they were misinterpreted, except if that is not their choice.

Interest for the lives and personalities of scientists from the Medical Informatics started by own collection and research from the author of this Lexicon, which was not easy and simple job. Those scientists who are alive today could check their data personally, because it was officially requested from them by mail correspondence.

To those who have helped in collecting biographies and photos for this Lexicon we are deeply grateful, because they improve the quality of the book. Special thanks we want to give to professors: Gjuro Dezelic, Josipa Kern, Marion Ball, Francis Roger France, Thomas Deserno, Barry Barber for their help in collecting some facts about femous medical informaticians who are not still alive and for reviewing the text of the Lexicon.

Also, we are grateful to our collegues Ajdin Rovcanin and Mirza Hamzic for their contribution in collecting data and technical editing of the book.

The First Edition of the "Biographical Lexicon of Medical Informatics", printed in May 2015, contains collection of approximately 500 biographies femous medical informaticians from over 50 countries and from all continents.

All errors, mistakes, a wrong facts will be corrected in Second edition. We hope we will update our Lexicon with new names every year, at least two months before MIE of MED-INFO Conferences.

Sarajevo, 15th May, 2015

Professor Izet Masic, MD, PhD

PREFACE OF 2ⁿᵈ EDITION

Interest for the First edition of the Biographical lexicon of Medical informatics was great. It was reason that we decided to expand first edition with 300 new biographies of Medical informatics scientists and experts who wasn't inluded in previous edition. Also, some of biographies and pictures in this edition were improved and updated.

The Second edition of the "Biographical Lexicon of Medical Informatics", printed in October 2016, contains collection of approximately 800 biographies famous medical informaticians from over 50 countries in the world.

Sarajevo, October 10th, 2016

Professor Izet Masic, MD, PhD

PREFACE OF 3ʳᵈ EDITION

Preface of 3rd Edition

Third edition of the book "Biographical Lexicon of Medical Informatics" contains a new 300 biographies collected during last year. Total amount of biographies in 3rd edition is 1100 biographies.Some of previous biographies printed in 2nd edition, also, were improved.

Thank you to all colleagues who helped to improve this edition of the book. Any other comment will be apriciated.

Sarajevo, July 2017.

Professor Izet Masic, MD, PhD

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AARTS JOS

Jos Aarts (1951-), PhD, FACMI, born on in Heerlen, near Maastricht, The Netherlands. He is associate professor of biomedical informatics with a focus on sociotechnical influences and human-centered design in the Department of Biomedical Informatics of the School of Medicine and Biomedical Sciences of the University at Buffalo, NY. He is also an assistant professor in the Institute of Health Policy and Management (iBMG) at Erasmus University of Rotterdam. He holds the position of adjunct associate professor in the University of Victoria. He is an elected Fellow of the American College of Medical Informatics. For more than 15 years he has investigated the impact of computerized provider order entry (CPOE) systems on health professionals. He studied the implementation of CPOE in large academic centers and developed theoretical frameworks to understand such processes. Professor Aarts conducted studies both in Europe and the United States. He applied both quantitative and qualitative methods. He took his PhD with professor

Marc Berg with a dissertation "Understanding implementation: a sociotechnical appraisal of the introduction of computerized physician order entry systems in Dutch and American hospitals". He showed how the implementation of these systems is a process of many years. To date professor Aarts supervised successfully two PhD students and more than 80 students in the master of health sciences program of Erasmus University Rotterdam. Dr. Aarts was instrumental in establishing a series of international working conferences in the domain of sociotechnical understanding of biomedical informatics and served on its program committees.

AAVIKSOO AIN

Ain Aaviksoo, MD, MPH as Deputy Secretary General for E-services and Innovation at the Ministry of Social Affairs is overseeing the digital transformation and innovation of social security area in Estonia, including health, labour and social matters. He is Chairman of National E-Health Task Force and of the National Personalized Medicine Pilot

Programme. Dr. Aaviksoo obtained MD from Tartu and MPH from Harvard University. He has working experience as a physician, senior level civil servant, researcher, service design consultant and entrepreneur.

ABBOTT "BUD" WILLIAM

William "Bud" Abbott (1931-2011) was one of the pioneers of health informatics in the UK. Bud was one of the first generation of health informaticians who started operationally in the mid-1960s. In 1948, Bud joined The London hospital, became involved in the use of machine accounting and explored the use of computing towards the end of the 1950's. He was instrumental in the development of hospital computing, and played a leading role in both global activities through the International Medical Informatics Association and closer to home with the establishment of the 'Current Perspectives' in Health Computing conference and exhibition in 1984 which became the 'HC' event which still runs today. By the early 1970s, Bud was already 'Mr-NHS Computing' and led many of the British Computer Society Health Informatics Specialist

Groups delegations to European and world events. He encouraged work and mobilized peers and novices to work together through the professional society. He had a knack of facilitating and fixing whilst also being a consummate diplomat. During organization of IMIA MEDINFO Conference in London in 2001, he was included there, playing a vital 'political' role in the Local Organizing Committee. He continued to guide health informatics even when operationally retired, frequently appearing in Harrogate at HC congresses and always willing to chair sessions, sometimes at very short notice! He was a mentor to many, especially in the UK and Europe, over the years. His professional legacy will be both the iconic London Hospital System and the position of UK health informatics world-wide.

ABBOTT PATRICIA

Patricia Abbott, RN, PhD, FACMI, trained in nursing at the University of Maryland and, after practicing for a few years, developed a growing interest in informatics. She obtained her master's degree in nursing informatics in 1992 and went on to earn a PhD in information systems in 1999. Even before completing her PhD, she had become a well-known and contributing member of the informatics community while serving as a clinical specialist for information systems at the University of Maryland School of Medicine. She subsequently joined the faculty of nursing, first at Maryland and, since 2003, at Johns Hopkins University, where she is Director of the World Health Organization (WHO)/Pan American Health Organization (PAHO) Center for Information Systems in Nursing Care. Dr. Abbott has been among the first nurses to apply data-mining techniques to the field of nursing, exploring existing databases in long-term care to understand better the factors that contribute to patient outcomes. She has extended her preliminary work into the patient safety arena, ensuring strong informatics content in programs funded by the Health Resources and Services Administration (HRSA) and Agency for Healthcare Research and Quality (AHRQ). Dr. Abbott is recognized internationally for her leadership in preparing scholars and practitioners in nursing informatics. She has also led the development of the American Nurses Association (ANA) Standards of Practice for Nursing Informatics. She has worked tirelessly as a member of the leadership team, Nursing Informatics Working Group, as our country's representative to the International Medical Informatics Association (IMIA)

Nursing Special Interest Group, and as a member of the Editorial Board of JAMIA. She also serves on the AMIA Board of Directors. Dr. Abbott possesses a unique talent for articulating effectively the disciplinary contributions to a multidisciplinary organization.

ABDELHAK MERVAT

Mervat Abdelhak, PhD, RHIA, FAHIMA, graduated MSIS, Information Science at University of Pittsburgh in 1975 and PhD, Information Science, University of Pittsburg in 1981. She is Chairman and Associate Professor of Health Information Management, University of Pittsburgh since 1981. Dr. Abdelhak has served as president (2005) of the American Health Information Management Association (AHIMA). She also served on the Board of AHIMA (2001-2006). Dr Abdelhak is currently serving as a Commissioner for CAHIIM. Dr. Abdelhak is the recipient of many Awards including Distinguished Member Award in 2009, the highest award of AHIMA. She was awarded the designation of AHIMA Fellow in November 2006 and is the recipient of AHIMA's Literary Award in

1996. Dr. Abdelhak received the Pennsylvania Health Information Management Association's Distinguished Member Award in 1989 and the University of Pittsburgh, School of Health Related Professions' 1991 Distinguished Alumnus Award. She served on the Educational Strategy Committee of AHIMA and co-authored the "Vision 2016: A Blueprint for Quality Education in Health Information Management." Abdelhak chaired AHIMA's Nominating Committee, chaired the Advisory Committee on Workforce Study, and was also Chair of AHIMA's Council on Research. She served on Editorial Review Boards for the Journal of the American Health Information Management Association. Abdelhak is Managing Editor of the 4th Edition of "Health Information: Management of a Strategic Resource." She is widely published and speaker. Dr. Abdelhak has served as a consultant nationally and internationally in the areas of education and the practice of health information management, including the electronic health record and standards development. Research Interests of prof Abdelhak are: Health informatics; Health information systems; Electronic health record; Privacy & security and Outcome research. Her External Funded Research are: "HIM CPATH Class I: Health Computing: Integrate Computational Thinking into Health Science Education," NSF; $283,637 (10/1/2009–9/30/2011), Role: Co-P.I. Prof Abdelhak published scientific publications

in a lot of international indexed journals in the field of Medical informatics, especially in Health Information Management. Her Courses Recently Taught is: HRS 2420 Introduction to Health Information Systems. Dr. Abdelhak is managing editor and co-editors for the text and ancillaries, Health Information: Management of a Strategic Resource, 1996; Distinguished Alumnus Award, School of Health Related Professions, 1991; The President's Award to attend the American Experience Program, 1991; Pennsylvania Medical Record Association Distinguished Member Award, 1989. This award represents the highest honor given by the association to one of its members for recognition of leadership, accomplishments in research and education, and contributions to the profession; Outstanding Young Women of America, 1982.

ABIDI SIBTE RAZA SYED

Syed Sibte Raza Abidi, PhD, is Professor, Computer Science and Medicine, Director, Health Informatics, Dalhousie University. He is the Director of Health Informatics at the Faculty of Computer Science. Dr. Abidi conducts research in the interdisciplinary area of health informatics, especially focusing on computerization of paper-based clinical guidelines, clinical decision support systems, personalized patient empowerment and behavior modification, and

health data analytics. He leads the NICHE (Knowledge Intensive Computing for Healthcare Enterprises) research group that comprises around 20 inter-disciplinary researchers working in the general area of health informatics. Dr. Abidi has published over 180 peer-reviewed research papers, supervised over 70 graduate students and has secured research grants totalling over $15 million for projects conducted within Canada and internationally. Dr. Abidi is the recipient of the International Award for Innovation in Medical Informatics, Research Excellence Award, Winner of the health data analytics challenge competition and five (5) best paper awards.

ABO TALEB FAHAD

Fahad Abo Taleb is a healthcare business consultant at Cisco, Saudi Arabia. He received his Master degree from George Washington University. He joined Cisco in 2007, working in strategic business development in the public sector before specializing in the healthcare. He is a member of the Saudi e-health event since 2010. In addition to consulting, Fahad continues to follow up on the latest trend in

IT solutions and keen to develop the community and society.

ABRAHAMOWICZ MICHAL

Michal Abrahamowicz is a James McGill Professor of Biostatistics at the Department of Epidemiology, Biostatistics and Occupational Health of McGill University, in Montreal, Canada; and a Medical Scientist in the Research Institute of the McGill University Health Centre (MUHC). His statistical research involves development and validation of new, flexible statistical methodology, with main focus on time-to-event (survival) analyses of longitudinal studies. He has developed also new methods to control for different sources of bias in observational studies. In his collaborative research, he applies these novel methods to address methodological challenges in arthritis, cardiovascular and cancer epidemiology, as well as pharmaco-epidemiology and comparative effectiveness research. He is the Nominated Principal Investigator on a major grant from the Canadian Institutes for Health Research's Drug Safety & Effectiveness Network (DSEN), which involves more than 30 faculty from 14 universities across Canada and focuses on the development, validation and applications of new statistical methods for observational longitudinal studies of both therapeutic and adverse effects of medications. In 2010-14, he was an elected member of the Executive Committee of the International Society for Clinical Biostatistics (ISCB). Since 2013 he is the Co-Chair of the international initiative for Strengthening of Thinking about Analyses of Observational Studies (STRATOS), that regroups >80 experts in statistics and biostatistics, from 15 different countries.

ABU HANNA AMEEN

Ameen Abu-Hanna (1963-), MD, PhD is Professor and Head of Department of Medical Informatics, Faculty of medicine (AMC-UvA), University of Amsterdam, The Netherlands. Ameen Abu-Hanna sees great potential for medical informatics to improve the quality of health care, and would like to see the AMC-UvA's Medical Informatics Department play a more prominent role in this respect at both the national and international level. His research focuses on two themes. The first theme centers on learning predictive models from complex medical data. These models can play an important role in safeguarding the quality of health care and facilitating difficult clinical decision making. The second theme centers on designing guideline-based decision support systems and measuring their effect on the behavior of healthcare professionals and patient outcomes. As regards education, Abu-Hanna aims to contribute to a plan for the training/re-training of medical students and other healthcare professionals in the area of medical informatics. Abu-Hanna has held various positions at the AMC-UvA since 1997. He served as vice-president of the Medical Informatics Educational Institute (1997-2000), associate professor (from 2000), and (adjunct) Head of the Medical Informatics Department (2003 and from 2010 onwards). Prior to this time, he worked at Utrecht University and the University of Amsterdam, where he obtained his doctorate degree in Artificial Intelligence in 1994. Abu-Hanna served as visiting professor at Stanford University in 2002, and was president of the European Society of Artificial Intelligence in Medicine from 2007 to 2009. Abu-Hanna received a 1 million euro grant for the ICOVE project as a part of the ZonMW National Care for the Elderly Program. He is associate editor of the Journal of Biomedical Informatics and has published extensively in medical informatics and clinical journals.

ACHARYA SUBRATA

Ph.D., Computer Science, M.S., Computer Engineering, Towson University USA. Courses that Subrata Acharya taught were COSC 745 (graduate) Advanced Topics in Computer Security - Healthcare Information Security and Privacy, HLTH 570 / ITEC470 (graduate/undergraduate) Healthcare Systems Design and Implementation, COSC 336 (undergraduate) Data Structures and Algorithm Analysis. She showed a wide research interests such as Healthcare Information Security and Privacy, Cyber Physical Systems, Medical Analytics, System Security, Trusted Computing, Information Security Management, Secure Health Informatics, Secure Mobile Systems, Ethical & Privacy Issues in Computing Systems. Subrata is a member of IEEE, ACM, WIMHE, CRA-W.

ACKERMAN EUGENE

Eugene Ackerman (1920-2014), PhD, FACMI, Emeritus Professor of Laboratory Medicine and Pathology at the University of Minnesota. He studied Physics at Swarthmore College and Brown University, where he met and married Dorothy Hopkirk in 1943. His studies were interrupted by serving as a Conscientious Objector during World War II. After completion of a doctoral degree in Biophysics at the University of Wisconsin-Madison, he joined the Physics faculty at Pennsylvania State University, with several sabbaticals at the University of Pennsylvania in the Biophysics laboratory of Dr. Britton Chance. In 1960 he became Associate Professor of Biophysics at Mayo Clinic, working on mathematical models of physiological systems. He was instrumental in obtaining one of the first National Institutes of Health (NIH) resource grants for Biomedical Computing Facilities, followed by many research grants modeling ultrasonic behaviors of cells, enzyme kinetics,

blood glucose regulation, and patterns of infectious disease epidemics. As adjunct Professor of Biophysics and Computer Science at the University of Minnesota, he developed a Mayo satellite program awarding a MS degree in Biophysics. In 1967 he left Mayo Clinic for the University of Minnesota, becoming Hill Family Foundation (now Northwest Area Foundation) Professor of Biomedical Computing and Professor of Biometry. A NIH grant to establish a Biomedical Computing Facility had been awarded to the University of Minnesota in 1965, and Eugene Ackerman became its director in 1968 after the illness of its first director, Dr. Eugene Johnson. With the establishment of the Academic Health Center in 1969, the entire biomedical computing program became the Division of Health Computer Sciences in the Medical School's Department of Laboratory Medicine. Charged with developing core and collaborative research, training, dissemination and a service unit, the growing cadre of informatics faculty, fellows and graduate students helped develop departmental computer systems in the clinical laboratories, surgery, electrocardiography, pulmonary function, and nuclear medicine. Gene was a superlative scientific educator and writer. One of the first and longest funded National Library of Medicine training grants in health computing was awarded to the University of Minnesota, which eventually trained over a hundred fellows from the health sciences, includ-

ing ones from medicine, nursing, pharmacy, dentistry and public health. Gene personally directed the graduate theses of nearly a hundred students and post-doctoral fellows. Over his long career, he published hundreds of journal articles, conference abstracts, book chapters and monographs; as well as three books: Biophysical Science (in two editions), Mathematical Models in the Health Sciences, and Simulation of Infectious Disease Epidemics. He was editor of the Biophysical Journal from 1984-1987.

ADAMIC STEFAN

Stefan Adamic (1926-) is a Slovenian researcher and organizer of biomedical informatics. In 1953 he graduated from the Veterinary Faculty in Zagreb in 1957 and reached a doctorate. In the academic year 1965/1966 he had professional training in the Department of Pharmacology, Faculty of Medicine, Winnipeg (Canada). He was an assistant in the Department of Veterinary Biotechnical Faculty in Ljubljana (1955-1959), a research associate at the Institute of pathophysiology at Faculty of Medicine and the Institute of Biomedical Informatics at Faculty of medicine of

University in Ljubljana, Slovenia. Alone or in co-authorship in domestic and foreign journals he has published several professional and scientific papers in the field of physiology and pharmacology, and wrote a book "Informatics in biomedicine and Fundamentals of biostatistics". He was one of founders of Yugoslav Association of Medical Informatics in 1989, and member of the Execuive Board. Also, he was one of founders of "Biomedicina Iugoslavica" on-line databasis of biomedical literature linked with DIMDI in Keln, Germany.

ADAMS BENNET MARTHA

Martha Bennet Adams, MA, MD, FACP is chair of Working Group Steering Committee of AMIA. Her primary focus in informatics is mobile technology in health care. Throughout her career she has been known for innovation and for forwarding adoption of technology. As a result she has led numerous evaluation studies involving PDAs, tablets, and smartphones, those in use by medical professionals. She also has experience as the principle investigator of a recent telemedicine study sponsored by

Susan G. Komen for the Cure, genetics counseling for breast cancer patients in rural North Carolina. She is best known for co-developing Custom ID, a highly successful web and mobile framework for stewardship of antimicrobial prescribing in use by Duke University Hospital since 2003 and by 30 hospitals in the Netherlands since 2006, a program with oversight by the Dutch Working Group on Antibiotic Policy (SWAB). Her collaborative work in informatics has led to publications external link in leading journals such as the Annals of Internal Medicine, Academic Medicine, and Circulation. Dr. Adams, July 2012, is newly Professor Emerita of Medicine at Duke University School of Medicine. She closed a highly respected clinical career in general internal medicine as the "doctor's doctor" and an educator of medicine residents. She was elected annually to America's Best Doctors, 2007-2012. She continues as a member of the Duke Center for Health Informatics, the Duke School of Medicine Academic IT Committee, and she has an advisory role in a rapid learning quality improvement consortium involving palliative care. She is the AMIA Chair of the Working Group Steering Committee. Dr. Adams is on the editorial board of the journal Informatics in Primary Care. She previously served on the board of NCHICA, the North Carolina Health Information and Communications Alliance. Dr. Adams is a national speaker and program co-developer of "Complex Cases

in Primary Care", sponsored by Duke University with Med-IQ, an award-winning continuing medical education company.

SERGEEVICH ARTEM ADJEMOV

Adjemov Artem Sergeevich (1951), PhD, born in Moscow. He is the Rector of the Moscow Technical University of Communications and Informatics of the Communications Agency of the Russian Federation. He graduated from the Moscow Telecommunications Institute in 1973. He was awarded with the medal "In Commemoration of the 850-th Anniversary of Moscow" in 1997, the RF Government Prize in the Field of education for 2000-2001, the honorary title "Esteemed Employee of RF Communications" in 2004. After graduating in 1973, he became a post-graduate student and later on an assistant lecturer and assistant professor of that Institute. For two years he worked as the Institute's Secretary of the CPSU Committee. From 1990 to 2001 he was a vice-rector for education at the General Technical faculties of the Moscow Technical University of Communications and Informatics (MTUCI) of

the Ministry for Communications and Informatization of the Russian Federation. Then he was promoted as a MTUCI's 1st vice-rector for education and later on – an acting rector. In 2005 he became the elected MTUCI rector and the Head of Telecommunications Theory Chair, as a prominent scientist in the field of Communications and Informatics. Under the guidance of A. Adjemov the State professional-educational Standards for telecommunications and a number of communications specialties have been worked out. His curricula of trends and specialties allowed to introduce a multilevel system of education in MTUCI. Over the 5 recent years the scientists of MTUCI, supervised by A. Adjemov, and their colleagues from the other Universities, including those from other cities, have completed an enormous work on elaborating and introducing in practice the technology of distance learning based on the-state-of-the-art infortelecommunications means. Due to Adjemov's initiative since 1999 Russia's higher education communications institutions got down to creating a common database of academic disciplines on the Internet with some CIS educational institutions participating in the project. In 2001 A. Adjemov together with a group of authors was awarded the RF Government Prize for devising scientific – methodological and scientific – technical basis of the Federal University network of distance learning for educational institutions

of higher professional education. Professor A. Adjemov is the author and co-author of two text-books, a number of educational brochures and over 60 researches and inventions. Annually he delivers lectures in this country and abroad. His Chair of Telecommunications theory has lasting and fruitful contacts with scientific schools of France and Spain. The subject of Adjemov's researches relates to transmission theory, data reception and processing. Recently he and his students have got some fresh results while researching multiple methods of analog – digital transmissions, including spline – interpolations. Professor A. Adjemov has been running the scientific department in the scientific – research section of the University for many years, works fulfilled under his guidance are regarded as especially important researches defined in the corresponding decrees of the RF government. A. Adjemov is engaged in a large – scale scientific – organizational and public work. He is an elected academician of the International Communications Academy and International Informatization Academy, he is a member of the Scientific and Technical Council of the Ministry for Communications and Informatics Technologies of the Russian Federation, a member of a number of the Education and Science Ministry Councils and the Presidium of Moscow and Moscow region Rector Council.

ADLASSNIG KLAUS PETER

Klaus-Peter Adlassnig (1950-) received his MSc degree in Computer Science from the Technical University of Dresden, Germany, in 1974. He joined the Department of Medical Computer Sciences of the University of Vienna Medical School, Austria, in 1976. In 1983 he obtained his PhD degree in Computer Sciences from the Technical University of Vienna, with a dissertation on "A Computer-Assisted Medical Diagnostic System Using Fuzzy Subsets". He received his Venia docendi for Medical Informatics from the University of Vienna in 1988 and became Professor of Medical Informatics in 1992. In 1987 he received the Federal State Prize for excellent research in the area of rheumatology, awarded by the Austrian Federal Ministry for Health and Environmental Protection. Since 1988 he has been head of the Section on Medical Expert and Knowledge-Based Systems at the Department of Medical Computer Sciences of the University of Vienna Medical School. He is

co-founder, CEO, and Scientific Head of Medexter Healthcare GmbH, a company established to broadly disseminate intelligent medical systems with clinically proven usefulness. Since its inception in 2002, Medexter succeeded in establishing technical platforms and clinical decision support systems for a number of academic, commercial, and clinical institutions. Prof. Adlassnig's research interests focus on computer applications in medicine, especially medical expert and knowledge-based as well as clinical decision support systems and their integration into medical information and web-based health care systems. He is highly interested in formal theories of uncertainty, particularly in fuzzy set theory, fuzzy logic, fuzzy control, and related areas. Also, he is equally interested in the theory and practice of computer systems in medicine. Prof. Klaus-Peter Adlassnig's sphere of interest includes various aspects of the philosophy of science, particularly the state and future impact of artificial intelligence. In this scientific fields he published a lot of papers in peer reviewed biomedical journals. He is Editor-in-Chief of the journal Artificial Intelligence in Medicine (AIM). He was chair of SPC of MIE 2009 Conference in Sarajevo.

AERTS HUGO

Hugo Aerts, PhD, is Director, Computational Imaging and Bioinformatics Laboratory (CIBL), Harvard and Dana-Farber

Cancer Institute. Dr. Aerts is based at Harvard-DFCI where he is Director of the Computational Imaging and Bioinformatics laboratory. Dr. Aerts' group focuses on the development and application of advanced computational approaches applied to medical imaging data, pathology, and genomic data.

AHMAD SUZAN

Suzan Ahmad is director of Nursing at Ministry of Health in Dubai, United Arab Emirates. She graduated at University of Arizona, USA. She works as e-health Consultant at Malomatia (April 2011 till present) in Doha, Qatar. Before that she worked as Project Manager at Sidra Medical and Research Center (April 2011 – December 2011) in Doha, Qatar, as Health Minister Advisor at Ministry of Health of UAE (January 2007 – August 2011) and Project Manager, patient management and Clinical at Sidra Medical and Research Center (2011 – 2011). Also, she worked as Health Informatics Consultant, MOH (2007 – 2010), as Advisor MOH (2007 – 2010) and finally as Lecturer at Jordan University of Science and Technology (May 1990 – August 1995) in Irbid, Jordan.

AHMED ZAKIUDDIN

Zakiuddin Ahmed is a visionary strategist, entrepreneur & a physician leader who specializes in developing sustainable, scalable and innovative solutions in Healthcare through IT. His areas of expertise are eHealth, mHealth, Healthcare Quality, Medical Ethics, Healthcare Marketing. He is the President of Healthcare Paradigm and holds leadership positions in other companies including eHealth Services, Smart Health Care, Medical Voice, Health Asia, PharmEvo Pvt. Ltd and Center for Type Development. He is the current President of OPEN, Focal Person for Akhuwwat & a globally recognized speaker.

AJAMI SIMA

Sima Ajami, PhD, is one of the pioneers and professors in Health Information Management (HIM) in Iran. Ajami is one of the first academic and member of Health Information Technology & Management Dep. at school of Management & Medical Informatics in Isfahan University of Medical Sciences. She finished her bachelor degree in Medical Records in 1992 from Shiraz Medical Sciences University. Then, she got the opportunity to teach as an instructor in Isfahan University of Medical Sciences. Then, she also was posted to be the head of Medical Records Department there. At that time, she held a national meeting in Iran to revise the curriculum of Medical Records in undergraduate level and make it update according to community needs. At 1997, she got her master degree and on October 2003 she finished her PhD degree. She was elected to be a member of examinations and policies maker board of PhD, and Master at council for education in Ministry of Health in Iran. She was awarded Postdoctoral fellow to do part of Healthcare Support through Information Technology Enhancements (hSITE) project at University of Toronto, in Canada in 2011. Her research interests include; Information Technology systems in Health, eHealth, Minimum Data set for Diseases, Registry Systems, Process Improvement in health care special in Emergency Department, Lean Management, Strategic Management, electronic health records, as well as health records and health policies. She has authored and co-authored about 118 in various journals, book, and conference proceedings. She is an editor in chief of Iranian journal of Health Information Management at faculty of Management & Medical Informatics in the Isfahan Medical Sciences University, from 2004-present, member of editorial boards of Journal of Information Technology and Software Engineering, and Journal of Production & Operation Management. She has been awarded in competition research prize as a prominent in 2005, 2006, 2007, 2008, 2009, 2011, 2012, and 2013. Many of her practical research projects were awarded by vice chancellor and led to incredible changes in Medical Records Department and Emergency Room in Hospitals in Isfahan. Her goal in teaching was and is to empower her students to become leaders within Biomedical informatics field.

ALBARRAK AHMED

Ahmed Albarrak is Associate professor of Medical Informatics in Family and Community Medicine Department, at The College of Medicine, King Saud University with a strong and diverse background in health/medical

informatics, and biomedical engineering.

ALBORG MIGUEL

Miguel Alborg is CEO of IDI Eikon, Founding member and CEO of IDI EIKON. IT executive by occupation and with a passion for trying new things. Aspires to maximize the potential of ICT as a tool for knowledge enhancement and equality. A present personal advocacy is to raise the awareness of the enabling use of ICT and to enhance the quality and accessibility of solutions for the healthcare sector and the world of prevention. He has been involved in R&D projects from the early 90s and with European projects from 1999.

ALDOSARI BAKHEET

Bakheet Aldosari, PhD, HIIM, is professor of health informatics (HI) and health information management (HIM). He earned his MSc and PhD. in the field of HI/HIM from the University of Pittsburg, Pittsburgh, PA, USA in 2003. He has been serving as a Chairman, Department of Health Informatics at King Saud Bin Abdul-Aziz University, Riyadh, Saudi Arabia since 2005. In his capacity as chair, he has the responsibility for the development of the department's long-term strategic goals and oversees the academic programs, policies, education and research. He has founded three pioneering HIIM programs; MSc in HI, BSc in HIM and Certificate in medical coding for the Saudi universities; all based on the CAHIIM standards. All programs are the first of their kind in the country. He also is the co-founder and has served as board member of the Saudi Association for Health Informatics. Nationally, he serves a Commissioner on accrediting HI/HIM programs. Internationally, he serves as a member of the Multinational HI/HIM Curriculum steering committee, CAHIIM, USA. In addition, he is an expert

higher education consultant, adjunct professor for the Department of Health Information Management at the University of Pittsburgh, USA, and Adjunct/visiting professor at many Saudi Universities. He works in partnership with national and international academic institutions, advising them in setting up educational programs in HI/HIM and related field, in order to meet their business goals, objectives and/or overcome problems. He is also, an expert HIIM Practice Consultant where he provides professional and expert advices, training, and guidelines to clients throughout the migration path of an ideal EMR,EHR, PACS etc.

ALTUWAIJRI MAJID

Managing director of Accenture's Health & Public Services. Dr. Majid Altuwaijri is managing director of Accenture's Health & Public Services, a unit dedicated to helping organizations in the public and private sector achieve higher performance by using innovation to meet the world's ever-changing health needs. Prior to joining Accenture in 2013, Dr. Altuwaijri served in high-level government positions in

Saudi Arabia, including as chief information officer for the Saudi National Guard Health Affairs office. For this role, he was awarded a Middle East Excellence Award in the Electronic Health category. In 2007, Dr. Altuwaijri played a key role in establishing the College of Public Health and Health Informatics at the King Saud bin Abdulaziz University, where he also served as dean. In 2010, he was appointed as the university's vice president for technology and informatics. Dr. Altuwaijri went on to chair Saudi Arabia's National Committee for e-Health in 2002, which led to the founding of the Saudi Association for Health Informatics. He is also an active researcher in the health IT field, with more than 30 publications and patents in leading international journals and conferences. Dr. Altuwaijri holds a full professor academic rank at King Saud Health University, where he established the Master of Science program in Health Informatics, the first of its kind in the Middle East. Dr. Altuwaijri received his executive management training from Harvard Business School in 2012 and his Ph.D. in Computer Engineering from the University of Louisiana at Lafayette in 1995. For his pioneering work in the Kingdom's health services sector, Dr. Altuwaijri received the highest national medal from the King of Saudi Arabia in recognition of his achievements.

AL HAQBANI BANDAR

Bandar Al Haqbani works as the General Director of IT Services at King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), in addition to his appointment as the Chairman of Health Informatics Department within the College of Public Health and Health Informatics of KSAU-HS where he teaches IT and information security courses as an Assistant Professor. Dr. Al Haqbani also holds the position of President of Saudi Association for Health Informatics and Head, Advanced Computing and Technologies, King Abdullah International Medical Research Center. Dr. Al Haqbani co-founded the Health Information System Bachelor's Programme and has published number of scientific research papers in international journals and conferences. His research interests cover federated identity management, access control security, e-Health security and privacy, network applications and security and cyber warfare, and conducted several information security seminars to many Saudi governmental agencies. He started his career as a Network Specialist then shortly after he

handled the Security Architect and was later appointed as Manager of IT Security and IT Planning within the National Guard Health Affairs. Shortly after, he was appointed Director of IT Planning Division at KSAU-HS. He obtained his Bachelor's degree with top honors in Computer Engineering, and has a Master's in Information Technology with a specialization in e-Business and a Doctorate in Information Technology with a specialization in Information Security.

AL-JAFAR EIMAN

Eiman Al-Jafar, PhD, is one of the pioneers in Health Information Systems/Management in Kuwait and the first Kuwaiti female academic member of the Health Information Administration Department at Faculty of Allied Health Sciences (FAHS), Kuwait University (KU). In 1999, She got her Master degree in Health Information Systems and was the first PhD graduated with concentration area of Health Information Systems from School of Health and Rehabilitation Sciences, at University of Pittsburgh, Pennsylvania, USA, April 2002. She worked as Assistant Professor since 2002

and Chairperson of the Department of Health Information Administration at FAHS, KU, since September 2014. Serving as Chairperson of the HIA department, she has the responsibility of reviewing the department strategic goals to meet the new challenges in HIIM field. She is working toward changing the curriculum from Health Information Administration to Health Informatics and Information Management and working with the department team, submitted proposals for Master degree in HIIM. In 2002 to June 2003, she provided consultation services to Kuwait Oil Company Hospital in the field of Health Information systems and statistics. She also worked as a consultant to the United Medical Group (January 2007 – February 2010) with the Canadian Medical Team and assist in the development of the HIM Department at Al-Saif Hospital under the same group. She provided several consultancy services to the different Hospitals of the Ministry of Health in Kuwait to assist them in getting their Accreditation. Since September 2014 until present, she worked with the Kuwait Institute for Medical Specialization (KIMS), an institute specialized in providing current advances in residency medical education. The services at KIMS included providing workshops related to Clinical Documentation and the use of Information Technologies by Health Care Team. She is a member at different international professional associations and participated in different International conferences. Dr. Al-jafar's primary research focus in Health Informatics, EHRs, Information & Communication technologies, m-Health and e-Health.

AL-KHOURI ISSAM

Issam Al-Khouri works at University Department for Biomedical Technology and Medical Informatics in Ministry of Health of Syria, Damascus. He graduated at Friedrich-Alexander-Universität Erlangen-Nürnberg. He had great experience in Freelancer, Project Management, Consulting und Training in Health care IT: MEDICOWARE (January 2014 till present) in Frankfurt Am Main Area, Germany as Project Manager in NEXUS / DIS (May 2009 – December 2013) in Frankfurt Am Main Area, Germany, also in area of Image-data-management-System's Administration (RIS/PACS) at MIK-Zentrum, University Hospital of Erlangen (November 2003 – November 2008) in Erlangen Area, Germany, as Software Engineer/Presales Consultant LHS (March 2001 – November 2003) in Frankfurt Am Main Area, Germany, as Quality Systems Consultant, Arabian Quality Makers (AQM) (April 2000 – November 2000) in Damascus, and finally as Software-Developer, iSOFT (May 1998 – March 2000) in Mannheim Area, Germany

AL-RABEAH MOHAMMED ABDULLAH

Abdullah Mohammed Al-Rabeah is a faculty staff under Public Health Department in College of Medicine at Al-Imam Muhammad Ibn Saud Islamic University. He received a Bachelor of Dental Surgery (BDS) in 1994 and Master Degree in Field Epidemiology in 1999 from King Saud University in Riyadh, KSA and performed 2 years of Resident at Saudi FETP (1997-1999). In 1999-2010, he became Epidemiologist of Saudi FETP. In 2007, he received a Diploma in Migration Path to the Electronic Health Record conducted by AHIMA (American Health Information Management Association. He completed his residency in Health & Medical Informatics and received a Master Degree in 2008 at King Saud Bin Abdulaziz University for Health Sciences,

National Guard, Riyadh, KSA. Al-Rabeah has more than 8 years of experience in the healthcare informatics field, he is interesting in health geographical information system (GIS), and he has projects and research on it such application of GIS and remote sense on malaria eradication and training on Health Mapper for Infectious Disease Surveillance, Conducted by WHO in collaboration. Al-Rabeah is a board member of Saudi Association for Health Informatics (SAHI). He is equipped to foster productive, enriching learning environments geared toward understanding the challenges of healthcare IT in Saudi Arabia.

AL RAMAIH ABDULAZIZ

Abdulaziz Al Ramaih is the Executive Director of Information Systems and Informatics Division at the Ministry of National Guard Health Affairs. Also as the Vice President of SAHI and a board member of the National Guard Health Affairs Council, Engr. Abdulaziz has more than 16 years of extensive experience in Information Technology and Informatics

with excellent achievements. Engr. Romaih holds a Bachelors Degree in Computer Engineering from King Saud University, a Masters Degree in Telecommunications Engineering from Essex university in UK, and MBA from University of Chicago.

AL REDHA MOHAMMAD

Mohammad Al Redha, PhD, is the Director of the Health Data and Information Analysis Department at the Dubai Health Authority. His main responsibility is to develop the necessary standards for implementing and managing the health information systems in the Emirate of Dubai. Before joining the Health Policy & Strategy Sector, Dr. Mohammad was a Research Fellow in Clinical Informatics at the Division of Clinical Informatics, Harvard Medical School in Boston (2008-2009). His main focus was redefining the standards of healthcare to meet international standards while creating a very patient-focused, research-enriched environment. Prior to joining the field of informatics, Dr. Mohammad was the Assistant Chief Operating

Officer at Rashid Hospital – a 600 bed trauma facility serving Dubai since 1973. Dr. Al Redha is a graduate and postgraduate of the Royal College of Surgeons in Ireland and holds a Masters Degree (MSc) in Healthcare Management. He is also a member of the Mohammed Bin Rashid Program for Leadership Development Programme and a Fellow at the Dubai School of Government.

AL-SHORBAJI NAJEEB

Najeb Al-Shorbaji, PhD, has been working as Director, Department of Knowledge, Ethics and Research at the World Health Organization Headquarters (WHO/HQ) in Geneva since November 2013 and as Director of the Department of Knowledge Management and Sharing between September 2008 and October 2013. Between February 1988 and August 2008, he held the posts of Information Scientist, Regional Advisor for Health Information Management and Telecommunication and Coordinator for Knowledge Management and Sharing at the WHO Eastern Mediterranean Regional Office in Amman, Alexandria and Cairo.

He holds a PhD in Information Sciences since 1986. The current portfolio of Dr Al-Shorbaji covers WHO publishing activities and programs, library and information services, knowledge networks, eHealth, research and public health ethics, research and knowledge translation and WHO Collaborating Centers. Through his career he initiated, lead and managed a number of regional projects related to access to health information, global networking, capacity building, use of information and communication technology for health. He has published over 100 research articles, book chapters, conference papers and presentations. He is a member of a number of national and international professional associations. He has been invited as keynote speaker at a number of international conferences on eHealth, mHealth, knowledge management and eLearning. He is asked to peer-reviews scientific articles for a number of internationals.

ALIFERIS CONSTANTIN

Constantin Aliferis, MD, MS, PhD, FACMI, is Professor of

medicine at Division of General Internal medicine at Minneapolis, MN, USA. He is director, IHI CRIO CTSI AHCSH BioMed Hlth Informatics. Also, he works at Core Faculty, Institute for Health Informatics (IHI). Medical School, Athens University, Athens, Greece. He earned Internal Medicine Fellowship, University of Pittsburgh, Pittsburgh, PA and PhD, University of Pittsburgh, Pittsburgh, PA, USA.

ALLEGRETTO (STEVE) STEPHEN

Stephen Allegretto, BA, CPA, MPH is the Vice President, Strategic Analytics and Financial Planning for the Yale-New Haven Health System. He has been at Yale-New Haven Hospital/Yale New Haven Health System for 28 years, serving in a variety of financial and operational roles. YNHHS is a $3.4 billion Health System operating primarily in Connecticut. Mr. Allegretto also manages all financial relationships between the Yale School of Medicine and Yale-New Haven Hospital. He is a certified public accountant with an undergraduate degree in economics and a master's degree in public health from Yale University. He has been an instructor at Yale School of Medicine's Epidemiology and Public Health Program, Quinnipiac University and is currently an adjunct professor at Sacred Heart University. Steve's work history and teaching interests have centered upon the development and application of

cost accounting data integrated with quality and outcomes data at the patient level to better understand and manage quality, process and financial variation.

ALTMAN B. RUSS

Altman B. Russ, MD, PhD, FACMI, received his bachelors degree summa cum laude in biochemistry and molecular biology from Harvard, and his MD and a PhD in Medical Information Sciences from Stanford. He was an assistant professor of medicine and computer science at Stanford, where he was a member of the Medical informatics group, maintained a general internal medicine practice, and co-directed the Medical Scientist Training Program. Dr. Altman's research interests are in the area of computational biology and bioinformatics. His doctoral dissertation focused on probabalistic methods for combining sparse and uncertain data sources to compute three dimensional molecular structures. For the promise shown by this work, he received the Presidential Early Career Award for Scientists and Engineers in a ceremony at the White House. Dr. Altman has

studied how scientists can share, communicate and collaboratively refine their collective understanding of a scientific problem. His recent work featured the RiboWeb project, which is an Internet-based resource for structuring and sharing molecular data and literature related to bacterial ribosomes. Dr. Altman was/is a member of the Board of Directors of the International Society for Computational Biology, a member of the executive committee of the National Partnership for Advanced Computational Infrastructure.

ALTSCHUL STEPHEN

Stephen Altschul, PhD, FACMI, is a Senior Investigator at the National Center for Biotechnology Information, which is part of the National Library of Medicine at the National Institutes of Health. He received his AB summa cum laude in mathematics from Harvard College and a PhD in mathematics from the Massachusetts Institute of Technology. Dr. Altschul held an IRTA postdoctoral fellowship at the Mathematics Research Branch of the National Institute

of Diabetes and Digestive and Kidney Diseases before moving to the NCBI, where he has been for the past years. His research has focused on developing measures, algorithms, and statistics for the comparison and analysis of DNA and protein sequences. He played a central role in developing the blast and psi-blast sequence database search programs, and his articles describing these programs have become, respectively, the most cited scientific papers published since 1990 and 1995. Dr. Altschul has served on grants committees for the National Human Genome Research Institute of the NIH and for the Medical Research Council of Canada. He has been a member of the editorial boards of Protein Sequences & Data Analysis, Gene-combis, and Genome Biology and is invited to be a keynote speaker at the Tenth Annual Conference on Intelligent Systems for Molecular Biology.

ALVES DE OLIVERA BRUNO

Bruno de Olivera Alves is Policy Advisor of European Commission Directorate General Com-

munications Networks, Content and Technology (DG CONNECT). Hi is working on policy and R&I initiatives promoting ICT innovation to address societal challenges. Before joining the European Commission he was the Head of Nike Inc.'s European Public Policy. During his time at Nike he also served as elected President of the European Federation of the Sporting Goods Industry (FESI) and Board Member of leading European think-tank "Sport & Citizenship". In 1998 he moved from the Council of Europe in Strasbourg to Brussels to join Ernst & Young and launch an advisory practice for the Technology, Communication and Entertainment (TCE) industries. He started his career in Portugal's national public television and radio broadcaster (RTP) and has 20 years' experience in international public policy having worked in Lisbon, London, Strasbourg and Brussels. Bruno holds a Diploma in European Community Law from King's College University, London.

AMMENWERTH ELSKE

Elske Ammenwerth (1970-) is professor for health informatics and head of the Institute for Health

Information Systems (iig.umit.at) at UMIT–University for Health Sciences, Medical Informatics and Technology. She is Austrian Representative within EFMI and IMIA. Dr. Elske Ammenwerth received her undergraduate education in medicine from the University of Essen in Germany, and a Doctorate in Medical Informatics from the University of Heidelberg's Institute for Medical Biometry and Informatics (1997). She also received a degree in Habilitation in Medical Informatics from the University of Health Sciences, Medical Informatics and Technology in Tirol, Austria (2005). She rose through the academic ranks and at the time of election to the College was professor of Health Informatics at the University for Health Sciences, Medical Informatics and Technology in Tirol. Professor Ammenwerth has made sustained contributions in the field of technology evaluation, and her methods have been adopted widely, in Europe, the United States and around the world. At the time of election she had more than 150 peer reviewed publications and a sustained record of funded research in electronic health records design, innovations to improve patient safety, evaluation of the impact of clinical information systems, and the use of inpatient, home and mobile monitoring. She has been a member of scientific program committees for a wide range of international health informatics conferences, and served as managing editor of

the IMIA Yearbook of Medical Informatics.

ANCKER S. JESSICA

Jessica S. Ancker, PhD, MPH, FACMI, is Associate Professor of Healthcare Policy and Research, Healthcare Policy and Research, Weill Cornell Medical College (2015-present); Assistant Professor of Public Health in Pediatrics, Pediatrics, Weill Cornell Medical College (2009- 2014); Her interesting areas are: Communication and access to information are critical to healthcare. Communication and information access are often provided by health information technology (IT) such as electronic health records, personal health records, and patient portals. Her research focuses on the use of health IT by patients and providers, effects on comprehension and decisions, and effects on healthcare quality. One of her primary areas of her focus is the relationship between IT design, cognition, and decision-making. She is keenly interested in good information design and its potential for enabling better health literacy, numeracy, and communication. She published some of the

foundational articles on health numeracy and risk communication through graphics and conducted experiments showing that effective information design reduced differences between high- and low-numeracy patients. Currently she is involved in a collaboration to develop novel passive sensor systems in smart phones and process/ present the data in a way that is informative to patients and their healthcare providers. Her work is focused on patient decisions, and she has been involved in a large-scale project showing that physician prescribing decisions can be strongly influenced by effective information design. She is extremely interested in how national policies guaranteeing patients access to their own electronic data might affect healthcare and health outcomes. She has conducted statewide and nationwide surveys to examine adoption of these new technologies, as well as smaller-scale interview studies to explore the serious challenges chronically ill patients face in managing their own medical information. She also analyzed EHR data to track the socioeconomic disparities in information access that are typically related to the digital divide. She also focused her investigations on health IT evaluation studies, because by her opinion study implementation successes and failures during the ongoing transformation of US healthcare by electronic health records and other technologies and she used qualitative and quantitative methods to this issue. Clinical

EHR data to develop novel measures to capture differences in how physicians were using the same technology, and linked these usage differences to differences in healthcare quality. She is the program director for Weill Cornell's health analytics certificate program and teach the master's level research methods course in health informatics. She also direct the biostatistics/epidemiology module for medical students and guest-lecture on statistical literacy for journalists. She is author and co-author of a lot of publications in peer reviewed journals and other publications. Also, she lead or were involved in a lot research projects.

ANDERSEN STIG KJAER

Stig Kjær Andersen (1947-) is an associate professor in Medical informatics at Department of Health Science and Technology, Aalborg University, Denmark, where he is also currently Deputy Head of Department. He graduated in 1974 from Aarhus University, Denmark, as a MSc. in Physics with Computer Science as a subsidiary subject. He also received his PhD degree

in physics here in 1977 for his thesis about standing X-ray waves. Until 1980 he has worked as a solid state physicist at Cornell University, US, at Aarhus University, and at CERN, Geneva. Between 1980 and 1984, he joined the Danish cement industry as a materials scientist. Since 1984 he has been employed at Aalborg University; from 1987 as an associate professor at Department of Medical Informatics and Image Analysis (which was renamed Department of Health Science and Technology in 2002). He served here as Head of Department for 6 years (1993-1999), and since 2010 he has been appointed Deputy Head of Department. At Aalborg University his original research area at Department of Medical Informatics and Image Analysis was medical knowledge-based systems, and he was part of the EU Esprit project: An EMG expert assistant. In 1989-1990 he stayed as a visiting fellow at Medical Computer Science, Stanford University, California. Back at Aalborg University, he became part of the Medical Informatics Research Group and was a member of the ODIN team (1992-1998), a research group focusing on methods for construction and application of model-based (intentional) systems for decision support, planning and control with uncertainty. He is a co-founder (1989) of HUGIN; a software company developing software for building Bayesian networks. From 1997 his research activities and teaching have been focused on Medical Informatics/Health Informatics. He has been

the project leader of two medical informatics projects under the EU 4th Framework Program (HC-Rema and PatMan.) He has been the representative for the Danish Universities at the board of the The Danish Center for Evaluation and Health Technology Assessment He has taken the initiative (2004) in establishing a national network, "SundhedsITnet"– a network for it-based health services, and has been the chairman of a scientific subgroup in this organization. He has been member of standing technical committee in International Health Technology Standard Definition Organization (2009-2011). From 1999 he has served as EFMI Council member and 2009-2015 as EFMI Executive Officer and member of the EFMI Board. He has been SPC chair of MIE 2008, held in Gothenburg. He is a core member of the e-Health Observatory (a yearly national conference on Electronic Health Record since 1998). He was the initiator (1996) of Virtual Center for Health Informatics, V-CHI, a cross-disciplinary organization for research and development within health informatics. He has been the managing director of V-CHI from the start in 1996 until 2010. Since 2011 he has headed the research group Tamics (Terminology and Models in Clinical Information Systems). His current research is on modeling complex clinical information systems, the Electronic Health Record and its implementation and the related human-computer interactions, terminologies, knowledge disseminations and

system development. He is author and co-author on more than 150 publications in indexed journals.

ANDERSON G. JAMES

James Anderson, PhD, earned a BES in Chemical Engineering, MSE in Operations Research and Industrial Engineering, MAT in Chemistry and Mathematics, and a PhD in Education and Sociology from the Johns Hopkins University. He is the former Director of the Division of Engineering of the Evening College at Johns Hopkins University. At Purdue, he has served as Assistant Dean for Analytical Studies of the School of Humanities, Social Sciences and Education (1975-1978), Associate Director of the Health Services Research Training Program supported by the U.S. Public Health Service (1971-1976), Director of the Social Research Institute (1995-1998), and Co-Director of the Rural Center for AIDS/STD Prevention (1994-2006). Professor Anderson is the author/co-author of five books including Evaluating the Organizational Impact of Health Care Information Systems, Springer, 2005; Ethics and Information Technology: A Case-Based Approach to a Health Care

System in Transition, Springer, 2002; Evaluating Health Care Information Systems: Methods and Applications, Sage, 1994 and Use and Impact of Computers in Clinical Medicine, Invited Volume in the Computers and Medicine Series, Springer-Verlag Publishing Co., New York, Berlin, Heidelberg, Tokyo, 1987, and Bureaucracy in Education, Johns Hopkins Press, 1968. His work has been recognized by outstanding research awards by the American Association for Medical Systems and Informatics (1983), the Association of American Medical Colleges (1988), the Alliance for Continuing Medical Education (1995), and the American Medical Informatics Association (1997) He was elected Fellow American College of Medical Informatics, 2003 awarded the Seeds of Excellence Award for Contributions to the Research Enterprise at Purdue University, 2005 and Elected Fellow Center for Education and Research in Information Assurance and Security (CERIAS), 2009. He has also been a member of international delegations on medical informatics to China (1988), Hungary (1995), and Russia (1995). He currently serves as Associate Editor of the International Journal of Reliable and Quality E-Healthcare.

ANDERSON JOHN

John Anderson (1921-2002), MD, MA BSc, MRCP, FRCP, was professor of medicine at King's College Hospital Medical School. He was essentially an innovator and pioneered developments in metabolic medicine, medical education and medical computing. His background was in history, having obtained a BA with honours in modern history at Durham University in 1942. After the war he took up the opportunity of free education to armed services' survivors to read medicine at Durham, and graduated MB BS with honours in 1950, also obtaining his MA in modern history in the same year. After house officer appointments at the Royal Victoria Infirmary in Newcastle-upon-Tyne, he was awarded an MRC scholarship in physiology and obtained a BSc with honours in 1952. An MRC research fellowship in Charles Dent's [Munk's Roll, Vol.VII, p.148] department at University College London followed, working on calcium metabolism. They described the now well-known use of steroids in the differential diagnosis of hypercalcaemia. In 1956 he returned to Durham as first assistant in the department of medicine and, in the same

year, obtained his MD with a thesis using a new technique of phosphate clearance by the kidney. In the following year he was awarded a Rockefeller travelling fellowship to Harvard University and carried out studies on sodium transport in the isolated toad bladder at Massachusetts General Hospital, which he continued to research throughout his subsequent career. He was present at Harvard when 'real time' was discovered, a concept which revolutionised the development of computer technology, and which he realised could be applied to medical records with enormous advantage. He returned to Durham in 1957 to assume direction of the artificial kidney unit there. In 1959 he went to King's as senior lecturer in medicine and consultant in endocrine and metabolic medicine. He was a key figure in the development of renal medicine at King's during the 1960s when the first acute dialyses were performed. He established and directed the South East region artificial kidney unit at this time, which subsequently became based at Dulwich Hospital. He also set up the first hypertension clinic in London. In 1964 he published, with Sidney Osbourne, the results of his noteworthy and courageous research, the world's first in-vivo neutron activation analysis. At the Atomic Energy Establishment (Harwell) they had both undergone neutron bombardment and demonstrated that this could be used to calculate the quantities of key elements such as sodium and calcium present

in the whole body during life. Previous measurements had only been able to be obtained from the ash of cadavers. In 1965 he was appointed to the newly established chair in medicine at King's College Hospital Medical School. Although he continued to research in sodium transport and other metabolic projects, his main focus shifted to medical education and medical computing. In medical education, he reorganised the old curriculum, replacing the existing lecture courses with systems-based topic teaching. These integrated clinical subjects with basic medical sciences to illustrate and explain disease. These ideas have now become established throughout the country on the recommendation of the GMC. Between 1967 and 1970, with the support of the Department of Health, he pioneered the development of computerised medical record keeping at King's. Although there were multiple difficulties, a useable record was achieved, together with a system of automated discharge summaries from the record to general practitioners, which eliminated the usual delays. Unfortunately the system was too slow, cumbersome and expensive for wider implementation and was not continued. In 1969, he became a fellow of the British Computer Society and chairman of its medical specialist group. He continued to publish and lecture on informatics and electronic medical records throughout the rest of his career. Generations of students will remember his

teaching and the way he said 'compuer'. He would be gratified to learn that technological advances have at last enabled his ideas to become a reality at King's, 30 years later. The price of being a visionary is that recognition tends to come too late!. He has been elected as Honorary Fellow of European Federation for Medical Informatics (FEFMI) in 1985.

ANDERSON SUSAN

Susan Anderson is Alberta's eHealth Strategy Acting Assistant Deputy Minister and Chief Information Officer, Health Information Technology & Systems Division, Alberta Health. Susan Anderson is the acting ADM and CIO for Alberta Health Ministry. From eHealth perspective, Susan's portfolio includes Alberta Netcare EHR initiatives, Electronic Medical Record Program and Alberta's Consumer Health and Personal Health Portal Program. Susan has been working within the Ministry for the last five years. Previously, she has worked in both public and private sector organizations with healthcare informatics focus over the last 20 years, at the local

and national level. Before transitioning to the healthcare sector, Susan worked internationally in advanced process automation to improve productivity across multiple industry sectors: oil & gas, manufacturing, energy and aerospace sectors.

ANDREASEN STEEN

Steen Andreasen is Head of MMDS and Professor at Aalborg University, Department. of Health Science and Technology. Since 1986 Steen Andreassen has been working on the development of four medical decision support systems, all of which have reached the stage of clinical testing. The decision support systems are based on model of physiology and pathophysiology and formal methods like decision theory are used to arrive at decisions. He has been system architect on MUNIN, a system for diagnosing neuromuscular disorders, and on DIAS, a system for advising on insulin dose adjustment in type I diabetes patients. He is coordinator for a four-year (2000-2004) EU-funded project TREAT. The goal of this project is to provide advice on antibiotic therapy for severe infections. He is leading a four-year (1999-2003) project

"Model-Based Medical Decision Support Systems" funded by the IT-Committee under the Danish Research Councils. This project also includes work on the decision support system INVENT for assessment of the respiratory and metabolic status of several groups of patients (circulatory problems, postoperative hypoxemia, acid/base disturbances). He was President of the European Society for Artificial Intelligence in Medicine. Vice president of the Danish Society for Biomedical Engineering. Chairman of the symposium on Computers in Diabetes, Israel (CID 2000). Chairman of the conference Artificial Intelligence in Medicine, Europe (AIMDM'99), Aalborg. Chairman of the symposium on Computers in Diabetes, Barcelona (CID 98). Chairman of the Scientific Program Committee of the 8th Nordic Meeting on Medical and Biological Engineering, Aalborg. He was appointed Senior Visiting Fellow at City University, London in 1992 and Honorary research award from "Civilingeniør A. R. Angelo's legat" in 1985.

ANDREASSON MARTIN

Martin Andreasson is Rapporteur for Committee of the regions on the m-health green paper at Committee of the Regions, European Union. Martin Andreasson is councilor in Region Vastra Gotaland, Sweden. From this position he leads the work to replace the current healthcare information systems. At the national level he is chairman of the board of Inera, which coordinates all the county councils joint e-health activities. Mr Andreasson is also head of the e-governing committee in the Swedish Association of Local and Regional Authorities. When the EU commission issued the green paper on m-health Mr Andreasson was appointed rapporteur on the topic for the Committee of Regions.

ANTONIS FRIGAS

Frigas Antonis, named as Entrepreneur by day, software engineer by night. He co-founded SQLearn in 2006, a company that specializes in the provision of integrated e-learning solutions and is the leader of the Greek e-learning services market. He founded beeherd in 2010, a company that specializes in mobile and tablet application development. He earned PhD in risk estimation algorithms, image analysis/pattern recognition techniques. He published several scientific papers in international indexed journals on the subject of mammogram analysis and microcalcification detection. He designed and developed a system for Breast Ca early detection based on the combination of data from the patient's family and personal medical history as well as findings from the mammogram analysis. and the system's patient record module ported to the iPhone.

ANTONIS P. JOSSIF

Antonis P. Jossif (1954-), MD, FAAP, FACC, Pediatric Cardiologist, was born in Cyprus. He earned his medical degree from the University of Athens in 1980. After a flexible training rotation in Cyprus and Greece, he trained in Pediatrics at St. Vincent's Hospital and Medical Center of New York in New York, NY (1984-1987) and then Pediatric Cardiology at the SUNY Health Science Center at Syracuse, NY (1987-1989). He as Chief Resident of Pediatrics at St. Vincent's Hospital and Medical Center of New York. He was Board Certified in Pediatrics in 1988 and Pediatric Cardiology in 1991 and recertified in both boards in 1998. He was elected as Fellow of the American Academy of Pediatrics and of the American College of Cardiology and has been member of the committee for continuing medical education of the Cyprus Pediatric Society. He is a senior lecturer at the Medical School of St Georges University at the University of Nicosia and special scientist at the department of computer science of the University of Cyprus. He is a member of the EFMI Council as Cyprus national representative and Scientific Program Commit-

tee of the European Federation for Medical informatics. He was founding member and Vice-president and President for several years of the Cyprus Society of Medical Informatics.

ARENSON L. RONALD
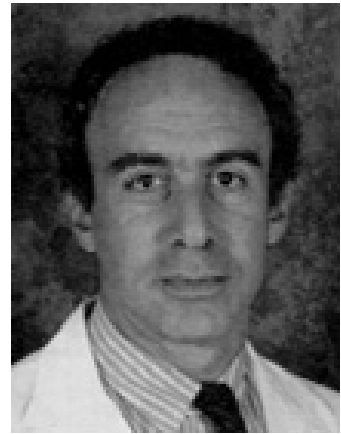
Ronald L. Arenson, MD, FACMI, is a Professor of Radiology at the University of Pennsylvania and Associate Chairman for Clinical Services. Dr. Arenson developed a radiology information system at the University of Pennsylvania which has been widely recognized. Most recently he has concentrated on image management systems including fiber optic networks and satellite transmission and has developed new forms of financial systems for use in a medical setting.

ARGUELLO SEQUERA OSMAN DE JESUS

Osmán de Jesús Argüello Sequera was the first Venezuelan physician in specialize in the area of medical Informatics in his country. He was the founder, along with a multidisciplinary team, of the Venezuelan Association of Health Informatics, which is currently its president. He is a great promoter of this area in the universities of the West and center of his country as well as in universities and centers of higher education in this area, with participating in forums, conferences and academic activities. He think the first information system for health institutions public from state (Zulia) together with some programmers, being the first estadal information systems in Venezuela, He is the pioneer of the creation of such systems in their country, achieving multiply this system in a second state (Tachira) of Venezuela. He is a member of IMIA since 2004 and member of IMIA LAC since 2007 and he was treasurer during the period 2010-2013, He made the first structure to make the association a self-sustaining organization in time, as part of its activities. He has advised institutions of Public Health and Private as well as also the Ministry of Health of his country, and was supported by scientific institutions as FUNDACITE, to help and support Informatica Medica projects in Venezuela.

ARONSKY DOMINIK

Dominik Aronsky, MD, PhD, FACMI, is the Chief Technology Officer and a member of the Board of Directors of Clinerion. His expertise and interests include the development, implementation, and evaluation of clinical information systems with a special emphasis on clinical decision support system, knowledge management, and the application of artificial intelligence to support real-time patient care.

ARONSON R. ALAN

Alan "Lan" R. Aronson, PhD, FACMI, received his bachelor's degree in mathematics magna cum laude from the University of Washington in Seattle, a master's degree in mathematics, and both master's and PhD degrees in computer science from the University of Maryland. He has been a computer scientist at the National Library of Medicine's (NLM) Lister Hill National Center for Biomedical Communications since 1988. In a highly productive research program, he has developed a broad array of applications that use the Metathesaurus and other UMLS (Unified Medical Language System) knowledge components. Among these are MetaMap, which is a program that automatically maps text to concepts in the Metathesaurus, and a Medical Text Indexer System, which produces automated MeSH indexing of meeting abstracts and suggests appropriate MeSH headings to NLM's MEDLINE indexers. He also developed a Natural Language Processing (NLP) subset

tag that has been incorporated into the Metathesaurus to assist NLP researchers. Dr. Aronson's innovations have had on the productivity of other researchers, and the utility of NLM's global information services.

ARRIBAS SALVADOR

Salvador Arribas, MD, PhD, graduated at University of Madrid. He received also his PhD in Computer Science at the Technical University in Madrid in the year 1980 where he was Professor of Medical Informatics and Artificial Intelligence. Also, he worked as Professor of Stactistics (1970-2005) at Hospital La Paz and Data processing manager at Hospital La Paz (Madrid) from 1970 to 1983. Professor Arribas was director of APIS (Association pour la Promotion d'Ínformatique de la Santè) (1979-1981) and Vice-president of APIS (1981-1983). He is one of the founders of the Spanish Society of Health Informatics. Actually he is member of the Board of this Society. He worked as Medical doctor at Madrid City Hall until 2001. Currently, professor Arribas is Editor-in-chief of Informática y Salud (Informatic and Health) Review - official journal of the Spanish Society

of Health Informatics. Also, he is General Secretary of Bamberg Foundation.

ARVANITIS THEODOROS

Theodoros N. Arvanitis is a professor of e-Health Innovation and Head of Research at The Institute of Digital Healthcare, WMG, at University of Warwick. He also holds the post of co-Director of the West Midlands AHSN Digital Theme. He received his RT (BSc) degree (Medical radiological technology) in 1990, from the Technological Educational Institute of Athens, Greece, and his DPh (Biomedical engineering) in 1997 from the University of Sussex, UK. His postdoctoral work at the University of Sussex included a lab director/research fellow post at the Trafford Center for Medical Research (1995) and a full-time lectureship in the School of Cognitive and Computer Sciences (1995-1998). In 1998, he joined the School of Electronic, Electrical & Computer Engineering, University of Birmingham, UK, as a full-time Lecturer (1998-2003), Senior Lecturer (2003-2007) and subsequently Reader in Biomedical Informatics, Signals

and Systems (2007-2013). His research interests span the areas of biomedical engineering, neuroimaging and health informatics. Professor Arvanitis has a substantial academic publication record (h-index= 24 with a total of 1727 citations @ scholar google. He published several books or chapters in the books and over 300 scientific or professional papers (more than 100 papers in indexed peer-reviewed journals), while he has received research funding from national (UK), European and international governmental funding agencies, charities and industry. Theo has been involved in UK (BSI) and EU (CEN) standardization work, while he has recently contributed work in various working groups of the US National Cancer Institute Cancer Biomedical Informatics Grid (CaBIG) effort. He is a Charted Engineer (CEng), Fellow of the Royal Society of Medicine (FRSM and a member of various scientific and professional groups (IET, AMIA, NYAS, RCS, ISMRM). He recently took the role of Joint Editor-in-Chief at the Digital Health open access peer-reviewed journal, published by Sage Publications, UK.

ASH JOAN

Joan Ash, PhD., MLS, MS, MBA is professor and Vice-Chair at Department of Medical Informatics and Clinical Epidemiology of School of Medicine, Oregon Health and Science University (OHSU), Portland, OR. She holds masters degrees in library science (Columbia University), health science (California State University, Northridge), and business administration (Portland State University). Her doctorate is in Systems Science: Business Administration from Portland State. She has served on the Boards of Directors of the American Medical Informatics Association, the Medical Library Association, and on NLM's Biomedical Library and Informatics Review Committee, and is an elected fellow of the American College of Medical Informatics. Her research has as its focus behavioral and social issues related to implementing clinical information systems, specifically computerized provider order entry, and the use of qualitative methods for conducting such studies. She leads a NLM funded research team with a web site at cpoe.or.

ATAGÜN SERKAN

Serkan Atagun is Project and Software Development Coordinator at Ministry of Health, Turkey. Serkan Atagün completed his Bachelors and Masters degree at Brooklyn College of City University of New York in Computer Science. His concentration is on analysis of algorithms, distributed systems and NoSQL stores. Serkan worked at Yahoo! and Ebay as a Software Developer and Architect. He lived in United States for about 13 years, then he moved to his country Turkey. For the last two year, Serkan is working at Health Ministry of Turkey as Project and Software Development Coordinator.

ATHEY BRIAN
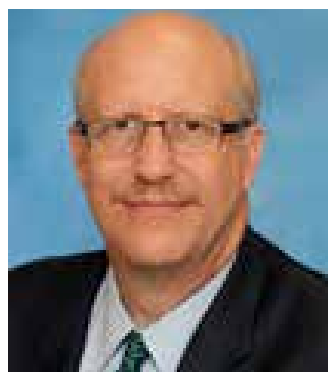
Brian D. Athey, PhD, FACMI, is Michael A. Savageau Collegiate Professor and Chair, Department of Computational Medicine and Bioinformatics, Professor of Psychiatry and Internal Medicine, University of Michigan Medical School. The Department of Computational Medicine and Bioinformatics has trained over 50 PhDs and 50 MS students in Bioinformatics since 2005. Brian is Principal investigator of the NIH funded Training Program in Bioinformatics, now entering its 9th year. Brian is actively engaged in developing a new field called psychiatric "pharmacoepigenomics". A national leader in translational biomedical informatics, Dr. Athey is the founding Principal Investigator of the NIH Roadmap National Center for Integrative Biomedical Informatics (NCIBI), one of eight NIH National Biomedical Computing Centers (2006-2012). Brian currently serves as co-founder and Chief Scientific Officer of the tranSMART Foundation, a non-profit company founded to coordinate the development of the open source

tranSMART communtiy and its code base. The tranSMART platform supports an integrated open data sharing and analytics platform used world-wide to accelerate clinical and translational research. Brian has led the National Library of Medicine (NLM) Next-Generation Internet (NGI) Visible Human Project and the DARPA Virtual Soldier Project. He is a key national leader in the NIH Clinical and Translational Scientists (CTSA) Informatics Community. Brian is a highly sought after national informatics lecturer, with over 90 papers, 165 invited talks, and numerous national advisory boards. Brian has served as a special advisor to the Defense Scinces Office (DSO), DARPA (1994-1999); and to the NIH Office of the Director (OD) and to the NIH Chief Information Officer (CIO) (2007-2010). He serves as Chair of the Scientific Advisory Board of Assurex Health, the leading company in the world offering psychiatric pharmacogenomics services. Brian was awarded a "Peace Fellowship" from the Federation of American Scientists (FAS) in 2000-2004 for his work countering Bioterrorism in the 1990s.

ATZORI WALTER

Walter Atzori is Senior Programme Officer of European Patient Forum, Belgium. Walter Atzori, is Senior Programme Officer at the European Patients Forum. He is a senior project manager with several years of experience in managing and implementing European projects, especially in the eHealth and integrated care field. As a result of this he has gathered extensive experience in areas which are critical to the successful deployment of eHealth and integrated care services such as user acceptance, patient empowerment, and identification and integration of user requirements into designing and delivering healthcare services.

AU REGINA

Regina Au is a strategic marketing consultant at BioMarketing Insight with over 20 years experience in the biotechnology, pharmaceutical, medical device, and diagnostic industries. She helps companies evaluate their technology upfront by conducting an in-depth business due diligence to de-risk the product development process. This ensures that the technology is the right

product for the right market in meeting a critical unmet need and that the market potential for the product meets the business goals of the company. She will translate these unmet needs into a product profile or specification. Ms. Au then develops marketing strategies to ensure a successful product launch. Ms. Au also serves as an advisor for the Massachusetts Technology Transfer Center Platform Meetings with entrepreneurs. Her expertise is in various therapeutic areas such as cardiology, interventional cardiology, infectious disease, immunology, surgery, gastroenterology, and pulmonology. Prior to BioMarketing Insight she worked for companies such as Merck & Co., Genzyme Corp., NMT Medical, and Radi Medical Systems (now St. Jude Medical) in various positions of increasing responsibility in marketing and sales. She had P&L responsibility in managing a number of multimillion dollar product lines and has experience in upstream and downstream marketing including strategic marketing, product development, market development, product launches, and product management. Her background includes an MBA in Marketing from the University of Connecticut, a Microbiology degree from the University of Michigan and a Masters in International Management from Thunderbird School of Global Management.

AUERBACH L. ISAAC

Isaac L. Auerbach ("Ike") (1921-) was born in Philadelphia. He received the BS degree in electrical engineering from Drexel University in 1943 and the MS. degree in applied physics from Harvard University in 1947. Upon graduation, he worked as a research engineer with the Eckert Mauchly Corporation (later to become the Univac division of the Sperry Rand Corporation) and then, from 1949 to 1957, as director of the Defense and Special Products Division of the Burroughs Corporation. In 1957, he left Burroughs to found Auerbach Associates, a computer design and consulting company, and Auerbach Corporation for Science and Technology, a holding company, in Philadelphia. Auerbach Publications, a publisher of information about computers and communication equipment, was incorporated in 1960. Mr. Auerbach served as president and chief executive officer of these companies and several others. Auerbach Consultants was founded in 1976, and he served as its president until his death. Honors bestowed on him include Fellow of the Institute of Electrical and Electronics En-

gineers (IEEE), Fellow of the Association for the Advancement of Science, Distinguished Fellow of the British Computer Society, and member of the US National Academy of Engineering and the US honor societies Tau Beta Pi, Eta Kappa Nu, and Sigma Xi. Mr. Auerbach was also a co-founder of the American Federation of Information Processing Societies (AFIPS). In addition to serving as IFIP's president, he had many other roles, including Representative of the US from 1960 to 1964, Individual Member from 1964 to 1970, and Council Member from 1966 to 1969. He was IFIP's first Honorary Member (elected in 1969) and one of the first recipients of the Silver Core award in 1974. The IFIP community last saw him participating in 1989, when he attended the General Assembly in San Francisco. He was clearly a man of great warmth and charm. In addition to his technical interests, he was also a philanthropist. In particular, he was a benefactor of the Ben-Gurion University of the Negev (Israel), serving as vice-governor of the board of governors from 1988 to the time of his death.

AUGUSTO CARLOS JUAN

Juan Carlos Augusto works at School of Science and Technology, Middlesex University United Kingdom. More than a decade of enthusiastic development in the area of Ambient Assisted Living systems have produced a good number of systems, have thought us many lessons, has shown that there are any fascinating applications which can improve the quality of life of citizens and that there are great market opportunities linked to innovation in this area. However, market uptake is slow and not many of the system have been adopted or the results have not been as optimistic as first imagined. This keynote will examine some of the issues surrounding the development of this systems and focus on methodologies and tools which can help our community to develop systems which are more fit for purpose.

B

BAGAYOKO CHEICK-OUMAR

Cheick-Oumar Bagayoko, MD, PhD, received his doctorate in medicine from the Bamako College of Medicine in 2002. He received his certificate of continuing education in Medical Computer Science from the University of Geneva in 2004, his Masters in Biomedical and Health Computer Science from the University Réné Descartes, Paris V in 2005 and his Masters in Expertise and Engineering of Health Information Systems from the "University of Aix en Provence" in 2006. He received his PhD in Medical informatics from the "University of Aix en Provence" in 2010. He is currently the Coordinator of the Francophone Africa Network for Telemedicine, head of the REIMICOM /CERTES in Mali, Resident Representative for the Health On the Net Foundation in Francophone Africa, lecturer-researcher at the Universities of Geneva and Marseille from 2004 to 2010 and senior-lecturer at the College of Medicine in Bamako. An expert in health related information and communication technologies, Dr. Bagayoko also has significant experience in coordinating and managing e-heath projects in Africa, notably through his work as Coordinator of the RAFT network, an internet-based medical education and consultation network targeting Francophone Africa. He works to make in Mali a Regional Research and Training Center in e-health and Medical Informatics (CERTES). He founded in 2006 the Mali Society of Biomedical and Health Information (SOMIBS) and is the IMIA representative. Author of more than 20 scientific publications in peer-reviewed scientific journals, his current research focuses on the use of innovative tools and ICT for improving the equity and efficiency of healthcare in developing countries. He has reviewed papers for several conferences and is in the program committees of conferences such as Rollback malaria and ICT in Africa 2002, National Strategy of ICT development 2005, JFIM, HELINA, AMIA, Yearbook of Medical Informatics etc.

BAKER MARY

Mary Baker is Immediate Past President of the European Brain Council and President of their 'Year of the Brain' project. Mary is also a member of the Strategic Advisory Board of the Human Brain Project and a member of the Commission's CONNECT Advisory Forum. Academic appointments include Associate Membership of the Health Services Research Unit, University of Oxford and Visiting Fellow within the London School of Economics (LSE) Health Centre.

BAKKEN SUZANNE

Suzanne Bakken, RN, PhD, FAAN, FACMI, is the Alumni Professor of Nursing and Professor of Biomedical Informatics at Columbia University. Following doctoral study in nursing at the University of California, San Francisco, she completed a National Library of Medicine postdoctoral fellowship in Medical Informatics at Stanford University. The goal of Dr. Bakken's program of research is to promote health and reduce health disparities in underserved populations through application of innovative informatics methods. A major focus of her current grant portfolio is visualization of healthcare data for community members, patients, clinicians, and community-based organizations.

Dr. Bakken currently directs the Center for Evidence-based Practice in the Underserved and the Reducing Health Disparities Through Informatics (RHeaDI) predoctoral and postdoctoral training program; both funded by the National Institute of Nursing Research (NINR). She also served as Principal Investigator of the AHRQ-funded Washington Heights Inwood Informatics Infrastructure for Comparative Effectiveness Research (WICER) and its follow-up study, WICER 4 U, which is focused on promoting the use of WICER infrastructure through stakeholder engagement. She has also received funding from the National Cancer Institute, National Library of Medicine, and the Health Resources and Services Administration. Dr. Bakken has published more than 200 peer-reviewed papers. In 2010, she received the Pathfinder Award from the Friends of the National Institute of Nursing Research. Prof Bakken is an elected fellow of the New York Academy of Medicine, American Academy of Nursing. She is a member of the Institute of Medicine and currently she is President of American College of Medical Informatics during period 2015 - 2016.

BAKKER R. ALBERT

Ab R. Bakker was professor of Medical Information Systems at Leiden University, The Netherlands from 1975 onwards. His main occupation there has been the development of Hospital Information System in Leiden University Hospital, named BAZIS, which served 8 university hospitals in The Netherlands, Belgium and Luxemburg and covered approximately 25,000 hospital beds. This Hospital Information System was rather successful in the 80's and 90's. Thereafter, industry took over. Professor Bakker's scientific and professional interesting fields were: development of Health Information Systems, development of Electronic Health Records and Digital Patient Data, Business Informatics, Computing in Mathematics, Natural Sciences and Engineering and Medicine. He translated with Kees Louwerse to Dutch language the IMIA Code of Ethics for Health Information Professionals. He was one of the early applied medical informaticians and also contributed to the International Medical Informatics Association (IMIA) in many ways, serving on Committees and on the IMIA Board. He served at the International Medical Informatics Association (IMIA) as Vice-President for Finance from 1992 and thereafter. He also was actively involved in the organization of IMIA meetings as Chair of SPC or Chair of Sessions. Professor Bakker also supported the early activities in the field of Nursing Informatics in the Netherlands and in Europe, working closely with a nursing informatician Ellie Plyter who was a chief in his hospital. He published more than 100 peer-reviewed scientific and professional papers in indexed journals, primarily in English. Ab R. Bakker was professor of Medical Information Systems at Leiden University, The Netherlands from 1975 onwards. His main occupation there has been the development of Hospital Information System in Leiden University Hospital, named BAZIS, which served 8 university hospitals in The Netherlands, Belgium and Luxemburg and covered approximately 25,000 hospital beds. This Hospital Information System was rather successful in the 80's and 90's. Thereafter, industry took over. Professor Bakker's scientific and professional interesting fields were: development of Health Information Systems, development of Electronic Health Records and Digital Patient Data, Business Informatics, Computing in Mathematics, Natural Sciences and Engineering and Medicine. He translated with Kees Louwerse to Dutch language the IMIA Code of Ethics for Health Information Professionals. He was one of the early applied

medical informaticians and also contributed to the International Medical Informatics Association (IMIA) in many ways, serving on Committees and on the IMIA Board. He served at the International Medical Informatics Association (IMIA) as Vice-President for Finance from 1992 and thereafter. He also was actively involved in the organization of IMIA meetings as Chair of SPC or Chair of Sessions. Professor Bakker also supported the early activities in the field of Nursing Informatics in the Netherlands and in Europe, working closely with a nursing informatician Ellie Plyter who was a chief in his hospital. He published more than 100 peer-reviewed scientific and professional papers in indexed journals, primarily in English.

BAKKER ARNOLD B.

Professor dr. Arnold B. Bakker; Professor of Work and Organizational Psychology, Erasmus University Rotterdam and Past President of EAWOP Prof.dr. Arnold B. Bakker was born on July 19, 1964 in Genemuiden, The Netherlands. Since June 2006 he is a professor of Work and Organizational Psychology, Erasmus University Rotterdam. Chair Dept. of Work and Org. Psychol-

ogy. He is teaching since 1987. This concerns teaching for 1st, 2nd, 3rd, and 4th year Psychology students from the universities of Rotterdam, Groningen and Utrecht, graduate students from the Free University of Amsterdam, graduate students from the University of Honolulu, Hawaii, USA, postdoctoral education for company doctors, insurance doctors, physiotherapists, managers, and Occupational Health Professionals ("A&O-deskundigen"), and for PhD students (also within the research school Psychology and Health). From Jan 2005 to Jun 2006 Bakkerwas professor of Positive Organizational Behavior ('Bijzondere Leerstoel'), Utrecht University; sponsored by Right Management Consultants. Member of the Management Team ('Dagelijks Bestuur'), Dept. of Social & Organizational Psychology. From Sept 2000 to Jan 2005 he was associate professor, Utrecht University (tenured term, 1.0 fte). Responsibilities: Daily supervision of the Work, Stress and Health group (PAGO) within the Dept. of Social & Organizational Psychology (representing Schaufeli); Chairman at work meetings; Member 'Faculteitsraad' (2003-2006); Member "Management Overleg". Supervision of graduate (PhD), bachelor and master students; Teaching bachelor and master students (including course on Personnel Psychology and Human Resource Management); Research on positive organizational behavior, job stress, burnout, work engagement, crossover/emotional contagion, work-home

balance, flow, and organizational performance.

BALAS ANDREW

Andrew Balas, MD, PhD, serves as Dean and Professor at Georgia Regents University, Augusta, GA. He obtained degrees in medicine (MD), medical informatics (PhD), and applied mathematics (MS). His expertise includes policy development to encourage innovative biomedical research responsive to societal needs and application of advanced digital technologies for transferring research to practice. He is member of the Board of Directors of the Friends of the National Library of Medicine and also the Allied Health Research Institute. He is an elected member of the American College of Medical Informatics and the European Academy of Sciences and Arts. Andrew Balas has been effective in taking on the status quo, achieving breakthrough performance improvements and fighting for better public access to scientific discoveries. His studies about delay and waste in the transfer of research results to health care are often cited as reference points in translational research initiatives. As a Congressional Fellow working for the Public

Health and Safety Subcommittee of the United States Senate, he drafted the Healthcare Quality Enhancement Act of 1999 that, among others, first achieved government action on reducing errors in health care and was signed into federal law (Dec. 6, 1999). Recently, he published an article on measuring the innovation performance of universities. His leadership emphasizes positive response to community needs, teamwork and measurable improvement. During six years of his previous service as Dean, the College of Health Sciences achieved many successes at Old Dominion University in Norfolk, Virginia (e.g., double digit increases in enrollment, launching of new programs, tenfold increase in externally funded research; multimillion dollar fundraising, new R&D partnerships with industry). Previously, he served as Dean of the School of Public Health in St. Louis, Director of the Missouri European Union Center and Weil Distinguished Professor of Health Policy at the University of Missouri. His academic credentials include over 100 publications, externally funded research in excess of 10 million dollar and publications that cumulatively attracted thousands of citations.

BALINA SIGNE

Signe Balina is President of Latvian Information and Communications Technology Association, and since 2009 a former Special Assignments Minister for Electronic Government Affairs in Latvia Dr. Balina is the president of LIKTA–a professional association representing ICT industry and professionals, research and educational institutions. In 2002 Dr. Balina received her PhD in Economics and continues to pursue her carer as a professor at the University of Latvia. Dr. Balina also chairs the Board of IT Competence Centre which promotes long-term cooperation between ICT enterprises and science institutions in fields of of natural language technologies and business process analyses technologies.

BALL J. MARION

Marion J.Ball (1940-) is Senior Advisor, Research Industry Specialist, Healthcare Informatics, IBM Research. She is Professor Emerita, Johns Hopkins University School of Nursing and Affiliate Professor, Division of Health Sciences Informatics, Johns Hopkins School of Medicine. Dr. Marion Ball is an international innovator, educator, author, and leader with over thirty-five years of experience in the healthcare IT community. Dr. Ball is a member of the Institute of Medicine (IOM) and serves on the National Library of Medicine's Board of Regents. She is a founding board member of the Health on the Net (HON). She has served on the American Medical Informatics Association (AMIA) Board, and has served as President of IMIA - the International Medical Informatics Association. Dr. Ball has twice served on the board of the College of Health Information Management Executives (CHIME). In 2004, she was elected to the Health Information Management Systems Society (HIMSS) Board, where she served for three years. She served from 2003-2007 as a member of the American Health Information Management Association/

Foundation of Record Education (AHIMA/FORE) Board. From 2007-2009, she served on the Advisory Council for the Department of Biomedical Informatics at the University of Pittsburgh, and most recently has been invited to serve on the International Advisory Committee for the China Hospital Information Management Association (CHIMA). She is a visionary in the field of health informatics and has worked in the federal, academic, and private sectors, and has published some of the core texts in the field of health informatics. Two of her books published in 2004 are entitled Health Information Management Systems: Cases, Strategies, and Solutions (Third Edition) and Consumer Informatics: Applications and Strategies in Cyber Health Care. In addition, Consumer Informatics received the Book-of-the-Year Award at the HIMSS National Convention in Dallas, Texas in February 2005. In January 2006, she published, Introduction to Nursing Informatics. In 2007, she was a coeditor of Aspects of Electronic Health Record Systems in the series entitled Health Informatics and the 4th Edition of Nursing Informatics: Where Technology and Caring Meet was published January 2011. There are now over 60 volumes in the series published by Springer-Verlag. Previous editions of her nursing books have been translated into Portuguese and Chinese, Japanese, German, Korean, and Polish. Dr. Ball has received numerous academic, national and international awards for her contributions to the field of health informatics. She is the recipient of such coveted awards as the Morris F. Collen Lifetime Achievement Award from ACMI/AMIA, the Award of Excellence - a lifetime achievement award from IMIA, and the Distinguished Service Award from AHIMA. Dr. Ball was selected as one of the 50 most influential IT professionals by HIMSS over the last 50 years. This was documented in the HIMSS publication HIMSS 50 in 50, debuted at the HIMSS Annual 50th Anniversary Meeting in February 2011. She is an honorary member of Sigma Theta Tau International and was inducted as an Honorary Fellow into the American Academy of Nursing (AAN). Most recently, she was invited to serve as an International Advisor to the Board of the China Hospital Information Management Association (CHIMA) and was given the Lifetime Membership Award by HIMSS for 30 years of service and major contributions to the field of health informatics. Dr. Ball is Professor Emerita at Johns Hopkins University and affiliate Professor in the Department of Information Systems at the University of Maryland Baltimore County. As an educator and speaker, Dr. Ball has led workshops and lectured on various aspects of health informatics worldwide. She has dedicated much of her career to the field of Nursing Informatics and is a founding member of the TIGER (Technology Informatics Guiding Education Reform) Foundation initiative which addresses the importance of integrating the most current enabling technologies into the nursing profession from bedside practitioners to researchers. TIGER has moved into the inter-disciplinary environment and as of 2014 is part of the HIMSS Foundation. Most recently, she has concentrated on patient safety, process engineering, and change management, and clinical point of care initiatives in healthcare. Dr. Ball works both nationally and internationally on patient safety, nursing, the electronic health record, and point of care initiatives. Dr. Ball has written and edited 27 books and over 200 journal publications and book chapters.

BANKS DOUGLAS

Douglas Banks is Associate Vice President for Economic Development, University of Massachusetts President's Office. Doug is associate vice president for economic development for the five-campus University of Massachusetts system, serving on the staff of President Robert L. Caret. In this position, Doug is responsible for promoting and developing strategic partnerships among the campuses and between state and federal gov-

ernment, business and industry, and other public and private institutions of higher education. Focus areas include clean energy, life sciences, defense technologies and Cybersecurity, and entrepreneurship. In addition, he manages the President's Science & Technology Initiatives Fund, an inter-campus grant program to strengthen the university's R&D base and strengthen industry relationships. He co-chairs a national working group launching the Innovation & Economic Prosperity Awards program for the Commission on Innovation, Competitiveness, and Economic Prosperity of the Association for Public and Land-grant Universities. Doug joined his alma mater following a career in technology and business journalism, most recently serving as publisher and editor of Mass High Tech, an information services company that includes a daily news web site, a biweekly print publication, e-newsletters and events that spotlight technology entrepreneurship, early-stage companies and emerging technologies in New England. In that role, Doug launched multiple new web sites and new industry-specific newsletters, winning regional and national awards.

BANNISTER WINDHAM SUSAN

Susan Windham-Bannister is President and CEO, Massachusetts Life Sciences Center, USA (appointed in 2008 as the first president and CEO). The Center is a quasi-public entity created by the Legislature in 2006 to promote life sciences in Massachusetts. The Center is making strategic investments in our life sciences workforce and to cultivate innovation at institutions whose research, development and commercialization of therapies, products and cures hold great promise for improving and saving lives. Susan is a former managing vice president of the Commercial Strategy Group for Abt Bio-Pharma Solutions Inc. where she managed a research-based consulting business that provides services to firms in the life sciences - health care delivery, pharmaceuticals, biotech, diagnostics, devices and healthcare information technology. She is co-author of Competitive Strategy for Health Care Organizations and Medicaid and Other Experiments in State Health Policy. She has written several articles on competition

in today's health care marketplace.

BARAHONA PEDRO
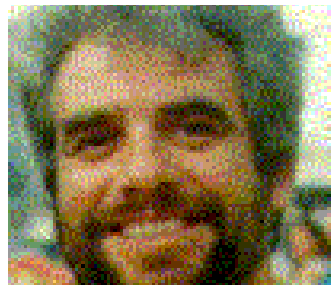
Pedro Barahona is Professor at the Department of Informatics, Faculty of Science and Technology, New University of Lisbon. He has been President of this department since 1999 to 2006 and is currently the Coordinator of the Master's programs in this department, the Master in Computer Engineering and a Masters European Computational Logic. Since 2008, he is head of CENTRIA, Artificial Intelligence Center, hosted in this department. He began his academic career in 1978, after completing a degree in Electrical Engineering from Instituto Superior Técnico (July 1977), and meanwhile obtained a master's degree and PhD in Computer Science from the University of Manchester (October 1984 and June 1987 respectively). Got Aggregation in Computing (Symbolic Systems of Decision and Information) in December 2002. In his main interest in research is part of the Constraint Programming, and more generally in Artificial Intelligence, in particular in applications to Bioinformatic and Artificial Intelligence to medi-

cine, having been regularly present the results of his research at various conferences and scientific publications in these areas. To support his research, he has participated and been responsible for several projects, national and international, carried out in research centers and scientific associations that he is member of. He has organized and collaborated in the organization of various scientific events. In his educational activity he has taught several courses both at undergraduate or the graduate level, particularly in the Masters in Computer Science and Applied Artificial Intelligence.

BARBER BARRY

Barry Barber (1933-) was born in Hove, England, and educated at the Friends (Quaker) School Saffron Walden and Christ's College Cambridge. He studied Mathematics and Physics taking the theoretical option. He was then appointed to Medical Physics Department of The (now Royal) London Hospital and during the next 11 ½ years he learned the professional activities of a medical physicist under the tutelage of Dr Lloyd Kemp. He specialized in precision radiation dosimetry in the course of which he earned his PhD from the University of London. He started exploring the opportunities for using some of the Operational Research techniques developed during WWII to improve the organization of the hospital. He collaborated with William (Bud) Abbott from the Finance Department to make the case for the hospital's purchase of an Elliott 803 computer in 1964 to enable the hospital's finance systems to progress as well as to provide a tool for scientific and medical research. He became the Director of the Operational Research Unit in 1966 and remained at the hospital until the NHS re-organization of 1974 took him to the North East Thames Regional Health Authority as Chief Management Scientist. Meanwhile, he looked after the scientific and medical research activities that could be developed, mainly on a "do it yourself" basis. The computer had a immediate access store of 8k of 39 bit words with a backing store of 35mm magnetic film and a 256µsec cycle time. Unknown to us at the time the fast 5-hole paper tape readers and printers must have been based on the technologies developed at Bletchley Park. Three years of exploration of the opportunities provided by the computer was enough for us to outline ideas for a ward and department based Patient Administration for the hospital. This fitted in with the Department of Health's of "Experimental Real-Time Computer Program" and led to the implementation of the first Patient Administration System in the UK at The London Hospital using a fast Univac, 418/III, message switching system installed in March 1971. The system was developed in modules by hospital staff overseen and directed by a Computer Executive including a Professor of Medicine, Robert Cohen, a senior nurse, Maureen Scholes, and a senior Administrator, Michael Fairey and subsequently David Kenny. Interestingly, the software was run on three different computer platforms and finally de-commissioned after an amazing 36 years. During this time Barry Barber was closely involved with the Institute of Physics, the Operational Research Society and the British Computer Society. He was a founder member of the EFMI, sometime Secretary, Vice President and President as well as Vice President (Europe) of the IMIA and chairman of IMIA Working Group 4 (Data Protection and Security). After leaving The London Hospital his initial focus was on the use of Operational Research techniques to assist with the development of the 5-year Plans for Health Care Services across the Region. Subsequently this developed into the need to address the issues of Data Protection and Security across the Region and for his last decade with the NHS he provided a national focus for this work after being seconded to the newly formed NHS Information Management Center in Birmingham. Naturally, Data Security led directly into issues of standardization and Patient Safety. This move provided opportunities

for sharing NHS activities with other European countries in various EU Data Security projects such as SEISMED, ISHTAR, EUROMED-ETS, MEDSEC - an involvement which lasted several years after retirement from the NHS.

BARBER NICK

Nick Barber holds a PhD in clinical pharmacology, and is currently joint Chair of the Center for Medication Safety and Service Quality, School of Pharmacy, University of London. Professor Barber's areas of research focus on the good and the bad with respect to medicines, society and the individual, and the role that pharmacy plays. The major portion of this work is in the area of the risks of using medicines incorrectly–by patients (non adherence) or by professionals (medication errors). Professor Barber is particularly interested in the assessment of the use of technology to reduce errors, and in the development and evaluation of services to reduce errors and to improve adherence.

BAR-ILAN JUDIT

Judit Bar-Ilan is professor at the Department of Information Science of Bar-Ilan University in Israel. She received her PhD in computer science from the Hebrew University of Jerusalem and started her research in information science in the mid-1990s at the School of Library, Archive and Information Studies of the Hebrew University of Jerusalem. She moved to the Department of Information Science at Bar-Ilan University in 2002. She is a member of the editorial boards of JASIST, Scientometrics, Journal of Informetrics, PLoS ONE, Cybermetrics, and Online Information Review. Her areas of interest include: informetrics, information retrieval, Internet research, information behavior and usability.

BARNES T. JUSTIN

Justin T. Barnes, BA, BS, FHIMSS, is a vice president with Greenway Medical Technologies and manages Greenway's industry, government, and international affairs. He is a health care software executive and public policy advisor for Greenway. In addition, Mr. Barnes is Chair-

man Emeritus of the Healthcare Information and Management Systems Society Electronic Health Record (EHR) Association as well as Co-Chairman of the Accountable Care Community of Practice; he assists both organizations with industry strategy and leadership. He is a regular public speaker on issues relating to value-based medicine, accountable care and accountable care organizations, interoperability, standards, EHR meaningful use, consumerism, health information technology innovation, health information exchanges, patient safety, patient engagement, quality, health care privacy, security, confidentiality, and the globalization of health care. Mr. Barnes has been published in more than 650 journals, magazines, and broadcast media outlets relating to national leadership of health information technology and electronic health records.

BARNETT G. OCTO

Dr. Octo G. Barnett (1930-) is the Senior Scientific Director at the LCS and a professor of Medicine at Harvard Medical School. His current projects include DXplain®, Primary Care Office Insite (PCOI) and Pulmonary

Artery Catheter Waveform Interpretation Tool (PACath). In 1970, health IT pioneer Dr. Octo Barnett at Harvard/MGH wrote his "Health IT Ten Commandments" (from Collen's "A history of Medical Informatics in the United States, 1950-1990"): a) Thou shall know what you want to do; b) Thou shall construct modular systems–given chaotic nature of hospitals; c) Thou shall build a computer system that can evolve in a graceful fashion; d) Thou shall build a system that allows easy and rapid programming development and modification; e) Thou shall build a system that has consistently rapid response time and is easy for the non-computernik to use; f) Thou shall have duplicate hardware systems; g) Thou shall build and implement your system in a joint effort with real users in a real situation with real problems; h) Thou shall be concerned with realities of the cost and projected benefit of the computer system; i) Innovation in computer technology is not enough; there must be a commitment to the potentials of radical change in other aspects of healthcare delivery, particularly those having to do with organization and manpower utilization; j). Be optimistic about the future, supportive of good work that is being done, passionate in your commitment, but always guided by a fundamental skepticism.

BARRON MIKE

Mike Baron is President and Chief Executive Officer of Newfoundland and Labrador Center for Health Information (NLCHI) at St. John's NL, Canada. He earned Bachelor of Commerce at Memorial University and Masters in Business Administration at Memorial University. He has 29 years experience in health information management and technology. He was actively included in next professional Associations and Committees: as Board member and President-Elect for COACH, Canada's Health Informatics Association; Chair, Conference of Deputy Ministers of Health Technical Advisory Committee on Health System Use (national initiative), and he served as the province's representative on Health Canada's Electronic Health Records Working Group, the Canada Health Infoway EHR Standards Steering Committee, and the Health Infostructure Atlantic EHR Steering Committee. His Certifications and Achievements are: Governance Program of Queens University; Public Executive Program, Queens University; Healthcare IT Innovators Award (2005), Healthcare Informatics magazine (US) for contributions

toward implementation of Canada's first provincial client registry system specifically designed for electronic health record development. Also, Mike Baron was Director (past) of Newfoundland and Labrador Center for Health Information ad Director of Newfoundland and Labrador Center for Applied Health Research and Led provincial information management technology initiatives such as the Provincial Diagnostic Imaging/Picture Archiving Communication Systems Project, the Provincial Pharmacy Network Project, Primary Health Care Information Enhancement Project, and the overall strategy for development of the provincial electronic health record.

BARROW ABIGAIL

Abigail Barrow is the Founding Director of the Massachusetts Technology Transfer Center (MTTC) which is housed in CVIP at the UMass president's office. In this role she supports start-up formation and other systemwide entrepreneurship activities at UMass. She is also responsible

for the overall management of the MTTC and the development of its programs. Prior to joining the MTTC, she served as managing director of William J. von Liebig Center at the University of California San Diego (UCSD). The von Liebig Center was created in 2001 to support the commercialization of research being performed in the UCSD Jacobs School of Engineering. Abigail worked in a variety of roles at UCSD CONNECT from 1990 to 2001. At CONNECT, she developed and expanded many of its programs to support early-stage company formation and technology commercialization. The CONNECT program is internationally recognized and has been successfully replicated in many other regions around the world. Abigail is on the board of the National Collegiate Inventors and Innovators Alliance (NCIIA) and on the scientific advisory board of Norway's Simula Research Laboratory. She received her PhD from the Science Studies Unit and a BSc in Mechanical Engineering from the University of Edinburgh.

BASHSHUR RASHID
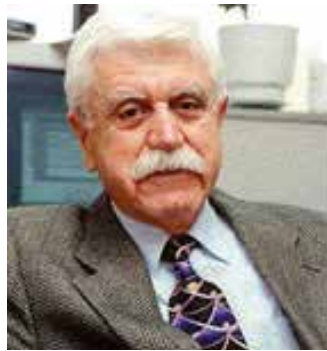
Rashid Bashshur, PhD (USA) is Professor Emeritus, Department of Health Management and Policy, University of Michigan School of Public Health; Director, UMH Telemedicine Core; President Emeritus, American Telemedicine Association. Rashid Bashshur is Director of Telemedicine at the University of Michigan Health System. Since the early 1970's, he has been a catalyst for the development and evaluation of telemedicine systems in the U.S. While at the National Academy of Sciences (Institute of Medicine), he was consultant to the Office of Economic Opportunity on the use of telecommunications to support rural health programs. He served as a member of the study section on health care applications at the RANN Program (Research Applied to National Need) of the National Science Foundation. The NSF awarded him a grant to evaluate a telemedicine program in rural Maine and to access the status of telemedicine nationwide. He organized the first two national conferences on telemedicine, whose proceedings were published as Telemedi-

cine: Exploration in the Use of Telecommunications in Health Care. Over the past two and a half decades, Dr. Bashshur has served as senior consultant to numerous telemedicine projects, agencies and governments, including, the Navy, Bell Laboratories, the Office of Technology Assessment, the Department of Defense, and several foreign governments. He is the founder of the National Consortium for Telemedicine Evaluation, based at the University of Michigan School of Public Health. Dr. Bashshur has published extensively on telemedicine, maintains an active speaking schedule, and works closely with policy-makers at institutional and national levels. Five years ago, he co-founded with Mark Goldberg the Telemedicine Journal, a multidisciplinary peer-reviewed journal, and continues as Editor-in-Chief.

BATES DAVID

David Bates is an internationally renowned expert in using information technology to improve clinical decision making, patient safety, quality of care, cost-effectiveness, and outcomes assessment in medical practice. A practicing general internist, Dr.

Bates is Chief Quality Officer at Brigham and Women's Hospital in Boston where he is also Chief of the Division of General Internal Medicine. He is a Professor of Medicine at Harvard Medical School, and a Professor of Health Policy and Management at the Harvard School of Public Health, where he co-directs the Program in Clinical Effectiveness. He also serves as Medical Director of Clinical and Quality Analysis for Partners Health Care. Dr. Bates is a graduate of Stanford University, and the Johns Hopkins School of Medicine. He began his fellowship in general internal medicine at Brigham and Women's Hospital in 1988, and he received a MSc. in Health Policy and Management from the Harvard School of Public Health in 1990. He has been elected to the Institute of Medicine, the American Society for Clinical Investigation, the Association of American Physicians and the American College of Medical Informatics, and is past chairman of the Board of the American Medical Informatics Association. He chaired the Food and Drug Administration Safety and Innovation Act (FDASIA) Workgroup. He serves as external program lead for research in the World Health Organization's Global Alliance for Patient Safety. He is the president of the International Society for Quality in Healthcare (ISQua). Dr. Bates' special research interests include clinical decision-making and affecting physician-decision-making, particularly using computerized interventions; quality of care and cost-effectiveness and medical practice; and outcome assessment. He has published over 600 peer-reviewed papers.

BAUD ROBERT

Robert Baud (1942-) is famous medical informatician from Geneva, Switzerland. For long period he was very active in Council of European Federation for Medical informatics (EFMI), as national representative of Switzerland, chair of Working Group: Natural Language Understanding (from MIE 1997 held in Thesaloniki, Greece till 2008), and later as Vice-President of EFMI and President of EFMI from 2004 to 2005. For 2006-2008 Robert Baud represented EFMI in IMIA as Vice-President. Robert Baud was very active in organizations of MIE Conferences, also chair and co-chair of Scientific Program Committees and chair at Sessions at MIE Conferences. As scientist he published a lot of scientific and professional articles in peer reviewed indexed journals.

BAUKNECHT KURT

Kurt Bauknecht, professor emerita, is one of the founders of computer science in Switzerland and has coined as a central figure in the Swiss computer science. This science discipline sustained as a scientist, manager, innovator and mentor. During three decades Kurt Bauknecht conducted with great commitment, the Institute of computer science, the IFL to the Economics and Mathematics and Science Faculty, University of Zurich. From small beginnings, he led the IFL to its present size and importance. Information and communication management are the teaching and research of Kurt Bauknecht. Then there are the interdisciplinary orientations of IFL, such as computational linguistics to the Faculty of Arts or - for almost 20 years - by joint courses with the Faculty of Law and the ETH Zurich. The IFL works with the Federal Institutes of Technology in Zurich and Lausanne and with the Universities of Bern, Geneva and St. Gallen, also with universities in Europe, Japan and USA. As president of the computer science committee of the University Zurich Kurt Bauknecht has at that time also a cross-border agreement between IFL and

the Faculty of Mathematics and computer science at the University of Konstanz prepared for it, which included a strengthening of cooperation in research and teaching through joint degree programs. Since 1970, Kurt Bauknecht is a professor of computer science. From 1995 to 2000 Kurt Bauknecht President of the International Federation for Information Processing (IFIP) of the World Association for Information Technology. From 2003 Kurt Bauknecht is Honorary Professor at the University of Vienna, permanent lecturer at the University of St. Gallen and honorary doctorate from the Johannes Kepler University Linz since 2000. As before, passes Kurt Bauknecht research groups at the University of Zurich, where he is also the Commissioner of Senior Citizens' University backorder. Kurt Bauknecht is a member of numerous professional groups and research organizations.

BAUMAN A. WILLIAM

William A. Bauman (1923-2012), MD, FACMI, graduated Phillips Academy Andover, 1942. MD,

College of Physicians and Surgeons, Columbia University, 1947. Clinical Professor Pediatrics, Columbia University Medical Center until 1975. He was first director, medical data processing at Columbia and pioneer in field. President, American Association of Medical Systems and Informatics (AAMSI). VP of Medical Affairs, Danbury Hospital in Connecticut

BECICH J. MICHAEL

Michael J. Becich, MD, PhD, FACMI, received his bachelor's, MD, and PhD degrees from Northwestern University, and undertook residency and fellowship training in anatomic pathology at Washington University in St. Louis. He advanced through the academic ranks at the University of Pittsburgh, and is now Professor and Chair of the Department of Biomedical Informatics, Director of Oncology and Pathology Informatics, and also Professor of Information Sciences and Telecommunications. In this capacity, he has had an important role in the National Cancer Institute's Cancer Biomedical Informatics Grid (CaBIG) and

particularly the CaTissue application for research tissue banking. In addition to his scholarly contributions, Mike Becich is best known for creating the Advancing Practice, Instruction, and Innovation (APIII) conference and the Association for Pathology Informatics (API). He is a deep thinker about the future of collaborative informatics and its role in personalized medicine.

BECK J. ROBERT

Robert J. Beck, MD, FACMI, is Professor of Pathology and Director of the Biomedical Information Communication Center at the Oregon Health Sciences University. He has contributed original research to several areas of medical informatics including clinical decision making, stochastic modeling of medical outcomes, the synthesis of decision science and expert systems, and general applications of mathematics to medical practice and outcomes. He has also made significant contributions toward understanding the role of computer literacy training and

artificial intelligence approaches to medical education. His work is published in the literatures of pathology, medicine, and decision science.

BEDIANG GEORGES WYLFRED

Wylfred Georges Bediang is medical doctor who earned MSc in Medical Informatics and MPH in Public Health, originating from Cameroon. He obtained his MD in 2008 at the Faculty of Medicine and Biomedical Sciences of the University of Yaoundé 1. He obtained Master of Advanced Studies in Medical Informatics and Public Health at the University of Geneva in 2011 and 2013 respectively. He was a PhD student at the Institute of Services Science at the University of Geneva. He is Senior Research and Teaching Assistant (Maître-Assistant) at the Faculty of Medicine, University of Geneva. He is also co-coordinator of the RAFT network (Réseau en Afrique Francophone pour la Télémédecine). His domains of interest are related to: E-health/Telemedicine; E-learning and Virtual patient; Health and Hospital Information Systems and Knowledge management of Healthcare.Being a founding member he served as president of the International Society for Telemedicine and eHealth (ISfTeH) since its re-formation in 2003. Under his presidency, the ISfTeH gained many new members and developed several new partnerships with international

organisations being active in the same field (WHO, ITU, etc.).

BELEVICS GUNTIS

Guntis Belevics (1958-) was born in Latvia. He is Dr of Biology sciences. Guntis Belevics is the current Minister for Health of the Republic of Latvia. He acquired his Dr.biol. (molecular pharmacology) from the University of Latvia in 1995 and his Ph.D. (biophysics) from the Moscow State University in 1988. He obtained a practical experience as a scientific worker at the institute of Organic Synthesis of Latvian Academy of Science after which he successfully turned to private sector becoming the founder and president of pharmaceutical wholesale company, chains of pharmacies and director of the clinical laboratory.

BELL S. DOUGLAS

Douglas S. Bell, MD, PhD, FACMI, received his bachelors degree in biochemistry from Case Western and his MD from Harvard. After an internship at Mount Auburn Hospital in Cambridge, he undertook a medical informatics fellowship in the Harvard-MIT

graduate training program, followed by an internal medicine residency at Stanford. He received a PhD in Health Services from UCLA in 2000, and then joined the faculty of the UCLA department of medicine, where he also works a research scientist at Rand corporation. Dr. Bell's research interests have ranged from cognitive science to electronic prescribing to systems evaluation. He has evaluated the effectiveness of online vs. traditional learning materials, and controlled vocabularies that support recording of clinical findings and diagnoses, and interoperability issues affecting electronic prescribing systems.

BELLAZZI RICCARDO

Riccardo Bellazzi is full professor of Bioengineering and Medical Informatics at the Department of Electrical, Computer and Biomedical Engineering of the University of Pavia, Italy. He teaches Medical Informatics and Machine Learning at the Faculty of Biomedical Engineering and Bioinformatics at the Faculty of Medicine of the University of Pavia. He is chair of the board of the PhD program in Bioengineering and Bioinformatics of the

University of Pavia. Prof. Bellazzi is the director of the Biomedical Informatics Labs "Mario Stefanelli" of the University of Pavia, and of the Laboratory of Informatics and Systems science of the IRCCS Fondazione S. Maugeri hospital of Pavia. He is Fellow of the American College of Medical Informatics, member of the Italian Bioinformatics Association, past Vice-President of IMIA, past chairman of the IMIA working group of Intelligent Data Analysis and Data Mining, program chair of the MEDINFO 2010 and AIME 2007 conferences, track chairman of the IEEE BHI 2014 and of the AMIA 2015 conferences and current member of the program committee of several international conferences in biomedical informatics and artificial intelligence. He is member of the editorial board of the Journal of the American Medical Informatics Association, of the Journal of Biomedical Informatics, of the International Journal of Medical Informatics, of Methods of Information in Medicine and of the Journal of Diabetes Science and Technology. He is Associate editor of BMC Bioinformatics and past Associate editor of the IEEE Transactions on Information Technology in Biomedicine. His research interests are related to biomedical informatics, comprising bioinformatics, data mining, IT-based systems to support biomedical research, mathematical modeling of biological systems. He is involved in several EU-funded research projects, as well as in projects funded by national institution. Prof. Bellazzi is author of more than 130 publications on peer-reviewed journals and more of 160 papers on international conferences.

BELL BRAD

Brad Bell is Chief Technology Officer, GoldCare.Brad Bell co-founded Campana Systems Inc. in 1988. As a partner and active member of the leadership and executive management teams, Brad shares responsibility for overall company governance and growth management. He is also a lead technology architect for the company. In his role as Chief Technology Officer, Brad oversees a responsive and innovative development team that is instrumental in developing GoldCare's product strategy. Under Brad's leadership, GoldCare's development team continually aligns technology initiatives and regulatory requirements with the business goals and best practices of GoldCare's client partner.With an honours degree in Mathematics and Computer Sciences from the University of Waterloo and more the two decades of industry knowledge and experience, Brad is highly respected in the field of healthcare technology and highly regarded by our client partners. He is often called upon to coordinate the effective translation of their current and future business requirements into GoldCare design, and regularly participates in strategic product demonstrations and healthcare technology events.

BENDER DUANE

Duane Bender is Professor, Software Engineering and Principal Investigator, eHealth & mHealth, Mohawk College. Duane Bender is a licensed Professional Software Engineer (P.Eng.) and enterprise technology architect with nearly 20 years of practical experience in software engineering and systems development. His work has primarily involved the design and construction of large-scale, high-performance distributed software and systems for Business and Healthcare. Mr. Bender is currently a Principal Investigator for the Applied Research program at Mohawk College. His work focuses on the application of information and mobile technologies to healthcare ("emHealth"). With the sponsorship of NSERC, Mohawk

is currently building a reference implementation of the national electronic health care record system architecture as published by Canada Health Infoway. Duane currently holds a faculty position as Professor of Software Engineering Technology at Mohawk College and is currently completing post-graduate work in the area of Software Engineering at McMaster University in Hamilton, Ontario, Canada.

BENGTSSON STELLAN

Stellan Bengtsson, MD, PhD, (1935-1998), was a Swedish bacteriologist. He achieved his PhD. in 1968 at Uppsala University, where he later became professor of Clinical bacteriology. He was associate Professor of clinical bacteriology and head of Department of Medical Microbiology at the Academic Hospital in Uppsala, Sweden. He became managing editor of the Scandinavian Journal of Infectious Diseases already in 1978, i.e. he has served it for 20 years. He has done so with the utmost care for the readers, to whom he provided the highest possible quality of the articles accepted. He also cared for those who

submitted manuscripts, whom he guided with an unusual sense of fairness and objectivity. Between 1993 and 1998, Bengtsson inspector at Stockholm nation in Uppsala. Professor Bentsson was President of European Federation of Medical Informatics (1991-1992) and represented EFMI in IMIA as Vice-President (1993-1995).

BENJAMIN GEORGES

Georges Benjamin, MD, FACP, FACEP(E), FNAPA, Hon FRSPH, is the executive director of the American Public Health Association (APHA), the nation's oldest and largest organization of public health professionals. He previously was the secretary of the Maryland Department of Health and Mental Hygiene from 1999 to 2002, following 4 years as its deputy secretary for public health services. For the past 20 years he has been actively practicing public health at the local, state, and national levels with expertise in the areas of emergency preparedness, administration, and infectious diseases. Dr. Benjamin serves as publisher of the field's premier journal, the American Journal of Public Health, The Nation's Health newspaper and the APHA's timeless publication on infectious diseases, the Control of Communicable Diseases Manual. He is the author of more than 100 scientific articles and book chapters. His recent book The Quest for Health Reform: A Satirical History is an exposé of the nearly 100-year quest to

ensure quality affordable health coverage for all through the use of political cartoons. Dr. Benjamin is a graduate of the Illinois Institute of Technology and the University of Illinois College of Medicine. He is board certified in internal medicine and a fellow of the American College of Physicians. He also is a fellow emeritus of the American College of Emergency Physicians, an honorary fellow of the Royal Society of Public Health, a fellow of the National Academy of Public Administration, and a member of the Institute of Medicine.

BENNETT J. BRYAN

Professor J. Bryan Bennett is the Executive Director for the Healthcare Center of Excellence (healthcarecoe.org) where he researches and consults on transformation issues for healthcare organizations. He is the author of the "Data Stewardship" chapter for the book ADAPTIVE Health Management Information Management and a blogger for the HIMSS Future Care website on Big Data and technology transformation issues. He is also a professor for Northwestern University's School of Professional Studies where he is a predictive analytics subject matter expert and is responsible for the development and teaching of predictive analytics and data management courses for the international and domestic markets. Additionally, he teaches leadership, healthcare marketing and consumer behavior courses

at the graduate and undergraduate levels for other universities.

BENSON A. DENNIS

Dennis A. Benson, PhD, FACMI, is Chief of the Information Resources Branch at the National Center for Biotechnology, National Library of Medicine. Dr. Benson received his undergraduate and graduate degrees in the neuroscience program at the University of Florida. Prior to his current position, Dr. Benson was a postdoctoral fellow in the Department of Biomedical Engineering, Johns Hopkins School of Medicine, where his research focused on the neurophysiology of the auditory cortex. He came to the Lister Hill Center for Biomedical Communications at the NLM in 1980 and worked on knowledge-based retrieval systems in the area of hepatitis and toxicology. He developed a test bed for evaluating statistical-based text retrieval algorithms, which evolved into an operational text retrieval system known as IRX. Early applications of IRX included the McKusick Mendelian Inheritance in Man database and a seminal integrated genetics data resource known

as GenInfo. With the creation of the NCBI in 1988, he has had responsibility for designing and managing the computing and network infrastructure for research and public access to the information resources NCBI produces - in particular, the Gen Bank, Entrez, and PubMed databases.

BERGER T. LARS

Lars T. Berger is director of R&D at Kenus Informatica, Paterna, Spain, with focus on Smart Grid/Smart Home, Ambient Assisted Living and eHealth. He is also founder of BreezeSolve, a Valencia-based company offering engineering and project management services. Dr. Berger is active in EU R&D projects since FP5. He is holding four patents, and is editor of the books "Smart Grid–Applications, Communications and Security" (John Wiley & Sons) and "MIMO Power Line Communications: Narrow and Broadband Standards, EMC, and Advanced Processing" (CRC Press, Taylor & Francis Group).

BERGMAN VIVECA

Viveca Bergman is Development Manager. THL (National Institute for Health and Welfare), Finland. Ms Viveca Bergman earned MSc Pol., Development Manager at the Department of Information Services at the National Institute for Health and Welfare (THL) in Finland. She has a long working experience in different public health projects in both national and international context, and has been working in various organizations in the health care administration as Programme management expert. She was the coordinator of the Finnish epSOS project, and has participated in other eHealth projects such as EXPAND, ASSESS CT, eHGi and eHNJA .

BERLER ALEXANDER

Alexander Berler is currently Director of consulting services department at Gnomon Informatics with an expertise in international projects related to e-health, e-procurement and e-government. On behalf of Gnomon Informatics, he is a member

of the epSOS Industry Team Steering Committee and participates in the development of the openNCP software components. He is currently a member of several societies, institutes and organizations (IEEE, ACM, HIMSS, PMI, IHE, etc), an external tutor to the National School of Public Health and the current Chair of HL7 Hellas, the Greek HL7 Affiliate. Dr. Alexander Berler has an MSc in Biomedical Engineering and a PhD in Medical Informatics. He was affiliated with the Electrical Engineering Department, National Technical University of Athens, Greece, as a Postgraduate Student and Research Associate in the areas of healthcare information systems interoperability, medical informatics and telemedicine since 1996. He has worked at Information Society SA, the official governmental information technology project office, as a project director responsible for the large healthcare informatics projects of the Greek government until 2006.

BERNER S. ETA

Eta S. Berner, Ed.D, FACMI, is a Professor in the Health Informatics Program, Department of Health Services Administration, School of Health Related Professions at the University of Alabama at Birmingham. She holds a secondary appointment in the Section of Medical Informatics in the School of Medicine. She received an AB degree with Highest Distinction in Psychology from the University of Rochester. After receiving an EdD in Human Development from the Harvard Graduate School of Education, Dr. Berner completed a postdoctoral fellowship in medical education at the University of Washington in Seattle. Prior to moving to her current position in 1997, Dr. Berner held faculty and administrative appointments at the medical schools at the University of Illinois at Chicago, University of Massachusetts, and the University of Alabama at Birmingham. Dr. Berner's informatics interests are in the evaluation of medical informatics applications and the

development of new modalities for health informatics education. Since 1990, she been involved in the evaluation of diagnostic decision support systems and is currently developing distance learning programs in health informatics. She recently completed a study examining methods for evaluating medical students' information retrieval and application skills. Dr. Berner has been a consultant to the World Health Organization and frequently serves on grant review panels for the National Heart, Lung, and Blood Institute. She has given invited presentations on informatics at several organizations, including the National Board of Medical Examiners, the American Educational Research Association Annual Meeting, and the National Library of Medicine's Workshop on Knowledge-based Systems. Dr. Berner is a manuscript reviewer for several medical education and informatics journals, and was a member of the editorial board of Academic Medicine. In addition to being a frequent presenter at AMIA symposia, she has served on the AMIA Education Committee and was Vice Chair of the Ethical, Legal, and Social Issues Working Group. She is currently a member of the editorial board of the JAMIA and Medical Education Online.

BERNSTAM V. ELMER

Elmer V. Bernstam, MD, MSE, MS, FACMI received Bachelors degrees in Biomedical Sciences and Psychology and Computer Engineering, an MD and a Masters of Science in Engineering, all from the University of Michigan. After an internal medicine residency he matriculated as an NLM Fellow to the Medical Information Sciences program at Stanford and received his Masters degree in Informatics there. He joined the School of Health Information Sciences at the University of Texas Health Science Center (UTHSC) at Houston as an assistant professor. At the time of his election to the College he was an associate professor at UTHSC, with tenure, in health information sciences and internal medicine, and informatics director for the Center for Clinical and Translational Sciences. Dr. Bernstam has performed research on the quality of health related information on the Internet, including disease-specific information related to obesity, sleep apnea, breast cancer, and complementary and alternative medicine. He also led the writing and publication of a peer-reviewed position paper on behalf of all 24 then-funded CTSA programs that articulated the synergies and distinctions between informatics and information technology. He has undertaken research to improve the effectiveness of information retrieval from MEDLINE and investigated the functionality needed for veterinary electronic medical records. These academic achievements are recognized by his election to the College.

BETTS HELEN

Dr Helen Betts was, until 31st October 2009, Dean of the Faculty of Humanities and Social Sciences at the University of Winchester, Hampshire, England. She originally trained as a nurse and midwife and worked for many years as a practicing midwife and Supervisor of Midwives before moving into midwifery education and eventually becoming the Approved Midwife Teacher and Head of Nursing and Midwifery Education at the University of Winchester. For two years from February 1989 she was the Wessex Computer Assisted Project Tutor where her role was to support nurse education staff in developing IT and elearning into pre-and post-registration nursing and midwifery education programmes. Helen has published widely in health informatics since 1988 and became a member of the British Computer Society. She was the Leader of the Midwifery Focus Group for the British Computer Society Nursing Specialist Group, which ran several English National Board Midwifery Approved Study Days on informatics in midwifery and hence counted towards the participants required continued professional development. In 1996 she edited the booklet "Benefits Realisation Monograph on Maternity Information Systems" that had been compiled with members of the Midwifery Focus Group following a survey of Maternity Units in England, and was published by the Department of Health Information Management Group of the NHS Executive.Helen was also an Associate Editor for the Information Technology In Nursing Journal (ITIN), the journal of the BCS Nursing Specialist Group. She was a member of the research team for the IMIA Open Steps Project and the subsequent development of the IMIA Knowledge Base, now a published IMIA document.In 2000 Professor Graham Wright, Dr Helen Betts and Dr Peter Murray, as the three Directors, set up the Centre for Health Informatics Research and Development (CHIRAD) that undertook various contracts both

in the UK and internationally. In her role as Dean of the Faculty of Humanities and Social Sciences Helen secured a £60,000 contract for teaching MSc Health Informatics to Staff and Government employees at Walter Sisulu University, Mthatha, South Africa. Members of CHIRAD, on behalf of the University of Winchester, delivered the programme. Helen represented the UK on the European Federation for Medical Informatics (EFMI) for 3 years, prior to her relocation to South Africa in 2009. During that time she chaired a team that organised the London EFMI Special Topic Conference on Open Source. Helen retired with her husband, Professor Graham Wright, to Shaw Park, Bathurst, where she now farms cattle, sheep and alpacas. However she has continued with small-scale academic research as a member of several teams, including one looking into the use of tablet computers in rural clinics, particularly in the Eastern Cape. This work has been published and presented at several conferences, including the EFMI Special Topic Conference in Budapest in 2014. As part of this continuing involvement, Helen is a member of both the HELINA Education Working Group and the HELINA Nursing Special Interest Group. She chaired sessions at the 2015 HELINA Conference in Accra, Ghana and the 2017 Conference in Bujumbura, Burundi and was a member of the HELINA Nursing Special Interest Group panel session at the 2017 HELINA conference. Retirement for Helen still keeps her very active, balancing the demands of managing, hands on, a small farm and continuing health informatics academic research interests in Africa.

BERNTSSON JOHNIE

Johnie Berntsson is IT Manager. Sahlgrenska University Hospital, Sweden. Johnie is present IT manager of Project management, Business Area manager and consultant. Johnie have been up to during his career, working in the Medical industry for 15 years. Beside the IT management profession, Johnie is also a professional sailor in Match Racing.

BEUSCART MARIE-CATHERINE ZÉPHIR

Marie-Catherine Beuscart Zéphir holds a PhD in cognitive psychology. She founded the Evalab, a usability lab dedicated to e-health and technologies for healthcare at the academic hospital of Lille. Her research interests include Human Factors Engineering and usability for health technologies and e-health, applied to applications like Computerized Order –Entry (CPOE), Clinical Decision Support Systems (CDSS), Patient Record systems (EPR/EHR) and home care systems. Dr. Beuscart-Zéphir co-chair the IMIA WG and EFMI WG on Human (and Organizational) Factors.

BHATNAGAR SAURABHA

Saurabha Bhatnagar, MD is at Harvard Medical School in the Department of Physical Medicine & Rehabilitation. He is a Computer Scientist turned Doctor and is involved in the VA's national innovation efforts. His interests focus on improving healthcare through merging techniques from Lean/Six Sigma systems improvement, human centered design, and value based healthcare. Dr. Bhatnagar is also an Innovation Officer through the VA Center for Innovation and Medical Director of the Traumatic Brain Injury (TBI) /

Polytrauma Network Site at VA Boston Healthcare System.

He teaches and consults healthcare professionals nationally in the above methodologies and leads a variety of healthcare teams to think creatively with these efforts. He also teaches about leadership in healthcare. In addition, he serves as the Associate Residency Program Director and Chair of the Clinical Competency Committee in the Department of PM&R at Harvard Medical School / Spaulding Rehabilitation Hospital.

BIALAS ANDRZEJ

Andrzej Bialas is an Associate Professor at the Institute of Innovative Technologies EMAG, Katowice, Poland the leader of the national and EU R&D projects on: risk management, business continuity and information security management, security assurance, design and evaluation of IT security, knowledge management and cryptographic applications, e.g.: EU FP7 ValueSec, EU FP6 CI2RCO, OSCAD, CCMODE, DG Home CIRAS. Dr.

Bialas graduated from the Silesian University of Technology, Fac. of Automatic Control, Electronics and Computer Science in 1979 (PhD-1986, DSc-2012). He has been in charge of numerous R&D projects and has carried out ICT security trainings certified by the Agency of State Defence and an Associate Professor at the University of Economics in Katowice, providing lectures on software quality, network security, risk management, information security management, cryptography and its applications. Author of more than 120 scientific publications. Member of the IFIP WG11.1 Information Security Management group and EU IMGS TA4 – Protection Neutralisation and Restoration group. He represents EMAG Institute in the Polish Technological Platform of Security Systems

BJORNBERG ARNE

Arne Björnberg has previous experience from Research Director and management consulting positions in Swedish industry. He has also served as CEO of the Swedish National Pharmacy Corporation ("Apoteket AB"), Director of Healthcare & Network Solutions for IBM Europe Middle East & Africa, and CEO of the University Hospital of Northern Sweden ("Norrlands Universitetssjukhus", Umeå). Since 2005, Dr. Björnberg has been the leader of the production of the Health Consumer Power-house international indices, such as the EHCI 2005 – 2014 project and numerous other, disease-related indices and projects.

BLAGOVEST H. SENDOV

Blagovest Hristov Sendov (1932-) is a Bulgarian diplomat, mathematician and politician. He was born in Asenovgrad, Bulgaria. Sendov was the rector of Sofia University, located in Sofia, Bulgaria; and the Deputy Chairman of Bulgarian Academy of Sciences, also located in Sofia. From 1995 to 1997, he was the Chairperson of the National Assembly of Bulgaria; and from 1997 to 2002, he was the its Deputy Chairperson. His candidacy for that position was supported by the Bulgarian Socialist Party (BSP), the successor to the Bulgarian Communist Party (BCP). Although never a member of the BCP, Sendov had close ties to former Bulgarian communist dictator Todor Zhivkov. The

rightist Union of the Democratic Forces removed him temporarily from that duty in 2000 when Sendov cosigned, together with four members of the BSP, a letter to the Israeli president asking that portraits of the Bulgarian Royal Family (from the 1940s) be removed from a memorial in Israel. This memorial commemorates that all Bulgarian Jews were saved from deportation to concentration camps during World War II. Sendov's name is attached to one of the major unsolved problems in the study of polynomial zeros, Sendov's conjecture (sometimes incorrectly known as Ilieff's conjecture). In 2000 he was elected as a member of Serbian Academy of Sciences and Arts, an academic institution located in Belgrade, Serbia.

BLAIR S. JEFFERY
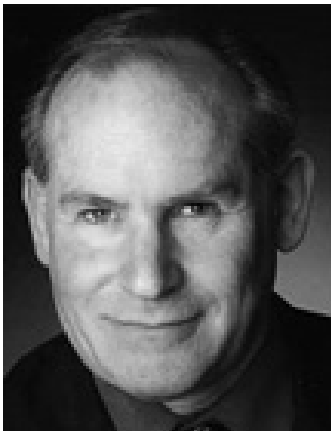
Jeffery S. Blair, MBA, FACMI, after earning an undergraduate degree in management engineering at Rensselear and an MBA from Northwestern University's Kellogg School of Management, began a 30-year association with IBM Corporation. His move to health care came in the 1980s, accelerated by his role on the IBM advisory team that provided input on a Council on Competitiveness report known as "Highway to Health: Transforming U.S. Healthcare in the Information Age." This led to his assumption of key roles in IBM strategic planning, to management of their marketing arm for clinical information systems, and to program management in their medical lexicon services. Since 1997, when he left IBM, Mr. Blair has been Vice-President of the Medical Records Institute. Jeff Blair has actively promoted the development of clinical information systems and related standards for well over a decade. He was heavily involved as a committee chair and Board member of the Computer-Based Patient Record Institute and as an active participant in Health Level 7 (HL7) and CorbaMed. With the passage of the Health Insurance Portability and Accountability Act (HIPAA) law in 1996, he has devoted extensive effort to assisting in the selection of the administrative health data standards it mandates. The Speaker of the House appointed him to the National Committee on Vital and Health Statistics in 1997, and he has played a key role there in the development of advice on standards for patient medical records. In 1998, Mr. Blair was appointed chair of the work group on computer-based patient records, which had lead responsibility for drafting the HIPAA-mandated report to the Secretary on standards for patient medical record information. Mr. Blair has a comprehensive understanding of incentives, barriers, and opportunities surrounding the implementation of health data standards in the United States. His combined knowledge of standards development processes, commercial system development, health care business systems, and clinical applications is unique.

BLAKEMAN MARK

Mark Blakeman is Director of Infrastructure and Informatics for Wirral University Teaching Hospital NHS Foundation Trust, UK and is the lead for the Trust's ambitious programme to create a truly modern digital hospital. Previously Mark worked at University Hospitals South Manchester, where he led a major upgrade of the Trust IT infrastructure, including implementing new PAS, PACS, theatres, maternity, electronic ordering, discharge prescribing and email systems. Mark has held Director of IM&T posts in community and mental health trusts and has a variety of professional and academic qualifications including an MBA.

BLAKE RACHELLE

Rachelle Blake, PA, MHA. CEO, is President and Managing Director, Omni Micro Systems and Omni Med Solutions UG, EU-US Workforce Development Workgroup. Rachelle is a Global Senior Strategic Healthcare Information Technology Leader and Global HIT Workforce Subject Matter Expert. She is Founder, CEO, President and Managing Director of Omni Micro Systems and Omni Med Solutions headquartered in the US and Germany, an international family of full-scale health information consulting and technology development companies in operation for nearly a decade on a global level. She has served in clinical, consulting, operations and administrative roles in healthcare information technology for 30 years, including working as a Physician Assistant.

BLANKLEY NICK

Nick Blankley, BA, joined the NHS after completing his studies in Leicester and spent much of his early career handling basic patient and statistical data in health authorities and hospitals in London. Soon after gaining operational and general management experience at Northwick Park Hospital, Nick became the Board member with responsibility for information management and information technology at Hillingdon Health Authority and has subsequently held several other Information Management and Technology Director posts. With experience in different healthcare settings and having been through several NHS reorganizations, Nick has accumulated a wide range of experience and knowledge that has enabled him to be the force behind many innovative projects to apply information management and new technology to the problems of healthcare delivery.

BLEICH HOWARD

Howard Bleich (1934-), MD, FACMI was born in Atlanta, Georgia, and grew up in Washington, D.C. He graduated from college at The George Washington University and from medical school at the Emory University School of Medicine. He moved to Boston where he completed medical residency training and clinical and research fellowships in nephrology at the Tufts New England Medical Center, before serving in the United States Air Force in the 1960's. He is certified by the American Board of Internal Medicine, is a founding fellow of the American College of Medical Informatics, and has served on the editorial boards of the New England Journal of Medicine and MD Computing. In 1967, after serving in the Air Force, Dr. Bleich came to Harvard Medical School and the Beth Israel Hospital. At that time, few physicians were interested in clinical computing. To carry out his research, he rented a teletype machine - slow and noisy - that was connected by telephone line to a computer across town. Dr. Bleich programmed the computer to help diagnose and treat disorders of salt and water. His first study, "Computer Evaluation of Acid-based Disorders," is now recognized as a pioneering work in the field of expert systems in medicine. Translated for modern equipment, this program remains in use today as a diagnostic tool and as an example of early artificial intelligence. In 1970, Dr. Warner V. Slack left the University of Wisconsin and came to Harvard and Beth Israel to work with Howard. The two of them set up a "Computer Medicine Laboratory" where Warner focused on "patient–computer dialog" and Howard on "expert systems." Since then, the two Harvard professors have, among other things, led the development of an integrated hospital computing system that is a model for many other institutions. In collaboration with colleagues, Dr. Bleich also developed Paper-

Chase, the first computer program that enabled doctors and nurses to search the medical literature themselves. PaperChase uses computational linguistics developed by Dr. Yuri Zieman, a refusnik from the Soviet Union, to help users quickly find what they are looking for. Professors of Medicine at Harvard Medical School and Senior Physicians at Beth Israel Deaconess Medical Center, Drs. Bleich and Slack served as co-chiefs of the Center for Clinical Computing. Together with their colleagues at the Center for Clinical Computing, they designed and deployed the computing systems now used at the Beth Israel Deaconess and Brigham and Women's Hospitals, and they helped educate medical personnel in the use of computers in research, teaching, and patient care. At these two hospitals, physicians, nurses, house staff, and other hospital personnel now use the system about 30,000 times per day to look up clinical and laboratory data about their patients. For the past forty years Dr. Bleich has been on the faculty of Harvard Medical School where he has taught medical students and resident physicians, published research papers and served on the Admissions Committee. Dr. Bleich has lectured on various topics in clinical computing and nephrology in Afghanistan, Bhutan, Canada, China, Columbia, Egypt, Great Britain, Hong Kong, Israel, India, Iran, Japan, Nepal, and Switzerland. He feels fortunate to work in Boston, where wonderful universities

provide a fertile environment in which to recruit and work with outstanding colleagues. He is the 2001 recipient of the Morris F. Collen Award of Excellence.

BLOBEL BERND

Bernd Blobel, PhD, FACMI, FACHI, FHL7, gained his first experiences in using computers in 1961 at the Magdeburg Institute of Technology, East Germany. He studied mathematics, technical cybernetics and electrical engineering, physics, informatics and medical informatics in Magdeburg, Halle, Dresden and Berlin. His life sciences endeavor has started in 1969 in the field of biocybernetics (nowadays called bioinformatics). In his PhD thesis he addressed sub-cellular and molecular issues in neurophysiology. For thirty years he performed as CIO of the University Hospital Magdeburg. From 1974-1980 he acted as Head of Laboratory in the area of environmental informatics at the Institute of Hygiene and Environmental Medicine at the Magdeburg Medical University, before he got appointed as Chair of Medical Information Processing Group. In 1985, he became Founder and Head of the Magdeburg Medical Informatics

Department and later on Director of the Institute for Biometry and Medical Informatics at the University of Magdeburg. He launched and chaired the Cancer Registry of the German Federal State Saxony-Anhalt. He was Member of both the Medical and the Informatics Faculty. In 2004, Prof. Dr. Bernd Blobel moved as founder and head of the Health Telematics Project Group to the Fraunhofer Institute for Integrated Circuits in Erlangen. In 2006, he has been appointed as Founder and Head of the accredited German eHealth Competence Center (eHCC), which has been established at the University Hospital Regensburg. Prof. Dr. Blobel's national and international career in medical informatics has started after the German reunification in 1990. Joachim Dudeck and Rolf Engelbrecht have been his most supportive mentors, especially encouraging his engagement at EFMI, but also in European projects and international standardization work. Bernd Blobel's relations to EFMI began in 1995 with the appointment as German Health Informatics Association Representative to EFMI WG2 (nowadays EFMI WG SSE) and IMIA WG4. Within a few years, he developed an international reputation as one of very few medical informaticians who comprehensively manages the fields of interoperability in distributed, component-based, intelligent systems including system modeling, system architectures, ontologies, standardization, EHRs, related security,

privacy and safety issues, but also personal health including bioinformatics, biomedical engineering, personal portable devices and their applications. After ten years of international work, he published in 2002 the influential book "Analysis, Design and Implementation of Secure and Interoperable Distributed Health Information Systems" and authored/co-authored a series of international health informatics standards. Prof. Blobel is/was Chair or Co-chair of several EFMI Working Groups and SPC Chair/Vice-Chair or Core Team Member of many of the MIE as well as of the EFMI Special Topic Conferences. He was responsibly managing and performing the EFMI and IMIA Security Tutorials continuously since 1999. He continuously acted for 20 years as Vice-Chair or Chair of HL7 Germany. Prof. Dr. Bernd Blobel is involved in several countries national eHealth or EHR Programs and related initiatives, but also teaching at different countries' acknowledged universities. Since 2001, he is/was member of the Editorial Board of the International Journal of Medical Informatics and European Journal for Biomedical Informatics. He is author/co-author/editor/co-editor of 35 scientific books as well as author/co-author of more than 450 scientific papers.

BLOCH DAVID

David Bloch is owner of Virtu Alameda, USA. He has found himself working near the leading edge of new education and communication technologies for decades. From his graduate work in Instructional Development and Technology in the 1970's, through community-animating video production in the 1980's, Internet and then Web work in the 1990's and 2000's, and now focusing on 3-dimensional virtual worlds, David has kept current with ways that these technologies can be used to inform and educate. David has been a professional Webmaster since the mid-90's, including eight years as Webmaster for the County of Nevada, California. He has been an active user in the virtual world Second Life since December 2007, including creating and maintaining the Gold Country Library, a 3D space where digitized historical documents from the Nevada County Library can be accessed. David has been closely following the growth of education- and health-related projects in Second Life, and has taken in-world classes that explore these areas.

BLOIS S. MARSDEN

Marsden S. Blois, Jr. (1919–1988), MD, PhD, was a visionary in health informatics. Professor of medical information science and dermatology at the University of California, San Francisco, he worked to bring together medicine and information science. Blois was of an opinion that there was an abundant literature on medical computing, and virtually none on medical information science as a science. As a response to that, he published a book "Information and Medicine" in 1984. It is thought to be one of the most comprehensive view of his work-work visible in his professional activities and publications. In his book, Blois turned to information science. He dealt with concepts ranging from theories of information, to the structure of descriptors and information processes. He brought the same analytical approach to the consideration of diseases and the clinical and diagnostic processes. As his work with the National Library of Medicine on a unified medical language attests, he was deeply interested in the creation and

representation of medical information. He wanted for the task of medical informatics as a new discipline, to better understand and define the medical information processes in order that appropriate activities that will be chosen for computerization, and to improve the man-machine system. Although a master informatician, Blois remained devoted to medicine, which he judged to be "the enterprise offering us the greatest opportunity for describing the nature of man in all the interrelated levels of his complexity." Some of his work includes: „Information and medicine: the nature of medical descriptions", „Free Radicals in Biological Systems: Symposium by Marsden S. Blois" and „The integration of hospital information subsystems". Dr. Blois was elected to be the founding President of the American College of Medical Informatics in 1984.

BLUM BRUCE

Bruce Blum, PhD, MS, FACMI, began working with computers at the Johns Hopkins Applied Physics Laboratory in 1962. As computer technology matured, he began to specialize in scientific information systems for military and space applications.

In the mid-1970s there was an opening for a Director of Clinical Information Systems in the School of Medicine, and he was invited to take that position. One of the key tasks was the implementation of a new information system for an Oncology Center that was to open in the late 1970s. A system became operational in time for the Center's opening, and it continues to support what is now the Sidney Kimmel Comprehensive Cancer Center; indeed, some of his original code is still in use. In the early 1980s, as the Oncology Clinical Information System (OCIS) became more fully operational, he had the time to help fill the gas in the sharing of information by participating in meetings for scientific exchange and in writing and editing books. He chaired the Sixth Annual Symposium on Computer Applications in Medical Care (1982) and invited some participants to adopt their papers for inclusion in Information Systems for Patient Care (1984). In 1986 he wrote Clinical Information Systems, which provided a comprehensive overview of the field as it existed in the mid-1980s. With his colleagues he produced a description of the OCIS (A Clinical Information for Oncology) in 1989. Finally, as the series editor of the Springer-Verlag Computers and Medicine series he helped produce works that offered experience in the many facets of medical information applications. His experience with open applications such as clinical application let him to turn away from medical

informatics and to the process of developing such systems (i.e., software engineering.) He returned to the Applied Physics Laboratory in the late 1980s and documented his findings in Software Engineering: A Holistic View (1992) and Beyond Programming: To a New Era of Design (1996.) He retired in 1994 from the Johns Hopkins University where he worked as professor of Biomedical engineering in the School of medicine. Although he was active in medical informatics for only about a decade, it was a very important transition for the field.

BLUM L. ROBERT

Dr. Robert L. Blum received his MD from the University of California Medical School at San Francisco in 1973. From 1973 to 1976 he did an internship and residency in the Department of Internal Medicine at the Kaiser Foundation Hospital in Oakland, California, where he was chief resident in 1976. He received his PhD in Computer science and biostatistics at Stanford University 1982. Currently a research associate in the Heuristic Programming Project at Stanford, Dr. Blum is principal investigator

of the RX project. The goal of the RX project is the automated discovery and confirmation of medical knowledge from large time-oriented data bases. He lead a team of clinicians, biostatisticians, and computer scientists in designing a computer program to automatically discover new medical relationships from a database containing 1700 patients with chronic immunologic arthritides. Blum assisted with the development and clinical evaluation of a computer-based advisor MYCIN for treatment of septicemia and acute meningitis and with the development of program MEDIPHOR to warn of potential drug interactions. He received a lot of honors and awards: National Research Service Award U.S. Public Health Service; New Investigator Award, National Library of Medicine, etc. He is founding member of ACMI, chairman of Professional Study Group on Clinical Consultation Systems, American Association for Medical Systems and Informatics, chairman of Session on Artificial Intelligence and Decision Making, Congress of AAMSI in San Francisco, etc. He is author of a lot of articles in peer reviewed journals.

BOBILLIER A. PIERRE

Pierre-Andre Bobillier, PhD graduated Ecole Politechnique de l'Universitate de la Lausanne in 1953. From January 1957 till present he worked in IBM Suisse and IBM Europe in Zurich and Geneva as scientific engineer and consultant. He is member of Swiss Association of ICT from 1953 till present. As Private Docent (ass. prof.) he worked at EPFL during 1966-1973, as associate professor from 1973 till 1995 and from 1995 till present as professor. He has been engaged for many years in several Swiss committees such as SARIT (Swiss Association for Researchers in Information Technologies), the SVI/FSI (Swiss Federation of Information Processing Societies), the Swiss Committee for IFIP (whose members are TC delegates), the Swiss Informaticians Society and its Suisse Romande Section, where he chaired the activity planning committee. Some recent events were on Digital signature, E-voting, Knowledge Management and e-learning. Pierre-Andre is the IFIP President with the longest period of service - from 1977 to 1983. Prior to his term he was heavily involved as IFIP Secretary and even today he continues as the

Chairman of IFIP's Statutes and Bylaws Committee. He worked for several years in the Committee for Future Research Policy of the Swiss Science Council where he contributed, among others, to two projects which he hope will be pursued: Education and Research in Legal aspects of ICT in Swiss universities - Status and possible improvements, and An Interactive System for Swiss Research projects where small and medium businesses could find quickly information on research projects and activities relating to theirs. His many years of IFIP involvement have no doubt helped him in these activities where international views are obviously essential.

BOBROWSKI LEON

Leon Bobrowski is professor and head of the Software Department at the Faculty of Computer Science, Bialystok University of Technology. Additionally, he works in the Laboratory of Biomedical Data Analysis at the Institute of Biocybernetics and Biomedical Engineering of the Polish Academy of Sciences in Warsaw. Research interests of Leon Bobrowski include specific methods of data mining, pattern recognition, and medical diagno-

sis support systems which are based on the minimization of the convex and piecewise linear (CPL) criterion functions defined on data sets. The basis exchange algorithms have been developed and implemented which are similar to linear programming and allow find the minimum of the CPL functions efficiently, even in the case of large, multidimensional data sets. This approach is used for designing medical diagnosis support systems (Hepar), hierarchical neural networks, multivariate decision trees and visualizing transformations. Most recent research topics involve designing prognostic models by using concepts of ranked regression, interval regression and the relaxed linear separability (RLS) method of feature (genes) subsets selection. Teaching experience relates to statistical models and algorithms, multivariate data analysis, decision support systems, and exploratory analysis of large data sets. Professor Leon Bobrowski was co-organized since 1994 nine seminars "Statistics and Clinical Practice" held in Warsaw in the framework of the International Centre of Biocybernetics (ICB) of the Polish Academy of Sciences. Prof. Bobrowski published a lot of scientific papers in peer-reviewed indexed journals.

BODENREIDER OLIVER

Oliver.Bodenreider, MD, PhD, FACMI, received his MD degree from the University of Strasbourg, France; a research degree in informatics, statistics and epidemiology; a master's degree in computer science and another one in medical information; and a PhD in medical informatics, all from the Henri Poincare´ University. He began his career as a junior faculty member in France, working on the informatics of clinical toxicology and took a sabbatical year at the NLM. He has been there ever since, working as a staff scientist within the Lister Hill National Center for Biomedical Communications.

BOGDAN MARTIN

Martin Bogdan received the engineer diploma in signal engineering from the Fachhochschule Offenburg, Offenburg, Germany, in 1993, the engineer diploma in industrial informatics and instrumentation from the Université Joseph Fourier Grenoble, Grenoble, France, in 1993, and the PhD degree in computer science (computer engineering) from the University of Tübingen, Tübingen, Germany, in 1998. In 1994, he joined the Department of Computer Engineering at the University of Tübingen, where he has been the Head of the Research Group NeuroTeam since 2000. This research group deals mainly with signal processing based on artificial neural networks and machine learning focussed on but not limited to biomedical applications. Since winter term 2005/2006, he has been a Substitute Professor for Computer Engineering at the University of Leipzig, where he received the appointment for a full professorship in April 2008. Currently he works at Leipzig University

BOGUSKI S. MARK

Mark Boguski, MD, PhD, FACMI, is Senior Vice President for Research and Development at Rosetta Inpharmatics, Inc. He received his BA in natural sciences from Johns Hopkins University and his MD and PhD in molecular biology from the University of Washington. He was a resident in anatomic pathology at Barnes, Children's and Jewish Hospitals and a medical staff fellow at the Mathematical Research Branch of the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health. Dr. Boguski spent 11 years at the National Center for Biotechnology Information at the National Library of Medicine, rising from Senior Staff Fellow to Senior Investigator. Early in his career, he studied the organization and biological importance of repeated sequences in nucleic acids and proteins. He developed analytic methods to trace the molecular evolution of proteins from related species. At NCBI, he was instrumental in the design and implementation of a database system for representing expressed sequence tags. More recently, he led the development of several prototype database systems for storing and analyzing microarray-derived gene expression data. Dr. Boguski has served as Editor of Genomics and is a member of the Board of Reviewing Editors of Science. He is recipient of the Regents Award of the NLM and the NIH Director's Award.

BOLLERSLEV PETER

Peter Bollerslev served as IFIP President from 1998 to 2001. He advocated a global view of the development of ICT in Education, particularly teacher Education. Contributed to the development of many conferences and global networks. Initiated the first World IT Forum (WITFOR) and participated in UNESCO-IFIP joint activities. Past TC 3 Chair. It was his fate in the year 2000 to commemorate IFIP's 40th Anniversary, the Ruby Jubilee. This was done in a federation, which is supported by a well-functioning secretariat. He left the Danish Ministry of Education in autumn 2000 after having served there for 30 years as Her Majesty's Inspector and General Inspector. I am at present a Chief Consultant in the leading Publishing House in Denmark. He is heavily involved in many activities in the Danish Data Association and he is still their representative to the IFIP GA.

BONFINI T. JEREMY

Jeremy T. Bonfini is the Executive Vice President for HIMSS International, a non-profit, mission-driven association. Jeremy is responsible for the development of programs in Europe, the Middle East and Asia Pacific. Since joining HIMSS in 2007, he has grown HIMSS international through the establishment of HIMSS Analytics International which surveys over 2,500 hospitals and advises healthcare organizations on how IT supports the practice of evidence based medicine. Prior to joining HIMSS, Jeremy served as Intel Corporation's Worldwide Digital Health Policy Manager. While at Intel, he contributed to European Union developments on eHealth interoperability; facilitated advancement of a national EHR Standard in the People's Republic of China; supported approval for medical devices using WLAN/Bluetooth in Japan. Before Intel, Jeremy served as an education policy analyst in the House of Commons in London, England. Upon returning to the United States, he represented the National Mining Association in Washington DC. Also in the nation's Capital, Jeremy was employed in the U.S Congress and

worked to provide constituent services to the people of Ohio's 18th Congressional District and advocated for legislation favoring economic development. Jeremy is a graduate of The American University, Washington DC, where he graduated Magna Cum Laude with a Bachelors Degree in Political Science and where he was elected to the Phi Beta Kappa Society.

BONNICI J. LAURIE

Laurie J. Bonnici is an Associate Professor at The University of Alabama College of Communication and Information Sciences. Her research is focused in two areas: information technologies for universal access as well as social media use in education and advocacy forums. Research methods expertise centers on interpretivist approach to investigate user interaction with information and communication technologies for information access. Employing a strong theoretical approach, theories applied include Innovation Diffusion, TAM, Social Support among other sociological approaches. She has served as an investigator on federal and state-funded grants. Dr. Bonnici holds a Master of Library Sci-

ence degree from the University of South Florida (1996) and a PhD in Information Science from Florida State University School of Information (2001). Dr. Bonnici's research focuses on the interpretation of non-verbal and physiognomic signals to discover disconnects in ICT use posed by physiological impairments, specifically in aging populations. Methods employ facial action coding of video-captured user behavior. In addition she also conducts research in the area of semiotics for e-communication as well as social media metrics for the academic environment.

BOICEY CHARLES

Chief Innovation Officer Clearsense USA. Charles is the Chief Innovation Officer for Clearsense, a healthcare analytics organization specializing in bringing "Big Data" technologies to healthcare. Prior to Clearsense Charles was the Enterprise Analytics Architect for Stony Brook Medicine. In his role he is developed the analytics infrastructure to serve the clinical, operational, quality and research needs of the organization. He was a founding member of the

team that developed the Health and Human Services award winning application "NowTrending" to assist in the early detection of disease outbreaks utilizing social media feeds. In 2015 Charles served as co-editor for "Mastering Healthcare Informatics" published by Sigma Theta Tau. Charles holds a MS in Technology Management from Stevens Institute of Technology and is the President of the American Nursing Informatics Association.

BOREN AUSTIN SUZANNE

Suzanne Austin Boren, PhD, MHA is an Associate Professor and Director of Academic Programs in the Department of Health Management and Informatics, School of Medicine, University of Missouri, Columbia, Missouri. She holds a Bachelor of Arts in Psychology (University of Michigan), a Master of Health Administration (University of Missouri), and a PhD in Educational Leadership (University of Missouri). She completed a postdoctoral fellowship in Biomedical and Health Informatics Research sponsored by the National Library of Medicine at the University of Missouri. Her academic credentials include

more than 60 publications that cumulatively have attracted thousands of citations. Her research interests emphasize the appropriate use of information technology to facilitate evidence-based, self-care behavior change in chronic illness as well as the evaluation of simulation in the education and training of health care professionals. She has co-authored numerous articles in the field of health informatics on decision support technologies including peer-comparison feedback, reminders, telemedicine, distance technologies, computerized information services, and interactive computerized patient education/management of chronic illness. Her work on the delayed transfer of research results to health care practice is often cited. She has chaired the research committee of the American Association of Diabetes Educators and currently serves on the editorial advisory board of The Diabetes Educator. She is also an editorial board member of the Journal of Diabetes Science and Technology, as well as co-editor of the diabetes informatics section.

BORYCKI ELIZABETH

Elizabeth Borycki, RN, PhD is an Associate Professor with the School of Health Information Science and an Adjunct Associate Professor at the School of Nursing at the University of Victoria in Victoria, British Columbia, Canada. Dr. Borycki was Canada's Health Informatics Association Academic Representative to the International Medical Informatics Association (IMIA) from 2007-2013 and represented North America as a Vice President on the Board of Directors of IMIA from 2010-2013. She was also a founding chair of the IMIA Working Group focusing on Health Informatics for Patient Safety. Elizabeth has authored and co-authored over 150 articles and book chapters as well as edited several books examining the effects of health information systems upon health professional work processes and patient care outcomes. She was also one of the co-founders of the first nursing informatics program in Canada – a double degree program leading to a Masters of Nursing and Health Informatics. Dr. Borycki's research interests include health information systems safety, human factors, clinical informatics, electronic

health record education for health professionals, telehealth, mobile health, organizational behavior and change management involving health information systems. Much of Dr. Borycki's pioneering work has focused on research in the areas of health information systems safety (i.e. reduction of technology-induced errors) and developing new ways of improving health informatics competencies and tools to educate health informatics professionals and health professional about health information technology.

BOS LODEWIJK

Lodewijk Bos was president of the ICMCC, Editor in Chief of the "Health and Technology" journal, and has held several other positions. Although ICMCC is a member of EAMBES, he was well known to many in our field. Both as EiC and because he was present in many BME conferences where he would always point to how what we were doing was influencing the patients. In stead a commemorative event will be planned. He had a bird's eye view over our field and many related fields, something that is very well presented in the mission statement of the

ICMCC: "ICMCC (International Council on Medical and Care Compunetics) is an international foundation operating as the knowledge center for medical and care compunetics (COMPUting and Networking, its EThICs and Social/societal implications), making information on medicine and care available to patients using compunetics as well as distributing information on the use of compunetics in medicine and care to patients and professionals." Apart from having influenced many people's work, he was also a very amiable man.

BOUAUD JACQUES

Jacques Bouaud (1960–) is a research officer in medical IT in the Department of Clinical Research and Development of Paris public hospitals (Assistance Publique-Hôpitaux de Paris), and member of the LIMICS lab (Laboratory of Medical Informatics and Knowledge Engineering for e-Health - U1142) at the French National Institute for Health and Medical Research (INSERM). He received masters degrees in Artificial Intelligence (Pierre and Marie Curie University – Paris 6) and in Biomathematics (Paris - Diderot University – Paris 7). He holds a PhD and in Biomath-

ematics from Paris-Diderot University (1989). He occasionally teaches in Masters in Biomedical Informatics (University Paris Descartes and Paris 5) and in a Erasmus Mundus Master (UPMC). He worked on medical information representation of medical text using ontologies and developing natural language understanding techniques (MENELAS project), or in the context of electronic medical records (DOME project). His current personal interest lies in the implementation of computerized tools for quality improvement in the medical domain, more specifically clinical decision support systems (CDSSs) based on published clinical practice guidelines, from conception, knowledge modeling, on site implementation, and assessment of their impact on clinicians' behavior. With colleagues, we developed a flexible documentary approach to guideline-based medical decision-making. It was first applied to the therapeutic management of breast cancer (OncoDoc projects), but was also used in the cardiovascular domain for general practitioners (ASTI projects), the diagnosis of drug-induced pulmonary lung disease (Pneumodoc project), etc. On the methodological side, he is interested in the modeling of therapeutic strategies, the evolution of guideline knowledge and its impact on CDSSs and on medical practices, the conditions of CDSS acceptance by users, the measurement of clinician compliance with guidelines as a quality indicator of medical prac-

tices and the multidimensional reasons why clinicians do not follow guideline recommendations even when supported by a CDSS. Recent works focus on the reasons of non CDSS-compliance by healthcare professionals and on the concurrent management of multiple guidelines to deal with poly-pathologic patients. Since 2013, he is editor of Decision Support section of the IMIA Yearbook of Medical Informatics.

BOUHADDOU OMAR

Omar Bouhaddou was born and raised in Morocco (Lycee Paul Valery 1975), schooled in France (University of Grenoble – PhD 1984 in Applied Mathematics), and professionally trained in health informatics in the US (post-doc, research associate, student at the department of Medical Informatics at the University of Utah School of Medicine (1984 to 1994). Omar worked with Homer Warner, MD on the ILIAD project, a diagnosis expert system used in half of the US medical schools, translated to French, Spanish, and Japanese, and connected to an EHR as a knowledge server. After leaving the University of Utah, Omar co-founded 3 startups: 1) Applied Informatics, which co-developed ILIAD and its consumer equivalent HOUSECALL and sold to Mosby Yearbook in 1994, 2) Utah Health Informatics, which developed web-based health assessments and sold to MediMedia in 2002, and 3) wRITA, which developed a low cost digital paper EHR and closed for lack of

investment in 2003. Omar joined and currently works for Hewlett Packard (HP). As an HP consultant, Omar mainly supports the US Department of Veterans Affairs EHR development with a focus on centralized terminology management and interoperability with the Department of Defense and the private sector. Omar is an adjunct faculty at the University of California San Diego, where he teaches health IT standards and interoperability to medical informatics and healthcare management students. He is also the lead instructor on an online course titled 'Essential Elements of Health Information Exchange'. In Morocco, Omar co-founded the Moroccan Association of Health Informatics in 2012 and retains an honorarium president role. He also co-organized two conferences in Morocco, one of which held jointly with the Journees Francophones d'Informatique Medicale, a branch of IMIA. Omar Bouhaddou co-authored 2 textbooks and over 60 peer-reviewed articles. Currently, Omar lives in San Diego, California (USA), a perfect place for a long distance tri-athlete. Omar's future ambition is to be involved in a Moroccan national project that fully leverages informatics & IT to improve access, quality, and reduce cost of healthcare.

BOURQUARD KARIMA

Karima Bourquard is Director of Interoperability. IHE France. Senior Consultant and founder of IN-SYSTEM, Karima Bourquard assists several regional/ national projects on tele-Imaging, telemedicine or national eHealth infrastructure. She has a solid background on Healthcare IT as eHealth Project director and eHealth interoperability. During the last 15 years, she contributed to the creation and development of IHE (Integrating the Healthcare Enterprise) in France and in Europe. She is actually director of Interoperability at IHE-Europe, working on EU-Affairs Committee and European projects.

BOURNE E. PHILIP

Philip E. Bourne, PhD, FACMI, is a Professor in the Department of Pharmacology at the University of California, San Diego, the Director of Integrative Biosciences at the San Diego Supercomputer Center and Co-director of the Protein Data Bank. He received a first class honors degree and a PhD in Chemistry from the Flinders University of South Australia. Dr. Bourne was a postdoctoral research fellow at both Sheffield University, UK, and Columbia University, NY, where he worked on the elucidation of various protein structures including the iron storage protein ferritin and post-synaptic neurotoxins. He began a career in structural bioinformatics nine years ago and focuses on data modeling, query languages and the understanding of structure-function relationships with particular reference to cell signaling and apoptosis. Dr. Bourne is an Associate Editor of the journal Bioinformatics and serves on the Advisory Board of Biopolymers. He is past-president of the International Society for Computational Biology and the recipient of Sun's convergence award.

BOWLES H. KATHRYN

Kathryn H. Bowles, RN, PhD, FAAN, FACMI, holds a BSN from Edinboro University of Pennsylvania, an MSN from Villanova, and a PhD from the University of Pennsylvania. In addition to her position at the Penn School of Nursing, she is the Beatrice Renfield Visiting Scholar for the Visiting Nurse Service of New York, a Senior Fellow in the Leonard Davis Institute, a faculty member in the Ackoff Center for Advancement of Systems Approaches, and Director of the Health Infor-

matics Minor. Dr. Bowles leads a program of research in the use of information technology to improve healthcare for elders and support healthcare provider's decision-making regarding hospital discharge referrals for elders. Applied Health Informatics" (NU 551) was developed and taught by Dr. Bowles based on her belief that all health care providers must be aware of health informatics issues and solutions in order to practice safely, effectively, and efficiently. Dr. Bowles also assisted in the development of a minor in health informatics at the master's level. Dr. Bowles' program of research examines decision making supported by information technology to improve care for older adults. Her ongoing study, funded by the National Institute of Nursing Research, focuses on decision-making and the development of decision support for hospital discharge referral decisions. Other research areas include telehealth technology, quality of life among frail elders, intervention research to close the health care racial divide, and the use of large databases in home care to support clinical decision-making. In an attempt to bring research to practice and support informed decision-making in a clinical area, Dr. Bowles practiced as the Director of Nursing Research at the Visiting Nurse Association of Greater Philadelphia from 1996-2005. In that role, Dr. Bowles served as clinical coordinator and principal investigator for several research studies. She is currently team teaching an

Evidence Based Practice course at the Visiting Nurse Service of New York and is translating her decision support and telehealth research to practice in several New York City sites.Dr. Bowles has been recognized for her research achievements in decision science and telehealth. To honor her research achievements, she received a lot of awards. In recognition of her work in telehealth she received the Lillian Sholtis Brunner Award for Innovative Practice in Nursing, awarded by the University of Pennsylvania Society of the Alumni. Dr. Bowles was served on the National Quality Forum Care Coordination Steering Committee and on CMS' Technical Expert Panel on the development of the CARE tool. She is a member of the Heath Information Technology Standards Panel (HITSP) Care Coordination Committee commissioned by the Office of the National Coordinator of Health Information Technology to identify the standards for the electronic patient record. She is a fellow in the AAN, a member of AMIA. ANA, and Sigma Theta Tau.

BOXWALA AZIZ

Aziz Boxwala, MD, PhD, FACMI, received his MBBS doctoral degree from the University of Bombay, and after an internship matriculated to graduate training in biomedical engineering and UNC Chapel Hill, where he received Masters and PhD degrees. He relocated to Boston as a research associate at Harvard, then joined the faculty as an instructor and assistant professor. He was director of Medical Informatics for Eclipsys for several years, and president of US Carelink. In 2009 he joined the new Division of Biomedical Informatics at the University of California, San Diego, where at the time of election to the College he was associate professor of medicine, head of the section on clinical informatics, and director of biomedical informatics for their newly awarded CTSA. Dr. Boxwala was one of the lead developers of the GuideLine Interchange Format (GLIF) as a means for sharing guideline knowledge for decision-support. He continues his research on

sharing clinical decision support knowledge through the Clinical Decision Support Consortium (CDSC). He leads the Knowledge Translation and Specification group in the consortium that focuses on defining best practices for knowledge representation of clinical decision support logic. Dr. Boxwala was a primary contributor to the Guideline Expression Language Object-oriented query and logical expression language (GELLO) for clinical decision support.

BOYER CELIA

Executive Director at Health On the Net Foundation (HON), University of Geneva Célia Boyer is responsible for managing and developing the overall business of the Health On the Net Foundation promoting distribution of high quality information for consumers on the internet. Célia established strategic partnerships with major government agencies world-wide including the World Health Organization, the European Union, the French High Authority for Health (HAS, France), the National Library of Medicine (USA), the Medical Research Council (South Africa)

and non-governmental agencies such as the IMIA (International Medical Informatics Association), and created a HON official representation in Africa (Mali). Célia leads the development of web solutions funded by national health organizations to offer certified information on health related issues to patients and citizens Célia leads research activities supported by national and European grants and translating them into practice such as WRAPIN, HON toolbar and KHRESMOI services.

BOZIKOV JADRANKA
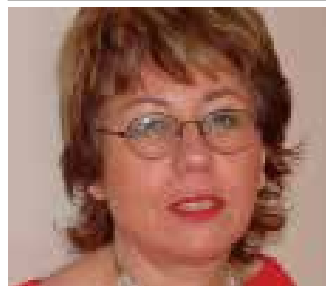
Jadranka Bozikov (1951-), PhD, born in Zagreb, Croatia, is Full Professor at the University of Zagreb School of Medicine (UZSM) and Director of its branch, the Andrija Štampar School of Public Health. She graduated in Mathematics from the University of Zagreb Faculty of Science and Mathematics in 1977 and joined the Department for Medical Statistics, Epidemiology and Medical Informatics of the Andrija Štampar School of Public Health in 1978. She completed scientific postgraduate program in Planning and Management of Health Care and earned both, MSc and PhD degree in the field

of Public Health and Health Sciences at the UZSM (in 1988 and 1997). In 1985 she was on 3-months training at the University of Tsukuba and elsewhere in Japan as a fellow of the Japan International Cooperation Agency within the framework of the project Continuing education for primary health care aimed for design and development of video and computerized educational course wares. She also paid study visits to higher educational institutions in Austria, Germany and France and was invited lecturer at several international scientific meetings and summer schools in European countries. She used to be head of the Department of Medical Statistics, Epidemiology and Medical Informatics (2004-2006) and since 2007 she is the director of the Andrija Štampar School of Public Health after being deputy director 2006-07. She participated a lot in the development of the PhD program Biomedicine and Health Sciences running at UZSM since 1998 and served as the deputy to the coordinator of this Bologna-shaped PhD program in Biomedicine and Health Sciences held in Zagreb in 2004 and 2005. As the result of these conferences the organization named ORPHEUS (Organization for PhD Education in Biomedicine and Health Sciences in the European System) was established and important documents regarding PhD education were adopted (e.g. Zagreb Declaration on PhD Education in Biomedicine and Health Sciences and the Standards for PhD Education in

Biomedicine and Health Sciences in Europe - a proposal from ORPHEUS, AMSE, WFME). She participated in the networking project Public Health for South Eastern Europe (PH-SEE) that brought together academic public health institutions from SEE countries. The main results of the network were teaching modules developed, tested and used mainly by authors from the region and published in English in a series of books PH-SEE - Programs for Training and Research in Public Health in South Eastern Europe. Jadranka published several other teaching materials and co-authored more than 200 scientific and professional papers in medical journals among them more than 50 are indexed in international bibliographic databases and cited in Web of Science Core Collection more than 350 times. Simulation modeling and its application in biomedicine and public health have been in focus of her scientific interest from the very beginning of her career. She was the president (2001-2007) of the Croatian Society for Simulation Modeling (CROSSIM) and CROSSIM representative in EUROSIM (European Federation of Simulation Societies). As the representative of the Andrija Štampar School of Public Health in the ASPHER, she was elected to the Executive Board (2010-2013) and participates in two working groups.

BRACKEN BETHANY

Bethany Bracken, PhD, is a Senior Scientist at Charles River Analytics. Throughout her career, Dr. Bracken has used a variety of behavioral, physiological, cognitive, molecular, and neuroimaging methodologies in both humans and animals to answer questions about the neurobiology of behavior. At Charles River, she currently works on projects using neurophysiological and physiological sensing methods to assess human states such as stress, focused attention, and cognitive workload and to predict upcoming performance deficits to allow time to enact augmentation strategies to optimize that performance. Dr. Bracken has a B.S. in Psychology from Clarion University of Pennsylvania, and a Ph.D. in Neuroscience from Brandeis University. Before joining Charles River Analytics, Dr. Bracken completed a postdoctoral fellowship, quickly followed with a promotion to the faculty level, in the department of Psychiatry at McLean Hospital and Harvard Medical School. Currently she works at Charles River Analytics Inc. United States.

BRAILER J. DAVID

David J. Brailer, MD, PhD, FACMI, attended medical school at the University of Pennsylvania, receiving his MD in 1986. After residency training in internal medicine, he became a fellow in general internal medicine at the University of Pennsylvania and a Robert Wood Johnson Clinical Scholar while working on his PhD at the Wharton School. He received the degree in 1992. He then founded CareScience, Inc., while continuing at Wharton and the University of Pennsylvania's medical school as a member of the adjunct faculty. In 2002, he moved to the Health Technology Center in San Francisco where he was a senior fellow for information technology and quality until he was recruited to the Bush Administration in early 2004 to serve as the nation's first Coordinator for Health Information Technology in the office of Secretary Thompson at the Department of Health and Human Services.Dr. Brailer's notoriety in the informatics world began in medical school when he presented his work on

expert systems at SCAMC in 1983 and was awarded the Martin Epstein Award in the student paper competition. He was also the first medical student to serve on the Board of Trustees of the American Medical Association. Today, he is recognized as a leader in health information technology and how it can enhance the delivery of safe, effective, and efficient health care. He is one of the nation's foremost authorities on health information exchange and the use of peer-to-peer technologies in health care. During his ten years as Chairman and CEO of CareScience, the nation's leading registry of medical errors and physician and hospital performance, Dr. Brailer led the company to add more than 150 clients, to develop groundbreaking inventions with major research institutions, to establish the nation's first health care ASP, and to create the first care management business process outsourcing partnership. Dr. Brailer also designed and oversaw the development of the first peer-to-peer health information exchange technology and led its first implementation in Santa Barbara County, CA. In his new role, Dr. Brailer is in a position to have a major influence on federal policy and activities in the area of health information technology.

BRAITHWAITE WILLIAM

William Braithwaite, MD, PhD, FACMI, is the Chief Medical

Officer at Anakam Inc. He has dedicated his career to improving the quality and efficiency of health care for patients and practitioners through information technology, but is best known as the author of the Administrative Simplification Subtitle of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and as a major contributor to the subsequent regulations setting federal standards for transactions, code sets, identifiers, security, and privacy of personal health information. Before joining Anakam, Braithwaite served as Chief Medical Officer of the eHealth Initiative and its Foundation, providing clinical and technical insight for its programmatic and evaluation activities. He also staffed the President's Information Technology Advisory Committee (PITAC) to help produce the June 2004 report, "Revolutionizing Health Care Through Information Technology." He serves as Policy Committee Co-chair and member of the Steering Committee of the Markle Foundation's Connecting for Health Project, and as a Board member of Health Level Seven (HL7). Braithwaite contributed to the Markle Common Framework for Networked Personal Health Information.

BRANDT N. EDWARD
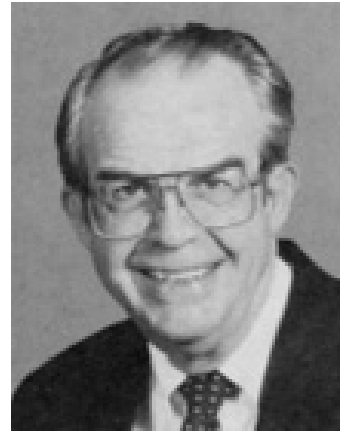
Edward N. Brandt, Jr., MD, PhD, FACMI was President of the University of Maryland at Baltimore, has promoted a primary concern for the importance of information processing as a means for enhancing the education of health professional students and practitioners. He has done this through his special interest in the activities of the National Library of Medicine. including its services, intramural research and development, and extramural research support.

BRATKO IVAN
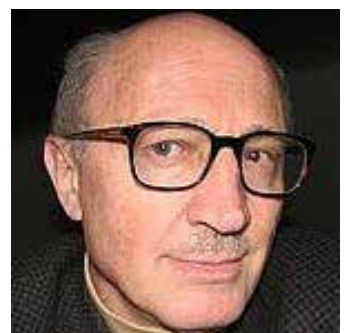
Ivan Bratko (1946-) is professor of computer science at Univer-

sity of Ljubljana. He has B.Sc. and M.Sc. degrees in electrical engineering, and a Ph.D. degree in computer science, all from the University of Ljubljana. He is head of Artificial intelligence Laboratory, Faculty of Computer and Information Sciences of Ljubljana University. Until 2002, professor Bratko also directed the AI group at J. Stefan Institute in Ljubljana. Professor Bratko has conducted research in machine learning, knowledge-based systems, qualitative modelling, intelligent robotics, heuristic programming and computer chess. His main interests in machine learning have been in learning from noisy data, combining learning and qualitative reasoning, constructive induction, Inductive Logic Programming and various applications of machine learning, including medicine and control of dynamic systems. Professor Bratko has published over 200 scientific papers and a number of books. He has been member of the editorial boards of a number of scientific journals, including Artificial Intelligence, Machine Learning, Journal of AI Research, Journal of ML Research, and KAIS (Journal of Knowledge and Information Systems). He was one of the founders and the first chairman of SLAIS (Slovenian AI Society) and chairman of ISSEK, International School for the Synthesis of Expert Knowledge, based in Udine, Italy. He is member of SAZU (Slovene Academy of Arts and Sciences) and a Fellow of ECCAI.

BRAUDE M. ROBERT
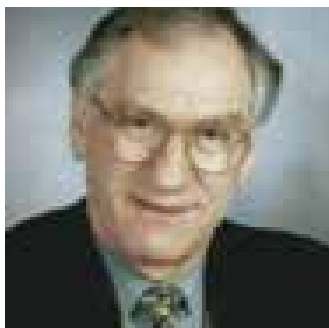
Robert M. Braude, PhD, FACMI, received his bachelors and masters degrees in Psychology, and a Masters in Library Science, all from UCLA. He received his PhD in Higher Education Administration from the University of Nebraska, while serving as director of the University of Nebraska medical library and director of the midcontinent Regional Medical Library program. Beginning in 1986 he directed the medical library at Cornell University Medical College, and at the time of election to the College served there as Assistant Dean for Information Resources. He also held an appointment as Professor in the program in Clinical Epidemiology and Health Services Research of Cornell's Graduate School of Medical Sciences. Dr. Braude performed and published analyses of the variables influencing career choices among medical informatics trainees. He has been a member of NLM's BLRC, IAIMS, and HPCC Review Committees, a reviewer for Health Sciences Education and Training grants, a member of the NLM's Long Range Planning effort, both the

large scale planning effort of the mid-1980's and a consultant to the subsequent International Programs planning panel. Dr. Braude has been an active contributor to AMIA meetings, is a member of AMIA's International Affairs Committee and the Editorial Board of JAMIA.

BRENDER JYTTE

Jytte Brender's scientific focus is on the theoretical and practical aspects of Quality Management and Technology Assessment. With her unique combination of R&D experience, together with fifteen years in a university hospital, nine years as an industrial researcher, and ten years as full-time university researcher, she cross-fertilized her expertise with an MSc. in biochemistry (Copenhagen University, 1973), an MSc. in computer science (Copenhagen University, 1991), and a European Doctorate & PhD in Medical Informatics (Aalborg University, Technology & Science Faculty, 1997). She is presently associate research professor at the Institute of Health Science and Technology, Aalborg University, Aalborg, Denmark. Her research and interest in quality management and assessment ranges from constructive assess-

ment (dynamic, self-reflective, purpose-driven and corrective evaluation) to holistic analysis of information flow. Her expertise covers the breadth of organizational change and includes the theoretical aspects of the quality of semantic aspects of medical knowledge. While she is a computer scientist, at the anthropocentric end of the scale, all things human-centered interest her as does the multifaceted realm of asymmetric abstraction. Her latest work is a handbook of methods for constructive assessment of IT-based solutions: Three hundred and sixty pages emphasizing the hidden aspects of methods, assumptions for application, conjecture on epistemological nature, as well as potential pitfalls and perils. It includes a framework for meta-analysis of evaluation studies dedicated to pinpointing the downside in such studies, while scrutinizing experimental biases. Her leadership experience ranges from project management and technical coordination, to task leader on multinational, cross-disciplinary R&D projects involving teams of highly skilled academics. She is author/co-author of five books, 50 (half of them invited) publications in scientific peer-reviewed journals and books, 80 technical reports (most of them peer-reviewed), 65 presentations (33 invited and 2 keynotes). Furthermore, she is (Co-)Editor of 4 proceedings of international congresses and workshops (incl. an interactive CD-Rom), and one special issue of a scientific journal, and she is editorial board member of one of the most prestigious, international scientific journals of her domain.

BRENNAN FLATLEY PATRICIA

Patricia Flatley Brennan, RN, PhD, FACMI, is the Lillian L. Moehlman Bascom Professor, School of Nursing and College of Engineering, University of Wisconsin-Madison, Madison, Wisconsin. Dr. Brennan received a Masters of Science in Nursing from the University of Pennsylvania and a PhD in Industrial Engineering from the University of Wisconsin-Madison. She developed several innovative Internet-based consumer support services, including ComputerLink and HeartCare, which helped home-dwelling patients feel greater connection to other and to recover faster with fewer symptoms. Dr. Brennan directed Project HealthDesign, a RWJ- funded initiative designed to stimulate the next generation of personal health records. She also directed external evaluations of novel HIT architectures. Brennan leads the Living Environments Laboratory at the Wisconsin Institutes for Discovery, which includes a 6-sided virtual reality CAVE that her group uses to re-create visually every environment on earth, and develop new ways for effective visualization of high dimensional data. Supported by AHRQ, her group explores the impact of household contexts on personal health information management. She is fellow of both the American Academy of Nursing (1991) and the American College of Medical Informatics (1993). Dr. Brennan was elected to the Institute of Medicine in 2002, and in 2009 became an elected member of the New York Academy of Medicine. From August 2016 professor Brennan serves as director of National Library of Medicine in Bethesda.

BRINKLEY F. JAMES

James F. Brinkley, MD, PhD, FACMI, is an Associate Professor (Research) in the Department of Biological Structure at the University of Washington in Seattle, where he directs the University of Washington Structural Informatics Group. He is also an Adjunct Professor in the Department of Computer

Science and Engineering and in the Division of Biomedical Informatics within the Department of Medical Education. He received a BA from Amherst College, an MD from the University of Washington, and a PhD (in medical computer engineering) from Stanford University. His primary research interests are in structural informatics, which he defined in 1991 as a subfield of biomedical informatics that pursues research and development of methods for representing, organizing, accessing, and utilizing information about the physical organization of the body. In his initial work, he developed one of the first three-dimensional ultrasound systems for acquiring, visualizing, and quantitating fetal volume. As part of this effort, he developed a method for representing spatial structural knowledge, called geometric constraint networks, which he later applied to other types of medical images and, at the macromolecular level, to protein structure determination. During the past ten years, Dr. Brinkley has focused his efforts on the development of a structural information framework, in which structure provides the basis for organizing, accessing, and visualizing a large portion of medical information. The projects that currently drive this effort are the Digital Anatomist information system, which provides online access to an evolving repository of spatial and symbolic anatomic information resources, and the University of Washington Human Brain Project, which provides a struc-

tural framework for organizing and integrating functional data about the brain. Dr. Brinkley has served on the National Library of Medicine's Board of Scientific Counselors, and on several National Institutes of Health special study sections. He served on the Editorial board of JAMIA, the program committee for the AMIA 2000 Annual Symposium, and several advisory committees for local and national medical informatics programs.

BRITO ANTÓNIO

António Carvalho Brito works at Faculty of Engineering of University of Porto, Portugal. has a BSc (1981) and an MSc (1985) in Engineering from the University of Porto (FEUP), a PhD in Computer Simulation from the School of Management at Cranfield University, England (1992) and an MBA (2002) from Catholic University. University professor since 1981 has taught in the areas of Mathematics, Computer Programming, Information Systems and Simulation. He is currently an Assistant Professor at FEUP in the Department of Industrial Engineering and Management.

He has been responsible for several projects, publications and consulting in the areas of Simulation and Information Systems. Recently he has been interested in Health Information Systems, teaching Information Systems in post-graduate (EGP – University of Porto Business School) and MSc courses (FEP – University of Porto) in the Health Care Service Management area and he has also been involved in several research projects, in particular, the Design of the Portuguese Electronic Health Record (Feup / Portuguese Ministry of Health) and An Integrated Framework for Operating Room Capacity Planning and Scheduling (FCT– Fundação para a Ciência e a Tecnologia).

BROERING C. NAOMI

Naomi C. Broering, MLS, MA, FACMI, is Director of the Biomedical Information Resources Center and Medical Center Librarian at the Georgetown University Medical Center, Dahlgren Memorial Library. She received her MLS degree from

the UCLA Graduate School of Library and Information Science, where she received an NLM/NIH Postgraduate Fellowship, after completing all coursework toward a doctorate in History and earning a MA in History and BA in Social Science. Her work in medical informatics emphasizes online access to medical literature. Currently she is concentrating on the integration of information for medical education, patient care and research through scholar's workstations and network systems. In 1981, she led the team effort to create the Georgetown University Library Information System (LIS), an integrated library system, and the miniMEDLINE SYSTEM, a self service bibliographic system based on the NLM MEDLINE file. In 1983, as Principal Investigator of the Georgetown IAIMS projects, she was responsible for developing the institution's IAIMS strategic plan followed by a model project in 1985. Under her leadership, in 1989, Georgetown began IAIMS implementation by creating a Biotechnology and Biomedical Knowledge Network, accessible to users from home, office and the campus. She presented numerous papers at the annual conferences of AAMSI and SCAMC (Symposium on Computer Applications in Medical Care) on her work at Georgetown to integrate literature systems to health care delivery, and to develop student clinical workstations with access to multiple resources of information. She says the "trick is a user friendly system." She served on

SCAMC program committees, planning panels and clinical informatics committees. She is recipient of the 1987 Special Libraries Association Professional Award, Medical Library Association, Frank B. Rogers Information Advancement Award, and the Georgetown University Vicennial Award for Distinguished Service. She is Associate Editor of Update: Computers in Medicine. She recently served on the NLM Planning Panel on Outreach Programs chaired by Michael DeBakey Jan to May 1989. A prolific author of 3 books and many articles, she continues to write scholarly articles and looks forward to contributing to the newly emerged AMIA.

BROK ARNO

Arno Brok is the first appointed CEO of Australian Information Security Association (AISA). He is committed to delivering value to its members, the community, and the information security industry. Arno is a former AISA Board executive and held the position of AISA National Director from 2013-2015. Arno was vital in defining the strategy for AISA

to advance from an association purely for information security professionals to one where all individuals, businesses and governments are educated in the risks and dangers of cyber-attack and data theft. Arno also set up AISA's first Advisory Council, which makes recommendations to AISA's Board of Directors. Arno has considerable commercial experience, most recently as Director of Information Security, Audit and Advisory firm Protiviti, and in similar positions at BAE Systems, Deloitte and Accenture. Arno is an excellent motivator and facilitator. His strengths lie in his ability to communicate complex information security issues with a positive "can-do" attitude.

BROWN H. STEVEN

Steven H. Brown, MD, MS, FACMI, received his bachelor's and MD degrees from Brown University. After internship and residency in internal medicine at Emory University he joined the faculty at Emory and became involved in the creation of Emory's Computerized Record system named THERESA. His interest in informatics led him

to an NLM-sponsored medical informatics fellow at Vanderbilt, and he received his master's degree in biomedical engineering in the years before biomedical informatics became an academic department. He is currently an Associate Professor of Biomedical Informatics at Vanderbilt. Steve has a long-standing relationship with the Veterans Administration (VA), having served as the Chief Information Officer of the Tennessee Valley VA, while becoming increasingly involved at the national level with data standards relevant to VA clinical systems. This includes serving as the VA representative to the federal Government Computerized Patient Record Framework project (GCPR) and being the national project leader for the VA's efforts to create standard drug reference terminologies. He was team leader for the RADARx project that developed automated methods for adverse drug event discovery, which received a VA national safety award. He also directs the national VA Compensation and Pension ExamProgram (CPEP). CPEPis program dedicated to improving the quality of veteran's disability examinations via applied informatics and traditional quality improvement techniques. This program performs 500,000 examinations and distributes over $30 billion per year based on the results. Dr. Brown's sustained contributions have advanced a systems approach to health care within the VA that has had a favorable impact on the care of literally millions of VA beneficiaries, and

his ongoing work is advancing the cause of interoperability for a true National Health Information Infrastructure.

BRUTLAG L. DOUGLAS

Douglas L. Brutlag, PhD, FACMI, is Professor of Biochemistry and Biomedical Informatics (by courtesy) at Stanford University. He also serves as Honorary Professor of Bioinformatics at Keio University, Japan. He received a BS from the California Institute of Technology with honors and his PhD in biochemistry from Stanford University with great distinction.

BRUNAK SØREN

Søren Brunak, PhD, is professor of Bioinformatics at the Technical University of Denmark and professor of Disease Systems Biology at the University of Copenhagen. Prof. Brunak is the founding Director of the Center for Biological Sequence Analysis, which was formed in 1993 as a multi-disciplinary research group of molecular biologists, biochemists, medical doctors, physicists, and computer scientists. Søren Brunak has been highly active within biological data integration, where machine learning techniques often have been used to integrate predicted or experimentally established functional genome, metagenome and proteome annotation. His current research does combine molecular level systems biology and healthcare sector data such as electronic patient records and biobank questionnaires. The aim is to group and stratify patients not only from their genotype, but also phenotypically based on the clinical descriptions in the medical records. An additional focus area is now adverse drug reactions.

BRYANT H. STEPHEN

Stephen H. Bryant, PhD, FACMI, is a Senior Investigator at the Computational Biology Branch of the National Center for Biotechnology Information at the National Library of Medicine. He received his BA in chemistry and English from the University of Virginia and a PhD in biophysics from Johns Hopkins University. Dr. Bryant's previous positions include research officer in the Department of Crystallography at Birkbeck College at the University of London; senior research associate, protein databank at Brookhaven National Laboratory; and research scientist, Wadsworth Center for Laboratories and Research, New York State Department of Health. At NCBI, he leads the structural biology group, one of the leading research teams in development of comparative analysis algorithms for three-dimensional structure data. Some of the team's accomplishments include development of sequence-structure threading methods, which use structural data to improve recognition of distant homology relationships. Their success was demonstrated by prediction of the Leptin structure in 1995, and in the 1998 CASP structure prediction competition, the Bryant team was awarded first place in the prestigious fold-recognition category. They have developed novel methods for structure–structure comparison. Their algorithms employ rigorous statistical tests and are fast enough to allow all-against-all "neighboring" of the structural database. These data, available through NCBI's Entrez service, allow biologists to identify conserved structural features in protein families. In addition, the team designs and maintains the database and software systems that incorporate structure data and comparative analysis results into NCBI's information retrieval systems. The Cn3D molecular graphics viewer, distributed with Entrez, allows biologists to view simultaneously structures, sequences, and sequence–structure alignments.

BRYANT JOHN

John Bryant, BSc, MBA, FBCS, graduated as a physicist before moving into commercial data processing. In 1972 he joined the NHS to work in the Experimental Computer Project at Cambridge. John has extensive experience in the use of information and communications technologies. He has directed a wide range of leading edge projects in the health sector that included a multi-million pound program to introduce integrated information systems into acute hospitals, the establishment of the national electronic patient record program, and the development of benefits management and change management programs. He also has wide experience of managing information services delivery. He has participated actively in the standards field, representing the UK user community at the International Standards Organization. He was also active worldwide in the health informatics field becoming President of the EFMI and Vice-President (Europe) of the IMIA. He is currently Head of Informatics in the European Institute of Health and Medical Sciences at the University of Surrey, where he has particular interests in strategic management, organizational transformation, the organizational impact of information systems, and the prevention of systems failures.

BRYDEN JOHN

John Bryden (1932-2012) was Public health consultant in Glasgow. Scotland. John Bryden graduated in medicine at Glasgow University in 1956 and after completing his national service worked in orthopedics and became a GP covering Mosspark and Govan. An early interest in optical character recognition and computer programming led to a three-year fellowship in administrative medicine and a diploma in Social medicine from Edinburgh University. In his final year he was on the commissioning team for Woodside Health Center and set up its computerized patient index, improving preventive medicine. He became medical superintendent for Paisley and District Hospitals in 1971 and completed his MSc in industrial administration with reference to health services at Strathclyde University. Between 1973 and 1981, he led a Health Boards Informatics Team which jointly developed a community health register for a combined population of 1.4 million using optical character recognition. It was known as the Community Health Index (CHI) and the unique identification number is now used on all prescriptions and many medical communications throughout Scotland. His next post was senior epidemiologist with the head injury research team in the Southern General Hospital in Glasgow, where he was involved in research on post-head injury morbidity. In 1986 he designed a diary for new doctors starting in the hospital. He continued as epidemiologist and consultant in public and hospital health with Greater Glasgow Health Board and in 1990 brought the European Federation for Medical Informatics Conference to Glasgow. After retiring, he ran his own private company providing expertise and trouble-shooting in his specialty. He helped with the difficulties of starting a needle exchange clinic required because of an outbreak of Hepatitis B, and backed the Heartstart campaign, which encouraged all citizens to learn basic resuscitation. He became a Scottish Blue Badge Tour Guide qualified to guide in French as well as English, thanks to many Brittany holidays.

BUCHANAN BRUCE

Bruce Buchanan (1935-) is professor of Computer Science, Philosophy, and Medicine, with the Department of Computer Science at the University of Pittsburgh. He is, also, co-Director of the Keck Center for Advanced Training in Computational Biology. His main research interests are in machine learning, knowledge-based systems, medical expert systems, and computational biology. He is pretty generally interested in applications of machine learning and artificial intelligence to any problems in biology or medicine. His most interesting book is "Artificial Intelligence as an Experimental Science." In J. H. Fetzer (ed.) Aspects of Artificial Intelligence, Amsterdam: D. Reidl, 1988. Bruce's recent research are: AI approaches to machine learning-development of the RL induction system; Applications of symbolic learning to problems in biology and medicine, and, Case-based reasoning with application to prediction of protein 2ary structure. His representative publications are: a) B.G. Buchanan and David C. Wilkins. "Readings in Knowledge Acquisition and Learning", San Mateo: Morgan Kaufmann, 1993; b) Robert K. Lindsay, Bruce G. Buchanan, Edward A. Feigenbaum and Joshua Lederberg. "DENDRAL–a case study of the first expert system for scientific hypothesis information" He is author of several articles, most of them ware published in the field of Artificial Intelligence.

BUCHAN IAIN

Iain Buchan, MD, FFPH, FACMI, has background in Medicine, and alongside medical training, with intercalation in Pharmacology, he studied Statistics and Informatics. As an undergraduate in the late 1980s he wrote statistical software for clinical researchers, which grew into www.statsdirect.com with over 17,000 users worldwide today. As a junior doctor, he developed software to improve the communication of clinical guidelines between primary and secondary care. In the mid-90s he trained as a Public Health Physician while pursuing Medical Informatics research at Cambridge. In 2003 he took up his first clinical academic post at Manchester, where he has attracted over £35M of research income and founded the Centre for Health Informatics, which has around fifty staff. In 2012 he was elected to Fellowship of the American College of Medical Informatics, which is the top international honour in the field of Biomedical and Health Informatics. In 2013 his team was awarded MRC Centre status and he became director of this, the Health eResearch Centre

(www.herc.ac.uk), which is now the methodological hub of the national Farr Institute for Health Informatics Research (www.farrinstitute.org). Currently he works as Clinical Professor Public Health Informatics, Centre for Health Informatics, University of Manchester.

BUETOW H. KENNETH

Kenneth H. Buetow, PhD, FACMI, received his Bachelors degree in Biology from Indiana University, and Masters and PhD degrees in Human Genetics from the University of Pittsburgh. He undertook postdoctoral training in Genetics at Fox Chase Cancer Center. He stayed on at Fox Chase, working in cancer genetics, and maintained an academic appointment as assistant professor of pediatrics and the University of Pennsylvania. In 1997 he was named a Special Assistant to the Director and Seniors Genetics Network chief at the National Cancer Institute (NCI)'s Division of Cancer Epidemiology and Genetics. He came to work full time at NCI, and at the time

of his election to the College he was the NCI Associate Director for Bioinformatics and Information Technology, Director, Center for Biomedical Informatics and Information Technology, and Chief of the NCI Laboratory of Population Genetics. Dr. Buetow achieved international recognition for his leadership of the NCI Cancer Biomedical Informatics Grid (caBIG) program, which developed and deployed a standards-based infrastructure for data sharing and analysis, and computational tools for the management of a wide variety of basic, translational and clinical cancer research. caBIG began as a high priority program of NCI in 2004 and at the time of Dr. Buetow's election to the College, the NCI had invested nearly $300 million of public funding in its informatics tools and resources. His expertise and accomplishments in advancing cancer research informatics has recognized nationally.

BURTON MATTHEW

Matthew Burton, MD, PhD, is Principal Clinical Information Scientist, Applied Clinical Informatics Program, Office of Information and Knowledge Management, Mayo Clinic. Dr. Burton is a pioneering clinical informatician and health systems engineer who designs, develops, and implements innovative information and knowledge management systems. He works at the intersection and pushes the boundaries of knowledge management, clinical workflow, and

practice redesign. These systems enable the full lifecycle of clinical best practices and pathways through cognitive support of expert clinician mental models within optimal workflows.

BUTTE J. ATUL

Atul J.Butte, MD, PhD, FACMI, received his Bachelor of Computer Science degree and MD from Brown University, and completed his residency in Pediatrics and Fellowship in Pediatric Endocrinology, both at Children's Hospital Boston. He later matriculated at MIT where he received a Masters degree in Medical Informatics and PhD in Medical Engineering and Medical Physics. He is Professor in the Medical Informatics division of the Department of Medicine at Stanford, with concurrent appointments in Pediatrics and Computer Science. Dr Butte presented his first AMIA paper in 1999 on development of knowledge discovery methods in clinical laboratory databases employing relevance networks, work that he parlayed into a subsequent publication in the Proceedings of the National

Academy of Sciences. He has been an innovative proponent of data mining of publicly available data resources, for the discovery of novel genome-phenome relationships, and the creation of genomic data-driven nosologies. Dr Butte has served on the AMIA Board of Directors and launched the first AMIA Summit on Translational Bioinformatics in 2008, which has been a resounding success.

BUTTERFIELD BLAIR

Blair Butterfield is Board Member Emeritus, eHealth Initiative and Foundation, and Vice President, International Development, GE eHealth Solutions, GE Healthcare. Blair Butterfield is Vice President, International for GE Healthcare eHealth Solutions, and leads GE's eHealth and Health Information Exchange international market development. Blair has extensive experience with ehealth initiatives and projects in North America, Western Europe, the Middle East, the Asia Pacific region, and mainland China, and is a frequent invited speaker at international, national and regional ehealth conferences and events. Blair is a past Member of the Board of Directors of the eHealth Initiative and Foundation, a national not-for-profit organization based in Washington, DC dedicated to the use of Healthcare IT to transform the quality of healthcare, and he is also a past Board Member of the VistA Software Alliance, a trade association formed to promote

the use of open source electronic medical record software. Blair has spent over 20 years working in Healthcare IT, the last 5 in ehealth and health information exchange. Prior to his current role, Blair managed the GE Healthcare IT strategic marketing program for standards-based connectivity solutions, and prior to that led the Government Initiatives team involved in US and Canadian federal healthcare IT initiatives. Blair spent the first part of his career with leading companies in advanced applications for medical imaging and image-guided neurosurgery, working with luminary sites nationally and internationally to pioneer innovative technologies for minimally invasive diagnosis and treatment. Blair grew up in Bermuda, is a graduate of Yale University, and has lived in 8 countries. He currently resides in the Burlington, Vermont area.

C

CACERES A. CESAR

Cesar A. Caceres (1927-), born in Honduras, moved in 1933 to the US with his father who was the Ambassador to Washington. Caceres received his MD

at Georgetown University. He was fascinated by electrocardiography and read widely about it during his medical school his post-doctoral years at Georgetown University. Caceres got a job at US Public Health Service (USPHS) and at the recommendation of Robert Grant of NIH he was asked to set up an ECG research laboratory. The laboratory was first established under NIH and after a couple of years under the Heart Disease Control Program of USPHS. Those days the problem for digital ECG processing was the lack of commercial amplifiers and FM recorders for multichannel recording of the 12-lead ECGs. Caceres based his computer-ECG program development on the use of standard 12-lead ECG. Initial work to record and digitize one lead at a time was performed in part by Airborn Instruments Laboratory under USPHS contract. The ECG program of Caceres evolved in an over a decade-long development effort by his large team from a primitive initial version to a more comprehensive ECG measurement and interpretation program (ECAN-D). In his 1969 book, describing the achievement, Caceres proclaimed that the first diagnostic computer was born for electrocardiography. A remarkable event, though the baby had some birth defects. Another book edited by Caceres and Dreifus "Clinical Electrocardiography and Computers" in 1970 contains many important aspects of computer-ECG development and contributions by both pioneer-

ing camps Limited acceptance of the ECAN program was mainly due to the inefficiency in single-channel recording and analysis of the 12-lead ECG and the inherent difficulty to obtain accurate global interval measurements. VA (Pipberger) program acceptance was low because the Bayesian-type of classification into mutually exclusive diagnostic categories with probabilities adding to 1 with out an option for combinations. His colleague and friend Pipberger deserves credit for introducing the probabilistic concept to computer ECG classification. Cardiologists actually commonly make use of the probabilistic concept in modifying diagnostic classification when clinical data in addition to ECG become available. However, the heuristic- type decision-tree ECG criteria are easier to associate with pathophysiological mechanisms.

FOX JOHN

Ph.D., Artificial Intelligence, Software Engineering, Cognitive Psychology, Medical informatics-John Fox is an interdisciplinary scientist with strong theoretical and applied interests in com-

puter science, artificial intelligence and medical informatics. After training in experimental psychology at Durham and Cambridge Universities and NATO post-doctoral fellowships in the USA and UK (MRC) he joined the Imperial Cancer Research Fund (now Cancer Research UK) in 1981 as a researcher in medical AI and Head of the then new computer service. In the latter role he introduced a number of technical innovations and his group provided the computing support which permitted M Waterfield's team to make the key discovery of the homology between PDGF and a simian sarcoma virus proto-oncogene.In 1987 he established an independent research laboratory in the Lincoln's Inn Fields Laboratories of ICRF. The group's research programme was explicitly multidisciplinary and it subsequently made significant contributions in basic computer science, AI and medical informatics, and developed a number of successful technologies which have been commercialised. He and his colleagues have published widely in computer science, cognitive science and biomedical engineering, and he was founding editor of the Knowledge Engineering Review (Cambridge University Press). Recent publications include a research monograph Safe and Sound: Artificial Intelligence in Hazardous Applications (MIT Press, 2000) which deals with the use of AI in safety-critical fields such as medicine.In 1996 they were awarded the 20th Anniversary Gold Medal of the

European Federation of Medical Informatics for the development of PROforma, arguably the first formal computer language for modeling clinical guidelines and protocols, and associated software for delivering decision support and workflow management services at the point of care. In 1999 he led the spinout of InferMed Ltd from CRUK to commercialise clinical decision support and clinical trials management software.Over the last 10 years or so they and InferMed have developed a wide variety of PROforma applications in primary and specialist care. His group's clinical work has been primarily concerned with establishing a convincing body of evidence that the technology is effective, and they have now published 7 studies that demonstrate that (most are in oncology but primary care has also been an important focus). The company is focused on developing commercial applications so there is little published data. However, the Retrogram system for advising on anti-retroviral therapy for HIV+ patients and other applications was developed for a highly successful international trial sponsored by Hoffman la Roche and 100 guideline based decision support applications have been developed with New Zealand's Best Practice Advocacy Centre and are currently being rolled out to NZ's 4000 GPs.The lab's last quinquennial review at CRUK was in 2004, where their work was assessed overall as "internationally leading" with the PROforma development programme as "out-

standing". This led to discussions with CRUK about setting up a new interdisciplinary collaboration (COSSAC) embedded in world class technical centres in Oxford and Edinburgh and offering stronger clinical links than were possible in the Lincoln's Inn Fields institute. At the beginning of 2007 he moved to take up a chair of Engineering Science in Oxford University.

CAMPANA ALESSANDRO

Alessandro Campana has a Degree in Economics in the LUISS (Libera Università Internazionale degli Studi Sociali – International University of Social Studies) University in Rome and ITP (International Teachers Program) graduate in the London Business School. Accenture Managing Director and Clinical Transformation Lead for EALA (Europe, Africa, Middle East, Latin America Regions). First professional experience in Citibank and, since 1985, he is working in the consulting sector with specific focus in the health and public sector. He was a Partner in KPMG, leading the Italian Health and Public practice, and Managing

Principle in IBM, where he was EMEA (Europe, Middle East and Africa) Lead for the consulting activities in the health sector. He was founder and Senior Partner of some Italian and International consulting companies (SGC – Sviluppo Gestione Controllo, Eurogroup Consulting Italy and CRS Conoscenza Ricerca Sviluppo). In the last four years, as Senior Partner of CRS, he was focusing on clinical governance issues, on the development of outcome indicators in the health sector and on the integration of costs and quality evaluation of health treatments. He is teaching Management in Catholic University in Rome and he was a lecturer in some Italian business schools. He is author of several articles and publications.

CAMPBELL KEITH

Keith Campbell, MD, PhD, FACMI, is Chief Technology Officer for Inoveon Corporation in Sunnyvale, California. He is also Assistant Adjunct Professor in the Medical Information Sciences Graduate Group at the University of San Francisco (UCSF) of Biopharmaceutical Sciences. He

received a BA degree magna cum laude in Chemistry from Central Washington University, an MD degree from the University of Southern California, and a PhD in Medical Information Sciences from Stanford University. He completed an internal medicine residency at Santa Clara Valley Medical Center. Prior to moving to his current position, Dr. Campbell was Assistant National Director for Kaiser Permanente's National Clinical Information Systems, and has been a consultant to many companies, including Ameritech Knowledge Data, Lexical Technology, Oceania, Kaiser Foundation Health Plan, Chiron Informatics, and the Veterans Administration. His primary area of research has been the development of methods for managing scalable distributed development of controlled terminologies, including terminology systems such as SNOMED RT. The Convergent Medical Terminology Project, which began as a collaboration between Kaiser Permanente, the Mayo Clinic, and the College of American Pathologists, was founded on his dissertation work on supporting distributed development of logic-based terminologies. Dr. Campbell has served as a co-chair of the Health Level 7 (HL7) Vocabulary Technical Committee and as a member of the SNOMED Editorial Board and the SNOMED Clinical Terms Technical Design Team.

CANNON-ALBRIGHT LISA

Lisa Cannon-Albright, PhD, FACMI, is Director of Genetic Epidemiology, a division of the Medical Informatics Department at the University of Utah. Professor Albright also founded the Genetic Research Group at Intermountain Healthcare, Inc. in 1995, and has served as its director since its inception. She received an MS in biostatistics and a PhD in medical informatics from the University of Utah, Salt Lake City, Utah, where she has served since 1988. Dr. Albright is an excellent contributor to the field of bioinformatics. She has made major contributions to the use of clinical information systems along with computerized genealogical records to detect family relationships to diseases. Using these family relationships, she has been able to contact families and obtained permission to use blood samples to search for specific disease entities. She works as the leader of a team, initially started by Mark H. Skolnick, PhD, which has found two breast cancer genes, BRCA1 and

BRCA2, and a prostate cancer gene. Dr. Albright was involved in the studies that identified the first melanoma gene, the first two breast cancer genes, and the first prostate cancer gene. She is a genetic epidemiologist whose primary research concentration is in the analysis of common disorders that appear to have a genetic component. Her research utilizes computerized medical/health records that are record-linked to a genealogical database. The analysis of the linked medical diagnoses to genealogical records can allow clarification of the genetic component of disease. These data are analyzed to identify a genetic component for a particular disease or subset of individuals with particular disease characteristics. The data are also used to ascertain the high-risk families, to study record linkages being expanded to include clinical data, to allow further characterization of cases, and to pursue analysis of drug response. Dr. Albright is a member of the American Association for the Advancement of Science, the American Association for Cancer Research, the American Society for Bone and Mineral Research, the American Society of Human Genetics, and the International Genetic Epidemiology Society. She serves on the Scientific Advisory Board for Intermountain Heart Study at LDS Hospital, the LDS Hospital Research and Administration Committee, the Intermountain Health Care Family Health Database Oversight Committee, and the International Consortium on

Prostate Cancer Genetics. She also served on the Myriad Genetics, Inc. Scientific Advisory Board from 1997 through 2000.

CAPRARA MARK
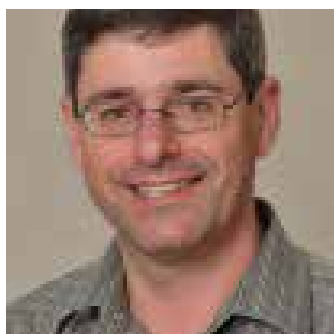
Mark Caprara is the Scientific Review Officer for the Biodata Management and Analysis Study Section. He oversees the review of applications that focus on computational methods for the acquisition, management, querying, sharing and analysis of biological and clinical data. Prior to joining NIH he was an assistant professor at Case Western Reserve University Medical School conducting research on RNA processing and mobile genetic elements.

CAPISTRAN D. JAMES

James Jim D. Capistran is Executive Director of the University of Massachusetts Innovation Institute (UMII), a UMass initiative that serves as the portal for UMass research with industry to move research outcomes from the University to society. The UMII is the interface for industrial collaborations at the Amherst campus. In his prior role, he served as the Director for the Center for UMass/Industry Research on Polymers at the University of Massachusetts Amherst. The Center was established in 1980 as a National Science Foundation–Industry/University Collaborative Research Center program and continues as a premier center for polymer research. Prior to assuming the Director position in 1996, Jim was the Corporate Technical and Environmental Director for MetoKote Corporation, a specialty coatings company with facilities throughout the US, responsible for corporate technology, R&D and environmental oversight for all manufacturing operations. His industrial career originated with Monsanto Chemical Company where he attained the level

of Technology Manager. During his 10 years with Monsanto, he was the recipient of several Monsanto Achievement Awards and five US Patents providing the basis for a new business venture in their Advanced Performance Materials division. This successful new business received a R&D 100 Award for new product development and a Kirkpatrick Achievement Award for best new product. Jim received his degrees in Polymer Science and Engineering and Chemistry from the University of Massachusetts Amherst.

CARPENDALE SHEELAGH

Sheelagh Carpendale is a Professor in Computer Science at the University of Calgary where she holds a Canada Research Chair in Information Visualization and NSERC/AITF/SMART Technologies Industrial Research Chair in Interactive Technologies. She has many received awards including the E.W.R. NSERC STEACIE Memorial Fellowship; a BAFTA (British Academy of Film

& Television Arts Interactive Awards); an ASTech Innovations in Technology award; and the CHCCS Achievement Award, which is presented periodically to a Canadian researcher who has made a substantial contribution to the fields of computer graphics, visualization, or human-computer interaction. She leads the Innovations in Visualization (InnoVis) research group and initiated the interdisciplinary graduate program, Computational Media Design. Her research on information visualization, large interactive displays, and new media draws on her dual background in Computer Science (BSc. and Ph.D. Simon Fraser University) and Visual Arts (Sheridan College, School of Design and Emily Carr, College of Art). She is an internationally known for both information visualization and multi-touch interaction research.

CARULLI MARCO

Marco Carulli works at AAL Association Belgium. The Active and Assisted Living Programme (AAL–http://www.aal-europe. eu) is a pan-European research funding programme aiming at creating better condition of life for the older adults and to strengthen the industrial opportunities in Europe through the use of Information and Communication Technologies (ICTs). The motivation of the programme lies in the demographic change and ageing in Europe, which implies not only challenges but also opportunities for the citizens, the social and healthcare systems as well as industry and the European market. The programme carries out its mandate through the funding of across-national projects (at least three countries involved) that involves small and medium enterprises (SME), research bodies and user's organizations (representing the older adults). The AAL programme's objectives and specificities will be presented to the participants.

CESNIK BRANKO

Branko Cesnik (1956-2007) earned MBBS in 1978 and MD in 1995. He was an Australian pioneer and an international leader in Health Informatics. Branko graduated as a doctor from Monash University. Following his graduation he worked in training posts in accident and emergency medicine and renal medicine in Australia before spending time working in South Africa. In 1988 Branko was appointed as a Senior Lecturer with the Department of Community Medicine and General Practice at Monash University. Under the visionary leadership of Professor Neil Carson AO, Branko went on to establish the first research and education unit for Medical informatics in any of the medical school in Australia. Branko's research focused on innovative ways to use information technology to support medical education and clinical care. Branko's work in medical education innovation received the Monash University Silver Jubilee Teaching Prize in 1993. In 1995 Branko was appointed as Associate Professor at Monash University and later Branko and Wendy and the members of their unit accepted an invitation to become part of the new Monash Institute for Health Services Research, established by the late Professor Chris Silagy AO. At the institute Branko continued his research activity on the establishment of successful postgraduate training programs for health professionals in health informatics. His vision for the use of IT in health care preceded the widespread development of the World Wide Web and the hypermedia applications which were to appear in the mid-1990s. Branko fostering the development of health informatics especially in Australia and the Asia Pacific Region. In 1991 Branko was one of the founders of the Health Informatics Society of Aus-

tralia. Since its establishment the Society has held an annual health informatics conference which has been instrumental in raising the profile of health informatics and facilitating the development of this discipline in Australia. In 1994 Branko co-founded the Asia-Pacific Association for Medical Informatics becoming its second President from 1997-2000. In 1997 he was responsible for bringing the second conference of the Asia Pacific Association for Medical Informatics to Australia. In 1999 Branko became a foundation Fellow of the Australian College of Health Informatics. Branko was the second President of the Australian College of Health Informatics from 2001-2003. In 2001 Branko was elected as Vice-President of IMIA, a mark of the level of respect that he engendered among his peers at an international level. His work helped to ensure that the 2007 conference of the MEDINFO, in Brisbane. He was involved especially in supporting the evaluation of health computing in Australian general practice. In recent years Branko also worked for Australia's National Health and Medical Research Council as a member of the Health Advisory Committee and as Chair of the Information Management Framework Committee. Branko was also appointed by the Australian Health Ministers Council as a member of the National Health Information Group, which is leading the development of electronic health records in each state and territory. Branko, also, worked

as a clinician in the Emergency Department of the Knox Private Hospital in Wantirna for many years. In August 2005 Branko's leadership and life work was honored with the award of Life Membership of the Health Informatics Society of Australia, and Life Membership of the IMIA. These are rarely bestowed honors and they reflect the esteem of Branko's peers in Australia and around the world.

CHAMPEAUX DAVID

David Champeaux leads the Strategy practice in the UK and Ireland for Accenture Health. Accenture Strategy operates at the intersection of business and technology, bringing together capabilities in business, technology, operations and function strategy to help our clients envision and execute strategies that support enterprise wide transformation. He was previously a Partner at McKinsey & Company, where he worked as a leader in the healthcare practice for 12 years in London, Boston and Sydney. He holds an MBA from HEC Business School in Paris.

CHALTIKYAN GEORGI

Georgi Chaltikyan (1973-), MD, PhD was born in Yerevan, Armenia. He is professor of eHealth, telemedicine and cross-border healthcare management, and co-ordinator of the study program Masters in Medical Informatics (MMI) at Deggendorf University of Applied Science (Deggendorf Institute of Technology, DIT) in Bavaria, Germany, and president of Armenian Association of Telemedicine (AATM). Georgi Chaltikyan is a graduate of Yerevan State Medical University. He has been trained as general surgeon and spent about 15 years in clinical practice in general and laparoscopic surgery. He has extensive experience in healthcare education, research and management; in 2001-2009 he has been an associate professor at the Department of Surgery of Yerevan State Medical University, and has taught medicine and surgery to undergraduate and postgraduate students. He has nearly 8 years of work experience in the field of Healthcare Information and Communication Technologies. As the founding president of a

non-governmental organization Armenian Association of Telemedicine (the national member of the International Society for Telemedicine and eHealth and the European Federation for Medical Informatics, and an MoU partner of the American Telemedicine Association) he has been instrumental in design and implementation of a number of successful eHealth and telemedicine projects with international participation. Georgi Chaltikyan joined the Faculty of Applied Health Sciences of Deggendorf University of Applied Science in 2015; he is the coordinator of the master's program in Medical Informatics, and is responsible for several other study courses in the healthcare domain. He has publications on different aspects of eHealth and telemedicine, and is involved in several research projects in digital health. Since 2016 he is participating in a multi-national project Global Center of Excellence in Digital Health in Armenia, establishing a cluster of education, practice and research and development in digital health, with participation of partner institutions from Armenia, USA, Germany, India, and Russia.

CHANDRASEKARAN B.

B. Chandrasekaran received his PhD from the Moore School of Electrical Engineering of the University of Pennsylvania in 1967. He spent the next two years as a research scientist at the Philco-Ford Corporation in Blue Bell, Pennsylvania, working on problems in the design of patternx Contributors xi recognition machines. He joined the faculty of Ohio State University in 1969, and is currently a professor of computer and information science. His current research interests span several areas in artificial intelligence, and include knowledge-based problem solving and vision.

CHAN CONNIE

Connie Chan, PhD, is project director at PCCI, a nonprofit research and development organization in Dallas, Texas, dedicated to eliminating adverse clinical events using advanced analytics and software technologies. She leads the Information Exchange Portal effort, which aims to electronically connect clinical and social service organizations to improve care coordination, access to services, and health outcomes, particularly for the most vulnerable patients. Dr. Chan is a graduate of the School of Foreign Service at Georgetown University and received her doctorate in public health informatics from Columbia University.

CHANG BETTY

Betty Chang, RN, DNSc, FAAN, FACMI, earned a BS and MA in nursing from Columbia University's Teachers' College in 1961 and then worked as an academic nursing educator for 16 years, first at Queens College in New York and subsequently at San Francisco State University. While on the SF State faculty in the 1970s, she worked on her DNSc degree in nursing care of the elderly, completing that training in 1977, and then moved to UCLA, where she has risen to a full professorship in the School of Nursing over the years. While at UCLA, she completed a certification in Nursing Informatics and became credentialed as a family nurse practitioner. Dr. Chang led one of the earliest research projects on knowledge-based systems in nursing. Funded by the National Institute of Nursing Research in the early 1980s, CANDI was designed to assist nurses with the process of generating a nursing diagnosis from the patient's signs and symptoms. Her recent research

on consumer health informatics builds on a program of research on the elderly and their family caregivers and other vulnerable populations including those with HIV/AIDS.Dr. Chang is a respected senior nursing informatics scholar whose leadership in nursing informatics has spanned more than two decades. For the past 20 years, she has served as Departmental Editor on Nursing Informatics for Research in Nursing and Health, a highly regarded research journal. She has actively promoted the use of computers for nursing practice, education, and research and serves as a role model for nursing informatics innovation. During the past five years, Dr. Chang has led a number of consumer health initiatives for both AMIA and IMIA, leading an AMIA Symposium Post-Conference on the topic of consumer health informatics and, more recently, chairing the 2003 Spring AMIA meeting that focused on digital divide and the use of informatics in underserved populations.

CHANG MARK

Mark Chang is Sr. Vice President, Strategic Statistical Consulting at Veristat. Before joining Veristat, Dr. Chang served various strategic roles including Vice President of Biometrics at AMAG Pharmaceuticals and director and scientific fellow at Millennium/Takeda Pharmaceuticals. Dr. Chang is a selected fellow of the American Statistical Association and an adjunct professor of Biostatistics at Boston University. He is a co-founder of the International Society for Biopharmaceutical Statistics, co-chair of the Biotechnology Industry Organization (BIO) Adaptive Design Working Group, and a member of the Multiregional Clinical Trial (MRCT) Expert Group. Dr. Chang has served associate editor for Journal of Pharmaceutical Statistics and MedCrave Publishing Group. He has been invited to serve as a co-chair on the scientific advisory board and organization committees for several national and international professional/ academic conferences on statistics and clinical trial designs. He has given over 50 lectures, short

courses, and invited speeches at national and international conferences.

CHANG PAUL

Paul Chang is Vice President of Accreditation, Standards, and Measurement at Joint Commission International. In this capacity, he leads a global team of talented and dedicated accreditation professionals to serve healthcare organizations throughout the world. With almost 20 years of healthcare experience, Dr. Chang has served in a variety of roles in clinical practice as well as in the government sector. Later, Dr. Chang had oversight of clinical quality, risk management, quality improvement, and JCI accreditation at Changi General Hospital, an 800-bed Singaporean public hospital. He was part of the management team that led the hospital to achieve JCI accreditation in 2005 and JCI disease-specific certification in two cardiology programs (Acute Myocardial Infarction and Heart Failure) in 2007. He went on to serve as JCI's Asia-Pacific office Managing Director from 2007 to 2013. While in the Asia-Pacific region, Dr. Chang collaborated with

regional ministries of health, governmental and nongovernmental agencies, hospitals, laboratories, and various health care organizations to develop ways to improve health outcomes and patient safety. During his tenure, JCI's Asia business grew by approximately 250%. In 2013, he joined JCI's executive team as Senior Executive Director of Accreditation and Standards prior to assuming his current role. Dr. Chang earned his medical degree (MBBS) and his Masters in Public Health (M.Med Public Health Medicine) from the National University of Singapore (NUS) and has a Masters in Business Administration (MBA) from both the University of California Los Angeles (UCLA) and the National University of Singapore. He is a Certified Professional in Healthcare Quality (CPHQ), a Fellow of the American College of Healthcare Executives (FACHE), and a part-time surveyor for the International Society for Quality (ISQua).

CHANG POLUN
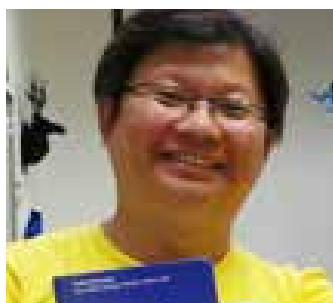
Professor, National Yang Ming University, Taiwan/ROCPolun Chang education (BA) started in 1986 in Taiwan, National Tsing-Hua University; PhD, University of Wisconsin-Madison, in Industrial Engineering. He began to focus on informatics starting in early 1990s and in clinical informatics in 2000. Polun chose informatics because he is an industrial engineer, in his professional training, they are trained to use technologies to work with people, to improve their performance, to get better outcomes in more efficient ways. It was a natural move to become interested in informatics. Now he is a professor in Taiwan. His career goals are to encourage and inspire our young generation dare to be different, learn to be independent, and listen to their own hearts for their dreams.He was very fortunate to meet Drs Edward Shortliffe and Robert Greenes in 1998. In 2002, Dr. Shortliffe was the chair of the biomedical informatics program at Columbia University. Polun paid a visit to his program, and he introduced him to his colleagues. One professor in particular, Suzanne Bakken inspired Polun to start focusing on nursing informatics. After then, so many great nursing informatics experts in AMIA such as Virginia Saba, Marion Ball, Judy Murphy, Rosemary Kennedy, Susan Newbold, Charlotte Weaver, Pat Walker, Patricia Dykes, Brian Gugerty, Patricia Brennan, Bonnie Westra, Connie Delaney, etc. Those in IMIA NI SIG, such as Hyeoun-Ae Park, Heimar Marin, Robyn Carr, Kaija Saranto, Peter Murray, etc., have been so kind to guide and to support him.

CHANG VICTOR

Victor Chang works at Leeds Beckett University United Kingdom. The rise of Cloud Computing and Big Data has played influential roles in the evolution of IT services and has made significant contributions to different disciplines. For example, there are ten services that cannot be achieved without the combined effort from Cloud Computing and Big Data techniques: They are Storage as a Service, Health Informatics as a Service, Financial Software as a Service, Business Intelligence as a Service, Education as a Service, Big Data Processing as a Service, Integration as a Service, Security as a Service, Social Network as a Service and Data Visualization as a Service (Weather Science) respectively, in which the keynote speaker will summarize the motivation, methods, results and contributions in each service. He will explain how the unique services can improve the quality of our life by understanding the complex biological and physiological science and ensuring the best approaches of treatments and actions can be adopted. These include development projects and successful deliveries in brain segmentation and learning,

proteins and body defense mechanisms, tumor studies and DNA sequencing. Research and enterprise contributions to other disciplines are available which include Business Intelligence as a Service to provide accurate and up-to-date tracking of risk and prices with regard to the investment, as well as contributions for weather data visualization and forecasting to inform the general public about the consequences of the extreme weather.

CHAPMAN W. WENDY

Wendy W. Chapman, PhD, FACMI is nationally renowned scholar and researcher in extracting information from narrative clinical reports, Dr. Chapman is a fellow of the American College of Medical Informatics and is past chair of the American Medical Informatics Association Natural Language Processing (NLP) Working Group. She is involved in several grant-funded multicenter efforts for enriching linguistic and clinical knowledge bases, developing standards for modeling clinical data described in narrative reports, and building infrastructure and resources for informatics development and collaboration. Currently, Dr. Chapman serves as Chair of

the Department of Biomedical Informatics at the University of Utah in Salt Lake City.

CHENGO CHARLES

Charles Chengo is Director Clinical Services, Nchanga North General Hospital in Chingola, Zambia. He graduated at University of Edinburgh. From 2008 till 2011 he studied at University of Edinburgh as PhD student and earned MSc in 2011 at same University. Actually, he is Interim President of Zambia Health Informatics Association (ZHIA) from March 2014 til present, located in Lusaka, Zambia. He works, also, in CEO, Smart Health Advisory from June 2012 till present, Chingola. Zambia, Earlier, he worked as General Medical Officer, Health Informatics Specialist in Nchanga North General Hospital (April 2007 – December 2012). Dr. Chengo is national representative of Zambia in International Association of Medical Informatics.

CHEN LIANG-YEU

Liang-Yeu Chen is a Senior Managing Consultant in Healthcare Transformation Team of

IBM's Watson Group. Mr. Chen has spent the past 22 years in diversified areas in the healthcare industry. He brings a unique combination of cognitive computing, strategy development, analytics, EMR/EHR, clinical operations, financial management, project management, as well as IT implementation expertise to the healthcare clients he serves.

CHEN S. ELIZABETH

Elizabeth S. Chen, PhD, FACMI, is Associate Director of Biomedical Informatics in the Center for Clinical and Translational Science, Assistant Professor of Medicine, and Assistant Professor of Computer Science at the University of Vermont. She received a BS in Computer Science from Tufts University in 1998, PhD in Biomedical Informatics from Columbia University in 2004, and has previously held positions at Columbia University/NewYork-Presbyterian Hospital and Partners HealthCare/Brigham and Women's Hospital/Harvard Medical School. Dr. Chen's research interests are in three main areas: a) developing, evaluating, and improving clinical systems (e.g., electronic

health record [EHR] and clinical decision support systems); b) adapting natural language processing and data mining techniques for discovering disease knowledge in clinical and biomedical text; and c) leveraging and enhancing standards to facilitate data integration and semantic interoperability. As part of NIH/NLM-funded research, her current work is focused on studying the collection and analysis of family and social history information in the EHR.

CHIEN STEVE

Steve Chien is Head of the Artificial Intelligence Group and Senior Research Scientist at the Jet Propulsion Laboratory, California Institute of Technology where he leads efforts in autonomous systems for space exploration. Dr. Chien was a recipient of the 1995 Lew Allen Award for Excellence, JPL's highest award recognizing outstanding technical achievements by JPL personnel in the early years of their careers. He has been awarded NASA medals in 1997, 2000, and 2005 for the development and deployment of Artificial Intelligence software for space missions. He is a four-time hon-

oree in the NASA Software of the Year Competition (twice in 1999, 2005, and 2011). In 2011 He was awarded the inaugural AIAA Intelligent Systems Award, for his contributions to Spacecraft Autonomy. He led the deployment of AI flight software onboard the Earth Observing One and Mars Exploration Rovers missions. He has also led the deployment of AI scheduling software for ground-based planning of space missions–most recently he led the deployment of ASPEN for scheduling science observations for the Rosetta Orbiter mission, an ESA-led mission to explore the comet Churyumov-Gerasimenko.

CHIKERSAL JYOTSNA

Jyotsna Chikersal is the Regional Advisor for Health Situation and Trend Assessment (HST) for the WHO's South East Asia Region based in New Delhi, India. She leads WHO's technical advice to member countries in the region on strengthening Health Information Systems, Civil registration and Vital Statistics, Health Statistics and eHealth as key pillars to strengthen Health Systems. She has over 15 years of experience in building strategic collaborations with develop-

ment partners and academic institutions to promote technical cooperation as well as capacity building in the area of HST. In recent years, her unit's work has also focused on the use of information and communication technologies (ICTs) in improving quality health services, accelerating universal health coverage, monitoring results, and improving information and accountability for better health outcomes. She has also been spearheading work in the region towards the direction of implementing Open Source Tools, District Health Information System, Electronic Medical Records and Health Data Standards. Ms Chikersal has also being taking forward the coordination of the activities under the Commission on Information and Accountability for Women's and Children's (COIA) health in SEAR countries, and monitoring of international health goals such as MDGs.

CHIN L. HOMER

Homer L. Chin, MD, MS, FACMI, is the Medical Director for

Clinical Information Systems at Kaiser Permanente Northwest and Assistant Professor in Medical Informatics and Outcomes Research at the Oregon Health and Sciences University. Dr. Chin received his BS degree with highest honors in bioengineering from the University of California, Berkeley, and his MD from Dartmouth Medical School. He completed residency training in internal medicine at the Santa Clara Valley Medical Center in San Jose, California, and a postdoctoral fellowship in medical informatics at Stanford University. In 1988, he joined Kaiser Permanente in Northern California, where he worked on strategic planning for information systems and was the clinician leader in the development of a centralized clinical data repository for the Kaiser Permanente Northern California Region. In 1992, he was recruited to his present position to lead the clinical information systems effort in Kaiser Permanente Northwest. He is board-certified in internal medicine and continues to maintain an active part-time medical practice. His areas of interests include the development, implementation, and evaluation of clinical information systems, confidentiality of electronic patient information, optimization of the computer–clinician user interface, and the development and use of data repositories in health care. His fundamental interest is in the development and implementation of information systems that, by improving the efficiency and quality of health care delivery, support the overall clinical and business needs of a health care organization. Kaiser Permanente Northwest embarked on the implementation of a comprehensive outpatient computer-based patient record in 1993 and completed their implementation in 1997. Kaiser Permanente won the 1998 Nicholas E. Davies CPR Recognition Award of Excellence, the 1999 Voh's Award for Quality Innovation, and the 2000 American Medical Group Association Acclaim Award, for work done in implementing the computer-based patient record. Dr. Chin was a board member of Intel's Internet Initiative, a board member of the Oregon HIMSS Chapter, and the Program Chair for the CPRI Davies Recognition Award in 2001.

CHOLAKOV LYUBOMIR

Lyubomir Cholakov is South East Europe Healthcare Solutions Director, S&T AG and Managing Director, S&T Bulgaria. His primary focus is the synergy between IT and healthcare solutions. Christof has authored more than 300 scientific papers and articles, eight patents and five books concerned with the way computers and neurons process information and the neuronal and computational basis of visual recognition and perception and attention. Together with his long-time collaborator, Francis Crick, Christof pioneered the scientific study of consciousness. His latest book is Consciousness – Confessions of a Romantic Reductionist. He is a frequent public speaker and writes a regular column for Scientific American Mind. Christof lives in Seattle and loves dogs, climbing, biking and long-distance running.

CHORBEV IVAN

Ivan Chorbev (1980-) is working currently as Assistant Professor at the Faculty of Computer Sciences and Engineering, Ss Cyril and Methodius University of Skopje (UKIM), Skopje, Republic of Macedonia. He earned his bachelor and master degrees at the Faculty of Electrical Engineering in Skopje in 2004 and 2006. He completed his PhD studies at the Faculty of Electrical Engineering and Information Technologies in Skopje in 2009. During his studies he has been continually awarded for excellent performance. As the best student of his generation he has been awarded by the Faculty, University Ss. Cyril and Methodius and other organizations and foundations, including the Organization of Engineers of Macedonia that awarded him the "Golden engineering ring". He gained his first

professional experience at the Macedonian Telekom – T-Home, at the department for software and web development, during the period 2003-2005. He started working at the Institute for Computer Science and Engineering in the Faculty for Electrical Engineering in Skopje in 2005, He became an assistant in 2008, and in 2009, after completing his doctoral studies, he became an assistant professor. His teaching commitments included lectures in Structured Programming, Object-oriented programming, Programming Methodologies, Web Design, Computer Graphics, Computer Animation etc. In his research work up until 2011 he has participated in more than 35 scientific papers published in magazines, books and conference proceedings. The fields of his research interests include combinatorial optimization, heuristic algorithms, constraint programming, web development technologies, software testing, application of computer science in medicine and telemedicine, medical expert systems, knowledge extraction, machine learning. He is an author of one university textbook. As an IT consultant he has been involved in analysis and development of several Enterprise Resource Planning (ERP) systems, University Information Systems, Web Content Management Systems, Document Management Systems, Online payment systems, Electronic time and attendance systems, banking applications, oil industry software. He has participated as an IT consultant in projects financed by the European Union (FP6, FP7, TEMPUS), non-government organizations (NDI).

CHRISTIAN CHARLES

Charles Christian is the Vice President of Technology and Engagement of the Indiana Health Information Exchange (IHIE), the nation's largest Health Information Exchange. Prior to joining IHIE, Mr. Christian served as the Vice President / Chief Information Officer of St. Francis Hospital in Columbus, Georgia. Before his role at St. Francis, Mr. Christian served as the Chief Information Officer for Good Samaritan Hospital, in Vincennes, Indiana. A position he held for almost 24 years. Mr. Christian is a HIMSS Fellow and is a Past Chair of the HIMSS Board of Directors. Mr. Christian is a Fellow and charter member of CHIME and served on the CHIME BOD from 2003 through 2004. Mr. Christian is credentialed by CHIME as a Certified Healthcare CIO (CH-CIO). Mr. Christian is a charter member of the re-established Indiana Chapter of HIMSS and served as a BOD member from 2000 - 2009. Mr. Christian served as a member of the Board of Directors of the Indiana Health Informatics Corporation by appointment of Indiana Governor Mitch Daniels. Governor Daniels also appointed Mr. Christian the Indiana Healthcare Information Technology Board of Directors. Mr. Christian is currently serving on the CHIME Board of Directors as Chair. Mr. Christian served on the Georgia HIMSS Board of Directors from 2013-2015. Mr. Christian is a past and current member of several industry advisory groups/councils. Mr. Christian is the recipient of the Charles E. Christian Leadership award, presented annually by the Indiana Chapter of HIMSS. Mr. Christian is the recipient of the 2010 John E. Gall, CIO of the Year Award, presented by CHIME and HIMSS. Mr. Christian was named among the top 100 Healthcare CIOs to know, 2013, 2014, and 2015 by Becker's Hospital Review.

CHRONAKI E. CATHERINE

Catherine E. Chronaki, Secretary General, HL7 International Foundation. Catherine has engaged in eHealth projects since the early 90's. She is an avid promoter of interoperability standards and is deeply convinced that eHealth IT standards can drive innovation, quality and patient safety. She has served as Affiliate Director on the Board of HL7 International (2008-2012), and represents HL7 on the eHealth Governance Initiative, Antilope, and the eHealth Stakeholders group established by European Commission.

CHUTE G. CHRISTOPHER

Christopher G. Chute (1955-), MD, PhD, FACMI, was born in Hartford, Connecticut, USA. He is a Bloomberg Distinguished Professor at Johns Hopkins University, physician-scientist and biomedical informatician known for biomedical terminologies and health information technology (IT) standards. He chairs the WHO Revision Steering Group for the revision of the International Classification of Diseases (ICD-11). Dr. Chute received his undergraduate and medical training at Brown University, internal medicine residency at Dartmouth, and doctoral training in Epidemiology at Harvard. He is Board certified in Internal Medicine and Clinical Informatics. Dr. Chute is the Bloomberg Distinguished Professor in Health Informatics at the Johns Hopkins University, with academic appointments in the School of Medicine, Bloomberg School of Public Health, and School of Nursing. In December 2014 Dr. Chute retired from Mayo Clinic, where he remains an emeritus professor. He became founding Chair of Biomedical Informatics at Mayo Clinic in 1988, stepping down after 20 years in that role. At Mayo Clinic he was Professor of Medical Informatics and Section Head. He was PI on a large portfolio of research including the HHS/Office of the National Coordinator (ONC) Strategic Health IT Advanced Research Projects on Secondary EHR Data Use, the ONC Beacon Community (Co-PI), the LexGrid projects, Mayo's Clinical and Translational Science Award Informatics, and several National Institutes of Health (NIH) grants including one of the eMERGE centers from the National Human Genome Research Institute (NHGRI), which focus upon genome wide association studies against shared phenotypes derived from electronic medical records. Dr. Chute served as Chair of the Mayo Clinic Data Governance Committee, and on Mayo's enterprise IT Oversight Committee. He was Chair of the ISO and ISO/TC 215. He also served on the Health Information Technology Standards Committee for the Office of the National Coordinator in the United States Department of Health and Human Services, and the Health Level 7 Advisory Council. Recently held positions include Chair of the Biomedical Computing and Health Informatics study section at NIH, Chair of the Board of the HL7/FDA/NCI/CDISC BRIDG project, on the Board of the Clinical Data Interchange Standards Consortium, ANSI Healthcare Information Technology Standards Panel Board member, Chair of the US delegation to ISO TC215 for Health Informatics, Convener of Healthcare Concept Representation WG3 within the TC215, Co-chair of the HL7 Vocabulary Committee, Chair of the IMIA WG6 on Medical Concept Representation, AMIA Board member, and multiple other MI sections as chair.

CHU STEPHEN

Stephen Chu is a leading international clinical informatics and eHealth standards expert. He has strong clinical background in nursing and medical disciplines including orthopaedics, internal and emergency medicine. He is a co-chair of standards workgroups including HL 7 International Patient Care Workgroup, HL7 Australia Medication Workgroup. He co-lead the development of the HL7 Care Plan model and Care Coordination Services Functional Model. He also led the application of an innovative co-design framework and methodology in Queensland's interoperability project to develop a business driven interoperability solution. He has been in eHealth leadership roles including, Lead Architect, Chief Clinical Information, Director and Executive Director.

CHUEH C. HENRY

Henry C. Chueh, MD, MS, FACMI, is an Assistant Professor of Medicine at Harvard Medical School, Codirector of the Massachusetts General Hospital (MGH) Laboratory of Computer Science, and Director of Informatics at the MGH Clinical Research Program and the MGH Cardiac Program. He is also a staff physician internist at MGH. A graduate of Harvard College, he received a medical degree from Harvard Medical School in 1989 and a simultaneous master's degree in medical informatics through the combined Harvard/MIT Health Sciences and Technology Program. After his residency training in internal medicine at MGH, Dr. Chueh was a Research Fellow in Medical Informatics at the MGH Laboratory of Computer Science. Following his informatics fellowship, Dr. Chueh joined the Department of Medicine faculty at Harvard Medical School. His research at MGH has revolved around novel approaches to electronic health records, several of which are in active use today at the hospital and elsewhere in Boston. His current efforts involve the exploration of intelligent, "just-in-time" integration of enterprise clinical data for disease management and the use of XML for clinical data sharing and transformation. Dr. Chueh is a current member of the Biomedical Library Review Committee, the primary review group for the National Library of Medicine. He was a member of the Scientific Program Committee for the AMIA 1998 Annual Symposium, and he received the Center of Healthcare Information Management Award at the AMIA 1993 fall meeting. He is the chairman of the American Society for Testing and Materials E31.11 Subcommittee on Electronic Health Record Portability.

CIMINO J. JAMES

James J. Cimino, MD, FACMI is an Assistant Professor of medicine and Medical Informatics at Columbia University College of Physicians and Surgeons. In 1977 he graduated in biology from Brown University. He earned an MD from New York Medical College in 1981. He completed a residency in Internal medicine at St. Vincent's Hospital and Medical Center in New York, spend a year as an attending physician in the Department of Community Medicine, and then entered a three-year, NLM-sponsored postdoctoral fellowship at the Massachusetts General Hospital (1985-88) under the mentorship of Octo Barnett, with guidance from Ed Hoffer and Bob Greenes. In 1988, he accepted a position as an assistant professor at Columbia University in the Center for Biomedical Informatics (initiated by Paul Clayton in 1987) and in the Department of Medicine. At Columbia, he spends most of his time in informatics research and development, but also teaches informatics to informatics students, teaches medicine to medical students in the classroom, teaches medicine to the house staff in the clinics and hospital wards, and sees patients in the faculty internal medicine practice. Although his undergraduate degree was in biology, he undertook a second major in computer science while at Brown. His interest in computing carried over to medical school, and he pursued a fourth-year elective in "Computers in Medicine" at the National Institutes of Health where, under the mentorship, he developed a connection between a pre-PC desktop computer and the hospital information system to generate graphical representations of patient data. Dubbed the Patient Information Graphics System (PIGS), the work was presented at the 1981 Symposium on Computer Applications in Medical Care (SCAMC). During his fellowship, he led the development of the knowledge base for the

DXplain diagnostic decision support system, developed by Octo Barnett and Jon Hupp. He was also involved in the Unified Medical Language System (UMLS), from its inception in 1986. Of note, he developed a method for representing controlled medical terminologies that supported automated translation based on comparison of semantic representations and developed an automated method for extracting semantic information from the Medline database. Since coming to Columbia, he has contributed to the development of the Paul Clayton's Clinical Information System (CIS) used at Presbyterian Hospital; his chief contribution has been the construction of a terminology knowledge base called the Medical Entities Dictionary, which has introduced a new paradigm for modeling controlled medical terminologies. His terminology modeling led to the development of an information model called the "Medical Concept Space" that could be combined with automated knowledge generation techniques and natural language processing to produce a framework for organizing knowledge and text into a single, navigable "hyperdocument". Continuing his work on the UMLS, he developed the "Medline Button", which automatically translates medical diagnoses in a patient's record into terms that can be used to automatically search the medical literature

CLAERHOUT BRECHT

Brecht Claerhout is CEO of Custodix, one of the first Trust Service Providers focusing on data privacy, and has been actively involved in a large number of European research projects mainly dealing with data protection, integration and re-use of health data. Recent projects in which Brecht has taking a leading role include EURECA (Enabling information re-Use by linking clinical REsearch and Care) and EHR4CR (Electronic Health Records for Clinical Research). Brecht has published several conference and journal papers on the subject of security and privacy protection and semantic integration of clinical data.

CLAITER-LARSEN CATHERINE

Catherine Claiter-Larsen joined Island Health in August 2005. As Vice President and Chief Information Officer, Catherine is responsible for the strategic and operational management of Island Health's Information Management and Information Technology portfolio. Catherine has extensive experience in strategic planning, senior IM/IT management, and clinical change management. Catherine is known in the health informatics industry for her passion, drive, knowledge of Electronic Health Record (EHR) solutions, and her commitment to capacity building through leadership development. Since joining Island Health, Catherine and her team have established the foundation for Island Health's One Patient, One Record EHR solution, with a single, integrated information system implemented across all acute and residential care facilities. With this foundation in place, Island Health is now pursuing the next generation EHR that will be used to realize safety and quality improvements across the continuum of care. Catherine holds a Bachelor of

Science in Health Information Science from the University of Victoria, and is actively involved in a number of national Health Informatics committees and organizations.

CLAMP SUSAN

Susan Clamp, as Director of the Yorkshire Centre for Health Informatics in the University of Leeds, has been at the forefront of developments in Health Informatics for over 30 years working closely with Governments, health and social care organizations and Health IT industries. With a wide experience in development and delivery of high quality, innovative Health Informatics education, she practices innovative teaching which includes the use of EHRs in undergraduate medical and nursing education, a Masters Programme which addresses the needs for developing capability and capacity in Health Informatics and how Health Informatics can support changing patient needs and service delivery. At a national level, Dr. Clamp informs the policy on professionalism of Health Informatics, the content and delivery of the clinical HI curriculum.

CLANCY M. CAROLYN

Carolyn M. Clancy, MD, FACMI, received her bachelor's degree in mathematics and chemistry from Boston College and her MD degree from the University of Massachusetts School of Medicine. She undertook postgraduate training in internal medicine, and was a Kaiser Foundation fellow at the University of Pennsylvania. She was a faculty member in the Department of Medicine at Virginia Commonwealth University from 1983 through 1990, and her first informatics research project at that institution demonstrated the impact of adding a reminder to a computerized provider order entry system related to use of pneumococcal vaccine in high-risk patients. In 1990 she joined the staff of the Agency for Healthcare Research and Quality (AHRQ) and rose to become director of AHRQ's Center for Primary Care Research, and Center for Outcomes and Effectiveness Research. Her success in these endeavors led to her appointment as director of the agency in 2003. Her stewardship of AHRQ continues to advance not only quality and patient

safety, but also the realization of the value of health informatics. She has substantial experience at the intersection of quality, safety, and informatics.

CLANCEY J. WILLIAM
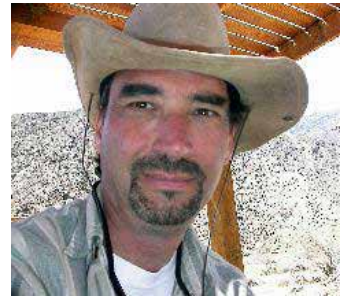
William J. Clancey (1952-) was born and grew up in New Jersey. He graduating as valedictorian from East Brunswick High School, earning honors in biology. He majored in Mathematical Sciences at Rice University in Houston, where in connection with his interest in cognition he took courses in a range of fields, including philosophy, anthropology, linguistics, religion, and sociology. His advisor was Ken Kennedy, who taught a fantastic course on compilers. Altogether, he took 40 courses in 13 departments, including six anthropology and three philosophy courses. He was elected to Phi Beta Kappa and received a BA summa cum laude in 1974. He then went to Stanford University, where he was engaged in expert systems research. He received a PhD in Computer Science from that institution in 1979, specifically in the area of Artificial Intelligence, He has said that at Stanford: "I focused on Artificial Intelligence,

but again combined different areas by developing a computer program to teach medical students how to diagnose a patient (combining computer science, education, psychology, and medicine)." His dissertation project, as he said, "was the first attempt to use an expert system for instruction. He describes himself as having been "a member of the 'Mycin Gang' in the Heuristic Programming Project, which became the Knowledge Systems Laboratory in the late 1970s. These projects were directed by Bruce G. Buchanan. Clancey is a computer scientist who specializes in cognitive science and artificial intelligence. He has worked in computing in a wide range of sectors, including medicine, education, and finance, and had performed research that brings together cognitive and social science to study work practices and examine the design of agent systems. Clancey has been described as having developed some of the earliest artificial intelligence programs for explanation, the critiquing method of consultation, tutorial discourse, and student modeling, and his research has been described as including "work practice modeling, distributed multiagent systems, and the ethnography of field science." He has also participated in Mars Exploration Rover mission operations, "simulation of a day-in-the-life of the ISS, knowledge management for future launch vehicles, and developing flight systems that make automation more transparent." Clancey's

work on "heuristic classification" and "model construction operators" is regarded as having been influential in the design of expert systems and instructional programs. Clancey was Chief Scientist for Human-Centered Computing at NASA Ames Research Center, Intelligent Systems Division from 1998-2013, where he managed the Work Systems Design & Evaluation Group. During this intergovernmental personnel assignment as a civil servant, he was also employed at the Florida Institute for Human and Machine Cognition in Pensacola, where he holds the title of Senior Research Scientist.

CLARE MARK

Mark Clare, founder of New Value Streams Consulting, has more than 20 years of experience in knowledge management, strategic change and informatics with Fortune 200 companies, including 3M and Allstate. His previous executive positions include vice president of knowledge and informatics management at Parkview Health, a nine-hospital system in northeast Indiana. Clare is author of many publications, including the book Knowledge Assets and a series of articles in KM Review

on "Solving the Knowledge-Value Equation." He holds a patent in artificial intelligence and has several more patents pending. Clare has an MS in physics, an MA in analytic philosophy and a Six Sigma Black Belt.

CLARK ALLISON WESLEY

Wesley Allison Clark (1927-2016) is a computer designer and the main participant, along with Charles Molnar, in the creation of the LINC computer, which was the first mini-computer and shares with a number of other computers the claim to be the inspiration for the personal computer. Clark was born in New Haven, Connecticut. He graduated from the University of California, Berkeley in 1947. In MIT Lincoln Laboratory he joined the Project Whirlwind staff. There he was involved in the development of the Memory Test Computer (MTC), a testbed for ferrite core memory that was to be used in Whirlwind. His sessions with the MTC, "lasting hours rather than minutes" helped form his views that computers were to be used as tools on demand for those who needed them. That view carried over

into his designs for the TX-0 and TX-2 and the LINC. He believed that "a computer should be just another piece of lab equipment." At a time when most computers were huge remote machines operated in batch mode, he advocated far more interactive access. He practiced what he preached, even though it often mean bucking current "wisdom" and authority. Clark's design for the TX-2 "integrated a number of man-machine interfaces that were just waiting for the right person to show up to use them in order to make a computer that was "on-line". When selecting a PhD thesis topic, an MIT student named Ivan Sutherland looked at the simple cathode ray tube and light pen on the TX-2's console and thought one should be able to draw on the computer. Thus was born Sketchpad, and with it, interactive computer graphics." In 1964, Clark moved to Washington University in St. Louis where he and Charles Molnar worked on macro modules, which were fundamental building blocks in the world of asynchronous computing. The goal of the macro modules was to provide a set of basic building blocks that would allow computer users to build and extend their computers without requiring any knowledge of electrical engineering. Each Linc had a tiny screen and keyboard and comprised four metal modules, which together were about as big as two television sets, set side by side and tilted back slightly. The machine, a 12-bit computer, included a one-half megahertz

processor. Lincs sold for about $43,000 - a bargain at the time - and were ultimately made commercially by Digital Equipment, the first minicomputer company. Fifty Lincs of the original design were built. Clark had a small but key role in the planning for the ARPANET (the predecessor to the Internet). In 1967, he suggested to Larry Roberts the idea of using separate small computers (later named Interface Message Processors) as a way of standardizing the network interface and reducing load on the local computers. In 1981 Clark received the Eckert-Mauchly Award for his work on computer architecture. He was awarded an honorary degree by Washington University in 1984. He was elected to the National Academy of Engineering in 1999. Clark is a charter recipient of the IEEE Computer Society Computer Pioneer Award for "First Personal Computer."

CLARKE R. JOHN

John R. Clarke, MD, FACMI, received his BA at Wesleyan University in 1965 and his MD at the University of Pennsylvania in 1968. He then trained in general surgery at Presbyteri-

an-St. Luke's Hospital in Chicago and St. Joseph Mercy Hospital in Ann Arbor from 1968 to 1975. After a fellowship in clinical trauma and trauma research at Boston City Hospital and Boston University in 1975 to 1977, he began a career in academic trauma surgery that led to his current position as Professor of Surgery at Drexel University in Philadelphia. A fellowship in cognitive science at Penn in 1982 and then a sabbatical with Dr. F. T. deDombal on computer-aided (Bayesian) diagnosis of acute abdominal pain in 1984 were turning points in Dr. Clarke's career. One of the few surgeons who saw the promise of informatics and decision sciences at that time, he was a founding member of the Society for Medical Decision Making and forged collaborations with computer scientists who were seeking a rich domain for work on clinical decision support. Today, in addition to his surgical appointment at Drexel, he is an adjunct professor in the Department of Computer and Information Science at the University of Pennsylvania. Dr. Clarke has shown us that surgical decision making can be descriptively represented by decision analysis and that the use of decision analysis improves the appropriateness of surgical decisions. Furthermore, through his research, he has demonstrated that computer-based decision support can provide real-time quality assurance for trauma resuscitations, a clinical situation that is time-sensitive and involves multiple interacting

diagnoses. Multiple disparate computer-based recommendations can be coordinated without conflict by representing the actions as goals, to be subsequently coordinated by an appropriate planning algorithm. Graphic representation of information, such as bullet paths in trauma surgery, can be integrated with categorical and continuous variables by converting to probabilities within a Bayesian belief network. His TraumAID project, in collaboration with Dr. Bonnie Webber, Dr. Omolola Ogunyemi, and others, has shown us the relevance of informatics methods in surgical diagnosis and planning.

CLASSEN C. DAVID
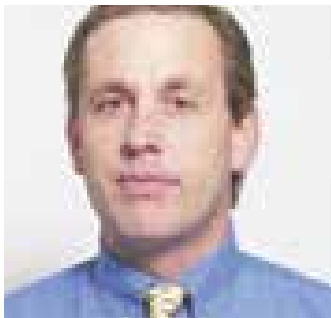
David C. Classen, MD, MS, FACMI, received his bachelor's and MD degrees from the University of Virginia, undertook postgraduate training in internal medicine at the University of Connecticut, and an infectious diseases fellowship at the University of Utah. He then obtained a master's degree in medical informatics, also from the University of Utah. As an assistant and currently associate professor of medicine, he

undertook a series of studies of adverse drug effects and medication safety, and helped develop computerized decision support tools for antibiotic selection that have had sustained impacts on improving outcomes and shortening inpatient length of stay. These studies have been widely cited in the national dialog regarding reduction of medical errors. In 1997 he was named Intermountain Health Care's Researcher of the Year, and in 2000 he joined First Consulting Group and there leads their safety and health care quality initiatives and consulting practice. His contributions to building programs that measure and improve the quality and safety of health care are very well recognized nationaly.

CLAYTON D. PAUL
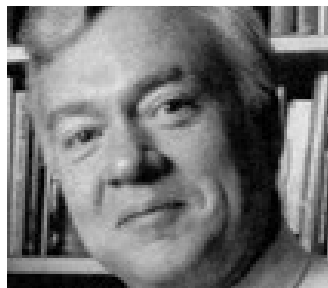
Paul D. Clayton, PhD, FACMI, is Professor and Director of the Center for Medical Informatics at Columbia University and Director of Clinical Information Systems at Columbia Presbyterian Hospital. His early work was in pattern recognition in angiographic images, but over the past 15 years he has developed important new methods for acquiring data, and for

automated decision making in cardiology and radiology. Department arose from the Center for Medical Informatics, formed by the College of Physicians and Surgeons and Presbyterian Hospital in 1987. The Center became a formal department and began training graduate students in 1994, making it the second oldest such department in the country. Columbia University Medical Center (CUMC) first entered the informatics age under the leadership of William A. Bauman, MD, from the 1960s through the 1980s. In 1983, Robert I. Levy, Rachael K. Anderson, Henrik Bendixen and Dr. Thomas Q. Morris created a unique unit - the Center for Medical Informatics. They recruited a well-known leader in the field, Paul D. Clayton, PhD, who had helped to develop the highly regarded and innovative clinical systems at LDS Hospital in Salt Lake City. Dr. Clayton was named Director of the new center, Professor in the Department of Medicine (and later, the Department of Radiology), and Director of Clinical Information Services at Presbyterian Hospital. Dr. Clayton quickly recruited a talented staff of faculty and postdocs from Columbia and surrounding universities. Armed with a diagram of a state-of-the-art clinical information system, Dr. Clayton raised awareness and built enthusiasm for integrated information systems. In 1988, the team obtained a $3.8 million IAMIS implementation grant and a $10 million deal with IBM to build such a system. The system went live in 1989, incor-

porating a flexible clinical data repository, a knowledge-based terminology, and an automated decision-support system. In 1995, the system won the inaugural Nicholas E. Davies award. The academic unit flourished. Its early research areas were information architecture, automated decision support including the Arden Syntax, knowledge-based terminologies, natural language processing, data modeling, health information standards including HL7, security, and education. The center obtained a National Library of Medicine training grant for postdocs in 1992, and it received approval for a graduate degree program in 1994. The center became a full department in the College of Physicians and Surgeons later in 1994. The department grew the graduate program, put natural language processing into routine use, created the first large-scale Web-based clinical information system, began working on health information exchange, and recruited a bioinformatician jointly with the Columbia Genome Center. In 1998, Dr. Clayton returned to Utah, and Edward H. Shortliffe, MD, PhD, was recruited to chair the department in 2000 with appointments in medical informatics, medicine, and computer science.

CLEARY MARY

Mary Cleary is Deputy CEO, Irish Computer Society Skills, Ireland. Mary has been responsible for curriculum design, certification programmes and professional development in the Irish Computer Society for more than 10 years. Currently Deputy CEO of ICS and ICS Skills, she manages the Healthcare Informatics Society of Ireland (HISI), its membership and Annual Conference and Scientific Symposium. Mary oversees the HISI academic and industry fora, which endeavour to integrate current HI research, government policy and the introduction of new healthcare technologies. Mary has extensive experience of ICT skills assessment, professional development initiatives and certification of competence. She is a member of the Skills Framework for the Information Age (SFIA) Council and contributes to various eCompetence Framework working groups. She is an active member of ECDL Foundation Expert Working Group on syllabus and test development, and sits on Chambers Ireland Digital Policy Council.

CLEMENT HÉLÈNE

Hélène Clement is Director, EHR and Health Informatics Education, Architecture and Standards, eHealth Ontario, and COACH: Canada's Health Informatics Association. Hélène Clément is a strategic thinker with over 25 years of experience in the health care sector in public and private organizations. Hélène is well-connected in the field of health informatics and possesses extensive knowledge of information systems applications, development and clinical systems implementation/adoption. Hélène began her career as a nurse and has held leadership positions in various organizations in four different provinces, giving her the knowledge of jurisdictional differences and providing a pan-Canada perspective. She is skilled in project management, conflict resolution and change management. Hélène is known for her ability to build and nurture relationships, her strong work ethic and for her integrity. Hélène joined eHealth Ontario in 2008 and is currently the Director of EHR and Health Informatics

Education in the Development and Delivery division. Her work has complemented her volunteer activities for COACH–Canada's Health Informatics Association, the Healthcare Information and Management Systems Society (HIMSS), the International Medical Informatics Association Nursing Special Interest Group (IMIA-NISIG), the American Medical Information Association (AMIA), the Canadian College of Health Leaders (CCHL) and several nursing associations. She has authored and co-authored a number of pieces for a variety of publications.

COHEN E. FRED

Fred E. Cohen, MD, DPhil, FACMI, is a Professor of Cellular and Molecular Pharmacology, Medicine, and Biochemistry and Biophysics at the University of California, San Francisco, and a partner at Texas Pacific Group. Dr. Cohen received his BS in molecular biochemistry and biophysics from Yale University, DPhil in molecular biophysics from Oxford University, and MD from Stanford Medical School. He completed a postdoctoral fellowship, medical residency and endocrinology fellowship at the University of California, San Francisco. In addition, he served as Chief of the Division of Endocrinology and Metabolism at UCSF for four years. Dr. Cohen is best known for his work in computational biology. He has used the computer as an experimental tool to explore the relationships between protein sequence and structure and gone on to use these relationships as a starting point for drug design efforts. The hallmark of these efforts has been the close connection between computation and experiment. More recently, Dr. Cohen and Dr. Stanley Prusiner have collaborated to investigate the molecular basis of prion replication. This work has led to our understanding of the prion diseases as diseases of protein folding. In the last few years, this insight has catalyzed their work on the development of novel diagnostic tests and therapeutic interventions for prion disease. Dr. Cohen has been the recipient of many awards, including a Rhodes Scholarship, a Searle Scholars Junior Faculty Award, the Richard E. Weitzman Young Investigator Award from the Endocrine Society, the Young Investigators Award from the Western Society for Clinical Investigation, the Louis Vuitton-Moet Hennessey Prix d'Honneur Award, shared with Stanley Prusiner, for their work on prion diseases, recognition as one of 40 Under-40 in the Bay Area by San Francisco Focus Magazine, and the Burroughs Wellcome New Initiatives in Malaria Award, shared with Joe DeRisi. He has served on many committees, including the Rhodes Scholarship Selection Committee, a National Science Foundation Committee on Computational Biology, NIH Study Sections including service as a permanent member, vice-chair, and chair of the Molecular and Cellular Biophysics Study Section, the Advisory Committee of the Structural Biology Program of the Academia Sinica, and the nominating committee of the Protein Society. Dr. Cohen has played significant roles with several journals, as an editor of the Journal of Molecular Biology and Folding and Design and as an editorial board member for Protein Engineering, Perspectives in Drug Discovery and Design, Journal of Computational Biology, and Molecular Medicine. He has given several eponymous lectures, including the Genetics Institute Lecture at the Dana Farber Cancer Institute, the Ninth and Tenth Annual Roland D. Pinkham, MD, Basic Science Lectures at the University of Washington, the Frederic M. Richards Lecture in Molecular Biophysics and Biochemistry at Yale University, and the J. Lawrence Oncley Lecture in Biophysics at the University of Michigan. Dr. Cohen has been elected as a Fellow of the American College of Physicians and as a member of the American Society for Clinical Investigation, the Western Association of Physicians, and

the Association of American Physicians.

COHN P. SIMON

Simon P. Cohn, MD, MPH, FACMI, is the National Director for Health Information Policy for Kaiser Permanente. Dr. Cohn earned both his BA and MPH degrees at the University of California, Berkeley and his medical degree from the University of California, Davis. He completed his postgraduate medical training at St. Mary's Hospital in San Francisco. He is board certified in Emergency Medicine and a Fellow of the American College of Emergency Medicine. Dr. Cohn maintains an active clinical practice. Dr. Cohn's medical informatics interests began in 1984, when he developed widely used computer-assisted medical charting applications using the Apple Macintosh computer for ambulatory and Emergency Department settings in Northern California Kaiser Permanente. He holds two copyrights for these software applications. In 1991 he was named Clinical Information System Coordinator for Kaiser Permanente. In this role he worked with other KP leaders

to develop and implement the first national KP Clinical Information Systems Strategy. From 1997-98 he was the National Director for Data Warehousing for KP. Since 1999, he has devoted his energies at KP to health information policy and issues related to encounter data capture. Dr. Cohn was co-investigator on a federally sponsored demonstration project for clinical terminologies. He has published on this topic. In 2002, he was a recipient of a President's Award from AMIA for his contributions to the field. Dr. Cohn serves on many national boards and committees concerned with health information policy issues. He is a member of the National Committee on Vital and Health Statistics (NCVHS), the main public advisory committee to the U.S. Department of Health and Human Services on health information policy and HIPAA. He chairs its Subcommittee on Standards and Security. Under his chairmanship, the subcommittee, in addition to its central role in HIPAA implementation, has developed a series of national recommendations on standards for patient medical record information. Additionally, he is a member of the AMA CPT Editorial Panel and the National Uniform Claims Committee (NUCC). He is also a member of the Institute of Medicine's Committee on Patient Safety Data Standards. Previously Dr. Cohn served as a board member of the Workgroup on Electronic Data Interchange (WEDI) and Executive Committee member

of the Computer-based Patient Record Institute (CPRI).

COIERA ENRICO

Enrico Coiera, MB, BS, PhD, FACMI, is a Professor in the Faculty of Medicine and an Adjunct Professor in Computer Science at the University of New South Wales. Dr. Coiera received a medical degree from the University of Sydney in 1982 and a PhD in computer science from the University of New South Wales in 1989. Dr. Coiera was the Head of the Clinical Computing Division at the Royal North Shore Hospital in Sydney from 1988 to 1989. He moved to the United Kingdom to work at Hewlett-Packard's Research Laboratory in Bristol as a senior research scientist between 1990 and 1998. He subsequently returned to Australia to assume his current position in Sydney at the University of New South Wales, where he is co-director of the newly established Centre for Health Telematics at the University of New South Wales. Dr. Coiera is the author of The Guide

to Medical Informatics, the Internet and Telemedicine, now used as the basis for many courses in health informatics. His current research centers on developing a richer understanding of the role that communication processes play in clinical information tasks and on developing economic-inspired models of information transactions. Hewlett-Packard twice has been granted worldwide patents arising from his work, specifically in the areas of guideline-based information systems and role-based communication services for clinical communication systems. Dr. Coiera has been invited to speak or give keynote addresses internationally on more than 30 occasions, including addresses at the Institute of Electrical Engineers, the Royal College of Physicians, the Royal Society of Medicine, and the Commission of the European Communities and one of the four Cornerstone addresses at the 1999 AMIA Fall Symposium. He is on the editorial board of the Knowledge Engineering Review and the Journal of Medical Internet Research. He has been a member of the Scientific Programme Committee for the Fourth and Fifth European Conferences on Artificial Intelligence in Medicine as well as the MEDNET European Conference on the Internet and Medicine in 1996, 1997, and 1998. He was on the organizing committees for the American Association for Artificial Intelligence Spring Symposium on Interpreting Clinical Data, at Stanford University in 1994, and for the Workshop on

Intelligent Monitoring at Medinfo '92, in Geneva.

COLBERT JAMES

James Colbert is Senior Medical Director for Population Health at Verisk Health. He is an Instructor in Medicine at Harvard Medical School, and he practices general internal medicine as a hospitalist at Newton-Wellesley Hospital in Newton, Massachusetts. In addition, he is the Web Editor for JAMA Internal Medicine. Dr. Colbert is a national expert on accountable care, population health, and value-based payment. He is the primary author of the 2014 Brookings Institution report, "Adopting Accountable Care: An Implementation Guide for Physician Practices." Dr. Colbert has been a featured speaker at multiple conferences including the National ACO Summit, the HIMSS Big Data and Healthcare Analytics Forum, the American College of Physicians Annual Meeting, and the Society of General Internal Medicine Annual Meeting. His scholarly work has been published in numerous journals, including the New England Journal of Medicine, the Journal of General Internal Medicine, and the American Journal of Accountable Care. Dr. Colbert received his Bachelor of Arts degree from Harvard College and his medical degree from Stanford University School of Medicine. He completed his internship and residency in internal medicine at Brigham and Women's Hospital in Boston,

Massachusetts. Prior to joining Verisk Health, Dr. Colbert served as an editorial fellow at the New England Journal of Medicine and as a workgroup leader and clinical expert for the Brookings Institution's ACO Learning Network.

COLLEN F. MORRIS

Morris F. Collen (1913-2014) was born in St. Paul, Minnesota. He attended the University of Minnesota, where he earned a bachelor's degree in electrical engineering in 1935. In 1938 he earned his MD "with distinction" from the School of Medicine and completed a residency in internal medicine at USC/Los Angeles County General Hospital. Dr. Morris Collen has had a profound influence, not only on the creation of the field of informatics, but also on healthcare delivery and the creation of new models of payment and prevention. Dr. Collen's remarkable career began in 1942 when he was selected by Dr. Sidney Garfield, a surgeon, to join him as an internist in a California group practice. Drs Garfield and Collen subsequently worked with the industrialist Henry Kaiser, who is credited with creating one of the first comprehensive prepaid

health plans for both office and hospital care. This led to the establishment of Kaiser Permanente in the post-World War II period plus a comprehensive infrastructure of hospitals in the Bay Area near San Francisco and near Portland, Oregon. In the subsequent decades, the Kaiser organization grew to become a nationwide healthcare provider with millions of enrollees. Collen became a nationally recognized authority on the treatment of pneumonia during World War II. His gift for research showed early in his published studies in The Permanente Foundation Medical Bulletin of which he was long-time editor. After two decades as an internist with Kaiser Permanente, his career took a turn into early medical information technology. Collen and his team set to work to automate the 10-year-old multiphasic health screening exam to develop a prototype electronic health record. Within a decade, Dr. Collen accumulated several millions of health checkup data sets on more than a million subjects, creating in the process not only a prototype electronic health record, but also a phenomenal and unique basis for research, and this despite the immaturity of the technology available in the fifties and sixties. For the pursuit of the scientific aspects of his work, Dr. Collen founded the Medical Methods Research Division within Kaiser Permanente in Oakland, to which he added the Division of Technology Assessment in 1979 that he directed until his retirement in

1983, at age 70. He was elected to membership in the Institute of Medicine of the National Academy of Sciences (1971), and has served in many capacities on many committees of the National Library of Medicine. By the time of his retirement that year, Dr. Collen listed some 150 publications in his scientific output and had held appointments at multiple first-class universities, including Johns Hopkins and Stanford. His work „Hospital Information Systems" and „Multiphasic Health Testing Services", both became classics.

COMEBISE JULIEN

Julien Cornebise is currently a senior research scientist at Google DeepMind, which he joined in 2012. After two MSc, in Computer Science and in Mathematical Statistics, he completed his PhD in 2009 in Mathematical Statistics at University Pierre et Marie Curie and ParisTech, on Adaptive Sequential Monte Carlo Methods, for which he received the Savage Award in Theory and Methods from the International Society for Bayesian Analysis. He then held several research positions at SAMSI/Duke University, University of British Columbia, and University College London,

working on advanced computational statistics. Prior to joining DeepMind, Julien also acted as an applied mathematics and statistics consultant to various pharmaceutical companies.

COMYN GERARD

Gérard Comyn was Acting Director of the Directorate for Information and Communication Technologies (ICT) for Citizens and Businesses in the Directorate General for Information Society and Media in the European Commission. He is also head of the unit on ICT for Health. Before joining the European Commission, he was managing director of the European Computer Industry Research Center (ECRC) in Munich, and was also a Professor at the University of Lille. Comyn hold a Master's Degree in Applied Mathematics and a PhD in Computer Science.

COOPER TALMADGE

Talmadge Ted Cooper, MD, FAC-MI, is the National Director of Confidentiality and Security at Kaiser Permanente. He is also an Associate Clinical Professor of Ophthalmology at the Stanford University School of Medicine. He received a BA and MD from George Washington University and completed a residency in ophthalmology there. He is a Fellow of the American Academy of Ophthalmology. Previously, Dr. Cooper served as the Associate Director for Medical Information Systems for Kaiser Permanente Northern California, where he sponsored the development and implementation of numerous large-scale clinical information systems. Dr. Cooper's primary interest in medical informatics is privacy and security. He has worked to advance standards in this area as the chairperson of the American Society for Testing and Materials Subcommittee E31.20, Data and Systems Security for Health Information, and as a leader of Work Group 4 on Security of the U.S.

Technical Advisory Group to the International Organization for Standardization Technical Committee 215 Health Informatics. At AMIA he has supported privacy and security as a member of its Internet Working Group and Public Policy Committee. He participated in the development of the AMIA guidelines for e-mail and has presented several AMIA tutorials on privacy and security. Dr. Cooper has been active in the Computer-based Patient Record Institute since it was founded. He was its Board of Directors Chairperson in 1998, has chaired its Work Group on Privacy and Security, and led the development the "CPRI Toolkit: Managing Information Security in Health Care." He is a commissioner of The Electronic Healthcare Network Accreditation Commission. He serves on the editorial advisory boards for the Report on Patient Privacy and the American Health Information Managers Association publication In Confidence.

COOPER JASON

Jason Cooper is Vice President and Chief Analytics Officer, Horizon Blue Cross Blue Shield of New Jersey. Cooper is responsible for enterprise-wide data analytics and informatics, including both commercial and government lines of business. He has more than 20 years of experience in analytics and informatics covering for-profit, nonprofit and government domains, including leading teams at Wellmark Blue Cross Blue Shield, Cigna and CVS

Health, as well as experience with NASA spaceflight software analyses. Additionally, he is a member of the International Institute for Analytics and the American Medical Informatics Association and an editorial board member for the American Journal of Pharmacy Benefits.

COOREVITS PASCAL

Pascal Coorevits is Vice President Research at the European Institute for Health Records (the EuroRec Institute) and Visiting Professor of Medical Informatics and Statistics at the Ghent University, Faculty of Medicine and Health Sciences, Department of Public Health. He is involved in several FP7 and H2020 eHealth projects. His primary research interests lie in the domain of Electronic Health Records (EHRs) and are oriented towards various aspects of quality labelling and certification of EHRs.

CORBRIDGE RICHARD

Richard Corbridge is Chief Information Officer. Dr. Steevens' Hospital, Dublin. He is Chief Information Officer for the Health Service Executive in Ireland and previously from the NIHR Clinical Research Network. Richard has a wealth of experience in the Health and Clinical Research sector leading various informatics delivery elements; business change, benefits management and Information security projects. He has specialised in IT development, procurement and implementation across national and local health care arenas in the UK for more than fifteen years. Richard has delivered a wide range of systems and process to aid with the provision of health care and research, these range from delivery of the first primary care messaging system to innovation within a care trust to deliver a health and social care single assessment process and onto the modernisation of the information systems infrastructure for the delivery of clinical research in England. At the end of 2014 Richard left his position as CIO of the National Institute for Health Research specifically the Clinical Research Network (NIHR CRN). This division was responsible for providing Information Systems and Business Intelligence to a workforce of around 10,000 research related staff in the NHS who were in turn responsible for the recruitment of over 630,000 participants into clinical studies and trials in England this year. Richard has taken up the dual role within Ireland of CIO of the Health Service Executive, the organisation responsible for the provision of health and social care services to everyone living in Ireland and the role of Chief Officer of the newly formed eHealth Ireland organisation, a new structure responsible for the delivery of an eHealth Eco-System for Ireland that will facilitate the health informatics innovation delivery country wide.

CORMACK ALLAN

Allan MacLeod Cormack (1924-1998) was born in Johannesburg, South Africa, the son of George and Amelia, a civil service engineer and a teacher respectively, who had emigrated from Scotland to South Africa prior to World War I. At the University of Cape Town, South Africa, Cormack chose the field of engineering, but two years later he changed his major to physics, completing abaccalaureate of science in 1944. He remained at the University of Cape Town, completing a Master of Science degree in the field of crystallography in 1945. During the years that followed,Cormack became a lecturer in physics at the University of Cape Town and pursued graduate studies in the field of theoretical physics for two years at Cambridge University in England. In 1950 Cormack returned to South Africa from Cambridge and during this period he was asked to serve a six-month service as resident medical physicist in the radiology department in Cape Town, where he supervised the use of radioisotopes as well as the calibration of film badges used to measure hospital workers' exposure to radiation. At Groote Schuur, Cormack witnessed first hand how radiation was being used in the diagnosis and treatment of cancer patients. Baffled by deficiencies in the technology used for such procedures, Cormack began a series of experiments and analyses, the results of which were two papers published separately between 1963 and 1964 in the Journal of Applied Physics . Between 1956 and 1964, most of his research in connection with the development of computerized axial tomography was conducted on his own time. Neither of his two Journal of Applied Physics papers met with significant response, despite the fact that they proved the feasibility of his

method for producing images of heretofore unviewable or barely viewable cross sections of the human body. Hounsfield was independently coming to conclusions similar to Cormack's, and developed the first CAT scanner as early as 1972. In 1979 Cormack and Hounsfield were awarded the Nobel Prize for physiology or medicine for their joint, though independent, development of CAT scan theory and technology. Unlike previous Nobel recipients, neither Cormacknor Hounsfield held a doctorate in medicine or science; further, their discovery was awarded the prize only after the Nobel Assembly voted the first choice of the selection committee; and, finally, it was highly unusual that the two men had never met or worked together, yet had worked on the same invention concurrently. In 1990, as one of several scientists receiving the National Medal of Science, Cormack was recognized by President George Bush. Cormack is a member of the National Academy of Science and the American Academy of Arts and Sciences, and is a fellow of the American Physical Society. Cormack died of cancer in Massachusetts at age 74. He was posthumously awarded the Order of Mapungubwe for outstanding achievements as a scientist and for co-inventing the CT scanner.

CORNET JOAN

Joan Cornet and Prat (1950-) is mHealth Director, Mobile World Capital Barcelona, Spain. He is a Technical Engineer in Metallurgy, and graduate in Psychology. After working as a clinical psychologist in a GeneralHospital in 1979, he was elected mayor of Manresa. In 1988 he became a civil servant in the European Commission in Brussels and was later appointed Secretary General of the Socialist Group in the European Parliament in 1994. In June of 2004 he was appointed General Secretary of the Department of Health of the Government of the Generalitat de Catalunya. In September 2005 the Government entrusted him to start up the "Bioregió of Catalonia" (Biotechnology) and since January 2007 to Mai 2013 he has been Executive Chairman of the Ticsalut Foundation commissioned by the health Department. He remains as board member of TicSalut Foundation related to international affairs and mHealth Strategies. Nowadays he is the Director of mHealth Competence Center at Mobile World Capital Barcelona. He is also a Professor of the UOC (Catalunya Open University) and IL3 (International Long-Learning-University of Barcelona).

CORNET RONALD

Ronald Cornet has a background as Software Engineer from the department of Medical Informatics in Amsterdam. In 2006, he received his PhD degree on "Methods for Auditing Medical Terminological Systems". His main research interest is in the field of medical terminologies, their applications, and integration into Electronic Health Records. Also, Ronald Cornet is a Consultant for the Dutch ICT institute in health care (Nictiz) on preparing implementation of SNOMED CT in the Netherlands. Currently, Ronald Cornet is a visiting associate professor (Gästlektor) at Medical Informatics research group, Department of Biomedical Engineering (Linköping University).

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CORRIGAN M. JANET

Janet M. Corrigan, PhD, MBA, MS-Eng, FACMI, received her bachelor's degree in social services from Syracuse, an MBA from the University of Rochester, and a master's degree in industrial and operations engineering and a PhD in health services organization and policy from the University of Michigan. She served with the Physician Payment Review Commission in Washington, the Group Health Association of America, and the National Committee for Quality Assurance, where she helped create the widely implemented Health Plan Employer Data and Information Set performance measures. She was a principal researcher at the Center for the Study of Health System Change, executive director of the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry, and Senior Board Director for the Institute of Medicine Board on Health Care Services, which produced the "To Err is Human" and "Crossing the Quality Chasm" reports. She is now President and Chief Executive Officer of the National Quality Forum.

COSTA-REQUENA JOSE

Jose Costa-Requena is Research Manager at Department of Communications and Networking, Aalto University, PRECIOUS project, Finland. Jose Costa-Requena his received his Master Sc. in Engineering (MSc.) in 1999, his Licentiate in Telecomunications Engineering in 2004 (Lic. Sc.) and he received his Doctor in Engineering (Dr.-Ing.) in 2007 from Helsinki University of Technlogy. From 1998 through early 2009, he worked as a research staff at Helsinki University of Technology and from 2009 to date he is working as research manager with teaching responsibilities at AALTO University. Dr. Costa-Requena has been also working simultaneoulsy in the industy for 10+ at Nokia Mobile Phones in product development.

COTE A. ROGER

Roger A. Cote, MD, FACMI, has been active in medical informatics since 1964 when he began the development of one of the first computerized clinical laboratory projects at the Boston Veterans Administration Hospital. Later he played a key role in the development of the University of Sherbrooke hospital information system design. His major effort has been the creation of the Systematized Nomenclafure of Medicine, now in its third edition. His current interest is in the translation of indexed medical knowledge into other natural languages, using the English SNOMED as the target or reference language.

COVVEY DOMINIC

Dominic Covvey is Adjunct Professor, University of Waterloo & University of Ontario Institute of Technology and President & Director, National Institutes of Health Informatics. Dominic Covvey is an Adjunct Professor at the University of Waterloo and the University of Ontario Institute of Technology. He is also the President and Director of the National Institutes of Health Informatics. He was the Founding Director of the Waterloo Institute for Health Informatics Research at the University of Waterloo (2003-2010). His research is in the representation and analysis of healthcare workflow, the definition of competencies and curricula in Health Informatics and the design of the Electronic Health Record. He has published hundreds of articles, presented at many conferences and produced 6 books and several book chapters. Dominic is a Fellow of the American College of Medical Informatics (ACMI) and of the Healthcare Information and Management Systems Society (HIMSS), a senior member of the IEEE, and CIPS Information Technology Certified Professional.

COX R. JEROME

Jerome Jerry Cox Jr., ScD, FACMI, is Professor in the departments of Electrical Engineering and of Computer Science in the School of Engineering at Washington University. From 1964 to 1975 he was Founder and Director of the Biomedical Computer Laboratory (BCL) at the Washington University School of Medicine. A 1947 graduate in electrical engineering from MIT, he earned his MS (1949) and ScD (1954) with specialization in electro-acoustics. Other responsibilities at Washington University include Chairman of the Washington University Computer Laboratories (1967-1973), Professor of Biomedical Engineering (1965-1984) and Program Director of the Training Program in Technology in Health Care (1970-1978). During the late 1960s, Cox and his colleagues at BCL developed several small-computer applications including an interactive radiation treatment planning system, an arrhythmia monitoring system for a coronary care unit and a dynamic brain imaging system for radioactive tracer studies. In

1971 Cox was elected to the Institute of Medicine of the National Academy of Science and in 1975 he became the founding Chair of Washington University's Department of Computer Science.

CRAWFORD JOHN

John Crawford is Healthcare Industry Leader. IBM Europe. John has joint responsibility for the development of IBM's Healthcare Business in Europe. He is a member of several healthcare IT industry associations, including COCIR and Continua, and he is currently Vice President of the European Health Telematics Association (EHTEL). He served on the Industry Team for epSOS, and is the lead IBM representative for the European Innovation Partnership on Active and Healthy Aging (Action Area B3 – Integrated Care). He is often invited to provide expert commentary about developments in eHealth, and has spoken at many conferences and events including World of Health IT, European Health Forum Gastein, eHealth Forum, HIMSS CIO Summit, European Telemedicine Conference, and the NHS Confederation Conference. In 2012 he contributed to the World

Economic Forum report on Sustainable Healthcare Systems, and in 2010 he designed and taught a class on the evolution of eHealth at the J&J European Health Leadership Programme at the INSEAD Business School. With over 34 years experience in the IT Industry, he is a strong advocate for the transformation of healthcare using information technology, and he regularly provides briefings on IBM's Healthcare Business and eHealth to the press and analysts. John has joint responsibility for the development of IBM's Healthcare Business in Europe. He is a member of several healthcare IT industry associations, including COCIR and Continua, and he is currently Vice President of the European Health Telematics Association (EHTEL). He served on the Industry Team for epSOS, and is the lead IBM representative for the European Innovation Partnership on Active and Healthy Aging (Action Area B3 – Integrated Care). He is often invited to provide expert commentary about developments in eHealth, and has spoken at many conferences and events including World of Health IT, European Health Forum Gastein, eHealth Forum, HIMSS CIO Summit, European Telemedicine Conference, and the NHS Confederation Conference. In 2012 he contributed to the World Economic Forum report on Sustainable Healthcare Systems, and in 2010 he designed and taught a class on the evolution of eHealth at the J&J European Health Leadership Programme

at the INSEAD Business School.

CRISTOFINI PATRICE

Patrice Cristofini is Strategic Partnership Vice-President ORANGE HEALTHCARE (France TELECOM). Patrice Cristofini is Medical Doctor, former Intern of Paris Hospital Group (Public health D.E.S. option Occupational Health). Graduate of the Paris Faculty of Medicine (silver medal). Specialist in Public Health and Sports Medicine. In charge of coordination and management of occupational health and public health projects for Atos Origin, he also advises on and develops the company's market position in healthcare business for ICT (e-Health). He gives support, training and pre-sales action for major account managers at top levels (ministries, general managers of hospitals or insurance companies...). He is now in charge of strategic partnerships and European affairs for France Telecom in the healthcare sector (Orange healthcare division). He has also managed and developed several international high-value propositions on e-Health for the executive board of SchlumbergerSema (as champion e-Health),

AtosOrigin. Technical and scientific expertise: Organized and participated in medical consensus meetings and internationalconferences on e-Health. Published articles on Public Health (sports medicine, health and safety at work), chaired and participated in forums and congresses, chaired training sessions on medicine and law. Author of "Occupational Health and Public Health: What is in the future ?", published by Editions de santé –Paris. Member of the inter-ministerial Commission on Sports Medicine and Doping (09/98 to 03/99) and risk assessment capabilities in driving cars (2003) for the French Ministry of Health. Extraprofessional activities: National President of AFTIM (French Association of Safety Technicians andEngineers and Occupational Health Physicians), which counts more than 600 members including many international companies. Director of the periodical "Safety and Occupational Health". Member of CEPS, international think tank on strategic prospectives, and Montaigne Institute.

CROOKS GEORGE

George Crooks, OBE MBChB, FRCP, FRCGP, professor, is currently the Medical Director for NHS 24 and Director of the Scottish Centre for Telehealth & Telecare. NHS 24 is the national provider of telehealth services for the whole of Scotland currently providing the majority of its services via telephony, the web and digital television. He is responsible for the quality, safety and effectiveness of all clinical services and the development of new services in partnership with other NHS organisations. George was a General Medical Practitioner for 23 years in Aberdeen latterly combining that role as Director of Primary Care for Grampian. George was elected President of the European Health Telematics Association in February 2012 and is a Board member of the European Connected Health Alliance. He leads the Integrated Care Action Group on behalf of the European Commission within the European Partnership for Active and Healthy Ageing. He is Chair of the Scottish Digital Health and Care Innovation Programme Board, leading on the at scale delivery of telehealth and telecare services and also the Chairman of the Digital Health Institute in Scotland, a partnership between academia, industry and health and care delivery organisations delivering innovation in technology and design that can provide safe, effective and sustainable health and care solutions and create economic growth in Scotland. He was awarded an OBE in the Queen's New Year Honours List 2011 for services to healthcare.

CROWLEY REBECCA
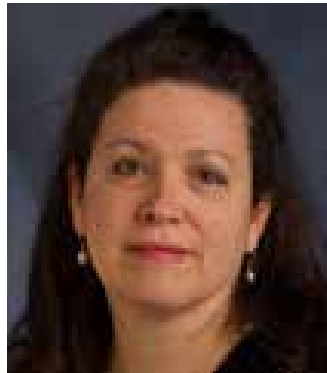
Rebecca.Crowley, MD, MSIS, FACMI, received her Bachelors degree in Biology from Swarthmore, and her MD degree from the University of Pittsburgh. She undertook postgraduate in Pathology with specialization in Neuropathology at Stanford, then returned to Pittsburgh where she undertook both a residency in Pathology and a fellowship in Medical Informatics, for which she was awarded a Masters of Science degree. She the joined the faculty of the departments of Pathology and Biomedical Informatics at Pittsburgh, and at the time of election to the College was an associate professor there. Dr. Crowley's research has focused on how computer-based representations of medical knowledge facilitate medical research and education, including development and evaluation of intelligent medical training systems, and development of automated systems for processing clinical text. She achieved national recognition through her work on caTIES. Building on methods of Natural Language Processing (NLP), the open source caTIES system builds a repository of de-identified, highly processed and coded, free-text documents that can be searched within and across organizations. caTIES was one of the first developed systems for the Cancer Biomedical Informatics Grid (caBIG). The software provided a novel platform for the development of translational research networks, based on a foundation of research on data sharing. Dr. Crowley served as Director of the Biomedical Informatics Training Program at Pittsburgh, contributing to teaching, mentorship, and administration of the PhD and MS programs, and has been an active and sustained contributor to AMIA scientific symposia.

CULLEN THERESA

Theresa Cullen, MD, Ms, is the Veterans Health Administration's (VHA) Chief Medical Information Officer and also leads VHA's Health Informatics service areas including Human Factors, Knowledge Based Systems, Applied Informatics Services, and the broadly recognized Barcode program. From February – October, 2013, Dr. Cullen was the Acting Deputy Director of the Department of Defense (DoD)/Department of Veterans Affairs (VA) Interagency Program Office (IPO). While at the IPO, Dr. Cullen worked, in concert with the IPO Director, to lead DoD and VA in the development and implementation of the integrated Electronic Health Record and the Virtual Lifetime Electronic Record Health Initiatives that allow for health information interoperability between the Departments to better serve Service members, Veterans and other eligible beneficiaries. Prior to joining VA in February 2012, Dr. Cullen was the Director of Health and Human Services Domain Information Technology Program Management Office (PMO) at the Department of Health and Human Services (HHS). In this position, she

helped coordinate the health information technology investments through HHS. Dr. Cullen started her career with Indian Health Service (IHS) in 1984 as a family practice physician and was a clinical director on the Tohono O'odham reservation from 1994-1999. She was the senior medical informatics consultant for IHS from 1999-2006. Starting in 2006 until June 2011, she was the Chief Information Officer (CIO) and Director of the Office of Information Technology for IHS.

CULTOT GERALD

Gerald Cultot is Research Programme Officer in the Health and Wellbeing Unit. European Commission, Directorate General Communications Networks, Content and Technologies. Gerald Cultot studied Computer Integrated Manufacturing at the University of Nancy (France) and started his career as a management professional in a Consulting firm for 8 years. Then, he began his career at the European Commission in 2007 in Directorate-General Justice Liberty & Security where he was responsible for the testing of a Large

Scale European Information Systems (Schengen). He became Head of Section in the Information Systems Unit in DG SANCO in 2009. In 2012, he was appointed Research Programme Officer in DG CONNECT where he has monitored the implementation of Research and Innovation projects related to Health and Well-Being. He is now in charge of several eHealth interoperability projects, including SemanticHealthNet, Trillium Bridge and Expand.

CULVER DEV

Dev Culver is the Executive Director and Chief Executive Officer of HealthInfoNet which operates Maine's statewide health information exchange (HIE). Prior to HealthInfoNet, Mr. Culver served for 16 years as CIO for Eastern Maine Healthcare, a seven-hospital integrated delivery network (IDN) located in eastern and northern Maine. In 2004, Mr. Culver joined Eclipsys Corporation and then later Cerner Corporation in senior management positions responsible for the installation of advanced clinical information systems and the delivery of consulting services to healthcare clients in a multi-state region. At the national level, Dev has served on the CCHIT task force on health information exchange networks, and the AHIMA State Level Health Information Exchange Steering Committee. In 2011, Mr. Culver and HealthInfoNet was the recipient of the Healthcare Informatics Innova-

tor Award. Mr. Culver graduated from Brown University and holds a Masters in Management from Northwestern University. Dev Culver has spoken at multiple national conferences over the past 30 years including HIMSS, IHT2 and AHIMA.

CUMMINS R. MOLLIE

Mollie R. Cummins, PhD, RN, FAAN, FACMI, is an Associate Professor of Nursing and Adjunct Associate Professor of Biomedical Informatics at the University of Utah. She graduated BSN (1994), Nursing at University of Illinois at Chicago; MSN (2000), Family Nurse Practitioner track at Northern Kentucky University and PhD (2005), Nursing Science, Information Science at Indiana University. She holds a PhD in nursing science and information science from Indiana University. In 2007, she studied methods of complexity science including agent-based modeling and network analysis at the Santa Fe Institute. Prior to her career in informatics, she practiced as an emergency nurse and family nurse practitioner. She has made numerous scholarly contributions in informatics,

and leads an award-winning program of research related to the induction of knowledge models for clinical decision support and informatics applications in poison control. Dr. Cummins serves on the Board of Scientific Counselors of the Lister Hill National Center for Biomedical Communications, the intramural research division of the National Library of Medicine. She serves is current President of the Utah Nursing Informatics Network and she is an elected member of the national steering committee of the Alliance for Nursing Informatics. At University of Utah, she is leading an AHRQ funded study to develop and evaluate a health information exchange process for emergency departments and poison control centers (1 R01 HS021472-01A1). She is also engaged in two Department of Veterans Affairs studies entailing the use of "big data" methods to develop predictive models of both MRSA (Methicillin-resistant Staphylococcus aureus) colonization and homelessness among veterans. She has authored over 60 articles, book chapters, scientific papers, and abstracts, and serves as a section editor for the journal "CIN: Computers, Informatics, and Nursing".

CUNNING MIKE

Mike Cunning is a Managing Director in PwC's Health Industries Cybersecurity & Privacy practice and has over 19 years of experience developing information risk and cybersecurity solutions. Mike focuses on clients in the pharmaceutical, life sciences and medical device sectors and is the US leader of PwC's Cyber services for medical device manufacturers and large-scale medical device users. In this role, Mike has built a team of subject matter specialists, obtained PwC investments, established program accelerators, published thought leadership and raised of medical device risks with client leadership. Mike's teams have performed engagements to help clients identify cyber risks and develop countermeasures to better align cybersecurity programs to business risks. On these and other topics, he has published thought leadership, spoken at conferences, on web casts and pod casts, and developed firm methodologies. He has also co-authored pieces on Cyber Risk in Medical Device, Cyber Risk in M&A, Cyber Risk for PE firms, 10 Minutes on Data & Identity Theft, Cloud Security

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D'AVOLIO LEONARD

Leonard D'Avolio, PhD, is President, Co-Founder, Cyft; Director, Informatics, Ariadne Labs. He has spent the last decade turning data into healthcare systems most valuable asset for discovering efficiencies and improving care. He is an Assistant Professor at Harvard Medical School, advisor to Ariadne Labs and the Helmsley Charitable Trust Foundation, and President and Co-Founder of Cyft, a company bringing data science to all of healthcare. His writing on transforming healthcare through information is featured in both academic journals as well as in the popular press. His work includes leading the development of the Department of Veterans Affairs genomic science infrastructure and the Million Veteran Program, implementing the world's first ""point of care"" clinical trial embedded within the VA's electronic medical record system, the development of Ariadne Labs' informatics capabilities, and the development of real time data feedback to improve childbirth practices in India and Africa.

DAFOULAS GEORGE

George E. Dafoulas, MD, MBA in HSM, PhDc, is an Internal Medicine resident and the project coordinator of the clinical pilot for Central Greece of the large scale Randomized Control Trial EU co-funded project "Renewing Health" www.renewinghealth.eu for the Health Technology Assessment of telehealth in 9 European Countries. He is a medical consultant for the telehealth, telecare and EMR, EU co-funded projects for "e-trikala SA" a leading competence center of the Municipality of Trikala, in the e-health sector in Greece. George is also involved in research related with innovative telehealth services, working with the SANA group http://sana.mit.edu/ after an internship in CSAIL-MIT, Cambridge-Boston, USA.

DANIELS H. JOHN

John H. Daniels is Global Vice President of the Healthcare Advisory Services Group for HIMSS Analytics at HIMSS, a global, cause-based, not-for-profit organization focused on better health through information technology (IT). Daniels has focused his experience in hospital administration and healthcare information technology. In his current role, Daniels leads HIMSS Analytics' global healthcare advisory services team providing maturity model related products and services to healthcare provider organizations and government health authorities around the world, including HIMSS Analytics EMR Adoption Model assessment and validation activities. Daniels currently serves on the American College of Healthcare Executives (ACHE) Board of Governors Examination Review Course faculty, and he has served as Adjunct Professor for the graduate program in health administration at Pfeiffer University and as a guest lecturer for Boston University teaching others about health IT issues and trends. Before joining HIMSS Analytics, Daniels served as Vice President of Strategic

and Social Media Security risks and mitigation strategies.

Relations for HIMSS North America, and previously served as Senior VP and CIO at Evolvent Technologies, Inc., during which time Daniels was elected to the HIMSS Board of Directors where he served in both the Vice Chair and Financial Director positions. Additionally, Daniels served as CIO at the U.S. Air Force Academy Hospital, Vice President of IT Operations for Harris County Hospital District, and in other healthcare positions throughout his career. Daniels holds a BS degree in Computer Science from West Texas A&M University, a MS degree in Health Services Administration from Central Michigan University, and a graduate certificate in Nonprofit Management from American Public University. He is a HIMSS and ACHE Fellow.

DARMONI JACQUES STEFAN

Stefan Jacques Darmoni (1959-) is professor of Biomedical informatics at the Rouen University, Normandy, France since 2003. He is a head of the Department of Biomedical Informatics from the Rouen University Hospital. He obtained his MD in 1985 from Paris Sud University and his

MSc in 1986 and his PhD in 1989 in computer science from Paris Dauphine. He has more than 135 peer reviewed publications indexed in MEDLINE and a sustained record (n=25) of funded from national and European research agencies in terminologies and ontologies management, information retrieval and automatic indexing. SJ. Darmoni has made specific contributions at the intersection between biomedical informatics and information science, creating several tools widely used in the French-speaking countries: CIS-MeF, a catalogue, which provides access to 100.000 indexed Web documents (guidelines, teaching documents, e-booklets for patients); HeTOP, a cross-lingual terminology server; InfoRoute, a French InfoButton. He has been a member of different scientific program committees for a wide range of international health informatics conferences and journals, and currently serves as editor of the IMIA Yearbook of Medical Informatics (Knowledge Management Section).

DAVIS DAI

Dai Davis is Partner, Solicitor and Chartered Engineer. Percy

Crow Davis & Co. Dai Davis has been a specialist and consistently recommended Technology Lawyer for over 25 years. He is a qualified Chartered Engineer and Member of the Institution of Engineering and Technology. Having been national head of Intellectual Property Law and later national head of Information Technology law at Eversheds for a number of years, Dai is now a partner in his own law practice. Dai advises clients on commercial agreements relating to software and technology products. He is an expert in product safety, product recall and CE Marking including medical devices.

DAWKINS GARRET

Garret Dawkins, MBA, is the Director of Transitions of Care and Public Health Services at Surescripts, the nation's largest clinical health information network. He was previously director of solutions management at Allscripts where he led Allscripts' Meaningful Use Stage 2 Public Health Reporting Solutions and Patient Engagement Portfolio. Prior to Allscripts, Mr. Dawkins led a joint development initiative between Nortel and IBM focused on imbedding communication tools within the health care information technology system. He is a graduate of Wake Forest University with a BA in English and an MBA.

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DAWSON NICK

Nick Dawson is the Director of Enterprise & Government Business for BlackBerry and is responsible for the team that manages BlackBerry's direct relationships with the company's most strategic customers. Since joining BlackBerry in 2005 he has worked with customers and partners across a variety of sectors, assisting them in the secure mobilization of enterprise IT systems, workflows, and processes. Prior to joining BlackBerry, Nick had worked in the technology sector since 1995 in consultative sales and leadership capacities for leading software and systems integration companies focused on government and enterprise IT systems. Nick was born in Vancouver, BC and is now a resident of Ottawa, Ontario.

DAYHOFF BELLE MARGARET

Margaret Belle (Oakley) Dayhoff (1925-1983) was an American physical chemist and a pioneer in the field of bioinformatics. She dedicated her career to applying the evolving computational technologies to support advances in biology and medicine, most notably the creation of protein and nucleic acid databases and tools to interrogate the databases. Dayhoff graduated from New York University in 1945 with a bachelor of arts and earned a PhD. in quantum chemistry in 1948 at Columbia University. She was a research assistant at the Rockefeller Institute from 1948 to 1951 and had been associate director of the National Biomedical Research Foundation in Washington, DC, since 1960. Dr. Dayhoff was widely known in the scientific community for establishing a large computer data base of protein structures as well as for being the author of the Atlas of Protein Sequence and Structure, a multivolume reference work. She initiated this collection of protein sequences in the Atlas, a book collecting all known protein sequences that she published in 1965. It was subsequently republished in several editions. This led to the Protein Information Resource database of protein sequences, which was developed by her group. It and the parallel effort by Walter Goad which led to the GenBank database of nucleic acid sequences are the twin origins of the modern databases of molecular sequences. The Atlas was organized by gene families, and she is regarded as a pioneer in their recognition. Her approach to proteins was always determinedly evolutionary. Her work is used in genetic engineering and medical research. As a noted archivist of proteins, Dr. Dayhoff contributed to the understanding of the evolutionary process by developing evolutionary "trees" based on correlations between proteins and living organisms. She and her staff made several discoveries, including one indicating that certain genes normally found in most body tissue cells are closely related to genes found in many cancer cells. She did postdoctoral studies at the Rockefeller Institute (now Rockefeller University) and the University of Maryland, and joined the newly established National Biomedical Research Foundation in 1959. She was the first woman to hold office in the Biophysical Society. She originated one of the first substitution matrices, Point accepted mutations (PAM). The one-letter code used for amino acids was developed by her, reflecting an attempt to reduce the size of the data files used to describe

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amino acid sequences in an era of punch-card computing.

DE ANDRES MEDINA RAFAEL

Rafael Medina de Andres is President of the AAL Association that manages the Active and Assisted Living Program, which aims to foster research projects on innovative solutions for smart aging through the use of ICT. His research policy interest covers smart social inclusive innovation, translational research, P4 (predictive, preventive, personalized, participate) Health; as well as European Joint Programming (JPND, JPI MYBL, JPI HDHHL, JPI AMR); Research Infrastructures Planning (ESFRI Health and Food Strategic Working Group) and EULAC Health (EU and Latin-America and Caribbean countries). In addition to the above mentioned information, he is the Head of the EU and Internationalization Division at the National Institute of Health Carlos III (ISCIII) in Spain

DE CLERCQ ETIENNE

Etienne de Clerque (1963-) obtained his MD in 1989. Also, he graduated in Medical informatics in 1992, became specialist in Health Data Management in 2003 and graduated in Public Health in 2006. He completed a PhD in Public Health/Health informatics in 2007 at the Université Catholique de Louvain (UCL). Actively involved in various research groups or projects at national and international levels, Etienne de Clercq has been a member of the Belgian Commission for the Private Life Protection, chairman of the Belgian Medical Informatics association (MIM), member of the Board of the European Federation for Medical Informatics (EFMI) and member of the Board of the 'French speaking part" of the Belgian Clinical Pathway Network (RIC – Réseau Itinéraire Clinique). He was also member of the Belgian Commission « Telematics Standards in relation to the Health Sector" (1999-2008), member and chairman of the GPs' software systems (EPRs) labeling group (2004-2008) and member of the CEN ContSys revision TaskForce (2003-2006). Etienne de Clercq started his research activities in Medical

Informatics in 1993 at the Université Catholique de Louvain (UCL). Senior researcher at the Research Institute for Health and Society (IRSS-UCL) and professor of Health Informatics at the Faculty of Public Health (FSP-UCL), his main research domains are the Electronic Patient Record (in hospitals and ambulatory care), the health telematics, the privacy protection, the health research information networks and the health information policy. His research activities focused mainly these last years on the secondary usage of routinely collected data in general practitioners' EPR systems, including the setting up of health research information networks and the improvement of the EPR systems for general practitioners.

DEBAKEY LOIS

Lois DeBakey, PhD, FACMI, is Professor of Scientific Communication at Baylor College of Medicine. She was a member of the Board of Regents of the National Library of Medicine

from 1982-1986. Dr. DeBakey's primary informatics interests are to enhance the precision. Gmplicity. and clarity of the terminology, documentation, and prose used in the field.

DEAN BRANDON

Brandon Dean, MPH, is the risk-based planning manager for the Emergency Preparedness and Response Program in the Los Angeles County Department of Public Health. He received his BA from Brigham Young University and MPH. from the University of California, Los Angeles, specializing in emergency public health. In 7 years with Los Angeles County, Mr. Dean has become one of the primary analysts and emergency planners of the department, creating, testing, and improving public health emergency response plans and policies. In particular, he has become the department's point person in development and application of mathematical disease modeling for improved strategic planning and operational responses. He also serves on the National Institutes of Health/National Institute of General Medical Sciences Models of Disease Agent Study Steering Committee.

DEEN JAMAL

Jamal Deen was born in Guyana, South America. He is currently Senior Canada Research Chair in Information Technology and Professor of ECE, Professor of Biomedical Eng, and Director, Micro- and Nano-Systems Laboratory at McMaster University.

DEGOULET PATRICE

Patrice Degoulet (1948-) is chair of the Public Health and Medical Informatics Department of the Paris Descartes University. He earned his MD in 1971 from the Pitié-Salpêtrière School of Medicine in Paris with a post-graduate training in Nephrology. In parallel he completed a formal training in information sciences with a MSc degree in medical informatics earned in 1973 from Pierre and Marie Curie University and a MSc degree in biostatistics in 1977 from Paris-Sud University. From 1978 to 1986 he

acted Lecturer and then Associate Professor of Biostatistics and Medical Informatics at Pitié-Salpêtrère School of Medicine in Paris under the direction of Professor François Grémy, his mentor for his 1984 PhD thesis entitled "Electronic Medical Records: The semantic and temporal dimensions". He was appointed as full professor at the Broussais Faculty of medicine in 1987 and at the Paris Descartes University in 2004. Between 1972 and 1988, Patrice Degoulet acted as chief research scientist for the French DIAPHANE dialysis registry that managing data collected from 40 dialysis centers throughout France. Between 1975 and 1997 he was involved in the development of disease management electronic records in different fields including hypertension (ARTEMIS), cardiovascular surgery (ICARE), chronic renal failure, and diabetes. To foster the development of such electronic records he conceived a temporal data management system (LIED for "Langage Interactif pour l'Exploitation des Données") including its data definition and manipulation language, and the integration with a rule-based expert system. LIED was implemented by Dominique Sauquet on Digital VMS and UNIX based mini-computers to be used during the period 1983-2000 by about 25 medical departments throughout France. From 1989 to 1994 he coordinated in the framework of several European projects the development of the HELIOS software engineering environment including

a message-oriented software bus and a semantic interoperability platform. In 1998, Patrice Degoulet was appointed as chief information officer at the Pompidou university hospital (HEGP). HEGP opened in July 2000 with a fully operational component-based integrated clinical information system (CIS). The system was designed as a set of patient-oriented components (ADT, EHR, Appointment Scheduling, and), generic component (Concept Dictionary, Decision Support Engine, Clinical Context of Work (CCOW) component, Documentation management system) integrated through a software bus. This system called COHERENCE was given in 2003 the First eAward for eHealth from the European Commission. Major components initially provided by several vendors were progressively acquired by one of the involved companies (MEDASYS®) to become under the name of DxCare® a complete CIS solution that has become over time one of the three CIS leading companies in France. In 2013 the HEGP hospital information was certified HIMSS/EMRAM level 6. In 2007, Patrice Degoulet initiated the development of an i2b2-based clinical data warehouse (CDW) sharing its dictionary of concepts with the HEGP clinical information system. The HEGP CDW is currently rich of 700,000+ patient records, 3 million ICD10 codes, 100+ million laboratory results, 70 million EHR structured items, and 2.5 million full text reports. As former past president of the

French Medical Informatics Association (AIM, 1988-1992) he has been strongly involved in IMIA activities both as French representative (1991-2010), MEDINFO Seoul SPC co-chair, and IMIA VP (2001-2004). He is member of several scientific journals on medical informatics and author or co-author of more than 400 peer-reviewed papers. Teaching activities have been centered since 1978 on biomedical informatics. Initially with Professor Grémy and after 1990 with Professor Marius Fieschi he co-authored several educational chapters and three full textbooks on information management and clinical informatics. During the deployment of the HEGP clinical information system he wrote with Rudi van de Velde from Brussels a textbook on a component-based approach to the development of clinical information systems. He currently coordinates with Professor Alain Venot (Paris 13 University) a national Master and PhD degree full curriculum on biomedical informatics.

DE GRAAF MARK

Mark de Graaf is Assistant Professor at Eindhove University of Technology, The Netherlands. Mark de Graaf is a researcher and lecturer at the Eindhoven University of Technology. He is co-founder of the department of Industrial Design that has a strong on the design of intelligent systems for behavioral change. He is also co-founder of two companies, SpInnov and SmartGoals, that bring innovative products for sports to the market. His research currently focuses on the design of intelligent environments for playful interactions. Typical projects in these fields are motivational systems for sports training and rehabilitation, and playful approaches to vital cities.

DE JONG-FINTELMAN MARINKA

Marinka de Jong-Fintelman, Msc, is program manager Patient and Self management at Nictiz–The National IT Institute for Healthcare in the Netherlands. In consultation with and at the request of the healthcare sector, Nictiz is continuously developing and refining national standards for electronic communications in healthcare. Furthermore, Nictiz supports the sector in developing functional IT solutions that can be used nationwide, and contributes to policy making on IT issues as they relate to healthcare on a national and international level. With the program Patient and Self management, Marinka focuses on the problems and issues as perceived by the patient. In September 2011 the platform Patient and eHealth was established. Within this platform stakeholders at all levels are cooperating in developing solutions that enable patients to become an active stakeholder in their healthcare process. Marinka actively shares her knowledge through contributions to conferences and symposia and by writing vision papers, blogs and articles.

DEL FIOL GUILHERME

Guilherme Del Fiol, MD, PhD, FACMI, earned his PhD in Biomedical Informatics from the University of Utah. He earned his MD at the University of Sao Paulo, Brazil and his MS in Computer Science at Catholic University of Parana, Brazil. He is an Assistant Professor in the University of Utah's Department of Biomedical Informatics since 2011. Prior to the University of Utah, Dr. Del Fiol held positions at the Clinical Knowledge Management team at Intermountain Healthcare and at the Duke Community and Family Medicine Department. Since 2008, he has served as one of the co-chairs of the Clinical Decision Support Work Group at HL7. He is the lead author for the HL7 Infobutton Standard and the project lead for Open Infobutton, an open source suite of infobutton tools and Web services, which is in production use at several healthcare organizations throughout the United States, including Intermountain Health-care, Duke University, and the Veterans Health Administration (VHA). His research Interests are: Controlled Standard Terminologies; Health Information Standards Development and Use; Clinical Decision Support Systems; Knowledge Management. Clinical decision support, especially the integration of knowledge resources into clinical systems using Infobuttons; clinical knowledge management; clinical decision support Web services; healthcare information technology standards, especially those used to enable clinical decision support applications; machine learning.

DELANEY BRENDAN

Brendan Delaney is Chair in Primary Care Research. King's College, London, UK. Brendan Delaney has 20 years experience as a primary care clinical Researcher, with a particular interest in the development and Evaluation of technological approaches to safe, efficient and high Quality medical care. He is practicing Family Physician and leads the 'Medical Decision Making and Informatics Research Group at King's.

He is also a member of the Farr Informatics Network in the UK and works with colleagues in the USA (Michigan,Mayo,Vanderbit and Stanford)on promoting the concept of 'The Learning Health System'.

DELANEY W. CONNIE

Connie W. Delaney, PhD, RN, FAAN, FACMI is Professor and Dean, University of Minnesota School of Nursing and Director of Biomedical Health Informatics (BMHI). Also, she is Associate Director of CTSI - BMI and Acting Director of the Institute for Health Informatics (IHI), University of Minnesota Academic Health Center. Prof Connie graduated: BSN in 1975, Nursing/ Math, Viterbo College, LaCrosse; obtained MA in 1978 in Nursing, The University of Iowa, Iowa City, IA. Conie obtained PhD in 1986 in Educ Adm/Comptr App at The University of Iowa, Iowa City, IA; Postdoctoral she earned in 1988 in the field of Nursing Informatics, The University of Utah, Salt Lake City, UT. Her positions were: 2010-present: Director, Office of Biomedical Health Informatics, Associate Director, CTSI-BMI, Acting Director, Institute for Health Informatics (IHI), Academic Health

Center, University of Minnesota, Minneapolis, MN; 2007-present: Professor, Institute for Health Informatics; 2005-present: Dean & Professor, School of Nursing, University of Minnesota, Minneapolis, MN; 2005-present: Emeritus Professor, College of Nursing, The University of Iowa, Iowa City, IA; 2004-present: Faculty of Nursing & Faculty of Medicine, University of Iceland; 2002-2005: Professor, College of Nursing, The University of Iowa, Iowa City, IA; 1993-2002: Associate Professor, College of Nursing, The University Iowa, Iowa City, IA; 1992-1999: Clinical Consultant - Informatics, Veterans Administration Medical Center, Iowa City, IA; 1987-1993: Assistant Professor, College of Nursing, The University of Iowa, Iowa City, IA; 1984-1987: Assistant Professor, Luther College, Decorah, IA. Prof Connie Delaney received a lot of awards: 2011: Women in Business Award. 25 Women Industry Leaders. Women in Business. Minneapolis, MN; 2009: AMIA Virginia K. Saba Informatics Award; 2009-present: Appointment to Health Information Technology Policy Committee, American Recovery & Reinvestment Act, by Acting Comptroller General of the United States & Head, Government Accounting Office; 2007: HIMSS 2006 "Book of the Year" Award. Awarded February 2007 for: Nursing and Informatics for the 21st Century: An International Look at Practice, Trends, and the Future. Eds. Charlotte A. Weaver, Connie W. Delaney, Patrick Weber, Robyn L. Carr. Chicago: HIMSS Publishing

2006; 2005: Leadership Award of AMIA; 2004-present: Fellow of ACMI; 1998-present: Fellow, American Academy of Nursing and 1977-present: She published as author and co-author several books about Nursing Informatics and over 100 scientific articles in peer-reviewed indexed journals in same scientific field.

DE LUSIGNAN SIMON

Simon de Lusignan (1957-) was born in Frimley, Surrey, UK. He is a senior clinical academic with research interests in quality improvement. Simon's research focuses on how to use technology to improve the quality of health care. The two core areas are: the use of technology at the point of care and how to use routine data to improve and measure quality. He has led the development of video tools to evaluate the impact of IT on the consultation; and brings with him what we understand is the world's largest series of video-consultations. He is currently the principal investigator on a large cluster randomized quality improvement trial and looking to further develop the groups' expertise in managing quality. Examples of his work include: Enabling the development of quality improvement

indicators for chronic kidney disease; he is working with NHS Diabetes to improve the classification of diabetes; and a member of the European Union funded TRANSFoRm project - looking at breaking down the barriers to international research collaboration. In addition Simon is Chair of the Primary Care Informatics working group and UK representative to the EFMI and Editor of the Journal Informatics in Primary care. His professional background is as a general practitioner, with his masters and doctorate in medical informatics; though he largely sees technology as a tool for quality improvement (QI), greater efficiency and for improved management of health systems. He is appointed as Professor of Primary Care and Clinical Informatics and Chair in Health Care Management at University of Surrey. He is also Head of the Department of Health Care Management and Policy, a department which is looking to grow and expand its student and research base. Simon de Lusignan is also trained as an educator and has developed innovative new courses including the UK's first full time undergraduate informatics degree. He also have a long experience of supervising undergraduate and post graduate students. He has been a partner in his practice (Woodbridge Hill Surgery) for over twenty five years and has been active in the local health community. His practice was one of six to form the countries first pilot ICO (Integrated Care Organization). He is vice-chair of the Guildford Practice-Based Commissioning group and is looking forward to the enhanced role for primary care in the latest health reforms.

DEMETS L. DAVID
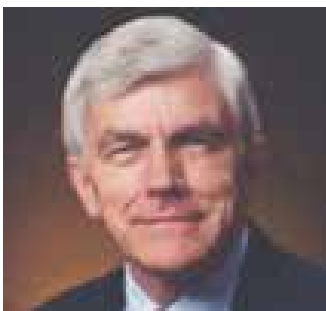
David L. DeMets, PhD, FACMI, received his Bachelors in Mathematics from Gustavus Adolphus College, Sankt Peter, MN, and his Masters and PhD in biostatistics from the University of Minnesota. Early in his professional career he developed a research interest in the design, conduct, and analysis of clinical trials. Following a postdoctoral appointment at the NIH, he spent ten years at the National Heart, Lung, and Blood Institute at the NIH where he became chief of the Biostatistics Research Branch. He then moved to University of Wisconsin (UW), Madison, becoming Director of the Biostatistics Center, Professor of Statistics and Biostatistics, and Associate Director of the UW Cancer Center. In 1991, he was the founding chair of the Department of Biostatistics at UW-Madison. Recognizing the importance of Informatics to Clinical Research, Dr. DeMetz led its conversion to the Department of Biostatistics and Medical Informatics in 2005. He recruited faculty with expertise in BioInformatics, image analysis, and clinical informatics. He also supported the founding of an NLM-funded informatics training program: Computation and Informatics in Biology and Medicine (CIBM) at UW-Madison. Dr. DeMetz has co-authored four leading texts on the design, conduct, and analysis of clinical trials. He has also been a leader in the development of Clinical Trials Management Systems.

DEMIRIS GEORGE

George Demiris is the Alumni Endowed Professor in Nursing at the School of Nursing and Biomedical and Health Informatics, at the School of Medicine, University of Washington. He is the Graduate Program Director of the Biomedical and Health Informatics Graduate Program at the School of Medicine and the Director of the Clinical Informatics and Patient Centered Technologies Program at the School of Nursing. He obtained his MSc degree in Medical Informatics from the University of Heidelberg, Germany and his PhD de-

gree in Health Informatics from the University of Minnesota. His research interests include the design and evaluation of home based technologies for older adults and patients with chronic conditions and disabilities, smart homes and ambient assisted living applications and the use of telehealth in home care and hospice. He is a Fellow of the American College of Medical Informatics, a Fellow of the Gerontological Society of America and a Member of the Washington State Academy of Sciences. In the past he has served as the Chair of the International Medical Informatics Association (IMIA) Working Group on Smart homes and Ambient Assisted Living, and the Lead Convener of the Technology and Aging Special Interest Group of the Gerontological Society of America (GSA).

DEMNER-FUSHMAN DINA

Dina Demner-Fushman, MD, PhD, FACMI received a doctoral degree in Medicine and Dentistry and PhD degree in Immunology from universities in the Soviet Union, and practiced as an orthodontist in Kazan in the USSR and in Frankfurt, Germany. She emigrated to the US and continued her education, receiving a bachelors degree in computer science from Hunter College in New York, and Masters and PhD degrees in computer science from the University of Maryland. She undertook a postdoctoral fellowship in Medical informatics at the Lister Hill Center, and in 2007 became a staff scientist at the National Library of Medicine. At NLM Dr. Demner-Fushman has been a major contributor in the application of natural language processing and information management for enhancing clinical infrastructure and health care delivery. She developed an innovative method combining UMLS ontological knowledge with clinical knowledge from the literature. This approach, which was originally devised for clinical question answering, is being applied to automatic extraction of information needs from NIH Clinical Center records. She has been recognized as a leading biomedical NLP researcher as evidenced by her role since 2007 in organizing the BioNLP workshops of the Association for Computational Linguistics, which have attracted a growing number of mainstream computational linguists and computer scientists. Dr. Demner-Fushman had contributed as an author more than one hundred peer reviewed publications, and creation of a number of novel applications, including InfoBot, a Repository for Informed Decision Making (or RIDeM), methods for automatic annotational and retrieval of images extracted from publications known as iMEDLINE, and HLDISCOVERY, which is a de-identified database system for clinically derived data. She has also been instrumental in adapting related information extraction techniques for NLM's successful participation in several biomedical natural language processing competitions.

DEMONGEOT JACQUES
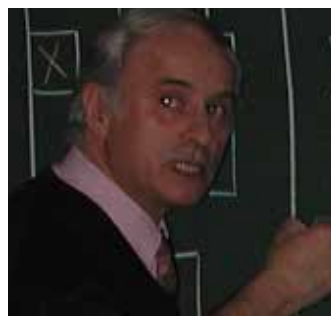
Institut d'Ingénierie de l'Information de Santé, Faculté de Médecine, France. Jacques Demongeot is presently director of the Laboratory TIMC (CNRS 5525) Techniques of Imaging, Modelling & Cognition and he is also head of the Institute of Bio-engineering (IFRT 130 IpV) at the University Joseph Fourier, Grenoble, France. He has MD and PhD in mathematics and has been appointed Chairman of Biomathematics at the Institut Universitaire de France in 1994. Jacques Demongeot is also responsible for the Department of Medical Information at the University Hospital of Grenoble (CHUG) and for the doctoral

school of bio-engineering Health, Cognition & Environment.

DENNY JOSH

Josh Denny, MD, MS, FACMI, is an Associate Professor of Biomedical Informatics and Medicine. He completed an Internal medicine residency as a Tinsley Harrison Scholar at Vanderbilt. His interest in medical informatics began while in medical school with the development of a concept - based curriculum database to improve medical education. Other interests include natural language processing, accurate phenotype identification from electronic medical record data, and using the electronic medical record to discover genome - phenome associations to better understand disease and drug response, including the development of the EMR – based phenome-wide association (PheWAS). Nationally, he is part of the Electronic Medical Records and Genomics (eMERGE) Network and eMERGE Coordinating Center, Pharmacogenomics Research Network (PGRN), and the Pharmacogenomics of very large populations (PGPop) network. At Vanderbilt, he is also part of the PREDICT (Pharmacogenomic Resource for Enhanced Decisions in Care and Treatment) program, which prospectively genotypes patients to tailor drug response. Dr. Denny serves on several local committees and remains active in teaching medical students and clinical roles. He received the Homer Warner award from the American Medical Informatics

Association (AMIA) in 2008 and 2009. He received the AMIA New Investigator Award in 2012 and was elected into the American College of Medical Informatics in 2013.

DE MOOR GEORGES

Georges J. E. de Moor, MD, PhD, studied Medicine and specialized in Clinical Pathology and Nuclear Medicine at the State University of Ghent (Belgium), where he also obtained his PhD in Medical Information Science. He is head of the Department of Medical Informatics and Statistics at the State University of Ghent, Belgium, where he teaches Health Informatics, Medical Statistics, Decision Theory and Evidence Based Medicine. As president of RAMIT (Research in Advanced Medical Informatics and Telematics), he has been involved in both European and International Research and Development projects (+85), as well as in Standardization activities. For seven years, Prof. de Moor acted as Founding Chairman of CEN/TC251, the official Technical Committee on standardization in Health informatics in Europe. Prof. de Moor has also founded a number of companies of which he is chairman or CEO (e.g. Medi-

Bridge, Custodix, TeleTendo, etc). In 2004, he was elected President of the European Institute for Health Records (EuroRec). In Belgium, Prof. de Moor chairs a number of official Committees, among which the Health Telematics Committee of the Belgian Ministry of Health and Social Affairs, as well as a number of scientific and professional organizations. Dr. de Moor is, also, head of the Clinical Pathology Laboratory of the St-Elisabeth Hospital in Zottegem. He has edited seven books related to ICT in Health and published over 200 articles in peer-reviewed scientific journals.

DE RAEVE PAUL

Paul de Raeve is Secretary General. European Federation of Nurses Associations, Belgium. He graduated as registered nurse in 1984, got his Master degree in Nursing Science at the Free University of Brussels in 1989 and in 1996 got his Master degree in Statistics from the Catholic University of Brussels. Paul got his PhD at the Kings College University of London in 2014. During most study periods, Paul worked full time and in 2002, Paul was appointed as General Secretary

of EFN. He is mainly lobbying the EU institutions on behalf of 3 million nurses in the EU.

DE SALVO KAREN

Karen De Salvo, MD, MPH, MSc, is the health commissioner for the City of New Orleans and serves as senior health policy advisor to Mayor Mitch Landrieu. Since assuming office in 2011, she has led a major transformation of the City Health Department into a modernized one with improved effectiveness and efficiency capable of improving the public's health where they live, learn, work, and play. The innovative programs in the department include programs addressing the social determinants of health, violence, and murder reduction and Fit NOLA, the City's nutritional and physical fitness program. Before joining the City, Dr. DeSalvo had 20 years of experience in medical education, clinical care, research, and policy aimed at improving access to quality, affordable care for all. Following Hurricane Katrina, she was a leader in the effort to create the nationally recognized model of neighborhood-based medical homes for low-income, uninsured, and other vulnerable populations in the New Orleans area. Dr. DeSalvo practices internal medicine and is on leave from Tulane School of Medicine, where she was formerly the vice dean for community affairs and health policy. She has led and served on numerous local and national professional boards, including president of the

Louisiana Health Care Quality Forum and is currently serving on the Board of Directors for the National Association of City and County Health Officers. She received her MD and MPH. at Tulane University, a master's in clinical epidemiology from the Harvard School of Public Health, and her BA from Suffolk University.

DESERNO M. THOMAS

Thomas M. Deserno (born as Lehmann, on March 15, 1966, Bonn, Germany) is Professor of Medical Informatics at RWTH Aachen University, Aachen, Germany. He received a masters degree in electrical engineering (German Diploma), the PhD in computer science, and the license for lecturing Medical Informatics (German Habilitation) from the RWTH Aachen University's schools of electrical engineering, natural sciences, and medicine in 1992, 1998, and 2004, respectively. Since 1992 he has been with the Department of Medical Informatics, Medical Faculty, Uniklinik RWTH Aachen, where he urgently heads the Division of Image and Data Management. He co-authored a text-

book on image processing for the medical sciences (Springer, Berlin, 1997) and edited the German Handbook of Medical Informatics (Hanser, Munich, 2005) as well as a book on Biomedical Image Processing within the series on Biological and Medical Physics, Biomedical Engineering (Springer, Heidelberg, 2011). His research interests include medical image processing applied to quantitative measurements for computer-assisted diagnoses and medical research in controlled clinical trials, as well as seamless workflow integration of image and signal analysis into the user's workflow. Dr. Deserno received the DAGM-Preis '93. The award from the German Association for Pattern Recognition was given for his work on automatic strabometry using Hough transform and covariance filtering. In 1998, he received the Borcher's Medal from the RWTH Aachen University for his work on medical image registration and interpolation. He served as president of the working group Medical Image Processing within the German Society of Medical Informatics, Biometry and Epidemiology (GMDS) and Chairman of the IEEE Joint Chapter Engineering in Medicine and Biology (IEEE German Section). He currently chairs the EFMI working group on medical image processing (WG-MIP). Dr. Deserno is senior member of the Institute of Electrical and Electronics Engineers (IEEE) and the Society of Photo-Optical Instrumentations Engineering (SPIE), where he is member of the Pro-

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gram Committee of the annually International Symposium of Medical Imaging (both, CAD and PACS tracks). He is a member of the International Association of Dentomaxillofacial Radiology (IADMFR), and serves on the International Editorial Boards of Dentomaxillofacial Radiology, Methods of Information in Medicine, World Journal of Radiology, GMS Medical Informatics, Biometry and Epidemiology (MIBE), and he is Co-editor Europe of the International Journal of Healthcare Information Systems and Informatics.

DE SOUZA GUILHERME

Guilherme De Souza is an associate professor in the Electrical and Computer Engineering, Department at the University of Missouri. He is the recipient of many awards, such as the Purdue Honeywell Teaching, the Maria Canto Neuberger Research Award, and the MU Excellence in Teaching Award. DeSouza came to MU after working as a research professor at Purdue and as a senior lecturer at the University of Western Australia. He also worked for 10 years at

the Brazilian Power Systems Research Center on diagnostic of power systems using machine learning, pattern recognition and computational intelligence. His research has been funded by the National Science Foundations, the Department of Defense, the Naval Research Lab, and the National Geospatial-Intelligence Agency.

DETMER DON EUGENE

Don Eugene Detmer, MD, MA, FAAAS, FACMI, FACS, FACSM, FAAN (Hon.), FAAPA (Hon.) is Professor of Medical Education in the Department of Public Health Sciences at the University of Virginia. Don was the initial President/CEO of the American Medical Informatics Association (AMIA). He led development of the new U.S. medical subspecialty of Clinical Informatics and the Advanced Interprofessional Informatics Certification effort. He is past chairman of the Institute of Medicine's Board on Health Care Services, National Library of Medicine Board of Regents, and the National Committee on Vital and Health Statistics. His medical degree is from the University of Kansas and his MA

is from Cambridge University. Education and training were at Kansas, Johns Hopkins, National Institutes of Health, Duke, IOM, and Harvard Business School. Faculty appointments include the Universities of Wisconsin-Madison, Utah, Virginia, Cambridge, and UCL. He chaired the IOM committee that produced the Computer-based Patient Record reports of 1991 and 1997 and was a member of the IOM To Err is Human and Crossing the Quality Chasm, among other reports relating to informatics. He advised England and Hong Kong on their health information infrastructures and supported international informatics education via IMIA, grants from the Rockefeller and Gates Foundations.

DEV PARVATI

Parvati Dev, PhD, FACMI, is the Director of Stanford University Medical Media and Information Technology (SUMMIT) at Stanford University School of Medicine. She is a Senior Research Scientist in the Section on Medical Informatics and holds an affiliate faculty appointment in the Division of Biomechanics.

Dr. Dev received a Bachelor of Technology degree, with Honors, in Electronics and Electrical Engineering from the Indian Institute of Technology, Kharagpur, India. She earned an MS and a PhD in Electrical Engineering at Stanford University. Dr. Dev has worked on the research and teaching staffs at MIT, Boston University, the Stanford Veterans Administration Medical Center, and Stanford University. From 1982 to 1989, she led product research at a medical imaging company, developing clinical three-dimensional imaging. Since coming to Stanford University, her research has focused on technologies to increase the efficiency and quality of education software development, including the facilitation of authoring of large, complex hypermedia documents, and on navigation in hypermedia during learning and problem-solving. Her recent research is on authoring tools for the construction of virtual teaching spaces on the Internet. Under her management and leadership, the SUMMIT research group has had a large impact on medical education both at Stanford and worldwide. Dr. Dev is Chair of the American Medical Informatics Association (AMIA) Education Working Group. She is a member of the AMIA publications committee and the editorial board of the Journal of the American Medical Informatics Association.

DEVLIES JOSÉ

José Devlies is a Medical Doctor by training, specialized in Family Medicine at the Catholic University of Leuven (1969) and in Occupational Healthcare at the University of Ghent (1972). He has also a degree in the Management of Healthcare Data (2003). Practising General Practitioner, full time for over 30 years, and working for several years part-time in Occupational Healthcare, especially in the public sector, he started to be an entrepreneur. He has founded and chaired several companies, among which: Medizorg C.V. a co-operative medical society founded in 1980, with now 62 members and an annual turnover of over 15 million € Datasoft Management N.V., founded in 1987, merged in 2002 into OmegaSoft, the largest provider of health information systems in Belgium, where he was responsible for business development, medical research and medical quality management He was also co-founder and Member of the Board of MediBRIDGE N.V. He joined in 2006 the team of Professor Georges De Moor (University of Ghent) to be the medical director, addressing more specifically clinical aspects in eHealth research and development. José is Member of the Board of the Belgian Scientific Society for Medical Informatics (M.I.M.), a member of ProRec Belgium vzw and an early member of EuroRec, co-organising the first EuroRec Annual Meeting in Paris in 1997. He is co-author of the Belgian certification criteria for GP EHR systems. He has always been very active in the context of the Health Telematics European Programs and has been a member of the EU 5th Framework Healthcare Telematics Requirements Board (DGXIII). He has also participated in several National and EU co-funded projects. Just some of them: Euclides, Patiënt en Dossier, Intranet Health Clinic, PharmDIS, eMed, C-Care, Share, eProLearn, PharmDIS-e+ and C^3, coordinating some of them. He is actually actively involved in ePrescript and LiverDoc as well as in RIDE and Q-REC. He was generally involved in the product specification, product design, validation and business development with a special interest for the clinical aspects of those projects. He was a member of CEN/TC251 Working Group 1 and 2, participated in several standardization projects e.g. on "Continuity of Care" and chaired the project team on the identification of medicinal products (ENV12610).

DEXHEIMER JUDITH

Judith Dexheimer, PhD, has a background in developing, implementing and evaluating Clinical Information Systems (CIS) including clinical decision systems, organizational and workflow aspects of informatics applications, computerized applications for emergency medicine and implementation of artificial intelligence techniques, computerized guideline applications and evidence-based medicine, public health informatics, and preventive care measures. Her research focuses on the design, implementation and evaluation of clinical decision support systems in pediatric emergency medicine to improve clinical care.

DEZELIC GJURO

Gjuro Dezelic (1935-) was born in Zagreb, Croatia. After graduating chemistry in 1958 at the Faculty of Science of the University of Zagreb, he earned his PhD in chemistry in 1960 at the same institution. He began his academic career at the Department of Physical Chemistry of the Faculty of Science in 1958, and after completing his military service, he became in 1964 assistant professor at the Andrija Stampar School of Public Health, School of Medicine of the University of Zagreb. During his postdoctoral fellowship in 1965-66 at the Indiana University (IU) in Bloomington, Indiana, USA, while working in the field of light scattering of dense liquids and macromolecular systems, he started to work in the IU Computer Center by developing computer programs for his research. Returning to Zagreb, he expanded his interests in computer science to the general areas of informatics, especially to the use of computers in medicine and healthcare, thus entering this at that time a new emerging field, called now (bio) medical informatics. During following years he could expand his informatics horizons in Italy, the UK, France, Belgium and Japan. After advancing to the associate professorship in 1970, and being appointed 1973 head of the Computing Laboratory of the Andrija Stampar School of Public Health, he became in 1975 full professor of medical informatics at the School of Medicine in Zagreb. He ended his academic career as full professor with the permanent title and retired in 2001. During the first period of his scientific activity, predominantly in physical chemistry and macromolecular science, he was also engaged as a senior research fellow at the "Rugjer Boskovic Institute" in Zagreb from 1968 to 1975. In 1971 he was one of the founders of the Postgraduate Study of Macromolecular Science at the University of Zagreb and its first head. During this period he also served as a member of the Editorial Board of "Croatica Chemica Acta" (1966-1980) and it's Advisory Board (1980-1990). His teaching activity in medical informatics started at the School of Medicine in Zagreb in the academic year 1970/71, both for undergraduate and graduate medical students. As a visiting professor he taught medical informatics at other Croatian schools of medicine (Osijek, Rijeka, Split), as well as at many medical schools and institutions in former Yugoslavia, (Ljubljana, Maribor, Sarajevo, Skopje), doing pioneering work for this discipline in that part of Europe. In 1984 he founded the Postgraduate Study "Health Information Systems" at the Medical School in Zagreb and was its first director until 1993. The study has been enrolled by a notable number of students from Croatia, but also from other parts of former Yugoslavia, being the basis for education of first medical informatics specialists in the country. He was also one of the founders of the University Computing Center in Zagreb, which introduced 1972 in Croatia distributed data processing via a network of terminals in all Croatian university centers of that time (Osijek, Rijeka, Split, and Zagreb). In this center he served from 1980 to 1983 as head of its Sector for research,

teaching and development. Gjuro Dezelic published more than 150 scientific and professional papers as well as several textbooks and monographs, among them the first Croatian textbook on medical informatics. In 1975 he was awarded with the "Rudjer Boskovic" prize for scientific achievements. After being elected in 1991 associate member of the Croatian Academy of Medical Sciences, since 1994 he is its full member. He is the founder of the Croatian Society for Medical Informatics (CSMI 1989.), being its first president and a representative to the European Federation for Medical Informatics EFMI) and the International Medical Informatics Association (IMIA). Since 2004 he is elected honorary president of CSMI. After the retirement he was mostly devoted to the problems of standardization in medical informatics, and was one of the initiators of the founding in 2002 the Croatia HL7 International Affiliate, serving as its first president until 2008, when he was elected as its honorary president. At the 22nd International EFMI Congress "Medical Informatics Europe 2009" in Sarajevo (August 30 – September 2, 2009), as a participant of the first EFMI Congress in Cambridge (1978) and longtime member of the EFMI Council, he was invited to present a keynote lecture.

DEVIS RANDALL

Randall Davis received his undergraduate degree from Dartmouth, graduating summa cum laude, Phi Beta Kappa in 1970, and received a PhD from Stanford in artificial intelligence in 1976. He joined the faculty of the Electrical Engineering and Computer Science Department at MIT in 1978 where he held an Esther and Harold Edgerton Endowed Chair (1979-1981). He has been a Full Professor in the Department since 1989. He has served as Associate Director of MIT's Artificial Intelligence Laboratory (1993-1998), as a Research Director of CSAIL from 2003-2007, and as Associate Director of CSAIL from 2012-2014. Dr. Davis has been a seminal contributor to the fields of knowledge-based systems and human-computer interaction, publishing some more than 100 articles and playing a central role in the development of several systems. He and his research group are developing advanced tools that permit natural multi-modal interaction with computers by creating software that understands users as they sketch, gesture, and talk. He is the co-author of Knowl-

edge-Based Systems in AI. In 1990 he was named a Founding Fellow of the Association for the Advancement of AI and in 1995 was elected to a two-year term as its President. From 1995-1998 he served on the Scientific Advisory Board of the U. S. Air Force, earning the USAF Decoration for Exceptional Civilian Service. Dr. Davis has also been active in the area of intellectual property and software. In 1990 he served as expert to the Court in Computer Associates v. Altai, a case that produced the abstraction, filtration, comparison test now widely used in software copyright cases. From 1998-2000 he served as the chairman of the U.S. National Academy of Sciences study on intellectual property rights and the information infrastructure entitled The Digital Dilemma: Intellectual Property in the Information Age, published by the National Academy Press in February, 2000.

DI PROSPERO FILIBERTO

Di Prospero's Obstetrics & Gynecologic Center ,ItalyGraduated as Medical Doctor in 1982 at Ancona University, Italy; Postgraduate School in Obstetrics

and Gynecology, Endocrinology and Metabolism. Dr Filiberto Di Prospero is considered an expert in Medical Informatics and Computer Science with the passion to develop innovative solutions in health care. Some significant contributions: the first diagnostic support software for predicting human ovulation in 1990; the realization of one of the most important Italian websites on feminine health in 1999 (SaluteDonna.it); the first app for fetal well-being assessment, integrated into outpatient obstetric assistance in 2012; introduction of the new concept of "proximity medicine" in 2013.

DIAZ OSCAR

Oscar Diaz is Chief Executive Officer, Healthcare Services Platform Consortium (HSPC). Oscar Diaz, is a 43+ year veteran in Healthcare Information Technology and has founded and served in key executive roles in both healthcare organizations and HIT companies. Diaz was responsible for the successful formation and build-out of EM-TEK, and served as its CEO until the acquisition by Motorola, Inc. EMTEK was a highly successful provider of point-of-care clinical information software (subsequently acquired Eclipsys Corporation). He founded and served as the Chief Software Architect at Carefx and served as an early member of its board of directors. In his role as CSA, Mr. Diaz was responsible for technology strategy, enterprise architecture, technology planning, and innovation.

While directing development of the company's next-generation software services platform, Mr. Diaz built strategic partnerships with key stakeholders and innovators in healthcare information technology. His four decades of experience in the industry have included executive-level positions at Baptist Healthcare, EMTEK, Eclipsys, MedSpecialists, Provation, Carefx, Harris Corporation and now CEO of the Healthcare Services Platform Consortium.

DISSANAYAKE H. W. VAJIRA

Vajira Dissanayake, MBBS, PhD, FNASSL, is a Professor and Medical Geneticist at the Human Genetics Unit, Faculty of Medicine of the University of Colombo, Sri Lanka. He graduated from the University of Colombo in 1996 and read for his PhD at the University of Nottingham in the UK. Since returning back to Sri Lanka in 2004 he has been instrumental in developing clinical genetic and genetic diagnostic services as well as education and research in the field of Medical Genetics and Biomedical Informatics both in the public and private sectors. He was the

Founder Secretary General of the Health Informatics Society of Sri Lanka in November 1998, and has been serving as its President since September 2009. He was the founder of the MSc course in Biomedical Informatics at the Postgraduate Institute of Medicine (PGIM) in the University of Colombo. The course trains Medical Doctors and Dental Surgeons in Biomedical Informatics. The course has produced 90 MSc graduates. He was the Founder Chairperson of the Specialty Board in Biomedical Informatics at the PGIM that runs the course. Building on its success the PGIM will be starting a MD course in Health Informatics in the academic year 2015/16 and the graduates of the MD course would be Board Certified as Specialists in Health Informatics. He was the President of the Sri Lanka Medical Association in 2012. He was elected a fellow of the National Academy of Sciences of Sri Lanka in 2013.

DIXON J. WILFRID

Wilfrid J. Dixon (1915-2008). Dixon received his BA. in mathematics from Oregon State College in 1938, his MA. in mathematics from the University of Wisconsin in 1939, and his

PhD. in mathematical statistics from Princeton in 1944. At UCLA, Dixon had a joint appointment in the Department of Preventive Medicine in the School of Medicine and in the Biostatistics Division in the School of Public Health. He was the first tenured statistician in each of these schools. In addition, Dixon initiated the Biostatistics Division, started its graduate program and served as its first Chief. He organized the Department of Biomathematics in the School of Medicine and served as chair of this department from its inception in 1967 until 1974. In 1973 he was appointed Professor of Psychiatry. As a member of the U.S. - U.S.S.R. Joint Working Group on Computer Software (1974-1980), Dixon served as liaison to the Kolmogorov Laboratory at the University of Moscow. Many of his over 120 publications result from long-term collaborations in pharmacology, physiology, surgery, neurology, cytology and psychiatry. His commitment to statistical consulting, coupled with his idea to parameterize computer programs in 1960, led to the development of one of the first general statistical software packages, BMD, Biomedical Computer Programs, which has evolved into BMDP Statistical Software. Dixon organized the Statistical Computing Sections of both the American Statistical Association and the International Statistical Institute. He made major contributions to nonparametric statistics, serial correlation, adaptive (up-and-down) experimental designs,

robust statistics and the analysis of incomplete data. He was a Fellow of the American Statistical Association, the Institute of Mathematical Statistics, the Royal Statistical Society and the American Association for the Advancement of Science and received the ASA's 1992 Wilks Medal. While at the University of Oregon (1951), Dixon coauthored with Frank Massey a first-of-its-kind statistical textbook for non-mathematicians that sold over 300,000 copies. Dixon: "Statistics is a science in itself, not a branch of mathematics... statistical consulting can be as imaginative and creative as any artistic endeavor." Dixon's greatest contribution was his ability to bridge the gap between theory and applications and therefore, bring insight to difficult applied problems. Wilfrid J. Dixon finished his academic career at UCLA as professor emeritus and a pioneer in statistics.

DIXON RONALD

Ronald Dixon, MD, is Director of Virtual Practice Project at Massachusetts General Hospital Department of Medicine. Ronald

is the Creator and Director of the Virtual Practice Project at Massachusetts General Hospital (MGH). He is the Director of CIMIT's (Center for the Integration of Medicine and Innovative Technology) Delivery System Innovation Program, and the Medical Director of MGH Beacon Hill. Dr. Dixon completed his undergraduate work at McGill University, graduate work clinical neuropsychology at University of Buffalo, and medical training at Dartmouth Medical School. He completed residency training at Harvard Medical School/Massachusetts General Hospital. He completed a two-year administrative fellowship with the Massachusetts General Hospital Physicians Organization (MGPO), and now serves as a Project Director for the MGPO. Dr. Dixon's interests are in alternative methods of health care delivery, specifically relating to general internal medicine. He is the Principal Investigator on a number of research efforts, notably a joint effort with biomedical engineering to develop a kiosk based system for automating certain aspects of the care delivery process. Dr. Dixon is on the Board of Directors of Martin's Point Health Care, a not-for-profit Healthcare Delivery System and Health Insurance Provider. Dr. Dixon's clinical interests are disease prevention, chronic disease management, clinical information technology, and care of patients with malignancies.

DJERASSI CARL

Carl Djerassi (1923-2015) is a Austrian-American and Bulgarian chemist, novelist, and playwright best known for his contribution to the development of oral contraceptive pills. Djerassi is emeritus professor of chemistry at Stanford University. Djerassi attended the same real gymnasium that Sigmund Freud had attended many years earlier. Because he was Jewish, to escape the Nazi regime he flee to Bulgaria. In December 1939, Djerassi arrived with his mother in the United States. Djerassi started his college career at Newark Junior College, and then studied chemistry at Kenyon College where he graduated summa cum laude. In 1942/43, Djerassi worked for CIBA in New Jersey, developing Pyribenzamine (tripelennamine), his first patent and one of the first commercial antihistamines. After one year at CIBA(now Novartis, Swiss multinational pharmaceutical company), he moved to the University of Wisconsin where he earned his PhD in chemistry in 1945. With his team in Mexico City he synthesized norethisterone (norethindrone), the first highly active progestin analogue that was effective when taken by mouth. This became part of one of the first successful combined oral contraceptive pills, known colloquially as the birth-control pill, or simply, the Pill. From 1952-1959 he was professor of chemistry at Wayne State University in Detroit. In 1960 Djerassi became a professor of chemistry at Stanford University. In 1968, he started a new company, Zoecon, which focused on pest control, using modified insect growth hormones to stop insects from metamorphosing from the larval stage to the pupal and adult stages. In 1965 at Stanford University, Nobel laureate Joshua Lederberg, computer scientist Edward Feigenbaum, and Djerassi devised the computer program DENDRAL (dendritic algorithm) for the elucidation of the molecular structure of unknown organic compounds taken from known groups of such compounds, such as the alkaloids and the steroids. This was a prototype for expert systems and one of the first uses of artificial intelligence in biomedical research. Carl Djerassi is a member of the Board of Sponsors of the Bulletin of the Atomic Scientists and is chairman of the Pharmanex Scientific Advisory Board. Djerassi wrote five novels, four of which he describes as "science-in-fiction", fiction which portrays the lives of real scientists, with all their accomplishments, conflicts, and aspirations. The genre is also referred to as Lab lit. Djerassi has written numerous poems that have been published in journals or anthologies. Some of the poems reflect his life as a chemist (e.g. Why are chemists not poets or The clock runs backwards). He is a member of the U.S. National Academy of Sciences and of its Institute of Medicine, the American Academy of Arts and Sciences, as well as a foreign member of the Royal Society (London), the Royal Swedish Academy of Sciences, the Royal Swedish Academy of Engineering Sciences, the Academia Europeae, and the German (Leopoldina), Mexican, Bulgarian, and Brazilian Academies of Sciences. Djerassi lives in San Francisco, Vienna, and London.

DONEV DONCHO

Doncho Donev (1949-), MD, PhD is founder and the first chief of the Chair of Social Medicine (1994) and founder and the first Director of the Institute of Social Medicine (1997) at the Faculty of Medicine (FM) "St. Cyril and Methodius" University in Skopje, R. Macedonia. He graduated at the FM-Skopje, in 1973, then completed specialization in social medicine in 1981 and obtained PhD in 1993 at the same Faculty. He realized one-year postdoctoral studies in public health (Hubert H. Humphrey Fellowship Program) at the Emory

University School of Public Health in Atlanta, GA, USA, in 1993/94. He was elected Assist. Professor in 1993 and Professor in 2003 at the FM-Skopje. Prof. Donev was driving force for establishing Center/School of Public Health (2003) and developing MPH and PhD studies curricula in Public Health at the FM-Skopje. He was one of the founders of Yougoslav Association of Medical Informatics, as well as of the Macedonian Association of Medical Informatics, established in 1989, being elected as vice president. His professional and research interest include broad scope of activities related to prevention and control of non-communicable diseases (NCD) and other priority health problems, health status and health needs of the vulnerable population groups, organization of health systems and health care management, health information system and health economics, health education and history and philosophy of medicine and public health. As a national counterpart of WHO he contributed for preparing the European Strategy and Action Plan for Prevention and Control of NCDs and related documents in R. Macedonia. Since 2000 he has actively participated in various activities within the Stability Pact Project for Training and Research Cooperation in SEE countries (http://www.snz.unizg.hr/ph-see/index.htm). Prof. Donev was awarded a number of national and international recognitions and rewards, among them - the Academician of the American Biographical Institute, in 2009, and being elected as regular member of the European Academy of Sciences and Arts in 2015. He is author of more than 300 articles, book chapters and papers presented and published in Proceedings and peer-review journals. He is Editor-in-Chief for Public Health of the Open Access Mac J Med Sci and Co-Editor-in-Chief of Materia Socio-Medica, as well as a member of the Editorial Board of numerous scientific journals. He is an editor and author/coauthor of a number of textbooks, monographs and books, including the FPH-SEE book on Health Promotion and Disease Prevention (2007) and on Health Systems and Their Evidence Based Development (2004) (http://www.snz.unizg.hr/ph-see/publications.htm), and of the Proceedings of the ECPD International Summer Schools on Management of Healthcare Institutions (2013).

DORODNITSYN A. ANATOLY

Anatoly Alekseevich Dorodnitsyn (1910-1994) graduated from the Grozny Petroleum Institute in 1931 and began his career as an instructor in Moscow and Leningrad. From 1941 to 1955, he worked at the Central Aerodynamics Institute in Moscow and from 1945 on, belonged to the Computation Center of the USSR; Academy of Sciences in Moscow, where he served as Director from 1955 until his retirement in 1990. Beginning in 1947, he was a professor at Moscow University, but he liked even better a professorship he had in a small technical college a little bit outside the city. At the early age of 43, he became a full Academy member. Academician Dorodnicyn was on the committee for the first World Computer Congress 1959 in Paris and, together with Academician Panov, was one of the two Soviet founders of IFIP. He served as the delegate of the USSR. (later, Russia) to IFIP, from its founding in 1960 until his death. Over this period, he missed very few Council and General Assembly meetings. Holder of the Silver Core since its first awarding in 1974, he was IFIP trustee (1965-1967, 1973-1977, and 1980-1984), vice-president (1977-1980), and president (1968-1971). During his presidency, the IFIP Technical Committee on Computer Applications in Technology (TC 5) was launched, and the first attempts were made to establish the IFIP Secretariat in Geneva. The first PROLAMAT conference (Rome, 1969) marked the entry of IFIP into the industrial application area, and he was instrumental in bringing the TC on System Modeling and Optimization (TC 7) into IFIP. His IFIP Congress was held in Ljubljana in 1971.

D

DORR DAVID

David A. Dorr, MD, MS, FACMI, earned his BA in Economics (with minors in Mathematics and Psychology) and his MD from Washington University in St. Louis. He then completed Internal Medicine residency at Oregon Health and Science University, and earned a Master's in Medical Informatics and Health Services Administration from the University of Utah. Broadly, David's interests lie in complex care management, especially for older adults and other at-risk populations, coordination of care, collaborative care, chronic disease management, quality, and the requirements of clinical information systems to support these areas. From these interests, he has broadened into clinical information needs, Electronic Health Record (EHR) deployment and Health Information Exchange as a way to expand systems-based approaches to all of health care. Finally, David performs evaluations of care management and informatics initiatives using a variety of methodologies. His current projects include dissemination,

further innovation, and evaluation of the Care Management Plus project (funded by The John A. Hartford Foundation). He developed the Integrated Care Coordination Information System (ICCIS), a population management system connected to multiple EHRs and other data sources that does risk stratification, complex care management, quality measurement, and reporting. He works on primary care redesign modeling, using pragmatic/effectiveness trial designs to study how changes in incentives, technology infrastructure, and practice facilitation can help improve health, reduce cost, and improve patient satisfaction with care; his current study is the TOPMED trial funded by the Gordon and Betty Moore Foundation) and he provides technical assistance for the Comprehensive Primary Care initiative and informatics initiatives.

DOWNS J. STEPHEN

Stephen J. Downs, SM, FACMI, received his Bachelors degree in Applied Physics from Yale, and a Masters degree in Technology

and Policy from MIT. He joined the U.S. Department of Commerce as a program officer in the Technology Opportunities program of the National Telecommunications and Information Administration, and rose to become the director of that program. In this capability he guided projects that experimented with community-level data sharing for complex diseases such as TB and HIV & AIDS, facilitating the precursor to contemporary health information exchanges. He also created funding programs to demonstrate the value of Web-based health information for low-income and underserved groups. In 2002 he moved to the Robert Wood Johnson (RWJ) Foundation, where he was Assistant Vice President for Health. At RWJ, Downs has continued stimulation of innovation in information technology in support of public and citizen health through the creation and/or direction of over a dozen demonstration programs, representing more than $45 million of foundation support for projects ranging from Common Ground: Transforming Public Health Information Systems to Open-Notes, an innovative program engaging physicians in sharing progress notes directly with their patients. Downs has played a significant role in pushing the capacity of health information technology in novel directions likely to benefit the health of all. Stephen Downs also has held appointments to several significant Federal policy and advisory bodies including the Office of the

National Coordinator for Health Information Technology HIT Policy Committee Workgroup on Adoption and Certification, the American Health Information Community (AHIC) Consumer Empowerment Workgroup, an expert panel in public health for the Agency for Healthcare Research and Quality, and the National Library of Medicine strategic planning panels. Downs' collaboration with federal agencies and his commitment to public health resulted in the expansion of the NLM traineeship program to include a thrust in public health informatics.

DOWNS M. STEPHEN

Stephen M. Downs, MD, MS, FACMI, received is bachelor's degree in cellular biology and chemistry from the University of Colorado, and his MD from Stanford. He was also the first student to complete the Stanford Medical Informatics training program and received a master's degree in medical information science from Stanford in 1986, which he later supplemented with postgraduate training in pediatrics at the University of North Carolina. He was a Robert Wood Johnson

scholar in clinical epidemiology at Chapel Hill, and began his faculty career there as a assistant and then associate professor of pediatrics and biomedical engineering. From 1997 to 2002 he was the principal investigator of the Duke–University of North Carolina biomedical informatics training grant. In 2001 he moved to Indiana University, where he is associate professor and chief of general pediatrics at Wishard and Clarian hospitals, and founding director of the Children's Health Services Research Section in the School of Medicine's Department of Pediatrics. His informatics research interests have ranged over many topics. These include using the expected value of information for a variety of purposes, such as the scoring of student performance on computer simulations (which has been adopted by the American Board of Family Practice as an examination scoring method for recertification) and use of expected value of information as a basis for prioritizing physician reminders.

DREYFUS PHILIPPE

Philippe Dreyfus (1925-) is a French informatics pioneer. After gaining his Master Degree in physics in 1950 from the École supérieure de physique et de chimie industrielles de la ville de Paris, he became a professor at the Informatics faculty at Harvard University using Mark I, the first automated computer ever built. In 1958 he was nominated director of the Bull Calculus Centre. In 1962 he coined the new term Informatique. In 1965 he became director of CAP Europe, an Anglo-French company, as well as director of CAP France and CAP UK. After CAP France and CAP Europe fused with Sogeti, and the consequent acquisition of Gemini Inc. (USA), he became in 1975 Vice-President of Sogeti, a position he still holds today. Philippe Dreyfus is a member of the European Computing Services Association (ECSA) Council and was the founder of Syntec Informatique. In 1962 he invented and defined the concept of programming language and in 1990 he introduced the concept of informativity (Informativité).

D

DUDECK W. JOACHIM

Joachim W. Dudeck, MD, FACMI, was Professor and Head of the Department of Medical Statistics, University Hospital Giessen, Germany. He received his MD from University of Heidelberg. He received additional training in physiology, internal medicine, medical statistics, and informatics at the Universities of Erlangen and Mainz and a habilitation in medical statistics and documentation at the University of Mainz. Dr. Dudeck's early work involved recognition process of positions of sounds and noises by the ear. He applied statistical methods in medicine, in particular to the multivariate analysis of variance in classification. In the late 1970s, he developed an automatic ECG program based on the Pipberger Program, a spelling checker as powerful as the system now used in Word, and a fault-tolerant network of minicomputers at Giessen University hospital. Dr. Dudeck's research on the application of knowledge-based functions in hospital systems included implementation and adaptation of the HELP system to the environment of German hospitals; develop-

ment of the comprehensive, knowledge-based hospital information system WING (knowledge-based information network at Giessen); development of a clinical workstation for oncology and cancer registries (Giessener Tumor Dokumentationssystem, CTDS), which is now in use in nearly 40 cancer registries and comprehensive cancer centers in Germany; and structuring of clinical guidelines using XML. He served as member of the Commission on Computer Systems of the German Research Council between 1989 and 1995; as Chairman of the Section of Medical Informatics of the German Association for Medical Informatics, Biometry and Epidemiology 1995 to 1998; Founder and Chairman of the HL7 User Group in Germany since 1993; Member of the Board of Directors of HL7 USA as representative of the international affiliates, 1997 to 1999; and Chairman of the CEN TC 251 Task Force on XML Application in Healthcare.

DUGAS MARTIN

Martin Dugas is Professor for Medical Informatics and Director of the Institute of Medical Informatics (IMI). He holds a doctoral degree in human medicine

as well as a diploma in computer science. His research is focused on informatics for personalized medicine, in particular medical data models, electronic health records (EHRs), single source information systems, cancer genomics and next generation sequencing (NGS) data analysis. He received the venia legendi for Medical informatics in 2002 at the University of Munich. From 2004 to 2005 he was a research fellow at Siemens Medical Health Services, USA. Since 2005 he is professor of medical informatics at the University of Münster. Since 2011 he holds a dual faculty membership (medicine as well as mathematics and informatics). Since 2013 he is a member of the ERCIS director's board (European Research Center for Information Systems).

DUMORTIER JOS

Jos Dumortier is an internationally renowned top expert in data protection and ICT law. Back in the '90s, he was one of the first Belgian lawyers to deal with data protection, long before other lawyers started practising this area of law. At

that time he was appointed by the Belgian Government to draft the Belgian Data Protection Act. Regarding IT law, he has particular expertise in digital marketing, e-business, e-government, electronic signatures, e-security, digital archiving and legal support of business process re-engineering. Education: Information Science, Free University of Brussels (ULB) (1981-1983): PhD in Law, KU Leuven (1975-1981); Post-graduate studies, Centre Européen Universitaire (University of Nancy, France, 1974) and University of Heidelberg (Germany, 1975); Law degree, KU Leuven (1973). Admissions and Qualifications: Member of the Brussels Bar; Admitted to represent clients before all Belgian courts, the Benelux Court and the European Court of Justice Prof. Dr. Dumortier is widely known as the go-to lawyer for the public sector in these areas of law. He very frequently acts as counsel to the Belgian Federal Government, the Belgian Federal Public Service of Information and Communication Technology, the Flemish, Walloon and Brussels Governments, the European Commission, the Dutch goverment and various other Belgian and international public sector bodies to draft contracts or provide advice in these areas of law. Since 1993, Jos Dumortier has been a Professor of Law at the Law Faculty of the University of Leuven, where he teaches data protection, IT and telecommunications law. Between 1984 and 1992, he was a part-time lecturer in Information Science

at the University of Antwerp. In 1990, he founded and became the first Director of the Interdisciplinary Centre for Law and Information Technology (ICRI) at the University of Leuven. He is a research director in the Belgian Institute for Broadband Technology (IBBT). Together with the Belgian Minister of Justice, he was also the driving force behind the launch in 2011 of the Belgian Cybercrime Centre of Excellence for Training, Research and Education (B-CCENTRE). For more than ten years he was an editorial board member of Computerrecht, the leading Belgian-Dutch law journal on IT and data protection law. He is the author of numerous books and articles and is a much sought-after speaker at national and international seminars and conferences in the area of data protection and IT law. He is the Editor of the International Encyclopedia of Cyberlaw (Kluwer International Publishers) and editorial board member of various specialized publications.

DURAND DANNIE

Dannie Durand is an associate professor in Biological Scienc-

es and Computer Science at Carnegie Mellon University. Her research focuses on the emergence of new genes via gene duplication, domain shuffling, and horizontal transfer. She is the author of the Notung software package, an integrated suite of phylogenetic reconciliation methods for analyzing gene family evolution. She holds a BS degree in physics from MIT and MS and PhD degrees in computer science from Columbia University. Durand is a David and Lucile Packard Foundation Science and Engineering fellow.

DYKES C. PATRICIA

Patricia C. Dykes, PhD, RN, FAAN, FACMI, is Assistant Professor of Medicine at Harvard Medical School; Sr. Nurse Assistant, Program Director of Patient Safety Research and Practice, & Program Director of the Center for Nursing Excellence at Brigham & Women's Hospital. Dr. Dykes received her bachelor of science in Nursing from Fairfield University, a Masters in Nursing from NYU, and a doctorate in nursing informatics from Columbia. She joined Partners Healthcare in Boston in 2004 as corporate manager for nursing informatics and research. At the

time of her election she was a senior nurse scientist and research program director at Brigham and Women's Hospital and Instructor in Medicine at Harvard Medical School. Dr. Dykes was an early innovator in development of clinical pathways as a decision support approach and subsequently in integration of clinical pathways into electronic health records as part of a multi-faceted, patient-centered, interdisciplinary approach to enhancing guideline-based care. Her first two books on the topic were published in 1997 and 1998 and subsequently translated into Japanese and German, and use widely to guide content standardization efforts in the U.S., Asia and in Europe. As principal investigator of an interdisciplinary research project funded by Robert Wood Johnson Foundation, Dr. Dykes led a team that established a link between a standardized fall risk scale with individualized tailored interventions to prevent patient falls in hospitals. This was the first randomized controlled trial to document use of health information technologies to establish a linkage between fall risk assessment, tailored interventions and decreased patient falls in acute hospital settings. Dr. Dykes has been active in a variety of professional societies, and has had leadership positions in nursing informatics in AMIA, the Health Information Managements and Systems Society (HIMSS), and the Alliance for Nursing Informatics. She has been recognized for these contributions by the HIMSS

Nursing Informatics Leadership Award, her election as a Fellow of the American Academy of Nursing, and now by election to the College..

E

EASSON D. DAVIDSON

D. Davidson Easson Jr., Sc.D. is Director, Life Sciences & Bioengineering Center, Director, Bioengineering Institute ad interim, Worcester Polytechnic Institute (WPI). David has over 20 years experience in the biotech industry in both private and public companies. Currently, he is Director of WPI's Life Science and Bioengineering Center. He is also interim Director of the Bioengineering Institute at WPI which has the mission to translate advanced research into innovative product opportunities via contract research, licensing or venture creation. Prior to joining WPI, he was VP Manufacturing and Process Development at Epic Therapeutics, Inc. (Norwood, MA), a private drug delivery company which was acquired by Baxter Healthcare Corporation. Prior to that, Dr. Easson was co-founder and Chief Operating Officer of Alpha-Beta

Technology Inc. (Worcester, MA), a public company involved in the development and manufacturing of yeast derived biopharmaceuticals. He has served on the boards of the UMass Memorial Foundation, the Worcester Business Development Corporation and the Juvenile Diabetes Research Foundation (JDRF) Bay State Chapter. David has a B.S. in chemical engineering from the University of South Carolina and a Sc.D. in biochemical engineering from MIT.

EDELSTEIN PETER

Chief Medical Officer. Elsevier, USA. Dr. Peter Edelstein is board certified by both the Amercian Board of Surgery and the American VBoard of Colon & Rectal Surgery. An Award winning educator , author , and speaker, Dr. Edelstein frequently appears as a medical expert on radio, television, and in print. As Chief Medical Officer of Elsevier Clinical Solutions, Dr. Edelstein serves to demonstrate the power of clinical reference solutions to improve the quality and cost efficiency of healthcare delivery.

EFFKEN A. JUDITH
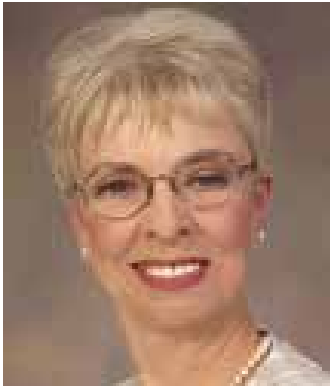
Judith A.Effken, RN, PhD, FACMI, FAAN, received her bachelor's in psychology from the University of Hartford, a master's in nursing, and a PhD in psychology from the University of Connecticut. She worked as a staff nurse in several health care organizations and began her "informatics journey" as a hospital information system consultant in the mid-1980s. She moved from Connecticut to join the faculty of the University of Arizona College of Nursing in 1995, where she is currently an associate professor. Her research has been in several areas, including the application of ecological psychology to help refine clinical system user interfaces to improve recognition of critical events and reduce errors. She also introduced to nursing the use of computational modeling to address organizational change over time and simulate the effect of patient safety and quality innovations in a virtual environment. Her paper describing this method won the 2004 HarrietWorley award for contributions to the field of nursing informatics. She led the development of an online nursing doctoral program, and chairs the AMIA Nursing Workgroup task force that has obtained a Standard Occupational Code for Nursing Informatics from the U.S. Bureau of Labor Statistics.

EHNFORS MARGARETA

Margareta Ehnfors, PhD, FACMI, obtained her degree at Sahlgrenska School of Nursing in Goteborg, Sweden, Dr. Margareta Ehnfors spent almost 20 years as Deputy Principal of Studies in the School of Caring Sciences, Vanersborg University College. She then returned to obtain her doctorate in nursing research at Uppsala University and has been a member of the faculty at Orebro University since that time. Professor Ehnfors is a leader in the medical informatics field in Sweden, Europe, and internationally. Her publications about nursing terminology began with a 1991 study of the content of Swedish medical records and culminated with a proposed model, known as VIPs, for capturing the content of care processes in Swedish health care records. The VIPs model has been translated for use in several European and Nordic countries, and its adoption is accompanied by a research and evaluation focus to understand its validity, impact, and importance to care quality.Dr. Ehnfors has served as Swedish representative to IMIA's Nursing Informatics Special Interest Group since 1997 and to the international standards in nursing work group within the International Standards Organization (ISO). She is an active member of IMIA's nursing concept representation group, an invitee of the annual International Nursing Terminology Summit, and a member of the Evaluation Committee of the International Council of Nurses. She is also an accomplished informatics educator, having successfully competed for funding to establish a multidisciplinary doctoral informatics program at Orebro University, and she has received awards from international societies for her informatics distance-learning course. Dr. Ehnfors is contributing significantly to informatics in Sweden and beyond by conducting seminal research on representing nursing care in patient records, by contributing to the international informatics literature, by participating actively in European standards work, and by establishing doctoral education for medical informatics in a multidisciplinary university environment in Sweden.

EICHLER GABRIEL

Gabriel S. Eichler, PhD, MSc, is General Manager at PatientsLikeMe. Gabriel manages large, multi-faceted partnerships and directs strategic initiatives with stakeholders throughout the healthcare industry. Prior to joining PatientsLikeMe, Gabriel was the SVP of Consulting Services at Relay Technology Management; a Nature Publishing Group funded startup, which was acquired by Decision Resources Group in 2013. Gabriel has also held positions at InnoCentive, McKinsey, and Harvard Medical School. He is an investor and advisor to numerous early-stage startup companies in the digital health space. Gabriel completed his MSc. and PhD in Bioinformatics at Boston University and the National Cancer Institute's Laboratory of Molecular Pharmacology, jointly. His BSE is in Computer Science from the University of Pennsylvania. He has authored over 35 papers and book chapters on cancer, personalized medicine, medical informatics, genomics, metabolomics and systems biology.

EISENSTEIN ERIC

Eric Eisenstein is a member of the Duke Clinical Research Institute's Outcomes Research and Assessment Group, with a special interest in understanding the relationships between complex interventions in health care systems and the long-term clinical and economic outcomes of patients. He has served as Principal Investigator for phase II, III, and IV economic and quality of life studies conducted alongside randomized clinical trials in cardiovascular, emergency, pulmonary, and vascular medicine and surgery. He also has conducted health technology evaluations making use of innovative research methods designed to better understand key relationships in observation (non-randomized) patient data. This work has included evaluations of the long-term clinical outcomes of coronary artery disease patients receiving drug-eluting vs. bare metal intracoronary stents, and how the use of clopidogrel changes those relationships. He also has conducted several studies assessing factors contributing to the costs of and evaluating different design considerations for multi-center randomized clinical trials. In addition to his working in traditional health technology evaluation, Dr. Eisenstein has an interest in evaluating information technologies as interventions in health care systems. In this regard, he has collaborated in the design and conduct of large-scale, randomized clinical trials to evaluate clinical decision support systems. The research objective in these studies has been to develop methods for evaluating health information technologies in practice-based settings using a "tool kit" of inexpensive, yet highly scalable methods that make use of data sets created as a byproduct of normal clinical and administrative operations. The use of these evaluation methods has been demonstrated in four clinical trials that include care process, clinical, economic, and quality of life measurements.

EISINGER ERWIN

Erwin Eisinger is a senior policy advisor with Dutch Ministry of Health Welfare and Sport. He has a Master in Applied Mathematics. He has been with the Ministry since 2009 and is a specialist on e-health and inno-

vation. His focus is on health information systems and funding an financing of innovation.

EKLUND BENNY

Benny Eklund is Coordinator for the Sustains Project, County Council of Uppsala, Sweden. Mr. Eklund represents the County Council of Uppsala in Sweden. He has also been involved in a number of European Projects. Mr Eklund has been the Chairman of the Working Group for Patient Portals at the former Swedish national organisation Carelinks. Mr Eklund has been an author of papers in the field of e-health and has been an invited speaker to conferences both inside Europe as well as Canada and the USA.

ELAM RICHARD

Richard Elam is Executive Director, MOITI–Massachusetts Office of International Trade and Investment. Mr. Richard Elam has extensive experience working as an international business lawyer both in the United States and abroad. For over twenty years, he held positions as both in-house corporate counsel and private practice counselor. Mr. Elam's legal career began at Ropes & Gray in Boston in the corporate and international departments. Mr. Elam then held the position of Senior Corporate Counsel with Digital Equipment Corp., a then major client of Ropes & Gray. In this position, he provided legal counsel on all aspects of the cross border disposition of Digital's assets abroad and crafted the company's global anti-trust policy manual. Next, Mr. Elam held an international position as General Counsel for a large French/German metal packaging company based in the Netherlands. He then returned to private practice with his primary outside law firm, Brada Law in Amsterdam, a JV partner with Leboeuf in the United States. After 9 years in the position of

Senior International Counsel at Brada Law, supporting clients all over the world in their international business endeavors, Mr. Elam became the managing partner of his own boutique specialized law firm, Elam International, based in Amsterdam. He brings a wealth of experience and knowledge to the Massachusetts Office of International Trade and Investment, where he looks forward to supporting the Patrick Administration's goal of making Massachusetts a leader in the global economy.

ELCHLEPP G. JANE

Jane G. Elchlepp, MD, PhD, FACMI, holds the positions of Associate Professor of Pathology and Assistant to the Chancellor for Health Affairs at Duke University Medical Center. She was a member of the Kellogg Foundation funded AAMC Task Force on Integrated Medical Center Information Systems (IMCIS) which published a general description of a database structure for an IMCIS. She has been instrumental in the devel-

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opment and implementation of the Duke University Medical Center Information Systems in all its phases

EL-DESOUKI MUNIR

Munir El-Desouki received the BSc degree in Electrical Engineering from KFUPM, Saudi Arabia in 2002, the MSc degree in Electrical Engineering, the M.Eng. degree in Engineering Entrepreneurship and Innovation, and the PhD degree in Electrical Engineering, all from McMaster University, Canada, in 2006, 2007, and 2010, respectively, in addition to a postdoctoral fellowship at the Department of Medical Biophysics at the University of Toronto, 2010-2011. From 2011 to 2013 he was the Manager of the Photonics Systems Department at KACST. Since 2012 he has been the Director of the KACST-IBM Nanotechnology Center of Excellence. Additionally, in 2013 he became the Director of National Center for Nanotechnology Research at KACST, as well as the coordinator for the KACST-KAUST-UCSB Solid-State Lighting Program. He is currently the Director of Materials Science Research Institute, managing over 320 employees and 80 active projects. He has authored or coauthored over 44 publications, holds 8 patents and has 13 patents pending. Dr. El-Desouki was part of the research unit that won the Almarai Prize for Scientific Innovation (2013), the recipient of the Natural Science and Engineering Research Council of Canada (NSERC) Industrial R&D Fellowship (2010), the Dean's Award for Excellence in Communicating Graduate Research (2009), 16 Canadian Microelectronics Corporation fabrication grants between 2004 and 2011, the Ontario Graduate Science and Technology (OGSST) Raymond Moore scholarship (2009), the Xerox Center for Engineering Entrepreneurship and Innovation grant for prototype development (2007), the NSERC doctorate scholarship and the Ontario Graduate Scholarship (OGS) (2006), the Dean's scholarship for PhD research at McGill University (2006), and the Engineering Innovation award at KFUPM (2001).

EL-HASSAN OSAMA

Osama El Hassan, PhD, is the head of eHealth section within Health Data and Information Analysis Department at Dubai Health Authority and an Adjunct Assistant Professor at the e-School of Health and Environmental Studies at Hamdan Bin Mohammad Smart University. He obtained a PhD in software Engineering from University of Leicester and an MSc in Advanced Computing from Imperial College in UK. Prior to and during his doctoral work he spent 10 years serving multiple teaching and research positions in the Middle East and UK universities. He developed an interest in Healthcare Information Systems during his PhD work which allowed him to play key roles in several healthcare authorities within Dubai after completing his research work. Dr. Osama joined Dubai Health Authority in Oct. 2012 to take the responsibility of devising and executing DHA's e-Health vision and to further develop Dubai's Health Data Standardization initiatives. Before joining DHA, he worked for 3 years as a Senior Technical consult in TECOM Investments where he was supervising IT operations within Dubai Healthcare City.

ELHADAD NOEMIE

Noemie Elhadad, PhD, FACMI, is Associate Professor of Biomedical Informatics, Affiliated with Computer Sciences at Columbia University. She obtained her PhD in 2006 from the computer science department at Columbia University. For her doctoral work as part of the natural language processing group led by Prof. Kathy McKeown, she focused on multi-document text summarization of clinical literature. She was on the computer science faculty at The City College of New York and the CUNY graduate center starting in 2006 before joining the Department of Biomedical Informatics at Columbia in the fall of 2007. In 2013, she was named chair of the Health Analytics center, part of the Columbia Data Science Institute. Dr. Elhadad's research interests are in natural language processing and data mining, with a particular focus on summarization and discourse-level structuring of information. She investigates ways in which clinical data sets (e.g., patient records) and consumer health data sets (e.g., online health communities) can be processed automatically to enhance access to relevant information for clinicians, patients, and health researchers alike. Her work is funded by the National Science Foundation, the National Library of Medicine, the National Institute for General Medical Sciences, and the National Cancer Institute, as well as the Google Faculty Research Awards program and the Simons Foundation.

ELKIN L. PETER

Peter L. Elkin, MD, MACP, FACMI, FNYAM serves as Professor and Chair of the UB Department of Biomedical Informatics. He is also a Professor of Medicine at the University at Buffalo. Dr. Peter L. Elkin has served as a tenured Professor of Medicine at the Mount Sinai School of Medicine. In this capacity he was the Center Director of Biomedical Informatics, Vice-Chairman of the Department of Internal Medicine and the Vice-President of Mount Sinai hospital for Biomedical and Translational Informatics. Dr. Elkin has published over 120 peer reviewed publications. He received his Bachelors of Science from Union College and his MD from New York Medical College. He did his Internal Medicine residency at the Lahey Clinic and his NIH/NLM sponsored fellowship in Medical Informatics at Harvard Medical School and the Massachusetts General Hospital. Dr. Elkin has been working in Biomedical Informatics since 1981 and has been actively researching health data representation since 1987. He is the primary author of the American National Standards Institute's (ANSI) national standard on Quality Indicators for Controlled Health Vocabularies ASTM E2087, which has also been approved by ISO TC 215 as a Technical Specification (TS17117). He has chaired Health and Human Service's HITSP Technical Committee on Population Health. Dr. Elkin served as the co-chair of the AHIC Transition Planning Group. Dr. Elkin is a Master of the American College of Physicians and a Fellow of the American College of Medical Informatics. Dr. Elkin chairs the IMIA WG on Human Factors Engineering for Health Informatics. Dr. Elkin is the Editor of the Springer Informatics Textbook, Terminology and Terminological Systems. He was awarded the Mayo Department of Medicine's Laureate Award for 2005. Dr. Elkin is the index recipient of the Homer R. Warner award for outstanding contribution to the field of Medical Informatics.

EMARA TAREK
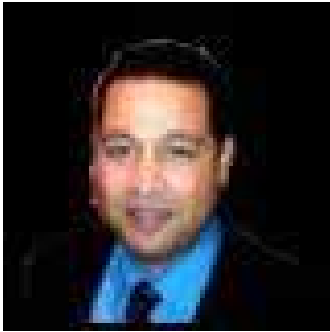
Tarek Emara is Associate Partner–Healthcare, IBM Canada Ltd. Tarek is an Associate Partner within the IBM Healthcare Practice. He is focused on Healthcare business transformation using relevant technology solutions. Tarek developed a broad set of skills throughout his 17 years IBM Career starting in systems sales, passing by Technology Consulting as a Senior Managing IT Consultant, and in various leadership roles in IBM's Global Business Services (GBS). Tarek developed several Technology Trends papers and a number of successful service offerings that resulted in significant benefit to clients across industries. Tarek delivered mobile technology strategies to a number of acute care hospitals and other healthcare organizations. Some of his current clients are eHealth Ontario, Health Canada, PHAC, New Brunswik Health, Trillium Health Centre, among others. Tarek gives back to his profession through his contribution as part of IBM's consulting certification committee. He also delivered a number of speaking engagements in Canada, United States, and Japan with focus on Technology Trends, IT best practices and IT Strategy.

ENGELBRECHT ROLF

Rolf Engelbrecht, PhD, directed the National Research Center for Environment and Health in Neuherberg, Germany. He is a past president of the EFMI (2000-2002) and past vice president of the IMIA (2002-2004). He is chair of ProRec Germany, the national member in EuroRec the European Health Records institute. Dr. Engelbrecht has, over many years, investigated the use of "smart cards" as portable electronic medical records. He is a long-standing scholar, teacher, and author in biomedical informatics. Professor Engelbrecht is elected as an International Associate in recognition of the broad scope of impact of his efforts in advancing the art and science of biomedical informatics in Europe and worldwide. In his last position before retirement in July 2009 he was head of the department MEDIS (Medical Information Systems) at the Helmholtz Center Munich (German Research Center for Environmental Health). Dr. Engelbrecht is associated Professor for medical informatics at the State University of Medicine and Pharmacy in Chisinau/Moldova. He is teaching at Siberian State Medical University (SSMU) Medical Informatics as member of the faculty also since 2008. He is well experienced in systems analysis, design, development, implementation of health care information systems and knowledge bases as well as in patient records. Dr. Engelbrecht has authored and edited more than 170 articles and books in the field of Medical informatics. He has been and is on the editorial board of some well established scientific journals. Prof Engelbrecht is honorary member of the Romanian Academy of Medical Sciences and European scientific societies. In 2005 he was elected as International Affiliate of ACMI (American College of Medical Informatics). He is founding member of the European center for Medical Informatics, Statistics and Epidemiology (EuroMISE) in Prague and founding member of the Koch-Metschnikow-Forum in Berlin/St.Petersburg. Dr. Rolf Engelbrecht has successfully participated in several EU and National R&D-projects as a coordinator and partner: Precise–Medical workstation (co-cordinator), Diabcard–Chip cards for Diabetes Care (coordinator), DiabCare - Quality assurance in Diabetes care (partner), Diadoq-Knowledge based quality assurance (coordinator), ProGuide Clinical Guidelines (coordinator), ByMedCard - Cards in the Bavarian Medical Network (coordinator), etc. He is founding member of: BYMI German

professional society of medical informatics, ISSHAC international society for system science in health care, etc.

ENGLMEIER KARL-HANS

Karl-Hans Englmeier received his diploma in Medical informatics and the PhD degree from the Ruprecht-Karls-University in Heidelberg. He completed a postdoctoral research at the GSF – Institute of Medical Informatics and Health System Research in 1995. He performed his habilitation at the medical faculty of the Ludwig-Maximilians-University, Munich. During this time he was head of the group "Virtual Reality and Medical Image Processing". Since 2007 he is head of the Laboratory of Image and Signal Processing in the Institute for Biological and Medical Imaging. He is also apl. professor at the LMU. His research interests are in development of novel image analysis methods like segmentation, registration and perfusion analysis. Prof. Dr. Karl-Hans Englmeier is author and co-author of more than 115 peer-reviewed journal articles.

ERZEN IVAN

Ivan Erzen (1957-), MD, PhD, graduated from Medical Faculty, University of Ljubljana in 1982. During 1987-1988 got his master degree from Epidemiology and then finished 3 year of postgraduate study in Epidemiology. At first he was had of the department and than he became the director of the Regional Institute of Public Health, but continued working also in his profession. He was leading a study on health impact of lead contaminated environment in Mezica Valley. In another part of Slovenia he conducted a research on etiological factors for high prevalence of chronic pulmonary diseases among children with his team. Some other research project's have been also conducted by his team, mainly dealing with the bio-monitoring or using Geographical Information System in order to asses the exposure or to determinate possible etiologic factors for disease in the environment. He was also involved in study of behavioral risk factors among adult population in Slovenia. In the period from 2008-2012 he was state secretary at Ministry of Health of Slovenia. Presently he is associated professor of Public Health, holding a chair in Medical faculty of University of Maribor and the director of the National Institute of Public Health of Slovenia.

ESPINOSA AMADO

Amado Espinosa is a respected expert on the field of Medical Informatics. He is one of few MD who developed a clinic, administrative and technical carrier. After being trained as a specialized physician in Anesthesiology, he served as a national advisor for healthcare at the IMSS, and got his MBA and his MCS in Mexico and then his PhD in Germany together with the specialty on Medical Informatics (MI). When he returned to Mexico through the invitation of the Mexican Health Foundation, he founded the Institute for Medical Informatics at the Autonomous University of Guadalajara, the Mexican MI Association, formalized and was the president of the International Medical Informatics Association for Latin America and Caribbean, and organized training programs on MI for healthcare professionals in Latin America. He started the first LA consortium to develop ICT solutions for healthcare, copying with the requirements of the healthcare reform and PAHO

(Pan-American Health Organization) guidelines. In 2000 he launched MEDISIST, a company dedicated to research, develop and deploy innovative ICT solutions for the healthcare system, including Electronic Medical Records, Integrated Information Systems, Mobile Computing for Healthcare, RFID and Telemonitoring & Biomedical Devices design and manufacturing. Dr. Espinosa has served as a Senior Consultant on the field of MI at leading companies like IBM, HP, Microsoft and Philips. He has attended different working groups at AMIA, IMIA, IMIA LAC, AMIM, GMDS, International Healthcare Telecommunication Organizations, HIMSS, among others. Dr. Espinosa has been recently appointed as President of IMIA LAC, VP for International Affairs at the Mexican Chamber of ICT Industry (CANIETI), becoming the formal attaché by WITSA and the chairman of the organizing committee of the GPPS 2011 (Global Public Policy Summit) and WCIT 2014 (World Congress on Information Technology) held in Guadalajara, Mexico. With a representative worldwide networking of institutions and organizations developed during his career, Dr. Espinosa main objective is to help healthcare sector and industry leaders to work together on innovative projects for new business opportunities, better quality of care and a positive social impact.

EVANS A. DAVID
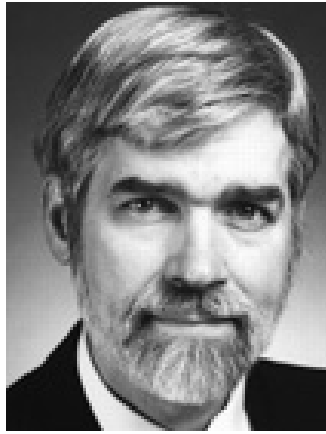
David A. Evans, PhD, FACMI, is President, CEO, and Chief Scientist of CLARITECH Corporation in Pittsburgh, Pennsylvania. He is also an Adjunct Professor in the Language Technologies Institute, School of Computer Science, Carnegie Mellon University (CMU). He received AB degrees in German Intellectual History and English, a BS degree in Mathematical Sciences, and a PhD degree in Linguistics, specializing in computational linguistics, all from Stanford University. From 1983 through 1996, Dr. Evans was Professor of Linguistics and Computer Science at CMU. There he initiated and directed the Computational Linguistics Program and the Laboratory for Computational Linguistics. In 1992, he founded CLARITECH Corporation, based on his work in natural-language processing and information science. His interests in medical informatics include the representational basis of medical vocabularies, medical cognitive science, and medical information

processing. His work on medical concept representation began in 1984 with the MedSORT Project and continued with his participation in early stages of United Medical Language System (UMLS) development. In 1991, he was one of the founders of the CANON Group. Dr. Evans' work in biomedical cognitive science encompasses the modeling of doctor-patient discourse and medical decision making; he has co-edited two books in this area. He currently holds seven patents on technology for information management and has additional patents pending in the United States and Japan. Dr. Evans' dissertation was selected for publication as an "Outstanding Dissertation in Linguistics" in 1984. In 1998, the ConceptBase software suite, based on Dr. Evans' work, received the "Software Product of the Year" Award from the Japanese government.

EVANS R. SCOTT

Scott R. Evans, PhD, FACMI, is in the Department of Medical Informatics at Intermountain Health Care and is the Director of Research for the Department of Clinical Epidemiology, LDS Hospital, and a Research Associ-

ate Professor in the Department of Medicine, University of Utah. Dr. Evans received his BS degree in Biology and MS degree in Microbiology/Parasitology from Brigham Young University. He received his PhD in Medical Biophysics and Computing from the University of Utah. His major experience and interests have been in the design, development, and evaluation of computerized tools for the selection and management of anti-infective agents, computer methods to identify and reduce adverse drug events, computerized methods to identify patients needing isolation, and computerized methods to identify and reduce hospital-acquired infections. A number of these computerized tools are clinically operational at several hospitals at Intermountain Health Care. He was a finalist and third place winner in the Student Paper Competition, 1984, Eighth Annual SCAMC. In 1992, he won the Best Paper on an Application, Sixteenth Annual SCAMC, and in 1993 he received the Priscilla M. Mayden Award for outstanding contribution to the field of Medical Informatics. In 1997, he received the Oslers Cloak Excellence in Caring and Curing Award from Intermountain Health Care. Dr. Evans was on the Fall AMIA Program Committees in 1995 and 1997 and the AMIA Awards Committee.

EWERS ROLF

Rolf Ewers is currently professor and Chairman of the CMF Institute Vienna, Austria. Raised in Dresden and Stuttgart, Germany, his final school year was spent as an exchange student in San Diego, USA. He studied Medicine and Dentistry in Freiburg, Germany. His Residency was started as a first year surgery resident at the Downstate University in Brooklyn, USA, continuing his training as a Cranio-Maxillofacial and Oral Surgeon and finishing with his PhD in Freiburg, Germany. For 9 years, he was Deputy Chairman of the University Hospital for Oral-Maxillofacial Surgery in Kiel, Germany. Until October 2012, for 23 years he was the Chairman of the University Hospital of Cranio-, Maxillofacial and Oral Surgery in Vienna, Austria.

EYSENBACH GUNTHER

Gunther Eysenbach is a Professor at the University of Toronto, Senior Scientist at the Center for Global eHealth Innovation at the University Health Network, editor of the Journal of Medical Internet Research and publisher of JMIR Publications, the leading open access publisher in the ehealth/mhealth field. He is also founder of the Medicine 2.0 conference series (having organized the first two events in Toronto), and now acts as "producer" for the conference series and the Medicine 2.0 Social Network, a network of over 3.000 ehealth researchers. Gunther Eysenbach's research interests range from consumer health informatics and social media, over behavior change apps, to electronic publishing and an area of research that he calls Infodemiology, i.e. deriving metrics from the chatter and "big data" on the Internet for public health purposes. He is also interested in the application of social media based "big data" for scientometrics and altmetrics, and has invented the "twimpact factor", after discovering that tweets are predictive

for citations and can be used as a metric for social impact.

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FACELLI JULIO

Julio C. Facelli, PhD, FACMI, is Professor and Vice Chair, Department of Biomedical Informatics and Associate Director for Biomedical Informatics, Center for Clinical and Translational Science. He was born in Buenos Aires, Argentina and attended the University of Buenos Aires where he got his PhD in physics in 1982. In 1993 he did post-doctoral research at the University of Arizona and the following year he joined the University of Utah. At the University of Utah he was the Director of the Center for High Performance Computing from 1995 to 2013 and he is currently, Professor and Vice Chair of the Department of Biomedical Informatics, Associate Director for Biomedical Informatics, Center for Clinical and Translational Science, Adjunct Professor of Chemistry and Physics and member of the Institute for Clean and Safe Energy and the Utah Nano Science Institutes. Dr. Facelli was elected fellow of the American College of Medical Informatics (ACMI) in 2014. Dr. Facelli has been involved in numerous computer and network related research projects and in many University and national committees dealing with Information Technology. He has extensive expertise in computational sciences, parallel and distributed computing and advance network applications. Dr. Facelli is co-author of more than 200 international per review publications and his research has been funded by NSF, NIH and DOE. Dr. Facelli served as Chair of the Coalition for Scientific Computing (CASC) during 2003 and 2004. He is referee for numerous international publications and funding agencies and has participated in advisory panels at NSF and NIH. He has taught classes in Physics, Chemistry, Computational Sciences, Telecommunications and Medicine. His current research interest are in parallel and distributed computing applications in biomedical informatics.

FAFUNWA TUNDE

Tunde Fafunwa has more than 20 years of senior management experience in the Telecommunications and Information Technology field. He has led start-ups, mid-size companies as well as major initiatives in Fortune 500 companies. Previously Managing Director of Bayan Telecommunications Inc., a leading Internet and competitive fixed line provider in the Philippines he led company's competitive repositioning to deliver data and Internet revenue growth of 30% a year, with a significantly lower cost structure. Previously he was Vice President, Marketing at Verizon subsidiary, where he was responsible for the product bundling of Landline, Cellular, Video and Internet to over 2 million customers with combined revenues of over $1 billion. In addition, Tunde has held senior IT management positions in the financial and computer consulting industries. He is the founder of Resourcery Limited the largest network integrator in West Africa.

FAGAN LAWRENCE
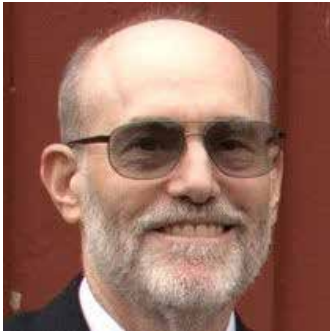
Lawrence Fagan received his undergraduate degree in Interdisciplinary Science from Massachusetts Institute of Technology (MIT) in 1973, his PhD in computer science from Stanford University and his MD from the University of Miami. Currently he works at Worcester Polytechnic Institute and Lawrence Fagan-Consulting (Advisor to Startups). Previously he worked at Stanford University School of Medicine, USC Information Science Institute (ISI). His research interests have covered a number of clinical informatics areas, including medical expert systems, decision support systems concentrating on temporal reasoning, knowledge acquisition of clinical guidelines, user interface design including spoken and gesture-based interfaces, and semantic information retrieval of medical knowledge. He helped run the Biomedical Informatics Training Program at Stanford University for nearly thirty years. He is now an advisor to small companies in this area and an prior art searcher/expert witness regarding informatics intellectual property. He was

elected to fellowship in the American College of Medical Informatics in 1985. He is Advisor, Health Delivery Institute, Worcester Polytechnic Institute (January 2011 – Present) - Prior Art Searching (Legal Intellectual Property Cases): Computer Science & Biomedical Informatics; Lawrence Fagan--Consulting (2005 – Present); Advisory Board Member, Advisor to Startups (January 2011 – Present). Current advisory Roles: PSYCHeANALYTICS and Spiral Genetics, Inc.. He is Member of AMIA (American Medical Informatics Association) (1985 – Present); Advisor, Biomedical Informatics Training Program at Stanford University School of Medicine (May 2012 – December 2014); Co-Director, Biomedical Informatics Training Program at Stanford University (1983 – 2012); Biomedical Informatics Training Program for Graduate Student, Research Scientist, Senior Research Scientist at Stanford Medical Informatics (1975 – 2004) and Researcher at USC Information Sciences Institute (ISI) (1973 – 1975). His patents are: System and method for indexing electronic text (United States 6,535,873, Issued March 18, 2003 and System and method for indexing electronic text (United States 6,928,432, Issued August 9, 2005).

FARRELL JOHN

John Farrell is an Assistant Director Healthcare Transformation at the Department of Health, Social Services and Public Safety in Northern Ireland. He has specific responsibility for the development of strategies and policies on eHealth, Commissioning of integrated health and social care services, the contribution of health to sustainable economic growth, and leads on Northern Ireland's role as an EIP-AHA 3 Star Reference Site. Other responsibilities include directing and co-ordinating the EIP Reference Site Collaborative Network, which Northern Ireland established in 2013, and includes all 32 Reference Sites.

FEIGENBAUM A. EDWARD

Edward Albert Feigenbaum (1936-) is a computer scientist working in the field of artificial intelligence, and joint winner of the 1994 ACM Turing Award. He is often called the "father of expert systems." Feigenbaum completed his undergraduate degree in 1956, and a PhD in 1960 at Carnegie Institute of Technology (now Carnegie Mellon University). In his PhD thesis he carried out under the supervision of Herbert A. Simon, he developed EPAM, one of the first computer models of how people learn. He founded the Knowledge Systems Laboratory at Stanford University and co-founded companies IntelliCorp and Teknowledge. He is a Professor Emeritus of Computer Science at Stanford University. His honors and awards are: 1984 - Selected as one the initial fellows of the ACMI; 1994 - ACM Turing Award jointly with Raj Reddy for "pioneering the design and construction of large scale artificial intelligence systems, demonstrating the practical importance and potential commercial impact of artificial intelligence technology"; 1997 - U.S. Air Force Exceptional Civilian Service Award; 2007 - Inducted as fellow of the ACM; 2011 - IEEE Intelligent Systems AI's Hall of Fame for "significant contributions to the field of AI and intelligent systems"; 2012 - Made fellow of the Computer History Museum "for his pioneering work in artificial intelligence and expert systems."; 2013 - IEEE Computer Society Computer Pioneer Award for "pioneering work in Artificial Intelligence, including development of the basic principles and methods of knowledge-based systems and their practical applications".

FELDMAN BONNIE

Bonnie Feldman, MD, MBA, is Chief Growth Officer, DrBonnie360. He brings a triple lens to her consulting, writing and speaking- that of an entrepreneurial dentist, a Wall Street analyst and a digital health analyst and consultant. Most recently, she has interviewed more than 200 digital health companies, while attending more than 50 meetings, always asking the question of how new digital tools and data help us each of us. Her research on "Big Data in Healthcare Hype and Hope" has been enjoyed by over 50,000 global professionals. Her work has been featured in O'Reilly Strata, Greatist and Forbes. She has been an invited speaker at the Stanford Medicine X, Bio-IT, Data to Drugs to Diagnostics, StrataRx, the Burrill Digital Health Conference, Games for Health, the Center for Connected Health, the Nye Collaborative Digital Health Summit, and the mHealth Summit. Her latest research has uncovered a large and growing need in the autoimmune community to apply new data and digital tools to improve treatment. She welcomes collaborative partners in this initiative.

FELLOWS JOHN

John Fellows is Horizon Scanning Consultant. Centre for Workforce Intelligence. John Fellows conducts horizon scanning for the Centre for Workforce Intelligence (CfWI) and is the Content Lead on Horizon Scanning for the EU Joint Action on Health Workforce Planning and Forecasting. He is the co-author of several publications on horizon scanning, including the CfWI Big Picture Challenges series. John also works on the CfWI's Horizon 2035 project for the Department of Health in England, which uses a skills and competencies approach to model the supply and demand of multiple health, public health and social care workforces.

FELTS R. WILLIAM

William R. Felts, MD, FACMI, is Professor of Medicine in the division of Rheumatology at George Washington University Medical Center. He is a past president of SCAMC (1983-1984) and a member of its Board of Directors (1980-1988). While he was president of the American Society of Internal Medicine he organized a series of seminars on Computers in Office Practice. He has served on many advisory and review boards which have guided the development of the field of medical informatics.

FERGUSON JAMIE

Jamie Ferguson is a Fellow at the Institute for Health Policy and Vice President of health information technology strategy and policy for Kaiser Permanente. He has been at Kaiser Permanente since 2002. Jamie participates in national and international organizations to help more people to gain the benefits of health IT including the US Health IT Standards Committee, HL7, IHTSDO, and the Care Connectivity Consortium.

FIDDIAN TOM

Tom Fiddian Lead Technologist– Digital Experience. Innovate, UK. Tom started his career designing consumer products in a medical design consultancy. Since then he has worked on a broad portfolio of digital products and has been involved in a number of collaborative projects to increase our knowledge of the subject of user-centered design. He has also run consultancies with industry and government regulators advising them on best practices on 'design-for-all'. In his current role Tom manages a portfolio of activities and investment which 'Focus on the user–including Digital Health.

FIESCHI MARIUS

Marius Fieschi, MD, PhD, FACMI, served as Professor of Biostatistics and Medical Informatics at Marseilles Medical School, France. He received his PhD in Physics at Université de Provence where he graduated on June 1972. In 1981, he graduated from the medical school of Marseille (France). He earned the PhD. in Human Biology from the University of Aix-Marseille II in 1983 with a dissertation on the SPHINX expert system. He became Assistant Professor in Medical Informatics in 1979, Full Professor in 1984 in the same university. He was Head of the Medical Information Department at Hôpital de la Conception from 1987 to 1992. He was chief of the Medical Information Department at Hôpital de la Timone (Marseille) and head of the Department of Public Health at Marseille University hospitals (1992-2011). He created in 1989 the Laboratory for Teaching and Research on Medical Information processing (LERTIM) at the Faculté de Médecine de Marseille. He serves as consultant at the French ministry of Health (Direction des Hôpitaux) from 1989 to 1994. He was Vice-President of the Université de la

Méditerranée from 2008-2011. As a carrier scientist, Prof. Fieschi's research in medical decision making, medical expert systems (He was the principal developer of the system SPHINX), information health care systems, AI medical applications, medical concept representation and patient data repositories have been published. Its interests in AI and medical computing include medical knowledge management, medical concept representation and health care guidelines on the Web. He has been involved in the activities of several French (he was President of the French Medical Informatics Association) and international scientific societies including AMIA and EFMI. He served as a member of the MEDINFO scientific program committee in 1998 and 2001 and as co-chair of the MEDINFO 2004 editorial board. He served as member of the editorial board of Methods of Information in Medicine and of the International Journal of Medical Informatics.

FINNELL T. JOHN

John T. Finnell, MD, MSc, FACMI, is Associate Professor of Clinical Emergency Medicine, Followship

Director and Medical Informatics scientist at Regenstrief Institute, Inc., in St. Indianapolis, IN. He is a native from Connecticut, obtained his BS and MD at the University of Vermont. He completed a transitional internship and then EM residency at UCSF Fresno. He was the chief resident in the class of 1995. Dr. Finnell is a diplomat of the American Board of Emergency Medicine and an examiner for the ABEM Oral Boards. Following his residency training, JT joined the faculty at Regions Hospital, St. Paul, Minnesota. There he was an Assistant then Associate Residency Director. Dr. Finnell has completed the EMF/ACEP Teaching Fellowship and the McMasters course "How to Teach Evidence Based Medicine." JT first joined the Regenstrief Institute in 2002 as an NLM-funded medical informatics fellow. During his fellowship, he earned a master's degree from the Indiana University Clinical Investigator Training Enhancement (CITE) Program. JT's research activities have focused on building the infrastructure necessary to capture emergency department visit data and his first publication, entitled "Community Clinical Data Exchange for Emergency Medicine Patients," explored the pattern of emergency healthcare delivery across Indianapolis over a one year period. John T is P.I. for the BioMedical Informatics training grant and had served as Co-P.I. with Dr. Stephen Downs since 2007. He is also the P.I. for the $1.4 million dollar Indiana Health Information Technology

Training Collaborative (I-HITTC) contract which builds upon the collaborations between Indiana University School of Informatics, School of Nursing, School of Medicine, and the Regenstrief Institute. The primary goal of this funding from the Office of the National Coordinator for Health Information Technology is to address the workforce needs of qualified health IT workers over the next several years. Dr. Finnell possesses strong experience in informatics training programs.

FIORINI RODOLFO A.

Rodolfo A. Fiorini is Professor of Bioengineering at the Department of Electronics, Information and Bioengineering (DEIB), Politecnico di Milano University, Italy. He gained his Ph.D. degree in Energetics from Politecnico di Milano University, in 1984. USA DOL appointed him with the U.S. Ph.D. in 1989. Prof. R.A. Fiorini is the founder and coordinator of the Research Group on Computational Information Conservation Theory (CICT), and currently he is responsible for the main course on Wellbeing Technology Assessment (WTA) at DEIB. He has published over 300 articles and presentations

in international journals, books, etc. Prof. R.A. Fiorini is Fellow of the World Academy of Art and Sciences (WAAS), Member Editorial Board of the Journal of Technology in Behavioral Science (JTiBS), Member of AAAS, IEEE and EMBS, and a renowned international scientific presenter, conference keynote and plenary speaker

FISCHER ANDY

Andy Fisher, MD is member of CEO, the Swiss Center for Telemedicine MEDGATE. Andy Fischer studied medicine before training in surgery and emergency medicine. Until 2006 he was a helicopter borne emergency doctor with the Swiss air rescue service Rega. In 1999 he founded the Swiss Center for Telemedicine MEDGATE and has held the position of CEO ever since. Andy Fischer is a founding member and board member of the Swiss Association for Telemedicine and eHealth (SATMeH) and President of the International Society for Telemedicine and eHealth (ISfTeH). Since 2008 he has a teaching mandate for telemedicine at the University of Zurich.

FISHER JOHN

John Fisher is the University of Leeds' first Deputy Vice–Chancellor. He supports the Vice - Chancellor across a range of activities focusing in particular on academic strategy, academic development and management of the nine academic Faculties. Professor Fisher is also a leading researcher in Medical and Biological Engineering, as Director of the Institute for Medical and Biological Engineering iMBE, Director of Wellcome Trust/EPSRC Medical Engineering Centre WELMEC, Director of EPSRC Innovation and Knowledge Centre in Regenerative Therapies and Devices, Director of N8 Centre for Regenerative Medicine, Director of White Rose Doctoral Training Centre in Tissue Engineering and Regenerative Medicine, Co Director of NIHR Leeds Musculoskeletal Biomedic al Research Unit. He provides leadership to over 200 academic researchers in Medical Engineering at Leeds and holds a grant portfolio of £50m. He has founded four medical device spinouts (including Tissue Regenix plc) and consults with 4 medical device companies The iMBE was awarded the 2012 Queen's Anniversary Prize, the country's highest accolade for an academic institution. Professor Fisher received his CBE for services to Biomedical Engineering, is a Fellow of the Royal Academy of Engineering, FREng, and of the Academy of Medical Sciences, FMedSci, a Chartered Engineer, CEng, and Chartered Scientist, CSi.

FISHER TIM

Tim Fisher is VP, Rasky Bearlein Strategic Communications, MA USA. Tim Fisher brings significant life sciences, innovation, financial services, and international markets experience to Rasky Baerlein with a proven track record of driving business objectives through government relations and stakeholder engagement strategies for over 15 years. Tim works with companies, organizations, and governments seeking to raise their profile, enter new markets, attract investment, and proactively communicate business interests, product/technology platforms, and thought leadership to key stakeholders at the international, federal, and state levels. He partners with these groups to create comprehensive solutions that have meaningful positive impact on their reputation and bottom line. Prior to Rasky Baerlein, Tim directed global policy efforts at Genzyme and led global government and industry affairs activities for MetLife and the ACE Group. In these roles, he successfully advanced market entry, licensing, and regulatory goals while

creating strong policy and brand platforms in markets such as Brazil, China, Egypt, India, Japan, Korea, Mexico, Russia, Saudi Arabia, Singapore, Taiwan, Vietnam, the UK, and the US.

FISZMAN MARCELO

Marcelo Fiszman, MD, PhD, FACMI, received an MD degree from the State University of Rio de Janeiro in Brazil, undertook residencies in Internal Medicine and Biomedical Informatics, then emigrated to the US where he received a PhD in Biomedical Informatics from the University of Utah. He was a postdoctoral fellow at the National Library of Medicine, and at the time of his election to fellowship was a Research Scientist at the Lister Hill National Center for Biomedical Communications. He also previously held academic appointments as an Instructor in Biomedical Informatics at the University of Sao Paulo, Research Assistant Professor of Biomedical Informatics at the University of Utah, and Assistant Professor of Medicine at the University of Tennessee. Dr. Fiszman has made significant contributions to foundational

research in natural language processing for both clinical practice and biomedical research. His work has concentrated on developing robust, sustainable methods, that contribute to advances in both biomedical research and clinical practice. Dr. Fiszman's early work on symbolic methods for processing electronic medical records, via an application called SymTex, has been recognized as influencing later developments such as i2b2. More recently, he has pursued creative research in symbolic natural language processing (with a program called SemRep) and semantic abstraction automatic summarization. These efforts are being implemented at NLM in Semantic MEDLINE, which combines information retrieval, semantic processing, automatic summarization, and knowledge visualization for enhanced access to the biomedical research literature.

FITZMAURICE J. MICHAEL

Michael J. Fitzmaurice, PhD, FACMI, is Senior Science Advisor for

Information Technology in the Immediate Office of the Director of the Agency for Health Care Policy and Research. Dr. Fitzmaurice received his BS degree in Mathematics (with a minor in Engineering Physics), his BA degree in Economics from St. Joseph's College in Rensselaer, Indiana, and his PhD degree in Economics from the University of Maryland at College Park. After 15 years in the Medicare Program at the Health Care Financing Administration, where among other accomplishments he led the development of Medicare's prospective payment system for hospitals, based on diagnostic related groups, Dr. Fitzmaurice left his position as Acting Director, Office of Research, to become the Director, National Center for Health Services Research and Health Care Technology Assessment (NCHSR). When AHCPR was created out of NCHSR by Congress, he became Deputy Administrator and, subsequently, Director of the Office of Science and Data Development and Director of the Center for Information Technology. Dr. Fitzmaurice is a staunch advocate of health informatics standards nationally and internationally, supporting collaboration among U.S. health data standard developing organizations and standards users since 1990. He continues to support the work of American National Standard Institute's Health Informatics Standards Board and the U.S. Technical Advisory Group to the ISO Technical Committee (TC) 215 on Health Informatics.

Internationally, he participates in ISO TC 215. In AHCPR and the Department of Health and Human Services (DHHS), In 1993, Dr. Fitzmaurice served on the White House Health Reform Task Force, Information Systems Working Group, and Administrative Simplification Working Group, which made recommendations to Hillary Rodham Clinton, Task Force Chair, on the use of information technology in health care reform. He wrote the Clinton Administration's vision paper "Health Care and the National Information Infrastructure," which was published by the Department of Commerce in 1994. Dr. Fitzmaurice is one of two government liaisons to the National Committee on Vital and Health Statistics (NCVHS). He co-chairs the DHHS Infrastructure and Cross-cutting Implementation Team that has oversight and guidance responsibility for the six implementation teams that recommend health data standards for the Secretary's adoption under the mandate of the Health Insurance Portability and Accountability Act (HIPAA) of 1996. HIPAA has also mandated NCVHS to produce a report on standards for PMRI and its electronic exchange. Dr. Fitzmaurice is co-lead staff of the Computer-based Patient Record Working Group that is charged with producing the draft of the report. He is a member of the Department's Health Privacy Regulation Working Group charged with producing a national privacy regulation under HIPAA. Dr.

Fitzmaurice has received numerous awards from his agency, the Public Health Service, and DHHS. He has been a member of the AMIA Advisory Council since 1994. In 1996, he received a President's Award from AMIA, "for significant contributions made to the Working Group for Family Practice/Primary Care of the American Medical Informatics Association." In 1999, he received the Future of Health Technology Award.

FLORANCE VALERIE

Valerie Florance, PhD, FACMI, is an Associate Director of the National Library of Medicine, NIH. There, she directs NLM's Extramural Programs Division, with overall responsibility for research, training and resource grant programs in biomedical informatics and health information sciences. She serves as program director for NLM's highly-regarded university-based training programs in biomedical informatics. Dr. Florance is a member of the Executive Committee for the NIH Big Data to Knowledge (BD2K) initiative. Before coming to NLM in February 2001, she spent 3 years leading

a visioning project undertaken at the Association of American Medical Colleges (AAMC) to help the association's members understand the power of computers and networks for managing health information. Before that, she held faculty and administrative positions at three U.S. academic medical centers. She has graduate degrees in medical anthropology and biomedical information sciences.

FOCSA ADRIAN MIRCEA

Mircea Adrian Focsa is Associate Professor of Medical Informatics and Biostatistics in the Department of Medical Informatics of the Victor Babes University of Medicine and Pharmacy Timisoara, Romania. In 1995 he graduated the medical school in Timisoara, in 2001 received his MSc degree in Medical Informatics in Cluj Napoca and in 2008 he become a specialist in Public Health and Healthcare Management. He is the founder member and currently holds the position of President of Prorec Romania Association and Romanian representative on the Board of Eurorec Institute. He took his PhD in 2007 with a dissertation

on „Quality certification of EHR Systems". He join the efforts of the Eurorec Institute for the broad adoption in Europe of the certified EHR systems. Through his career he participated to a number of European (FP6, FP7) or national projects related to eHealth or eLearning domains. His areas of interest include: database and knowledge management, bio-signals and image processing, biostatistics and medical ontology. From 2008 he joined an international team for developing a knowledge based clinical information systems, co-ordinating the ontology development and the medical algorithms implementation. In 2012 he leads the interoperability group - part of the Theme Advisory Committee for Health Services (CCTSS) of the Romanian Ministry of Health. Dr. Focsa was also involved in numerous clinical research projects, in specialties like gastroenterology, neurology, cardiology or public health. He has published dozens of peer-reviewed research articles, book chapters, conference papers and presentations that cumulatively attracted more than 160 citations and 130 impact factor points.

FORTUNOV ILIA

Ilia Fortunov is Microsoft Worldwide Health Architect and Technology Strategist, Microsoft s.r.o. During his 30+ year career in the software industry, Dr Fortunov worked as a developer, architect, manager and consultant for companies and governments in Europe, North America, Australia and Asia. As Chief Technology Officer in the Microsoft Worldwide Health team, he advises governments, customers and partners on eHealth strategy and architecture of large-scale, interoperable systems. Dr Fortunov is the leading author of the Microsoft Connected Health Framework Architecture and Design Blueprint – which offers a set of vendor-agnostic best practices and guidelines for building the next generation of interoperable e-Health solutions based on a service-oriented architecture (SOA) and industry standards – ranging from within healthcare organizations to regional, national and cross-agency systems.

FOWLIE ANDREW

Andrew Fowlie is Executive Manager Innovation in Health and Social Care. NHS Scotland, UK. Executive in the Scottish Health and Social Care Service working nationally on bringing innovation into practice. Leading convergence of activity through proactive collaboration between industry, academia and the NHS. Strong association with Life Sciences and economic development in Scotland aligning closely with European and Global interests. Social Work graduate with post graduate qualifications in Economics, Business Management and Primary Care.

FOX JOHN

Ph.D., Artificial Intelligence, Software Engineering, Cognitive Psychology, Medical informatics-

John Fox is an interdisciplinary scientist with strong theoretical and applied interests in computer science, artificial intelligence and medical informatics. After training in experimental psychology at Durham and Cambridge Universities and NATO post-doctoral fellowships in the USA and UK (MRC) he joined the Imperial Cancer Research Fund (now Cancer Research UK) in 1981 as a researcher in medical AI and Head of the then new computer service. In the latter role he introduced a number of technical innovations and his group provided the computing support which permitted M Waterfield's team to make the key discovery of the homology between PDGF and a simian sarcoma virus proto-oncogene.In 1987 he established an independent research laboratory in the Lincoln's Inn Fields Laboratories of ICRF. The group's research programme was explicitly multidisciplinary and it subsequently made significant contributions in basic computer science, AI and medical informatics, and developed a number of successful technologies which have been commercialised. He and his colleagues have published widely in computer science, cognitive science and biomedical engineering, and he was founding editor of the Knowledge Engineering Review (Cambridge University Press). Recent publications include a research monograph Safe and Sound: Artificial Intelligence in Hazardous Applications (MIT Press, 2000) which deals with the use of AI in safety-critical fields such as medicine.In 1996 they were awarded the 20th Anniversary Gold Medal of the European Federation of Medical Informatics for the development of PROforma, arguably the first formal computer language for modeling clinical guidelines and protocols, and associated software for delivering decision support and workflow management services at the point of care. In 1999 he led the spinout of InferMed Ltd from CRUK to commercialise clinical decision support and clinical trials management software.Over the last 10 years or so they and InferMed have developed a wide variety of PROforma applications in primary and specialist care. His group's clinical work has been primarily concerned with establishing a convincing body of evidence that the technology is effective, and they have now published 7 studies that demonstrate that (most are in oncology but primary care has also been an important focus). The company is focused on developing commercial applications so there is little published data. However, the Retrogram system for advising on anti-retroviral therapy for HIV+ patients and other applications was developed for a highly successful international trial sponsored by Hoffman la Roche and 100 guideline based decision support applications have been developed with New Zealand's Best Practice Advocacy Centre and are currently being rolled out to NZ's 4000 GPs.The lab's last quinquennial review at CRUK was in 2004, where their work was assessed overall as "internationally leading" with the PROforma development programme as "outstanding". This led to discussions with CRUK about setting up a new interdisciplinary collaboration (COSSAC) embedded in world class technical centres in Oxford and Edinburgh and offering stronger clinical links than were possible in the Lincoln's Inn Fields institute. At the beginning of 2007 he moved to take up a chair of Engineering Science in Oxford University.

FRASER S. F. HAMISH

Hamish S. F. Fraser, MBChB, MSc, FACMI, received his Bachelor of Science degree in Medical Science/Physiology and his MD from Edinburgh University. He earned his MRCP Medical Boards at the Royal College of Physicians of Edinburgh, along with a Masters degree in Knowledge based systems from Edinburgh University. At the time of his election, Dr Fraser was an Assistant Professor at Harvard Medical School and Associate Physician in the Division of Global Health Equity at Brigham and Women's Hospital. He also

served as a Research Associate with the Children's Hospital Informatics Program in Boston and Director of Informatics and Telemedicine, for Partners In Health, a not for profit foundation devoted to improving global health. Dr Fraser began his research career working with ACMI fellow William Long on the evaluation of an Artificial Intelligence program for heart disease diagnosis, and has since developed an active research and development program in healthcare technologies for developing nations. He has created systems to support teleradiology in Africa, multiply-drug-resistant TB treatment in Peru, and HIV treatment in Haiti. With colleagues at other US and international institutions, Dr Fraser has championed the development and deployment of the Open-MRS electronic medical records system platform in countries of sub-Saharan Africa, the Caribbean, and South America.

FRED ANA
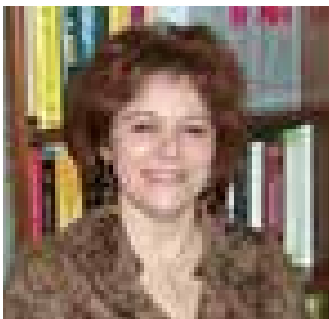
Ana Fred works at Instituto de Telecomunicações / IST, Portugal. She received the MS and PhD degrees in Electrical and Computer Engineering, in 1989 and 1994, respectively, both from Instituto Superior Técnico (IST), Technical University of Lisbon, Portugal. She is a Faculty Member of IST since 1986, where she has been a professor with the Department of Electrical and Computer Engineering, and more recently with the Department of Biomedical Engineering. She is a researcher at the Pattern and Image Analysis Group of the Instituto de Telecomunicações. Her main research areas are on pattern recognition, both structural and statistical approaches, with application to data mining, learning systems, behavioral biometrics, and biomedical applications. She has done pioneering work on clustering, namely on cluster ensemble approaches. Recent work on biosensors hardware (including BITalino – and ECG-based biometrics (Vitalidi project) have been object of several nacional and internacional awards, as well as wide dissemination on international media, constituting a success story of knowledge transfer from research to market. She has published over 160 papers in international refereed conferences, peer reviewed journals, and book chapters.

FREIMUTH ROBERT R.

Ph.D., Mayo Clinic ,USA. Robert Freimuth, Ph.D., works at the interface of medical informatics, bioinformatics and genomics to develop computational methods, tools and infrastructure that will speed the translation of advances in genomics to clinical practice. The long-term goal of Dr. Freimuth's research is to develop resources that make genome-guided therapy a routine part of clinical care. Dr. Freimuth's research includes designing scalable and semantically interoperable systems that are based on standardized ontologies and terminologies, information models, and structured data elements. These systems are essential for integrating the large data sets and diverse knowledge bases that form the foundations of personalized medicine. Dr. Freimuth is exploring methods for integrating genomic data into the Mayo Clinic electronic medical record (EMR) and developing clinical decision-support tools that enable physicians to understand and make use of a patient's unique genomic data. The initial focus of his work is in the area of cancer pharmacogenomics, cur-

rently one of the most promising applications of genome-guided therapy. To more successfully prevent, diagnose and treat disease, it's imperative to understand the molecular mechanisms of biological systems and the underlying pathophysiology of disease. However, each patient has a unique genetic background and is exposed to differing environmental factors that impact their risk of developing a disease or how they will respond to pharmacological treatment. Dr. Freimuth's research focuses on improving the ability to use genetic information in clinical practice and achieving the vision of personalized medicine. Ultimately, advances in this area will offer insights into new or improved therapeutic strategies and the identification of new drug targets.

FREY BRENDAN

Brendan Frey is the CEO and Co-Founder of Deep Genomics and a Professor at the University of Toronto. He has made fundamental contributions in the areas of machine learning and genome biology, and is widely known for his work on using machine learning to understand how genetic variation leads to disease. Dr. Frey has received numerous distinctions and is a Fellow of the Royal Society of Canada and a John C. Polanyi Fellow. He recently co-founded a University of Toronto spinoff, Deep Genomics, which is using machine learning to change the course of genomic medicine. Dr. Frey has consulted for several industrial research and development laboratories in Canada, the United States and England, and has served on the Technical Advisory Board of Microsoft Research. His former students and postdoctoral fellows include professors, industrial researchers and developers at universities and industrial laboratories from across Canada, the United States and Europe.

FRIDSMA B. DOUGLAS

Douglas B. Fridsma, MD, PhD, FACMI, is the Chief Science Officer and Director of the Office of Science and Technology in the Office of the National Coordinator for Health Information Technology. Prior to arriving at ONC, Dr. Fridsma was on the teaching staff in the Department of Biomedical Informatics at Arizona State University and, as a practicing internal medicine physician, had a clinical practice at Mayo Clinic Scottsdale. Dr. Fridsma completed his medical training at the University of Michigan in 1990, and his PhD in Biomedical Informatics from Stanford University in 2003. In his role at ONC, Dr. Fridsma is responsible for all programs that are focused on providing a foundation for interoperable health information exchange. He served on the Clinical Data Interchange Standards Consortium (CDISC) Board of Directors from 2005-2008, as well as the Health IT Standards Committee from 2009-2010. Dr. Fridsma currently serves as a board member of HL7 and the National e-Health Collaborative.

FRIED NAOMI

Naomi Fried, PhD, is Boston Children's Hospital's first Chief Innovation Officer. She leads the Innovation Acceleration Program, aimed at improving care quality and assisting the hospital in shaping the future of health care. The Innovation Acceleration program focuses on enhancing the innovation

culture by supporting strategic innovation initiatives, resourcing grass roots innovation, and identifying unmet innovation opportunities. Naomi oversees the Innovestment Seed Grant program and FastTrack Innovation in Technology Program. She lead the development of Boston Children's telehealth strategy. Previously, she was the Vice President of Innovation and Advanced Technology at Kaiser Permanente (KP) where she led an effort to identify and assess new and emerging health care technology and was involved in the start-up and governance of KP's Innovation laboratory, the Sidney R. Garfield Center for Health Care Innovation. Prior to this position, she was Managing Director of KP's Archimedes Project. Before KP, Naomi advised two venture capital firms on life science and health care information technology investments; served as the General Manager and Vice President for Business Development of 1747, Inc., which conducts online clinical trials for new drugs; and was instrumental in the formation of the medical informatics internet start-up company (e-SKOLAR, formerly SHINE) spun out of Stanford School of Medicine, serving as interim President for its first year. Naomi has a BS in Chemistry from the University of California, Berkeley and a PhD in Materials Science from MIT.

FRIEDE ANDREW

Andrew Friede, MD, MPH, FACMI, joined Cerner Corporation in 1997 and serves as a Physician Executive. He completed his medical training at Johns Hopkins (MD, 1981), an internship in pediatrics at the Children's Hospital of Pittsburgh, and a residency in preventive medicine at Harvard School of Public Health (MPH, 1984). Cerner is a worldwide provider of clinical and management information systems and services to healthcare. Dr. Friede's current focus is on developing research products, often in collaboration with Cerner clients, to evaluate the impact of information systems in transforming health care. In particular, he is interested in the development of new database systems for genomics, the design of expert systems for pneumonia, heart failure, anti-retroviral drugs, and pressure ulcers; and using clinical data to study outcomes and improve safety. He also helps health care organizations strategize about their future information system needs, and collaborated on the installa-

tion and custom configuration of Cerner's products. His particular area of consulting interest is in developing information systems for research. In 1984, he joined the Epidemic Intelligence Service at the Centers for Disease Control and Prevention, and stayed on as a medical epidemiologist. In 1987, he joined CDC's Information Resources Management Office, where he led a large group in the development of CDC Wonder, an integrated information and communications system that provides access to some 30 databases for 20,000 users and provides specialized features used by many CDC surveillance programs. CDC Wonder, uses a novel systems architecture that was specifically developed for public health information systems by the CDC Wonder team and includes specialized end-user communication and graphing software. Dr. Friede also served as a principal participant in the CDC INPHO (Information Network for Public Health Officials) project, which aims to develop a national information network for public health. Dr. Friede has served as a consultant to the United Nations for family planning and clinical information systems in Madagascar and to the World Bank on statistical and information systems for China; he was the chief editor of the CDC Prevention Guidelines and has served on innumerable CDC and National Library of Medicine special emphasis panels. From 1998 to 2000, he served on the National Academy of Sciences/IOM workgroup, which

produced the report "Networking Health: Prescriptions for the Internet."

FRIEDMAN CAROL

Carol Friedman, PhD, FACMI, received her bachelors degree from City College and her Masters and Ph.D. in Computer Science from New York University. She is a Professor of Computer Science at Queens College and is also on the faculty of the Center for Medical Informatics at Columbia.Dr. Friedman is an internationally recognized authority on medical language processing. Her MedLEE system for analyzing text reports was put into operational use at New York Presbyterian Hospital, where it was one of the first such systems to have had a demonstrated impact on improving patient care, by interpreting radiology reports for evidence of the need for respiratory isolation. She is an active researcher in the area of controlled vocabulary development and structured knowledge representation, and a longstanding contributor to

AMIA meetings. She is a member of the Association for Computational Linguistics, the Association for Computing Machinery, and the American Association for Artificial Intelligence..

FRIEDMAN H. ROBERT

Robert H. Friedman, MD, FACMI, trained as a physician at Harvard and Stanford. Dr. Friedman spent a few years with Octo Barnett at Massachusetts General Hospital (where he contributed to the early development of Computer-Stored Ambulatory Record, COSTAR) before moving in 1974 to a faculty position in the Department of Medicine at Boston University. Within a few years, he had formed the Medical Information Systems Unit (MISU), an important center for innovation in applied clinical systems that continues to this day. Dr. Friedman is now professor of medicine and professor of public health at Boston University while he continues to direct the MISU. The MISU was

one of the first research and development units, in academia or elsewhere, that created systems to help patients and consumers make important lifestyle and other health behavior changes. The Unit has been a pioneer in the development of automated systems for patients with chronic disease to help them self-manage their conditions, to assist their clinicians in monitoring their conditions, and identifying clinical problems that require medical intervention. The research has demonstrated that chronic disease management systems lead to improved health outcomes and reduced health services utilization and costs. This research has stimulated the development of a new subdiscipline: behavioral informatics. Dr. Friedman has also led important research efforts in the integration of the structure of a clinical trial within an electronic medical record (EMR), enabling the system to instantiate specific protocols and to execute them by monitoring the EMR of participating study patients and then alerting participating clinicians when appropriate. A frequent presenter at our annual AMIA Symposia, Dr. Friedman offers a unique union of clinical excellence, scholarly leadership, and practical insights that have been important to the evolution of our field.

FRIEDMAN P. CHARLES

Charles Friedman, PhD, FACMI, joined the University of Michigan as Professor and Director of the health informatics program after eight years of work for the federal government, prior to which he served for 26 years as a university faculty member and administrator. Most recently, Dr. Friedman held executive positions at the Office of the National Coordinator for Health IT (ONC) in the U.S. Department of Health and Human Services. From 2007 to 2009 he was Deputy National Coordinator and from 2009 to 2011 he was ONC's Chief Scientific Officer. While at ONC, Friedman oversaw a diverse portfolio of nationwide activities that included a "learning health system" supporting research, public health, and quality improvement; the health IT workforce development program; the SHARP health IT research program; initiatives in usability and clinical decision support; evaluation of ONC's programs; and international cooperation for eHealth. He was the lead author of the first national health IT strategic plan which was released in June of

2008. From 2003 to 2006 he was a senior scholar at the National Library of Medicine and from 2006 to 2007, he served as Associate Director for Research Informatics and Information Technology of the National Heart, Lung and Blood Institute, also serving as the Institute's chief information officer. Prior to his work in the government, Dr. Friedman was Professor, Associate Vice Chancellor for Biomedical Informatics, and Founding Director of the Center for Biomedical Informatics at the University of Pittsburgh. He was responsible for management of information resources across the university's six schools of the health sciences. The center Friedman established at Pitt subsequently became an academic department. He also served for many years in a range of faculty and administrative roles at the University of North Carolina at Chapel Hill. He was a professor in the departments of biomedical engineering and family medicine in the School of Medicine; he directed the Office of Educational Development and served as Assistant Dean for Medical Education and Medical Informatics.

FRISSE MARK

Accenture Professor of Biomedical Informatics and Vice Chair of Business Development Mark Frisse, MD, MS, is the Accenture Professor of Biomedical Informatics in the School of Medicine at Vanderbilt University. His work focuses on the intersection between health care informatics, economics, policy, and health care transformation. His primary research is directed toward an understanding of economic sustainability and toward the development of technical and administrative measures to enable effective care coordination and to ensure the integrity of security and privacy efforts. In Tennessee, Dr. Frisse led the development and oversight of a six-year federal- and state-sponsored effort to create and operate a health information exchange for the greater Memphis area. This exchange currently has over 7 million records covering the care of over 1.2 million individuals and is now managed completely by a Memphis-based board and a commercial vendor. He has also worked with other states and communities to devel-

op their HIT programs. He also directed the the executive-level Masters of Management in Health Care program at the Vanderbilt Owen Graduate School of Management. A board certified internist, Dr. Frisse was a Professor of Medicine and Associate Dean at Washington University School of Medicine and he served as academic director of the Health Services Executive MBA program at the John M. Olin School of Business. In his capacity as Associate Dean, he served as the Director of the Bernard Becker Medical Library and established the School's first common technology infrastructure supporting networks, email, educational computing, and digital library services. He founded the Medical Informatics Laboratory within the Department of Medicine and served as a Director of an National Library of Medicine Training Program in Biomedical Informatics. In collaboration with the BJC System, he and his colleagues developed several innovative applications for adverse drug event prevention. He also developed early hypertext systems and directed an IAIMS Planning Grant. Prior to assuming his position at Vanderbilt, Dr. Frisse was Vice President in First Consulting Group's Clinical Transformation Practice working to advance quality and safety through the application of technology, process redesign, evaluation techniques, and evidence-based practice. His experience includes quality and financial analysis, key metrics assessment, clinical visioning,

strategy, vendor selection, pre-implementation planning, and clinical quality program alignment. In addition to participating in numerous short-term planning and evaluation engagements, Dr. Frisse served as an operational Vice President overseeing two large-scale transformation and clinical systems implementation efforts. Prior to joining First Consulting Group, Dr. Frisse was Chief Medical Officer and Vice President, Clinical Information Services at Express Scripts, one of the Nation's largest independent pharmaceutical benefits management concerns. He served as general manager for their Practice Patterns Science subsidiary - a firm applying integrated medical and pharmaceutical claims data to reduce practice variation to a client list that included Blue Cross / Blue Shield of Missouri and Humana. He participated in the formation of RxHub - a new approach to electronic transmission of prescriptions from physicians to pharmacies. He was also responsible for the Express Scripts' DrugDigest consumer Web site and was active in the development of Express Scripts' consumer e-business strategy. Dr. Frisse received his MD and MBA from Washington University and received a master's degree in Medical Information Science from Stanford University. Active in medical informatics for 20 years, he is the author of approximately 60 scientific papers, reviews, and book chapters on medical informatics. He served as a consultant for numerous

government agencies and health care concerns. He was a member of the National Research Council's Committee on Enhancing the Internet for Health Applications and more recently was an author of a national report on ePrescribing prepared by the eHealth Initiative. He also has authored works on laboratory data exchange interoperability and the financial impact of e-prescribing. He serves on the Board of the NCPDP Foundation. Previously, he served on the boards of the eHealth Initiative and SureScripts, LLC. He is a member of the National Academy of Medicine.

FRITZ FLEUR

Fleur Fritz earns a general qualification for university entrance at the Gymnasium Marienhöhe in Darmstadt in 1998. Until 2005 she studies in information management at the Universität Karlsruhe, Università di Bologna (Italien) und Massey University (Neuseeland). During the period of 2006-2009 works as Healthcare IT-Consultant and Service Team Lead, AGFA HealthCare GmbH granting of a doctorate rer. medic. at the West. Wilhelms-Universität Münster Dr. Fleur Fritz is a post-doctoral

researcher on process-oriented health information management at the Institute of Medical Informatics from the University of Münster in Germany.

G

GABRILOVICH EVGENIY

Evgeniy Gabrilovich is a senior staff research scientist at Google, where he works on knowledge discovery from the web. Prior to joining Google in 2012, he was a director of research and head of the natural language processing and information retrieval group at Yahoo! Research. Evgeniy is an ACM Distinguished Scientist, and is a recipient of the 2014 IJCAI-JAIR Best Paper Prize. He is also a recipient of the 2010 Karen Sparck Jones Award for his contributions to natural language processing and information retrieval. Evgeniy currently serves as a program co-chair for WSDM 2015.

GADD S. CYNTHIA
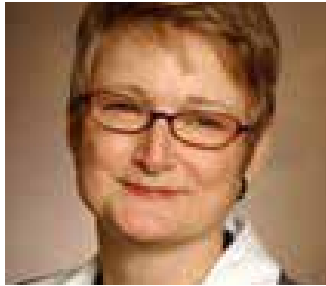
Cynthia S. Gadd, PhD, FACMI is a Professor of Biomedical Informatics and Vice-Chair for Education. She joined the Department of Biomedical Informatics at Vanderbilt University in September 2005. Dr. Gadd earned her doctorate in Information Systems from the University of Pittsburgh in 1995 and her masters in Biomedical Engineering/Informatics from Duke University in 1998. Dr. Gadd has published numerous articles in her primary area of research, implementation and evaluation of integrated clinical information systems in large health care delivery networks. She has conducted evaluations of a diverse range of health information technologies, including: an integrated, multi-site vendor EHR; web-based guideline-based decision support system; multi-media EHR for outpatient oncology practice; bioscience collaboratories; hand-held computing use to support a residency program; and teleradiology and telepathology initiatives. She also directed the evaluation of the Pittsburgh IAIMS initiative. Dr. Gadd has a continued interest in promoting and conducting information system evaluations that address system functionality and effectiveness, as well as user and organizational impacts. Gadd's research interests also include the development and evaluation of innovative approaches for biomedical informatics education and training to meet the needs of health care in the United States and globally.

GAGNON MARIE-PIERRE

Public Health, Primary Care, Nursing Science PhD, Laval University Canada. Marie-Pierre Gagnon obtained her PhD in Community Health from Université Laval in 2003. She completed a postdoctoral fellowship at the Catalan Agency for Health Technology Assessment in 2004-2005, followed by another postdoctoral fellowship at the Health Telematics Unit, University of Calgary, in 2005-2006. She is currently an associate professor at the Faculty of Nursing at Université Laval. In 2012, she was awarded the Tier 2 Canada Research Chair in Technologies and Practices in Health. Her research program focuses on the use of scientific evidence in the implementation of innovative

technologies, particularly Information and Communication Technologies (ICT) in healthcare. Her other research interests include health technology assessment (HTA) and its impact on decision making, the study of individual, professional and organizational determinants of ICT integration in the healthcare system, patient participation in healthcare decisions, and best practices in knowledge translation and application.

GALLAHAN DANIEL

Daniel (Dan) Gallahan is Deputy Director of the Division of Cancer Biology at the National Cancer Institute (NCI) and helps lead the Division in its mission of supporting and facilitating basic cancer biology research. His primary focus at NCI is the application of integrated approaches, tools, and data sets to understanding cancer. He established and still oversees the Division's efforts in cancer systems biology, the latest of which is the Cancer Systems Biology Consortium (CSBC). As Deputy Director, he also assists in planning and implementing the NCI's overall efforts in genomics,

proteomics, structural biology, and nanotechnology, and is a liaison with other government and commercial entities in the areas of technology and systems biology. Dr. Gallahan is a molecular and cancer biologist with broad expertise in the fields of systems biology, breast cancer, technology development, and science policy. He was trained in Molecular Biology and Biochemistry at the University of Maryland, with additional post-doctoral training at the NIH and the German Cancer Research Center. His post-doctoral work included training in cancer biology, proteomics, and bioinformatics. Prior to joining the Division of Cancer Biology, he had an active NCI intramural career in the Laboratory of Tumor Immunology and Biology.

GALVIN BRIAN

Brian Galvin is Senior Information Specialist/Head of Irish National Focal Point to EMCDDA. He is also Senior Information Specialist/Head of Irish National Focal Point to EMCDDA. Health research board, chair of the International Federation of Libraby Associations. Manager of the National Documentation Centre on Drug Use (NDC), Head of Irish Focal Point to the European Monitoring Centre on Drugs and Drug Addiction managing Ireland's national report on the drugs siutation, Managing editor of the HRB's drugs and alcohol research bulletin, Drugnet Ireland, and Manager of the HRB's Knowledge Centre.

GAMACHE ROLAND

Roland Gamache, PhD, is the Director of Public Health Informatics at the National Association of County and City Health Officials (NACCHO). Prior to his arrival at NACCHO, he was the director of the State Health Data Center at the Indiana State Department of Health (ISDH), where he worked for 15 years. He also served as the director of the Public Health Preparedness Program at the ISDH for 2 years during this time. Dr. Gamache's research focuses on the application of public health data analysis in the areas of public health assessment and evaluation, policy development, data systems integration, strategic planning, quality improvement, and public health preparedness activities. Dr. Gamache's recent work is in the development of integrated data systems for public health data needs. This work places an emphasis on database design for the improvement of analysis time, integration of public health systems with community-based health information exchanges, and improvement of the dissemination of public health information in an effort to measure and improve the health resiliency of the community. Dr. Gamache received his BS in chemistry from the University of Lowell, MBA. from Indiana University, and a PhD in chemistry from Purdue University.

GARBER LARRY

Larry Garber is Medical Director for Informatics, Reliant Medical Group. Dr. Garber is a practicing Internist and the Medical Director for Informatics at Reliant Medical Group (formerly known as Fallon Clinic, and a member of Atrius Health). He has had decades of experience and success in Medical Informatics. Shortly after joining Reliant in 1986, he led the practice through an extensive redesign of their paper medical record system. Twenty years later, he successfully led the replacement of these paper records with Epic's Electronic Health Record system for the group's 1 million visits each year. Dr. Garber is Acting Chair of the Massachusetts eHealth Collaborative's Executive Committee, a member of the Massachusetts State Health Information Technology Council, a member of ONC Policy Committee's Health Information Exchange Workgroup and Privacy & Security Tiger Team. He has been Principal Investigator on $3.5 Million AHRQ and HHS/ONC grants to develop innovative Health Information Exchanges. Dr. Garber also co-chairs the ONC S&I Framework Longitudinal

Coordination of Care Workgroup which is using an evidence-based approach to update the HL7 Consolidated CDA to meet the needs of care transitions and care planning. Dr. Garber has long been a proponent for patient safety, having co-authoring articles in JAMA and JAMIA on Adverse Drug Events in the ambulatory setting. Dr. Garber is recipient of the 2010 eHealth Initiative eHealth Advocate Award, the 2011 Health Data Management EHR Game Changer Award, an ONC Health IT Fellow, and led the HIMSS 2011 Davies Award-winning implementation of Reliant's EHR system.

GARDNER M. REED

Reed M. Gardner, PhD, FACMI is one of the principal developers and evaluators of the medical expert system known as HELP (Health Evaluation through Logical Processing). He previously served as a co-director of medical computing at LDS, Cottonwood, and Alta View Hospitals in Salt Lake City, Utah. Dr. Gardner received a Bachelor of Science degree in electrical engineering from the University of Utah in 1960. In 1968 he received a PhD in Biophysics and Bioengineering from the University of Utah. Dr.

Gardner's primary academic and research interests are in hospital informatics systems, computerized medical decision-making, computerization of critical care, automation of nursing processes, medical informatics education, and public health informatics. He is author or co-author of more than 350 articles in the fields of Medical Informatics and Bioengineering. Dr. Gardner is currently on the editorial board of Methods of Information in Medicine, and has been a journal editor and on editorial boards of Critical Care Medicine and other critical care journals, as well as the Journal of American Medical Informatics Association (JAMIA). He also served as editor-in-chief of International Journal of Clinical Monitoring and Computing. Dr. Gardner is a Fellow of the American College of Medical Informatics. He is a past president and served on the board of directors of the American Medical Informatics Association. He is the 2005 recipient of the Morris F. Collen Award of Excellence from the ACMI.

GARFIELD EUGENE

Eugene Garfield (1925-2017) is an American scientist, one of the founders of bibliometrics and

scientometrics. He received a PhD in Structural Linguistics from the University of Pennsylvania in 1961. Dr. Garfield was the founder of the Institute for Scientific Information (ISI), which was located in Philadelphia, Pennsylvania. He founded the ISI in 1960 and developed an indexing system for science literature, based on the analysis of citations used within a given work. Works earn an "impact factor," a measure of citations to other science journals that serves as an indicator of their importance in the field. The more citations in reputable journals, the higher the impact factor. The ISI sold subscriptions to their publication the Science Citation Index, and over time grew to include the Social Sciences Citation Index (SSCI) and the Arts & Humanities Citation Index (A&HCI). These databases now form the foundation of the online research tool called the Web of Knowledge. He is responsible for many innovative bibliographic products, including Current Contents, the Science Citation Index (SCI), and other citation databases, the Journal Citation Reports, and Index Chemicus. He is the founding editor and publisher of The Scientist, a news magazine for life scientists. In 2007, he launched HistCite, a bibliometric analysis and visualization software package. Following ideas inspired by Vannevar Bush's famous 1945 article "As We May Think", Garfield undertook the development of a comprehensive citation index showing the propagation of

scientific thinking; he started the Institute for Scientific Information in 1955. The creation of the Science Citation Index made it possible to calculate impact factor, which measures the importance of scientific journals. It led to the unexpected discovery that a few journals like Nature and Science were core for all of hard science. The same pattern does not happen with the humanities or the social sciences. Garfield's work led to the development of several Information Retrieval algorithms, like HITS and Pagerank. Both use the structured citation between websites through hyper-links.

GASSERT A. CAROLE

Carole A. Gassert, PhD, RN, FACMI, is the Informatics Nurse Consultant and Advisor for Informatics and Distance Learning in the Division of Nursing, Bureau of Health Professions, Health Resources and Services Administration. Dr. Gassert received a BS in Nursing from the University of Virginia, a Masters of Nursing from the

University of Washington, and a PhD in Nursing with a minor in instructional design from the University of Texas in Austin. Dr. Gassert has been a leader in establishing informatics as a specialty practice within nursing. Her initial informatics work was to implement a bedside clinical information system as a cardiac surgical clinical nurse specialist to link the cardiac-thoracic surgical suites and intensive care units. After her doctoral work in informatics, she developed and coordinated the first nursing informatics doctoral programs in the world, establishing standards for graduate nursing informatics education. She also developed a summer institute to help faculty and practicing nurses learn more about informatics. She has led an expert panel in establishing a national agenda for nursing informatics and developed initiatives in distance learning, telehealth, and credentialing. Dr. Gassert has recently been inducted into the American Academy of Nursing. Her honors include recognition by the National League for Nursing for her contributions to nursing informatics education and the Administrator's Special Citation from Health and Human Services for her work in informatics. Dr. Gassert has served on national committees for the AMIA, IMIA, the American Nurses Association, and Sigma Theta Tau International. She is currently on the Nursing Informatics 2003 planning committee and is working with a task force to revise the

scope of practice and standards for nursing informatics.

GATEWOOD LAEL

Professor Emeritus, Department of Laboratory Medicine and Pathology; Member of Graduate Faculty, Institute for Health Informatics (IHI) Dr. Gatewood has been instrumental in establishing the University of Minnesota as a leader in health informatics. She and her colleagues have produced cutting-edge research and developed innovative technologies in the fields of micropopulation simulation modeling, clinical decision-making and laboratory information systems, and microbial biotechnology databases. Gatewood was key in establishing the National Micropopulation Simulation Resource, a pioneering individual-based modeling resource for epidemiology. Over the years she has worked with informatics colleagues and doctoral students to develop simulation programs for modeling genetic, chronic, and infectious diseases, neural networks, and social networks. Gatewood's current research is focused on pathology informatics, in particular in incorporating

anatomical and surgical pathology into a form of informatics that will allow these fields to be integrated with clinical pathology and laboratory information systems. This work involves bringing informatics to bear in specimen tracking through bar coding including the separation of specimens into paraffin blocks or slides, the staining processes used for specimen analysis, and molecular testing, a rapidly growing area for anatomic as well as clinical pathology. The integration of all diagnostic testing systems reporting through the Epic electronic health record system is vital for providing precise, individualized treatment for patients. Clinicians are calling for pathologists to conduct more molecular tests on site rather than sending specimens to a reference lab and to include results of the tests in their final report. Clinician requests for molecular testing can affect specimen procurement procedures and tissue quantity provided through core biopsy or fine-needle aspiration. Challenges also exist in accurately conveying pathology testing results via Epic in language that is umambiguous to clinicians. Gatewood and colleagues are developing co-path middleware for Epic that will serve as an "add on" with features to facilitate pathology and laboratory systems reporting. In time these features will include a genomics information system and a graphics archiving system for whole-slide imaging. In the education and training arena, pathology and informatics professional

organizations and educators including Gatewood are working to elevate pathology informatics and set standards for the rapidly changing field. The Accreditation Council of Graduate Medical Education (ACGME) has set graduation milestones in pathology informatics that will be necessary to meet for further training through fellowships and board certification in the field. The College of Pathology, the Association of Pathology Chairs, and the Association for Pathology Informatics have created PIER (Pathology Informatics Essentials for Residents). PIER is a program designed to provide informatics training to residents and help them meet ACGME informatics milestone requirements.

GATHARA VICTOR

Victor Gathara is ICT Consultant (eHealth). Victor enjoyed working for more than 14 years for the British Government. In 1997 Victor joined the British High Commission in Kenya as Systems Administrator at a time when the British Government was moving to computerise its systems. Victor led the drive to

introduce ICT as a key factor of business in the High Commission, developing and installing new systems to replace functions that had hitherto been manual. His performance led him to be invited to the UK to facilitate a high level session on Change management within the UK Foreign and Commonwealth Office (FCO) being one of only two non UK staff in the FCO invited to this meeting. A successful time in this position led to the launch of his ICT consultancy, Vimak Company Limited, in 2011. As consultant, Victor is currently engaged by DFID to help design the eHealth components of its new family planning and maternal health programmes. He is also assisting the Kenya Government to develop its action plan for the implementation of the Kenya National eHealth Strategy 2011-2017.

GATZOULIS OUKIANOS

Oukianos Gatzoulis is Policy Analyst. European Commission, Directorate General–Health Food, and Safety. Loukianos Gatzoulis, PhD, has a background in Biomedical Engineering and Wireless Communications. He received his PhD from the University of Edinburgh, UK, for work on intravascular ultrasound imaging. He subsequently worked in the wireless telecoms sector in the UK and as post-doc research fellow at the University of Strathclyde, UK. Loukianos joined the European Commission

in 2005, as Scientific Officer in the ICT for Health Unit of DG Information Society and Media. He was responsible for eHealth research activities in the area of Personal Health Systems. Currently, as a Policy Analyst in DG Health and Food Safety, he is involved in the activities of the European Innovation Partnership on Active and Healthy Ageing. Loukianos' scientific interests include telehealth, integrated care, medical imaging, sensor networks, wireless technologies and robotics.

GEISSBUHLER ANTOINE

Antoine Geissbuhler is a Professor of Medicine, Chairman of the Department of Radiology and Medical Informatics at Geneva University, Director of the Division of eHealth and Telemedicine at Geneva University Hospitals. He is also President of the executive committee of the Health-On-the-Net Foundation, and President of the International Medical Informatics Association (2013-2015). Dr. Geissbuhler graduated from the Geneva University School of Medicine in 1991 as a Philips European Young Scientist first award laureate. He

received his doctorate for work on three-dimensional reconstruction of positron emission tomography images. After that he trained in internal medicine under the direction of Prof. Francis Waldvogel. After completing a post-doctoral fellowship in medical informatics at Vanderbilt University, he rose to Associate Professor of Biomedical Informatics and Vice-Chairman of the Division of Biomedical Informatics at Vanderbilt University Medical Center. There Dr. Geissbuhler worked primarily on the development of clinical information systems and knowledge-management tools. During his time at Vanderbilt, he was the primary developer of the WizOrder computerized Physician Order Entry system, which uses integrated decision support and is now being marketed commercially. In 1999, Dr. Geissbuhler returned to Geneva to head the Division of Medical Informatics in Geneva University Hospitals and School of Medicine. Dr. Geissbuhler's current research focuses on the development of innovative computer-based tools for improving the quality and efficiency of care processes, at the local level of the hospital, at the regional level of a community healthcare informatics network, and at the global level with the development of a telemedicine network in Western Africa. He has been named an international associate of the American College of Medical Informatics. Author of more than 120 original scientific publications, his current research focuses on

the development of innovative, knowledge-enabled information systems and computer-based tools for improving the quality, safety and efficiency of care processes, at the local level of the hospital, the regional level of a community healthcare informatics network, the implementation of the national eHealth strategy for Switzerland, at the global level with the Health-On-the-Net Foundation He is also leading an effort by Geneva University Hospitals to develop a world-class medical tele-expertise network.

GELBURD ROBIN

Robin Gelburd is the founding President of FAIR Health, Inc., a national, independent not-for-profit corporation which has as its mission bringing transparency and fairness to healthcare costs and health insurance information. It houses the nation's largest independent healthcare claims collection which currently totals in excess of 18 billion claims, representing the healthcare experience for over 150 million covered lives. FAIR Health achieves its mission through the dissemination of comprehensive data products and custom analytics drawn from its vast data repository, the availability of its free, award-winning consumer educational materials and cost look-up tools, and a robust research platform to support policymaking and health systems research. FAIR Health also serves as the official data source to support a variety of state health programs including

Workers' Compensation, auto liability, and dispute resolution programs; it recently was officially designated as the only source of data to support groundbreaking legislation in New York which offers protections against surprise out-of-network bills and bills for emergency care, among other provisions. Ms. Gelburd is invited to speak at forums around the country on the topics of consumer engagement, cost transparency, and "making data actionable.

GELL GÜNTHER

Günther Gell (1941-) Prof. emeritus for Medical Informatics and Dean emeritus for Doctoral Studies at the Medical University of Graz, Austria, Honorary Fellow of the EFMI, Dr. phil for Theoretical Physics of Univeristy of Graz. G. Gell started work in Medical Informatics with the development of documentation systems for Pathology and Radiology based on free text in 1968. Subsequently Medical Information Systems became the focus of his scientific and practical work including all the steps/processes oft the life cycle of such systems: planning, concept, implementation, introduction (for clinical routine use), main-

tenance and finally shutdown or transit to a new system. All of these steps have been the subject of scientific analysis resulting in numerous publications in international scientific papers. The goal was always to produce systems that have an impact on clinical medicine supporting and integrating patient care, routine operation and scientific research. Pioneering work was the development of large scale integrated Picture Archiving, Communication and Storage Systems (PACS). Besides his scientific and routine work (being responsible for the routine operation of clinical information systems) he was active in the organization and definition of Medical informatics as a scientific discipline and as an organizational entity in health care. He founded the Working Group (Arbeitsgemeinschaft) for Medical Informatics in Austria which became the Austrian member in EFMI and IMIA. He was for many years the Austrian representative in EFMI and IMIA and also a Board member (treasurer) of EFMI. He was a member of the program committee of many international conferences, a member oft he editorial board of: The International Journal of Medical Informatics, der Radiologe and Methods of Information in Medicine. He served as a reviewer and evaluator of EU and national projects and also in different standardization bodies (CEN, ACR-NEMA). On the national scale he was member of advisory commissions of the government concerning medical informatics

in such topics as: telemedicine, standardization, PACS and data protection (how to balance the needs of patient privacy, patient care, research and public health in particular with respect to the introduction of lifelong electronic health records).

GEORGIOU ANDREW

Andrew Georgiou is a Senior Research Fellow at the Center for Health Systems and Safety Research, part of the Australian Institute of Health Innovation, University of New South Wales. Andrew has a broad range of research interests and has published widely in the areas of aged care, pathology and health informatics, evaluation, quality of care and health outcomes measurement. Andrew is currently a member of the Editorial Board of the International Journal of Medical Informatics.

GERAGHTY ESTELLA

Estella Geraghty is Chief Medical Officer and Director of Health Solutions. Esri, USA. where she leads the health and human services team, focusing on the improvement of health though strategic use of geographic information systems. Previously, she was the Deputy Director of Health Statistics and Informatics with the California Department of Public Health. She holds an MD, and Master's degrees in Medical Informatics and Public Health from UC Davis. She is board certified in internal medicine.

GERZER RUPERT

Rupert Gerzer (1950-), MD, PhD works at Organization or Center, Institute of Aerospace Medicine, German Aerospace Center. Prof Gerzer is Medical Doctor. He is head of the DLR Institute of Aerospace Medicine (www.dlr.

de/me) in Cologne, Germany, and Professor of Aerospace Medicine at Aachen University since 1992. He is trustee to the International Academy of Astronautics from 2003 to 2013 is Co-Editor Life Sciences of Acta Astronautica, member of the Swedish National Space Board 2010-2013, chairman, Science Council of the City of Cologne 2012-2013 and head of the University Council of the University of Applied Sciences Bonn-Rhein-Sieg from 2006 to 2016. He is member of the Medical Advisory Board to the German Minister of Defense since 2008. He served as President of the German Society of Aerospace Medicine from 1999 to 2001 and of the German Society for Travel Medicine from 2006 to 2009. He was Vice President of the German Society for Health Telematics from 1999 to 2005. He received the Life Sciences Award of the International Academy of Astronautics in 2003 and the Leonov Medal of the Association of Space Explorers in 2013.

GIUSE A. DARIO

Dario A. Giuse, PhD, MS, FACMI, is Associate Professor of Biomedical Informatics and Associate Director of the Informatics Center, Vanderbilt University Medical Center; and Associate Professor of Computer Science in the Vanderbilt University School of Engineering. Dr. Giuse received the Dr. Ing. ("Dottore in Ingegneria") degree from the Politecnico di Milano, Milan, Italy in 1979. He also received an MS degree (Pure and Applied Mathematical Logic) from Carnegie Mellon University in 1993. After joining the faculty of the School of Medicine at Vanderbilt University, he spearheaded the effort to implement the StarChart electronic patient record system. The system provides an integrated, longitudinal patient record that contains all lab results, radiology reports, discharge summaries, problem lists, clinic notes, letters, echocardiography, cardiac catheterization, and pulmonary function test reports for both inpatient and outpatient encounters. The system is used interactively via a Web-based front-end for day-to-day clinical patient care, and as the back-end repository for automated decision support tools. Before coming to Vanderbilt in 1994, Dr. Giuse was an adjunct faculty member at the University of Pittsburgh Medical Center. There, he served as the main architect of the QMR-KAT knowledge acquisition tool, the first knowledge editor to be used for large-scale, multi-center diagnostic medical knowledge acquisition. With his colleagues at the University of Pittsburgh, he conducted a systematic evaluation of the costs of long-term maintenance of medical knowledge bases, documenting statistically significant inter-rater reproducibility for the extraction of medical knowledge from the literature. Dr. Giuse became a member of Sigma Xi in 1984. He serves on the editorial boards for Artificial Intelligence in Medicine and Computer Methods and Programs in Biomedicine, Dr. Giuse has served as a member of the AMIA Bylaws Committee, as well as co-chair of Working Group 10 (Hospital Information Systems) of the IMIA.

GIUSE B. NUNZIA

Nunzia B. Giuse, MD, MLS, FACMI, is Associate Professor of Biomedical Informatics and Director of the Eskind Biomedical Library at Vanderbilt University Medical Center. She received her MLS from the University of Pittsburgh School of Library and Information Science after earning an MD at Universita' degli Studi di Brescia, Brescia, Italy. Prior to coming to Vanderbilt in 1994, Dr. Giuse established herself at the University of Pittsburgh as an independent researcher in the area of multi-center medical knowledge base acquisition strategies. In her current position, Dr. Giuse has pioneered the application of models from the adult learning research literature to continuing professional education within the library. She has also pioneered the idea of actively involving the library in VUMC clinical activities, and has gained national recognition for developing the "Informationist" model. Dr. Giuse currently chairs the Medical Informatics Section, Medical Library Association and has chaired the Medical Informatics Section/MLA Career Develop-ment Grant Jury. She is currently a member of the

Journal of the American Medical Informatics Association Editorial Board. In addition, she serves as a member of the Board of Scientific Counselors, Lister Hill Center, National Library of Medicine.

GLENNIE HENRY

Henry Glennie, MD, FRCS, FRACS, MPP, MBA is Chief Operating Officer and Senior Medical Advisor, Business Intelligence, Medilink, Australia Pty Ltd. Dr Henry Glennie is an otolaryngologist-head and neck surgeon in Queensland, Australia who combines his surgical practice with his position as Chief Operating Officer and Senior Medical Advisor, Medilink Australia Pty. Ltd. He is in the forefront of big data analysis in the health sector and consults to various companies providing business intelligence to hospitals throughout Australia as well as the United Kingdom and Ireland. A state-of-the-art program is currently in the late stages of development which accurately measure the cost of services combined with quality assurance algorithms to achieve optimal cost efficiency.

GOGIA BHUSHAN SHASHI

Shashi Bhushan Gogia (1955-), MD, PhD, earned MS (General Surgery) passed in December 1981 from A.I.I.M.S. New Delhi and MBBS cleared in 1977 [internship 1978] from A.I.I.M.S. New Delhi. He specialized in Plastic surgery and Medical informatics and research in Lymphoedema. He worked at Sanwari Bai Surgical Center Rajinder Nagar, New Delhi, Indian Spinal Injuries Center, Vasant Kunj, New Delhi and BL Kapur Memorial Hospital, Karol Bagh, New Delhi. His special interest are: Plastic Surgery, Hand Surgery & Lymphoedema, Medical Informatics, Telemedicine. Dr. Gogia was involved in: Organizing Chairperson APAMI 2014; as President Elect Asia Pacific Association for Medical Informatics; as Co- Chairperson of Working Group (WG) of Telehealth – IMIA; Past President of Indian Association of Medical Informatics; Founder President of S.A.T.H.I. (Society for Administration of Telemedicine and Healthcare Informatics); in Organizing APAMI 2014 and consequently next President Elect for 2015-2016. Title of his thesis is "Role of IPEC in the Treatment of Filarial Lymphoedema of the

Extremities" submitted during post graduation at AIIMS. He designed medical equipment for the treatment of Elephantiasis and associated therapeutic modalities, post malignancy edema and DVT called "Vipel Compression System". Also dr. Gogia written A Book "Management of Lymphoedema in Tropical Countries". He published a lot of papers in the fields: Hand Surgery, Lymphology and Medical Informatics delivered in over 150 national, international and specially organized meets and workshops. He made software for healthcare establishments – Medic Aid and Rheum Aid. This has recently been awarded as the best IT project implementation among SME center for 2012 by PC Quest magazine and innovated an Indian inexpensive variant of the NPWT (Negative Pressure Wound Therapy) machine named SLOVAC. Also, he was involved in setting standards for India - Member of the standards committees (MHD 16 for Wound care and Bandages, as well as MHD 17 Healthcare Informatics and EMR) of BIS - Bureau of Indian Standards.

GOLDBERG PAMELA

Pamela Goldberg is CEO, Massachusetts Technology Collaborative in USA, an economic development organization focused on catalyzing technology innovation throughout the state. The Mass Tech Collaborative brings together leaders from industry, government, and academia to advance solutions to improve healthcare IT, expand broadband access, strengthen regional economies, and enhance the state's global competitiveness. An experienced leader, Goldberg has an extensive background in entrepreneurship, innovation and finance, and is the first woman to lead the Mass Tech Collaborative in its 30 year history. Goldberg works closely with leading public officials and senior executives in Massachusetts to support critical economic development initiatives that unlock private investment and create jobs for state residents. Passionate about innovation and entrepreneurship, Goldberg most recently served as the Director of The Center for Entrepreneurial Leadership at Tufts University, a program she launched to drive innovation for the university. Her background includes 25 years of experience in the worlds of start-up ventures, academia, finance and strategic planning. Pamela received her BA from Tufts University and MBA from Stanford University.

GOLDSWORTHY ASHLEY

Ashley Goldsworthy has 25 years of uninterrupted and active service in IFIP. He first attended GA '74 in Stockholm as president of the Australian Computer Society, bidding for Congress '80. Since then, he attended all GAs and every Council meeting except one. He has been Australia's GA representative since 1980 and has grown up the IFIP executive hierarchy, as trustee, vice-president, president-elect, and president (1986-1989), after which he again served as vice-president. He is the only person in IFIP history to act as Chairman of an Organizing Committee for two World Congresses (Melbourne and Tokyo in 1980 and Canberra in 1996). As president, he was responsible for the creation of the Technical Assembly and the establishment of Technical Committees 12, 13, and 1 (which started out as SIG14) and many Working Groups. He was awarded the IFIP Silver Core in 1986.

GOMEZ FERNANDO

Fernando Gomez, PhD, Computer Science, Ohio State University. M.A., R. Linguistics, Ohio State University. "Licenciado," Philosophy, University of Valencia, Spain. He is Professor of Computer Science Director, Artificial Intelligence Laboratory. Fernando Gomez's research covers a range of issues in natural language understanding including parsing, semantic interpretation, knowledge acquisition, knowledge representation and problem-solving. These areas of research are combined in SNOWY, a project that has been underway for over ten years now and which is being used as a test bed for the ideas in these areas. SNOWY is presently reading articles on animals and people randomly selected from the World Book encyclopedia WorldBook and acquiring knowledge from them, and answering questions about the knowledge it has acquired. Semantic Interpretation: The main effort in semantic interpretation is directed towards achieving it on a large scale as required in the understanding of encyclopedic texts. To that aim, we have integrated WordNet lexical knowledge

base into SNOWY. Predicates, or verbal concepts, have been defined for WordNet verb classes, which have been reorganized very considerably following the criteria imposed by the interpretation algorithm. The predicates have been linked to the Wordnet ontology for nouns, which has also undergone some reorganization and redefinition to conform with the entries in the thematic roles of the predicates. An interesting aspect of the algorithm is that the solution of all these problems is interdependent and is based on the declarative representation of knowledge in the predicates. The algorithm has become an essential tool for testing the correctness of the newly defined predicates. Ontology: The massive construction of predicates, whose thematic roles have been linked to the WordNet ontology for nouns, has permitted us to look closely into which ontology is needed for semantic interpretation. There could be little doubt that a knowledge extraction component should be based on the output of a semantic interpreter. The more general the semantic interpreter the easier it should be to build different knowledge extraction tasks for different domains. Because the knowledge extraction component is grounded on the semantic interpreter, and because it uses the predicates of the semantic interpreter to draw inferences and shares the same ontology, the construction of different knowledge extraction tasks reduces to building some inferences in the verb predicates

used by the semantic interpreter. Incompatibilities between ontologies used by diverse components of the system do not exist. Furthermore, the knowledge extraction designer does not have to be concerned with defining ontological categories, because these have been built for him/her in the semantic interpreter. With his PhD students (Hansen Andrew, Sean Szumlanski and John Turner) Gomez have built up several applications to acquire biographic knowledge from The World Book. Automatic Acquisition of Semantic Knowledge. They worked on the automatic acquisition of knowledge from the Web for word sense disambiguation and other aspects of semantic interpretation and evaluation of semantic networks using co-occurring data in Wikipedia, and on the automatic acquisition of selectional preferences for adjectives from the Google Web 1T 5-gram corpus, and other corpora.

GONZALES BERNALDO DE QUIROS FERNAN

Fernan Gonzalez Bernaldo de Quiros, MD, MSc, FACMI, graduated with honors from the

School of Medicine in 1987. Since 2002 he serves as Head of the Department of Human Physiology. In 1997, he created the Medical Management Health Plan and a Fellowship in Health Management. In 1999 he led the creation of the Department of Health Informatics and developed a residency program for health professionals. He was in charge of the development of the HIS and the terminology server project that gives interface services based on SNOMED CT to different clinical application in different countries of Latin-America. He also led several training programs in the region, including a Spanish version of the OHSU version of the 10×10 program. He serves as Vice-Director for Strategic Planning since 2003. In 2004 he was elected Chair of Argentine HL7 chapter and was appointed Head of Clinical Research in Internal Medicine. In 2010 he was named Fellow of the American College of Medical Informatics. Throughout these years he published more than 50 articles in peer review journals and over 20 chapters/books and 200 international conferences. He is part of the editorial board of several international journals. In 2013 was elected as member of the eHealth Technical Advisory Group of WHO.
Currently he leads the Health informatics Specialty and the Master in Clinical Research at Hospital.

GONZALEZ-BARAHONA M. JESUS

Jesus M. Gonzalez-Barahona teaches as professor and researches in Universidad Rey Juan Carlos, Fuenlabrada (Spain). His research interests include the study of software development communities and processes, with a focus on quantitative analysis. In this areas, he has published several papers, and has participated in several international research projects. He has been involved in FOSS (free, open source software) for many years. During this time, he has participated in several working groups, and has started training programs on the matter. He also collaborates with several FOSS projects and associations, writes in several media about topics related to FOSS, and consults for companies and public administrations on issues related to their strategy on these topics. He is one of the founders of Bitergia, the software development analytics company.

GONZALEZ JORGE

Managing Director. TicBIOMed. Jorge Gonzalez is Managing Director of TICBioMed, a business association that promotes ICT for Health across Europe. Mr. Gonzalez is the coordinator of the European Project GET that provides support to SMEs and entrepreneurs with their Business Models, Internationalization, Private funding and search for unmet needs in Health. He also coordinates the READi for Health Project that develops Digital strategies for Health at regional level. The cluster also organizes the EU SME eHealth Competition to give visibility to the best Digital Health SMEs in Europe. Mr. Gonzalez holds a PhD in Physics.

GOODMAN KENNETH

Kenneth W. Goodman, PhD, FACMI, is founder and director of the University of Miami Miller School of Medicine's Institute for Bioethics and Health Policy and co-director of the university's Ethics Programs. The Ethics Programs have been designated a World Health Organization Collaborating Center in Ethics and Global Health Policy, one of seven in the world. Dr. Goodman is a Professor of Medicine at the University of Miami with appointments in the Department of Philosophy, Department of Health Informatics, Department of Public Health Sciences, Department of Electrical and Computer Engineering, School of Nursing and Health Studies and Department of Anesthesiology.He is past chair of the Ethics Committee of AMIA (American Medical Informatics Association), for which organization he co-founded the Ethical, Legal and Social Issues Working Group. He is a Fellow of the American College of Medical Informatics, the only philosopher or ethicist to be elected. He is past chair of the American College of Epidemiology's Ethics Committee.In Florida, he directs the Florida Bioethics Network,

chairs the UHealth/University of Miami Hospital Ethics Committee and the Adult Ethics Committee for Jackson Memorial Health System; he is vice chair of the Sylvester Comprehensive Cancer Center/University of Miami Hospital and Clinics Ethics Committee. Dr. Goodman's research has emphasized issues in health information technology, including bioinformatics or the use of computers in genetics, and in epidemiology and public health. His new book, Ethics, Medicine, and Information Technology: Intelligent Machines and the Transformation of Health Care, is forthcoming from Cambridge University Press. He has edited a book on the Terri Schiavo case for Oxford University Press, published a book about ethics and evidence-based medicine for Cambridge University Press, co-authored a book of case studies in ethics and health computing for Springer-Verlag and co-authored another volume of case studies, in ethics in public health, for the American Public Health Association. He has also co-authored a book on artificial intelligence, edited a book on ethics and medical computing, co-edited a volume on artificial intelligence, and published and presented numerous papers in bioethics, including end-of-life care, the philosophy of science, and computing. Current funded work includes directorship of the ethics component of the University of Miami's Clinical and Translational Science Institute. Recent grants include an NIH/Fogarty International Center

grant to help expand research ethics education around the Americas. He has led a Robert Wood Johnson Foundation-funded project to identify and address ethical issues in the use of electronic personal health records.

GOOSSEN WILLIAM

Dr. William Goossen is researcher and consultant in health informatics and director of Results 4 Care B.V., the Netherlands, and director Health at Synergetics Benelux B.V., the Netherlands. He is involved in research and development of electronic patient records, HL7 v3 messages, health terminologies, clinical information models, e-learning packages, and other applications of information and communication technology for health care. As Lector ICT innovations (2008-2013) in healthcare at Windesheim, Zwolle, he received a grant for a project in which nursing data for oncology care are selected, standardized with DCM format and nursing terminologies, extracted from EHRs into a Clinical Data Ware House. From the Clinical Data Ware House these data were exchanged to home care and anonymised for secondary data use for quality

indicators and reporting. He serves in (inter)national health informatics standards bodies as NEN, CEN, ISO and HL7. One initiative, his involvement in development of Detailed Clinical Models, standards, artefacts and tooling for this, forms the basis for the infostructure for eHealth he currently works on. William is contributor and voting member of the international Clinical Information Modeling Initiative and participates in the EU funded Semantic Health Net FP7 project as external expert. A specific project he is currently involved in is the ISO technical specification for the Medicinal Product Dictionary, and the Horizon 2020 project OpenMedicine. William functions as Associate Professor, Adjunct on the faculty of the School of Nursing, University of Minnesota, Minneapolis, USA, is past Lector ICT innovations in healthcare at Hogeschool Windesheim, Zwolle, the Netherlands, and visiting professor at the MBA Healthcare at the Hochschule Osnabrück and International Study for Health Management at Hochschule Bremen, Germany. William publishes regularly in scientific journals and presents at peer reviewed scientific conferences.

GOPAL VIPIN

 Vipin Gopal is the Enterprise Vice President of Clinical Analytics at Humana, a Fortune 100 company. In this role, Dr. Gopal is responsible for the organization that develops and applies advanced analytics that shapes Humana's clinical strategy, operations, programs and quality. He is an expert in developing differentiating analytic competencies, and has previously led analytic organizations in diverse companies ranging from industrial conglomerates to healthcare. Dr. Gopal obtained his Ph.D. from Carnegie Mellon University and B.Tech. from Indian Institute of Technology, Bombay, both in Engineering, and has an MBA from New York University Stern School of Business. He has served on the organizing/advisory committees of many international analytic conferences and was previously Associate Editor of IEEE Transactions on Control Systems Technology. Most recently, Dr. Gopal was the Chairperson of the World Congress Leadership Summits on Predictive Analytics held in October 2010 and August 2011, and the Data Analytics Summit

in April 2012, and delivered the Opening Plenary at the Seventh National Predictive Modeling Summit in December 2013.

GORMAN PAUL

 Paul Gorman, MD, FACMI, received his bachelor's degree in biological sciences from the University of Chicago and his MD from Rush Medical College. He completed postgraduate training in internal medicine at Rush Presbyterian and the VA Medical Center in Portland, OR. He is currently Associate Professor in the Department of Medical Informatics and Clinical Epidemiology and Department of Medicine, Oregon Health & Science University and Assistant Director of Medical Education, Providence Portland Medical Center. Dr. Gorman is internationally known for his research on the information needs, information seeking, and information use (ISU) by clinicians. He significantly expanded understanding of ISU in health care by emphasizing primary care and especially rural primary care, by including nonphysician clinicians. Dr. Gorman expanded on conventional notions of in-

formation seeking by clinicians in his National Science Foundation–funded project entitled "Tracking Footprints in an Information Space." He has worked with ACMI Fellow Joan Ash and other colleagues on the design and conduct of a multisite, multidisciplinary observational research program on physician order entry that has on an ongoing basis documented its limited application in U.S. hospitals. Dr. Gorman has been successful at applying concepts and skills of informatics research to the emerging patient safety agenda, as Principal Investigator or Co-investigator on four Agency for Healthcare Research and Quality–funded patient safety projects, including a current project focused on "Using IT to Improve Medication Safety for Rural Elders." For these varied and substantial contributions to the field, he is recognized by election to the College.

GORRY G. ANTHONY

Anthony G. Gorry is the Friedkin Professor of Management and Professor of Computer Science at Rice University where he is

also the Director of the Center for Technology in Teaching and Learning. He is an Adjunct Professor of Neuroscience at Baylor College of Medicine and a director of the W. M. Keck Center for Interdisciplinary Bioscience Training, a collaborative program of six institutions in the Greater Houston area. He previously was Vice President of Rice University, Vice President of Baylor College of Medicine and a faculty member in management and computer science at M.I.T. He has consulted extensively with corporations and institutions and has been involved in the development of several businesses. He lectures widely on the effects of information technology on society. Dr. Gorry is a member of the Institute of Medicine of the National Academy of Sciences and a Fellow of the American College of Medical Informatics.

GO ESTHER

Go Esther is President and CEO of MediLink Network Inc., a third party electronic network serving the healthcare industry. MediLink provides eligibility verification, payment settlement solutions and analytics for HMOs, insurance, TPAs,

hospitals, clinics and doctors. Esther previously held various positions with Citigroup, Inc. based in New York City. She was VP of Payment Innovation, Strategic Planning and Product Development, and Operations. Prior to Citigroup, Esther was Senior Associate with the Financial and Health Services Practice of Booz, Inc. She developed strategy, designed and implemented change programs across projects in the retail banking, brokerage and health care sectors across the U.S., Singapore, Jakarta, and Tokyo. Esther earned her MBA from Harvard Business School. Undergraduate studies were completed at Smith College, where she graduated magna cum laude, with double majors in Computer Science and Economics. She is a Member of Phi Beta Kappa and Sigma Xi honor societies and a Chartered Financial Analyst (CFA) charterholder. She currently serves on the board of the Harvard Business School Club of the Philippines, and was also past president.

GRABNER GEORG

Georg Grabner (1923-2006), MD, PhD, was full professor of Medical informatics at Department of Medical informatics and Computers Sciences of University of Vienna, Austria, and one of pioneers of Medical informatics in Europe. He worked as gastroenterologist at Department of Gastroenterology of AKH in Vienna. He was chairman of MEDINFO Congress of International Association of Medical

Informatics held in Vienna in August 1991. During period from 1978 till 1979 professor Grabner was president of Austrian Society of Gastroenterology. During his academic and scientific career he published a lot scientific and professional papers in peer reviewed indexed international journals.

GRABNER HELMUT

Helmut Grabner works at Computer Vision Laboratory, Department of Information Technology and Electrical Engineering, Eidgenössische Technische Hochschule Zürich (Swiss Federal Institute of Technology Zurich). He received a MSc degree (Dipl.-Ing.) in Telematics and a PhD degree (Dr.techn) in Computer Science, both from Graz University of Technology in 2004 and 2008, respectively. He is currently a postdoctoral researcher at the Computer Vision Lab at ETH-Zurich. His research interests are mainly on-line and incremental machine learning for computer vision (e.g. object detection, tracking, recognition and event detection) in particular in the field of visual surveillance. In 2011 he co-founded upicto GmbH. upicto offers technology for the automated processing of video

data and is a direct consequence from research at the Computer Vision Lab at ETH-Zurich. In 2015 upicto GmbH was acquired by Logitech.

GRAETZ MICHAEL

VP Healthcare EMEA Sales. EMC Enterprise Content Division, Germany. With 20+ years of technology intentional sales experience, Michael Graetz continues his vast experience in conducting business in diversified culture business environment. He is responsible, since 2011 of EMEA Healthcare sales in EMC Information Intelligence Group, with a proven leadership in liaising as a trusted advisor with C-Lev, IT and Business Executives in the market multiple contexts, such as public and private Hospitals, Network of Hospitals, Territorial entities and Ministry of Health, in both mature and emerging countries. Education: graduated in Computer Sciences and business administration in marketing and finance, trained in Myers-Briggs ISTJ.

GRAMS R. RALPH

Ralph R. Grams, MD, FACMI, is a Professor of Pathology at the University of Florida and is Director of the Medical Systems Group. He has been involved in the creation of laboratory and hospital information systems and initiated the Journal of Medical Systems in 1977. Since 1979, he has participated in the construction of a medical database for astronauts in conjunction with an ongoing NASA development program in the Biomedical Office at the Kennedy Space Center in Florida.

GRANT ANDREW

Andrew Grant, MD, PhD, FACMI, is Investigator and Director Health: Populations, Organization, Practices Axis at Centre de recherche du CHUS. He is Medical biochemist of Centre hospitalier universitaire de Sherbrooke and Directeur CRED. Also, he is Full Professor at Department of Biochemistry of Faculty of Medicine and Health Sciences of Université de Sherbrooke. The research activities of Dr. Grant concern, on the one hand, laboratory research in new diagnostic assays, and on the other hand, the exploitation of informatics, and the application of health information standards and different methods of evaluation in order to optimise the analysis, prediction and feedback of information into the process of the introduction of a new diagnostic technology into the practice of health care. Dr. Grant is a principle investigator of CIRESSS at the Sherbrooke University Hospital Centre, a clinical data warehouse that is unique in Canada. The research of Dr. Grant includes the development of informatics tools to support collaboration, knowledge representation, modelling, data mining and the contextual representation of information. Specific studies include: dashboards for clinical teams to access the clinical data warehouse for practice evaluation; pattern recognition of clinical data to trigger decision support and application of machine learning; web based neural networks for diagnostic algorithms; networked informatics platforms for clinical and informatics research; knowledge support tools for accessing and using health information standards. He also leads the first online courses in Health Informatics for health professionals and in

Health Information Standards in Canada. He was co-president of the Standards Steering Committee of Canada Infoway (2002-2004). He is member of the Canadian delegation of ISO 215 in Health Informatics and leader of its Clinical Data Warehouse activity. He was president of the Québec Society of Biomedical and Health Informatics, SoQibs, (2002-2004) and currently serves as vice-president. In 2004 he was elected as fellow of the American College of Medical Informatics. He received the Canada Health Infoway - Partnerships peer award in 2006.

GRAY J. A. MUIR

Sir J. A. Muir Gray, CBE, FRCPS-Glas, FCLIP is a doctor, who has held senior positions in screening, public health and information management. He was director of Research and Development for Anglia and Oxford Regional Health Authority and supported the United Kingdom Center of the Cochrane Collaboration in promoting evidence-based medicine (EBM). He held the positions of director at the UK National Screening Committee, during which he helped pioneer Britain's breast and cervical cancer screening

programs, and National Library for Health, and director of Clinical Knowledge Process and Safety for the NHS National Program for IT. He was knighted in 2005 for the development of the fetal, maternal and child screening program and the creation of the National Library for Health. He is now the director of the National Knowledge Service and Chief Knowledge Officer to the National Health Service, a Director of the healthcare rating and review service iWantGreatCare and Public Health Director of the Campaign for Greener Healthcare. He is also one of the original authors of the IDEAL framework for surgical innovation. He had written a several books: Raffle, Angela E; J.A. Muir Gray (2007). Screening: Evidence and practice. OUP Oxford; Gray, J.A. Muir (2007). How to Get Better Value Healthcare. Offox Press; Gray, Muir (2001). The Resourceful Patient. eRosetta Press; Pencheon, David; Charles Guest; David Melzer; J. A. Muir Gray (2001). The Oxford Handbook of Public Health Practice. Oxford Handbooks. Oxford University Press. Gray, J.A. Muir (1996). Evidence-based Healthcare. Churchill Livingstone. Gray, J.A. Muir (1989). PM The PM System Preventive Medicine for Total Health Identify Your Symptoms and Prevent Illness. Arrow Books; Many, D.C.; J. A. Muir Gray (1987). Building Regulations and Health. IHS BRE.

GRAY KATHLEEN

Dr. Kathleen Gray, PhD is a Senior Research Fellow in the Health and Biomedical Informatics Centre at the University of Melbourne, and a Fellow of the Australasian College of Health Informatics. Her research spans e-health and e-learning and the influence of the Internet in healthcare and biomedicine – especially on scholarly practice; on citizen participation; and on the health workforce. She coordinates the University's Master of IT Health specialisation. She has held academic development roles in health and life sciences, and information management roles in health and education. She has qualifications in linguistics, education, environmental science and library and information science.

GREENES A. ROBERT

Roert A. Greenes (1940–) is a professor and chief of the new Department of Biomedical Informatics (BMI) in the School of Computing and Informatics at Arizona State University. He holds a BA from the University of Michigan and MD and PhD from Harvard Medical School. Greenes is also the Director of the Harvard-MIT Biomedical Informatics Program. He is also teaching as Professor of Biomedical Informatics at the Mayo Clinic College of Medicine. Before his move to Arizona, he was founder and director of the Decision Systems Group, a Harvard-based biomedical informatics laboratory at the Brigham and Women's Hospital. For over 25 years, Dr. Greenes was the Program Director of the National Library of Medicine-supported Boston Research Training Program in Biomedical Informatics, based at the Harvard-MIT Division of Health Sciences and Technology. He was also Distinguished Chair in Biomedical Informatics at Brigham and Women's Hospital, Professor of Radiology and Health Sciences and Technology at Harvard Medical School, and Professor of Health Policy and Management, Harvard School of Public Health. With an MD. and PhD. in applied mathematics/computer science from Harvard, he is Board Certified in Diagnostic Radiology. He is a member of the Institute of Medicine, and a Fellow of the American College of Medical Informatics (also its past President), the American College of Radiology, and the Society of Imaging Informatics in Medicine. He was the 2008 recipient of the Morris F. Collen Award for contributions that have made a lasting impact on the field of biomedical informatics, from the American College of Medical Informatics. The Robert A. Greenes Directorship in Biomedical Informatics at the Brigham and Women's Hospital continues to bear his name. Dr. Greenes' main interests are in the area of clinical informatics, with a particular focus on clinical decision support, health care quality improvement, and application usability/interoperability to optimize clinical care processes.

GREMY FRANCOIS

Francois Grémy (1929–2014) was Professor who had a dual curriculum vitae. In the domain of information sciences he completed three Master degrees in Physical Sciences (1948), Mathematics (1948), and Statistics (1961). As a physician he passed the Paris resident fellows' competitive examination, the "Internat de Paris", in 1953 and obtain a specialty in neurophysiology. In 1958, at the age of 29, he was appointed as tenured professor in biophysics at the Faculty of Medicine of Tours, and two years later in 1960 as professor in biophysics at the Pitié-Salpêtrière School of Medicine in Paris. Between 1966 and 1971, François Grémy published five comprehensive textbooks in the three scientific areas where his different training mutually contributed: biophysics, biomathematics, and biostatistics. Very soon, François recognized the key role played by information sciences in medicine and initiated at Pitié-Salpêtrière in 1966 a curriculum on the medical applications of computing techniques. To foster research in information sciences François Grémy created in 1969 the INSERM Unit U88 entitled Informatics and Statistics methodology in Medicine. This unit was going to be the framework for his close collaborators to develop, not only clinical informatics, but also clinical research, epidemiology, health informatics, statistics, and decision support systems. As a recognition of this involvement he was appointed in 1970 as professor of Biostatistics and Medical Informatics at the Pitié-Salpêtrière School of Medicine. In 1967, Professor Grémy established within the International Federation for

Information Processing (IFIP) the Technical Committee 4 (TC4) on Medical informatics. The first meeting of TC4 was held in Paris in April 1968. A dozen nations were represented and François Grémy was elected as president. During his presidency (1967-1973), François Grémy initiated within TC4 several working groups that represented many emerging subfields for this new discipline. In 1973, François Grémy negotiated during the preparation of the IFIP meeting in Stockholm the creation of a separate structure devoted to the healthcare field. The result was the first MEDINFO 74 held in Stockholm at the same time and same location as the IFIP meeting (August 5-10). François Grémy acted as the chair of the MEDINFO 74 Program Committee. The International Medical Informatics Association (IMIA) was constituted as a Special Interest Group of IFIP. In 1984, François Grémy was appointed as Professor of Biostatistics and Medical Informatics in the University of Montpellier-Nîmes, and chair of the Medical Information Department of the Lapeyronie University hospital. He published his first comprehensive textbook on Medical informatics in 1987. However, he progressively focused his research on health informatics, the assessment of medical informatics technology, and finally on public health. He was appointed in 1990 as Professor of Public Health at the Montpellier-Nîmes Faculty of Medicine. He became a member of the French National Commit-

tee for Public Heath, strongly engaged in the prevention of tobacco, alcohol dependence, and the social integration of autistic patients. François Grémy is recognized at the international level for his key contributions to the development of Medical Informatics and the birth of IMIA. In 1996, he became with Jan van Bemmel one of the two first Europeans recognized as Fellow of the American College of Medical Informatics. In 2004, he received during the San Francisco MEDINFO meeting the first IMIA Award of Excellence. In France, in addition to being recognized as the father of Medical Informatics in his country, François Grémy has left a strong heritage for the development of public health. He has influenced the decision makers with his political engagement for prevention, social equity, solidarity, and against any clinical form of racism.

GRIER R. MARAGARET

Margaret R. Grier, PhD, FACMI, is Professor and Associate Dean for Graduate Studies and Research

at the College of Nursing, University of Kentucky. Her research interest is in the use of computers to assist nurses in clinical decision making. Recently she has focused on methods for improving pain management. She is a member of the Peer Review Group for Medical Information Systems Program, Office of the Assistant Secretary of Defense (Health Affairs). Department of Defense

GRIFFITHS BRYAN

Bryan Griffiths is Commercial Programme Manager. North West Coast Academic Health Science Network. Dr Bryan Griffiths is the Commercial Programme Manager at the North West Coast Academic Health Science Network. Bryan is leading on support for local SMEs with particular focus on Liverpool City Region and Lancashire with the business assist programme. Previously, Bryan was Commercial Services Manager for the NHS Innovation service for the North West with responsibility for assisting healthcare businesses and providing innovation services to NHS Trusts. Prior to this Bryan spent 15 years at ConvaTec involved in the design and development of medical

devices from inception to launch, achieving successful global commercialisation of a number of wound care products and he is named inventor on over 25 patents. Bryan is also a member of the CLASP (Challenge Led Applied Systems Programme) Panel for Healthcare for the Science and Technology Facilities Council (STFC).

GROBE J. SUSAN

Susan J. Grobe, PhD, RN, FACMI, an Associate Professor of Nursing at the University of Texas at Austin, School of Nursing, became involved with informatics with early work on a CA1 authoring system for nursing education, known as Nursing Education Module Authoring System. She published one of the first nursing books on computers in nursing, Computer Primer and Resource Guide for Nurses (1984). She has authored numerous papers on using computers in nursing and on preparing nurses to use computers. She has been active in influencing national nursing organizations to focus on topics related to nursing informatics.

GULDEMOND NICK

Nick Guldemond is Associate Professor Integrated Care and Technology. University Medical Centre Utrecht, The Netherlands. Dr. Guldemond was trained in Engineering (electric engineering) and medicine (clinical physiology). He obtained his PhD with a focus on orthopaedic complications due to diabetes. He worked at various universities and hospitals as researcher, coordinator and principal investigator in projects regarding healthcare innovation, medical technology and eHealth. As founder and CEO of the ëMedical Field Labí he received great acknowledgement for creating business through public private partnerships by the Ministry of Economical Affairs. Dr. Guldemond is currently Associate Professor Integrated Care & Technology and Chief Innovation Officer at the University Medical Centre Utrecht, He is advisor for the Dutch House of Representatives and board member of the Innovative Medical Device Initiative IMDI.nl and member of the commission on the national eHealth implementation agenda. He is coordinator

of EIP-AHA A2 Action Group Falls Prevention and associated with thematic networks Pro-FouND, E-NO-FALLS.

GUPTA PRATAP RAJENDRA

Rajendra Pratap Gupta (Rajendra) is one of the most influential and sought after public policy expert in the country . He is known globally for his innovative approach and strategic thinking . He has been invited by global organizations like the United Nations, World Health Organization, World Economic Forum, ITU, Embassy of the United States of America, Government of Japan & Finland, and also by the MOHFW & The Planning Commission - Government of India for his views on diverse range of topics, and he authored the Election Manifesto for BJP in 2009 and in 2014 under the Chairmanship of Dr. Murli Manohar Joshi. Policies of the Modi led NDA Government are entirely based on the Election Manifesto authored by him. He has contributed immensely to digital health globally. He served on the Global Agenda Council - Digital Health at the World Economic Forum, and serves as Chairman; HIMSS

India, Continua Health Alliance -India, Personal Connected Health Alliance - India . Also, he has authored the first Telehealth report for India, and a report on interoperability on medical devices. He has drafted policies which have paved way for making eHealth a reality in India. Rajendra has delivered lectures across the globe and has written articles in leading publications, and also serves several health care advisory boards across USA, Europe, U.K. & India and divides his time between public policy and corporate boards. He holds a masters degree in Leading Innovation & Change from U.K. and bachelors degrees in Science and Social sciences.

GUSHEV MARJAN

Marjan Gushev (1961-) born in Gevgelija, R. Macedonia, He is a computer scientists and professor at the Faculty of Information Sciences and Computer Engineering, University Ss. Cyril and Methodius in Skopje, specializing in parallel processing, computer networks and Internet technologies. He finished mathematical high school and achieved a lot of di-

plomas and best student awards on competitions in regional and international competitions in mathematics and physics. In 1985 he graduated at University Sts. Cyril and Methodius, Faculty of Electrical Engineering, Computer Science and Informatics with award for outstanding success. In 1989 he obtained the MSc degree (MSc thesis entitled "Parallel Processing Algorithms") from the same University, and in 1992 the doctoral degree (PhD thesis entitled "Processor array implementations of systems of affine recurrence equations in digital signal processing") from University of Ljubljana, Slovenia. In the period of 1991-1992 he has pursued doctoral research at Parallel Algorithm Research Centre at Loughborough University of Technology, UK. After studies he was working at Mining Institute, Skopje. In 1988 he was appointed as young researcher and teaching assistant at the Faculty of Natural Sciences and Mathematics, Institute of Informatics, University Ss Cyril and Methodius, in 1990 as senior assistant, in 1993 as lecturer, in 1998 as assistant professor and from 2003 as full professor. In the period 1993-95 and 1998-99 he was director of Computing Centre, and head of department from 1999-2003. Dr Gushev has performed research in parallel processing, Internet technologies, e-business, mobile and wireless applications, computer architecture and networks. Dr Gushev has coordinated and managed 17 international and 5 domestic projects, as expert for projects that include research

and development, curricula development and university management, knowledge management, network of excellence etc. He is member of several professional organizations and bodies, consultant for information technology of ministries and government committees, teams for development of national IT strategies, academic and other institutions, president of IT experts council of MASIT, e-Government task force etc. He organized 7 international conferences, 19 workshops, and 7 seminars in the field of e-Government, e-Education and Internet technologies. He is founder of the company Innovation which has developed several solutions for government and business services. He initiated, organized and managed of laboratories for wireless applications, new innovative technologies and parallel processing. He is director of regional CISCO academy, Microsoft academy and Pearson Vue testing centre.

GUSMEROLI SERGIO

Sergio Gusmeroli is Corporate Research Director TXT

e-Solutions SpA. After several experiences in IT research and commercial delivery in diverse industrial domains such as manufacturing, energy, environment, space and defence, since July 2000, Sergio Gusmeroli is the TXT Corporate Research Director (now Research & Innovation Director) counting more than 20 researchers in the labs of Milano, Bari and Genoa. In the specific field of ICT infrastructures and architectures for enterprise interoperability and collaboration, his main research activities have been focusing on the following 3 major themes: Platforms and Architectures for Enterprise Software and Applications Interoperability; Methodologies, models and software tools to support collaborative business and Methodologies, models and software tools to support the vision of the the Future Internet and the Internet of Things. In European Commission FP7 research programme, Dr. Sergio Gusmeroli has been Technical Coordinator of the COIN Integrated Project (COllaboration and INteroperability for networked enterprises) and is currently Coordinator of the FP7 Factories of the Future MSEE Integrated Project (Manufacturing SErvice Ecosystem) and of the FP7 Future Internet FITMAN Phase II Trial about Future Internet Technologies in Manufacturing. In H2020, Sergio, as Politecnico di Milano's Research Coordinator, is now Scientific Coordinator of PSYMBIOSYS (Factories of the Future on Product Service Systems) about symbiotic collaboration forms in product-service business ecosystems. As a representative of the IT industry, topics addressed during this talk by Dr. Sergio Gusmeroli are quite focused on technical aspects: Business-IT alignment and Enterprise Interoperability; EI technical solutions for specific sectors and services and Case studies, return of experience and best practices. Moreover, supplementary topics will be also addressed: Interoperability between product- and service- lifecycles in manufacturing enterprises; Enterprise Interoperability, Internet of Things and the Internet of the Future and Service-driven business models in collaborative ecosystems

GUSTAFSON H. DAVID

David H. Gustafson, MD, MS, FACMI, obtained a PhD in industrial engineering from the University of Minnesota. Dr. Gustafson has spent his entire professional career at the University of Wisconsin. His research has been at the forefront of our emerging discipline for the last three decades. ACMI can illustrate the diversity, influence, and sustained consistency of his work by citing a few examples. In the 1970s, he and his colleagues developed a computer-based system for interviewing patients reporting suicidal thoughts and then used a Bayesian statistical model to predict the likelihood of suicide. In the 1980s, he led the development and testing of the Body Awareness Resource Network (BARN), a system to help teenagers address issues of smoking, alcohol and other drugs, sexual activity, and stress; it has been used in 16% of middle and high schools nationwide. In the 1990s, his team developed and tested the Comprehensive Health Enhancement Support System (CHESS), a program that provides information, plus emotional and decision support, to people facing life-threatening illness. Dr. Gustafson is also known for his rigorous evaluation studies. For example, he has published on the acceptability and effectiveness of systems in populations with less education and less familiarity with computer systems such as black, unemployed, poorly educated patients with breast cancer. He was one of the founders of the Institute for Healthcare Improvement, where he developed innovative techniques for understanding the needs of consumers and identifying evidence-based principles for improving their health. He is now the National Program Director for a Robert Wood Johnson program

applying systems engineering principles to enhance substance abuse treatment. Dr. Gustafson is among that small group of specialists in the field of industrial engineering and operations research who have helped create an awareness of the importance of these disciplines to the future of sound public policy and operational management in health care. He has shown his informatics colleagues how senior academic scholars can contribute to the development of younger professionals.

GUTTER ZDENEK

Zdenek Gutter is developed eHealth projects in the Czech Republic since in Stimcare Ltd and he collaborates with University Hospital Olomouc. He provides expertise in use of telehealth in chronic diseases. He co-ordinates participation in partnerships and projects, including EIP on AHA and United4Health, and promotes integrated care. He was previously Director of Research Centre of a GSM operator. He worked in TESTCOM, where he was Head of Department and led an expert team for electronic communications.

GYÖRGY SURJÁN

Surjan Gyorgy, MD, PhD, graduated as a physician in 1983 at Semmeweiss University Budapest. After ten years full time clinical practice he moved gradually to Medical informatics. He received PhD degree from University of Amsterdam in 2011. Currently he is acting director of ESKI (Institute for Strategic Health Research), and head of Department of information. This department is responsible for national health statistics. ESKI plays the role of national eHealth competence center. György Surján is a member of a number of professional bodies and board member of European and national medical informatic associations. (EFMI, and Beiomedical Section of John von Neumann Society) His professional interest is medical terminologies, ontologies and coding systems.

GÜLKESEN K. HAKAN

Hakan K. Gulkesen, MD, PhD, (1967-) has graduated from Hacettepe University, Ankara, Turkey in 1993. He is Specialist in Pathology and he also has got his PhD in Medical Informatics. Middle East Technical University (METU), Ankara, Turkey in 2009. He is Associate Editor of Journal of Medical Systems, he was President of TurkMIA, Akdeniz University Medical Ethics Committee, Co-moderator of "Medical Informatics Education", and "Telemedicine" Study Groups of TurkMIA, Hakan Gulkesen is Turkey representative in International Medical Informatics Association from 2002 till present, Also, prof. Gulkesen is member of Postgraduate Education Committee of Faculty of medicine of Akdeniz University; Turkish Surgical Association e-Learning WG (2009-present), and Turkish Medical Specialist Associations Coordination Platform eHealth WG Co-moderator (2009-present).

GUYON ISABELLE

Isabelle Guyon, PhD, FACMI, is co-inventor of the support vector machine (SVM) algorithm, and SVM-RFE feature selection, two machine learning methods essential for scientific prediction in biomedical informatics. These methods have been referenced in more than 10,000 papers. She has authored a highly cited (>2,000 citations) seminal paper on feature selection and has co-authored several books and organized workshops and competitions on feature selection and causal discovery. She led a major initiative on data exchange, online experimentation, and causal discovery benchmarking called the Causality Workbench. Dr Guyon is among the most cited researchers in machine learning internationally, has developed original methods for biomedical informatics, and has applied them in ways that can significantly improve medical care.

H

HAALAND KIRSTEN

Kirsten Haaland is a senior researcher at the Maastricht Economic Research Institute on Innovation and Technology in the Netherlands. She is a member of the Collaborative Creativity Group (CCG), a leading research group on open source software, open content, and collaborative creativity and innovation. She has extensive project experience, including FLOSSIMPACT focusing on open source on innovation and competitiveness of the European Union, the EU-funded "Free/libre/Open source software metrics and benchmarking study (FLOSSMetrics)" and the "QUALity in Open Source Software" (QualOSS) project. As an economist her responsibilities covers socio-economic analysis, such as business models and strategies, and community dynamics.

HAIKERWAL MUKESH

Mukesh Haikerwal is Officer of the Order of Australia (AO) of National Clinical Lead National E-Health Transition Authority in Australia. Dr. Mukesh Haikerwal is a practicing General Medical Practitioner, Commissioner to the National Health and Hospitals Reform Commission and Professor in the School of Medicine in the Faculty of Health Sciences at Flinders University in Adelaide, South Australia. He is currently working with the National e-Health Transition Authority (NEHTA) as the National Clinical Lead, leading a team of healthcare providers from multi disciplinary backgrounds, to assist in NEHTA's liaison with the healthcare community and to provide input into the development of the NEHTA work program to deliver e-health for Australia. In 2011 Dr Haikerwal was made an Officer of the Order of Australia (AO) for distinguished service to medical administration, to the promotion of public health through leadership roles with professional organisations, particularly the Australian Medical Association (AMA) to the reform of the Aus-

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tralian health system through the optimisation of information technology, and as a general practitioner. He was the former head of the Federal AMA that is responsible for national policy development, lobbying with federal parliamentarians, co-ordinating activity across the AMA State entities and representing the AMA and its members nationally and internationally.

HALAMKA JOHN

John Halamka is Chief Information Officer of Beth Israel Deaconess Medical Center and Professor of Medicine at Harvard Medical School, He is also chairman of the New England Healthcare Exchange Network (NEHEN), co-Chair of the national HIT Standards Committee, co-Chair of the Massachusetts HIT Advisory Committee and a practicing Emergency Physician. As Chief Information Officer of Beth Israel Deaconess Medical Center, he is responsible for all clinical, financial, administrative and academic information technology serving 3000 doctors, 14000 employees and two million patients.

HALES W. JOSEPH

Joseph Joe W. Hales, PhD, FACMI, is an Professor in the Department of Health Management and Informatics at the University of Missouri, Columbia, Missouri, where he is also Director of Health Informatics. He earned a BS in Electrical and Computer Engineering with University Honors from Brigham Young University. Dr. Hales then completed a PhD in Medical Informatics at the University of Utah. Prior to his current position, Dr. Hales was a faculty member at Duke University, where he served as the Associate Director of the Training Program in Medical Informatics. In addition to research on clinical vocabularies and data models, his work has focused on electronic information resources and, more recently, on IAIMS infrastructure planning for electronic commerce in health care. His paper on the integration of the gopher protocol with a critical path documentation system is among the first to demonstrate this type of integration of Internet-infor-

mation resources and clinical applications. Dr. Hales has served as chair of the AMIA Education Committee and has served on the AAMC Medical School Objectives Project (MSOP) Task for Medical Informatics. He was chair of the Scientific Program Committee for the 1999 AMIA Spring Congress. Dr. Hales served as a member of the Board of Directors of AMIA and on the Editorial Advisory Board of the Informatics Review.

HALL K. LESLIE

Leslie K. Hall is Senior Vice President, Policy. Healthwise-Informed Medical Decisions Foundation. Hall is widely recognized as a leader in health care information technology. As a former health system CIO and marketing officer, her achievements have made a significant impact in Idaho healthcare and beyond, always with a focus on the patient. Leslie's efforts were recognized by Business Week as one of the top 50 Web Smart leaders in the country for her efforts in patient and provider portals. Hall was appointed by HHS Secretary Sibelius to the Health Information Technology Committee, and recently by

Sec Burwell to the HIT Policy Committee for Consumer Engagement.

HAMER SUSAN

Susan Hamer is Director of Nursing, Learning and Organisational Development for the NIHR Clinical Research Network (NIHR CRN). The NIHR CRN provides the infrastructure that enables high-quality clinical research to take place in the NHS, so that patients can benefit from new and better treatments. Susan is passionate about purposeful change and in particular the development of the healthcare workforce. As lead nurse Susan works with colleagues to ensure that the clinical leadership culture is vibrant and integrated across the large managed network which is the NIHR CRN. As a committed adult educationalist Susan understands that a positive work environment is key to high performance and leads a team to develop timely, high quality learning opportunities using a range of media. A previous role as national leader in the Department of Health Informatics Directorate persuaded Susan about the possibilities for technology to enhance practice and to support innovation in

the development of patient led services. She sees the development of accessible information as crucial to this. Susan is a regular writer and is the author of "Achieving Evidence-Based Practice" and "Leadership and Management: A Three-Dimensional Approach". She is a Fellow of the Queens Nursing Institute. In 2012 Susan received the EHI CCIO award for Clinical IT leadership and in 2013 Susan was named one of the HSJ's Inspirational Women.

HAMILTON CLAYTON

Clayton Hamilton leads the eHealth and Innovation portfolio of the WHO European Region, providing support and strategic guidance to eHealth development and capacity building initiatives as a component of Health Information management in the region's 53 Member States. With a background in ICT development and business management within WHO that spans a 15 year period, Mr. Hamilton works on broadening the awareness and benefit of strategic implementation of eHealth in Europe, linking with major international partners to build capacity in low-middle income countries and as a contributor to

major national eHealth strategy development initiatives

HAMMOND E.WILLIAM

William Ed Hammond II (1935-) was born in Hendersonville, North Carolina. He studied electrical engineering at the Duke University and graduated in 1957. Soon after that William joined the Navy. Ed joined the first class of the EE PhD program when it was established in 1964. From 1964 through 1967, Ed experienced rapid changes in technology - as vacuum tubes were replaced by transistors, then large component integration, and then large-scale integrated circuits. He developed his interest in computers, programming first in machine language on the IBM 620. After completing his PhD, Ed spent two years in a special postdoctoral program that let him take selected preclinical courses in the School of Medicine before joining the initial faculty of the new program in biomedical engineering in 1968. That summer, he used a Link 8 computer to develop the first real-time visualization of the cardiac activation sequence mapped on the body surface - a problem

that had proven to be unsolvable on mainframe computers. Ed Hammond's interest in electronic health records began in 1969. He built a hardware interface between an optical scanner and a PDP-12 and wrote assembly language programs to print an initial medical history captured from the patient on mark sense forms. In the summer of 1970, he assembled a team of five medical and undergraduate students. By 1972, history and physical examination "takers" had been combined into a prenatal electronic health record that was operational at Duke until 2002. By 1973, practice management such as appointment scheduling and billing permitted an early outpatient clinical system with a computer-based record as its core. From this foundation, the team went on to build GEM-ISCH - a command line language running on top of RSX and VMS Operating Systems. Multiple site-specific applications were replaced with generic application programs. A dictionary of metadata provided for site-specific variation and entity–attribute–value data structures handled sparseness. The result - TMR - was in use at its peak in over 40 sites in 20 different settings, ranging from a two-person practice to a 60-bed cancer research hospital. This variety led to Dr. Hammond's interest in standards. Beginning in 1983, Ed worked with Clem McDonald and others to create messaging standards for exchange of data among systems. The standard for the transmission of laboratory data was the first one adopted by the American Society for Testing and Materials (ASTM). Ed was a member of the group that formed Health Level 7 (HL7) in 1987, and he served as chair of that organization in 1990-1991 and again in 1996-1997. He played a major role in the integration of SGML/XML into HL7 and was instrumental in the creation of a number of Technical Committees and Special Interest Groups, including the Vocabulary, the Electronic Health Record, and most recently, the Patient Safety SIG. Ed has advocated for what we now call the National Health Information Infrastructure (NHII) since the early 1990s. As Chair of the Computer-based Medical Record Institute, he introduced a proposal for the acceleration of the adoption of the computer-based patient record, identifying barriers and making specific recommendations on how to overcome these barriers by specific actions. More recently, he was chosen to be the chair of the Data Standards Working Group for the Connecting for Health Initiative. This group made recommendations for the identification and acceleration of necessary health data standards. He is a member of the Institute of Medicine (IOM) Patient Data Standards Committee. He is the bridge between that committee and HL7 regarding electronic health record functionality standards. He has worked to build each of the medical informatics organizations that existed during his career. He served two terms as chair of the Special Interest Group on Biomedical Computing (SIGBIO) of the Association for Computing Machinery (ACM). He served on the American Association of Medical Systems and Informatics (AAMSI) board as well. He is a founding fellow of ACMI and a founding member of the American Institute for Medical and Biological Engineering (AIMBE). Dr. Hammond had an unusually active 33-year career in the U.S. Naval Reserve, retiring in 1989 as a Captain. He created an underwater navigation system for unmanned deep submersibles. This system was used for the recovery of several aircraft that crashed at sea and for mapping the debris field for the Challenger spacecraft.

HANAUER DAVID

David Hanauer, MD, MS, FACMI, is an Associate Professor in the Department of Pediatrics at the University of Michigan Medical School. Education: from 1991 till 1995 he studied Chemistry at Cornell University at Ithaca, NY. and earned BA. Medicine graduated in 1999 at Medical School Ann Arbor MI, at University of Michigan. MS thesis earned at Harvard MIT Division of Health Science and Technology in Boston, MA in 2004. From 1999 till 2002 he studied at NYU-Bellevue Medical Center, Pediatric Residency in New York, NY. His clinical area is in general pediatrics. In his various roles at the University he devotes effort to support multiple health system initiatives including care, qual-

ity, and research. His research interests include clinical and health informatics, with a focus on electronic health records, workflow, and the secondary use of clinical data. Examples of current projects include the on-going development and support of a search engine for electronic medical record systems.

HANDELS HEINZ

Heinz Handels is Professor and Director of the Institute of Medical Informatics at the University of Lübeck, Germany. He received a master degree in informatics and physics (German Diploma) in 1987 and his PhD degree in informatics in 1992 at the RWTH Aachen, Germany. From 1992 to 2003 he was the head of the Medical Image Processing and Telemedince Group of the Institute for Medical Informatics at the University of Lübeck. In 1999, he received his Habilitation for Medical Informatics, a German license for lecturing, from the Faculty of Informatics, Natural Sciences and Technology at the University of Lübeck. In 2003 he was appointed as full professor and director of the Department of Medical Informatics at the University Medical Center Hamburg-Eppendorf in

Hamburg, Germany. In 2010 he moved to Lübeck and became full professor and director of the Institute of Medical Informatics at the University of Lübeck. His current research fields are 3D and 4D medical image computing, image segmentation and registration, image-based modeling and analysis of organs and physiological processes (e.g. breathing motion of inner organs, heart motion, blood flow) as well as image-based virtual reality simulation of punctures and surgical interventions. He has published more than 300 original papers in journals and conference proceedings in the fields of medical image computing, virtual reality simulation, telemedicine, and computer-assisted diagnosis and therapy, and he is editor of more than 30 proceedings and textbooks. He designed the Bachelor and Master degree programs in Medical Informatics at the University of Lübeck which started in 2011 and 2014, respectively. His current lectures are in medical informatics, medical image and signal processing as well as in medical image analysis and visualization. He is author of a German textbook for Medical image computing. Prof. Handels is member of the editorial board of the Journal Methods of Information in Medicine and reviewer of more the ten other international journals. He has supported various international and national conferences as member of the program committee (MICCAI, MEDINFO, MIE, WC, BVM, etc.). Furthermore, he was the host of the Annual Conference

of the German Association of Medical Informatics, Biometry and Epidemiology in 2013 and organized the German Conference on Medical Image Computing (BVM) in 2001, 2006, 2011 and 2015. He is a member of the Deutsche Forschungsgemeinschaft (German Research Association) and serves as an elected reviewer for medical informatics and medical technology.

HANMER LYN

Lyn Hanmer works in the Burden of Disease Research Unit at the South African Medical Research Council (MRC), and heads the World Health Organization collaborating center for the Family of International Classifications (WHO-FIC) at the MRC. She trained as a biomedical engineer and holds a PhD in Information Systems, and has extensive experience in the development, management and evaluation of hospital information systems; and the development and implementation of curricula in Health Informatics, from basic to masters level. She is a member of the Council of the South African Health Informatics Association (SAHIA), and was the secretary of the Board of the International

Medical Informatics Association (IMIA).

HANNAH KATHRYN

Kathryn J. Hannah is a nurse and a consultant specializing in information management in health care environments. With over 30 years of experience in academia, health care delivery, government and the private sector, Dr. Hannah has long been active in promoting the use of IT in health care. She is co-editor of the Health Care Informatics Series, published by Springer-Verlag. Dr. Hannah has been awarded Fellowship in the American College of Medical Informatics and honored with the title Maestro Illustre by the Faculty of Medicine and Health Science at the University of Guadalajara in Mexico. In November 2008, the Canadian Nurses Association recognized Dr. Hannah with the prestigious Centennial Award, for her pioneering leadership in promoting the involvement of nurses in the development and use of information systems in health care. Dr. Hannah has held senior management positions in both the health care delivery system (as a Director of Nursing at the Calgary General Hospital) and in government (as a branch

Director at Alberta Health). She has extensive experience in knowledge transfer and change management. Dr. Hannah has taught and conducted research as professor in the Faculty of Nursing and the Department of Community Health Sciences at the University of Calgary. Until recently, she was Professor (Adjunct) at the Department of Community Health Sciences, Faculty of Medicine at the University of Calgary. Currently, Dr. Hannah is Adjunct Professor at Department of Biomedical Informatics, School of Medicine, University of Utah, and Professor at School of Nursing University of Victoria, British Columbia, Canada.

HANNAN JOHN TERRY

Terry John Hannan, MBBS, FRACP, FACHI, FACMI, is clinical Associate Professor. Dr Hannan is a full time practicing specialist physician in General Internal Medicine at the Launceston General Hospital where he is also an Associate Professor to the Menzies Research Institute in Hobart. His roles in e-Health and health reform began with the first successful internation-

al translocation of a complex clinical information system from the Johns Hopkins Oncology Center into the Prince of Wales/ Prince Henrys Hospitals in Sydney. (1984-1992). He is an inaugural Fellow of the Australasian College of Health Informatics (ACHI) and a former College President. In 2004 he was elected an International Fellow of the American College of Health Informatics (ACMI). In 2000 he was invited to be a co-founder of the Mosoriot Medical Record System (MMRS) an Electronic Medical Record (EMR) project in Kenya. This remains a collaborative project between the Moi University in Eldoret Kenya and the Regenstrief Institute in Indiana. The MMRS project led to the development of the Academic Model for the Provision and Access To Healthcare (AMPATH) and the OpenMRS e-record systems (www.openmrs. org). Currently OpenMRS is the largest open-source web based EMR for developing nations. His main focus has been on end-user acceptability of eHealth technologies. He is currently a Moderator for two international web-based resource projects GHDonline (www.ghdonline.org) whose aim is to improve health care delivery through global collaboration and the mHealth Working Group (https://www. mhealthworkinggroup.org/).

HANSEN ROLF

Rolf Hansen (1931-1993) was one of pioneers of Medical informatics from Oslo, Norway. He was an organized and pragmatic medical informatician who developed respected and pioneering health information systems at the Norwegian Institute of Public Health. At the time of his death he had just become the President of the European Federation for Medical Informatics (EFMI) after having played an active and important role in the development of the EFMI since participating in its foundation 1976 in Copenhagen. He had been a member of the Executive Board from 1982 to 1986, Secretary from 1989 to 1990 and Vice President from 1991 to 1992. He took responsibility as the Chairman of the Organizing Committee for the very successful MIE-1988 congress in Oslo. He also worked in the Editorial board of Medical Informatics from its inception. Rolf Hansen will be recognized as one of the Medical informatics experts who have had great contribution to the development of Medical Informatics worldwide.

HANSON ADAM

Adam Hanson, is Senior Director, Enterprise Infrastructure and Solutions Engineering, Information Technology, Steward Health Care. Adam has worked in healthcare IT for 19 years. He started his career as an implementation specialist for a local HCIS vendor, then as a customer, before moving into IT Infrastructure. Adam has over ten years' experience in IT Infrastructure leadership. His teams manage a large diverse WAN consisting of 10 hospital campuses and over 100 branch office/remote sites, that supports approximately 17,000 nodes.

HAQUE REZWAN

Rezwan Haque works (founder) at Center for Internet and Society (CIS) - Bangladesh in collaboration with University of Dhaka. He spearheading Traditional Knowledge Digital library (TKDL) for folk medicine and Bangladesh National Formulary (BDNF) Online (www.bdnf.org.bd) projects. Rezwan was Bangladesh Coordinator of "CrowdOutAIDS", an online and offline crowdsourcing research project of HIV/AIDS under the aegis of UNAIDS. He is a

Correspondent member of International Medical Informatics Association (IMIA). He also holds Professional membership of Asia eHealth Information Network (AeHIN) and International Society for Telemedicine and eHealth (ISTeH). He is interested to see the impact of Internet and social media use by healthcare providers, healthcare professionals as well as patients and the impact of smartphones on clinical care; which broadly can fall under the category of Medicine 2.0, Health 2.0, eHealth and public health informatics; provides a basis for his interest in the Fifth Estate as a new form of accountability in the healthcare sector by fostering concordant approach to patient care. His work sits on the interface between research, policy and practice. His research aim is to examine the role of patients' online experiences as a resource for choice and decision making in health care and utilization of online patient experience data for improving health service delivery. Investigating how a connected health world is changing; how future online health trends may be shaped; how Internet is transforming health system; how patients and the public interact with services and manage their own health also fall in the remit of his research area..

HARDIKER NICK

Nick Hardiker is Professor of Nursing and Health Informatics and Associate Dean (Research and Innovation) of the University of Salford School of Nursing, Midwifery, Social Work and Social Sciences. Nick has a background in Nursing and has Bachelors, Masters and Doctoral degrees in Computer Science from the University of Manchester. He has nearly 25 years' experience of theoretical and applied research in Health Informatics, with a particular focus on Health Records and Terminologies. Nick holds an adjunct position of Professor at the University of Colorado, Denver, USA. He is Director of the International Council of Nurses eHealth Programme, Editor-in-Chief of Informatics for Health and Social Care, and a member of a number of national and international standards bodies and think tanks.

HARDIN JAMES MICHAEL

James Michael Hardin is the Provost and Vice President for Academic Affairs at Samford University. Dr. Hardin has a BA in Math and Philosophy from the University of West Florida, MS in Research Design and Statistics from Florida State University, and MA in Mathematics from the University of Alabama. He earned a Master of Divinity from New Orleans Baptist Theological Seminary and his PhD in Applied Statistics from The University of Alabama. He has authored or co-authored over 80 papers in various journals. He is the author or co-author of over 150 abstracts presented at national meetings and has given over 75 invited lectures or talks. Dr. Hardin has authored several book chapters dealing with database design and decision support systems. He often serves as a consultant to healthcare organizations in the areas of data mining, sampling, and program integrity.

HARDING KIMBERLY

Kimberly Harding is Founder and President of Monarch Innovation Partners, a multi-dis-

ciplinary consulting firm that delivers proven market and business intelligence and product development consultation for emerging technology solutions, and enterprise-level implementation strategies for the following business domains: Healthcare and Life Science Delivery System Technology Platforms; Enterprise IT Architecture Consulting and Training; IT Product, Program and Project Management; Research and Development of Emerging Technology Platforms As a healthcare and IT product and business development executive, Ms. Harding has over 26 years of experience in acute and ambulatory care systems, telemedicine, pharmaceutical, claims processing, quality outcome registries and clinical trial data management systems. Some of her key professional assignments and consulting engagements include the following: CMS, the National Institute on Drug Abuse, the Department of Education, Veteran Health Administration, the American College of Cardiology, Ortho Biotech, Florida Blue (Blue Cross Blue Shield of Florida), Blue Shield of California, and Shared Medical Systems (Now Siemens Medical). As a thought leader and advocate for the adoption of interoperability standards and Open Source technology, Ms. Harding led Florida Blue in an effort to become the first payer to participate in the IHE Connectathon and HIMSS Interoperability Showcase, demonstrating the use of HL-7 standards for care coordination between providers

and payers. Ms. Harding was also selected to present as a guest speaker and Thought Leader for her Project Orchid platform, as a model for Open Science Clinical Innovation platform at the Association for Health Information and Libraries in Africa 14th Bi-Annual Conference, in Dar es Salaam, Tanzania, the 2015 Unite for Site Global Health Innovation Conference at Yale University, and the 2015 CUDI Big Data Big Networks Conference in Puerto Vallarta, Mexico, to illustrate the potential use of Open Source technology for clinical data exchange and management for drug discover initiatives in local, regional and multi-national clinical trial and public health programs.

HARLESS G. WILLIAM

William G. Harless, PhD, FACMI, was the Director of TIME Project at the Georgetown University School of Medicine. His prime interest in informatics is centered in the use of intelligent systems to support more relevant, experiential, and confluent methods of education. He has developed patient simulations using the new technologies of interactive videodisc, microprocessor, and voice recognition which offer unprecedented capabilities for new approaches to medical education.

HARRIS K. DANIEL

Daniel K. Harris, MBA, FACMI, was the Director of the American Medical Association's Medical information Network and President of the Medical Division of SoftSearch, Inc., a software engineering firm. Mr. Harris was President of the Symposium on Computer Applications in Medical Care in 1986 19X7. He also served on the Board of Directors and as Secretary for the U.S. Council for MEDINFO '86.

HARRISON OLIVER

Oliver Harrison is Chief Executive, Ithaca Health (UK). Oliver is CEO of Ithaca Health, a UK company helping to transform health through the better use of data and Managing Partner of Platform Health, a UK non-profit company developing open health data standards as a Sector Member of the ITU-T in Geneva. He is also currently a Consultant to the World Health Organisation on health data systems, and work stream lead for healthcare Technology and Standards for London Connect. Previously, as Director of Strategy at the Health Authority – Abu Dhabi (HAAD), Oliver set the agenda for a comprehensive health reform in the emirate. His team managed Abu Dhabi clinical capacity, monitored healthcare outcomes, and set the parameters for health spending. To enable their work, Oliver's team developed through pioneering data systems which became the blueprint for health data systems serving more than half a billion people in eight countries. Oliver built the Abu Dhabi Public Health Department from the ground-up, and created the award-winning Weqaya Programme tackling non-communicable disease. Before moving to Abu Dhabi, Oliver spent five years with McKinsey's

healthcare practice. He is a UK registered physician with postgraduate training in psychiatry, a Masters in Public Health from Johns Hopkins, and US National Board Certification in Public Health. Oliver is a Foundation Scholar at Jesus College, Cambridge where he read Medicine and Neuroscience, an Honorary Lecturer at Imperial College London, and a member of the World Economic Forum Global Agenda Council on Neuroscience and Behaviour.

HARTVIGSEN GUNNAR

Gunnar Hartvigsen, PhD, is since 1994 professor at the University of Tromsø - The Arctic University of Norway (UiT), Faculty of Science and Technology, Department of Computer Science, and head of the Medical Informatics & Telemedicine group (MI&T). Dr. Hartvigsen is since 2000 professor at the Norwegian Center for Integrated Care and Telemedicine (NST), University Hospital of North Norway (UNN) (part time). He holds an MSc and a PhD degree in Computer Science (Artificial Intelligence) from UiT. In 2005-2009 he was Vice Dean at the Faculty of Science, UiT. He has held several honorary posts at the Department of Computer Science, including Head of

Department. In 2004-2006 he was chairman of the Norwegian Council for Computer Science. In 2010 he became member of The National Committee for Research Ethics in Science and Technology (NENT). From 2005-2013 he served as board member of the Norwegian Society for Medical Informatics (FDH and later NorHIT). In 2007-2014 he was research manager and director of Tromsø Telemedicine Laboratory (TTL), one of Norway's first centers for research-based innovation. He has supervised more than 60 master students and 9 PhD students. He has act as referee for several conferences, journals and research councils. He has been a member of several doctoral adjudication committees in Norway, Denmark, Sweden and the Netherlands. Dr. Hartvigsen has received several grants, including from the Research Council of Norway (Euro 11 Mill.), Northern Norway Regional Health Authority (Euro 2 Mill.) and Regional Research Fund North-Norway (Euro 0,4 mill). His research interests include various aspects of telemedicine and medical informatics, including electronic disease surveillance, self-help systems for people with chronic diseases, medical sensor systems, HCI for mobile systems, electronic health records (EHRs), social media and mixed reality social computer games for people with chronic diseases, serious games, context-sensitive communication in hospitals, and telemedicine systems in private homes. Dr. Hartvigsen has written three

books and more than 300 papers and reports within his areas of interest. In 1994-1995, he was on sabbatical leave at the University of Twente, Faculty of Computer Science, The Netherlands. In Fall 2006 he was on sabbatical leave at the Faculty of Medicine, Munich University of Technology and Department of Health Science and Technology, Aalborg University. In July 2011 he visited ITACA, Technical University of Valencia, Spain. In 2011-2012 he was visiting professor at the University of California Davis.

HASMAN ARIE

Arie Hasman, emeritus professor in Medical Informatics. Arie Hasman was born February 1, 1945. He graduated in Technical Physics from the Technical University, Delft in 1968. In 1971 he obtained his PhD at this university. From 1971 until 1974 he worked in the department of Radiotherapy and Nuclear Medicine of the St. Radboud hospital in Nijmegen. He then moved to the Free University in Amsterdam to work in the Medical Informatics department chaired by Jan van Bemmel. Here he supervised several PhD students doing research in the areas of signal analysis (EEG analysis

and sleep staging, serial ECG analysis), database management systems for enabling research in radiotherapy and research concerning the appraisal of computerized medical interviews. He was also involved in education in medical informatics where he participated in the block course Medical Informatics for which he developed several educational packages. In 1985 he was appointed professor in Medical Informatics at the University of Maastricht (then called the University of Limburg), in the faculties of Medicine and Health Sciences, where he stayed until 2004. He became head of the newly established Medical Informatics department. Here several packages for medical Informatics education for both medical students and health sciences students were developed. He was involved in research covering a number topics: DRGs, interobserver variation in the assessment of fetal heart rate recordings, the discriminative value of patient characteristics for upper-gastrointestinal endoscopy, telecommunication in healthcare, estimation of cardiac deformation from marker tracks, the granularity of medical narratives and its effect on the speed and completeness of information retrieval, decision support system using computer interpreted guidelines, decision support for anti-epileptic drug treatment and for clinical laboratory capacity planning, a reminder system for general practitioners, development of diagnostic reference frames for epileptic seizures,

graphical information retrieval by browsing meta-information, automatic classification of diagnostic reports, development of a Nursing Minimum Dataset for the Netherlands, an electronic record for stroke patients, simulation of processes in hospital departments, assessing the importance of features for multi-layer perceptrons, patient related information needs and intention based guideline systems. He was involved in a number of European projects. In the context of AIM (Advanced Informatics in Medicine) his department obtained funding for two projects: KAVAS (research in the area of knowledge acquisition) and OPENLABS (research in the area of open clinical laboratory systems). He was chairman of the Concerted Action EDUCTRA. He also participated in the IT-Eductra accompanying measure of the 4th framework program of the EU. In the Erasmus program the department was involved in the Master Course on Medical Informatics, held in Athens. He lectured in Prague in the context of the TEMPUS project EUROMISE. From 1991 until 2005 he was also part-time professor at the Technical University Eindhoven, where he lectured and also supervised a number of PhD students. In 2004 he became head of the department of Medical Informatics at the AMC, University of Amsterdam. He has supervised 54 candidates who received their PhD in one of the above mentioned universities. He was external examiner for

the program in Medical Informatics of the Trinity College in Dublin, Ireland, of the University of Surrey, UK and of the University Colleges of Dublin and Galway, Ireland. He gave lectures in Prague and Athens. He was an EFMI and IMIA Board member. He was Scientific Program chair of MIE 2000, held in Hannover. Germany and Scientific Program co-chair of Medinfo 2001, held in London, UK. He was one of the authors of the IMIA Recommendations on Education in Biomedical and Health Informatics. He was also involved in the development of a procedure for IMIA accreditation of health informatics programs and in the evaluation of this procedure. He was Editor-in-chief of the International Journal of Medical Informatics and editorial board member of Computer methods and programs in biomedicine, Methods of information in medicine and The Journal of Informatics in Primary Care. In 2010 he retired but he is still active in the field of medical informatics.

HAUG J. PETER

Peter J. Haug, MD, FACMI, is the Director of Medical Informatics for the Urban Central Region, a three-hospital group of Intermountain Health Care. He is currently housed at the LDS Hospital in Salt Lake City, Utah. He is also an Associate Professor of Medical Informatics at the University of Utah and serves as adjunct faculty for the School of Nursing Informatics Program. He received a BA in mathematics and MD degree from the University of Wisconsin. Subsequently, he completed a residency in internal medicine at the LDS Hospital and a fellowship in medical informatics at the University of Utah. Dr. Haug's principal interests lie in the areas of medical information systems, medical decision support, and natural language processing. During his career, he has contributed to the development of the HELP system, a pioneering hospital information system, and has worked for a number of years in the area of applied decision support. He has been a participant in the development of the Arden Syntax for representing medical logic, first during its formulation as a produce of the American Society for Testing and Materials and, subsequently, within the responsible Health Level 7 committees. He remains an active member of the HL7 committees seeking to extend Arden and is a participant in HL7 committees seeking to develop a standard for authoring and exchanged medical guidelines. In addition, Dr. Haug has integrated a research interest in statistical decision making into his natural language research. The result has been a novel NLP approach, featuring a semantic component based in Bayesian statistics. Dr. Haug continues to focus a large segment of his time and effort on training new informaticians. He directs the Health Information Systems track in the University of Utah's informatics program and has contributed to a number ofinformatics training efforts, including the National Library of Medicine's informatics course at the Marine Biological Laboratory, Woods Hole, Massachusetts, from 1992 through 1995.

HAUX REINHOLD

Reinhold Haux is Professor and Director of the Department of Medical Informatics at the University of Heidelberg, Heidelberg, Germany. Dr. Haux received a masters degree (German "Diplom") in Medical Informatics from the University of Heidelberg and University of Applied Sciences Heilbronn in 1978. He received a doctorate from the Faculty for Theoretical Medicine, University of Ulm in 1983. He received a License for Lecturing (German "Habilitation") for Medical Informatics and Statistics from the Medical Faculty of the Technical University of Aachen. Between 1978 and 1989, Dr. Haux held faculty positions at the Institute for Medical Documentation, Statistics and Data Processing, University of Heidelberg; the Institute for Medical Statistics and Documentation, Technical University of Aachen; and the University of Tübingen. Since 1989, he has been Full Professor for Medical Informatics, Medical Faculty, and Director of the Department of Medical Informatics at the University of Heidelberg. During his early professional years, Dr. Haux concentrated on the design and analysis of multicenter observational studies,

construction of statistical tests, and design of statistical analysis systems. More recently, his focus has been on information systems in health care, particularly hospital information systems; on medical documentation, particularly clinical data management; and on knowledge-based decision support for diagnosis and therapy. He has participated in the design of curricula in health and medical informatics, contributing especially to the four-and-a-half-year medical informatics program for Medical informatics specialists at Heidelberg/Heilbronn. Dr. Haux has been an invited lecturer at, among others, the universities of Heidelberg, Heilbronn, and Prague. He is a member of the International Medical Informatics Association (IMIA) and, since 1989, has been chairperson of IMIA Working Group 1: Health and Medical Informatics Education. His current research fields are health information systems and management, and health-enabling technologies. Reinhold Haux is, among others, co-chairing the Lower Saxony Research Network Design of Environments for Ageing, where more than 60 researchers are involved in inter-and multidisciplinary research on information and communication technologies for promoting and sustaining quality of life, health and self-sufficiency. Prof. Haux is author and editor of more than 300 publications. He has supervised about 50 doctoral theses. His current lectures are in medical informatics and various

subfields, such as health information systems and health-enabling technologies. Since its start in 2001 the international Frank - van - Swieten-Lectures on Strategic Information Management in Health Information Systems are part of his teaching activities. For the term 2007-2010 Reinhold Haux was President of the International Medical Informatics Association (IMIA). He is now serving as IMIA's Past President. Since 2001 Prof. Haux is editor of the journal Methods of Information in Medicine. He has, from 2001 to 2007, co-edited the IMIA Yearbook of Medical Informatics. Reinhold Haux has advisory functions in science, economy, and government. He is a member of the German Association for Medical Informatics, Biometry and Epidemiology, where he served on the Advisory Board (1987-1995) and as a member of the Board of Directors (1990-1995). He is a member of the Deutsche Forschungsgemeinschaft (German Research Association) and has served as an elected reviewer for medical informatics and biometry since 1992. He has been a member of the Committee for Computing of the association since 1995. Dr. Haux is an associate editor of Methods of Information in Medicine. He is a member of the editorial boards of the International Journal of Medical Informatics and Artificial Intelligence in Medicine. He is a founding member and Chairman of the Board of the Academy of Medical Informatics, a German institution offering courses

for postgraduate training and education.

HAYES GLYN

Glyn Hayes, MD, has healthcare in his DNA. A GP in Worcester for 25-years and a health informatics professional for over 40 years, few people understand the role of ICT in the NHS and healthcare communities better than Glyn. He works as an independent consultant and member of the Mantis Advisory Panel and use his knowledge and expertise to support everybody. He specialises in product development – the design, implementation, accreditation and evaluation of healthcare software solutions in the UK and internationally. He prides himself on making systems, which clinicians want to use, improving individual patient care by the application of IT. His other recent consultancies have included providing strategic advice to several IT companies exploring their place in the changing face of the NHS; clinical systems design; and development of examination questions for the NHS Information Governance (IG) Toolkit. He also became the Medical Director of one of the

largest suppliers of IT to the English NHS in 1992 and retired from this post in 2000. Glyn is a founder member of the British Computer Society's Primary Health Care Specialist Group; he was its Chair from 1985 to 1990 and is currently its President. He has represented the UK on the IIMIA and was the chair of the Primary Care Working Group of IMIA. He was made an Honorary Fellow of the BCS in 2008, and he has also been awarded the Rory O'Moore Medal by the Irish Health Informatics Society for his contribution to health informatics. Dr Glyn Hayes has been awarded a lifetime achievement award by the Health Informatics Forum of the British Computer Society, becoming the third person ever receive the accolade. Dr Hayes has been one of the major influences in the development of health informatics in UK. Glyn is the chair of the Health Informatics Forum Strategic Panel. He is also President of the UK Council for Health Informatics Professionals. He has lectured widely around the world and been a keynote speaker at many international conferences.

HAYNES R. BRIAN
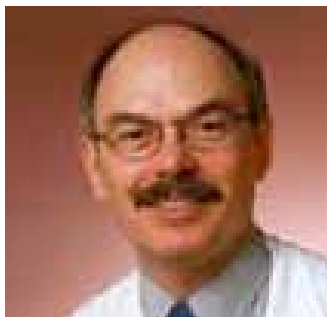
R. Brian Haynes, MD, PhD, FAC-MI, is an internist and clinical epidemiologist. He is Professor of Clinical Epidemiology and Biostatistics and Professor of Medicine at McMaster University in Hamilton Ontario Canada, and founded the Health Information Research Unit there in 1987. His main interests are in the reliable retrieval, communication, dissemination and uptake of health care research that has been validated in sound clinical trials and observational studies. His early research included development and testing of interventions to help patients follow recommendations for medical care. He is one of the founders of Evidence-Based Medicine (along with David Sackett, Peter Tugwell, Gordon Guyatt, and Deborah Cook) and led a group that proposed and initiated more informative abstracts ("structured abstracts") for clinical journals. He pioneered the development and deployment of direct use by clinicians of Medline and other bibliographic resources, and search filters for bibliographic databases to improve the yield of clinically relevant, scientifically sound ar-

ticles. He is the founding editor of ACP Journal Club.

HEALY JEAN-CLAUDE

Dr. Jean-Claude Healy received his medical training at the University of Paris in 1969 and his PhD. in physics and biology from the University of Paris in 1973. A brilliant medical doctor and scientist, he was Professor of Biophysics and Medical informatics for many years before he joined the European Union Directorate General for Information Society in 1995 as head of the unit, "Telematic Applications for Health." In 2004 he was assigned to the World Health Organization (WHO) headquarters in Geneva, Switzerland, as Director in charge of the WHO eHealth strategy. He authored more than 250 scientific publications and additional administrative documents for the eHealth Resolution (WHA 58 28), WHO eHealth Action Plan, the EU–WHO eHealth report for the World Summit on Information Society, etc. In 2007, he was appointed at the United Nations in New York as Senior Advisor, United Nations Global Alliance for ICT and Development (GAID). He retired in November

2007, planning to spend his time between his primary residence in Lausanne and his vineyard in south of France. The American Telemedicine Association (ATA) remembers his superb presentation as a keynote speaker at the fall 2007 meeting in Las Vegas. He was Professor of Biophysics and Medical informatics in a French University Hospitals for 30 years.

HEIN MATTHEW

Matthew Hein is an International Trade Specialist in the Office of Health and Information Technologies at the International Trade Administration. Since September 2005, he has followed medical device issues in Southeast Asia, and also tracked domestic and international developments in the Health Information Technology (Health IT) sector. In October 2010, he completed an 18-month set of courses and work assignments to graduate from the Commerce Department's Executive Leadership Development Program. Mr. Hein received an MBA from the University of Maryland in 1988.

HEINZE OLIVER

Oliver Heinze is Medical computer scientist. University Hospital Heidelberg, Germany. He co-chairs the Section of Medical Information Systems of the Department of Information Technology and Medical Engineering (ZIM) and oversees the regional EHR projects. He raised external funds for many projects. He is involved in teaching eHealth and in the Open eHealth Foundation. He is author of numerous publications and speaker at national and internat. conferences. Oliver is double laureate of the Telemed Award and winner of the Baden-Wuerttemberg Goes Mobile Award. He is The founding Chairman of Medical Informatics Unit and the Director for E-learning and knowledge management in The Medical Education Department. He is the former Director of Computer and Information Department (CIO) in The College of Medicine and the University Hospitals. Currently he is the vice president for Quality Planning and development in

the Saudi Electronic university. He is the former dean for health sciences college. He is the vice president for the Saudi society for biomedical engineering and Member of the scientific committee for biomedical engineering in Saudi Commission for Health Specialties. Dr Albarrak has a PHD in medical Informatics and MSc in BioEngineering. Chairman of conferences and scientific committee member for national and international symposiums and conferences. Dr Albarrak occupied posts including: a consultant for Ministry of health, ministry of transportation, MOHE, NGHA, and other public and private institutions. Area of research and interest includes e-Health, e-Learning, e-Education, Health Informatics, Nursing Informatics, Hospitals Information Systems, Quality Management, Health care Planning and Development, Academic and Executive Coaching. Dr Albarrak has been awarded several excellence prizes and awards for his research, projects, and services including first award in information technology projects, first award in engineering projects by Riyadh techno Vale, KSU, professor of the year college of medicine KSU and several research grants.

HELFAND MARK

Mark Helfand, MD, MS, MPH, is Professor of Medicine and Professor of Medical Informatics and Clinical Epidemiology at the Oregon Health & Science University. He is board-certified in Internal Medicine and practices hospital medicine at the Portland VA Medical Center, where he is a staff physician and directs the VA Evidence-Based Synthesis Program Coordinating Center. He directs the Scientific Resource Center for the Agency for Healthcare Research and Quality (AHRQ) Effective Health Care Program and, in 2014, was named the director of the new West Coast Branch of the US Cochrane Center. He was Editor-in-chief of Medical Decision Making from 2005 to 2012. Dr. Helfand received an AB and BS from Stanford University, an MD and MPH from University of Illinois Medical School, and an MS in health services research from Stanford University

HENDERSON DONNA

Donna Henderson is Service Development Manager. Scottish Centre for Telehealth and Telecare / NHS 24. Donna trained as an Occupational Therapist and worked as an operational manager of a range of health and care services before moving into strategic planning for adult health and care services. She now specialises in supporting the development of telecare services in Scotland, in her role as Service Development Manager in Scottish Centre for Telehealth and Telecare. As part of NHS 24's active engagement in European initiatives, she co-ordinates the European Innovation Programme on Active and Health Ageing's B3 Action Group on Integrated Care.

HENRY BAKKEN SUZANNE

Suzanne Bakken Henry, RN, DNSc, FACMI, is Associate Professor, Nursing and Medical Information Science, at the University of California, San Francisco. She serves on the Executive Committee of the MIS Program and heads the focal area in Knowledge Management. Dr. Henry received her BSN from Arizona State University. Following her doctoral degree in nursing science from the University of California, San Francisco, she completed a NLM-funded Postdoctoral Fellowship in Medical Informatics at the Section on Medical Informatics, Stanford University School of Medicine. Dr. Henry's research has focused on the intersection of informatics and quality management. Early studies described the clinical decision-making process using computer simulations. More recent efforts have focused on concept representation for computerbased systems in order to provide the infrastructure to link patient problems, interventions, and outcomes across settings and over time. She is currently conducting comparative evaluations of selected coding and classification systems using clinical data extracted from patient records. The findings of her research have targeted areas for the development and refinement of coding and classification systems. Dr. Henry was selected as a Fellow, American Academy of Nursing in 1995. She serves as a member of the American Nurses Association Steering Committee on Databases to Support Clinical Nursing Practice and as a consultant to the SNOMED Editorial Board. She is a member of the AMIA Awards Committee, Standards Committee, and Nursing Working Group, as well as the editorial board of the Journal of the American Medical Informatics Association.

HERCIGONJA – SZEKERES MIRA

Mira Hercigonja-Szekeres (1951-), PhD) completed Primary School and Classical Gymnasium in Zagreb, Croatia. She graduated at the Faculty of Science, Practical Mathematics and Informatics. She started her professional career in 1971 as a high school teacher of mathematics even during the time of studying at the University of Zagreb. In 1983 she changed her area of interest and, in following years, she was engaged in the production, marketing and sale of medical equipment as the managing director. During this period she got acquainted with Medical Informatics and Medical Statistics. In 1996 she has achieved a MSc. degree and in 2010 PhD. degree in Biomedicine at School of Medicine, University of Zagreb. Parallel to business with medical equipment she started to lecture Medical Informatics and Statistics. Following the time and her specialization in this area, Informatics, Medical Informatics and Statistics have become her main interest and nowadays she transfers her knowledge and experiences teaching college students. Her positions are:

Assistant Professor in Health Informatics and Statistics at Department of Biophysics, Medical Statistics and Medical Informatics, Faculty of Medicine, J. J. Strossmayer University in Osijek; Professor of Informatics and Applied Statistics at Hrvatsko Zagorje Polytechnic, Krapina; Professor of Medical Informatics at University of Applied Health Sciences, Zagreb, Croatia. She is a member of Croatian Society for Medical Informatics from its establishment in 1989 and she has served as Board member, secretary, treasurer and a representative in EFMI and IMIA. Currently she is Executive Officer of EFMI Board. She has more than 60 professional and scientific papers, she was a participant in more than 40 professional conferences and, even more, she has directly participated in organization of more than 25 conferences with various topics.

HERMANN THOMAS

Thomas Hermann works at CITEC–Center of Excellence Cognitive Interaction Technology, Bielefeld University Germany.

Sound is an often neglected carrier of information when it comes to computer interfaces. This talk will focus on how sound can contribute to improve the interaction of users with their environment, including the information environment, with tools, and with each other. Auditory Display and Sonification will be introduced and examples will illustrate how information can be made audible using non-speech but also synthesized vocal sounds. Selected examples of systems developed at CITEC in Bielefeld show how interfaces can be designed to control and interact with sonifications. This leads to sonification systems that make the behaviors of the human user itself audible, for instance to help to avoid unhealthy behaviors or to support sports exercise. Sound plays also an important role in organizing attention: a system for using sounds to increase joint attention of cooperating users in an Augmented Reality condition will be shown. Furthermore, some recent developements of our research at Bielefeld University are shown that use 'Blended Sonification' and 'Auditory Augmentation' to couple information spaces to the physical environment. We will sketch how these and other approaches come together in our large-scale project 'The Cognitive Service Robotics Apartment as Ambient Host' where a mobile robot with anthropormophic head and an instrumented environment cooperate to render 24/7 services to users.

HERSH WILLIAM

William Hersh, MD, FACMI, FACP is Professor and Chair of the Department of Medical Informatics & Clinical Epidemiology in the School of Medicine at Oregon Health & Science University (OHSU) in Portland, Oregon, USA. Dr. Hersh obtained his BS in Biology from the University of Illinois at Champaign-Urbana in 1980 and his MD from the University of Illinois at Chicago in 1984. After finishing a residency in Internal Medicine at University of Illinois Hospital in Chicago in 1987, he completed a Fellowship in Medical Informatics at Harvard University in 1990. Dr. Hersh has been at OHSU since 1990. Dr. Hersh is a leader and innovator in biomedical informatics both in education and research. In education, he developed and serves as Director of all of OHSU's graduate biomedical informatics education programs, including the Master of Science, the Master of Biomedical Informatics, the Graduate Certificate, and the Doctor of Philosophy. Dr. Hersh also spearheaded OHSU's efforts in distance learning for biomedical informatics, which are available up to the master's degree level. He also conceptualized and implemented the first

offering of the American Medical Informatics Association (AMIA) 10x10 ("ten by ten") program, which aims to educate 10,000 health care professionals and others in biomedical informatics. Dr. Hersh also serves as Director of OHSU's Fellowship in Biomedical Informatics, mainly funded by a training grant from the National Library of Medicine, which was recently renewed through 2017. He also directs an Informatics Training for Global Health grant from the National Institutes of Health Fogarty International Center in collaboration with Hospital Italiano of Buenos Aires, Argentina. Dr. Hersh is also involved in other global efforts to expand informatics capacity through education in Singapore and elsewhere. These include the OHSU Faculty Senate Distinguished Faculty Award for outstanding teaching in 2007; the 2008 AMIA Donald A.B. Lindberg Award for Innovation in Informatics; being named among the Modern Healthcare Top 25 Clinical Informaticists in 2010, 2011, and 2012; and the HIMSS Physician IT Leadership Award in 2015. Dr. Hersh has also made many contributions in research. His research originally focused in the area of information retrieval, where he has authored over 100 scientific papers as well as the book, Information Retrieval: A Health and Biomedical Perspective (Springer, 2009), now in its third edition and which has an associated Web site. He has also been involved in the leadership of various aspects of the Text Retrieval Confer-

ence (TREC) sponsored by the National Institute of Standards and Technology (NIST). Some more recent work has focused on the quantity and characteristics of the workforce needed to implement health information technology, especially in clinical settings. Dr. Hersh is also active in clinical and translational research informatics. He served as Director of the Biomedical Informatics Program of the Oregon Clinical & Translational Research Institute (OCTRI) from 2006-2014 and was Chair of the National Informatics Steering Committee of the Clinical & Translational Science Award (CTSA) program of the National Institutes of Health from 2006-2008.

HIGGINS MICHELE

Michele Higgins, PharmD, MBA,-Pharmacy Informatics Coordinator, Nebraska Methodist Health System. Dr. Higgins received her Doctor of Pharmacy degree from the University of Nebraska Medical Center and her MBA in Healthcare Administration from New England College. Her current responsibilities as pharmacy informatics coordinator for Nebraska Methodist Health system include all aspects of medication management within the Electronic Health Record. Past experience include duties as pharmacy manager, the setup of a highly automated pharmacy department in a brand new facility with CPOE for all disciplines including a NICU that was a new service line for the system, implementation of dispensing

cabinets, bedside barcode medication administration and smart pumps.

HILDEBRAND CLAUDIA

Claudia Hildebrand studied at the Faculty of Biology at Birkbeck College, University of London and Ludwig-Maximilians-Universität, München where she received her diploma in biology. In 1989 she joined Helmholtz Zentrum München (then GSF). She is head of the working group Medical Information Systems at the Institute of Biological and Medical Imaging at the Helmholtz Zentrum München. She has been managing various EU and nationally funded projects such as DIAB-CARD (Smart card for Patients with Chronic Diseases), ByMed-Card-HaB (Smartcard across borders) and BioHealth (Promoting Security Standards in eHealth). Her research interests focus on developing innovative, user-oriented ICT (information and communication technologies) solutions for improving the quality of care for patients, for supporting the workflow of health professionals and for ensuring the independence of senior

citizens. His current research interests are nano-/opto-electronics, nanotechnology and their emerging applications to health and environmental sciences. Dr. Deen's research record includes about 490 peer-reviewed articles, 6 awarded patents that have been used in industry, and 12 best paper/poster awards. Over his career, he has won more than fifty awards and honors. For his exceptional scholarly achievements, exemplary professionalism and service contributions, Dr. Deen was awarded three honorary doctorates –Doctor of Engineering – honoris causa from University of Waterloo, Canada in 2011 and Doctor – honoris causa from both Universidad de Granada, Spain in 2012 and Universitat Rovira i Virgili, Tarragona, Spain in 2014.

HODGE TREVOR

Trevor Hodge is Canada Health Infoway's Strategy Senior Vice President, Investment Strategies and Alliances, Canada Health Infoway. As Senior Vice President, Investment Strategies and Alliances, Trevor Hodge is responsible for Infoway's investment strategies, the oversight of its projects in western and northern Canada, relationships with the private sector, as well as the implementation of Infoway's investment program for EMRs and clinical system integration. Prior to joining Infoway in 2004, Mr. Hodge was the Health Practice Director for Sierra Systems Group and was responsible for coordinating their healthcare

business in Canada and the United States. Mr. Hodge previously held positions as Vice-president and part-owner of EDM Management Systems, and CIO for Alberta Health. He holds a Master's of Business Administration from the University of Alberta and a Bachelor of Arts from the University of Otago (New Zealand).

HOEFMAN JOHANNES BASTIANN

Bastiann Johannes Hoefman is a passionate entrepreneur with over 10 years of corporate experience across the banking, media and advertising sectors. Bas was at the forefront of executing one of the first large-scale interactive mobile health (mHealth) campaigns in Africa. After watching a BBC television documentary on the explosive growth of mobile telephony in Africa, Bas developed the the idea of using SMS communication to reach wide audiences with health education. After realizing the potential and intrigued by the idea, he decided to radically change his life, gave up his job and moved to Africa. He is the Co-Founder and

CEO of the award winning social enterprise Text to Change (TTC). Since 2007 TTC is using mobile technology for social marketing and to research the tastes and opinions of millions of people in Africa, South America and Asia. Currently, TTC is one of the market leaders in its field. The company connects hundreds of organizations with their often hard-to-reach target audiences in 17 countries across the world.

HOFDIJK JACOB

Jacob Hofdijk (1946-), PhD, was trained at the Rijks Universiteit Groningen in 1974, as Doctoral Business Economics with a main focus on Systems Approach and informatics. In May 1974 he started his career in Health Care at the University Hospital Leiden with the development of the BAZIS Integrated Hospital Information System. In 1979 he became project manager of the first DRG project in the Netherlands. This was the start of his involvement in the paradigm shift of health care management. In 2005 he left HISCOM to be more active in the world of Casemix in the Netherlands, as partner in Casemix, Special Adviser to the Dutch Casemix office and as consultant to the Ministry of

Health. Since 2003 he is involved in the development of integrated disease management programs for the most common chronic conditions, like Diabetes, COPD, Vascular. The focus is to create a patient oriented approach involving self management and a multidisciplinary coordination model. This is the base for outcome oriented population funding. International Organizations: Emeritus Secretary General of Patient Classification Systems International. Jacob Hofdijk became a member of EFMI Council since 1994 as The Netherlands national representative, later as Working Group chair, and Board member. He served EFMI as Secretary, Vice-President and President (2009-2010) During period 2011-2012 he represented EFMI in IMIA as Vice-President. Also, he chaired a lot of sessions and committees at MIE Conferences.

HOFFER P. EDWARD

Edward P. Hoffer, MD, FACP, FACC, FACMI, has spent his professional career combining clinical practice with cutting-edge research in the area of medical informatics. His work in medical informatics began during formal

training with the Massachusetts General Hospital Laboratory of Computer Science, during which he developed a computer-based program to teach cardiopulmonary resuscitation. Upon completion of his fellowship, he was appointed to faculty at Massachusetts General Hospital and Harvard Medical School. Dr. Hoffer's early work with LCS focused on using computers for teaching purposes. He developed a library of educational software that was distributed both via links to the LCS computers and as a disk-based series by Williams and Wilkins. This innovative series was well-reviewed in medical literature. He also developed the software to automate the interpretation of pulmonary function tests and to provide the backbone of the MGH Anticoagulant Clinic. For the past twenty years, Dr. Hoffer's major contributions have been in the development, maintenance, testing and expansion of DXplain, a diagnostic decision-support system. This program has been extensively used at Harvard Medical School, medical schools around the country, by practicing physicians, and by institutions around the world. He is currently leading efforts to expand the role of diagnostic decision support by integrating it into electronic medical record systems. Dr. Hoffer earned his SB from MIT and his medical degree from Harvard Medical School and completed his residency training in Medicine at Massachusetts General Hospital. In addition to

his work in medical informatics, he maintains a clinical practice of Cardiology and Internal Medicine in Framingham. He is an Associate Clinical Professor of Medicine at Harvard, performing ward rounds, delivering lectures, and conducting case conferences. He has taught both physicians and the lay public through formal Grand Rounds and public lectures, focusing on his clinical areas of interest in atrial fibrillation and geriatric cardiology. He has also contributed via committee work and leadership roles at the hospital, state and national levels.

HOGAN WILLIAM

William Hogan, MD, PhD, FACMI, is Director of Biomedical Informatics, Clinical and Translational Science Institute. He graduated MS, Intelligent Systems, University of Pittsburgh, MD, Jefferson Medical College, Philadelphia, PA, BS Science, The Pennsylvania State University. Dr. Hogan is a Professor in the College of Medicine, Department of Health Outcomes and Policy at the University of Florida. He is also Director of Biomedical Informatics for the Clinical and Translational Science Institute

and Director of Informatics for the OneFlorida Network, a statewide collaboration of three universities and healthcare providers that brings research findings from labs and other clinical settings to more than 9 million patients in all of Florida's 67 counties. To these endeavors, he brings over 15 years of experience in building and implementing large informatics systems, including the National Retail Data Monitor for early detection of outbreaks from point-of-sale data on over-the-counter healthcare products and the Comprehensive Research Informatics Suite for the National Children's Study and research at academic health centers and in the community. Dr. Hogan received his MD from Jefferson Medical College in 1993, after which he completed a residency in Internal Medicine at the University of Pittsburgh in 1996. He then enrolled in the Medical Informatics training program at the University of Pittsburgh, earning an MS in Intelligent Systems and Medical Informatics certificate in 1999. Since then he was worked for healthcare providers implementing electronic health records and tying together disparate systems, for industry, and in academic biomedical informatics. Dr. Hogan has expertise in clinical informatics, public health informatics, biosurveillance, electronic health records, clinical decision support, research informatics, and data standards in clinical, research, and public health information systems. His current research

studies how formal ontology can improve reuse of information and enable the construction of larger systems and datasets to improve patient care, research, public health, and education. He also has experience in the study of data and algorithms for early case and outbreak detection in infectious disease. He is author and co-author of a lot of articles in peer reviewed journals and other publication. Also he received several awards for his scientific work within Medical informatics field.

HOGARTH MICHAEL

Michael Hogarth, MD, FACMI, is Professor at Department of Pathology and Laboratory Medicine, UC Davis Medical Center EDRS in Sacramento, CA. Michael Hogarth received a bachelor's degree in Biomedical Engineering in 1985 from Texas A&M University. In 1991, he received a Doctor of Medicine from University of Texas, Southwestern (Dallas, TX). After completing residency training in Internal Medicine at the UC Davis Medical Center in 1995, he entered a Medical Informatics fellowship in the UC

Davis Department of Pathology and Laboratory Medicine. He completed the fellowship in 1997 and joined the faculty of the UC Davis Department of Pathology and Laboratory Medicine where he currently serves as an Associate Professor. His research interest are: Development of public health information systems and frameworks; Terminological and ontological systems development; Understanding collaborative scientific networks through social network analysis and visualization. Currently, Michael Hogarth is a member of the Masters of Public Health faculty, the Medical Informatics graduate program faculty, and the UC Davis Computer Science graduate group. He also attends on the Internal Medicine wards and serves in the Department of Pathology as a member of the Pathology Informatics faculty. He is the principal investigator for the California Electronic Death Registration System (CA-EDRS; http://www.edrs.us), the largest and most active electronic death certificate system in the US. Michael Hogarth is a member of the American Medical Informatics Association (AMIA), Health Level 7 (HL-7), the National Association of Public Health Statistics and Information Systems (NAPH-SIS), and the California Regional Health Information Organization (CalRHIO).

HOLDEN M. FRANK

Frank M. Holden, MD, FACMI, was the Director of the Veterans Administration Department of Medicine and Surgery at the Boston Development Center. He has been responsible for the development and implementation of important computer-based health system management techniques, including the DRG system for ambulatory and long-term care. He has had a career-long interest in the relationship between information and the management of health services and health professionals.

HOLE T. WILLIAM

William T. Hole, MD, FACMI, is Research Medical Officer for the Unified Medical Language System Metathesaurus at the National Library of Medicine. He received his BA in chemistry from Earlham College in Indiana and his MD from Ohio State University. He completed a residency in pediatrics at Mount Zion Hospital and Medical Center in San Francisco and a postdoctoral fellowship in child psychiatry and academic pediatrics at Stanford University. Dr. Brown was Assistant Professor in Pediatrics at Brown University and Director of Information Science at Bradley Hospital. His early work included direct computer recording of the physiology and behavior of premature infants in the neonatal intensive care unit. Since his arrival at the National Library of Medicine, Dr. Hole has been deeply involved in the UMLS. He has been responsible for the design, creation, and release of 13 annual editions of the Metathesaurus, the largest of the three UMLS Knowledge

Sources. Since the initial 1990 experimental release, the Metathesaurus has grown to contain and relate more than 800,000 concepts containing terms from more than 60 biomedical vocabularies, including the current and proposed HIPAA standard terminologies.

HOLLADAY EVON

Evon Holladay, is Professor, Executive in Residence, Analytics, Denver University; former Vice President, Enterprise Intelligence, Catholic Health Initiatives. Executive level healthcare strategist skilled in: defining and implementing a vision to solve complex problems. This is accomplished by identifying/ building relationships and establishing formal governance structures to create a safe space for dialogue, learning and evolution. Key leadership attributes: high energy, compassionate, analytical, and courageous. Currently serving as executive in residence for Denver University analytic program. Previously served as vice president of enterprise intelligence for Catholic Health Initiatives. Key leader in defining and implementing an analytics and data strategy – which is critical to CHI's transition from a 3.5B holding company into a $15B healthcare delivery operating company. Consistently produced and promoted; identified as top talent needed to achieve CHI mission (create healthy communities).

HOLMES H. JOHN

John H. Holmes, PhD, is professor of Medical Informatics and Epidemiology at University of Pennsylvania School of Medicine, Philadelphia, USA. Additional Positions of John Holmes are: Associate Director of the Penn Institute for Biomedical Informatics for Medical Informatics Chair, Graduate Group in Epidemiology and Biostatistics Director, Doctoral Program in Epidemiology Senior Fellow, The Leonard Davis Institute of Health Economics Senior Fellow, Center for Public Health Initiatives Senior Fellow, Center for Health Behavior Research. Dr. Holmes earned his M.S. in Information Systems and his Ph.D. in Information Science from Drexel University. He collaborates extensively with epidemiologists, biostatisticians, and clinical researchers from a wide variety of disciplines within and beyond Penn. He has been recognized nationally and internationally for his work on developing and applying new approaches to mining epidemiologic surveillance data, as well as his efforts at furthering educational initiatives in biomedical informatics. Dr. Holmes has published over 125 peer-reviewed manuscripts,

conference papers, abstracts, and book chapters. Dr. Holmes' research interests are focused on several areas in medical informatics, including evolutionary computation and machine learning approaches to knowledge discovery in clinical databases (data mining), interoperable information systems infrastructures for epidemiologic surveillance, clinical decision support systems, semantic analysis, shared decision making and patient-physician communication, and information systems user behavior. Dr. Holmes is a principal or co-investigator on projects funded by the National Cancer Institute, the National Library of Medicine, and the Agency for Healthcare Research and Quality, and he directs the Training Core and the Contextual Analysis Core for the NIH-funded Penn Center of Excellence in Prostate Cancer Disparities. Dr. Holmes is engaged with the Botswana-UPenn Partnership, assisting in building informatics education and clinical research capacity in Botswana. Dr. Holmes serves on numerous national and international committees, including as a chartered member and now chair of the Biomedical Computing and Health Informatics study section at the NIH, as well as numerous ad hoc review committees for several institutes at the NIH, the Office of the National Coordinator for Health IT, the Agency for Healthcare Research and Quality, and several US foundations and European funding agencies. Dr. Holmes sits on the Board of Directors of

the AMIA , and is Chair of the International Affairs Committee of AMIA and the AMIA Representative to IMIA. Internationally, he serves as Vice President of IMIA for North America, Vice Chair of the IMIA Working Group on Data Mining and Big Data Analytics. and on the Board of Directors of the Artificial Intelligence in Medicine Society (Europe).

HONG HUANG

Huang Hong graduated from Fudan University Shanghai Medical College, formerly Shanghai Medical University, with a Bachelor of Science in Health Administration in August, 1994. After graduation, she joined the IT Department of Fudan University Huashan Hospital, one of the top general hospitals in China. In January 2004, she became the Chief Information Officer (CIO) of Huashan Hospital. Since 1994, Hong has overseen the planning and implementation of HIS, LIS, RIS, PACS, EMR, and Outpatient Service Information System at her hospital, where she acquired in-depth knowledge on clinical workflow and application requirements. In the recent 3 years, she pioneered data center

construction and hybrid cloud deployment in China. For three consecutive years from 2013 to 2015, she was granted funding from the Ministry of Health to conduct the innovative projects on data center and health analytics with an emphasis on transforming the results of clinical research to support evidence-based medicine. She was nominated as the 2015 National Outstanding CIO by the China Chief Information Officer Union. Hong is currently the Vice Chairwoman of Shanghai Hospital Information Management Association, and a member of the Executive Committee of China Hospital Information Management Association (CHIMA).

HONG YUH-FONG

Assistant Professor of Nursing – Clinical Nursing Systems, The University of Texas USA. Before he obtained the PhD degree in Science Education from The University of Texas at Austin in 2005, Dr. Hong joined UTHealth School of Nursing to provide instructional designs for its first online nursing degree program. He also has three years of doc-

toral training in Molecular Biology at the University of Nebraska at Lincoln and earned an MS degree in Biology at Pittsburg State University in Kansas. In 2013, Hong received a Certificate in Applied Health Informatics from the UTHealth School of Biomedical Informatics. Hong teaches a variety of courses in informatics, education and research at bachelor's, master's and doctoral levels. His research interests focus on teaching and learning in nursing/health education and applications of health informatics in nursing education, research and practice. In addition, he is interested in applications of innovation technology in nursing education, research and practice, especially in implementation, assessment, and evaluation.

HOOK KRISTINA
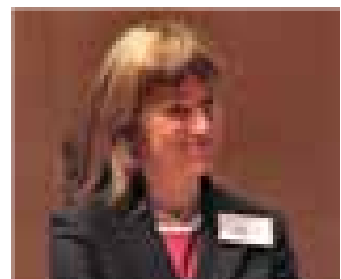
Kristina Höök is a professor in Interaction Design at the Royal Institute of Technology and also works part-time at SICS (Swedish Institute of Computer Science). She is the director of the Mobile Life centre. Höök has published numerous journal papers, books and book chapters, and conference papers in highly renowned venues. A

frequent keynote speaker, she is known for her work on social navigation, seamfulness, mobile services, affective interaction and lately, designing for bodily engagement in interaction through somaesthetics. Her competence lies mainly in interaction design and user studies helping to form design. She has obtained numerous national and international grants, awards, and fellowships including the Cor Baayen Fellowship by ERCIM (European Research Consortium for Informatics and Mathematics), the INGVAR award and she is an ACM Distinguished Scientist. She has been listed as one of the 50 most influential IT-women in Sweden every year since 2008. She is an elected member of Royal Swedish Academy of Engineering Sciences (IVA). Currently she works at Royal Institute of Technology Sweden.

HORSCH ALEXANDER

Alexander Horsch is lecturer for medical informatics at TUM. He has been Associate Professor for 5 years, University of Tromsø, Faculty of Medicine, Department of Clinical Medicine. He was Head of medical computing center of Klinikums rechts der Isar in 1987-1995. From September 1998 to September 2007 he was Chair of Working Group Medical Image Processing of the German Society of Medical Informatics, Biometry and Epidemiology (GMDS). Also, he was German representative in the EFMI Council, and chair of EFMI Working Group on Medical Image Processing (WG MIP) and Member of scientific program committees of MIE and CARS as well as for national conferences. Author or co-author of more than 70 publications in conference proceedings, scientific journals, and books. He was reviewer for IEEE, IJMI, Methods, and other journals and scientific societies. He is also involved in telemedicine actions of EC, ESA and WHO.

HORVITZ ERIC

Eric Horvitz is technical fellow and director of the Microsoft Research lab at Redmond, Washington. He has pursued principles and applications work includes leveraging large stores of data to predict outcomes, using predictive models to guide decision making, and developing mechanisms for enhancing privacy. His research and collaborations have led to fielded systems in healthcare, transportation, information retrieval, human-computer interaction, and aerospace. He has been elected fellow of AAAI, AAAS, NAE, and he has been inducted into the CHI Academy. He has served as president of the AAAI, chair of the AAAS Section on Information, Computing, and Communications, and on advisory committees for the National Institutes of Health, National Science Foundation, President's Council of Advisors on Science and Technology (PCAST), Computing Community Consortium (CCC), and DARPA. He received his PhD and MD from Stanford University. of computational intelligence, with efforts in machine perception, learning, reasoning, and decision making.

HOUNSFIELD N. GODFREY

Sir Godfrey Newbold Hounsfield (1919-2004) was born near Newark in Nottinghamshire, England. He delighted in experimenting with electronics, the farm's mechanical and electrical machinery and the elements of flight from haystacks using a home made hang glider. He had always had an aptitude for phys-

ics and mathematics but never entered a University. After working on radar and the research staff of Electric and Musical Instruments (EMI) in 1951 he went on to make notable advances in computer memory design, increasing the speed of the machine by redesigning the then very slow transistor to compete with the valve. In 1967 he moved to the Central Research Laboratories (CRL) of EMI and into the field of automatic pattern recognition where he realized that much information was being lost by inefficient data retrieval methods. Hounsfield conceived the idea of CT in that year. Without any knowledge of earlier observations by Radon and Cormack, Hounsfield went on to develop the principles of CT and three dimensional reconstruction. In his initial experiments using a gamma source it took 9 days to acquire the data and 2.5 hours to reconstruct the image on a large main frame computer. Replacing the gamma ray source with an X-ray tube reduced the scanning time to 9 hours. The basic principle was that of a rotate-translate system and with this apparatus Hounsfield was able to differentiate white and gray matter in a preserved brain specimen. The Department of Health and Social Security (DHHS) - as it was then - was approached by Hounsfield and radiologists James Ambrose and Louis Kreel and with commendable foresight agreed to support, with EMI, the development of a head scanner. Hounsfield and a small team were installed in the

radiological department of the Atkinson Morley's Hospital in Wimbledon - a location chosen to avoid wide spread publicity in the development phase. In 1975, at an international conference in Bermuda, Hounsfield announced a general purpose scanner which did not require a water bath and therefore enabled access to other parts of the body providing not only enhanced diagnostic possibilities but also more effective application of treatment programs. His announcement was greeted with a standing ovation. In 1972 Hounsfield had won the MacRobert Award, the UK's highest award for innovation. Numerous awards and Honorary Degrees followed with recognition from around the world. In 1979 Hounsfield and Cormack were awarded the Nobel Prize for physiology or medicine for their joint, though independent, development of CAT scan theory and technology. In 1981 he was knighted by HM the Queen. In 1994 he was elected an Honorary Fellow of the Royal Academy of Engineering. After his official retirement in 1986 he continued as a consultant for EMI and various departments and hospitals.

HOUSEH MOWAFA
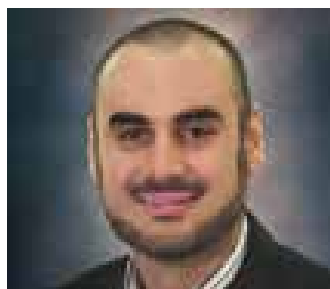
Mowafa Househ is an Assistant Professor at the College of Public Health and Health Informatics, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs, Riyadh, Kingdom of Saudi Arabia. Dr. Househ is also an adjunct professor at the University of Victoria School of Health Information Science, BC, Canada. Dr. Househ is also the editor-in-chief of the Journal of Health Informatics in developing countries. Dr. Househ worked as a planning and research analyst with the Northern Health Authority and an instructor at the University of Northern British Columbia, in Prince George, BC, Canada, prior to coming to Saudi Arabia. Prior to his work at King Saud bin Abdulaziz University for Health Sciences, Dr. Househ completed his undergraduate degree at the University of Alberta and his Master's Degree in Industrial Engineering at the University of Toronto. Dr. Househ was accepted to the University Of Victoria School Of Health Information Science (Victoria, Canada) in 2004. During his first year, Dr. Househ received the Michael Smith Foundation for Health Research Trainee award to carry

out his research on the evaluation of common drug review dissemination strategies and use of evidence by drug plans using virtual networking tools. Dr. Househ completed his Doctoral work in 2009. Dr. Househ has also edited one book through IOS press on the subject of "International health informatics" and he is currently working on his another books on "Social Media and Mobile Technologies in Healthcare" and "Global Health and Informatics" to be published through IGI global. Dr. Househ has also published scientific papers in leading peer reviewed health informatics journals. Dr. Househ's primary research interests are around the use of information and communication technologies to empower patients and clinicians. Dr. Househ's doctoral work focused on the empowerment of pharmacists, physicians, and academics in the use of collaborative technologies to facilitate knowledge translation research. His current work revolves on empowering patients through the use of social media, mobile health, and personal health records.

HOUTSMA ALE

Ale Houtsma is Project Director / Independent Consultant at Radboud University Medical Center The Netherlands. Working for more than 25 years in general and academic hospitals, in different roles on all levels. In the last 15 years experience as CIO and program director of complex IT-programs with a big change component: implementation of EHR (Epic), new infrastructure (from datastorage till virtual desktop), steering info, labsystem. On the other hand experience as (interim) manager and COO, with experience in almost all surgical, internal and ancillary specialisms. He is independent consultant and owner of Ale Houtsma Strategie & Interim Management.

HOVENGA J. S. EVELYN

Evelyn J. S. Hovenga is a distinguished Australian health informatician. She has made major contributions to the Medical informatics for over 30 years. Her primary aim is to promote a national knowledge-oriented computing framework, in which complex meaning can be validly represented and shared via adaptable health computing systems and patient-centric electronic health records to support seamless and high quality patient care and a sustainable health system. In her official retirement Evelyn, Heather Grain and Joan Edgecumbe have established a new company eHealth Education Pty Ltd, for which Evelyn works as the Director, Company secretary, Professor, CEO and Trainer. Evelyn regularly delivers the 'train the trainer' course (TAE40110 Certificate IV in Training and Assessment) in Rockhampton and elsewhere under the company's trading name eHe and RSC Training. Until recently Evelyn was the Professor and Program Director for the Health Informatics Research Group and Head, School of Management and Information Systems at the Faculty of Business and Informatics, Central Queensland University. She retired from those positions in November 2007. Evelyn is the Director of EJSH Consulting. She has been appointed as a consultant to the openEHR Foundation, is an Honorary Senior Research Associate at the Center for Health Informatics & Multiprofessional Education, University College London and an Honorary Academic Fellow at Austin Health, Melbourne. Evelyn is a founding member of the openEHR Clinical Review Board responsible for Archetype Governance and a development process framework promoting Archetype standardization and founding Editor-in-Chief of eJHI - the electronic Journal of Health Informatics. She has served as an Editorial team member for the International Journal of Medical Informatics for several years. Evelyn is a foundation member of the Standards Australia IT/14 health informatics committee and serves on two technical sub committees on health concept representation and electronic

health records. She initiated and collaboratively directed an international effort to develop a new ISO standard for the integration of a reference terminology model for nursing. Compliance with this standard ensures that a clinical information system is able to accommodate nursing concepts. This work was supported by the IMIA Nursing Informatics group and the International Council of Nurses. Evelyn contributes to many standards development projects overseen by Standards Australia IT/14, IT/14/9 and IT/14/2 committees. Many of these projects contribute to standards work items undertaken by health informatics committees from the European standards organization (CEN TC251), the International Organization of Standards (ISO/TC215) and HL7. Evelyn was elected to represent IT/14 as a member of the national Health Data Standards Committee (HDSC) whose work focuses primarily on the maintenance, revision and development of the National Health Data Dictionary now also used as the repository of data standards to support electronic health records development in Australia. The HDSC also has responsibility for overseeing the work of the Classifications and Terminology Working Group. Evelyn participated in the Australian Health Information Council's workforce capacity building sub-group and contributed to the development of the National Statement outlining a vision for the health informatics capacity of the workforce and detailing priorities of action in

the areas of leadership, education and research. Similarly Evelyn was a key contributor to the development of a white paper, a Roadmap for Nursing Informatics in Australia commissioned by the Australian Government Department of Health and Aging. Evelyn chaired the MEDINFO 2007 hosted by HISA under the auspices of IMIA held in Brisbane. Also, in 2007. Evelyn was appointed as an expert advisor to the European Commission funded NIGHTINGALE project from 1998-2002, and has been an invited speaker to many international conferences and meetings, reviewer of many conference papers, member of numerous scientific program committees and examiner of many doctoral thesis.

HOYT JOHN

John Hoyt is Executive Vice President. HIMSS Analytics, USA. Mr. Hoyt is responsible for providing executive leadership for HIMSS Analytics worldwide where he also provides direction for all Stage 6 and Stage 7 validations and derivative research. Throughout his healthcare career, Hoyt has been instru-

mental in defining business and IT strategy as well as selecting, implementing and integrating mission-critical HIT systems across the enterprise. Before joining HIMSS, Hoyt served as a hospital Chief Operating Officer and twice as a Chief Information Officer with various healthcare organizations accumulating in over 22 years of hospital exec experience.

HRIPCSAK GEORGE

George Hripcsak, MD, MS, is Vivian Beaumont Allen Professor and Chair of Columbia University's Department of Biomedical Informatics and Director of Medical Informatics Services for NewYork-Presbyterian Hospital/Columbia Campus. He is a board-certified internist with degrees in chemistry, medicine, and biostatistics. Dr. Hripcsak's current research focus is on the clinical information stored in electronic health records and on the development of next-generation health record systems. Using nonlinear time series analysis, machine learning, knowledge engineering, and natural language processing, he is developing the methods necessary to support clinical research and patient safety initiatives.

He co-chaired the Meaningful Use Workgroup of U.S. Department of Health and Human Services's Office of the National Coordinator of Health Information Technology; it defines the criteria by which health care providers collect incentives for using electronic health records. He led the effort to create the Arden Syntax, a language for representing health knowledge that has become a national standard. Dr. Hripcsak chaired the U.S. National Library of Medicine's Biomedical Library and Informatics Review Committee, and he is a fellow of the Institute of Medicine, the American College of Medical Informatics, and the New York Academy of Medicine. He has published over 250 papers.

HSIEH K. C. RICHARD

Richard K. C. Hsieh, DrPH, FACMI, was Director for International Programs at the National Library of Medicine. His early work was with the U.S. Public Health Service in computer applications in hospitals.

ambulatory care facilities, and multi-phasic health testing services. Dr. Hsieh's current interest is the international exchange of biomedical information. such as the use of MEDLINE

HSU (MARC) HUEI MIN

Min Huei (Marc) Hsu was appointed as Director of Medical Informatics Department at Ministry of Health and Welfare of Taiwan in March 2011. Prior to the MOHW appointment, Dr. Hsu served as CIO at Taipei Medical University and also a Consultant Neurosurgeon at Wanfang Hospital (a 746-bed hospital affiliated to Taipei Medical University). In addition, Dr. Hsu also chaired as the Head of Neurosurgery Department of Wanfang Hospital between August 2009 and July 2010.

HUESING STEVEN

Steven Huesing (1944-2009) was an outstanding person and professional. As Executive Director of the International Medical Informatics Association, he has for many years provided significant and global contributions to the progress of our field. It is through his tireless work that IMIA has developed into the leading international association that it is today. Since the start of his career, in the 1960s, he has been a pioneer and ambassador to the advancement of computers and information technology in healthcare. Among the many recognitions of his contributions, he was honored for his exceptional work with the prestigious Canadian Health Informatics. Award for Lifetime Achievement. Steven has also been described as "one of Canada's true eHealth pioneers", serving as Founding President (1975-1978) and Executive Director (1980-1999) of COACH, Canada's Health Informatics Association. He was also Editor of the COACH history book, was a co-founder of CHITTA (now the healthcare division of the Information Technology Association of Canada, ITAC) and was Editor and Publisher of Healthcare In-

formation Management & Communications Canada (HIM&CC). He worked in the health industry and informatics from 1964, holding senior executive, CFO, and CIO positions in healthcare facilities, government and voluntary organizations. Among many other achievements during more than 40 years on involvement in IMIA, COACH and other organizations and activities in health informatics within Canada and internationally, Steven established the COACH Founding President's Award in 1983 to recognize and motivate outstanding health informatics students at the University of Victoria. Steven was actively involved in developing health informatics curricula with several universities, colleges and associations; in 1999, COACH established the Steven Huesing Scholarship for students in health informatics or related programs at Canadian post-secondary institutions.

HUFF STANLEY

Stanley Huff, MD, FACMI, is Chief Medical Informatics Officer, Intermountain Information Systems. Dr. Stanley M. Huff earned his MD from the University of Utah's School of Medicine. He is a clinical professor in the University of Utah's Department of Biomedical Informatics, an adjunct professor of Nursing, and an adjunct assistant professor of Pathology at the University of Utah. His expertise is in the following areas: medical information representation in database systems;

standards for the exchange of data between medical computer systems, including Health Level Seven (HL7), Logical Observation Identifiers Names and Codes (LOINC), and SNOMED CT; as well as Electronic Medical Record architecture and design. Dr. Huff joined the department in 1987 as a clinical professor. He is board certified in Clinical Pathology and was elected to the American College of Medical Informatics. He serves on the Health Information Technology Standards Committee (Office of the National Coordinator for Health Information Technology), is a member of the Board of HL7, and co-chairs the LOINC Committee.

HULLIN CAROL

President of the International Medical Informatics Association Latin America and the Caribbean (IMIA-LAC) Dr. Carol Hullin has a doctorate in Medical Informatics from the University of Melbourne and a post graduate degree in Artificial Intelligence. She is President of the International Medical Informatics Association Latin America and the Caribbean (IMIA-LAC). She works as a leader in the Division

of Medical Informatics of the World Bank and her work takes her to underdeveloped countries managing projects to improve access to healthcare using new technologies. She meets with ministers of health from different countries and creates reports over their computational needs.

HUMPHREYS L. BETSY

Betsy L. Humphreys, MLS, FACMI works as Deputy Director of National Library of Medicine (NLM) in Bethesda, USA. As Deputy Director, she shares responsibility with the Director for overall program development, program evaluation, policy formulation, direction and coordination of all Library activities. In addition, the Deputy Director is responsible for the day-to-day operations of the Library, and in the absence of the Director, assumes full responsibility for all functions performed by the National Library of Medicine. Ms. Humphreys also coordinates the Unified Medical Language System (UMLS) project, which produces knowledge sources to support advanced retrieval and integration of information from disparate electronic information sources, and NLM's activities related to health data standards. She contrib-

utes to the development of NIH and HHS policy on a range of matters, including health information technology, public access to research results, clinical trial registration and results reporting. Ms. Humphreys received a BA from Smith College, where she was elected to Phi Beta Kappa, and an M.L.S. from the University of Maryland, College Park. She is a member of the Institute of Medicine of the National Academy of Sciences, a Fellow of the American College of Medical Informatics, and a Fellow of the Medical Library Association. She is the recipient of a number of awards, including the Marcia C. Noyes Award, which is the Medical Library Association's highest honor, the first Cornerstone Award conferred by the Association of Academic Health Sciences Libraries, the Morris F. Collen Award of Excellence from the American College of Medical Informatics, considered the highest honor in the field of Medical informatics and the rank of Meritorious Executive in the Senior Executive Service, conferred by the President of the United States. Ms. Humphreys presents and publishes widely.

HUNTER LAWRENCE

Lawrence Hunter, PhD, FACMI, is the Director of the Center for Computational Pharmacology

at the University of Colorado School of Medicine, and an Associate Professor in the Departments of Pharmacology, Computer Science, and Preventive Medicine and Biometrics. He is also a Founder and Director of Molecular Mining Corporation. He received his BA degree cum laude in psychiatry and a PhD in computer science from Yale University. Dr. Hunter spent more than 10 years at the National Institutes of Health, beginning in the machine learning project at the National Library of Medicine and ending as the Chief of the Molecular Statistics and Bioinformatics Section at the National Cancer Institute. Dr. Hunter's research interests span a wide range of areas, from cognitive science to rational drug design. His primary focus recently has been the application of machine learning techniques to data generated by high-throughput molecular biology. He has also developed techniques for automated processing of biomedical texts, anatomically realistic models of neural computation, and neurobiologically and evolutionarily informed computational models of cognition. Dr. Hunter inaugurated two of the most important academic bioinformatics conferences, Intelligent Systems in Molecular Biology and Pacific Symposium on Biocomputing, and was Founding President of the International Society for Computational Biology

HUPERT NATHANIEL

Nathaniel Hupert, MD, MPH, is a primary care internal medicine specialist and a researcher in public health emergency response and medical decision making. He is an associate professor of public health and medicine at Weill Cornell Medical College in New York City. He trained at Harvard Medical School, the University of Pittsburgh Medical Center, and the Harvard School of Public Health. His research concerns a number of topics that fall under the heading of "computational public health," the application of mathematical and simulation modeling techniques to health problems that extend beyond the bounds of traditional epidemiology. Since September 2000, he has collaborated with local, state, federal, and international public health officials in a series of federally financed research projects on hospital and clinical preparedness for bioterrorism. In the course of this research, Dr. Hupert led the development of a series of computer simulations to study mass antibiotic distribution and hospital capacity in the event of a large-scale release of a bioweapon or other catastrophic health event. Since 2005, Dr. Hupert has worked in close collaboration with colleagues in the engineering/operations research community to bring state-of-the-art engineering solutions to critical public health problems. Locally, these collaborative efforts have been formalized with the creation of the cross-cam-

pus Institute for Disease and Disaster Preparedness, co-led by Dr. Hupert and Professor Jack Muckstadt at Cornell University. Dr. Hupert serves on the Health and Human Services (HHS) Anthrax Modeling Working Group and was a member of the 2007 RAND Expert Panel on Defining Public Health Preparedness. He has participated in a number of national webcasts on bioterrorism preparedness for the Centers for Disease Control and Prevention's Strategic National Stockpile program and for the HHS Agency for Healthcare Research and Quality. Dr. Hupert received his A.B., M.P.H., and M.D. from Harvard University.

HURLEN PETTER

Peter Hurlen, MD, PhD, is associate professor (since 2013) of University of Oslo, Norway. Currently he works as Head of Department of Diagnostic Imaging, Akershus University Hospital Nordbyhagen, Norway. Previous he worked at Helse Sor-OstHealth Services Research Center, Akershus University Hospital. Hurlen was certified as Radiologist in 2007 at Norwegian Medical Association. He graduated Faculty of medicine in 1975 at University of

Oslo, achieved MSc with title in Computer Sciences in 1980 and PhD in Radiology Informatics/ Health Service Research in 1986 at University of Oslo. He worked at Directorate of Organization and Management (1983-1985) as Senior Executive Officer, Helsedirektoratet (1985-1993) as Special Medical Officer, at National Institute of Public Health (1993-1996), as Chief physician and Head of Section, at Akershus University Hospital (2006-2008) as Resident physician, and from 2009 to 2011 as Head of Department for Radiology. Five years (1996-2001) he was engaged as Managing director for CEN standards and EU projects - Primary task: Health Informatics for Siemens Health Services. Peter's scientific interesting areas are: Medical/ Health informatics, radiology informatics, radiology, health services research. During his sabbatical explore he had the possibility of initiating Clinical Informatics R&D activities at university hospital. Prof Peter Hurlen was chair of Local Organizing Committee of MIE 2011 held in Oslo. From the year 2015 prof Hurlen serves as secretary of International Medical Informatics Association.

HURL GERARD

Gerard Hurl, MA, FBCS CITP, Fellow of the Irish Computer Society and the Royal Academy of Medicine in Ireland National Director of ICT, Health Services Executive, the national organization responsible for providing Health and Personal Social Services in the Republic of Ireland. He was Chairman of the Healthcare Informatics Society of Ireland and Vice Chairman of ProRec Ireland, Vice Chairman of the Irish Forum for Health Informatics and Secretary General of the EuroRec Institute. Also, he is Founder member of the HealthCare Informatics Standards Committee of the National Standards Authority of Ireland and Irish representative on the council of the European Medical Informatics Federation (EFMI). Hurl is Lecturer in Healthcare Informatics: Institute of Public Administration, Royal College of Surgeons in Ireland, University College Dublin in 1996, Overall Winner - Irish Computer Professional of the Year.

HUSSEIN RADA

Rada Hussein (1970-) established and directed the Biomedical Informatics Center of Excellence (BMICoE) at the Information Technology Institute (ITI)- the Ministry of Communications and Information Technology (MCIT) in Egypt. The BMICoE adopts the knowledge triangle model (research, education and innovation) to launch the Biomedical Informatics discipline in Egypt since 2006 In education: she established the ITI/Oregon Health and Science University (OHSU) joint program in Biomedical Informatics in 2006, and the Egyptian Health Informatics Fellowship Program jointly with the Egyptian Ministry of Health (MoH) since 2009. In research: she established a research project with the Institute for Medical Informatics, Statistics and Epidemiology (IMISE)-Leipzig University and internship program for the German students (2007-2010). She was the principle investigator of two EC funded projects, namely, the TeleMedic@Egypt project in partnership with Fraunhofer-Gesellschaft-Institute for Biomedical Engineering (IBMT) (2009-2011) and the AFRICA BUILD project in partnership with Universidad Politecnica de Madrid (UPM) (2011-2014). She was also a member of the panel of experts of FP7 projects, such as, Map-IT, and Action Grid. In consultation services, she was a consultant for the MCIT national eHealth projects in Egypt: the national cancer registry project (2007) and eHealth master plan (2008) in addition to being a reviewer for the eHealth projects funded by the Information Technology Academia Collaboration (ITAC) program Information Technology Industry Development Agency (ITIDA) (2007-2010). In outreach, she organized conferences and workshops on biomedical informatics in Egypt: the 4th ICICT conference (in cooperation with IEEE) 2006, and the Health IT & mHealth Innovations track during MEDICONIX 2012. Dr. Rada Hussein holds a PhD. in Medical Informatics from Heidelberg University (2004). Her thesis addresses the utilization of the Integrating the Healthcare Enterprise (IHE) framework in providing the required interoperability in today's healthcare organizations. She was a member of the CHILI GmbH team, Heidelberg, Germany, for developing the CHILI radiological workstation (2001-2003). In her master (1995-1998) at Cairo University, she was engaged in research and development of medical decision support systems. She also developed an Ultrasound Image Viewer during her diploma at ITI (1993-1994). She worked as an assistant professor at the biomedical engineering department,–Ahliyya Amman University (2004-2005). She developed a roadmap for telemedicine 2020 in Egypt utilizing innovation and strategic management techniques available at the WHO Global Observatory for eHealth. She also developed a roadmap for future activities in Africathat describes a framework for strengthening the national health systems in Africa utilizing: eHealth, Research and Innovation (R&I) for health, and Science, Technology, and Innovation (STI) Capacity Building. She also published several papers on Biomedical Informatics in international journals and conferences. Rada is the MCIT-ITI representative at the IMIA and an associate Editor at the Journal of Medical Systems (JoMS).

HWANG HEE

Hee Hwang, MD, PhD, is the Chief information Officer and Associate Professor of Pediatric Neurology in Seoul National University Bundang Hospital (SNUBH), Korea. He graduated from Seoul National University College of Medicine in 1996 and had an internship at Seoul National University Hospital from 1997 to 1998. After working as a resident at Department of

Pediatrics of Seoul National University Children's Hospital for four years, he has been an assistant professor at the Division of Pediatric Neurology, Department of Pediatrics, SNUBH. He had a visiting scholar at MEG center and Epilepsy Surgery Program of Cincinnati Children's Hospital, Cincinnati, OH, USA. He has been in charge of development and management of Electronic Health Record system since 2004. His major interests are the user interface of Electronic Health Record (EHR) system, u-health application, and health information exchange.

HYPPÖNEN HANNELE

Hannele Hypönen has 15 years of clinical experience in health care. She has a degree in adult education majoring in organizational development. In her doctoral thesis she developed a model for constructive assessment of change connected with IT development and implementation in social welfare and health care. At Stakes she acts as a development manager responsible for information technology assessment.

HÜBNER URSULA

Ursula Hübner, PhD, is a research professor of Medical and Health Informatics and Quantitative Methods at the University of Applied Sciences Osnabrück, Germany. Ursula Hübner is head of the Health Informatics Research Group, a group of researchers who have a focus on continuity of care and IT adoption research/IT benchmarking. She also leads the Center for Multimedia and IT Applications, a service unit at the Department of Business Management and Social Sciences, which among others provides eLearning services to the staff and to the students. She is the initiator and promoter of the HL7 CDA based eNursing Summary in Germany, of nursing summary standards worldwide and of other multi-professional transfer documents to ensure continuity of care. Since 2002 she regularly issues the IT Report Healthcare (www.it-report-healthcare.info) that includes recent data on the adoption of health IT systems in Germany, Austria and The Netherlands. Ursula Hübner received her PhD from the Department of Mathematics and Science Düsseldorf University Germany after studying Psychology, Biology and Brain Research at the Universities of Mainz and Düsseldorf. She worked as a research fellow at the Department of Neurology Düsseldorf University Hospital before she then spent 10 years in industry research at a major international IT company (Groupe Bull S.A.)

in Paris and Cologne. At Bull she was consortium leader of several European R&D projects for developing a neuroradiological workbench including an image management system. Ursula Hübner is among others member of the German Association for Medical Informatics, Biometry and Epidemiology and chairs the Nursing Informatics Working Group. She also chairs the Lower Saxony eHealth Initiative.

HÖHNE HEINZ KARL

Karl Heinz Höhne is a professor emeritus of Medical informatics at the University of Hamburg. He is the founder of the Department of Computer Science in Medicine (later Department of Medical Informatics) and was the acting director of the former Institute of Mathematics and Computer Science in Medicine of the University Medical Center Hamburg-Eppendorf until 2003. Together with his co-workers he has done pioneering work in medical volume visualization and spatial knowledge representation with applications to diagnostics, surgery planning and medical education. Most of his work is incorporated in the VOXEL-MAN-3D atlases of Anatomy and Radiology and

recently in the VOXEL-MAN Surgery Simulators. Presently he is active as an associate and advisor of the VOXEL-MAN Group. He has retired from his duties as Associate Editor of the IEEE Transactions on Medical Imaging, as honorary officer of the International Society of Medical Image Computing and Computer Assisted Intervention (MICCAI) and as Editorial board member of several international scientific journals.

HÄKKINEN UNTO

Unto Hakkinen is Research Professor. Centre for Health and Social Economics. National Institute for Health and Welfare, Finland. He has been a Finnish co-ordinator in many international comparisons and a project director in EuroHOPE (European Health Care Outcomes, Performance and Efficiency) -project funded by the European Commission. His academic and applied research has mainly focused on health economics and topics related to it.

HÖRBST ALEXANDER

Alexander Hörbst is an Associate Professor for Medical Informatics and the head of the Research Division for eHealth and Telemedicine at the University for Health Sciences, Medical Informatics and Technology (UMIT) in Hall in Tyrol. He is a member of the Senate and various other committees at UMIT, including the study commission for biomedical informatics. He also holds a position as a Guest Professor in Information Management at the Leopold-Franzens-University of Innsbruck. He received a PhD in Medical informatics, a master in business administration, a master in economics and a bachelor in informatics. In 2012, he received his Habilitation in the field of Medical Informatics as the youngest scientist in Europe in the respective field. In addition to his academic training, he has completed different trainings such as SAP certification and ITIL certification. He also received the certification "Medical Informatics" from the Society of Medical Informatics, Biostatistics and Epidemiology (GMDS), which is currently only held by around 220 people since its introduction in 1978 world-

wide. He is president of ProRec Austria, an EU-wide initiative (EuroRec) for the promotion of high quality EHRs. Since 2012, Alexander Hörbst is a member of the EFMI board and holds the position of the Press and Information Officer; he is also part of the eHealth Stakeholder group of the European Commission and the Committee 238 "Medical Informatics" of the Austrian Standards Institute. Currently his research activities focus on: applied robotics in health- and social care; novel information system architectures for integrated care; quality management and standardization in healthcare IT; patient empowerment and nursing informatics. He has substantially contributed to the scientific community with numerous publications in the field of which several were selected for publication in the IMIA yearbook of Medical Informatics. In 2010 he received the young scientists award of the German Society of Medical Informatics, Biostatistics and Epidemiology for outstanding scientific work. He is/has been involved in several national and international projects. These projects were ranging from the establishment of a novel approach for the dynamic user-driven orchestration of IT services across organizations to support integrated care scenarios or the development of an EHR quality certification approach to the conceptualization and prototype-implementation of a robot that supports elderly people in their medication management and measuring of vital

parameters. Alexander Hörbst acts as a reviewer for different congresses and journals in the field of Medical informatics such as MIE, GMDS, Medinfo, Methods of Information in Medicine, BMC – Medical Informatics and Decision Making or Applied Clinical Informatics. He is also a regional editor of the IMIA yearbook of Medical Informatics. Mr. Hörbst maintains various regular teaching duties at universities in the core areas of computer science and Medical informatics.

HÄYRINEN KRISTIINA

Kristiina Häyrinen, PhD, is currently Consultant at Fujitsu. She has worked 18 years in health care organizations as a medical laboratory technologists and participated in several ICT projects. Since then she has studied more, specialized medical laboratory technologists, biomedical laboratory scientists, Master of Social and Health Informatics. In 2011 she got her PhD in Social and Health Informatics from University of Eastern Finland, Kuopio, In her PhD thesis she developed an interdisciplinary data model of electronic health care record. She has also worked as a researcher in University of Eastern Finland, Kuopio and as a development manager at Kuntien Tiera Oy. For several years, she has been a chair of the Finnish Social and Health Informatics Association. She is also Editor-in Chief of the Finnish Journal for eHealth and eWelfare. She has participated in the

national electronic health record development project in Finlan

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IAKOVIDIS ILIAS

Ilias Iakovidis, PhD, is Deputy Head of the ICT for Health (eHealth, Health IT) unit of the European Commission which he joined in 1993. He is responsible for European Union's (EU) research strategy as well as the International cooperation in this domain. The ICT for Health unit supports currently research and development in areas of multi scale modeling and simulations (Virtual Physiological Human), Patient safety, and health monitoring (Personal Health systems) with budget of ca. € 90 Mil/year. Ilias is also working on the follow up of the eHealth Action Plan COM (2004) 356 targeting large scale deployment of eHealth in EU Member States of which he was the main co-author. He continues to publish in journals and books, teach at graduate programs and specialized seminars, and give keynote lectures at major international conferences. In 2001 he has been elected fellow of American College of Medical Informatics

for his contribution to the field of Medical informatics.

IIVANAINEN ANTTI

Antti Iivanainen, MS, DSc, is Development Director. Apotti Programme, Helsinki, Finland. Antti is specialist in General Practice. Previous to the appointment in Apotti –Program he worked as one of the planners in the unification of the Social wellfare department and Health care department of City of Helsinki. Before that he was the director of Health stations in Helsinki Health care department.

IKRAM ARFAN

Arfan Ikram is associate professor and head of neuro-epidemiologic research at the department of Epidemiology, Erasmus MC Rotterdam, the Netherlands. He is principal investigator

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of neurologic diseases in the Rotterdam Study and principal investigator of the Rotterdam Scan Study. His research focuses on investigating the etiology of neurologic diseases in the elderly, with a particular focus on dementia, Alzheimer disease, stroke, and Parkinson disease. The main areas of research are to elucidate the earliest signs of brain diseases, before clinical symptoms are present, and to understand how these lead to clinical manifestation of disease. Moreover, he is interested in preclinical signs that can be used to identify persons at highest risk of developing disease. A main focus on his research has been the use of MRI-imaging to understand brain disease. Dr. Ikram hase published over 300 international scientific papers.

ILAKOVAC VESNA

Vesna Ilakovac (1962-) was born in Osijek, Croatia. She is associate professor and Head of the Department of Biophysics, Medical Statistics and Medical Informatics at the Josip Juraj Strossmayer University of Osijek, Faculty of Medicine, Osijek, Croatia. She teaches Medical statistics and Medical informatics to nursing, medical and postgraduate students at Osijek Faculty of Medicine. She is also a visiting professor at Mostar University School of Medicine and at Alma Mater Europaea – European Center Maribor. From 2009 she is the president of the Croatian Society for Medical Informatics and member of the Committee for E-Health (Croatian Academy of Medical Sciences). In 2012 she was appointed to National Committee for Health Care Informatization Strategy. She was Croatian representative in EHR-QTN project - "Thematic network on quality and certification of EHR systems" (initiated and coordinated by the EuroRec Institute). As the result of these activities the Croatian ProRec Center was formed in November 2013 in Dubrovnik with Professor Ilakovac as the first president.

ILUYEMI SINA

Consultant, Researcher, Strategist, Non-Executive, Analyst, Cross-Reader, HEALTHTRONICS Consultancy & Advisory, Royal College of Surgeons England, United KingdomSina Iluyemi is passionate about making digital health innovations work for patients, hospitals, citizens, governments, companies, startups and international organisations. Adesina offers unique knowledge about digital health innovation, implementation and entrepreneurship by combining knowledge from diverse multidisciplinary subjects and areas. He speaks on digital health innovation at conferences such as the Digital Health Assembly and Digital Health Investment Summit. Adesina is an Advisory Board Member of an EU WELCOME project on digital health wearable technology, and a non-Exec of Comuzi, a London-based Creative Innovation firm. He co-hosts Digital Health Innovation and Entrepreneurship events in London with Simmons & Simmons and a Mentor on MassChallenge Accelerator Programme. Adesina since 2012, a GSMA Global Mobile Award Judge, and as a Competition Judge to 1776 Global Challenge Cup in 2013 and ICT Achievers Africa Awards between 2008 & 2010. Between 2009 and 2012, he was made an Ambassador to Mobile Healthcare Industry Summit, where he was awarded for 'thought leadership' on mobile-phone-medical device convergence.Dr Iluyemi trained as a Dental Surgeon with postgraduate qualifications from Royal College of Surgeons and Universities of London and Portsmouth. He has a PhD in Health Informatics (eHealth innovation and policy); he is Fellow of Royal Society of Medicine, a UK Council for Health

Informatics Professionals Level 3 Registrant.

ILVES HENDRIK TOOMAS

Toomas Hendrik Ilves is President of the Republic of Estonia. Office of the President of the Republic of Estonia. He served as Chairman of the EU Task Force on eHealth from 2011 to 2012, and since November 2012, at the invitation of the European Commission, he became Chairman of the European Cloud Partnership Steering Board. His interest in computers stems from an early age–he learned to program at the age of 13, and he has been promoting Estonia's IT-development since the country restored its independence. During recent years, president Ilves has spoken and written extensively at integration, trans-atlantic relations, e-government, cyber security and other related topics.

INDRA NEIL SARKAR
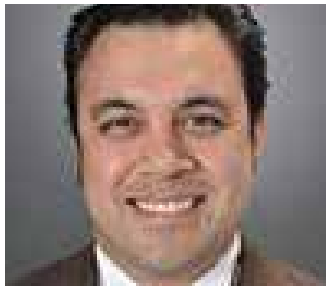
Sarkar Neil Indra's work is dedicated to furthering a biomedical informatics research agenda across the entire spectrum of biomedicine, from molecules to populations. His specific research involves the development and use of a range of computational techniques (including knowledge gathering and discovery methods, phylogenetics, information theory, ontology development, semantic indexing, information retrieval, and natural language processing) to facilitate the analysis and linking of molecular and public health data. Ultimately, Dr. Sarkar's research aims to enable the creation of testable models of disease and provide a framework to enable the assessment of comparative hypotheses across the spectrum of biomedicine and health care.

INGERICK PATRICIA

Patricia Ingerick, MBA, MSHS, is Director, The Geneia Institute. Pat holds an MBA degree from Lebanon Valley College, an MSHS degree with a major in Clinical Management and Leadership from George Washington University, and a certification

in Lean Six Sigma from Villanova University. She is currently pursuing her D. Ed. Degree in Adult Education from Penn State University. Her expertise spans a variety of areas including Information Technology, Process Improvement and Design, Project Management, Education and Healthcare Transformation.

IPPOLITO ANDREA

Getting her start at VA as a Presidential Innovation Fellow, Ms. Andrea Ippolito now leads the VA Innovators Network within the VA Center for Innovation. In this capacity, she designed and oversaw the creation of a program that provides the tools and resources to VA employees to develop innovations that improve the experience of our Veterans. The Innovators Network currently includes Innovation Specialists at twenty-two VA Medical Centers across VA. Through the Innovators Network, front line VA employees have designed, tested or launched more than 35 Veteran-centric innovations. She recently completed her role as a Presidential Innovation Fellow working with VA. Ms. Ippolito has pursued doctoral studies in the Engineering Systems Division at MIT and is

the Co-Founder of an innovative application that improves access to care called Smart Scheduling (acquired by athenahealth in 2016). She also previously served as the Co-Director of MIT's "Hacking Medicine" program, as an Innovation Specialist at the Brigham Innovation Hub and Product Innovation Manager at athenahealth. Ms. Ippolito completed her MS in Engineering & Management at MIT. Prior to MIT, Ms. Ippolito worked as a Research Scientist within the Corporate Technology Development group at Boston Scientific. She obtained both her BS in Biological Engineering in 2006 and Masters of Engineering in Biomedical Engineering in 2007 from Cornell University.

ISHAQ M.A. FAIZ

Faiz A. M. Ishaq is consultant/ Adjunct Professor of SZABIST, Dubai International Academic City in Dubai, United Arab Emirates. He works as Consultant (IT & Academics), Self-employed (May 2013 till present) in Alexandria, Virginia and Founding Partner of SmartBizPK (July 2006 till present in Islamabad, Pakistan. This micro-venture was started in 2001 to provide Internet enabling services for

family and friends. It was formalized in 2006 with an ex-student helping out in Islamabad, Pakistan. As of July, 2011, the ex-student, Mr Abdul Waheed, has become a partner and the micro-business is looking to grow and expand. Dr. Ishaq was Owner of Abul Faiz Computer Software (October 2007 – June 2013) in Dubai, UAE and he was Quality Assurance Consultant at Islamic Azad University, Dubai (September 2012 – January 2013) in Dubai, UAE. Also, he was Head of Campus, SZABIST (May 2010 – September 2012) of Dubai International Academic City, Dubai, UAE and Adjunct Faculty Manipal University Dubai Campus (September 2008 – May 2010) in Dubai, UAE. As Professor he worked at COMSATS Institute of Information Technology (September 2001 – May 2006) in Islamabad, Pakistan, He was Professor of Computer Science of IBADAT Foundation (October 1998 – August 2001) in Islamabad, Pakistan, Technical Consultant of Jaffer Brothers (Private) Limited (February 1997 – October 1998) in Islamabad, Pakistan. Also, he worked as Chief Scientific Officer of Directorate General of Computers & Control (June 1995 – January 1997) in Islamabad, Pakistan, Director of Computer Training Center, UGC Campus (October 1982 – July 1992) in Islamabad, Pakistan and Head of Computer Systems Group PINSTECH (December 1979 – September 1982) in Islamabad, Pakistan.

ISMET MUNIR

Munir Ismet is HP's Head of Cloud Business for Public Sector, Healthcare and Education industries in Europe, Middle East and Africa (EMEA). In his role, Munir is responsible for HP's Cloud strategy across EMEA in the areas of Central Government, Local Government, Justice & Public Safety, Education, Defence and Healthcare. Munir and his team work very closely with our customers and partners (Systems Integrators and Application Software vendors) in order to share HP's vision as well as creating HP's Cloud go to market initiatives and value propositions in these markets. In his 25years in the IT industry, Munir held a number of management positions in some of the leading IT companies in the industry, focusing in Public Sector, Education, Healthcare and Life Sciences Industries. During this time, Munir has been involved in some of the leading Healthcare national and regional IT projects in the UK, Spain, Middle East, Turkey, Hungary and many other countries.

J

JACKSON PURCELL GRETCHEN

Gretchen Purcell Jackson, MD, PhD, FACMI is Associate Professor, Department of Pediatric Surgery, VUMC. Her interesting fields are: General pediatric surgery, laparoscopic surgery, with a strong interest in both fetal and neonatal surgical technique. Education: PhD, Medical Information Sciences, Stanford University (1997); MD, Stanford University (1996); BA, Electrical Engineering and Biological Sciences, Stanford University. Postgraduate Training: Chief Resident, General Surgery, Duke University Medical Center, Durham, NC Fellowships (2003-2004); Fellow, Pediatric Surgery, Children's Hospital of Pittsburgh, Pittsburgh, PA (2004-2006). Her research interesting areas are: Rapidly evolving communication technologies such as the Internet and social media offer patients and families powerful tools for communicating with healthcare institutions and managing their health. Dr. Jackson's research in biomedical informatics focuses on using such technologies to empower patients and families to take an active role in their health care. Her work has studied the usage of MyHealthAtVanderbilt, a web-based patient portal that allows patients and families seen at the Vanderbilt University Medical Center to interact with the healthcare system. MyHealthAt-Vanderbilt offers a diverse set of functions, including secure messaging between patients and healthcare providers. Dr. Jackson's work has shown that actual medical care is delivered through the portal messaging. For example, new problems are identified, and referrals are made or medications are adjusted. Her laboratory has identified ethnic and racial disparities in use of the messaging function, and thus, disparities in access to care that may be created by patient portal technologies. Ongoing research projects seek to identify and address the causes of these disparities. Other projects are evaluating the level of care delivered through the messaging function and investigating whether messaging interactions constitute billable services. Dr. Jackson's group has also developed self-management tools for MyHealthAtVanderbilt. One tool allows patients to set and track health-related goals, and it may serve as the basis of managing a wide variety of chronic health conditions that are treated with behavioral modifications. This tool is currently being evaluated in a randomized trial to address obesity in an employee wellness program. Dr. Purcell has published over 20 peer-reviewed articles and book chapters and has made numerous scientific presentations.

JAFFE CHARLES

Charles Jaffe, PhD, is the Chief Executive Officer of HL7. He serves as the organization's global ambassador, fostering relationships with key industry stakeholders. A 37-year veteran of the healthcare IT industry, Dr. Jaffe was previously the Senior Global Strategist for the Digital Health Group at Intel Corporation, Vice President of Life Sciences at SAIC, and the Director of Medical Informatics at AstraZeneca Pharmaceuticals. He completed his medical training at Johns Hopkins and Duke Universities, and was a post-doctoral fellow at the National Institutes of Health and at Georgetown University. Formerly, he was President of InforMed, an informatics consultancy for research informatics. Over the course of his career, he has been the principal investigator for more than 200 clinical trials, and has served in various leadership roles in the American Medical Informatics Association. He has been a Board member on leading organizations for information technology standards, and

served as the chair of a national institutional review board. Most recently, he held an appointment in the Department of Engineering at Penn State University. Dr. Jaffe has been the contributing editor for several journals and has published on a range of subjects, including clinical management, informatics deployment, and healthcare policy.

JAIN ANIL

Anil Jain is a University Distinguished Professor in the Department of Computer Science at Michigan State University where he conducts research in pattern recognition, computer vision and biometrics. He has received Guggenheim fellowship, Humboldt Research award, Fulbright fellowship, IEEE Computer Society Technical Achievement award, IEEE W. Wallace McDowell award, IAPR King-Sun Fu Prize, and ICDM Research Award. He served as the Editor-in-Chief of the IEEE Trans. Pattern Analysis and Machine Intelligence (1991-1994) and is a Fellow of ACM, IEEE, AAAS, IAPR and SPIE. Holder of eight patents in biometrics, he is the author of several books on biometrics and pattern recognition. He served as a member of the National Acad-

emies panels on Information Technology, Whither Biometrics and Improvised Explosive Devices (IED). He was a member of the Defense Science Board. Professor A. Jain has 107505 citations (h-index 141).

JAIN DINESH

Dinesh Jain is Vice President of Clinical Data Analytics at Max Healthcare, a leading healthcare provider in India. His deep Healthcare expertise covers Clinical, Information Technology & Executive management with experience in Clinical Information Systems, Healthcare IT, and Data analytics. For more than a decade, he has been working at the interface of Clinical domain with Information Systems design and increasingly machine learning techniques. Prior to certification in Bioinformatics and Predictive Business Analytics, he completed his residency in General Surgery and a Bachelor's in Medicine. His work experience includes Surgical Practice, Bioscience Informatics, Enterprise IT Management, Project Management and Business Analytics.

JAIN SACHIN

M.D., MBA, CMO, CareMore Health System/Anthem. Sachin H. Jain (born in 1980 in New York City and raised in Alpine, New Jersey) is an American physician and health policy analyst who held leadership positions in the Center for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health Information Technology (ONC). He is president and chief executive officer at the CareMore Health System after serving as Chief Medical Information and Innovation Officer at Merck and Co, lecturer in health care policy at Harvard Medical School, and attending physician at the Boston VA Hospital. He is also co-founder and co-Editor-in-Chief of "Healthcare: The Science of Delivery and Innovation", consulting professor of medicine at the Stanford University School of Medicine, and a Contributor at Forbes. At CMS, Jain was involved in the launch of the Center for Medicare and Medicaid Innovation that was chartered by Section 3021 of the Patient Protection and Affordable Care Act. His optimistic perspective on the Center's

capacity to reform payment for health care services was met with skepticism from some critics. As a senior advisor to Donald Berwick when he was Administrator at CMS, Jain advocated for speedier translation of health care delivery research into practice and an expanded use of clinical registries. Previously, Jain was Special Assistant to the National Coordinator for Health Information Technology at the Office of the National Coordinator for Health Information Technology (ONC). At the ONC, Jain worked with David Blumenthal to implement the HITECH Provisions of the Recovery Act and to achieve broader alignment between health plans and federal meaningful use policies and enhance electronic health record usability; he led private sector engagement efforts on behalf of ONC. He is the subject of a Harvard case study written by Harvard Business School dean Nitin Nohria.

JAMAL AMR

Amr Jamal (1978-), MD, SBFM, ABFM, MRCGP, GCMI is Assistant Professor and Consultant Family Physician and Clinical Informatician. He is Head of Medical Informatics and e-Learning Unit of Medical Education Department at King Saud University, School of Medicine in Riyadh, Saudi Arabia. Currently he worked as Assistant Professor of Family Medicine, Specialist in Medical Informatics of King Saud University (KSU), College of Medicine, Department of Family & Community Medicine, Riyadh, and Acting Consultant of Family Medicine King Saud University (KSU), King Khalid University Hospital (KKUH), Primary Care Clinics, Riyadh From November 2008 till April 2009. He worked as Senior Registrar of Family Medicine King Saud University (KSU), King Khalid University Hospital (KKUH), Primary Care Clinics, Riyadh. From October 2007 till September 2008. He was Chief Resident of National Guard Health Affairs, King Abdul-Aziz Medical City (KAMC), Department of Family & Primary Health Care (PHC), Riyadh and Resident in Family Medicine King Saud University (KSU), College of Medicine, Department of Family & Community Medicine, Riyadh Qualifications: March. 2009 - MRCGP (International) Royal College of General Practitioners, UK; March. 2009 - Bachelor of Islamic Jurisprudence, Imam Muhammad ibn Saud Islamic University, Riyadh, February 2009 - Arab Board of Family Medicine (ABFM), The Council of Arab Board of Medical Specializations, Damascus, Syria, November 2008 - Saudi Board of Family Medicine (SB-FM) Saudi Commission for Health Specialties, Riyadh, January 2003 - Bachelor of Medicine and Surgery (MBBS) at King Saud University (KSU), College of Medicine, Riyadh.

JANOLS REBECKA

Rebecka Janols is a PhD student at the Department of Information Technology, Uppsala University since January 2009. Her PhD is within Human-Computer Interaction and Health Informatics. She successfully defended her Licentiate Thesis "Tailor the System or Tailor the User – How To Make a Better Use of Electronic Patient Records" on the 6th of May, 2011. Janols is now a research visitor at University of Auckland, Scool of poulational health, National Institute of Health Innovations (NIHI). Janols background is as Master of Sociotechnical Systems Engineering, Uppsala University.

JASPERS MONIQUE

Monique Jaspers, PhD, is Professor at Department of Medical Informatics, Academic Medical Center of University of Amsterdam. In her research position in the field of Medical informatics, Monique Jaspers co-ordinates healthcare and IT related projects throughout the Academic

Medical Center of Amsterdam and with other health care faculties. Her research projects are funded under the Dutch Cancer Society, the Dutch Children Cancer Free Foundation, Quality of Life, and LSH match. The main theme of her research line is the evaluation and improvement of the usability of healthcare information systems in supporting end users in their daily working routines. Her research projects cover the issues surrounding the evaluation and (re) design or computerized physician ordering systems, laboratory ordering systems, patient care records, and computerized oncology-related registry systems. Her involvement in thesis projects HAS let her Acquire knowledge and experience or evaluation methodology in healthcare, usability testing and system engineering. She has established a strong network of relations with medical informatics researchers at the European level. She is member of the European Human Factors Engineering and Usability Working Group on Health Informatics. She has ACTED as a reviewer or international Medical informatics journals and Medical Informatics international conference proceedings such as the MIE, MEDINFO and AMIA. In the period 1999-2003, she was responsible for Establishing an International Partnership for Health Informatics Education - how includes six universities and Promotes professionalism or future medical informatics specialists through international collaboration and baccalaureate or graduate programs in medical and health informatics. Currently she is director of the Educational Institute of Medical Informatics at the University of Amsterdam AMC. This institute holds end responsibility for the curricula contents, quality assurance and international affairs of the bachelor's and master's program in medical informatics. Previously she held a senior research position at the University of Nijmegen. Her research was on cognitive engineering and evaluation of intelligent tutorial computer systems. A cognitive psychologist by academic education and a computer scientist and usability expert by post-graduate training, Monique Jaspers HAS spent most of her professional career with the University of Amsterdam, starting research positions and moving to scientific project leadership and associate professorship in 2000.

JAULENT MARIE-CHRISTINE

Marie-Christine Jaulent in 1983 became Engineer ENSEEIHT in Computer Sciences (Ecole Nationale Supérieure d'Electronique, d'Electrotechnique, d'Informatique et d'Hydraulique de Toulouse France). In 1986 she achieved PhD from INPT (Institute National Polytechnique de Toulouse, France), option Artificial Intelligence. In 1987 she got "Certificate in Natural Computation", University of Boston, Massachusetts, USA. In 1997 she received Certificate in Statistics for Medicine (CESAM) – Option STARC. In 1998 she earned «Habilitation à Diriger les Recherches» at Faculty of Medicine Broussais-Hôtel-Dieu (UPMC, Paris VI, France). In a period 1987-1989 she was Associate researcher at Boston University. ("Biomedical Engineering Department") in the research laboratory "Intelligent Systems Laboratory". Research areas of Marie-Christine are: Artificial Intelligence, Cognition, Image Processing. Research, Artificial intelligence, Cognition, Processing of visual information. In period 1989-1990 she was Project Manager of l'AP-HP (Assistance Publique–.Service d'Informatique Médicale de l'hôpital Broussais in Paris (Director Patrice Degoulet). within research Area: Artificial Intelligence in Medicine, Hospital Information Systems. In period 1990–2002 she worked on CR1 INSERM, appointed to the SPIM (Medical Health and computer Sciences), co-steered by the professors Patrice Degoulet and Joël Ménard. Also, she was included in Research Program: Medical Image Understanding and Medical decision Making (Since 2002 DR2 INSERM), and as director of the research team of INSERM, U 729 (Knowledge engineering in health sciences) which became

in 2007 the team 20 of INSERM U 872.

JENDERS ALLEN ROBERT

Robert Allen Jenders, MD, MS, FACMI, received his bachelor's degree in computer science from Marquette University, his MD from the University ofWisconsin, and a master's degree in computer science from Northeastern University. After a fellowship at Massachusetts General Hospital, he joined the faculty at Columbia University, and for the past three years has been Associate Professor of Medicine at UCLA while practicing at Cedars Sinai in Los Angeles. Dr. Jenders began his work with Arden Syntax shortly after its initial publication as an American Society for Testing and Materials (ASTM) standard in 1992 and has led efforts for its continued development as well as promoted its use by vendors and health care institutions. He has been the co-chair of the Health Level 7 Clinical Decision Support Technical committee since 1998. Over this time, this committee has expanded its area of influence considerably to include several other key clinical

decision support technologies including the "Infobutton," computable guidelines, and order sets in addition to ongoing development and dissemination of the Arden Syntax. Dr. Jenders developed a multihospital immunization registry (EzVac) in New York City that facilitated data sharing among the participating institutions and with local government to allow better delivery of vaccination services. This work was reflected in his membership of theWorkgroup on Immunization Registries of the National Vaccine Advisory Committee that published a national action plan in 1999. This work continues through participation in the technical working group of the National Immunization Program.

JENNETT PENNY JENNETT

Penny Jennett, MA, BA, PhD, CCHRA(C) is professor Emeritus, Faculty of Medicine, Community Health Sciences, University of Calgary, past and founding Head, Health Telematics Unit; and past Director, Office of Medical Education, University of Calgary, is recognized internationally for her expertise in telehealth,

e-health, and health telematics/ informatics/education. She is a founding member of the Canadian Society of Telehealth (CST) Board and Executive, and Past-President of the CST. Further, Dr. Jennett was a member of the Board and Executive of the Canadian Network for the Advancement of Research, Industry, and Education (CANARIE) Inc., and she served as Vice-Chair of the Board of Directors of Netera for 10 years. As the Project Lead, as she retired, she completed a 1.2 M e-Health Industry Project initiative, funded by Alberta Innovation & Science and Western Economic Diversification. Dr. Jennett was Project Lead for the EU-Canada Collaborations in Health Telematics, was a member of the Alberta Telehealth Project Planning Team, and chaired the Implementation Team for Alberta Wellnet's Telehealth Committee. Dr. Jennett has received an honorary life-time membership in the CST and was honored by her colleagues for her contributions to telehealth in Canada, as well as for her outstanding efforts and commitment in building the University of Calgary, Telehealth Program. In addition, Dr. Jennett is the recipient of the first Digital Group of Telehealth Companies "Award of Excellence" for her significant contributions to telehealth in Canada. Further, she has received recognition for multiple administrative roles at the University and in the community. Dr. Jennett reviews for a number of journals and funding agents, and is known for

her outstanding ability to access soft dollar support, as well as for her numerous publications and dissemination activities; in particular, since her arrival in Alberta, she has played leadership roles in acquiring over $30,000,000 to advance research, and has published over 130 peer reviewed scientific papers, along with several book chapters, to advance health services research with her colleagues. Over the years, she has served on a number of editorial boards of peer-reviewed journals. Dr. Jennett was the first PhD in a Canadian Faculty of Medicine to be awarded a Canadian Life and Health Insurance Association Scholarship. She was a Research Fellow during her graduate studies at the College of Human Medicine at Michigan State University. She was with the College of Medicine University of Saskatchewan, as a part time or full time research assistant, or clinical assistant professor, for approximately 9 years prior to arrival at the Faculty of Medicine, University of Calgary, over 25 years ago.

JIMISON HOLLY

Holly Jimison, PhD, FACMI, is research is focused on technology for health interventions in the

home, with an emphasis on the needs of older adults and vulnerable populations. Dr. Jimison is the Director of the Northeastern-based Consortium on Technology for Proactive Care, created to develop a technology infrastructure for sustainable interventions that support continuity of care outside a medical center setting and promote long-term health behavior change. Dr. Jimison specifically investigates the "Big Data" issues associated with streaming sensor data from the home, using computational methods to model and assess patient state. Application areas include cognitive monitoring with adaptive computer games, interactive physical exercise with real-time feedback based on data from the Kinect camera, sleep monitoring and interventions, and socialization monitoring and interventions. Her dynamic user models serve as a framework for real-time assessment and automated messaging. Dr. Jimison is a Fellow of the American College of Medical Informatics, Past-President of the Oregon Chapter of the Health Information Management Systems Society, and former technology advisor for the Office of Behavioral & Social Science Research at NIH. Her research has been funded by the National Science Foundation, National Institute on Aging, National Institute of Mental Health, the Alzheimer's Association, the Intel Corporation, and the National Institute on Standards & Technology. Dr. Jimison received her PhD from Stanford Univer-

sity in Medical Informatics with a Fellowship from the National Library of Medicine. Her dissertation work included developing a new knowledge representation for Bayesian decision models enabling patient-tailored messaging and the dynamic ordering of assessments by importance.

JOHNSON B. KEVIN

Kevin B. Johnson, MD, MS, FACMI, is a Professor and Chair of Biomedical Informatics, with a joint appointment in the Department of Pediatrics at Vanderbilt University Medical Center. He received his MD from Johns Hopkins Hospital in Baltimore and his MS in Medical Informatics from Stanford University. In 1992 he returned to Johns Hopkins where he served as a Pediatric Chief Resident. He was a member of the faculty in both Pediatrics and Biomedical Information Sciences at Johns Hopkins until 2002, when he was recruited to Vanderbilt University. He also is a board certified Pediatrician. Dr. Johnson is an internationally-respected developer and evaluator of clinical information technology. His research

interests have been related to developing and encouraging the adoption of clinical information systems to improve patient safety and compliance with practice guidelines; the uses of advanced computer technologies, including the Worldwide Web, personal digital assistants, and pen-based computers in medicine; and the development of computer-based documentation systems for the point of care. In the early phases of his career, he directed the development and evaluation of evidence-based pediatric care guidelines for The Johns Hopkins Hospital. He has been principal investigator on numerous grants, and has been an invited speaker at most major medical informatics and pediatrics conferences. He is the author of over 100 publications and books or book chapters, is Associate Editor for the preeminent journal in biomedical informatics (JAMIA), and serves on the editorial board of Ambulatory Pediatrics. He is a former recipient of the Robert Wood Johnson Foundation's Harold Amos Medical Faculty Development Award and is also a recipient of the American Academy of Pediatrics Byron B. Oberst Award in recognition of his informatics education efforts. At Vanderbilt, he has been a member of the Academy for Excellence in Education since 2008. He was elected into the American College of Medical Informatics in 2004, The Academic Pediatric Society in 2010, and the Institute of Medicine in 2010. Dr. Johnson is a member of the American Board of Pediatrics' Program for Maintenance of Certification Task Force, and has been actively involved with the program of Maintenance of Certification developed by the Board for all pediatricians. He has held numerous leadership positions within the American Medical Informatics Association and the American Academy of Pediatrics..

JOHNSON B. STEPHEN
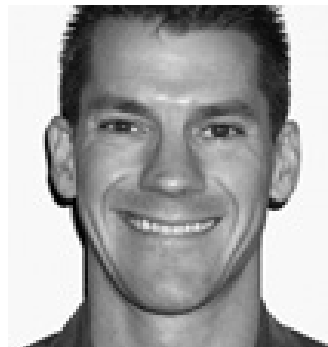
Stephen Bennett Johnson, PhD, FACMI, is an Associate Professor of Medical Informatics at Columbia University. He received an undergraduate degree in Computer Science from McGill University. His doctorate was also in Computer Science, and he specialized in natural language processing at New York University. Dr. Johnson currently serves as the Director of Informatics for the Cancer Center at the Columbia-Presbyterian Medical Center, using information technology to assist in cancer care and research. He also directs the graduate degree program in medical informatics at Columbia. Dr. Johnson has been deeply interested in the area of data modeling and the importance of bringing these techniques into medical informatics. He demonstrated the advantages of data modeling in building the Clinical Data Repository at the Columbia-Presbyterian Medical Center, one of the first large-scale relational databases in medicine. This work showed that a patient database could be both flexible and efficient. He has taught data modeling as a tutorial at the AMIA Annual Symposium for several years and at the Woods Hole course on informatics. He has also been a participant in the Unified Medical Language System, with a special interest in showing how data modeling resources can contribute to the area of natural language processing. Dr. Johnson has worked for several years to create a detailed curriculum for medical informatics, emphasizing the importance of the social sciences in providing theoretic foundations for the field. His current area of research is knowledge extraction from medical and scientific texts.

JOHNSON E. PAUL

Paul E.Johnson received his PhD from Johns Hopkins University in 1964. He is currently a professor of management sciences and psychology and a faculty member in the Center for Research in Human Learning at the University of Minnesota. He specializes in methodology for the study of expertise in complex decision environments. His recent work has focused on investigation of

expert problem solving in several professional fields including medicine, science, law, engineering, and management.

JOHNSON JEFF

Jeff Johnson joined the Design Discipline at the OU in 1981 after three years in the Geography Department at Cambridge University working with Graham Chapman and Peter Gould. Before that he was in the Mathematics Department at Essex University working with Ron Atkin on his theory of Q-analysis for social systems. This has developed into multilevel hypernetworks. This research involves the application of hypernetwork theory in the design and management of complex social and technical systems at local and global levels in the emerging policy-oriented field of Global Systems Science. His OU undergraduate teaching has included: creating the CADPAC suite of interactive computer exercises for T363: Computer Aided Design; creating the SmartLab suite of interactive computer exercises for T395 - Mechatronics, Designing Intelligent Machine and co-authoring with Phil Picton the textbook Mechatronics: Concepts in Artificial Intelligence; leading

the development of T183 - Design and the Web, T184 - Robotics and the meaning of life, A178 - Perspectives on Leonardo, TM190 - The Story of Maths, T218 - Design for Engineers; and writing the interactive computer exercises for T174 - Engineering the Future. Professor Johnson's BA and PhD are in mathematics. He is a Fellow of the Institute of Mathematics and its Applications and a Fellow of the British Computer Society. Prof Johnson is a Chartered Mathematician and Chartered Engineer. I had been director of various engineering and consulting companies like CEO of Vision Scientific Ltd, a company founded with Phil Picton in 1989. He is a Past President of the Complex Systems Society, and a Board Member of the UN-ESCO UniTwin Digital Campus for Complex Systems.

JORGENSEN MOGENS

Mogens Jorgensen was one of founders of European Federation of Medical Informatics (EFMI) in 1975 together with Jan Roukens from Holland and Jan van Egmond from Belgium. They made Statute of EFMI and formed Preliminary Executive Group of national representatives from several European countries which in that time had national Societies of Medical Informatics. As delegates from 10 countries (UK, Italy, France, Norway, Denmark, Sweden, FR Germany, Holland, Belgium and Finland) on September 10th 1976

they established the Federation of the European Medical Informatics Societies, later EFMI, supported by two representatives of WHO European headquarters: M. Sedeuilh and Alfred Weber. At the meeting as Chairman of EFMI inaugural meeting was elected Mogens Jorgensen, and as Secretary Barry Barber. Most important direction of works which have been developed by Mogen Jorgensen and his team was patient record systems, data security, nursing informatics, communication standards and common terminology.

JOSHI SHAMBHU

Shambhu Dutta Joshi has obtained his MBBS from Kathmandu University, Nepal. He is doing his MD residency in Dermatology, Venereology and Leprology. He affiliates with National Academy of Medical Sciences Kathmandu, Nepal. Currently he works at Nepal Medical College Teaching Hospital in Kathmandu, Nepal. Dr. Joshi has a keen interest in Sexual and reproductive health, Safe motherhood, Infertility, Clinical and public health issues on STIs and HIV/AIDS, Cosmetology, Dermato-surgery, Telemedicine and Health Informatics in developing

countries. He had also worked under Ministry of Health and population, Nepal, traveled more than 36 districts of Nepal.

JUNI PETER

Peter Jüni is the Director of the Applied Health Research Centre (AHRC) at the Li Ka Shing Knowledge Institute of St. Michael's Hospital and a Professor at the Department of Medicine and the Institute of Health Policy, Management and Evaluation at the University of Toronto. He graduated at the Faculty of Medicine at the University of Bern in Switzerland, completed his training in internal medicine at various hospitals in Switzerland, and was a Research Fellow at the Department of Social Medicine at the University of Bristol, UK. Prior to joining St. Michael's Hospital, Dr Jüni was the Director of the Institute of Primary Health Care and Professor of Primary Care and Clinical Epidemiology at the Faculty of Medicine at the University of Bern in Switzerland. He held previous appointments as Director of the Institute of Social and Preventive Medicine at the University of Bern and Founding Director of CTU Bern, the University's clinical trials unit. Dr. Jüni is internationally renowned for his methodological work and for his clinical research on the management of cardiovascular and musculoskeletal disorders. A Fellow of the European Society of Cardiology, he has had leading roles in several major cardiovascular trials, including SIRTAX,

LEADERS, FAME 2 and MATRIX, served as a member of several task forces of the European Society of Cardiology and co-authored the European guidelines on myocardial revascularization and on the management of acute myocardial infarction. Dr. Jüni has published over 270 papers, many of these widely cited. In 2015 he was recognized as Highly Cited Researcher by Thomson Reuters in view of several papers published in the last decade that ranked among the top 1% most cited in their field..

JURISICA IGOR

Igor Jurisica is Tier I Canada Research Chair in Integrative Cancer Informatics, Senior Scientist at Princess Margaret Cancer Centre, Professor at University of Toronto and Visiting Scientist at IBM CAS. He is also an Adjunct Professor at he School of Computing, Pathology and Molecular Medicine at Queen's U,Computer Science at York University , and an Honorary Professor at Shanghai Jiao Tong University. Since 2015, he has also served as Chief Scientist

at the Creative Destruction Lab, Rotman School of Management. His research focuses on integrative computational biology and the representation, analysis and visualization of high-dimensional data to identify prognostic and predictive signatures, drug mechanism-of-action and in-silico repurposing of drugs. Interests include prediction and analysis of protein interactions networks, modeling signaling cascades and high-throughput protein crystallography. He has published extensively on data mining, visualization and cancer informatics, including multiple papers in Science, Nature, Nature Medicine, Nature Methods, J Clinical Oncology, and has over 8,932 citations since 2011. He has been included in Thomson Reuters 2015 & 2014 list of Highly Cited Researchers, and The World's Most Influential Scientific Minds: 2015 & 2014 Reports.

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KACKI EDWARD

Edward Kacki (1925-) was born in Poznanj, Poland. He was professor of Computer science and Cybernetics. He was, also, professor of technical sciences and Rector of the School of Com-

puter Science in Lodz. He studied at the Faculty of Electrical Engineering Technical University of Lodz and mathematics at the University of Lodz. He earned his doctorate in 1963 and his PhD in 1966, and the title of professor in 1972. He organized the Center of Electronic Computing Technology (in 1972) and the Institute of Computer Science Technical University of Lodz (in 1980), whose director was until 1996. In the years 1984-1987 he was the dean of the Faculty of Technical Physics, Computer Science and Applied Mathematics at Technical University of Lodz. Since 1997 he has been rector of the Higher School of Computer Science in Lodz In this university is also the head of the Department of expert systems and artificial intelligence. In the years 1990-2003 he was president of the Board of the Polish Society of Medical Informatics. He was a Polish representative in the IMIA and EFMI. Since 1994 he has been a member of the Scientific Committee of the Academy of Sciences of Biocybernetics and Biomedical Engineering. Since 1997 he has been a member of the New York Academy of Sciences and an honorary member of the Polish Society of Systemic and International Neutral Network Society. Edward Kacki was the promoter of, at least, 37 doctoral theses. He has authored or co-authored more than 285 scientific articles and 18 books and monographs.

HOGAN WILLIAM

William Hogan, MD, PhD, FACMI, is Director of Biomedical Informatics, Clinical and Translational Science Institute. He graduated MS, Intelligent Systems, University of Pittsburgh, MD, Jefferson Medical College, Philadelphia, PA, BS Science, The Pennsylvania State University. Dr. Hogan is a Professor in the College of Medicine, Department of Health Outcomes and Policy at the University of Florida. He is also Director of Biomedical Informatics for the Clinical and Translational Science Institute and Director of Informatics for the OneFlorida Network, a statewide collaboration of three universities and healthcare providers that brings research findings from labs and other clinical settings to more than 9 million patients in all of Florida's 67 counties. To these endeavors, he brings over 15 years of experience in building and implementing large informatics systems, including the National Retail Data Monitor for early detection of outbreaks from point-of-sale data on over-the-counter healthcare products and the Compre-

hensive Research Informatics Suite for the National Children's Study and research at academic health centers and in the community. Dr. Hogan received his MD from Jefferson Medical College in 1993, after which he completed a residency in Internal Medicine at the University of Pittsburgh in 1996. He then enrolled in the Medical Informatics training program at the University of Pittsburgh, earning an MS in Intelligent Systems and Medical Informatics certificate in 1999. Since then he was worked for healthcare providers implementing electronic health records and tying together disparate systems, for industry, and in academic biomedical informatics. Dr. Hogan has expertise in clinical informatics, public health informatics, biosurveillance, electronic health records, clinical decision support, research informatics, and data standards in clinical, research, and public health information systems. His current research studies how formal ontology can improve reuse of information and enable the construction of larger systems and datasets to improve patient care, research, public health, and education. He also has experience in the study of data and algorithms for early case and outbreak detection in infectious disease. He is author and co-author of a lot of articles in peer reviewed journals and other publication. Also he received several awards for his scientific work within Medical informatics field.

KAHOUEI MEHDI

Mehdi Kahouei is an associate professor of health information management at Semnan University of Medical Sciences in Iran. He was graduated with a bachelor degree in the field of medical records from Shahid Beheshti University of Medical Sciences in 1988, was graduated with master degree in the field of medical records education from Iran University of Medical Sciences in 1998; and was graduated with PhD degree in field of health information management from Iran University of Medical Sciences in 2010. He was several times introduced as the best researcher in the School of Nursing and Allied Health between 2009 and 2015. He is currently a member of research center of Social Determinants for health and supervisor of health information technology department of Semnan University of Medical Sciences. He has published 23 Persian papers and 15 English articles.

KAIHARA SHIGEKOTO

Shigekoto Kaihara (1937-2011) was born in Hakusan, Tokyo. In 1955 he entered the University of Tokyo, studying medicine and receiving certification by the ECFMG (the US Educational Commission for Foreign Medical Graduates) prior to graduation. His clinical training was received at the US Forces Tachikawa Hospital, where he honed his English-language skills. Subsequently he acquired a doctoral degree from the medical faculty at the University of Tokyo for his research in nuclear medicine. In 1966, he went to the US to pursue additional studies at Johns Hopkins Hospital. After returning to the University of Tokyo, he was appointed as a 2nd internal medicine assistant in 1969, a lecturer in 1974, and an assistant professor in 1975. It was at this time that he began his early work on medical informatics topics, and in 1978 he became the director of the Information Processing Division of the affiliated hospital. Throughout the 1980s, he investigated medical consultation systems using artificial intelligence methods and also trained young researchers. He organized

several international symposia in the US and Germany. In Japan Dr. Kaihara was widely viewed as the country's pioneering authority in the field of Medical informatics, and he rapidly developed a similar reputation internationally. During the 70s, medical informatics grew in prominence through the efforts of a variety of organizations, including the Japan Society of Medical Electronics and Biological Engineering, the Information Processing Society of Japan, and others. He brought that rigor to life for the larger community when he played a key role in assuring that the third MEDIN-FO was held in Tokyo in 1980. In the following year, he organized the 1st Joint Conference on Medical and Biological Informatics, paving the way to establishment of the Japan Association for Medical Informatics, which organizes those meetings to this day. Shigekoto Kaihara was a respected person of considerable insight and contributed to the work of several government ministries. Internationally, Dr. Kaihara served as editor in chief of the Proceedings for MEDINFO 80 (Tokyo), as chairman of the IMIA from 1986 to 1989, and as a program committee chairman of MEDINFO 95 (Vancouver). In 1998, he was elected to fellowship by the American College of Medical Informatics. Remarkably, at a time of difficult political strife, during his IMIA chairmanship he successfully held MEDINFO 89 at two venues, Beijing and Singapore, a few months apart. This was a unique event in the

history of IMIA and a reflection on his leadership skills and superb negotiating abilities. After retiring from his office at the University of Tokyo in 1996 and becoming an emeritus professor, he served as director of National Okura Hospital (later integrated as the National Center for Child Health and Development). He installed a hospital network that assured an outlet at each sickbed, and realized "Patient Participation" through the use of the developing electronic media, which enabled hospitalized children to see and talk with their parents via teleconference. Simultaneously, within the same site, he brought the first Ronald McDonald House, for parents of sick children, to Japan. He accordingly became Vice-President of the International University of Health and Welfare in 2001 to educate nurses, clinical laboratory technologists, care workers, and medical informatics engineers. In order to emphasize the doctrine that he championed, he became the Vice-Chairman of the 28th General Assembly of Japanese Association of Medical Sciences and opened the event for attendance by the general public, rather than limiting it to participation by medical doctors. In 1994, Dr. Kaihara contributed an article to Iryo Johogaku (Medical Informatics), which is entitled "Medical informatics in Japan - Challenge in the coming five years". Some 17 years later, his 5-year vision has been only partially achieved. Even today his colleagues continue to pursue the goals that he believed should have been achieved in 1999.

KALET J. IRA

Ira J. Kalet, PhD, FACMI, received his bachelors degree in Physics from Cornell, and PhD in Theoretical Physics from Princeton. He began his academic career as a Research Associate at the Physics Department at the University of Washington. He subsequently had appointments at Sonoma State College in California, and the Graduation School of Education at the University of Pennsylvania, where he was a lecturer in mathematics education. He then joined the Department of Radiation Oncology at the University of Washington, where he progressed from Research Associate in Medical Radiation Physics to full Professor, and at the time of his election to the College, Professor Emeritus. He maintained joint appointments in Medical Education and Biomedical Informatics, Computer Science and Engineering, and Bioengineering and has been an informatics contributor for more than 25 years, having received a best paper award at the 1985 Congress of the American Association for Medical Systems and Informatics (AAMSI). He led the development of the University of Washington MS and PhD programs in Biomedical and Health Informatics (BHI) and served until 2004 as the Director of the UW BHI Graduate Program. Dr. Kalet's primary and sustained research contribution over the years has been in the use of artificial intelligence and computer engineering methods for the design of radiation treatment planning systems. This work focused on automating the creation of a treatment plan and iterative improvement with generate and test, and "plan repair rules". In 1998 he shifted his research focus to automating the delineation of target volumes. Dr. Kalet has also been a much beloved teacher who has received many awards for excellence in teaching informatics. He single authored a monograph entitled Principles of Biomedical Informatics that illustrates in an elegant way how to write computer programs that can handle data in various forms, perform inference, and use these as a basis for decision support systems in a large variety of applications ranging across information retrieval, discovery of biological networks, drug interactions, radiation therapy planning and computer security. The text has been called a landmark in the field since it is one of the first attempts to develop a theory of biomedical informatics.

KALLIO ANNE

Anne Kallio is Head of Development. Ministry of Social Affairs and Health, Finland. Anne Kallio is responsible of national eHealth and eSocial development strategy in Finland. Anne Kallio is a Medical Doctor specialized in ENT and government. She has worked within specialised care. Since 1999 she has worked within eHealth issues first on local and regional and since 2009 on national level in the Ministry for Social Affairs and Health.

KALRA DIPAK

Dipak Kalra, PhD, FRCGP, FBCS, British, is President of The European Institute for Health Records (EuroRec) and the European Institute for Innovation through Health Data (i~HD). He plays a leading international role in research and development of EHR architectures and systems, including approaches to harmonise clinical meaning and protect privacy, and had led the development of key international standards on EHR interoperability. Dipak leads the Managing Entity for a €16m Innovative Medicines Initiative on the re-use of electronic health record information for clinical research, EHR4CR, alongside ten global pharmaceutical companies. EuroRec is also a partner in another IMI project, EMIF, on the development of a European clinical research platform federating multiple population health and cohort studies. Dipak also leads an EU Network of Excellence on semantic interoperability, and is a partner in other EU projects on the sustainability of interoperability assets and the transatlantic sharing patient summaries. Dipak is Clinical Professor of Health Informatics at University College London, United Kingdom, a Director of the openEHR Foundation, and a member of standards bodies including CEN, ISO and HL7-UK.

KAMAT VAISHALI

Vaishali Kamat is Associate Director, Cambridge Consultants, MA USA. Vaishali heads the company's practice in Digital Health. She has worked with senior leadership of several mid-large corporations over the past 4 years to help them apply the new healthcare model, providing insight into regulations, financial models and market players. Vaishali brings over 15 years of experience in the Medical Technology field and has successfully led several medical device developments. Prior to joining Cambridge Consultants, Vaishali worked at the Ultrasound division of G.E. Healthcare. Vaishali has several published articles to her credit and has been an invited speaker at industry conferences. She has a Master's degree in Electrical & Computer Engineering from Iowa State University and has been named as inventor on 3 US patents.

KANG MICHELE

Michele Kang was Vice President, Health & Science Solutions, Northrop Grumman Corporation. She earned her bachelor's degree in economics from the University of Chicago and master's in public and private management from Yale University

KANTER S. ANDREW

Andrew S. Kanter, MD, MPH, FACMI works as memmber od Board of Directors of Highland Park, Illinois. His interesting fields are: War and Public Health, Climate Change, Nuclear Power, Nuclear Weapons. His medical Specialties are: Internal Medicine, Medical Informatics. Currently he is Assistant Professor of Clinical Biomedical Informatics and Clinical Epidemiology at the Earth Institute, Columbia University; Director of Columbia International eHealth Laborato-

ry (CIEL). His areas of expertise are: Global warming mitigation and clean energy solutions; Nuclear power, nuclear waste, radiation exposure; Iran nuclear crisis; Nuclear nonproliferation and disarmament; Nuclear war, terrorism and preparedness; Medical student activism; Global/international health; Media Experience: Television, Radio, Writing (editorials), Public Speaking. Dr. Kanter has been involved with PSR since 1982 when he started a chapter at UCLA. In 1985, he was appointed as the first full-time Medical Student Liaison to the International Physicians for the Prevention of Nuclear War. Dr. Kanter is the Director of Columbia International eHealth Laboratory (CIEL), and an Assistant Professor for Clinical Biomedical Informatics and Clinical Epidemiology at Columbia, as well as the former director of Health Information Systems/ Medical Informatics for the Millennium Villages Project for the Earth Institute at Columbia University. He has been on the PSR National Board since 2000, was President of PSR in 2012 and is IPPNW Co-Vice President for North America 2012-2014.

KAORU ANDO

Ando Kaoru (1914-1997) was formerly president of IFIP, director and member emeritus of the Information Processing Society of Japan (IPSJ), executive director of Fujitsu Limited, and president of Fujitsu FACOM Information Processing Corporation. In his lifetime, he held a point of view and an abundance of experience that could be termed nothing less than "global," making him something of a rarity among his contemporaries. In 1937, after graduating from the Department of Management Studies of Indiana University in the U.S., he joined the Watson Statistical Accounting Machines Corp. of Japan (now IBM Japan Ltd.), where he was involved in the sale of punched card systems. Immediately following the end of the Second World War, Dr. Ando became a consultant to the General Headquarters of the Allied Powers in such areas as social statistics

KAPLAN BONNIE

Bonnie Kaplan, PhD, FACMI, of the Yale Center for Medical Informatics, is a Yale Interdisiciplinary Bioethics Center Scholar, a Faculty Affiliate of the Yale Law School's Information Society Project, and Faculty in the Yale Medical School's Program on Biomedical Ethics. An editor of two books, the author of more than 90 refereed and invited papers and book chapters, and popular tutorials and sessions at international medical informatics and information systems conferences, her research and consulting concern informatics ethical and legal issues, user perspectives and experiences with health information technology, and ethnographic sociotechnical evaluation. Among her publications in key journals, such as JAMIA, International Journal of Medical Informatics, MISQ, and Cambridge Quarterly of Healthcare Ethics are some of the most read papers and foundational writings on organizational issues, qualitative/ethnographic sociotechnical approaches, and ethical issues. She was faculty for the American Medical Informatics Association's People and Organizational Issues Doc-

toral Consortium, the National Science Foundation Consortium for the Science of Socio-technical Systems (CSST) Summer Research Institute (2011), and the National Library of Medicine Informatics Course (2015), and will teach in the Global Bioethics Initiative 2016 International Bioethics Summer School. Dr. Kaplan was elected twice as chair of AMIA's People and Organizational Issues Working Group and of the Ethical, Legal, and Social Issues Working Group; and was chair of the IMIA Organizational and Social Issues Working Group. She served on AMIA's Vendor Contract Issues Task Force, having previously chaired the Consumer Health Informatics Task Force. Dr. Kaplan was a Program Chair of the 2004 conference on Relevant Theory and Informed Practice: A 20 Year Retrospective on IS Research, sponsored by the International Federation for Information Processing (IFIP) Working Group 8.2, The Interaction of Information Systems and the Organization, and an editor of the resulting book. She has taught undergraduate through post-doctoral and professional courses in business, medical, nursing, and arts and sciences programs, as well as on-line graduate and certificate courses in biomedical informatics. Dr. Kaplan is a recipient of the AMIA President's Award, and a Hastings Center Scholar.

KARNSTEDT MARCEL

Marcel Karnstedt (1977-) was born in Halle (Saale), Germany. He received his Diploma (MSc) from the Martin-Luther-Universität Halle-Wittenberg, Germany, at the end of 2003. From January 2004 to February 2009 he worked as a research associate and teaching assistant with the Databases & Information Systems Group (head: Prof. Dr.-Ing. habil. Kai-Uwe Sattler) at the Ilmenau University of Technology, Germany. That is where he also successfully completed his PhD (summa cum laude). Since March 2009 he has been affiliated with the Digital Enterprise Research Institute (DERI), National University of Ireland, Galway (NUIG). He is member of the Unit for Information Mining and Retrieval (UIMR) and started as a Postdoctoral Researcher in the CLIQUE project on analyzing and visualizing large graphs and networks, specifically social networks and biological networks. Since December 2009 he also holds an adjunct lectureship at NUIG. Starting with November

2010, he has been employed as a Senior Postdoc and is currently responsible for DERI's part of the ROBUST project, an EU-funded international project focusing on risks and opportunities in huge-scale business communities. Further, he contributes to the tasks of query processing and sensor mining in the SPITFIRE project, which aims at combining the "Internet of Things" with the "Web of Things".

.KASSIRER P. JEROME
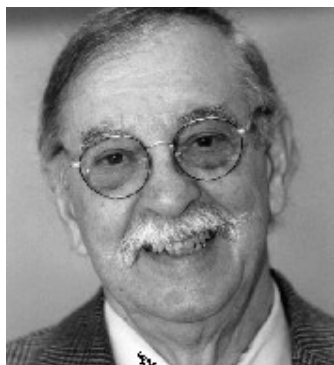
Jerome P. Kassirer, a native of Buffalo, NY, graduated Magna Cum Laude from the University of Buffalo School of Medicine in 1957. He trained in Internal Medicine at Buffalo General Hospital and in Nephrology at the New England Medical Center in Boston. He joined the faculty of Tufts University School of Medicine in 1961, was named Professor of Medicine in 1974, and was the Sara Murray Jordan Professor of Medicine from 1987 to 1991. From 1971 to 1991 he was Associate Physician-in-Chief of the New England Medical Center and Vice Chairman of the Department of Medicine at Tufts University School of Medicine.

Dr. Kassirer served as Editor-in-Chief of the New England Journal of Medicine between 1991 and 1999. He is currently Distinguished Professor and Senior Assistant to the Dean at Tufts University School of Medicine, and Professor Adjunct of Medicine at Case Western Reserve University School of Medicine. Dr. Kassirer has published numerous original research and clinical studies, textbook chapters and books on nephrology (in particular, acid-base equilibrium), medical decision making, and the diagnostic process. He was a co-founder and co-editor of Nephrology Forum in the journal Kidney International and of Clinical Problem Solving in Hospital Practice until 1991. Dr. Kassirer was elected to AOA as a student and was named the AOA Distinguished Clinical Teacher of the Year in 1989. He is a Master of the American College of Physicians and has received the College's John Phillips Award. He was named Distinguished Alumnus by the School of Medicine and Biomedical Sciences at the University at Buffalo and has received the Distinguished Faculty Award from Tufts University School of Medicine and the Distinguished Service Award of the Alumni Association of Tufts University. He has six honorary degrees, including one from L'Universite Rene Descartes in Paris. He is an honorary member of the Deutsche Gesellschaft für Innere Medizin. He serves on the Board of Directors of the National Committee for Quality Assurance, the Editorial Board of

the Canadian Medical Association Journal, and the Scientific Publishing Committee of the American Heart Association. Dr. Kassirer has served on the American College of Physicians' Board of Governors and Board of Regents, chaired the National Library of Medicine's Board of Scientific Counselors, and is a past Chairman of the American Board of Internal Medicine. He has been elected to the Association of American Physicians, the Institute of Medicine of the National Academy of Sciences, and the American Academy of Arts and Sciences. In editorials in the New England Journal of Medicine, and in multiple publications since, he has promoted professionalism, ethical scientific conduct, patient involvement in decision making, appropriate use of firearms, and reliable approaches to the assessment of the quality of health care. He was been highly critical of for-profit medicine, the abuses of managed care, political intrusions into medical decisions, and financial conflicts of interest.

KAUSHAL RAINU

Rainu Kaushal, MD, MPH, FAC-MI, is an international expert in the clinical effectiveness, cost-effectiveness and comparative effectiveness of health care. She has already held several leadership positions. In 2007, she was the founding chief of a new Division of Quality and Medical Informatics in the Departments of Pediatrics and Public Health at Weill Cornell, focused on the analyzing the use of health IT to improve clinical quality and patient safety. In 2011, she was named the founding director of the Center for Healthcare Informatics and Policy, a multi-departmental entity consisting of more than 60 faculty members focused on research, service, education and innovation at the intersection of health care policy and informatics. As director of pediatric quality and safety at the Komansky Center, Dr. Kaushal translates research into operational improvements. Dr. Kaushal also founded and became executive director of the Health Information Technology Evaluation Collaborative in 2005. The collaboration is a consortium of four universities in New York State that evaluates initiatives by HEAL NY, the New York State Department of Health's investment in health information technology to support health care delivery. Dr. Kaushal has published more than 115 scholarly publications and is a frequent invited speaker. She has served on numerous national and international advisory committees focused on health information technology and patient safety, and has consulted with other researchers on methodological issues and policymakers on state and federal issues. In addition, Dr. Kaushal has served on editorial boards for health care journals and on several study sections for the Agency for Healthcare Research and Quality. Dr. Kaushal received her undergraduate degree from the University of Vermont, her medical degree from Harvard Medical School and a Master of Public Health from the Harvard School of Public Health. She completed her residency at Brigham and Women's Hospital and Children's Hospital in Boston, attaining double board certification in internal medicine and pediatrics. After completing the Harvard Clinical Effectiveness Fellowship, Dr. Kaushal joined Harvard Medical School's faculty until she came to Weill Cornell Medical College in 2006.

KAWAMOTO KENSAKU

Kensaku Kawamoto, MHS, MD, PhD, FACMI, earned both his PhD in Biomedical Engineering and MD from Duke University. He is Associate Chief Medical Information Officer, Director of Knowledge Management and Mobilization (KMM), and Assistant Professor of Biomedical Informatics at the University of Utah Health Sciences Center. As a health informaticist and system architect, His research interests are: Clinical Decision Support Systems; Knowledge Management; Personalized Medicine; Standards and Scalability. Dr. Kawamoto's expertise involves leveraging his experience in health informatics, software engineering, and clinical medicine to assist with the practical and scalable use of health IT to optimize disease prevention, diagnosis, and management. He is actively engaged in the development and adoption of health IT standards, co-chairs the HL7 Clinical Decision Support (CDS) Work Group, and has expertise in CDS and knowledge management. He

directs OpenCDS (www.opencds.org), a multi-institutional, open-source initiative to enable advanced CDS at scale, and also directs the KMM Initiative at the University of Utah Health Care, which coordinates the institution's informatics support for improving care quality and value (www.kmm.utah.edu). Prior to joining the department in 2011, Dr. Kawamoto was an assistant professor at Duke University in Clinical Informatics. There, he developed a CDS technology known as SEBASTIAN, which has been used to support chronic disease management and population health management at several health care organizations both within and outside of the United States.

KAYE RACHELLE

Rachelle Kaye has been an active professional in the area of healthcare management and eHealth for over 35 years, in North America, Israel and Europe. She provides strategic and international consulting services to a number of organizations, including: Maccabi Healthcare Services, the Gertner Institute for Epidemiology and Health Policy Research and Assuta Medical Centers .She is a member of the Board of Directors of EHTEL and is the Chairperson of the Working Group on Long term Care and Active Aging of AIM and is active in the EIP AHA on Integrated Care. rkkayer@gmail.com.

KAY JONATHAN

Jonathan Kay is Clinical Informatics Director, NHS England. Jonathan is responsible for leading the development of an information culture across the NHS which will drive continuous clinical and process improvement and help to ensure safe and effective patient care. This includes providing clinical informatics advice to the Board and contributing to an innovative national framework for the management of clinical information across the NHS. He is also a Senior Clinical Lecturer at the University of Oxford and Visiting Professor of Health Informatics at City University London is best known for his work on blood tracking which used barcode labelling and bedside scanning to improve the safety of blood transfusions and received many national awards. He previously designed and implemented the automated transmission of laboratory reports to general practitioners which is routinely used across the UK, and the Oxford Clinical Intranet. Jonathan previously worked as a chemical pathologist at the Oxford University Hospitals where he was a member of the Hospital Board. He developed processes used for the valuation and uptake of new clinical technology and collaborated with several spin-off companies in the areas of diagnostics and informatics. Current research programmes include point of care testing, the automated monitoring of vital signs, and the development and dissemination of evidence-based laboratory medicine.

KAY STEPHEN

Stephen Kay has been actively engaged in international standards development since 1987. He is a consultant on Health Informatics Standardization and an honorary professor at the University of Salford in the UK. The relationship between research and standardization within Health informatics has always fascinated him, and his

research in Electronic Health Records, user centered design, narrative and story telling intertwines with standardizing data interchange, understanding clinical communication architectures, and developing information models. He is the convenor of both CEN TC251 working group 1 on Information Models and ISO TC215 working group 1 on Data Structures; both have an emphasis upon conceptual modeling, service frameworks, and with electronic health records' specifications.

KAZIC TONI

Toni Kazic, PhD, FACMI, received her BS in microbiology from the University of Illinois in 1975 and a PhD in genetics in 1984 from the University of Pennsylvania. After a 2-year postdoctoral fellowship in bacterial genetics at Fox Chase Cancer Center, she moved to Washington University where she stayed in a variety of roles until 2001. Her interest in computational biology led her to a visiting scientist's role at Argonne National Laboratory in 1990 and a consulting role with the Division of Computer Research and Technology at

NIH in 1991. An instructor in the Institute for Biomedical Computing at Washington University, she took a year off in 1996–1997 to serve as Program Director for Computational Biology at the NSF. Since 2001, she has been an associate professor of computer science at the University of Missouri-Columbia, with a secondary appointment in health management and informatics since 2003. In 1990, Dr. Kazic wrote a seminal paper that directly linked computer science techniques to the biological domain. The paper arose from her work at Argonne National Laboratory and was entitled "Prototyping Databases in Prolog," published as a book chapter in The Practice of Prolog. Her work from that time was the genesis of her research on the design of biochemical databases and use of computational logic to model networks of biochemical reactions as cellular systems. A member of the NLM's Biomedical Library and Informatics Review Committee, Dr. Kazic is also an educator, having supervised the research of postdocs, grad students (computer science, chemistry, statistics, health informatics, bioinformatics, biochemistry, and plant biology) and undergrads. Her work has consistently stressed the importance of accurately representing what is known about biochemistry so that the data can be used to model biological phenomena rather than settling for representations that are computationally convenient or customary. Realizing the dream

of accurate, inclusive models has stimulated her development of new approaches to biological databases, the representation of biochemical ideas and data, and the semantic interoperability of databases

KEN AOSHIMA KEN

Ken Aoshima is an Executive Director, Data Science Laboratory, hhc Data Creation Center at Eisai Co., Ltd., Tokyo, Japan. He received a PhD in Applied Physics from Tokyo Institute of Technology. His main research interests are in real world health care big data analysis, biostatistics, bioinformatics and biomarker researches. He has held the responsibilities for biostatistics and leading translational medicine using biomarkers in clinical development. Dr. Aoshima has been a director, head of Biomarker & Personalized Medicine Unit and focusing on bioinformatics and biomarker researches in preclinical research for more than 9 years, since 2016 he is in charge of leading ICT and data driven drug discovery by combining various types of big data and

utilizing advanced data analysis technologies including artificial intelligence (AI). Dr. Aoshima's main research interests include Biomarker, Bioinformatics, Proteomics, Metabolomics, Biostatistics, Drug discovery, Clinical Research, Clinical Trial.

KENNEDY ANGELA

Angela Kennedy serves as chairman of the Department of Health Informatics and Information Management at Louisiana Tech University. She has a rich history in association leadership. Dr. Kennedy is a former President and Board Chair of the American Health Information Management Association (AHIMA). AHIMA is a 49M non-profit professional organization with over 100,000 members. Dr. Kennedy is currently a member of the U.S. Office of the National Coordinator's Health Information Technology Standards Committee. Angela has served as chair of the Commission on Accreditation of Health Informatics and Information Management (CAHIIM) for academic programs and has served as a member of the National Association of Healthcare Quality

Leadership Council. Angela is an AHIMA Triumph Award winner, LHIMA Distinguished Member, and LHIMA Career Achievement recipient, and in 2013 received AHIMA Diamond recognition for leadership. Dr. Kennedy has given numerous presentations, most notably she has testified before the United States Senate Health Education Labor and Pensions Committee on consumer driven interoperability and health literacy.

KERN JOSIPA

Josipa Kern (1948-) was born in Antunovac, Croatia. After graduating mathematics in 1972 at the Faculty of Science of the University of Zagreb, she earned her MSc (1981) and PhD (1990) at the same institution. She began her academic career at the Andrija Stampar School of Public Health, School of Medicine of the University of Zagreb in 1972 by working as data analyst (mathematician/statistician) in several scientific projects of the institution. In year 1974 she started to work as the research fellow in the Computing Laboratory of the Andrija Stampar School of Public Health, and started to work in medical informatics and medical statistics. In 1991 she

became the assistant professor of medical informatics at the School of Medicine in Zagreb, and director of the postgraduate study program "Health Information Systems" (1994). After advancing to the associate professorship in 1996, and being appointed the head of the Chair of Medical Statistics, Epidemiology and Medical Informatics (1998-2000), she used to continue working on improving the curriculum of medical informatics. After the year 2000 the new medical informatics curriculum was created by her - basics at the first year of study and advanced at the sixth year for both, Medical Study in English and Medical Study in Croatian. In 2012/13 the new study program - Nursing - was established at the School of Medicine with nursing informatics as a special topic (application of ICT in nursing) created by her. She ended her academic career as full professor with permanent title (2007) and retired in 2014. Her teaching activity in medical informatics started at the School of Medicine in Zagreb in the academic year1974/75, both for undergraduate and graduate medical students. As a visiting professor she taught medical informatics at other Croatian schools of medicine (Osijek, Rijeka), as well as at the School of Dentistry at the University of Zagreb, and the University of Applied Health Sciences in Zagreb. Josipa Kern published more than 200 scientific and professional papers as well as several textbooks and chapters in textbooks and monographs. She was the

editor of the textbook on Medical informatics in 2009. Being the full member of the Croatian Academy of Medical Sciences (2000-) and the president of the Committee for E-Health (2009-) she initiated drafting of the Declaration on e-Health of the Academy. The Declaration on E-Health was published in 2011 and, as such, has become one of the foundations of the strategy of development of the health system in Croatia (computerization). Josipa Kern was one of founders of the Croatian Society for Medical Informatics (CSMI 1989), being its president (2004-2009) and the representative of EFMI and IMIA for 16 years (1994-2010). Also, she initiated establishment of Technical Committee for standardization in medical informatics (TC215) at the Croatian Organization for Standardization, being its first president (2005-). She participated in several national/international research projects (the newest are Action Grid, 2007-2010, Regionalism of CV behavioral risks - model of intervention, 2007-2014, MEDIN-FO - Curriculum Development for Interdisciplinary Postgraduate Specialist Study in Medical Informatics, 2013-). During the period of her activities she also has served as a member of the Editorial Boards of several Medical informatics journals.

KHALIFA ALY

Aly Khalifa, is currently a PhD student and Research Assistant, Biomedical Informatics department, University of Utah. His current research interest is to use HIE interoperability standards to leverage the integration of genotype and phenotype, paving the way for personalized medicine. Aly is a graduate of the Information Technology Institute (ITI) - Ministry of Communications and Information Technology (MCIT), with a Graduate Certificate in Biomedical Informatics from Oregon Health and Science University and he holds BSc. of Pharmaceutical Sciences from Cairo University. He also got a diploma in information technology management and innovation from Dublin Institute of Technology. He was a Senior Research Assistant at the ITI-Biomedical Informatics Center of Excellence (BMICoE). He also managed the ITI BMI Program of the BMICoE and presented the BMICoE activities in several national, regional, and international events (2009-2014). He is also one of the founders of the Egyptian Health Informatics Fellowship, Stirring Committee member and instructor. Aly is the Administrative Contact

of ITI at the International Medical Informatics Association (IMIA). He designed and conducted several of biomedical informatics courses including: Overview of Health Informatics, Standards and Interoperability in Health Informatics, Hospital Information Systems and Electronic Health Record, Mobile Technology in Healthcare. Aly is a member of the ITI scientific team of BMI research projects such as: the joint research project with the Institute for Medical Informatics, Statistics and Epidemiology (IMISE), Leipzig University in modeling the clinical documentation (2009-2010). In the TeleMedic@Egypt project (2009-2011) funded by the Research, Development and Innovation (RDI) Program (EU-Egypt Innovation Fund) in partnership with Fraunhofer- Gesellschaft, Institute for Biomedical Engineering (IBMT. He coordinated the customization process of the system in the rural area, and participated in implementation of the customized system as well as the development the Road-Map of Telemedicine in Egypt. He also led the ITI technical team participated in the AFRICA BUILD project (2011-2014), funded by the EC FP7-health theme, that aimed at developing advanced centers of excellence in health care to support healthcare education and research in the African countries. Aly coordinated and participated in the ITI efforts in AFRICA BUILD portal development process as well as analyzing the state of the art of utilizing ICT for the develop-

ment of healthcare research and education in Africa.

KIJSANAYOTIN BOONCHAI

Boonchai Kijsanayotin (1959-) earned his medical degree from the Chulalongkorn University and Board Certified Internal Medicine and Preventive Medicine from Thai Medical Council. He spent 15 years working at rural public hospital as an internal medicine clinician. While he was working as a clinician in the hospital, he was also responsible for the Hospital Information System (HIS) and oversaw the hospital telemedicine station, one of Thai Ministry of Public Health (MoPH) Telemedicine project. In 2008, he received his MS. & PhD in Health Informatics from University of Minnesota, USA. Currently, he is the health informatician and research manager at Thai Health Information Standards Development Center (THIS), Health Systems Research Institute (HSRI), Ministry of Public Health, Thailand. He is also the co-chair of the Asian eHealth Information Network (AeHIN), vice president of Thai Medical Informatics Association (TMI), International representa-tive of TMI for International Medical Informatics Association (IMIA), member of Thai Medical Council and Royal College of Physicians of Thailand. His working areas and research interest include eHealth in developing country especially Thailand, National health data standards and interoperability, Health Information Exchange (HIE), Electronic Health Records(EHR), Socio-technical aspect of Health Information Technology and Health/biomedical informatics education in Thailand.

KILLCOMMONS PETER

Peter Killcommons, MD is Physician, Inventor, Philanthropist. Dr Killcommons , CEO of Medweb a telemedicine and teleradiology in California has traveled extensively around the world promoting telemedicine as a mechanism to extend expert medical care to rural and underserved areas around the world. Dr Killcommons graduated of the Sophie Davis accelerated BS-MD program at the City College of New York, and New York Medical college, founded Medweb in 1989. He holds several major patents in the field of medical imaging and informatics, and donates a considerable amount of time, energy , and resources to the promotion of enterprise telemedicine as a mechanism to bring together colleagues from many countries, as well as extending expert medical care across the globe. Dr Killcommons has donated his time to many projects around the world, most recently in Pakistan and Afghanistan. He is focused on introducing the value of enterprise telemedicine systems and their role in expanding medical care to rural villages around the world. His expertise includes medical informatics, software and hardware design, voip telephony, low bandwidth videoconferencing, cloud storage, satellite communications, and most recently the use of SMS messaging and smart phones for medical consultation and triage. His passion is to collaborate with colleagues internationally to improve the quality and availability of medical care by providing an extensible architecture that grows from a few sites to a nationwide architecture.

KIM SOON MIN

Min Soon Kim is an Assistant Professor at the Department of Health Management (HMI) and Core faculty of Informatics Institute (MUII) at the University of Missouri at Columbia. He is an Adjunct Assistant Professor at the Department of Emergency Medicine, Mount Sinai School of Medicine, New York, NY. He received his MS. and PhD degrees in Biomedical Engineering at the University of Texas at Austin. He has conducted numerous evaluation projects, including usability evaluation of generalist and specialist EHRs involving physicians and nurses, clinical decision support systems (CDSS) involving physicians in emergency medicine, clinical information needs analysis of clinicians and patients in primary care setting, and evaluation of the impact of mobile application intervention on improving clinical decision support. Prior to joining to HMI, he has served as a research fellow at the Center for Biomedical Informatics, Mount Sinai School of Medicine, NYC, NY. Prior to postdoctoral experience, he conducted his doctoral research, in which he focused on a range of topics in support of an algorithm design for cost-effective, compu-

tational aids for evidence-based medical decisions regarding breast cancer treatment. This work was done in direct collaboration with the Plastic Surgeons and Behavioral Scientists at The University of Texas MD Anderson Cancer Center in Houston, TX.

KIARIE CAROLINE

Caroline Kiarie brings her managerial experience in the financial and communication sector and has worked with people from different diversity. She has been coordinating and facilitating the ground work for Anadach Group during the E-health conference in Kenya, 2012 and the USA Week for PAT Enterprises in Kenya in 2011 among other events. She lectures Communication, Public Relations and Marketing at Daystar University and Jomo Kenyatta University of Agriculture and Technology (JKUAT). She has worked with PAT Enterprises in Washington, DC, Discover Financial Services in Columbus, Ohio as a communication specialist. She holds a Masters in Science degree in Communication and Marketing from Franklin University in Ohio, USA and Bachelors of Arts degree in Economics from University of Nairobi, Kenya. She is fluent in Swahili and English.

KIMURA MICHIO

President of Japan Association for Medical Informatics(JAMI) Michio Kimura is a professor of Medicine , and Medical Informatics, and director at Medical Informatics Department of Hamamatsu University Hospital, Japan. He is currently IMIA vice-president for membership, President of Japan Association for Medical Informatics(JAMI), HL7 Japan chair, ISO TC215-WG2 vice convener, and IHE (Integrating the Healthcare Enterprise) International board member. Prof.Kimura was past-president of APAMI, the Asian Pacific Association of Medical Informatics.

KLEIN E. TERI

Teri E. Klein, PhD, FACMI, is a Senior Research Scientist at Stanford University and Project

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Director of the PharmGKB, a national resource for pharmacogenetics and pharmacogenomics data funded by the National Institutes of Health. She is also an Associate Adjunct Pro-fessor in the Department of Pharmaceutical Chemistry at the University of California, San Francisco. She received a BA degree with honors in chemistry/biology from the University of California, Santa Cruz, and a PhD in medical information sciences from the University of California, San Francisco. Dr. Klein moved to Stanford University in 2000 after 14 years on the faculty at University of California, San Francisco in the Department of Pharmaceutical Chemistry and at the Computer Graphics Laboratory. Her interests include bioinformatics for support of pharmacogenomics as well as molecular modeling to affect clinical disease syndromes with a structural basis, such as collagen-based diseases like Ehlers-Danlos and osteogenesis imperfecta. She is also interested in modeling the three-dimensional effects of human genetic polymorphisms, particularly those with implications for pharmacogenomics. She is now directing an informatics effort to construct a comprehensive knowledge base linking genomic, laboratory, and clinical data for the purposes of understanding how variation in human genes is correlated with variation in response to medications. As such, this knowledge base poses problems in both clinical informatics and bioinformatics, at

their intersection. Dr. Klein is a founding organizer of the Pacific Symposium on Biocomputing, an annual meeting for biocomputation that is now in its seventh year and attracts roughly 400 attendees each year. This meeting is one of three important meetings in bioinformatics and has hosted sessions designed to bridge clinical informatics and bioinformatics, including sessions on physiologic modeling, visualization and interfaces, and human genetic variation. Dr. Klein is also the Treasurer of the International Society for Computational Biology, an organization devoted to bioinformatics and one whose mission is closely related to that of AMIA. Finally, Dr. Klein recently served on a special panel convened by NIH/National Center for Research Resources to advise the NCRR on ways in which it could participate in the new informatics initiatives being developed at NIH in response to the Biomedical Information Science and Technology Initiative report.

KNAUP-GREGORI PETRA

Petra Knaup-Gregori studied Medical Informatics at Univer-

sity of Heidelberg/University of Applied Sciences Heilbronn. Since 1991 she worked at Department of Medical Informatics, Institute of Medical Biometry and Informatics, University of Heidelberg and got her PhD degree in 1994 at University of Heidelberg, Medical Faculty (Dr. sc. hum., grade: magna cum laude, supervised by Prof. Dr. Reinhold. Haux). In 1998 Petra got Medical Informatics Certificate of the German Society for Medical Informatics, Biometry and Epidemiology (GMDS) e.V. and the German Society for Informatics (GI) e.V. Sabbatical in the Department of Medical Informatics at Maastricht University, The Netherlands (Director: Prof. Dr. Arie Hasman) in same year. In 2004 she earned Habilitation in Medical Informatics, Private University for Health Sciences, Medical Informatics and Technology - UMIT (Hall in Tirol, Austria, formerly in Innsbruck, supervised by Prof. Dr. Reinhold Haux), in 2005 she earned Venia Docendi for Medical Informatics at UMIT, in 2007 Venia Legendi for Medical Informatics at Heidelberg University, in 2009 APL - Professor for Medical Informatics at Heidelberg University. In 2012 she became Head of Medical Informatics Section of the Institute for Medical Biometry and Informatics, University of Heidelberg. During period 2006-2008 she was a member of the Board of the German Association for Medical Informatics, Biometry and Epidemiology (GMDS); During period 2006-2008 she was Head

of Medical Informatics board of GMDS;. 2010-2012 Member of the board of GMDS; 2010-2012 Head of Medical Informatics board of GMDS. Since 2010 she was member of the Editorial board of the International Journal of Clinical Bioinformatics. Since 2011 she was member of the Editorial board of the journal Methods of Information in Medicine. Since 2011 she was Editor of Medical Informatics of the GMDS (Medizinische Informatik, Biometrie und Epidemiologie). Since 2011 Petra Knaup-Gregori was IMIA representative of the GMDS and since 2012 she was Head of Working Group 'Information Management in Medicine' of the German Society for Biomedical Engineering.

KOBAYASHI HISATOSHI

Hisatoshi Kobayashi is a group leader of WPI Research center MANA, National Institute for Material Science, Tsukuba Japan. He is also affiliated with several organization including Visiting Professor of Tokyo University of Agriculture and Technology, Japan; Adjunct Professor, University of Allahabad, India,

and Honorary Guest Professor of Denbandhu Chliotu Ram University of Science & Technology, India. At present he plays a role in President of International Association of Advanced Materials(IAAM); Councilor of Japanese Society for Biomaterials; Consultant of Global Healthcare Company, etc. In his academic carrier, he has published more than 150 publications, books, and patents in the field of biomaterial science and technology. His expertise is Biomaterial science, biopolymers, biodegradable polymers, Nano- composites, Nano-fibers, Ophthalmologic devices, Orthopedic devices, etc. His current research interest is cell-nano-materials, tissues-nanomaterials interactions. Based on the information, he is focused on design and development of highly functionalized biodegradable scaffold for tissue engineering, nano-composite for medical devices, etc.

KOCH CHRISTOF

Christof Koch was born in the American Midwest, and grew up in Holland, Germany, Canada, and Morocco. He studied Physics and Philosophy at the University

of Tübingen in Germany and was awarded his PhD in Biophysics. Following four years at MIT, Christof joined the California Institute of Technology as a Professor in Biology and Engineering. After a quarter of a century, Christof left academia to become the Chief Scientific Officer at the non-for-profit Allen Institute for Brain Science in Seattle. He is leading a ten year, large-scale, high through-put effort to build brain observatories to map, analyze and understand the mouse and human cerebral cortex.

KOCH SABINE

Sabine Koch, PhD, FACMI, is the Strategic Professor of Health Informatics at Karolinska Institute and the Director of HIC, the Health Informatics Center since 2008. Since Autumn 2012, she is also Program Director for our Global Master's Program in Health Informatics, a joint program with the Department of Computer and Systems Science at Stockholm University. She holds both a MSc and a PhD degree in Medical Informatics from Ruprecht-Karls University Heidelberg, Germany. Sabine got into the field of Medical informatics in 1988 which she five years later combined with

research in human-computer interaction. She is engaged in a number of activities both locally in Sweden and around the world, currently acting as: treasurer of the International Medical Informatics Association (IMIA). associate editor of Applied Clinical Informatics. Member of the Editorial Boards of Methods of Information in Medicine and the International Journal of Medical Informatics. Member of the Board of Directors, eHealth and Strategic IT, Karolinska University Hospital.

KOH CHANG-SOON
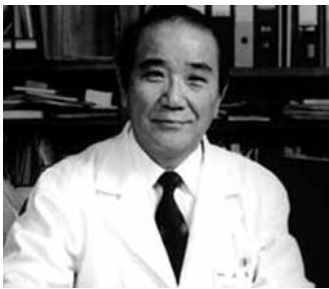
Chang-Soon Koh (1932-2012) was born in the Southern area of Korea. After finishing pre-medical courses at Seoul National University in 1953, he moved to Japan and graduated from Showa University School of Medicine in 1957. He then returned to Korea and started his residency at Seoul National University Hospital, where he became an internist in 1961. Five years later, under the supervision of Professor Munho Lee, he earned a PhD at Seoul National University College of Medicine. Chang-Soon Koh played a key role in establishing the Institute of Radiation Medicine Research

Center (currently known as the Korea Institute of Radiological & Medical Sciences, KIRAMS) and was appointed to be the first director of the Radioisotope Clinic and Department of Nuclear Medicine from May 1963 to July 1969. Afterwards, he served as a professor at Seoul National University College of Medicine for 28 years. He was also appointed as the first director of the Department of Nuclear Medicine at Seoul National University Hospital (SNUH), and was the physician of the former Korean President, Mr. Young-Sam Kim. In the academic field, Professor Koh devoted himself to the establishment of various divisions in medicine. At SNUH, he led a research group called "Dong-Won", from which arose diverse divisions of medicine, including nuclear medicine, endocrinology, nephrology, hematology, and infectiology. His autobiography was given the title "Fifty Years of Challenge and Harmony" in accordance with to his character and his life. Professor Koh served actively in various educational and academic societies. He served as the first Dean and president of the College of Medical Sciences at Gachon University from 1998 to 2000. He held consecutive posts as President of the Korean Society of Nuclear Medicine, Secretary General of the 3rd Asia and Oceania Congress of Nuclear Medicine, Vice-Chairman of the Asia and Oceania Thyroid Association, President of the Korean Radioisotope Association, Chairman of the Korean Endocrinolo-

gy Society, and Chairman of the Korean Association of Internal Medicine. He played a leading role in founding the Korean Society of Medical and Biological Engineering and served as its president. He was also the first president of the Korean Society of Medical Informatics. Chang-Soon Koh wrote more than 300 articles and 10 books, including the first edition of "Nuclear Medicine," published in 1992. In 2008, the third edition of "Nuclear Medicine," edited by June-Key Chung and Myung Chul Lee, was titled "Chang-Soon Koh's Nuclear Medicine" in honor of his contribution to nuclear medicine. He wrote a book, "Never Be Unbowed by Cancer," based on his personal experiences. Unfortunately, however, he passed away from recurrent liver cancer on August 6, 2012. Professor Chang-Soon Koh lived a life dedicated to establishing and developing the challenging fields of medicine, especially nuclear medicine. He and his spirit of "Challenge and Harmony" will be remembered and respected in the history of Korean medicine.

KOHANE ISAAC

Isaac Kohane, MD, PhD, FACMI, is an Assistant Professor in Pediatrics, Harvard Medical School, and an Associate in Medicine in the Division of Pediatric Endocrinology at Children's Hospital in Boston. He is also a Research Affiliate at the MIT Laboratory for Computer Science and a founding member of the Dana Farber Cancer Institute Center for Outcomes and Policy Research. He received a ScB with Honors in Biology at Brown University. He pursued research in knowledge-based systems at the Clinical Decision-Making Group, MIT Laboratory for Computer Science, under the auspices of the Boston University MD, PhD program, and he received both degrees. He completed a residency in Pediatrics at Children's Hospital in Boston followed by a fellowship in Pediatric Endocrinology. He became director of the Children's Hospital Informatics Program (CHIP) in 1995. In 1991, Dr. Kohane completed implementation of the Clinician's Workstation

(CWS) at Children's Hospital, which has been in operation since then in several specialty clinics. The CWS has been successfully used for several clinical research projects in addition to its primary role as a pediatric record system. Dr. Kohane was chief architect of the World Wide Web Electronic Medical Record System (W3-EMRS), which has been the foundation of several multi-institutional implementations and collaborations. He was instrumental in organizing a collaboration among several Boston teaching hospitals, the Boston EMR Collaborative, which has led to the identification of several significant problems in multi-institutional data sharing as well as the articulation of a model confidentiality policy. Other contributions in medical informatics include research into temporal reasoning and trend detection. Dr. Kohane has chaired the two most recent spring symposia on Artificial Intelligence in Medicine at Stanford University, sponsored by the American Association for Artificial Intelligence.

KOHTAMAKI KARI

Kari Kohtamäki is VTT Technical Research Centre of Finland. Kari received his MSc in Medical Technology from Tampere University of Technology. He has a 20-year business background from working with global medical device companies, most recently at GE Healthcare. He has gathered an extensive business experience from various international management positions ranging from product development to marketing, sales and business development. His international experience also includes an assignment at the United Nations Industrial Development Organization, focusing on industrial development in African countries. Kari currently works as Key Account Manager for wellness and healthcare technologies at VTT Technical Research Centre of Finland, with special focus on Digital Health. This role involves assessing future trends and customer needs in this field, as well as creating international partnership networks for VTT.

KOLMOGOROV ANDREI NIKOLAEVICH

Andrei Nikolaevich Kolmogorov (1903- 1987) was born in Moscow. He was perhaps the foremost contemporary Soviet mathematician and counts as one of the greatest mathematicians of the twentiest century. He arrived at the Moscow University in autumn 1920, at the age of 17, with already a fair knowledge of mathematics, gleaned from a book called "New Ideas in Mathematics". Within two years, Kolmogorov had completed a study in the theory of operations on sets, which was eventually published in 1928. In 1922 brought immediate recognition, because he formulated the first known example of an integrable function with a Fourier series that diverged almost everywhere. The international mathematics community took notice of the bright 19-year-old. During his years as a university student, he published 18 mathematical papers including the strong law of large numbers, generalizations of calculus operations, and discourses in intuitionistic logic. In 1925, Kolmogorov received a doctoral degree from the Department of physics and mathematics and became a research associate at Moscow University. At the age of 28, he was made a full professor of mathematics; two years later, in 1933, he was appointed director of the university's Institute of Mathematics. While he was still a research associate, Kolmogorov published a paper, "General Theory of Measure and Probability Theory," in which he gave an axiomatic representation of some aspects of probability theory on the basis of measure theory. His work in this area, which a younger colleague once called the "New Testament" of mathematics, was fully described in a monograph that was published in 1933. The paper was translated into English and published in 1950 as Foundations of the Theory of Probability. Kolmogorov's contribution to probability theory has been compared to Euclid's role in establishing the basis of geometry. He also made major contributions to the understanding of stochastic processes (involving random variables), and he advanced the knowledge of chains of linked probabilities. Kolmogorov developed many applications of probability theory. He published a lot of papers on probability theory and mathematical statistics, and embraces topics such as limit theorems, axiomatics and logical foundations of probability theory, Markov chains and processes, stationary processes and branching processes. Kolmogorov undoubtedly was one of the greatest mathematicians and researchers of laws of nature of the Twentieth Century, (a Natural Philosopher, as such one would have been called in earlier times), and one among the greatest Russian scientists in the entire history of the Russian science. He was an expert and a delicate judge of arts - of poetry, of paintings, and above all, of sculptures. He was deeply concerned for the future problems of humankind. He occupies the first place among all Soviet mathematicians in the number of foreign academies and scientific societies that have elected him as member. He was presented with honorary doctorates from the universities of Paris, Berlin, Warsaw, Stockholm, etc. He was elected a honorary member of the Moscow, London, Indian, and Calcutta Mathematical Societies, of the London Royal Statistical Society, the International Statistical Institute, and the American Meteorological Society. In 1963 he was awarded the International Bolzano prize.

KOLODNER M. ROBERT

Robert M. Kolodner, MD, FACMI, received his bachelor's degree

from Harvard and his MD degree from Yale. After a medical internship at New England Deaconess Hospital he was a Clinical Fellow in Medicine at Harvard, and then completed his psychiatric residency at Washington University School of Medicine in St. Louis. He rose through the ranks of the VA informatics hierarchy, serving as Director of Medical Information Resources Management and Associate Chief Information Officer, and at the time he was nominated to the American College of Medical Informatics fellowship he was Chief Health Informatics Officer for the Veterans Health Administration (VHA) in the Department of Veterans Affairs (VA), Washington, DC. Over the course of his career, Dr. Kolodner has profoundly influenced the field of clinical information systems contributions to the VA Decentralized Hospital Computer Program (DHCP) and the Veterans Health Information Systems and Technology Architecture (VistA). As noted in his nomination, the VA is widely recognized as one of the leaders in systems approaches to health care delivery due in significant part to Dr. Kolodner's vision, thought leadership, and day-to-day guidance. Shortly after the FACMI election, the President George W. Bush named Dr. Kolodner as Acting Director of the Office of the National Coordinator for Health Information Technology, succeeding Dr. David Brailer. Dr. Kolodner's election to the FACMI recognizes these sustained contributions that have had a national impact.

KOLSTRUP NILS

Nils Kolstrup is General Practitioner, Senior Researcher and Advisor. Norwegian Center for Integrated Care and Telemedicine, Norway. Nils Kolstrup has 29 years' experience as a GP, for 19 yxears he was Associate Professor at the UIT–the Arctic University of Tromsoe. Presently he works as a GP and as a senior researcher and advisor at the Norwegian Centre for Integrated Care and Telemedicine and researcher at the UIT .

KONSTANTINIDIS STATHIS

Stathis Konstantinidis is a research scientist at Norut, Northern Research Institute,

Norway. He holds a PhD in Medical Education Informatics from Aristotle University of Thessaloniki in Greece. He received his bachelor Degree in Computer Science from University of Crete, Greece, in 2004 and his MSc in Medical Informatics from Aristotle University of Thessaloniki, Greece, in 2007. He has over 7 years experience on 14 EU, National (Greek and Norwegian) and interregional funded projects. He has published 1 book, 8 book chapters, 7 journal papers and over 30 peer reviewed conference papers. From 2006 until 2011 he was teaching at Technological Educational Institute of West Macedonia, Kozani, Greece. He is the project Co-ordinator of CAMEI (FP7 CSA) and recently appointed as OKFN Ambassador in Norway. He was managing the Interregional project "Collaboration for the common confrontation of problems of health in the cross border region of Greece-FYROM" (INTERREG IIIA/Greece-FYROM) and led the technical part of multiple projects like mEducator (EU eContentPlus Programme), "Smoking Cessation Network" (Greek Thoracic Sociaty), etc. His research includes among other collaborative e-learning, content sharing and repurposing, educational standards, medical education informatics, virtual patients, serious games, linked open data, semantic web and web-based health records.

KOONIN V. EUGENE

Eugene V. Koonin, PhD, FACMI, is Senior Investigator at the National Center for Biotechnology Information at the National Library of Medicine. He has a Biology diploma (equivalent to MSc) summa cum laude and his PhD in biology from Moscow State University. Prior to coming to NCBI, Dr. Koonin was Senior Research Scientist at the Laboratory of Virus Biochemistry, Institute of Poliomyelitis, Senior Research Scientist at the Laboratory of Bacterial Genetics and Head of the Laboratory of Gene Systematics and Bacterial Evolution, Institute of Microbiology, all of the USSR Academy of Sciences. Based on his research in computational biology analyzing the complete genome sequences of several cellular life forms, he has predicted the function of many families of proteins. Furthermore, he has delineated clusters of orthologous and paralogous protein groups, compared the gene organization in different organisms, determined a minimal gene set for cellular life, and reconstructed biochemical pathways in a variety of completely sequenced bacterial and archeal genomes. He also has done leading-edge research in the field of sequence analysis by developing a technique for analysis of protein motifs. Dr. Koonin is Editor of Archaea and of the "Genome Analysis" section in Trends in Genetics. He is a member of the editorial boards of Nucleic Acids Research, Bioinformatics, and In Silico Biology.

He has received the National Library of Medicine's Regents Award.

KOPPEL ROSS
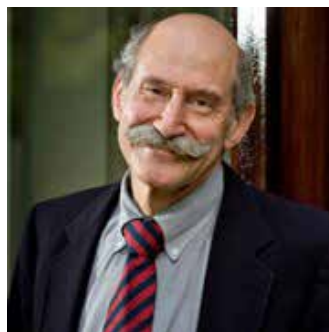
Adjunct Professor, Sociology, School of Arts and Sciences. Ross Koppel, PhD, FACMI, is a leading scholar of healthcare IT and of the interactions of people, computers and workplaces. His articles in JAMA, JAMIA, Annals, NEJM, Health Affairs, etc are considered seminal works in the field. Professor Koppel is on the faculty of the Sociology Department at the University of Pennsylvania and also of Penn's Medical School. At the Med School he is the Principal Investigator of the Study of Hospital Workplace Culture and Medication Error. Dr. Koppel is also the Internal Evaluator of Harvard Medical School's project to create a new HIT architecture. In addition, Ross Koppel is co-PI on the NSA study of workarounds to cyber security and is also the co-investigator of the National Science Foundation Project on Safe Cyber Communication and Smart Alerts in Hospitals His work combines ethnographic research, extensive statistical analysis, surveys, and usability studies. He coauthored the AHRQ Guide to reducing unintended consequences of HIT. His newest book: First Do Less Harm: Confronting the Inconvenient Problems of Patient Safety (Cornell Univ. Press, 2012).

KOSLOW H. STEPHEN

Stephen H. Koslow, PhD, FACMI, is Director, Office on Neuroinformatics, and Associate Director, National Institute of Mental Health, National Institutes of Health. He also coordinates the Human Brain Project, a multi-government agency informatics initiative. He earned his PhD from the Division of Biological Sciences, Department of Pharmacology, University of Chicago. Prior to his current position, Dr. Koslow was Director of the Division of Basic and Clinical Neuroscience at NIMH. His work focused on increasing the support and quality of neuroscience and behavioral research at NIMH to further an understanding of brain function and mental illness. While in this position, he initiated the Human Brain Project, a neuroinformatics initiative aimed at creating

Web-based databases, analytic tools, and biological models of the brain. Dr. Koslow serves as the Chair of the Global Science Forum Neuroinformatics Working Group of the Organization of Economic Cooperation and Development, and Co-chair of the United States/European Commission Committee on Neuroinformatics. He serves on the editorial boards of Biomednet and the journals NeuroImage, CNS Drug Reviews, and Human Brain Mapping. Dr. Koslow is a Fellow of the American Association for the Advancement of Science and the American College of Neuropsychopharmacology. He has been awarded the NIH Directors Award for his leadership efforts, and the International Neural Network Society President's Award for outstanding leadership fostering international collaboration of Human Brain Projects through modern neuroinformatics.

KOTAGIRI RAMAMOHANARAO

Kotagiri Ramamohanarao is Professor of Computer Science and Software Engineering, The University of Melbourne,

Australia. Ramamohanarao (Rao) Kotagiri received the PhD degree from Monash University. He was awarded the Alexander von Humboldt Fellowship in 1983. He has been at the University of Melbourne since 1980 and was appointed as a Professor in computer science in 1989. He has held several senior positions including Head of Computer Science and Software Engineering, Head of the School of Electrical Engineering and Computer Science at the University of Melbourne and Research Director for the Cooperative Research Centre for Intelligent Decision Systems. He served on the editorial boards of the Computer Journal. At present, he is on the editorial boards of Universal Computer Science, and Data Mining, IEEE Transactions on Knowledge and Data Engineering and VLDB (Very Large Data Bases) Journal. Dr. Kotagiri was the program cochair for VLDB, PAKDD, DASFAA, and DOOD conferences. He is a steering committee member of IEEE ICDM, PAKDD, and DASFAA. He received a Distinguished Contribution Award for Data Mining. He is a fellow of the Institute of Engineers Australia, the Australian Academy Technological Sciences and Engineering, and the Australian Academy of Science. He was awarded a Distinguished Contribution Award in 2009 by the Computing Research and Education Association of Australasia.

KOURI PIRKKO

Pirkko Kouri (1955-), PhD, PHN, RN, was born in Joroinen, Finland. Her first profession was as a registered nurse, which degree she got in 1977 from Nurse College in Helsinki. Since she has studied more, Public Health Nurse in 1986, and Master of Health Education 1994. In 2006 she got her PhD in Nursing Science from University of Eastern Finland, locating in city of Kuopio. The title of her PhD work is "Development of Maternity Clinic on the Net service - views of pregnant families and professionals". She is the secretary of Finnish Society for Telemedicine and eHealth (FSTeH), an ISfTeH national member. Since its foundation in 1995, FSTeH is the second oldest society in the world and oldest in Europe, FSTeH is nationally very active in developing all the areas related to telemedicine and eHealth. Latest is the support to academic education, physician's are able obtain specialization in eHealth. Pirkko has a long history of utilizing ICT in her work, starting from year 1984 at the Kuopio university hospital. As an educator her interest is in developing education in eHealth among health professions. Pirk-

ko Kouri has written both scientific and practice - base articles, and been a co-author in many books. Currently she works as Principal Lecturer in Healthcare Technology at Savonia University of Applied Sciences (Savonia). She is a project manager in projects which develop use of mobile technology in the field of mother-child health care. Her latest project is called FinMoz2 which takes place both in Mozambique and in Finland. Furthermore she has been Savonia's coordinator in the development work to China. She has been four times as an exchange teacher in the Fudan University School of Nursing, Shanghai. In 2011 she was invited as a member of eHealth Strategic Advisory Group at the International Council of Nurses (ICN). She is also member of IMIA - NI education working group since 2007. The group is discussing and defining e.g. the nursing informatics competences related to nurse education and practice. Nationally she is a board member and secretary in Finnish Society for Telemedicine and eHealth Association (STeHS). She does voluntary work, and she is the chair of regional Cancer Association, which has 20 local units and altogether 4500 members

KOUTSOURIS DIMITRIS

Dimitris Koutsouris (1955-) was born in Serres, Greece. He received his Diploma in Electrical Engineering in 1978 (Greece), DEA in Biomechanics in 1979 (France), Doctorat in Genie Biologie Medicale (France), Doctorat d' Etat in Biomedical Engineering 1984 (France). Since 1986 he was research associate on the USC (Los Angeles), Renè Dèscartes (Paris) and Assoc. Professor at the Department of Electrical & Computers Engineering of National Technical University of Athens. He is currently Professor and head of the Biomedical Engineering Laboratory. He has published over 100 research articles and book chapters and more than 150 conference communications. He has been the former elected president of the Hellenic Society of Biomedical Technology. Prof. D. Koutsouris has been principal investigator in many European and National Research programs, especially in the field of Telematics in Healthcare.

KOZEL MARIE

Marie Kozel, is Director, Clinical Informatics, Nebraska Methodist Health System. She is a RN with clinical background in Obstetrics for over 20 years. For the last 10 years, she has worked in a Clinical Informatics role assisting a wide variety of clinical areas to convert their workflow and processes to the EMR and assisting a wide variety of Clinicians with gaining efficiency with the EMR. Currently she worked as Service Executive for Clinical Informatics at Methodist Health system, She lead a team of staff who provide support to clinicians in using the EMR from new provider/employee training to go live support during implementations. She hold a BSN from Methodist College of Nursing, a MBA from the University of Nebraska at Omaha and a Post Masters Certificate in Nursing Informatics from the University of Utah.

KRISHNAMURTHY RAMESH

Ramesh Krishnamurthy serves as a senior technical officer and the focal point for eHealth standardization and interoperability efforts at the World Health Organization in Geneva, Switzerland. He has extensive experience in designing, implementing, coordinating, and managing national and sub-national eHealth systems and services, including health information systems, emergency operations centers,

and public health surveillance information systems. Dr. Krishnamurthy has also assisted numerous countries in their development and implementation of national and sub-national eHealth strategies, standardization and interoperability of eHealth systems and services, and utilization of strategic information for evidence-based public health decision-making.

KRISTENSEN BØRLUM FINN

Finn Borlum Kristensen, MD, PhD. University graduated in medicine, PhD in epidemiology and medical specialities as primary care and public health physician. Involved with international projects in health services research, epidemiology, health technology assessment, and clinical practice guidelines since the 1980ies. Currently he is director of Center for evaluation and HTA, DACEHTA, National Board of Health of Denmark and director of EUnetHTA. He is chairman of the executive committee, European Network for Health Technology Assessment (EUnetHTA) and director of its coordinating secretariat, National Board of Health, Den-

mark since 2009. He is Adjunct professor in health services research and health technology assessment at University of Southern Denmark from 1999. He is Formerly director of the Danish Center for Health Technology Assessment (DACE-HTA), National Board of Health, Denmark 1997-2009. Kristensen is Past chairman of the International Network of Agencies for Health Technology Assessment (INAHTA) (2003 - 2006), member of the ISPOR Board of Directors (2011 - 2013) and Project leader of EUnetHTA, (2006-2008; www.eunethta.net), editor of Health Technology Assessment Handbook (English, translated), 2007, and chief editor of three peer reviewed publication series from DACEHTA 1998-2009.

KUDESIA VALMEEK

Valmeek Kudesia, MD, is Director, Clinical Informatics, Massachusetts Veterans Epidemiology Research and Information Center (MAVERIC), Boston VA Healthcare System. Valmeek Kudesia is a practicing internist, board certified clinical informatician, and engineer who trained at Boston University and Harvard University. He thrives in the challenging overlap of clinical, administrative, and technical domains in healthcare. He uses his multidisciplinary background to forge effective collaboration between clinical, administrative, and technical stakeholders. Valmeek guides interdisciplinary teams to equip healthcare networks with informatics platforms,

clinical analytics tools, and change-processes that support a learning healthcare system. As a physician, he believes healthcare informatics systems should be invisible and bring care-providers and patients closer together instead of wedging them apart. As an engineer and informatician, he knows those systems can be created, and we can learn tremendously by building them.

KUHN A. KLAUS

Klaus A. Kuhn is professor and chair of Medical Informatics and director of Institute for Medical Statistics and Epidemiology at the Technische Universität München, where he is a Member of the Faculty of Medicine and Faculty of Informatics. He has formal training in internal medicine, statistics, and informatics and has spent much of his career in developing and evaluating architectures and applications for operational health care environments. He was instrumental in the development of a standard terminology and a documentation system for ultrasound studies that has been both published and used in a commercial product. He has improved tools for generation of applications embedded in health care

professionals' work practice and these systems are widely used in Germany and internationally. Professor Kuhn has also been a frequent contributor to JAMIA and the AMIA Symposium in the areas of systems architectures and decision support, and he is a member of the editorial board of the International Journal of Medical Informatics, and of Methods of Information in Medicine. He serves as the President of the German Association for Medical Informatics, Biometry and Epidemiology, and the German national representative in IMIA. For these achievements that have had international impact, he is recognized by election as an international associate of the College.

KUHN M. BRADLEY

Bradley M. Kuhn is President and Distinguished Technologist at Software Freedom Conservancy and on the Board of Directors of the Free Software Foundation (FSF). Kuhn began his work in the software freedom movement as a volunteer in 1992, when he became an early adopter of the GNU/Linux operating system,

and began contributing to various Free, Libre and Open Source Software (FLOSS) projects. He worked during the 1990s as a system administrator and software developer for various companies, and taught AP Computer Science at Walnut Hills High School in Cincinnati. Kuhn's non-profit career began in 2000, when he was hired by the FSF. As FSF's Executive Director from 2001-2005, Kuhn led FSF's GPL enforcement, launched its Associate Member program, and invented the Affero GPL. From 2005-2010, Kuhn worked as the Policy Analyst and Technology Director of the Software Freedom Law Center. Kuhn holds a summa cum laude BS in Computer Science from Loyola University in Maryland, and an MS in Computer Science from the University of Cincinnati. His Master's thesis discussed methods for dynamic interoperability of Free Software languages.

KUKAFKA RITA

Rita Kukafka, DrPH, FACMI, received her Bachelor's degree in Health Sciences from Brooklyn College, a Masters in Health Education from New York University, and a Doctorate in Public

Health with a concentration in Sociomedical Sciences from the Mailman School of Public Health at Columbia University. She also then completed a National Library of Medicine postdoctoral fellowship, and received a Master's degree in Biomedical Informatics from Columbia. At the time of her election Rita was an Associate Professor in the Departments of Biomedical Informatics and Sociomedical Sciences (Public Health) at Columbia, and director of the graduate education training program in Biomedical Informatics. Throughout her career, Dr Kukafka has promoted and fostered the growth of public health informatics as a field. She has pursued an informatics research program where social and behavior change theories are applied within biomedical informatics to inform the design, evaluation and dissemination of expert systems, and computer-mediated communications to practitioners and patients. She has been an active contributor to AMIA as a member of the Fall Symposium Scientific Program Committee, and an AMIA Board member. She has chaired the Consumer Health Informatics Working group for AMIA, and served on an Institute of Medicine study committee that asked the question, in the 21st Century, of 'Who Will Keep the Public Healthy?

KULIKOWSKI A. CASIMIR

Casimir A. Kulikowski (1944-), PhD, FACMI, is a researcher who developed one of the earliest pattern recognition approaches to computer-based medical diagnosis, and then developed Artificial Intelligence (AI) methods for causal reasoning about the pathophysiology of disease. With Sholom Weiss he developed the CASNET system for glaucoma consultation, and the more general EXPERT framework for modeling diagnostic and therapeutic models. With Robert Galen they designed the first expert system on a chip incorporated within a medical instrument - the serum protein electrophoresis laboratory system which was commercially produced by Helena Laboratories. Kulikowski later worked on problems of medical image interpretation and machine learning, biophysical modeling and simulation, and the analysis and elucidation of macromolecular structure from NMR and crystallographic data. In Medical informatics he has worked on models for clinical guidelines, methods of medical decision support, and predictive data mining from large heteroge-

neous clinical datasets. Kulikowski is a Board of Governors Professor in the Department of Computer Science at Rutgers University, a Fellow of ACMI and IMIA and many other scientific societies, a member of the Institute of Medicine of the National Academy of Sciences (USA), and the winner of numerous awards and honors. Casimir Kulikowski was co-developer of the early expert system CASNET, and organizer of the First AI in Medicine Workshop held under NIH auspices at Rutgers in 1975 which brought together investigators from the first generation of AI in clinical and biological research. Also, Kulikowski is chair of the 50th Anniversary IMIA History of Medical Informatics Project.

KUNG ANTONIO

Antonio Kung has 30-year experience in embedded systems. He holds a Master's degree from Harvard University and an Engineering degree from Ecole Centrale Paris in France. He co-founded Trialog (www. trialog.com) in 1987, where he now serves at CTO. He initially worked on the design of embedded systems (real-time operating systems, protocols, engineering tools). He now focuses on the

integration of transversal issues such as interoperability, privacy or trust applied to a variety of ICT domains such as ageing, intelligent transport, or smart grids.

KUNHARDT HORST

Horst Kunhardt (1959-), MSc, PhD (Computer Science and Human Biology), professor, is Vice President of Health Sciences at Deggendorf University of Applied Science (Deggendorf Institute of Technology, DIT) in Bavaria, Germany, and Director of the European Campus Rottal-Inn of DIT. He has been working as a professor since 2004 in the fields of Operational and Application Systems and Health Management. He is lecturing in a number of bachelor and master study programs in German and English, on various topics in eHealth, Telemedicine and Healthcare ICT, Operating Systems, Computer Architecture, Networks, IT-Security, IT Forensics, Health and Medical Tourism, and Health Economics. He has more than 15 years of professional experience as CIO at a tertiary hospital, and 4 years as CIO at the University Comput-

ing Center. He designed and implemented clinical information systems in a multi-professional environment. Prof. Kunhardt has significant research experience in Individual Health Care Management, Clinical Information Systems, Evidence-Based Medicine, Healthcare Networks, IT Security and Compliance, and Risk Management. He has designed and delivered virtual courses on Telematics in Health Care, Cross-Border Healthcare Management, Nursing & Medical English, via a MOOC platform Virtual University of Bavaria with over 500 participants (www.vhb.org). He is a member of the board of directors of several healthcare institutions, consulting companies, and a social media company; assessor in the accreditation of study programs by Bavarian Ministry of Education and Research; author and co-author of several monographs and many publications on topics in healthcare management and computer science applications in healthcare; regular speaker at conferences for IT management and healthcare management. He is also the coordinator of the MBA program in Healthcare Management and the undergraduate nursing education program. Prof. Kunhardt is a civil service officer responsible for healthcare in the County of Deggendorf, as part of a program run by the Bavarian Ministry for Environment and Health.

KUMMERFELD ERICH

Erich Kummerfeld, MS, PhD, is a Postdoctoral Scholar in the Department of Biomedical Informatics at the University of Pittsburgh. He received his PhD in Logic, Computation and Methodology from Carnegie Mellon University's Department of Philosophy, where his dissertation developed new algorithms for discovering latent causal variables from observational data. The general aim of his research is to improve the procedures, methodologies, and inference tools used by scientists, with special attention to biomedical domains. His most recent work focuses on the development and evaluation of algorithms for discovering causal structures and latent measurement models.

KUNZ JOHN

John Kunz is Executive Director, Emeritus, of the Center for Integrated Facility Engineering (CIFE) in the Department of Civil and Environmental Engineering at Stanford University, Stanford Center for Integrated Facility Engineering. Jerry Yang and Akiko Yamazaki Environment and Energy Building, 473 Via Ortega #292, Stanford CA 94305-4020. Research Interests Virtual Design and Construction; Non-Numeric (Symbolic) Modeling of Engineering Products and Processes. Building energy analysis. Education, training and technology-transfer Teaching CEE 111/211: Multi-disciplinary modeling and analysis. CEE 113:

Patterns of Sustainability. CEE 243: Predicting and Measuring Building Energy Use. CEE320: Seminar on Integrated Facility Engineering Overseas Studies..

KUPERMAN J. GILAD

Gilad J. (Gil) Kuperman, MD, PhD, FACMI, is the Director of Clinical Information Systems Research and Development at Partners HealthCare System, and an Instructor in medicine at Harvard Medical School. Dr. Kuperman has an MD from the Albert Einstein College of Medicine in New York, and a PhD in medical informatics from the University of Utah. Dr. Kuperman has worked in the Information Systems Department of Brigham and Women's Hospital and Partners HealthCare System since 1992. He has been involved in the development and evaluation of several clinical decision support systems, including an automated alerting system for critical laboratory results, reminders in physician order entry to improve the quality and efficiency of care, reminders in the ambulatory setting to improve compliance with guidelines, dosing decision support for patients with renal

failure, and drug–drug interactions. Dr. Kuperman also has worked on important infrastructural components, such as coded problem lists and clinical medication dictionaries. Dr. Kuperman won the 1996 CHIM Award at the AMIA Fall Symposium for his paper "Detecting Alerts, Notifying Physicians, and Offering Action Items: A Comprehensive Alerting System" for the application most likely to change the hospital information systems industry. He serves on the editorial board of the Joint Commission Journal for Quality Improvement and is on the American College of Physicians' Patient Safety Task Force. Dr. Kuperman speaks and has published widely on the effects of physician order entry and other information technologies on clinical care.

KUSHNIRUK ANDRE

Andre Kushniruk, MSc, PhD, FACMI, received his Bachelor's degrees in Biology and Psychology from Brock University, a Master's in Computer Science from McMaster University, and a PhD in Cognitive Psychology from McGill University, in Canada. He then began his academic career as a research scientist in the Department of Computer Science at the University of Toronto, and was subsequently appointed Assistant Professor of Computer Science at Trent University in Ontario, Canada. He was recruited to York University in Ontario as Associate Professor in the Department of Mathematics and Statistics, and served as program coordinator for the Information Technology Program there. In 2004 he moved to the University of Victoria, where he became Director of the School of Health Information Science, one of the most well-known and comprehensive health informatics programs in the world. He is currently a Professor and the Director of the School of Health Information Science at the University of Victoria. Dr. Kushniruk is also an Adjunct Professor in the Faculty of Engineering and Science at Aalborg University in Denmark, an Honorary Professor in the Faculty of Education at the University of Hong Kong, and an Adjunct at the Mount Sinai School of Medicine in New York. In 2009 he was elected a Fellow of the American College of Medical Informatics and in 2012 elected to the Canadian Academy of Health Sciences. Dr Kushniruk's work has demonstrated how usability engineering methods can be applied widely in health informatics. The methods he has developed have been used worldwide for projects in Canada, the United States, Europe, Australia and Asia. He has published hundreds of articles with a focus on the area of usability engineering in healthcare. Dr Kushniruk has developed and extended a range of novel approaches for application of qualitative analysis methods such as protocol and video analysis to support the assessment of user interactions with systems. The methods have been used to help in designing, refining and selecting health information systems that are more usable and safe. These approaches have been adopted by a number of healthcare institutions, including hospitals, clinics and research centers, nationally and internationally. Dr Kushniruk has also been a promoter of health informatics as a career in Canada and worldwide, and has led the development of educational strategies, including promoting undergraduate health informatics education, web-based distance education up to the Master's level, and work on design of a flexible PhD program to increase the number of trained professionals in the field. Dr. Kushniurk is currently working in a number of areas including the collection and analysis of large-scale usability data, application of usability engineering in genomics research and human factors evaluation of mobile health applications..

KWAK SIK YUN

Yun Sik Kwak is President, Asia Pacific Association of Medical Informatics (APAMI) and President, Korean Society of Medical Informatics. He was a Chairman, HL7-Korea; Chairman, ISO Technical Committee, Health Informatics. Yun Sik Kwak is

Visiting Professor of Medical Informatics, Kyungpook National University School of Medicine.

KWANKAM YUNKAP

S. Yunkap Kwankam, PhD (Switzerland) is Professor of Engineering; CEO, Global eHealth Consultants; Executive Director, International Society for Telemedicine and eHealth (ISfTeH); WHO Coordinator of eHealth (2004-2008). S. Yunkap Kwankam holds the BS, MS and PhD in electrical engineering, and was elected to the following American honor associations: Eta Kappa Nu (Electrical Engineering), Tau Beta Pi (Engineering) and Sigma Xi (Research). He is currently CEO of Global eHealth Consultants, based in Geneva Switzerland. He is also Executive Director, International Society for Telemedicine and eHealth (ISfTeH). From 2004 until August 2008 he was Coordinator eHealth, at the World Health Organization, Geneva Switzerland, where he was responsible for overall coordination of eHealth work across the Organization. In this role, he oversaw a number of WHO programs on the use of ICT in health. His work covered issues such as development of appropriate frameworks and

tools to support policy and practice improvements in ICT-based knowledge management and sharing in countries; creation of, and support to, networks to assist countries in building national capacity for effective and efficient use of ICT in their health systems; and development of the evidence base and best practices in the area. He also directed the development of new policies and their implementation and provides authoritative advice in relation to policy and procedures as they relate to eHealth. Before joining WHO in 2001, he was Professor and Director, Center for Health Technology, University of Yaounde I. He has also been Chairman, Technology Commission of the National Epidemiology Board of Cameroon; member, Board of Directors, SatelLife; IT consultant to the NLM, and consultant to UNIDO on information systems. Prof. Kwankam has published 2 commissioned books, numerous scientific papers and technical reports.

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LABKOFF STEVEN

Steven Labkoff, MD, FACMI, FACP is a global medical leader

with a track record of developing cutting edge strategies towards new healthcare delivery models. He has demonstrated success in the convergence of medicine, life sciences and policy across disparate organizations including government, non-government organizations (NGOs), health plans and academic institutions. He is previously Head of Strategic Programs in AstraZeneca's Research & Development Information Department. There he leads three groups, Real World Evidence and Payer Evidence, Personalized Medicine and Biomarkers and Clinical Trials Design and Interpretation, dedicated to leveraging healthcare data for the development of ethical pharmaceuticals. Previously, he was a senior member of Deloitte Consulting's Healthcare Informatics and Life Sciences Practice. Prior to that he spent 13 years with Pfizer Pharmaceuticals. His last role at Pfizer was as a Medical Executive leading a field-based medical outcomes team in Pfizer's Primary Care Business Unit. In 2003 he founded and led the Healthcare Informatics Group (HCI), the first such group in any pharmaceutical company. Other previous roles included Director, US Business Technology where he was an internal consultant and project manager for various internal clients including Planning and Business Development, the Strategic Investment Group (an internal VC Fund owned by Pfizer), Pfizer Health Solutions and the Pfizer Helpful Answers Program. His current areas of interest include the trustworthy reuse of healthcare data from an international and domestic point

of view, clinical data transparency, the maturity of Regional Health Information Organizations and interoperability, the emergence of the patient generated health records, biomarkers & personalized medicine, ePrescribing and standards development. Previously, Dr. Labkoff was an instructor of Medicine and Medical Informatics at Brigham and Women's Hospital, Harvard Medical School. He completed a post-doctoral fellowship at Harvard Medical School and Massachusetts Institute of Technology in Medical Informatics. He did his cardiology training at the University for Medicine and Dentistry of New Jersey, his medical training at the University of Pittsburgh and at the Albert Einstein Medical Center in Philadelphia. He is a Fellow of the ACMI and serves on the executive board of the AMIA.

LACROIX EVE-MARIE

Eve-Marie Lacroix, MS, FACMI, originally trained in chemistry and mathematics. She went on to earn a master's in science information from Illinois Institute of Technology in 1972. After a decade with Notre Dame University and then with Miles Laboratories in Indiana, she moved to the Canada Institute for Scientific and Technical Information, a component of the National Research Council of Canada. There she became Head of Information Services before moving to the National Library of Medicine (NLM) in 1985. She is now Chief of the NLM's Public Services Division. Eve-Marie Lacroix has directed the development and ongoing maintenance of major applications that have improved access to health information for researchers, health professionals, patients, and the general public around the world. She leads the multidisciplinary team that developed and continues to maintain and expand MEDLINEplus, the NLM's comprehensive consumer health Web information service. Launched in 1998, MEDLINEplus now contains more than 600 health topic pages that organize approximately 15,000 Web resources. MEDLINEplus now serves approximately 20 million page views to more than two million unique users each month. Ms. Lacroix's leadership of the development of MEDLINEplus typifies her general approach to launching, maintaining, and continuously improving high-volume production information services. This approach involves initial and ongoing study of user behavior and preferences through a combination of Web log analysis, focus groups, usability testing, user surveys, and direct user feedback. She has managed the development of many other "behind the scenes" systems that enhance delivery of health information every day. These include DOCLINE, NLM's automated document request and routing system, which handles approximately three million interlibrary loan requests annually. She also directed the implementation of the Loansome Doc extension that allows individual users to route document requests to a library willing to serve them. The work of Eve-Marie Lacroix has had a profound effect on the NLM, the public, and the health of the nation.

LAGIER CHRISTIAN

Christian Lagier is the founding Managing Director of a HealthTech Innovation Center launching at Baystate Health in Springfield, MA, - a late-stage accelerator offering healthcare data, health system access, and space to innovators, as well as a bridge-head to the US healthcare market for foreign companies. Participants have unique ability to simulate or demonstrate their solutions using data assets from Baystate and network partners, pilot in live clinical environment, consult with users & experts, and get their product

to market. Leveraging Baystate Health data, community, and expertise, it is the project goal to grow innovative solutions for the very real challenges of healthcare today in collaboration with innovators from around the globe. Baystate Health is a $1.6B model health system in a model environment presenting all the advantages of a top-tier integrated delivery health network in an environment that closely mirrors the vast majority of the US, including in patient population and socio-economic profile. The network includes the region's largest health insurance company and a flagship academic medical center. Christian has a background in entrepreneurship, business operations, and strategic business development having worked for start-ups and high growth companies in San Francisco, Paris and Copenhagen. He is a Danish and French national and holds a MSc in Economics and Business Administration.

LANGEMAK SHARI

Shari Langemak is a physician, a journalist and a digital health strategist. Her talks and lectures are mainly concerned with the opportunities and challenges of an ongoing digitalization and medical innovation. Apart from her job and speaking activities, she advises several startups and serves as a mentor of the healthcare investor XLHealth. Shari works as Editorial Director of the German branch of the multi-language physician network Medscape. She graduated from Ludwig Maximilian University (LMU) of Munich with a degree in medicine, gained practical experience in London and Shanghai, and finished her PhD at the LMU's department of Psychiatry. She currently is a Global MBA candidate at IE Business School Madrid..

LANDRY MARK

Mark Landry leads the eHealth and health information systems (HIS) initiatives of the WHO Western Pacific Region by coordinating and providing technical assistance to countries in Asia and the Pacific with development and implementation of standards-based, scalable, and reusable eHealth solutions. Mr Landry collaborates with development partners and supports networks of professionals to improve regional and national eHealth policies, strategies, plans, governance, and sustainable investments. Mr. Landry has 17 years of experience in eHealth and HIS working with country governments and organizations in Asia, Africa, the Middle East, and the Americas. He is specifically assisting low and middle-income countries with building institutional and individual capacity for better data collection, quality, management, and use of health information and statistics to inform health sector planning, systems strengthening, and clinical care.

LANGLOTZ P. CURTIS

Curtis P. Langlotz, MD, PhD, FACMI, FSIIM serves as Professor of Radiology and Biomedical Informatics and Associate Chair for Information Systems in the Department of Radiology at Stanford University. His laboratory conducts a wide variety of medical informatics and comparative effectiveness research to improve radiology practice. He has a longstanding interest in the development and assessment of structured radiology reporting systems to optimize the communication of imaging results. His laboratory also develops novel machine learning and natural language

processing algorithms that provide intelligent assistance to radiologists, clinicians, patients, and other consumers of the radiology report. Dr. Langlotz is responsible for the strategic technical direction of a filmless, paperless radiology department that interprets several hundred thousand exams annually. This unified technology platform serves in part as a test bed to evaluate the effect of new technologies on clinical practice. He is a founder and former President of the Radiology Alliance for Health Services Research, a former Chair of the Society for Imaging Informatics in Medicine, and a current member of the Radiology Informatics Committee of the Radiological Society of North America.

LARENG LOUIS

Louis Lareng (1923-) was born in the village of Ayzac-Ost, at the foot of the Pyrenees. He goes on to study medicine in Toulouse and practices the medical profession throughout his life within the city's hospitals. He is an anaesthetist-resuscitator, a discipline that he also teaches as Professor of Medicine. As pioneer of the emergency departments in France, he was the creator of the Emergency Medical Service "SAMU" (Service d'Aide Médicale Urgente) in 1967 and continued to advocate for the legal recognition of this organization by law, which finally happened in 1992. Prof. Lareng was founder of the University Paul Sabatier in Toulouse, and recognized as Professor Emeritus from 1992. It is at that time that he takes up the cause for telemedicine, a virtually unknown discipline in France in those days, which he will bring to the highest political levels - with determination and stubbornness - until the recognition by the laws of 2004 and 2010, the so-called HPST law (hôpital, patients, santé, territoires) of which the article 78 - the real birth certificate of telemedicine in France - bears his proverbial signature. In his region of Midi-Pyrénées, at first with the Public Interest Group 'Telemedicine Network' (Groupement d'Intérêt Public (GIP) Réseau de Télémédecine) in 2003 and then through various responsibilities up until the administration of the Health Cooperation Group 'Telehealth Midi-Pyrénées' (Groupement de Coopération Sanitaire (GCS) Télésanté Midi-Pyrénées) since March 2011, Louis Lareng implemented telemedicine and telehealth, and ensured the best possible applications. The creation of the European Institute of Telemedicine, of which he is the Director, and of the European Society of Telemedicine and eHealth, of which he is the President, allowed him to make his work and realizations known throughout France and beyond the French borders. Considered as one of the pioneers of telemedicine in the world, he is a member of the editorial boards and review committees of numerous specialized journals in the field. He is author of 896 publications and communications which are even more milestones and proof, if need be, of his various medical activities throughout his long career, which still continues today. He has been President or member of numerous scientific societies. In particular, he was one of the founder members in 1997 of the International Society for Telemedicine (ISfT) and a member of the Board of ISfTeH from 2007 till 2009. At the crossroads of his skills, he worked at the Red Cross in his region, and also at national level with the Emergency Preparedness Services, being President of their National Federation. For all his actions and activities, Louis Lareng was honored multiple times with prizes and awards, especially as Commander of the Academic Palms, Commander in the National Order of the Legion of Honour, Officer in the National Order of Merit.

LARSEN L. KEVIN

Kevin L. Larsen, MD, is medical director of meaningful use at the Office of the National Coordinator for Health Information Technology (IT). In that role he is responsible for coordinating the clinical quality measures for Meaningful Use Certification and oversees the develop-

ment of the Population Health Tool (http://projectpophealth.org). Prior to working for the federal government he was chief medical informatics officer and associate medical director at Hennepin County Medical Center in Minneapolis, Minnesota. He is also an associate professor of medicine at the University of Minnesota. Dr. Larsen graduated from the University of Minnesota Medical School and was a resident and chief medical resident at Hennepin County Medical Center. He is a general internist and teacher in the medical school and residency programs. His research includes health care financing for people living in poverty, computer systems to support clinical decision making, and health literacy. In Minneapolis he was also the medical director for the Center for Urban Health, a hospital–community collaboration to eliminate health disparities. He served on a number of state and national committees in informatics, data standards, and health IT.

LATIFI RIFAT

Rifat Latifi, MD, FACS is Professor of Surgery, University of Arizona, Tucson, Arizona, USA. He is, also, Director of Trauma Services at Hamad General Hospital in Doha, Qatar. Dr. Latifi is, also the President and Founder of International Virtual e-Hospital Foundation (IVeH, www.iveh.org), a not for profit US based organization based in Austin, Texas. Through this organization, Dr. Latifi has been working to transform healthcare and medical education worldwide through telemedicine and advanced medical technologies. Dr. Latifi has led the creation and the establishment of self-sustainable telemedicine and e-health programs in Kosova, Albania, Cape Verde and teletrauma of the Arizona Telemedicine Program. Dr. Latifi is a graduate of the Medical Faculty from the University of Prishtina in Prishtina, Kosova. He completed his internships at the University Clinical Center of Kosova and the Cleveland Clinic Foundation in Cleveland, Ohio, his residency in General Surgery at Yale University School of Medicine in New Haven, Connecticut, and his Surgical Critical Care Fellowship at New York Medical College, Bronx New York. He has authored or co-authored over 140 peer review articles and book chapters and has edited 11 books. Three of his latest books on telemedicine include: "Establishing Telemedicine in Developing Countries": "From Inception to Implementation" (IOS Press, 2004), "Current Principles and Practices of Telemedicine and eHealth" (IOS Press, 2008), and "Telemedicine for Trauma, Emergencies, and Disaster Management" (Artech House Publishers, (2010). He is the principal author of the strategy "Initiate - Build - Operate - Transfer (IBOT)" as a model to create a sustainable telemedicine program in the developing world through International Virtual e - Hospital Foundation, for which he has been awarded the "21st Century Achievement Award" for health by Computerworld Honors program for 2011. In addition, he has received numerous teaching awards from medical students and residents in the past.

LAVENTURE MARTIN
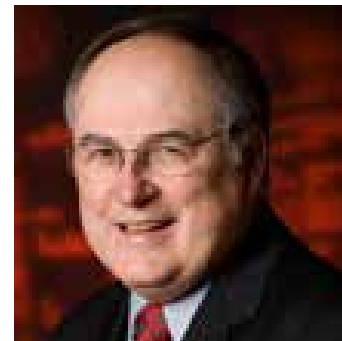
Martin LaVenture, PhD, FACMI, received his Bachelor of Science degree from St. John's University in Minnesota, and Masters of Public Health from the University of Minnesota. He joined the workforce as an epidemiologist and surveillance coordinator for the Minnesota Dept of Health (MDH), and rose through the ranks to become manager of the Acute Disease Prevention Services section. He extended his education with a PhD in Public Health Informatics from the University of Minnesota. At the time of his election he was Director of the Office of Health

Information Technology in MDH, Director of the Minnesota e-Health Initiative, Director of the Center for Health Informatics, and Co-Director of the Center for e-health Policy and Research at the University of Minnesota. While working in the state Dept. of Health, Dr. LaVenture has made many academic contributions, both at the technical and policy levels. He has directed the development of a statewide plan for implementing interoperable electronic health records (EHR) in response to a legislative mandate for EHR adoption, and directs an annual Minnesota e-Health Summit. As a Robert Wood Johnson Foundation funded principal investigator, he developed a novel statewide infrastructure for an immunization registry.

LAVRAC NADA

Nada Lavrac is professor and head of the Department of Knowledge Technologies at the Jozef Stefan Institute, Ljubljana, Slovenia. Her main research interests are in machine learning, relational data mining, knowledge management, and applications of intelligent data analysis in medicine and bioinformatics. She was the scientific coordina-

tor of the European Scientific Network in Inductive Logic Programming (ILPNet, 1993-1996) and co-coordinator of the 5FP European project Data Mining and Decision Support for Business Competitiveness: A European Virtual Enterprise (SolEuNet, 2000-2003). In 1997 she got the "Ambassador of Science of Slovenia" award, and in 2007 she became the ECCAI Fellow. She is author and editor of numerous books and conference proceedings, including "KARDIO; A Study in Deep and Qualitative Knowledge for Expert Systems" (The MIT Press, 1989), "Inductive Logic Programming: Techniques and Applications" (Kluwer, 1994), Intelligent Data Analysis in Medicine and Pharmacology" (Kluwer, 1997), "Relational Data Mining" (Springer, 2001), and "Data Mining and Decision Support: Integration and Collaboration" (Kluwer, 2003)."

LEAO DE FARIA BEATRIZ

Beatriz Leao de Faria has been working with health informatics since 1980, being a founder of the Brazilian Health Informatics Association in 1986. Besides a solid academic background she also

has public and private sector experiences. Beatriz is now an independent consultant in Heath Informatics. Her main expertise areas are: standards and electronic health records. In the last two years she has worked with São Paulo City Health Department, The Brazilian Agency for Supplementary Health, ZILICS a private company dedicated to health Informatics systems development. She also worked as a WHO consultant for Moçambique in the area of health informations systems, standards and national policies. Presently she is also the coordinator of the Models and Concepts Representation WG of the Brazilian ISO TC in Health Informatics. Former Adjunct Professor of Computer Science at the Federal University of Rio Grande Sul, and also from the Federal University of São Paulo. From 2000 to 2004 she worked as a consultant in the Brazilian Ministry of Health/DATASUS in the National Health Card Project. Her specialties are: Standards for the electronic health record, Health information systems design and implementation.

LEAVITT MARK

Mark Leavitt, MD, PhD, FACMI, received his bachelor's degree in electrical engineering from the University of Arizona, master's and PhD degrees in electrical engineering from Stanford, and an MD degree from the University of Miami School of Medicine. He undertook postgraduate training in internal medicine at Oregon Health and Science University. While practicing as an internal medicine physician he founded MedicaLogic, and served as its CEO and chairman until the company was acquired by GE Healthcare Information Technologies. He has been active in American Medical Informatics Association and Healthcare Information and Managements Systems Society professional societies, and served as advisor to the Markle Foundation "Connecting for Health" program and iHealth Initiative. He has a faculty appointment in the Department of Medical Informatics and Clinical Epidemiology at Oregon Health and Science University. Dr. Leavitt's vision for clinical systems led to MedicaLogic's groundbreaking electronic medical records applications,

and his vision and accomplishments have been recognized by his appointment as the founding Chair of the President's Certification Commission for Healthcare Information Technology.

LE BEUX PIERRE

Pierre le Beux, MD, PhD, was a professor of Medical informatics in Rennes, France. He graduated from Engineering school: Ecole Centrale de Paris (1968). PhD Medical Information Science UCSF University of California San Francisco (1974). French Doctorate of Sciences Université Pierre et Marie Curie (1978). MD 1983 CHU Pitié Salpétrière Université Pierre et Marie Curie (1983). As Academic Professional Pierre has been Postgraduate research Engineer University of California San Francisco (1971-1974). In France he was Associate Professor Université de technologie de Compiègne and Université Paris Sorbonne Spéciality Microcomputing for medical devices. He was one of the creator of Euromico European Scientific Association. From 1981 to 1988 he was full Professor Université technologie de Compiègne. His Research field was Artificial Intelligence and Medical expert systems. From 1988 to 2011 he was

professor and Hospital head of Medical Informatics Faculté de Médecine Université de Rennes 1. He has been president of French society of medical informatics. He was also a president of MIE 2003 Conference held in Saint Malo. Pierre was representative of EFMI and IMIA until 2009. His research interest fields include fields such as distance learning, problem based learning, educational models, patient simulation, medical education etc. He has many scientific and policy-related articles, monitoring, post market surveillance, public health, epidemiology research.

LEDERBERG JOSHUA
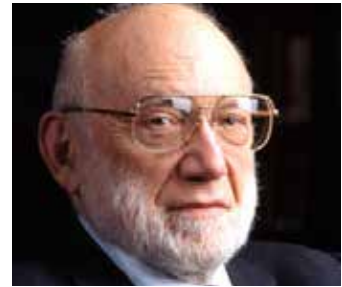
Joshua Lederberg (1925-2008) was an American molecular biologist known for his work in microbial genetics, artificial intelligence, and the United States space program. He was just 33 years old when he won the 1958 Nobel Prize in Physiology or Medicine for discovering about bacterial genetic information transfer. He graduated from Stuyvesant at the age of fifteen. At the Columbia University, his mentor Francis J. Ryan introduced him to the red bread mold, Neurospora, as an important

new experimental system in the emerging field of biochemical genetics. In the United States Navy's V-12 training program, he performed his military training duties and examined stool and blood specimen from malaria patients. After receiving his bachelor's degree in zoology in 1944, he enrolled in Columbia University's College of Physicians and Surgeons and continued to do his research. Lederberg carried out experiments with the intestinal bacterium Escherichia coli which demonstrated that certain strains of bacteria can undergo a sexual stage, that they mate and exchange genes. The most important of his discovery was the discovery of viral transduction, the ability of viruses that infect bacteria to transfer snippets of DNA from one infected bacterium to another and insert them into the latter's genome. The use of viruses in manipulating bacterial genomes became the basis of genetic engineering in the 1970s. In 1958 he received a Nobel Prize in Physiology or Medicine, along with Tatum and George W. Beadle, "for his discoveries concerning genetic recombination and the organization of the genetic material of bacteria." The launch of Sputnik in 1957 led Lederberg toward an interest in astronomy that lasted 20 years. His concern about the risk of spacecraft returning to Earth with contaminants from space resulted in a quarantine for space travel that remains in effect today. He went on to design experiments intended to detect the presence of life on Mars, resulting in the Mars

Viking lander. Lederberg became increasingly aware of the value of computers. He formed collaborations with researchers at Stanford to create a program for analyzing mass-spectrometric data of molecular structures, called DENDRAL, which led to further programs for disease diagnosis and management. It was the first expert system for specialized use in science. Over the course of his life, Lederberg was elected to the National Academy of Sciences, the Institute of Medicine, received the National Medal of Science, was named an honorary life member of the New York Academy of Sciences, was awarded Foreign Membership of the Royal Society of London and holds the title of Commandeur, L'ordre des arts et des lettres in France. Lederberg published over 300 scientific and policy-related articles and was the editor of several books, including Papers in Microbial Genetics: Bacteria and Bacterial Viruses (1951), Emerging Infections: Microbial Threats to Health in the United States (1992), and Biological Weapons: Limiting the Threat (1999).

LEDLEY STEVEN ROBERT

Robert Steven Ledley (1926-2012), Professor of Physiology and Biophysics and Professor of Radiology at Georgetown University School of Medicine, pioneered the use of electronic digital computers in biology and medicine. He attended the Horace Mann School and studied physics at Columbia University. After receiving his D.D.S. from New York University in 1948, Dr. Ledley enrolled as a graduate student at Columbia to study physics. He received his master's degree in physics in 1950. His professors included the Nobel Prize winners Enrico Fermi, Hans Bethe and I. I. Rabi. I.I. Rabi joked that Ledley was the only physicist who could pull a man's tooth. In 1951, during the Korean War, Dr. Ledley was in the Army Dental Corps, assigned to a research unit at Walter Reed Army Medical Center in Washington, where he worked on improving prosthetic dental devices. His work, which married dentistry and physics, attracted national attention. An article by The Associated Press carried the headline "Mathematics Used to Keep False Teeth in Place."

Fascinated by the machine, he learned to program the computer by studying the manuals and programs that his wife brought home. Soon, Dr. Ledley was working directly with the SEAC and focusing on the role that computers might play in solving biomedical problems. In 1956, Dr. Ledley was hired as an assistant professor of electrical engineering at the George Washington University School of Engineering and Applied Science. That year, he began to collaborate with Lee B. Lusted, a radiologist and electrical engineer, on developing ways to teach physicians and biomedical researchers to use electronic digital computers in their work. Dr. Ledley began his work on CT scanning in 1973. Building on earlier work by the British engineer and Nobel Prize winner Sir Godfrey Hounsfield, whose scanner could be used only on patients' heads, he assembled a group at Georgetown to build the Automatic Computerized Transverse Axial, or ACTA, scanner, which could scan the entire body. In 1974, Dr. Ledley established the Digital Information Science Corporation, selling the machines for $300,000 each. The next year, soon after obtaining the patent for the ACTA scanner, he sold his company to Pfizer, which briefly dominated the medical imaging market before losing ground to General Electric and Siemens. Dr. Ledley was inducted into the National Inventors Hall of Fame in 1990 and awarded the National Medal of Technology and Innovation by President Bill Clinton in 1997.

The original prototype of the ACTA scanner is at the Smithsonian Institution. Among Ledley's childhood friends was Margaret Oakley Dayhoff, who would later become a founder of the field of bioinformatics. After Dayhoff died suddenly in 1983, Ledley and Winona Barker) took charge of the project. During the mid-1980s Ledley and Barker led a team that developed the Protein Identification Resource (later called the Protein Information Resource or PIR), an online version of the Atlas. By the mid-1970s the Atlas had become the primary repository of protein sequence data, and ultimately served as a model for the Protein Data Bank and the nucleic acid sequence database GenBank, both now major resources for biologists. Dr. Ledley was a founding fellow of the American College of Medical Informatics and authored or coauthored more than 300 peer-reviewed articles. During his long career at the NBRF, Ledley served as editor of four major peer-reviewed journals: Pattern Recognition, Computers in Biology and Medicine, Computer Languages, Systems and Structures, and Computerized Medical Imaging and Graphics.

LEE CHRIS

Chris Lee (Keeyuck Lee) is In-charge of Change Management, Best HIS Project Team Professor of Family Medicine Department, Seoul University Bundang Hospital

LEFRANC MARIE-PAULE

Marie-Paule Lefranc, PhD, is founder and director of IMGT®, the international ImMunoGeneTics information system®, that she created in 1989 at Montpellier, France (CNRS and University of Montpellier). By its creation, IMGT® marked the advent of immunoinformatics, a new science, which emerged at the interface between immunogenetics and bioinformatics. For the first time, immunoglobulin (IG) or antibody

and T cell receptor (TR) variable, diversity, joining and constant genes were officially recognized as "genes" as well as the conventional genes. This major breakthrough allowed genes and data of the complex and highly diversified adaptive immune responses to be managed in genomic databases and tools. Marie-Paule Lefranc is an international leader and innovator who has constantly promoted as researcher, educator, mentor, collaborator and author, a standardized and integrated vision of the IG, TR and major histocompatibility (MH) molecular data analysis, and of their superfamilies IgSF and MhSF, from gene to structure and function, between fundamental, clinical, medical, pharmaceutical and therapeutical research and applications. She defined the IMGT Scientific chart rules and the IMGT-ONTOLOGY concepts which are the foundations of IMGT®. Her team developed the IMGT® databases, tools and web resources which are worldwide used for leukemia and lymphoma clonality analysis, therapeutic monoclonal antibody (mAb) engineering and humanization, next-generation sequencing analysis of immune repertoires in vaccination, infectious diseases and cancers (online portal IMGT/HighV-QUEST). IMGT® is the global reference in immunogenetics and immunoinformatics. Marie-Paule Lefranc is a member of the WHO International Union of Immunological Societies (IUIS) Nomenclature Committee and a specialist advisor of HUGO

Gene Nomenclature Committee (HGNC). Since 2007, IMGT® gene and allele names have been used for the description of the therapeutic mAb of the WHO International Nonproprietary Name (INN) Program. IMGT® has been an Academic Institutional Member of IMIA since 2006.

LEHMANN P. HAROLD

Harold P. Lehmann, MD, PhD, FACMI, received his bachelor's and MD degrees from Columbia. After postgraduate training in pediatrics in New York and at Johns Hopkins, he received his PhD in medical information sciences from Stanford. He is currently Associate Professor of Pediatrics, Health Sciences Informatics, and Health Policy and Management at Johns Hopkins, and Director of Research and Training in Hopkins' Division of Health Science Informatics. Dr. Lehmann has published influential studies on Bayesian communication, which is the use of the Bayesian paradigm and Bayesian statistics to the interpretation and application of research data to local decision making, and also the application of Bayesian reasoning and decision analysis

to systematic reviews of the literature, and application of decision analysis to pediatric clinical problems. As principal investigator of the NLM medical informatics training grant at Johns Hopkins, he has been a proponent of new curricula and informatics education for all medical students, not only those seeking graduate degrees in our field. He has chaired AMIA's Education Working Group and been a member of the ACMI medical school objectives project.

LEHMANN ULRICH CHRISTOPH

Christoph "Chris" Lehmann, MD, FAAP, FACMI, is Professor for Biomedical Informatics and Pediatrics at Vanderbilt University Medical Center. He conceived and launched the journal Applied Medical Informatics, devoted to original research and commentary on the use of computer automation in the day-to-day practice of medicine and he served as the Editor-in-Chief since its inception. In 2009, he co-edited Pediatric Informatics, the first textbook on this subject. Dr. Lehmann served on the board of the American Medical Informatics Association from

2008 to 2013 and served two terms as the organizations secretary. In 2010, he was inducted as a fellow into the ACMI, in 2014 he was elected to the American Pediatric Society, and in 2012 he became a Vice Presidents of the IMIA in charge of the IMIA Yearbook. In 2010, Dr. Lehmann was appointed Medical Director of the Child Health Informatics Center for the American Academy of Pediatrics, where he was involved in developing the Model Pediatric EHR Format. Dr. Lehmann serves on the federal Health IT Policy Committee and as the chair of the Examination Committee of the American Board of Preventive Medicine, Subcommittee for Clinical Informatics. In 2015, Dr. Lehmann chaired the AMIA Annual Symposium in San Francisco. Chris Lehmann directs the Clinical Informatics Fellowship Program at Vanderbilt. He is the President-Elect of the IMIA..

LENERT A. LESLIE

Leslie A. Lenert, MS, MD, FACMI, as MUSC's first Chief Research Information Officer. Dr. Lenert comes to us from the University of Utah where he served as the Ann G. and Jack Mark Presidential Chair in Internal Medicine, Associate Chair, Department of Medicine for Quality and Innovation, and Professor of Medicine and Biomedical Informatics at the University of Utah. He earned his MD from University of California, Los Angeles and his MS in Biomedical Informatics from Stanford University. At Stanford, Dr. Lenert also completed a fellowship in Clinical Pharmacology.Dr. Lenert is a practicing primary care physician with a 20-year history of research and development work in informatics and predictive analytics. He was a pioneer (1990's) in development of web-based systems for patient use and online research studies. In response to 9/11 attacks, Dr. Lenert led a team of engineers and computer scientists that developed the first wireless "location aware" EHR system for first responders, including the world's first WiFi pulse oximeter and electronic triage tag, obtaining more than 4 million dollars in Federal funding. In 2007, Dr. Lenert became the founding Director of the National Center for Public Health Informatics at Centers for Disease Control and Prevention (CDC). There he managed the development of key national biodefense computer systems, including BioSense (which merged real time emergency room data from hundreds of hospitals) and Nationally Notifiable Disease Surveillance System. He also led efforts to integrate public health data systems with the Nationwide Health Information Network. Currently, he researches approaches to help make health care safer and patient-centric through the application of cognitive modeling and predictive analytics. Dr. Lenert has published extensively on the application of data mining methods to medicine. An internationally recognized expert in informatics, he is a fellow of the American College of Medical Informatics and sits on the editorial boards of three leading journals in the field.

LEONG TZE YUN

 Assoc. Professor of Computer Science, School of Computing, National University of SingaporeTze Yun Leong is a faculty member in the Department of Computer Science. He also directs the Medical Computing Laboratory, a multidisciplinary research program at the School of Computing. Tze Yun is on leave from the University from academic year 2015/16 to 2017/18. He teaches courses in Artificial Intelligence and general computing methodologies. For academic year 2014/15 he taught CS4246 AI Planning and Decision Making and CS1010S Programming Methodology in Python. More about his teaching assignments can be found on the NUS IVLE system.His research interests include decision-theoretic artificial intelligence, temporal probabilistic reasoning, machine learning, cognitive modeling, adaptive computing, and biomedical informatics.

LERCHUNDI RAMON

Ramon Lerchundi is CIO. San Sebastian University Hospital, Spain since 2012 (Osakidetza-Basque Country Public Health Service). He is member of the Board of the Hospital (1000 beds; 5000 workers) and the Board of the Primary Care Area (38 centers covering 300.000 people). His primary background is Information Technology but he has developed abilities in Change Management, Leadership and Finance. Previously, he got Stage 6 for a private hospital (Onkologikoa). He has experience in several Telecom, Banking and Consultancy firms. His aim is to export proven successfully approaches between different economical sectors.

LETINA LIGA

Liga Letina is Head of UX. Cube Systems, Latvia. Līga Lētiņa is a local UX evangelist in Latvia,

trainer, speaker and currently holding Head of UX and Senior User Experience Architect position at CUBE Systems. Liga has been responsible for user research and usability testing, designed information architecture and user interfaces for leading local companies in finanance, telco sectors like LMT, DNB bank, Elektrum an other domains. Liga has been involved also in projects for several government institutions as State Land service, State Rural Support Service, Latvijas valsts meži among others.

LEVETT JEFFREY

Jeffrey Levett had career in development of systems and communication theory, as in cybernetics. His original interest was in control theory applied to monitoring of nuclear reactor flux-servo mechanistic control-and rod temperature profile [England, Greece]. Jeffrey Levett's career spans America, the Balkans, Greece and England. His research in the USA was in the nonlinear characteristics of visual systems, emergency medical systems and biomedical engineering. It included design

and development of a trauma system serving 11 million people, alcohol studies to shape State implied consent legislation, HMO serving 30,000 patients, patient safety in 5000 hospital bed network, and biomedical engineering supervision in an Inter-Institutional Cardio-Vascular Center. He has penned declarations on public health, peace and human rights [PH Network, SEE], human security [ECPD- Japanese Ministry of Foreign Affairs] and formulated a personal petition calling for the release of Eskinder Nega an imprisoned Ethiopian journalist. Jeffrey Levett is engaged in all things Greek and Balkan. He served the Hellenic School of Public Health [NSPH] as professor and dean and serves the UN University for Peace, Belgrade [ECPD] as a member of its Academic Council. As a result he has directed a Center in Prizren, Kosovo and a post doctoral studies program in biomedicine, Pula, Croatia. Over the past 20 years he has directed or participated in projects with Albania [health management], Egypt [public health and disaster management], Turkey [disaster management], Georgia [health promotion], Kosovo and Serbia [human security] and Syria [public health]. Currently, he is engaged with ASPHER and with the SEEHN. A generous and recent invitation from Long Island University, Brooklyn, sponsored by the United Nations European Center for Peace and Development, Belgrade facilitates his periodic return to the US. Agenda items include the develop-

ment of health diplomacy and a regional school of public health. He has experienced local operating systems during disasters and received insights into the process of reconciliation of peoples. Jeffrey Levett's work has been published in books and journals such as Vision Research, Aviation Space and Environmental Medicine, International J. Biomedical Engineering, International Surgery. He is currently engaged in the development of a new model for public health based on disaster management in collaboration with the World Association of Disaster Medicine. He is equally at ease with health care personnel, engineers, managers, other specialists and politicians. Jeffrey Levett's breaking news: negotiation of an unregistered success for Greece, the "achievements celebration" of the first 50 years of ASPHER (1966-2016) on the European stage and mediation of an American-Balkan agreement in New York and the formulation of a Balkan Youth Forum to be transacted in Brooklyn, 2016.

LEVY A. MIA

Mia A. Levy, MD, PhD, FACMI, is the Ingram Assistant Professor of Cancer Research, an Assistant Professor of Biomedical Informatics and Medicine in the School of Medicine and Vanderbilt University. She is also the Director of Cancer Clinical Informatics for the Vanderbilt-Ingram Cancer Center. She is a practicing medical oncologist specializing in the treatment of breast cancer. Her research interests include biomedical informatics methods to support the continuum of cancer care and cancer research. Her current projects include informatics methods for a) image based cancer treatment response assessment using quantitative imaging, b) clinical decision support for treatment prioritization of molecular subtypes of cancer, c) protocol based plan management and d) learning cancer systems. She is the informatics lead for the Vanderbilt Personalized Cancer Medicine Initiative (PCMI) working to integrate tumor genetics biomarkers into the electronic health record in computable form and provide decision

support for standard of care and clinical trial eligibility based on those predictive biomarkers. As part of this initiative, her team has developed the My Cancer Genome website, a freely available knowledge resource for patients and providers designed to guide actionable decisions regarding treatment options based on tumor genetics. The goal is to help make genome directed cancer care the next standard of care by providing an international resource for patients and providers to help drive treatment decisions. She is also the informatics lead for the Vanderbilt Oncology Information System (VOIS) program developing clinical information systems for the continuum of cancer care. VOIS projects include adaptation of existing technologies to the cancer clinical environment including bar-code medication administration, data integration and visualization, and the development of new systems for chemotherapy plan management. Through a collaboration with the Vanderbilt Institute for Software Integrated Systems (ISIS), we are developing a model driven computing application for longitudinal management of patient plans including full integration with downstream transaction systems. She is the faculty lead for the Vanderbilt Ingram Cancer Center Research Informatics Core (RIC) which supports clinical and translation research including maintenance of clinical trial management system, tissue repositories, clinical data repositories and data marts,

as well as novel tool development to support cancer research. Dr. Levy received her undergraduate degree in bioengineering from the University of Pennsylvania in 1997 and her medical doctorate from Rush University in 2003. She then spent 6 years at Stanford University completing post-graduate training in Internal Medicine and Medical Oncology while completing her doctorate in Biomedical Informatics.

LEVY H. ALLAN

Allan H. Levy, MD, FACMI, worked at University of Illinois College of Medicine. It's difficult to envision a College of Medicine campus without computers, but when Allan Levy, MD, joined the faculty of the University of Illinois in 1975 that was the case. The Medical Sciences Building had just been completed, and Dean Daniel Bloomfield had recruited Dr. Levy from Baylor College of Medicine, which had one of the first computer research centers, to head the College's Medical PLATO project.

"The goal was to convert much of the basic science curriculum to computer," says Dr. Levy. "PLATO was a very important step in computerbased education. Not only did we develop many lessons for our students, but we cooperated with 5 to 10 other medical schools who agreed to join the Health Sciences Network. It was pioneering work." More than 30 years later, microcomputers and web-based learning make that early work seem cumbersome and inefficient, but it was groundbreaking at the time. And because of Dr. Bloomfield's vision and Dr. Levy's expertise, it put medical informaticians and students in a position to be at the forefront of important technological developments. Dr. Levy takes great pride in the fact that over the years he played a part in developing an environment "where the training of physician-scholars is first rate." Till his retirement from the ACMI, he continued to be involved in the biomedical informatics field as a consultant and is an active volunteer with CASA, Court-Appointed Special Advocates, where he served as an advocate for abused and neglected children.

LIAW SIAW-TENG

Professor of General Practice, School of Public Health and Community Medicine, UNSW Australia. Professor Liaw is Professor of General Practice at University of NSW and Director of the UNSW/South West Sydney Local Health District General Practice Unit, which is based in Fairfield Hospital in Sydney. He is an internationally recognised primary care and informatics researcher and educator and International Fellow of the American Medical College of Medical Informatics. Research Interests: Primary and integrated health care, delivered by a multiprofessional team is essential to optimal management of chronic diseases and promotion good quality of life. Continuity of information and management protocols are important mechanisms, along with relational continuity, are important facilitators and contributors to best practice and of beneficial patient outcomes. This confluence of clinical practice and informatics is a basic and essential skill in the health profession. Broad Research Areas: Medical Informatics, Primary Health Care, Clinical

Research, Cross-cultural Health, Indigenous Health, Population Health Society Memberships & Professional Activities: Fellow, Royal Australian College of General Practice, Foundation Fellow, Australian College of Health Informatics, International Fellow (elected) American College of Medical Informatics

LIEBER STEPHEN

Stephen Lieber is President and CEO of HIMSS, a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology. A seasoned health-care management executive, Lieber brings to the HIMSS WorldWide over 30 years of experience in healthcare, primarily in healthcare association management. Since 2000, Lieber has served as President and CEO of HIMSS WorldWide and related organizations focused on the optimal use of information technology and management systems for the betterment of health. Lieber not only serves on the Board of Directors of HIMSS

and its related corporations, but he also serves on numerous other corporate, non-profit and coalition boards and groups. He was one of the founders of the Certification Commission for HIT and the Health Information Technology Standards Panel, two U.S. federally funded initiatives at the foundation of the U.S. interoperability effort. Lieber was recognized between 2004 through 2012 as one of the Top 100 most influential people in US healthcare. In his strategic leadership role at HIMSS, Lieber has established the organization as a global leader on issues such as, electronic health records, interoperability, technology standards, IT adoption, and certification. He has also brought significant growth to HIMSS, more than quadrupling the organization's size and expanding its scope to encompass ambulatory IT issues and healthcare business information systems, in addition to HIMSS leadership in the acute care clinical information systems arena. HIMSS annually hosts the world's largest health IT educational conference and trade show, attracting over 35,000 healthcare professionals to its US-based event, as well as hosting similar conferences and exhibitions in Europe, Asia and the Mideast to promote HIT knowledge sharing and professional development worldwide. Lieber previously served as CEO of the Emergency Nurses Association (ENA) for nearly nine years before accepting a position with the American Hospital Association as Vice President, Division

of Personal Membership Groups. Prior experience includes Vice President of Operations for the Illinois Hospital Association; Senior Budget Analyst for the Illinois Bureau of the Budget; and Assistant Administrator, Research and Statistics for Arkansas Social Services. Lieber holds an MA from the School of Social Service Administration at the University of Chicago, a BA in Psychology from the University of Arkansas, and has completed additional course work at the graduate schools of business at both universities and at the Keller Graduate School of Management. Steve has been a Certified Association Executive (CAE) since 1994, is a member of the American Society of Association Executives and Association Forum of Chicagoland and has been awarded honorary life memberships at the American Hospital Association and the American Society of Healthcare Risk Management.

LIEBERMAN MICAH

Producer, content developer and facilitator of executive forums for thought leaders in the bio-pharmaceutical and healthcare

industry. Ascertain industry trends and develop training and course content to match these trends. Areas of focus cover a range of topics (e.g., trial optimization, drug development, portfolio management, biologics formulation, biomedical informatics) but the goal in all cases is to help R&D leaders, scientists and corporate executives assess business opportunities, evaluate R&D strategy, enhance corporate value and better forecast the economic and regulatory landscape within the rapidly changing pharmaceutical, biotechnology and healthcare industries.

LIEVENS FRANK

Frank Lievens (1944-) was born in Ghent, Belgium. He achived Master in Economic and Diplomatic Sciences (1967) I.C.H.E.C. Brussels, (Belgium). He is Managing Director of LIEVENS LANCKMAN BVBA (Belgium), AKROMED FRANCE (France), Companies involved in manufacturing and distribution of Medical Devices, having a worldwide network. He is Director of MED-e-TEL in Luxembourg and Board member, Secretary and Treasurer of the ISfTeH. Back in 1999, got interested in Telemedicine via Home Care applications.

He was involved in the creation of MED-e-TEL, the International Educational & Networking Forum for eHealth, Telemedicine & Health ICT, taking place yearly in Luxembourg and acts as its director. He was elected to the Board of the ISfTeH (International Society for Telemedicine & eHealth) in September 2003 as Treasurer, and reelected in December 2007 and December 2012 as Secretary-Treasurer. As such, has been attending many Telemedicine Conferences and Events in more than 40 world countries. Presentations on the Global Vision about Telemedicine/eHealth were made in: Abu Dhabi, Abuja, Antwerp, Bangalore, Berlin, Bhubane swar, Brisbane, Brussels, Bucharest, Budapest, Cairo, Cape Town, Chandigarh, Chennai, Coimbatore, Copenhagen, Dubai, Durban, Donetsk, Fiuggi, Fukuoka, Guanzhou, Hvar, Hyderabad, Iasi, Joensuu, Kuala Lumpur, Kunming, London, Luxembourg, Lyon, Mangalia, Montreal, Moscow, Mumbai, Nairobi, New Delhi, Ottawa, Parana, Paris, Perth, Prishtina, Pune, Rabat, Sandton, Santiago de Chile, Sao Paulo, Sarajevo, Saratov, Skopje, Sofia, Tarusa, Tirana, Tromsö, Vienna, Warsaw, Yerevan, Zagreb. Over a period of 10 years, Frank LIEVENS has been instrumental in establishing contacts for the ISfTeH with several International Organizations and Institutions, Professional Associations, Telemedicine/eHealth, Experts and has contributed to a sustained expansion of the Society, in harmonious and efficient col-

laboration with the other Board Members and the coordinators of the Working Groups.

LINCOLN J. MICHAEL

Michael J. Lincoln, MD, FACMI, received his Bachelors and MD degrees from the University of Michigan, followed by a residency in Internal Medicine at Utah, and fellowships in Pulmonary Medicine and Medical Informatics. He joined the faculty at Utah and is now Associate Professor of Medicine and Adjunct Associate Professor of Biomedical Informatics, as well as an attending physician at the Salt Lake City VA Medical Center and Chief Terminologist for the VA Health Affairs Office of Information in Salt Lake and Washington, DC. He is also Program Director of the VA Special Fellowship in Medical Informatics. Dr. Lincoln has accumulated a substantial record of achievements in decision support, expert systems, and health care education. Under Dr. Homer R. Warner, he led an effort to formally implement and evaluate The Iliad

system in the medical curriculum, and demonstrated that Iliad case simulation software significantly improved student case solving performance. He explained these results in terms of cognitive psychology theories. He subsequently applied his cognitive psychology experience to the VA's Computerized Patient Record System development project to improve system usability, and in this context found that an expert system for practice guidelines resulted in improved physician compliance with guideline content. Dr. Lincoln helped create the FDA's Structured Product Label initiative, then demonstrated the use of structured label information to automatically update VA's drug terminology content. He is a codeveloper of the Document Naming Nomenclature that has become the basis for the LOINC document standard, which in turn has contributed significantly to the Health Level 7 (HL7) Clinical Document Architecture. Dr. Lincoln is the VA liaison to the SNOMED Editorial Board and has led adoption of SNOMED-CT in the VA's electronic health record. He is also the VA lead for the Federal Medical Terminologies Consortium, which is a Federal collection of medication terminologies that are provided to the public via the Office of the National Coordinator for Health Information Technology.

LINCOLN L. THOMAS

Thomas Tom L. Lincoln (?-2016), MD, FACMI, was a faculty member for over 3 decades in the Department of Pathology at the Keck School of Medicine of University of Southern California, quickly rising to the rank of Professor, specializing in medical informatics. In 1981, he directed the implementation of comprehensive laboratory information systems at the LAC/USC Medical Center, one of the largest/most complex hospital laboratories in the United States. He served as Chief of Clinical Information Systems at Los Angeles County/University of Southern California Medical Center. He also served as a scientist at the RAND Corporation, beginning in 1967, focusing on computer applications in the fields of medicine and healthcare. From 1995 to 1996 he was Consultant Chief Scientist for Sunquest Information Systems in Tucson AZ. Between 1997 and 2000 he served as Research Professor of Medical Informatics in the School of Biomedical and Health Informa-

tion Sciences at the University of Illinois at Chicago, working with the HL7 XML SIG and PRA (Patient Record Architecture) Technical Committee on XML applications for healthcare messaging and record formatting. The Association for Pathology Informatics presented its Lifetime Achievement Award to Dr. Lincoln at the ASCP 2014 annual meeting. A frequent attendee at AMIA/SCAMC and ACMI events, Dr. Lincoln also served as a key informatics faculty member at national meetings of the College of American Pathologists (CAP) and American Society for Clinical Pathology (ASCP) from the 1970's thru 1990's. His published articles focused on a range of topics with an emphasis on improvements of the clinical laboratory. His writings included some of the earliest articles making specific reference to medical informatics and the electronic medical record. A seminal 1980 article in Science entitled "Computers, Health Care, and Medical Information Science" helped define the specialty of Clinical Informatics. At the time of his death in March 2016, Dr. Lincoln was an Emeritus Professor in the Department of Pathology at the University of Southern California.

LINDBERG A. B. DONALD

Donald A.B. Lindberg, (1933-) MD, a scientist who has pioneered in applying computer technology to health care beginning in 1960 at the University of Missouri. In 1984 was appointed Director of the National Library of Medicine and served this function till August 2016. From 1992-1995, he served in a concurrent position as founding Director of the White House High Performance Computing and Communications Program, (annual budget $1.1 billion; 12 federal agencies, including DOD, DOE, NSF, NASA, HHS, VHA, DOC, EPA). In 1996, he was named by the HHS Secretary to be the U.S. Coordinator for the G-7 Global Healthcare Applications Project. He is a leader in the Federal Networking and Information Technology Research and Development (NITRD) initiative to improve health and health care. In addition to an eminent career in pathology, Dr. Lindberg has made notable contributions to information and computer activities in medical diagnosis, artificial intelligence, and educational programs. Before his appointment as NLM Director, he was Professor of Information Science and Professor of Pathology at the University of Missouri-Columbia. Dr. Lindberg was elected the first President of the AMIA. He is also a founding member of the Health on the Net Foundation, an international organization devoted to guiding patients and providers to sound, reliable health information. As the country's senior statesman for medicine and computers, he has been called upon to serve on many boards including the Computer Science and Engineering Board of the National Academy of Sciences, the National Board of Medical Examiners, the Council of the Institute of Medicine of the National Academy of Sciences. Dr. Lindberg is the author of three books: "The Computer and Medical Care"; "Computers in Life Science Research"; and "The Growth of Medical Information Systems in the United States", several book chapters, and more than 200 articles and reports. He has served as editor and editorial board member of nine publications including the Journal of the American Medical Association. Dr. Lindberg graduated Magna cum Laude from Amherst College and received his MD. degree from the College of Physicians and Surgeons, Columbia University. Among the honors he has received are Phi Beta Kappa, Simpson Fellow of Amherst College, Markle Scholar in Academic Medicine, Surgeons General's Medallions, recipient of the First AMA Nathan Davis Award for outstanding Member of the Executive Branch in Career Public Service, the Walter C. Alvarez Memorial Award of the American Medical Writers Association, the Presidential Senior Executive Rank Award, Founding Fellow of the American Institute of Medical and Biological Engineering, the Outstanding Service Medal of the Uniformed Services University of the Health Sciences, Federal Computer Week's Federal 100 Award, Computers in Healthcare Pioneer Award, Association of Minority Health Professions Schools Commendation, RCI High Performance Computing Industry Recognition Award, U.S. National Commission on Libraries and Information Science Silver Award, Council of Biology Editors Meritorious Award, Presidential Rank Award of Meritorious Executive in the Senior Executive Service, Medical Library Association President's Award, American College of Medical Informatics Morris F. Collen, M.D. Award of Excellence, Johns Hopkins University School of Medicine Ranice W. Crosby Distinguished Achievement Award, New York Academy of Medicine Information Frontier Award, Cosmos Club Award, American Medical Women's Association Lila A. Wallis Women's Health Award, U.S. Medicine Frank Brown Berry Prize, University of North Carolina Louis Round Wilson Academy Prize for Lifetime Achievement, NFAIS Miles Conrad Award, Research America Builders of Science Award, and the CNI Paul Evan Peters Award, and Fellow of the American Association for the Advancement of Science, the New York Academy of Medicine, the American Academy of

Arts and Sciences. Dr. Lindberg received honorary doctorates from Amherst College, the State University of New York at Syracuse, the University of Missouri-Columbia, and the University for Health Sciences, Medical Informatics and Technology, Innsbruck, Austria, and Old Dominion University.

LINDEN FREDRIK

Fredrik Lindén is epDOD Project Manager. He has a Master of Science in International Business Administration from the University of Lund, this included studies at ESCP, Ecole Supérieure de Commerce de Paris. After the studies he did a traineeship at IBM and during nearly seven years with IBM he worked both with managing Business Partners, Sales, Projects and Business Development in Sweden and the Nordic countries. The last couple of years he has been working for the Swedish Competence Centre for eHealth managing the work involved in creating the common technical infrastructure for eHealth in Sweden. Since 2008 he has been the Project Coordinator of epSOS a Large Scale eHealth Pilot.

LINKOUS JON

Jon Linkous is the Chief Executive Officer of the American Telemedicine Association (ATA), the largest membership-based organization in the world focusing exclusively on providing health and medical care through telecommunications technology. ATA's annual meeting and trade show are among the fastest growing in the country. The Association advocates for changes in public laws that promote the deployment of telemedicine throughout the world. As the chief staff executive of ATA, Mr. Linkous has spoken and written extensively in the U.S. and in other countries on policy issues, emerging applications and market trends affecting telemedicine. Mr. Linkous has over 20 years experience in the nation's capital working in corporate and public sectors. He served as a senior consultant with Issue Dynamics Inc. (IDI), a Washington DC consulting firm specializing in telecommunications and technology policy. While at IDI, Mr. Linkous assisted in the early formation of ATA. For five years he was a leader in the aging services community as the Executive

Director of the National Association of Area Agencies on Aging. His principle interest in this position was in using telecommunications and adaptive technology to assist older Americans and their caregivers. Mr. Linkous was also involved for many years in regional planning and economic development, serving as the Deputy Executive Director of the National Association of Regional Councils and at the Appalachian Regional Commission as Director of District Programs. In his early career, he was also active in broadcast and cable television in Ohio. Mr. Linkous holds a Masters of Public Administration from the School of Government and Public Affairs at the American University in Washington, DC and a BS degree in Business Administration from Franklin University in Columbus, Ohio with additional postgraduate work at the LBJ School of Public Affairs in Austin, Texas.

LIPMAN J. DAVID
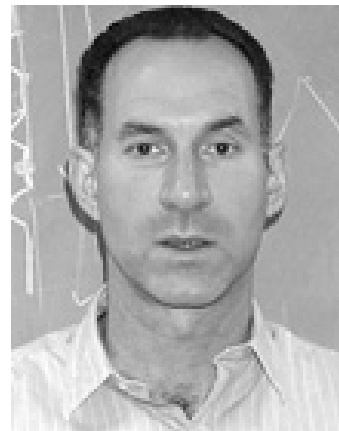
David Lipman, MD, FACMI, served as the Director of the

National Center for Biotechnology Information, a division of the National Library of Medicine, at the National Institutes of Health. Dr. Lipman received his BA from Brown University and his MD from the State University of New York at Buffalo. Following the completion of his internal medicine internship at the University of Arizona at Tucson, Dr. Lipman joined the National Institutes of Diabetes and Digestive and Kidney Diseases, NIH, as a Medical Staff Fellow in the Mathematical Research Branch. He has served as a member of the United States Public Health Service Commissioned Corps since 1984. Comparative studies are a powerful tool used by computational biologists to detect important nucleotide or protein fragments that may be hidden in a raw sequence, to identify novel genes and proteins and to gain insight into the structure and function of a protein. Dr. Lipman's research efforts have made a significant contribution toward advancing this field of study, beginning with the first algorithm for rapid database searching, which was used for the critical discovery that the viral oncogene v-sis and a platelet-derived growth factor are derived from closely related cellular genes. Dr. Lipman's ongoing research includes the development of the most widely used tools for sequence database searching, including FASTA and BLAST. Dr. Lipman has also been instrumental in an effort to design and implement a platform for integrating the diverse data

stored in the public databases. The NCBI Entrez Data Retrieval System was designed to allow users to search vast quantities of data with a technique that is both fast and sensitive yet easy to use. The ability to traverse both the literature and molecular databases via Entrez provides a very powerful method for accessing and analyzing data. Dr. Lipman has received many honors and awards for his achievements and contributions to the field of computational biology, including his election the National Academy of Science's Institute of Medicine.

LITTMAN L. MICHAEL

Michael L. Littman is a Professor of Computer Science at Brown University. His research in machine learning examines algorithms for decision making under uncertainty. He has earned multiple awards for teaching and his research has been recognized with three best-paper awards on the topics of meta-learning for computer crossword solving, complexity analysis of planning under uncertainty, and algorithms for efficient reinforcement learning.

Littman has served on the editorial boards for the Journal of Machine Learning Research and the Journal of Artificial Intelligence Research. He was general chair of International Conference on Machine Learning 2013 and program chair of the Association for the Advancement of Artificial Intelligence Conference 2013 and is a Fellow of AAAI.

LIU LING

Ph.D., Healthy Environments & Consumer Safety Branch ,CanadaLing Liu is currently an associate professor at the College of Computing, Georgia Tech. Before joining Georgia Tech, she was on faculty at the department of computer science and engineering, Oregon Graduate Institute (July 1999) and an assistant professor at the department of computer science, University of Alberta (1994-1998). Dr. Ling Liu received her PhD in 1993 from Tilburg University, The Netherlands, and worked as a senior research scientist at the department of computer science, J.W.G. University, Frankfurt, Germany from 1992 to Summer 1994. Dr. Ling Liu research interests are in the area of distributed data intensive systems, including

Internet Data Management Systems, Wide-area middlware Systems, Transactional Workflow Systems, Data Warehousing and Data Mining, Software Evolution and Reuse. She has published over 70 papers in international journals and conferences. Most of Dr. Ling Liu's recent research has been focused on methodology, framework, and techniques for designing and implementing scalable software systems, specifically the scalability problems with respect to reliability, availability, extensibility, performance, and unpredicability of wide area distributed software systems. Dr. Ling Liu has taught courses on various topics in the area of database systems and distributed computing systems, including graduate courses such as data management on the Internet, distributed computing systems, distributed databases, object-oriented databases, and undergraduate courses such as introduction to database systems, DBMS implementation, and practical programming methodology.

LIU HONGFANG

Hongfang Liu, PhD, FACMI, is a professor of Biomedical infor-

matics in the Mayo Clinic College of Medicine, and is a consultant in the Department of Health Sciences Research at Mayo Clinic. Education: Doctor of Philosophy - Computer Science Specialized in Biomedical Informatics Graduate School, City University of New York; Master of Science - Computer Science Fordham University; BS - Applied Mathematics and Statistics The University of Science & Technology of China. As a researcher, she is leading Mayo Clinic's clinical natural language processing (NLP) program with the mission of providing support to access clinical information stored in unstructured text for research and practice. Administratively, Dr. Liu serves as the section head for Medical Informatics in the Division of Biomedical Statistics and Informatics. Dr. Liu's primary research interest is in biomedical NLP and data normalization. She has been developing a suite of open-source NLP systems for accessing clinical information, such as medications or findings from clinical notes. Additionally, she has been conducting collaborative research in the past decade in utilizing existing knowledge bases for high-throughput omics profiling data analysis and functional interpretation. Dr. Liu's work in informatics has resulted in informatics systems that unlock clinical information stored in clinical narratives. Her work accelerates the pace of knowledge discovery, implementation and delivery for improved health care. Leader, American Medical Informatics Association Natural

Language Processing (NLP) Working Group (2014-present), member, Informatics Domain Task Force, national CTSA Consortium (2015-present).

LOBACH F. DAVID

David F. Lobach, MD, PhD, MS, FACMI, a biology graduated of Bucknell University in 1980. He moved to the MD/PhD program at Duke University where he earned a PhD in immunology in 1986 and his medical degree in 1987. During his medical residency and an endocrinology fellowship, he became increasingly interested in medical informatics and earned an additional MS in medical informatics in the Duke program in 1994. Joining the faculty at Duke in 1995, he rose to his current role as an associate professor in both the Department of Community and Family Medicine and the Department of Biomedical Engineering. He has been Chief of the Division of Clinical Informatics since 1999. Dr. Lobach's work has attracted wide attention since his first SCAMC paper won the meeting's Best Paper award in 1994. He is perhaps best known for his demonstration of the effectiveness of disease-specific,

patient-tailored, clinical practice guidelines integrated with electronic patient record systems. He has published a rigorous evaluation of this decision support approach in a randomized, controlled trial and has shown us how to enhance this form of integrated guideline to include clinician-specific performance feedback (also evaluated in a randomized, controlled trial). He has also developed a methodology for local adaptation of clinical practice guidelines and has demonstrated a process for converting text into a computable algorithm. A former NLM trainee, Dr. Lobach is now Chief of the Division of Clinical Informatics in the Department of Community and Family Medicine at Duke University Medical Center. He has brought together a core group of 20 faculty members who focus on issues related to medical informatics research and teaching at Duke. This group has become the focal point for academic medical informatics at Duke and has formed bridges between the academic informaticians and senior level operational support staff for the Duke Medical Center Information Systems group.

LOBEL ELIE

Elie Lobel is Director of e-Health Projects Department. ASIP Santé, France. Elie LOBEL is in charge of the e-Health projects department at ASIP Santé, the French government agency in charge of promoting and developing e-Health in France. The agency supports this development by defining interoperability and security standards, and by building key national e-Health infrastructures. ASIP Santé is in charge of several projects including healthcare professional smartcards (CPS), national secured mail infrastructure for Healthcare (MSSanté), emergency care national IT system (SI SAMU), eHealth interoperability certification procedures and national electronic Patient Health Record infrastructure (DMP). ASIP Santé is also involved in European projects such as epSOS and Palante. Elie studied engineering in France at Ecole Centrale Paris and in the US at Cornell University, and holds a PhD in neuroimaging from University Paris Pierre et Marie Curie. Elie has been working in eHealth for fifteen years, initially

taking part in the development of start-ups (Doctissimo, e(ye) Brain), and since 2009 at ASIP Santé.

LODWICK S. GWILYM

Gwilym S. Lodwick (1917-) was born on a small farm in Mystic, IA. Dr. Lodwick attended the University of Iowa where he received his BA and MD degrees before entering the U.S. Army in 1943. He served in the European theater. After it was liberated, Dr. Lodwick treated prisoners from the Bergen-Belsen concentration camp. Dr. Lodwick became an associate professor at the University of Iowa. He was a professor and the first chairman of the Department of Radiology at the University of Missouri. He helped create the Department of Bioengineering at the University of Missouri in 1969, and in 1975 received a nomination for the Nobel Prize in Medicine for his work in image modeling and computer diagnosis of bone tumors. When he retired from the University of Missouri in 1983 he took a visiting professor position at Harvard Medical School. Dr Lodwick was a senior member of the Institute of Medicine of the National Academy of Sciences

and a founding member of the International Skeletal Society.

LOEFFLER – STASTKA HENRIETTE

Psychiatrist and psychoanalyst, Medical University of Vienna, Austria.Born in 1971 in Vienna. Degree in Human Medicine at the Medical University of Vienna. Associate Professor at the Medical University of Vienna. Venia docendi for Psychoanalysis and Psychotherapy. Specialist for Psychiatry and Psychotherapeutic Medicine. Psychoanalyst (WPV/IPA).Module coordinator for the "Professional development" and "Scientific thinking in medicine" modules in the BA Health Sciences and MA Human Medicine at Karl Landsteiner Private University of Health Sciences. Responsible for the medicine curriculum in the Lower Austrian project "Karl Landsteiner Private University of Health Sciences" (since 2011).Coordinator of the educational block on "Physical Functions in Health and Illness", medical counselling techniques and the 4th year at the Medical University of Vienna (since 2009). Major awards (inter alia): Ingrid zu Solms Prize for

Medical Psychotherapy (2007); advancement award for science from the city of Vienna (2007); recognition award for science from the state of Lower Austria (2001).

LOGESWARAN R.

R. Logeswaran serves as the Dean of Graduate Studies and Professor in Computer & Engineering at the Asia Pacific University of Technology and Innovation (APU) and chairs the Postgraduate and Research Committee (PARC). Dr. Loges is an academic with over lecturing experience in a number of institutions both locally and abroad. He studied his B.Eng (Hons) Computing at Imperial College London, United Kingdom, and completed his Master of Engineering Science (M.Eng. Sc.) as well as PhD (Engineering) at Multimedia University, Malaysia. He is a Novell Certified Linux Professional, and also a certified IC Digital Citizen and trainer. A recipient of several scholarships, including Telekom Malaysia, he was recognized as the JCS 75th Anniversary Scholar for his Masters achievements and later went on to do his post-doctoral

research in Seoul, Korea under the Brain Gain Malaysia international fellowship & post-doctoral programme as well as a Brain Korea21 post-doctoral scholar. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), he is actively involved as the Secretary of the IEEE Signal Processing Society Malaysia chapter and is a reviewer of numerous journals and conferences. Dr. Loges areas of interests are mainly in multimedia data processing, data compression, neural networks, natural user interfaces and big data, with over a hundred publications in books, peer-reviewed journals and international conference proceedings

LONGHURST CHRISTOPHER

Christopher Longhurst, MD, MS, FACMI, is Chief information officer (CIO) for UC San Diego Health. He oversees all operations and strategic planning for information and communications technology. He is also responsible for planning and developing all administrative

and clinical information systems related to operating UC San Diego Health hospital and clinical facilities. Dr. Longhurst leads the creation and execution of a comprehensive information strategy to meet future needs of UC San Diego Health along with creating standards, architectures and policies for information technologies across UC San Diego and the UC system. His area of responsibility includes electronic health records and the MyUCSDChart system. UC San Diego Health has reached Stage 7 of electronic medical record (EMR) adoption, a ranking devised by the Healthcare Information and Management Systems Society (HIMSS). This distinction is achieved by less than five percent of US hospitals. UC San Diego Health is consistently recognized nationally as being among the top 100 most wired hospitals by the American Hospital Association's publication, Hospitals and Health Networks. In addition, UC San Diego Health is recognized as among the top 25 most wireless hospitals, leveraging wireless technology to improve the efficiency of the care process. Dr. Longhurst is also a key faculty member in the Department of Biomedical Informatics in the UC San Diego School of Medicine. He most recently served as chief medical information officer for Stanford Children's Health, where he led strategic efforts to improve children's health and provider workflow using information technology. He also founded and led the clinical informatics fellowship at Stanford,

where he was a clinical professor of pediatrics. Dr. Longhurst completed his residency at Stanford Medical School and earned his medical degree and MS in medical informatics from UC Davis. He holds a BS in molecular biology from UC San Diego. He is a board-certified pediatrician and clinical informaticist. The author and co-author of many publications on using technology and data to improve patient care and outcomes, Dr. Longhurst was elected a fellow in the prestigious American College of Medical Informatics

LOONSK W. JOHN

John W. Loonsk, MD, FACMI, received his bachelor's degree in Natural Sciences from Johns Hopkins, and his MD from SUNY Buffalo. He served as director of academic computing at his alma mater in Buffalo, then joined the faculty of the Division of Medical Computing and Informatics in the Department of Biomedical Engineering at the UNC Chapel

Hill School of Medicine. From UNC he moved in 1999 to the Centers for Disease Control and Prevention in Atlanta, where he was associate director for informatics and director of information resources management. At CDC he led the Public Health Information Network initiative and the Biosense biosurveillance program. In 2005 he joined the Office of the National Coordinator for Health Information Technology in Washington DC, where he is director of Interoperability and Standards. At the Office of the National Coordinator, John leads the National Health Information Network initiative, runs the Healthcare Information Technology Standards Panel or HITS-P, leads the development of use cases, and manages the Certification Commission for Health Information Technology.

LOPETEGUI MARCELO

Marcelo Lopetegui, MD, MS, is the Medical Director of Clinical Informatics Services at "Clínica Alemana de Santiago, Chile." He also serves as the vice-president of the Chilean Health Informatics Association (ACHISA). He holds an additional position as Adjunct Assistant Professor of Biomedical Informatics within The Ohio State University College of Medicine. Dr. Lopetegui is a recognized pioneer in the field of Health Informatics in Chile, organizing and hosting the first Chilean Health Informatics Annual Symposium and collab-

orating in government initiated efforts to establish the discipline locally. He contributed to the foundation of the department of biomedical informatics in the top one ranked private hospital in Chile, where he leads the Applied Clinical Informatics Research Lab. Dr. Lopetegui received his MS in Biomedical Informatics at The Ohio State University, where he joined the KBASE lab as a postdoctoral researcher. His research focused on clinical workflow studies, mobile health, data visualization and clinical education, as well as crosscutting themes related to data visualization and user interface design. Currently, his efforts are focused on establishing and developing the discipline in Chile, collaborating in the creation of educational programs locally, while also participating in the industry front, where he advocates for the establishment and adoption of interoperability standards.

LORENC KOKA

Koka Lorenc is CRM Consultant at Power Objects, Toronto, Canada Area, Information Technology and Services. He graduated at York University. He worked as IT Support Technician, Network Administrator as BestXpert IT

Products & Services (December 1996 – September 2003) in Athens. After he passed Training and Curriculum Development at Computer Learning Center - Bestxpert Training & Technology from February 2005 till October 2012 and was at Certified Computer Training and Testing Center. He worked as IT Systems Analyst IT Project Manager in Embassy in Athens Greece (January 2008 – November 2012), late as IT Manager/Business analyst/instructor - Bestxpert Training & Technology (October 2003 – December 2012) in IT Solutions Provider Company and IT Consultant/Manager of the Information Systems SOLAR Group (August 2013 – January 2014) Scarborough, Toronto, Canada Area, Business Systems Analyst/Project Manager - Bestxpert Training & Technology (September 2014 – December 2014 and finally as CRM Consultant BA/PM, PowerObjects (January 2015 – till Present) in Toronto, Canada.

LORENZI M.NANCY

Nancy M. Lorenzi, MLS, MA, PhD, FACMI, is Professor of Biomedical Informatics, Assistant Vice Chancellor for Health Affairs, and Clinical Professor of Nursing

at Vanderbilt since May 2000. In her role as Assistant Vice Chancellor, she was much involved in developing of organizational changes and strategies of implementation Medical informatics initiatives in country. For VUMC (Lorenzy: "Informatics is in the fabric of this organization and the systems of care can change, but we cannot implement newer systems of care without informatics." Early in her career, Dr. Lorenzi was elected to the Presidency of the Medical Library Association. She has served as Director of the Medical Library in Cincinnati and progressed in administrative responsibility to become Associate Senior Vice President of the University of Cincinnati. She served as Chair of the International Medical Informatics Association (IMIA) Working Conference on the Organizational Impact of Informatics in 1993 and was the first Chairperson of the IAIMS Consortium Board. She served as the Scientific Program Chair of the AMIA Fall Symposium in 1999. She was President IMIA from 2004-2007. During her term, IMIA formalized its relationship with WHO and IFIP by appointing Liaison Officers to WHO (Antoine Geissbuhler and to IFIP (Hiroshi Takeda). Most significant of her successes, is the openness and transparency that has characterized Dr. Lorenzi's presidency and leadership style. Dr. Lorenzi served as Chair of the Board of the American Medical Informatics Association; (AMIA) from 2009-2012. She was awarded the 2004 Marcia C. Noyes Award, the

highest award from the Medical Library Association to honor lifetime achievements and was also honored by Sigma Theta Tau International Honor Society of Nursing as one of five people inducted in November 2005 as an honorary member organization. In 2012, Dr. Lorenzi was awarded ACMI's Morris F. Collen Award of Excellence for lifetime achievement and significant contributions to the discipline of Medical informatics. Dr. Lorenzi has published significantly in peer–reviewed literature and authored a number of books considered to be definitive in her field. She is internationally recognized as a one of top expert in the areas of change management related to information technology with respect to organizational and personnel issues in the health care industry.

LOUREIRO RUI

Rui Loureiro is the ASPIRE Senior Lecturer and Head of the Aspire Centre for Rehabilitation Engineering and Assistive Technology (Aspire CREATe) at UCL, and Royal National Orthopaedic Hospital, Stanmore. He specialises in advanced robotics and human interactive systems for rehabilitation engineering. Before joining UCL in the Spring 2014, he was a senior lecturer at Middlesex University (2010-2014) and enjoyed senior research appointments at the Univer sity of Reading (2000 -2010), Royal Berkshire Hospital NHS Foundation Trust (2006-2010), and engineering consultancies

at Synectic Design LTD (1998-2000). Dr Loureiro has pioneered work in stroke rehabilitation and movement disorders and has a wealth of experience with both the design of rehabilitation technologies and clinical assessment of such aids at the acute, subacute and chronic phases of recovery. In 2001 he conducted the first multi -centre RCT in Europe using robotic rehabilitation for chronic strokes and his recent work looked at the effects of functional reach and grasp in sub-acute hemiplegia. At the new Aspire -CREATe centre his research focuses on whole-body rehabilitation paradigms facilitating the development of therapies translating to functional independence, the understanding of spinal-cortical re- organisation in stroke, SCI and following amputation, and on the development of robots that assist when needed. Alastair Cozens Clinical innovation, collaboration and commercialisation: launching technology in the market Alastair Cozens is a Consultant in Rehabilitation Medicine at Woodend Hospital, Aberdeen, with particular interest in the rehabilitation of posture and movement following disabling neurological conditions, such as stroke. He has been involved with rehabilitation robotics since their earliest inception –including publication of the first electromyographic evidence that robotic techniques can support active exercise in paretic patients.

LOWE J. HENRY

Henry J. Lowe, MD, FACMI, received his medical degree from University College in Dublin, Ireland, and showed an early interest in computing as he was named "House Officer for Computers" at Mater Hospital in Dublin. There he developed a computer-based endoscopy information management system. He emmigrated to the US in 1982 and received Residency training in Internal Medicine and Neurology at St. Elizabeth's Hospital and New England Medical Center in Boston, and was a Medical Informatics fellow in Octo Barnett's program at the Massachusetts General Hospital in Boston. As an informatics fellow he worked on the Unified Medical Language System and built a system called MicroMeSH, which was one of the first microcomputer UMLS vocabulary browsers, later linked to MEDLINE for automated literature searching. He returned to Ireland from 1990 to 1992 and with funding from the European Community established Ireland's

first Department of Medical Informatics at University College in Dublin. He was recruited back to the US in 1992 and at the time of election to the College was director of the Oncology Informatics Program and associate professor of medicine at the University of Pittsburgh's Center for Biomedical Informatics. There he was principal investigator on two High Performance Computing and Communications (HPCC) awards to develop multimedia electronic patient records.

LOVIS CHRISTIAN

Christian Lovis (1962-) MD, MPH, FACMI was born in Goumois, Jura, Switzerland. He is professor of clinical informatics at the University of Geneva and leads the Division of Medical Information Sciences at the Geneva University Hospitals. He is a medical doctor trained in Internal Medicine with special emphasis on emergency medicine and holds a FHM in Internal Medicine and is graduated in public health from the University of Washington, Seattle, USA, with a mention in community based health. In parallel to medicine, he studied medical informatics at the University of Geneva under the supervision of Prof

Jean-Raoul Scherrer, focusing on clinical information systems and medical semantics. Between 2000 and 2010, he was in charge of developing and deploying the computerized patient record for the university hospitals of Geneva. Christian is the author of a large number of peer-reviewed papers in the field of medical informatics focusing on three pillars: a) Medical semantics, knowledge representation and natural language processing, focusing on big data ; b) Clinical information systems, architectures, strategy, secondary usage of data for clinical research and c) advanced human-machine interfaces, including bio-captors, and their evaluation and impacts, quantified self. Christian is editorial board member of major peer-reviewed journals in medical informatics, such as the Journal of the American Medical Informatics Association (JAMIA), PLOS One, the Journal of Medical Internet Reseach (JMIR), Applied Clinical Informatics (ACI). He is chairing the Traceability working group of the EFMI, the "standard und Architektur" and the "Semantik" working groups of the Swiss eHealth Federal Coordination Committee. Christian is member of several working groups at the European Union for ICT activities, such as impacts of health records, policies around secondary usage of clinical data, or regulation for the usage of RFID in healthcare and active in major BigData European research programs such as clinical leader of the DebugIT Eu project of the

7th framework, that intend to develop a distributed pan-European network around infectious disease surveillance using clinical information systems or data providers for the Innovative Medicine Initiative project EHR4CR. Christian Lovis is the European representative and vice-chair elect of the board of managers of HIMSS Global, the largest worldwide organization supporting the improvement of care systems using health care information and management systems. Christian was president of the Swiss Society for Medical Informatics until 2014. Christian Lovis is co-founder of three startups. He is President-Elect of EFMI.

LOVREK VISNJA

Visnja Lovrek, PhD, graduated at Faculty for Electrical Engineering and Computing of University of Zagreb, Croatia. She achieved her PhD thesis with title "Medical Data Structuring Model for the Integrated Hospital Information System" at the School of Medicine at the same University. She published more than 80 professional and scientific papers most in the health and pharmaceutical informatics field and took part in many international

conferences related to the health informatics field and got insight in internationally successful hospital information systems (HIS), as well as in development trends of information systems in general. She has presented papers at the international congresses on informatics, medical informatics and pharmaceutical conferences in Amsterdam, Haag, Washington, Brussels, Helsinki, Oslo, Glasgow, Vienna, Sydney, Singapore, Barcelona, Cairo. Also took the part at many congresses and conferences in Croatia, presenting works and lectures from the field of informatics. Awarded with Informatics plaque (2002) in recognition of contribution to informatics in Croatia."Josip Lončar" award as the best student in the generation. She was a secretary of the Croatian society for medical informatics, a secretary of the Committee for Health Informatics in the Association of Croatian Health organizations, and a member of the Professional Committee of the Ministry of Health. She was also vice president of the Croatian Information Technology Society (HIZ). Lovrek passed away at 2016.

LUNGEANU DIANA

Diana Lungeanu is the chair of Medical informatics and biostatistics at the University of Medicine and Pharmacy Timisoara, Romania. She is a member of the Romanian Society of Medical Informatics (affiliated with EFMI – European Federation of Medical Informatics), where she coordinates the working group of education, and a member of the Romanian Group in the International Society of Clinical Biostatistics. Professor Lungeanu graduated in computer engineering and holds a PhD in computer science, both from University Polytehnica Timisoara. She earned a scholarship at Georgetown University, receiving a certificate in health research and policy in 2005. In the 1990s, her research interests included modeling and simulation of early visual processes and biologically inspired neural networks, while in the 2000s she was mainly involved in collaborative projects focused on medical data processing by employing techniques from data mining and soft computing. In addition, she has maintained a constant interest and involvement in projects of interdisciplinary academic teaching.

LUMPKIN R. JOHN
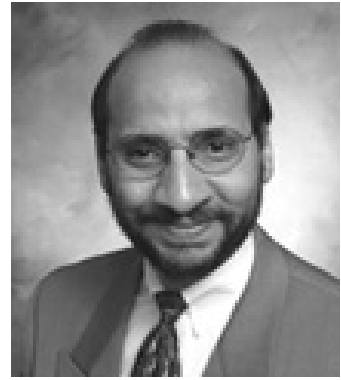
John R. Lumpkin, MD, PhD, MPH, FACMI, was appointed director of the Illinois Department of Public Health in January 1991, after serving as acting director since September 1990. He is the first African-American to hold this position at the agency. For the previous five years, Dr. Lumpkin had been associate director of the Department's Office of Health Care Regulation. Before joining the state health department, Dr. Lumpkin served as an emergency physician at several Chicago hospitals, including St. Mary's Nazareth, South Chicago Community and the University of Chicago Hospitals and Clinics. Dr. Lumpkin received his medical degree in 1974 from Northwestern University Medical School. He trained in Emergency Medicine at the University of Chicago and earned his master's degree in public health from the University of Illinois at Chicago, School of Public Health. Dr. Lumpkin is active in national policy development on public health information systems and performance measurement and teaches these

subjects at the graduate level at the University of Illinois at Chicago, School of Public Health. He has also been active in injury prevention and has provided technical assistance to the Ministry of Health of the Arab Republic of Egypt on behalf of the U.S. Public Health Service. He has served on a number of national advisory committees and currently serves as Chair of the National Committee on Vital and Health Statistics (NCVHS), Chair of the NCVHS Workgroup on National Health Information; past member of the Centers for Disease Control and Prevention's Advisory Committee to the Director; the Institute of Medicine's Committee on Public Health Performance Measures, Public Health Roundtable and Performance Partnership Grants Panel. Active in numerous professional organizations, Dr. Lumpkin is a member of the National Forum for Health Care Quality Measurement and Reporting (i.e., National Quality Forum), past president of the Association of State and Territorial Health Officials (ASTHO), a former member of the Board of Trustees of the Foundation for Accountability, a former Commissioner of the Pew Commission on Environmen-tal Health, a past board member of the American College of Emergency Physicians and past president of the Society of Teachers of Emergency Medicine.

LUN (KC) CHAN KWOK

Kwok Chan (KC) Lun is Professorial Fellow of Health Informatics at Department of Information Systems, School of Computing, National University of Singapore. Professor KC Lun received his PhD in biometrical genetics from the University of Birmingham, UK in 1975 under an 1851 Royal Exhibition Overseas Science Research Scholarship. His academic career spans over 30 years including 26 years with the Faculty of Medicine, NUS and 6 years with the School of Biological Sciences, NTU which he helped to establish in 2001. A student of Emeritus Professor Michael Healy and Professor John Osborn of the London School of Hygiene and Tropical Medicine, KC has taught biomedical statistics for over 30 years and is one of the most sought after teachers for biomedical and clinical statistics in Asia. While at NUS, he had given advice to and worked with many clinicians and research scientists on projects and clinical trials. In addition, KC has served as statistical consultant and given workshops and courses in many Asian countries for international

agencies such as IDRC, WHO and UNDP. In recognition of his international contributions to health informatics, KC was conferred the 'Excellence for Singapore' award in 2002. He retired from academia in 2006 to establish Gateway Consulting and has been its CEO since then. Under Gateway Consulting, he continues to teach courses in Biostatistics and Health Informatics. In June 2010, he re–joined NUS as a Professorial Fellow (Health Informatics) in the Department of Information Systems, School of Computing. For the Healthcare Analytics Course, Prof Lun brings with him a wealth of experience in training participants the tools and techniques of data analysis in healthcare. Internationally, KC served as President of the IMIA from 2001-2004 and Founding President of the Asia Pacific Association for Medical Informatics (APAMI) from 1994-1997. In his career, KC has made numerous contributions to the work of WHO, IMIA, IDRC, UNDP and several other international agencies as temporary advisor/consultant, mainly in the area of biostatistics and health informatics. He was formerly Editor (Asia Pacific) for the International Journal of Medical Informatics (IJMI) and had also served on the editorial boards of the IJMI and Methods of Information in Medicine. For his efforts in promoting Singapore through his international activities in health informatics, KC was the recipient of the Singapore Internationale award in March 2001 and the

"Excellence for Singapore Award" in 2002. KC Lun is no stranger to crisis management. Following the Tien-an Men incident in the People's Republic of China in June 1989, KC Lun helped IMIA to relocate the international meeting of MEDINFO '89 from Beijing to Singapore. and turned it into one of the most profitable MEDINFO's for IMIA. In September 2001, he became the second Asian to become the IMIA President. During his 3-year term, KC steered IMIA through a period of global economic slowdown to end his term of office with an operating budget sur plus and probably the most financially successful MEDINFO to-date in San Francisco in September 2004. In recognition of his leadership, he was presented a plaque by IMIA and made an IMIA Honorary Fellow at the closing ceremony of MEDINFO 2004 in San Francisco.

LUNA DANIEL

Chief Information Officer, Hospital Italiano de Buenos Aires. Daniel Luna, MD is Chief Medical Information Officer at the Hospital Italiano de Buenos Aires (HIBA) in Argentina. He also has academic appointments in the Internal Medicine Division, coordinates the Residency Training Program in Medical Informatics that was created in 2001 and he is Chair of the Department of Health Informatics at the School of Medicine in HIBA. Dr. Luna currently is Board Member of the Argentinian Association of Medical Informatics (AAIM) and Vice-Chair of IMIA's Working Group Health Informatics for Development and was Secretary of HL7 Argentina from 2004 till 2006. His research focuses on the development of Electronic Health Record Systems, Computerized physician order entry (CPOE), Clinical Information Systems and Patient Safety. He has published over 60 scientific papers on the field of biomedical informatics in the last 10 years.

LUO SHUQIAN

Shuqian Luo is professor and President of China Medical Information Association (CMIA). He is one of the pioneers in Medical informatics in China. Honor President of Beijing Medical Information Association, Asociate Director of China Medical imaging Committee, CGIC, and Member of National Expert Committee of Electronics and Medicine. In 1966 he graduated from the Department of Modern physics, University of Science and Technology of China. He worked in Zhengzhou University as Associate professor, Director of The Electronics Lab, Group leader and Principal investigator of Heart Rate Variability project. He also worked with Professor Willis Tompkins at Department of Electrical and Computer Engineering, University of Wisconsin- Madison, USA, and participated in the 12-Lead ECG Interpreter and 12-Lead ECG Simulator Software. In 1993-1995, at Montreal Neurological Institute, McGill University, Canada, as a Visiting Professor, worked with Dr. Alan Evans, did Research on "Matching Human Sulci in 3-D Space using Multiple Force-Based Deformation". From 1996, he has been professor and director of Medical Imaging Lab of Institute of Biomedical Engineering, Capital Medical University, Beijing, China. He is IEEE Senior Member, and leader of many projects, including Multi-Modality Medical Image Registration, Brain Tissue Segmentation and Classification, 3D Digitalized Human Brain Atlas, Chinese Digital Human, New Medical Imaging Technology. He published 180 papers and 10 books, 2 Patents, and is Editor, reviewer of many academic journals and international conferences such as IEEE trans. MI, TPAMI, etc . Shuqian Luo was the area chair of ICDIA (International Conference on Diagnostic Imaging and Analysis) 2002, Executive chair of the 174th

XiangShan Science Conference, Executive chair of the 208th XiangShan Science Conference, China, Program Chair of the National Medical Information Conference, CMIA, in 2002, 2005, 2008, 2011, as well as Program Chair of the China-Japanese-Korea Medical Information Conferences, for many times.

LUSSIER A. YVES
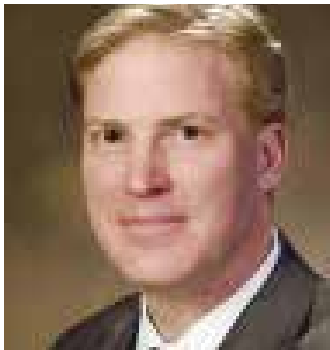
Yves A. Lussier, MD, FACMI, is a UA professor of medicine; associate vice president for health sciences and chief knowledge officer for UAHS; associate director for cancer informatics and precision health for the University of Arizona Cancer Center; and associate director, BIO5 informatics, for the UA BIO5 Institute. Dr. Lussier a professional engineer and physician-scientist is an international expert in translational bioinformatics and a pioneer in research informatics techniques including systems biology, data representation through ontologies and high-throughput methods in personalized medicine. At the UA, he is leading efforts to fully develop novel programs in biomedical informatics, computational genomics and precision health. Dr. Lussier provides critical leadership in efforts to advance precision health approaches to health outcomes and healthcare delivery and in the development of big data analytical tools and resource services in support of the University's clinical research and service missions. Dr. Lussier comes to UA from the University of Illinois at Chicago (UIC), where he was professor of medicine, bioengineering and biopharmaceutical sciences, and assistant vice president for health affairs and chief research information officer for the University of Illinois Hospital and Health Sciences System. Prior to his tenure at UIC, Dr. Lussier was associate director of informatics for the University of Chicago Comprehensive Cancer Center as well as co-director of biomedical informatics for the Clinical and Translational Science Award (CTSA)-funded Institute for Translational Medicine (2006-2011). From 2001-2006, Dr. Lussier was an assistant professor in the Departments of Biomedical Informatics and Medicine at Columbia University in New York. Dr. Lussier's research interests focus on the use of ontologies, knowledge technologies and genomic network model to accurately individualize the treatment of disease and to repurpose therapies. His research has been featured in the New York Times and the Wall Street Journal. He has authored 130 publications and delivered more than 100 invited presentations in precision medicine, systems medicine and translational bioinformatics, including 14 opening conference keynotes. A Fellow of the ACMI, Dr. Lussier is a member of numerous governance, technology transfer, scientific and editorial boards, including the American Medical Informatics Association, International Society for Computational Biology, Society for Clinical and Translational Science, American Society for Cancer Research, Healthcare Information and Management Systems Society, American Association of Pharmaceutical Scientists, American Association for the Advancement of Science and American Society for Human Genetics. Dr. Lussier received a bachelor of engineering and his medical degree from the University of Sherbrooke, Quebec, Canada. He performed predoctoral research in the Departments of Medicine and Human Physiology at the University of Sherbrooke. After medical school, Dr. Lussier completed an internship in ophthalmology at Laval University Hospital in Quebec City, and a residency in family medicine at the University of Sherbrooke Medical Center. He was a post-doctoral residential fellow in the Department of Biomedical Informatics in the College of Surgeons & Physicians at Columbia University.

LUSTED BROWNING LEE

Lee B. Lusted (1922-1994) was born in Mason City, Iowa. He received his BA degree from Cornell College in 1943. H graduated physics and received his MD degree from Harvard Medical School in 1950. Lee then served a residency in radiology and later as assistant radiologist at the National Institutes of Health (NIH). In 1959, in collaboration with Dr R. S. Ledley, Dr Lusted authored their seminal paper „Reasoning Foundations of Medical Diagnosis". After several rejections, the article appeared in Science. Introduced in that article were concepts of symbolic logic and probability, not methods in general use at that time. From 1959 to 1962, he was on the faculty at the University of Rochester, NY, in radiology and biomedical engineering. He developed applications of signal detectability theory to diagnostic radiology, resulting from analysis of false-positive and false-negative interpretation of chest radiographs for tuberculosis. In 1948, his major work „Introduction to Medical Decision Making" was published. From 1969 to 1978, he served as

professor of radiology and vice chairman of the Department of Radiology at the University of Chicago. During this period, he was able to show that the false-positive to false-negative performance curves were realized to be receiver operator characteristic (ROC) curves. This concept was incorporated into the idea that an abnormal x-ray image or abnormal medical manifestation could be considered a signal analogous to a radar signal. In 1970, Dr Lusted became the chairman of Committee on Efficacy Studies for the American College of Radiology. Its goal was to minimize use of unnecessary radiography for the protection of the public health. A formal definition of „efficacy" was developed and is used to this day. In addition to the academic appointments noted above, he was chairman of radiology at the Stritch School of Medicine at Loyola University, Chicago, III, from 1968 to 1969. He served as professor of radiology at the University of Oregon, Eugene, from 1962 to 1968. He was clinical professor of radiology at the University of California, San Diego, and adjunct distinguished member of the Department of Academic Affairs and Department of Radiology, Scripps Clinic and Research Foundation, La Jolla, Calif, beginning in 1978. He received the honorary degree of Doctor of Science from Cornell College in 1963. Dr Lusted served as historian for the Society for Medical Decision Making from 1985 until his death. The Lee B. Lusted Student Award given by

that Society was initiated in 1985 and continues today. The entire career of Lee B. Lusted can serve as a beacon for the paths of future radiologists.

LYONS GERARD

Gerard Lyons, PhD, is Executive Dean of Engineering & Informatics and Professor of Information Technology at National University of Ireland, Galway. Ireland. He holds a doctorate in engineering, is a Chartered Engineer, Chartered IT Professional, Fellow of Engineers Ireland, Fellow of the British Computer Society and European Certified Engineer. He is President of the Health Informatics Society of Ireland (HISI). He has 30 years of experience in academic and industrial research, product development, manufacturing, management and consulting. He is founder and chairman of Syncrophi Systems Ltd., a medical informatics technology company. Before joining NUI Galway in 1991, he worked as European Research Projects Manager with Digital Equipment Corporation, and earlier worked with national and international research agencies. He is a respected international advisor to many of the leading Fortune 100 companies, in the

Healthcare, FMCG, Financial Services, ICT and Pharmaceutical sectors, and also works with education and healthcare public sector agencies internationally. His research interests include: healthcare systems modeling and design; ambulatory patient monitoring systems; and early-warning scorecards.

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MACERATINI RICCARDO

Riccardo Maceratini (1947-2001). graduated Faculty of Medicine at University "La Sapienza" of Rome in 1972. He took various scientific specialties as Gastroenterology Tropical Medicine, Oncology, etc. He was researcher and professor of many medical disciplines as oncological surgery, medical informatics, biostatistics, etc. Also, he was Head of several research Operating Units and some were relating Health and Medical Informatics (i.e. expert systems on clinical risks and on cancer diseases, medical standard data set, evaluation of software in health applications, etc.). Riccardo was, also, scientific expert for the Research Program "Life Science" of European Union (1999), Italian delegate of many associations as IMIA (in particular during MEDINFO 1989 in Singapore), International Federation of Health Records Organization, European Society for Medical Oncology, etc. He was promoter of different scientific Italian societies and events as AIIM - Italian Association of Medical Informatics, Smart Hospital conference and member of several scientific committees. Since 1985 he has been "de facto" one of the Italian pioneers in introduction of ICT in Health Care. In particular he was one of scientific coordinators of MIE '87 in Rome and after expert of Italian Committee of Ministry of Research on Telemedicine (1989). s a member of Scientific Program Committee of @ITIM (Italian Association of Telemedicine and Medical Informatics), he was co-organizing person of the European conference Health Cards '99 in Milan. He was director of Italian magazine "Medicine & Informatics" (1989-1995) and after of another magazine "Telemed". He was cofounder and member of the board of National Association of Informatics in Neurosciences (ANINs). Maceratini was, also, member of many scientific societies at national and international level (as for example Italian Medical Oncology and Surgery, EFMI Working Group 3, International College of Surgeons, American Society for Testing and Materials, Committee for medical Informatics and so on). He was author of about 200 publications (some books and one of this the Italian Handbook named "Il medico on line" and many articles written in different languages (Italian, English, Portuguese).

MAXINE MACKINTOSH

During her Biomedical Sciences BSc at UCLopens in new window, she wanted to explore careers in science that were not lab-based. She wanted an internship at the intersection of business and science she simply cold-emailed some of the most senior individuals in the pharmaceutical industry. Miraculously one replied and she spent a few months in Basel advising the Chief Technology Officer of Roche Diagnosticsopens in new window on their global strategy. Maxine also spent a short stint at the Royal Society's Enterprise Fundopens in new window and went to Kenya on a UCL-funded programme to support entrepreneurs with Balloon Venturesopens in new window. The following year she took another gamble and queried L'Oreal'sopens in new window Scientific and Regulatory Director as to why they did not have a scientific internship. She began an MSc in Health Policy and Economics at the London

School of Economicsopens in new window and London School of Hygiene & Tropical Medicineopens in new window to learn about the barriers and challenges to bringing treatments from bench to bedside. As she wanted to learn more about the impact of digital health on models of healthcare, she created mini research projects for herself, by cold emailing interesting groups, including NHS Innovationopens in new window and the Centre for the Advancement of Sustainable Medical Innovationopens in new window. She also attended every digital health conference, meet-up or talk she could and she started programming. Job hunt time came and she struggled to find something that looked right for her. Luckily findaphd.com opens in new window flagged one up at the intersection of neuroscience, public health and programming – perfectly combining her three interests. Maxine was offered a place and she is now working on early detection of dementia using data science. Prior to starting, she leveraged her network to undertake more health innovation consulting projects and decided to take an extended trip to the Silicon Valley to see how the digital health scene compared to London. Whilst there, she met the founders of HealthTech Womenopens in new window, a professional network of women working in health innovation. As the London women-in-tech scene had been instrumental in her transition into data science, she saw the value in

setting up a hub in the UK. Now HealthTech Women UK opens in new window, only 6 months old, has over 6,500 members. She is now full swing into her PhD and balancing a number of side projects, including running healthtech events, growing a digital health communityopens in new window, speaking at enthusiast meet-ups and setting up a neurotech acceleratoropens in new window.

MACLEAN SCOTT

Scott MacLean, MBA, CHCIO, CPHIMS, FHIMSS, began his career at General Electric and has 20 years of experience in Information Technology. He also served as a campus chaplain in New York City, which has given him a unique perspective on human interaction and the implementation and application of technology. Mr. MacLean is Deputy CIO and Director of IS Operations for Partners HealthCare in Boston, Massachusetts. He is responsible for the core technical infrastructure teams and administration of the Partners Information Systems Department. This includes the voice and data network, data centers, desktop support and

Help Desk for many of the Partners Hospitals and affiliated ambulatory practices. He oversees the budget, space and HR needs of a 1500 person department. Previously, Mr. MacLean was Chief Information Officer at Newton-Wellesley Hospital and a Corporate Director at Partners. He oversaw all information systems and telecommunications for Newton-Wellesley. While there, he led successful implementations of enterprise fiscal and administrative systems, several construction projects and prepared the hospital for Meaningful Use Stage 1. During his tenure at Partners, Mr. MacLean was Director of Clinical Systems at Dana-Farber Cancer Institute, where he was responsible for systems related to patient safety such as physician order entry, electronic medical record, medication administration record and bar coding. He was Corporate Manager of the Partners Oncology Service Line Information Technology program, an initiative to improve patient safety and cancer outcomes through the use of computer systems.Before joining Partners, he was Campus Director for InterVarsity Christian Fellowship at Columbia University. He taught leadership development, spiritual formation and reconciliation principles. Mr. MacLean is a graduate of the General Electric Technical Sales Program and was a Systems Engineer for CIMTEC, a programmable logic control integration company in Charlotte, North Carolina. Mr. MacLean is a Past President of

the New England Chapter of HIMSS and has served on the Ambulatory Steering and Foundation Scholarship Committees. He has been an item writer for the CPHIMS exam. Mr. MacLean is a charter member of the IHE-USA Board of Directors and serves on an Expert Panel for the National Quality Forum. He serves on the HIMSS Analytics Board of Directors. Mr. MacLean received a Bachelor of Science in Electrical Engineering from Clemson University and a MBA in Healthcare Management from Boston University.

MADJARIC MIROSLAV

Miroslav Madjaric, BSc, PhD, graduated at the Faculty for Electrical Engineering of University of Zagreb, Croatia in 1973. Miroslav the whole of working life spent in the field of information technology. He began his career at the Clinical hospital "REBRO" in Zagreb, where he worked as programmer and organizer, project-manager and Head of the Department of medical information systems, and finally the Head of the Center for Informatics University Hospital Center Zagreb. In 1990, at the invitation of the

Institute for Medical Informatics University Hospital in Graz Miroslav went to Austria, where he continued to work within the same technical issues, including management of project groups for implementation of Hospital information systems. Since 2002 he has been working in the INA as director of information technology.

MAEDER ANTHONY

Anthony Maeder, PhD, is a Professor in Health Informatics at the University of Western Sydney where he leads the eHealth Research Group and directs the Telehealth Research & Innovation Laboratory. He was previously Research Director of the CSIRO eHealth Research Center in Brisbane from 2004. Prior to that, he followed an academic career as Head of School in Engineering at University of Ballarat and subsequently at Queensland University of Technology Electrical and Electronic Systems Engineering. His earlier appointments were at Monash University in the Department of Computer Science, where he undertook his PhD in Software Engineering. He is a Fellow of the Institution of Engineers Australia and was the founding

President of the Australian Pattern Recognition Society. He is currently chair of the Standards Australia IT - 14-12 Telehealth Subcommittee and a member of the IT- 14 Health Informatics Committee Australian delegation to ISO/CEN meetings. He was a Board Member of the Health Informatics Society of Australia and their representative on IMIA WG1 (Education) until 2011. In 2013 he was appointed Distinguished Visiting Professor in the Departments of Computer Science and Information Systems at Rhodes University, and Honorary Visiting Professor in the College of Health Science at the University of KwaZulu-Natal.

MAGLAVERAS NICOS

Nicos Maglaveras is Director Lab Medical Infomatics, Aristotle University of Thessaloniki (A.U.Th.) Greece. Nicos received the diploma in electrical engineering from the Aristotle University of Thessaloniki (A.U.Th.), Greece, in 1982, and the MSc and PhD degrees in electrical engineering with an emphasis in biomedical engineering from Northwestern University, Evanston, IL, in 1985 and 1988, respectively. He is currently a Professor and Director at the Lab of Medical Informatics, A.U.Th. He is head of the graduate program in medical informatics at A.U.Th, and is a collaborating researcher with the Center of Research and Technology Hellas, the Institute of Applied Biosciences (CERTH-IN-AB). His current research interests include nonlinear biological

systems simulation, cardio-vascular engineering, biomedical informatics, ehealth, AAL, personalised health, biosignal analysis, medical imaging, and neurosciences. He has published more than 300 papers in peer reviewed international journals, books and conference proceedings. He has developed graduate and undergraduate courses in the areas of (bio)medical informatics, biomedical signal processing, physiology and biological systems simulation. He has served as a Reviewer in CEC AIM, ICT and DGRTD-HEALTH technical reviews and as reviewer, associate editor and editorial board member in a number of international journals, and participated as Coordinator or Core Partner in over 35 national and EU-funded competitive research projects attracting more than 9 MEUROs in funding. He has served as president of the EAM-BES in 2008-2010. Dr. Maglaveras has been a member of the IEEE, AMIA, the Greek Technical Chamber, the New York Academy of Sciences, the CEN/TC251, and Eta Kappa Nu.

MAHFUZ UPAL MOHAMMAD

Mohammad Upal Mahfuz is Post-doctoral Researcher University of Ottawa, Canada from January 2015 till present. He graduated Bangladesh University of Engineering and Technology in 2002. He worked as lecturer at Bangladesh University of Engineering and Technology from 1996 till 2002, at Asian Institute of Technology from 2005 till 2006, as laboratory supervisor. He worked as Research Assistant at University of Calgary, 2006 – 2008, later as visiting lecturer at Prince of Songkla University, Phuket, Thailand (November 2008 – April 2009). He was Research Assistant at University of Ottawa (May 2009 – July 2010) and Electrical Engineering and Computer Science Department and as Teaching Assistant at University of Ottawa (September 2009 – December 2014) in Ottawa, Canada

MAH BENJAMIN

Benjamin Mah is a EMR practitioner at IHiS, a healthcare-IT leader, transforming patient care through excellence in technology. IHiS healthcare-IT professionals architect and manage the highly integrated systems across Singapore's Regional Health Systems, public hospitals, national specialty centres and polyclinics. IHiS played a key role in 9 public healthcare institutions becoming among the first public institutions in the Asia Pacific region to achieve HIMSS EMRAM Stage 6, an international benchmark for advanced technology used in patient care. At IHiS, Benjamin is responsible for leading a team in deploying various enhancements and new features on the EMR platform. Specifically, he oversees the expansion and growth of the EMR solution at the Alexandra Health Systems cluster. This includes the upgrade of the EMR platform as well as implementation of various clinical initiatives to improve patient care safety, user adoption and improved clinical outcomes.

MAKEDON FILLIA

Fillia Makedon, PhD, is Professor and Department Head of Computer Science and Engineering at the University of Texas at Arlington (UTA). She received her PhD in Computer Science from Northwestern University in 1982. Between 1991-2006, she was professor of computer science at Dartmouth College where she founded and directed the Dartmouth Experimental Visualization Laboratory (DEVLAB). In 2005-2006, she was Program Director at the National Science Foundation. Prior to Dartmouth, Prof. Makedon was Assistant and Associate Professor at the University of Texas at Dallas (UTD), where she directed the Computer LEArning Research Center (CLEAR). She has supervised over 20 PhD theses and numerous Masters Degree theses. Makedon has received several NSF research awards in the areas of trust management, data mining, parallel computing, visualization, and knowledge management. She has been senior investigator and co-PI of NIH, DOJ and Foundation grants. She received the Dartmouth Senior Research Professor Award, three Fulbright awards, and is author of over 300 peer-reviewed research publications. She is faculty affiliate of the Dartmouth ISTS security institute and currently directs the HERACLEIA Human Centered Laboratory, that develops pervasive technologies for human monitoring and privacy and security algorithms. She is member of several journal editorial boards and chair of the PETRA conference (www.petrae.org) and senior editor of EJETA. ORG, an electronic journal on emerging tools and applications in computing. She has recently received an NSF-MRI grant on smart rehabilitation technologies and leads a large team of interdisciplinary researchers that include 8 PhD students and three postdocs.

MALIN A. BRADLEY
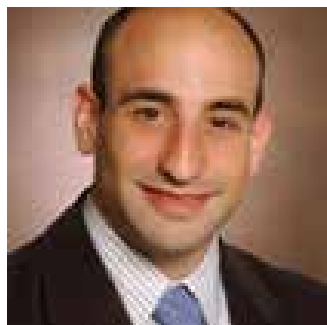
Bradley A. Malin, PhD, FACMI, received his Bachelors in Biological Sciences, Masters in Computer Science and Public Policy and Management, and PhD in Computer Science from Carnegie Mellon University. He may be thought of as a 'third generation' ACMI fellow, as he was the first graduate student of Latanya Sweeney, whose 1997 AMIA Best Paper more or less launched the informatics subdiscipline of health data privacy. Dr. Sweeney was, in turn, a trainee under the mentorship of ACMI fellow Pete Szolivits at MIT. Dr. Malin joined the faculty of the Department of Biomedical Informatics at Vanderbilt as an Assistant Professor and was promoted to Associate Professor with tenure in near record time based on a uniquely successful combination of investigator-initiated research, teaching in informatics and computer science, and public service at the highest levels of government. Dr. Malin received a prestigious Presidential Early Career Award for Scientists and Engineers, and had the distinction of receiving two new, concurrent RO1's from the same NIH study section on the same day. As director of Vanderbilt's Data Privacy Laboratory he has developed and published a growing set of software tools to assist healthcare organizations to understand and manage the data de-identification process to comply with regulatory mandates such as HIPAA for both business operations and research. He has been a pro-active consultant to the US Dept. of Health and Human Services on issues of data privacy and its implications for public policy.

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MANDIL SALAH

Salah Mandil (1941-), PhD, is Sudanese. Dr Mandil studied in the United Kingdom, and achieved a PhD. in Computer Science. He is an Expert Consultant to the ITU and WHO on eHealth and eStrategies. He is also former director of Health Informatics and Telematics World Health Organization in Geneva, Switzerland. He is currently the Vice President for eStrategies, Wise-Key SA, Geneva, a Swiss Internet company that specialises in the security of transactions over computerized networks for uses like eCommerce, eGovernment and eHealth including TeleMedicine. Dr Mandil has directed, and personally contributed to, the WHO support to many countries on the policy, strategy, design and implementation of their National Health Information Systems and Networks, particularly health care management information systems, and the introduction and uses of Tele-Health and TeleMedicine. He was formerly the Team Leader, Data Base Technology, IBM (UK) Scientific Center, and a Lecturer in the Faculty of Engineering, University of Khartoum, Sudan.

MANDL KENNETH

Kenneth Mandl, MD, MPH, is Professor and Chair, Biomedical Informatics and Population Health, Harvard Medical School; Director, Computational Health Informatics Program (CHIP), Boston Children's Hospital. Kenneth is board certified in pediatrics and pediatric emergency physician and received his doctorate in medicine from Harvard Medical School in 1989, and his Master of Public Health degree from the Harvard School of Public Health in 1995. He completed graduate work in medical informatics at the Massachusetts Institute of Technology. Through scholarship intersecting epidemiology and informatics, Mandl pioneered use of IT and big data for population health, discovery, patient engagement and care redesign. Mandl leads the transformative SMART Platforms initiative to design the "app store for health"" and is principal investigator of the Scalable Collaborative Infrastructure for a Learning Health System across Boston hospitals and nationally. Recognized for research and teaching, Mandl received the Presidential Early Career Award for Scientists and Engineers and the Clifford A. Barger Award for top mentors at Harvard Medical School. He was advisor to two Directors of the CDC and chairs the Board of Scientific Counselors of the NIH's National Library of Medicine. His clinical training and experience is in pediatrics and pediatric emergency medicine. Dr. Mandl has been elected

to multiple honor societies including the American Society for Clinical Investigation, Society for Pediatric Research, American College of Medical Informatics and American Pediatric Society.

MANTAS JOHN

John (Ioannis) Mantas (1954-) is Director of the Laboratory of Health Informatics and Full Professor of Health Informatics at the National and Kapodistrian University of Athens, Greece. He graduated with BSc (Honours) from the Department of Electrical Engineering at the University of Manchester in 1979, and on 1980 completed his master's degree with specialization in Information Technology and Telecommunications. He acquired his PhD in Computer Science in 1983. Professor John Mantas began his academic career firstly at the University of Manchester and then from 1986 onwards at the School of Health Sciences of the University of Athens. Today Professor Mantas is the Director of the Laboratory of Health Informatics and Director of Postgraduate Studies in "Health Informatics and Health Care Management" program of the University of Athens. He established the first

Master's program in Europe in 'Health Informatics' on 1990. His current research interests are in health information systems, patient safety, biomedical informatics, nursing informatics, management of healthcare, and education in biomedical and health informatics. He is the organiser from 2002 of the Annual International Conference on Informatics, Management, and Technology in Healthcare. He was the President of the European Federation for Medical Informatics for the period 2010-2012. He was Vice–President of IMIA from 2012 to 2014. He was elected as Vice-Dean at the Faculty of Nursing of the University of Athens from 1996 to 2001 and Dean at the School of Health Sciences of the University of Athens from 2001 to 2005. He was appointed member of the Governing Board of the Cyprus University of Technology from 2004, Dean of the School of Health Sciences from 2006 to 2009, and he was the Vice-Rector of the same University from 2009 to 2010. He was also appointed member (2009-2013) of the Governing Board of the University of Central Greece responsible for the newly established department of Biomedical Informatics. He is the President of the Biomedical and Health Informatics Association of Greece, which is member of EFMI and IMIA. Professor Mantas is leading many local and European research programs in the field of Health Informatics. He is the author of more than 250 publications. He has supervised more than 250 Master's

theses and 30 doctoral dissertations. He is currently lecturing in Introduction to Informatics, Health Informatics, Hospital Information Systems, Biomedical Informatics and Technology, and Special Issues in Biomedical Informatics Research. He is the author and the main editor of ten books published by international publishers in English and six books in Greek. He is serving in many international scientific publications as associate editor and reviewer. For many years served as advisor and reviewer in European Commission panels of experts. He also led many European and International initiatives in the educational field of Biomedical and Health Informatics.

MAOJO VICTOR

Victor Maojo, MD, PhD, FACMI created the Biomedical Informatics Group in 1993. Since 1990 he teaches undergraduate and graduate courses on Biomedical Informatics, Knowledge Engineering, AI applications, History of Science and Cognitive

Science.He has sent students to various international universities, such as Health Science and Technology (Harvard-MIT), with whom he developed an intense exchange program, with six students, Rutgers University, the University of Utah and the US National Cancer Institute. He has participated in pioneering activities in medical informatics at the UPM, with undergraduate and graduate courses.In 1996 he began to work on biomedical database integration, which later led to work on clinic-genomics database integration, a research that he pioneered with the First European Commission-funded project in this area (INFO-GENMED).In 2008-2011 he was the coordinator and scientific leader of the Action Grid project, which was the first EC-funded project in the new area of Nanoinformatics. In this area he has written several seminal papers, which have contributed to consolidate the field. He participates as co-editor in a forthcoming book on Nanoinformatics principles and practice, edited by Elsevier. Other research areas include artificial intelligence in medicine, clinical guidelines and protocols, image processing and analysis, data and text mining, information retrieval, internet-based applications, models and tools for clinical trials and semantic interoperability. He is now coordinating the AFRICA BUILD project, including WHO and four African partners from Mali, Cameroon, Egypt and Ghana, to create centers of excellence in Africa where the

use of information technologies can be used to improve health research and care. Through the Africa Build portal and a social network specially created for the project, the project aims to create a self-sustainable South-South infrastructure to carry out e-learning activities in the health domain. He earned MD, Universidad de Oviedo, MSc in Knowledge Engineering (Artificial Intelligence), and PhD in Computer Science, Universidad Politecnica de Madrid, Phd in Medicine, Universidad de Coruña. Postdoctoral research: Georgia Institute of Technology (with Prof. Norberto Ezquerra): Visiting Professor and Consultant and Medical Informatics Program, Health Science and Technology, Harvard-MIT (with Prof. Robert A. Greenes): Research Fellow. He received awards: HISE initiative. Hewlett Packard USA. 1995; Best research group. Sociedad Española de Informática de la Salud. 1997; Best research group. Sociedad Española de Informática de la Salud. 1998 (note: after 1998, the SEIS established a maximum of 2 awards for the same group); He is elected as the Fellow of ACMI. His special participations: Distinguished talks and keynotes: ISMDA, MIE, CBMS, University of Coruña, Oviedo, Complutense de Madrid, Valencia, Santiago de Compostela, University of Utah (3rd Reed Gardner lecture), Medical College of Georgia, Georgia Tech, Harvard University, Emory University, University of Rome, Goethe University, Linköping University (doctoral's opponent), Hewlett Packard Germany, and

other participations in Cairo, Buenos Aires, Chile, Ghana, Korea, China, among others; Chairs and Session Chairs: Medinfo, CBMS, MIE, Conceptual Modelling, ISMDA, among others; Boards: more than 20 international conferences and Journal Boards: Methods of Information in Medicine; Journal of the American Medical Informatics Association (JAMIA) and Journal of Fuzzy & Intelligent Systems. He participated at a lot of scientific and research projects.

MARCELO B. ALVIN

Alvin B. Marcelo is a general and trauma surgeon by training who is currently chair of the Asia eHealth Information Network. Prior to this, he served as senior vice-president and chief information officer of the Philippine Health Insurance Corporation (PhilHealth). As the director of the University of the Philippines Manila National Telehealth Center and chief of the Medical Informatics Unit, Dr. Marcelo established the Master of Science in Health Informatics program and conducted local and international research in the field of eHealth and health information systems development. He took his postdoctoral

fellowship in medical informatics at the National Library of Medicine in Bethesda, Maryland with research interests in telepathology, mobile computing, and bibliometric analysis of MEDLINE content. Dr Marcelo also manages the International Open Source Network for ASEAN+3, a center of excellence in free and/ or open source software established by UNDP, and advises the Community Health Information Tracking System (or CHITS), a Stockholm Challenge finalist in the health category in 2006. He is the Philippine representative to the APAMI and the IMIA. Dr Marcelo is certified in the governance of enterprise IT, The Open Group Architecture Framework (TOGAF), and Archimate.

MARCIAL GARCIA ROJO

García-Rojo was born in Oviedo, Asturias, Spain. He is President of the Ibero-American Association for Telemedicine and Telehealth (IATT), from 2015 to 1017. He is Director of Pathology Department at Hospital de Jerez de la Frontera, Cádiz, Spain since January 2014. From 2009 to 2013 he was Head of Pathology Department in Hospital

General Universitario de Ciudad Real, and Associate Professor of Pathology at the Medical School of the University of Castil-la-La Mancha. He received his PhD in 1995 from Universidad Autónoma, Madrid. He is also Vice-president of the Spanish Society of Health Informatics (SEIS), Spanish representative in IMIA board, and past-president of Internet Association for Bio-medical Sciences (INABIS). From 2007 to 2011 he was chair of the European project EURO-TELE-PATH, Anatomic Telepathology Network, Action IC0604 of the European Cooperation in the field of Scientific and Technical Research (COST). He is collab-orating as researcher in other European Projects on Digital Pathology. His main research areas are medical informatics standards in digital pathology and molecular pathology. He has published 3 books on medical informatics, 5 electronic publica-tions (CD/DVD) and he is author of 23 book chapters, and 125 scientific journal papers.

MARCIN JAMES

James Marcin, MD, MPH, is a professor of pediatric critical care at the University of Califor-nia (UC), Davis, Children's Hospi-tal in Sacramento. In addition to his clinical work in the pediatric intensive care unit at UC Davis, he directs the pediatric tele-medicine program in the Center for Health and Technology and is very active in research in pediatric quality of care and telemedicine, particularly among acutely ill and injured children. Dr. Marcin has been conduct-ing telemedicine consultations for more than 10 years and has worked closely with other clinicians, administrators, techni-cians, and health policy makers to support the use of clinical telemedicine. He is the founding and immediate past chair of the Pediatric Telehealth Special Interest Group in the American Telemedicine Association, is on the Committee for Pediatric Workforce in the American Acad-emy of Pediatrics, and is on the State of California's Technical Advisory Committee for Califor-nia Children's Services. He con-ducts research in telemedicine and quality of care, particularly as it relates to acutely ill and injured children in the emergen-cy department and the intensive care unit. He has been principal investigator on grants from the Agency for Healthcare Research and Quality and the Health Resources Service Administra-tion investigating the impact of telemedicine on quality of care and other patient outcomes. Dr. Marcin has also been a facul-ty advisor and mentor to 40 undergraduate students, medical students, pediatric residents, as well as students in the School of Public Health, Graduate Group in Epidemiology, and Graduate Group in Health Informatics. He has volunteered on 13 interna-tional medical missions, serves as a faculty volunteer to a med-ical-student-run free clinic and is a proud member of Physicians for Social Responsibility. He obtained his B.S. in biomedical engineering at UC San Diego in 1988 and his M.D. at UC San Diego in 1992. He completed his residency in pediatrics at UC San Francisco in 1995 and his pedi-atric critical care fellowship at the Children's National Medical Center in Washington, DC, in 1998. He obtained a M.P.H. at The George Washington University in 1998.

MARGOLIS ALVARO

Alvaro Margolis is an internist from Uruguay with a Master's degree in Medical Informatics from the University of Utah (USA). He has held academic po-sitions in Internal Medicine and in Continuing Medical Education at the School of Medicine and currently is Associate Professor at the School of Engineering, Universidad de la República, Uruguay. He is the President and CEO of EviMed, a CME Corpora-tion working across Latin Ameri-ca. Dr. Margolis is past President of the Federation of Health Informatics Societies in Latin America and the Caribbean, and past Vice-President of the In-ternational Medical Informatics Association (IMIA). He has been and is a member of international and scientific committees, such as MEDINFO 2007 and 2010, the

International Journal of Medical Informatics, and CME Congress 2008 (Vancouver Canada), is Associate Editor of Applied Clinical Informatics, an official IMIA Journal, a member of AMIA's Steering Committee for the Global Partnership Program (Bill & Melinda Gates Foundation) and has participated in the coordination of international events, such as the Seminar of eHealth Capacity Building (Rockefeller Foundation, Italy, July 2008), and the Regional Congress of Medical Informatics InfoLAC, (Argentina, October 2008).

MARIN HEIMAR

Heimar de Fátima Marin, Msc, PhD, is a nurse who has devoted her professional career to improving patient care using information and communication technologies. Dr. Heimar Marin is a graduate of Nursing and holds a Master and Doctoral Degree in Health Informatics at UNIFESP. She is "Livre-Docente" at the Medical School, State University of São Paulo (FM-USP). She is a fellow in Clinical Computing at the Center for Clinical Computing at Harvard Medical School. She is Full Professor at the Federal University of São Paulo (UNIFESP). In 2004

she was elected International Member at the American College of Medical Informatics. Heimar Marin is also the President of Brazilian Society of Health Informatics (2002–2008); Associate-editor of the International Journal of Medical Informatics; and Vice-chair and Elected Chair (2009–2012) of the International Medical Informatics Association Nursing Informatics Special Interest Group (IMIA NI SIG). Dr. Marin holds a position as Visiting Professor at Decision Systems Group at Harvard Medical School. She has over 250 publications. As a professor, she has mentored over 20 PhD students, 32 master students, and 85 specialists in health and nursing informatics.

MARKO NICHOLAS

Nicholas Marko, MD, is Chief Data Officer (CDO), Geisinger Health System. He is a clinical neurosurgeon subspecializing in neurosurgical oncology, a data scientist with expertise in predictive analytics and high-performance computing, and a healthcare executive focusing on enterprise data strategy, integration, and innovation. He is the Chief Data Officer (CDO) for Geisinger Health System and the Chair of the Organization's Enterprise Data Strategy Steering Committee. He also heads its Department of Data Science & Data Engineering in the Division of Applied Research and Clinical Informatics (DARCI), co-direct the organization's High Performance Computing Center, and

oversee its enterprise data warehouse. He is a practicing clinician and Director of Neurosurgical Oncology for Geisinger Medical Center. His clinical focus is on surgical management of patients with malignant tumors of the brain and spine.

MARKUSOVA VALENTINA

Valentina Markusova is Director of Information Service Department for the Russian Academy of Sciences (RAS) of the All Russian Institute of Scientific and Technical Information (VINITI) of the RAS, Moscow. Her research intetests involve Citation Analyses; Science Indicators; Science Policy Impact of transition economy on R&D; Evaluation of Research Groups and Individuals; Gender issue and Women in Science. She has received multiple research grants and authored more than 130 papers and six books chapters.

MAROCCO DOV

Dov Marocco, MPH, CSSBB, is the Chief Innovation and Improvement Officer for Santa Clara Valley Health and Hospital System. In addition to this role,

Mr. Marocco also serves as the Director of the County's first Center for Population Health Improvement (CPHI). Santa Clara County's CPHI is the first of its kind of the County and has a diverse staff with training in the areas of public health, data science, improvement, and data base administration. Under Mr. Marocco's direction, CPHI is focused on merging data from multiple sources in order to provide targeted interventions to the County's most vulnerable populations. Some of the projects to date include identifying and targeting high utilizers of multiple systems, providing interagency referrals to ensure low income and/or at risk patients receive special services, and building the business intelligence infrastructure to allow for real-time improvements for at-risk patients.

MARQUES LILIA

Lília Marques, Shared Services of the Ministry of Health, Portugal. Lília Marques is graduated in Engineering of Informatics Systems (University of Minho – Portugal), actually works at Information Systems department of SPMS and is in charge of

epSOS project, as National Pilot Coordinator deputy. Between 2008 and 2011 worked on ACSS ICT Department for Standardization & Certification as technical coordinator of the ePrescription certification process, with responsibilities on the development of Technical Specifications and process rules and management of evaluation process of software products. During this period was also involved in the EU project EHR-QTN and in the proposal for PT participation on epSOS. She spent about 20 years at ACSS (ex-IGIF), IS department, with activities of planning, systems analysis and development, training and promotion of projects for the NHS institutions. Involved in the EU project SHINE, in all of the tasks assigned to IGIF as pilot site (1992-1994). She was co-author of a publication on SHINE project and technical responsible for the Portuguese pilot of the EU project Cardlink2 (1997-2002).

MARS MAURICE

Maurice Mars, MD (South Africa) is Professor of TeleHealth, Head of the Department of

TeleHealth, Nelson R Mandela School of Medicine at the University of KwaZulu-Natal; Founding President, South African Telemedicine Association; Chair, Education Working Group, International Society for Telemedicine and eHealth . Maurice Mars is the Founding President of the South African Telemedicine Association and Professor and Head of the Department of TeleHealth at the Nelson R Mandela School of Medicine at the University of KwaZulu-Natal. He graduated in medicine at the University of Cape Town and subsequently gained an MD in vascular surgery at the University of Natal. Mars is a member of the African Union eHealth Experts Group and serves on the Ministerial Advisory Committee on Medical Technology in South Africa. He chairs the International Society for Telemedicine and eHealth's Education Working Group, is vice chair of the Global Network for International Surgery and serves on the Steering Committee of the African Academic Public Health Informatics Alliance and the Telemedicine Working Group of the International Medical Informatics Association. He has been invited to talk on eHealth at meetings of African Health Ministers, by the Commonwealth Secretariat, the United Nations Office of Outer Space Affairs, the United Nations Economic and Social Council and the WHO. His department initiates telemedicine and tele-education services in KwaZulu-Natal and he has established postgraduate programmes

in both Telemedicine and Medical Informatics. Through a Fogarty International Center training grant for International Training for Global Health, Mars' department is teaching medical informatics into several African countries and is working on developing staff capacity in medical informatics in these Universities. His staff are also developing Health Informatics Building Blocks for the American Medical Informatics Association, a model that he wants to replicate for Telemedicine. He is a member of the American Telemedicine Association, the Canadian Telehealth Forum and the International Society for Telemedicine and eHealth. Mars serves on several editorial boards, and has written over a hundred peer reviewed publications. His current research focus is on eHealth Economics.

MARTIN-SANCHEZ FERNANDO

Fernando Martin-Sanchez, Msc, PhD, was born in Madrid, Spain, where he studied Molecular Biology and Biochemistry at the Universidad Autonoma. He then received his MSc degree in Knowledge Engineering and

a PhD in Informatics from the Polytechnic University. After a postdoctoral stay at the Joint Program in Biomedical Engineering between Emory University Hospital and Georgia Institute of Technology, in Atlanta, USA, he returned to Spain and entered the National Institute of Health Carlos III. From 1993 to 1998 he was the CIO of the Institute and in 1998 became the Founding Director of the Medical Bioinformatics Research Unit. Since 2007 he was Vice-president of IMIA (International Medical Informatics Association). In 2010 he received his PhD in Medicine from the University of La Coruna (Spain). As of February 2011 he was appointed Professor and Chair of Health Informatics at the Melbourne Medical School and Head of the IBES Health and Biomedical Informatics Research Laboratory. Prof. Martin-Sanchez is co-author of more than 70 peer-reviewed publications and his research has been funded by some 25 grants from the European Commission and the Spanish Ministries of Health, Science and Defense. His research interests cover a wide range of topics related with the role of informatics in personalized medicine (genomic and nano medicine) and the convergence of Nano, Bio, Info and Cogno (NBIC) technologies for health applications. As of February 2012 he was appointed Adjunct Professor at the Department of Computing and Information Systems, Melbourne School of Engineering.

MARTIN S. ATYIA

Atyia S. Martin, MPS, EMT-B, is the director of the Office of Public Health Preparedness at the Boston Public Health Commission (BPHC). In this role, she is responsible for coordinating emergency management across internal BPHC programs and services, as well as across public health and health care system partners. This includes oversight of the Stephen M. Lawlor Medical Intelligence Center, which coordinates response and recovery efforts across public health, medical, and public safety partners during emergencies that impact public health. Additionally, Ms. Martin is on the Executive Committee of the Boston Healthcare Preparedness Coalition, which is an emergency preparedness collaboration among public health, emergency medical services, health care, and public safety entities. She has a diverse set of experiences in emergency management, intelligence, and homeland security. Ms. Martin was most recently the director of the DelValle Institute for Emergency Preparedness. Among her previous positions, she served as a senior analyst and later the homeland security supervisor and acting director at the Boston Regional Intelligence Center at the Boston Police Department. Additionally, she served as the regional planner for the City of Boston's Mayor's Office of Emergency Management where she coordinated critical infrastructure and information sharing projects for the Urban

Area Security Initiative Homeland Security Grant Program. In this role, she also managed public–private emergency preparedness, emergency notifications, and emergency operations planning. Ms. Martin was also a civilian at the Federal Bureau of Investigations in the Boston Field Intelligence Group and active duty Air Force assigned as a Serbian/Croatian linguist and analyst to the National Security Agency. She holds an associate of arts in Serbian Croatian from the Defense Language Institute, B.S. from Excelsior College, and a Master's of Professional Studies in Homeland Security Leadership from the University of Connecticut. She is currently pursuing her doctorate in law and policy from Northeastern University. She is also a certified emergency medical technician and basic life support instructor.

MARTINS HENRIQUE

Henrique Martins, MD (Lisbon), MPhil, PhD (Cambridge) CEO of SPMS.EPE, Shared Services of the Ministry of Health, Portugal Assistant Professor, Faculty of Health Sciences, Universidade da Beira Interior, Portugal Health Executive education Coordinator at the Catholic Lisbon Business School. Internist Physician, Fernando Fonseca Hospital, Lisbon, Portugal. Prof. Martins is an Internal Medicine Specialist. He obtained his PhD degree from the Judge Business School, University of Cambridge with a thesis on "The use of Mobile ICT in clinical Settings". He holds a

Master in Management from the University of Cambridge and a Masters in HIV/AIDS from the University of Barcelona. He has several publications in the area of Mobile computing in healthcare and many conference presentations/keynotes in the area of eHealth. He worked as CMIO – Chief Medical Information Officer at the Hospital Fernando Fonseca, a 730-beds hospital, between 2010 and 2013 where he set-up the new Electronic Health Record, and created the Center for Investigation and Creativity in Informatics (www.ci2.pt), here he supervised projects in robotics, mobile computing and database exploration and intelligent systems. From 2011 to 2013 he worked at the Ministry of Health as Adjunct for Health IT to the Health Secretary of State, and was responsible for the new Health Information Sharing Platform for Electronic Health Records and for nationwide efforts on complete electronic prescription and Clinical informatics. In April 2013 he became president of the Shared Services of the Ministry of Health (SPMS), national agency responsible for medical products and IT Central Purchase body as well as ehealth and healthcare IT for the Portuguese National Health Service (www.spms.min-saude.pt). In 2013 he became head of the CAIC, a national commission dedicated to "Accompanying Clinical Informatics implementation"–a network of local commissions and more than 40 experts. He was the National EpSOS project Coordinator until

its end, and is present coordinator of EXPAND follow project. He is the representative for Portugal at the European eHealth Network established under the EU cross-border directive, since its beginning in May 2012, and where he is the Chair of the eHealth DSI implementation subgroup established in November 2014. He publishes and teaches health management, leadership and medical informatics to medical students and clinicians in Portugal and abroad.

MARTINS HENRIQUE

Henrique Martins is Coordinator of the Portuguese Comission for Clinical Informatics. Prof. Martins is an Internal Medicine Specialist. He obtained his PhD degree from the Judge Business School, University of Cambridge with a thesis on "The use of Mobile ICT in clinical Settings". He holds a Master in Management from the University of Cambridge and a Masters in HIV/AIDS from the University of Barcelona. He has several publications in the area of Mobile computing in healthcare. He currently works at the Ministry

of Health as Adjunct for Health IT to the Health Secretary of State and is responsible for nationwide efforts on Clinical IT and launching the Portuguese Health Records – Plataforma de Dados de Saúde. He additionally works as CMIO – Chief Medical Information Officer at the Hospital Fernando Fonseca, where he coordinates the Center for Research and Creativity in Informatics. He teaches health management, leadership and medical informatics in Portugal and abroad.

MASARIE E. FRED
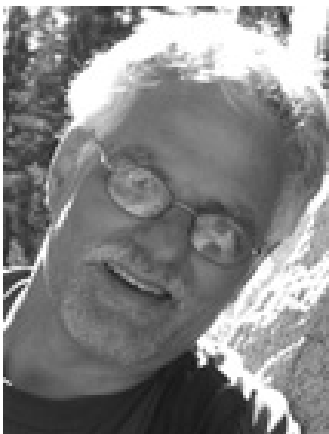
Fred E. (Chip) Masarie, Jr, MD, FACMI, as physician trained at the University of Oregon, Dr. Masarie moved to Pittsburgh for housestaff training in the early 1980s. The move was fortuitous, because it brought him into contact with Harry Pople, Jack Myers, and Randy Miller's Internist/ Quick Medical Reference (QMR) efforts. The rest is history. He became a fellow in the Decision Systems Laboratory and subsequently joined the

research faculty. When QMR was spun off as a commercial activity in 1990, Chip served as chief scientist and cofounder. With the evolution of that company, he became Chief Scientist with First Databank and then, in 1997, joined Medicalogic as its terminology expert, a company that in turn evolved into GE Medical Systems (where he most recently served as Enterprise Terminology Management Architect). He has not, however, abandoned his academic roots and continues to be involved teaching and mentoring students in the Oregon Health & Science University (OHSU) medical informatics program. Dr. Masarie was one of the first academic informaticians to venture out into the commercial world, attempting to move an informatics-based product (QMR) into more widespread distribution. Since then, he has mentored many physicians and young informaticians regarding opportunities and career paths outside of academic informatics. He has been involved in national standards organizations and has participated in numerous informatics forums at AMIA, Healthcare Information and Management Systems Society (HIMSS), and Toward the Electronic Patient Record (TEPR). He has carried the informatics torch religiously over the past 19 years, staying true to his personal mission to "build systems that allow clinicians to capture high quality clinical data that is structured and coded such that better clinical decisions can be made." He has influenced the directions of

companies over the years as they attempt to provide products and services to tens of thousands of clinicians in an effort to provide better care through information technologies. Dr. Masarie's ongoing contributions to medical informatics, as an innovator, industrial leader, and teacher/ mentor, with his role at national meetings and other forums had been a strongly positive force in building bridges between academia and industry.

MASIC M. IZET

Izet M. Masic, MD, MSc, PhD, FEFMI, FACMI (1952-) was born in Gracanica, Bosnia and Herzegovina (B&H). He is pioneer of Medical informatics in B&H and Balcan countries as first MD who earned MSc and PhD in Medical informatics field. He graduated at Faculty of Medicine of Sarajevo University in 1976 and notified his medical diploma at Faculty of Medicine at Innsbruck University (Austria). He was a postgraduate student at London School of Hygiene and Tropical Medicine in 1981/1982. Title of his MSc thesis was "Evaluation of information system of family health"and PhD thesis "Evaluation of computerized information system

in primary health care", both earned from Faculty of Medicine of University of Sarajevo in 1985 and 1990. After specialist's exam in 1982 he worked as physician in Health center in Sarajevo and assistant of Social medicine at Medical faculty of Sarajevo University. He became lecturer at Nursing college in 1986 and since 1989 he was developed into professor on the same institution. Izet Masic become assistant professor of Social medicine in 1991. In 1992 Izet Masic established Cathedra for Medical Informatics at Medical Faculty of University of Sarajevo and past through all phases, from assistant professor in 1992, to full professor in 1998. In 2002 he became full professor of Family medicine at Faculty of Medicine of University of Sarajevo. In 2011 he became full professor of Management in Quality of Health at Dubrovnik International University (DIU). In the year 2012 he become full professor of Health Management at Faculty of Health Sciences of University of Zenica. As author Izet Masic published over 300 papers in peer reviewed indexed medical journals and over 500 papers he has published as co-author. Also, he is author of over 40 books and monographs. Izet Masic has been Editor-in-chief of five indexed biomedical journals (last 20 years he edited: Medical Archives, Materia Socio-Medica and Acta Informatica Medica journals). In the year 2009 Izet Masic formed Academy of Medical Sciences of BiH and became first President of Academy. He established

Society for Medical Informatics in B&H in 1988. Izet Masic is member of Council of EFMI (1994-present), General Assembly of IMIA (1994-present), International Society for Telemedicine & eHealth (2005-2012), Governing Board of European Association for Public Health (EUPHA) (2000-present), and European Association of Information Technology Managers (2007-2015). From 2012 to 2015 he has been member of Council of European Association of Science Editors (EASE). In the year 2016 Izet Masic has been elected as Honorary Fellow of European Federation for Medical Informatics (FEFMI) and Fellow of American College of Medical Informatics (FACMI). Prof Masic has organized over 50 scientific and professional conferences and among those 10 during the war time in Sarajevo. Prof Izet was pioneer of development of Distance Learning in Medical Education in South-Eastern Europe (Cantonal and Federal Governmental project - 2002-2007). Masic chaired 22nd European congress of Medical Informatics (MIE2009) held in Sarajevo. He received a lot of domestic and international awards. He was actively involved as speaker and session chairman at various conferences in Public health, Medical informatics, Medical publishing and Family medicine worldwide..

MAS MONCHO VICENT

Vicent Moncho Mas is Director of Organization and Information Technologies of Hospital de Denia, CIO. Marina Salud S.A., Spain, and member of the steering committee. His challenge to change the medical culture that can adapt easier and faster to the possibilities offered by new technologies. He participated in the implementation of EHR in the primary care of the region of Valencia with 1,120 centres and a capita of 5,200,000 patients. He also participated in the redesign and implementation of equipment for data centres of the network in the 23 public hospitals in the Valencian community. The hospital opened in 2009 and during 2012 achieved HIMSS Stage 7 Award.

MASYS R. DANIEL

Daniel Richard Masys, MD, FACMI is an honors graduate of Princeton University and the Ohio State University College of Medicine. He received postgraduate training in Internal Medicine, Hematology and Medical Oncology at the University of California, San Diego, and the Naval Regional Medical Center, San Diego. His interest in medical informatics began as a computer programmer, developing a series of microcomputer programs to assist in clinical cancer research while practicing as a cancer specialist. In 1984, Dr. Masys became a Computer Medical Specialist in the Computer Communications Branch of the National Cancer Institute (NCI) at the National Institutes of Health, and there helped develop the PDQ (Physician Data Query) online cancer information system. He served as Chief of the International Cancer Research Data Bank of the NCI, and since 1986 has been the Director of the Lister Hill National Center for Biomedical Communications, which is the research and development division of the National Library of Medicine. Dr. Masys' informatics interests are in the design and implementation of large scale biomedical research databases, particularly those pertinent to molecular biology, and in computer-based technologies for health professions education. Dr. Masys is a Diplomate of the American Board of Internal Medicine in Internal Medicine, Hematology, and Medical Oncology. He is a Fellow of the American College of Physicians, and a member of the American Society of Hematology, the American Society of Clinical Oncology, and the Alpha Omega Alpha Honor Medical Society.

JOHN MATTISON

John Mattison, is the Chief Medical Information Officer and Assistant Medical Director for Kaiser Permanente. He focuses on transforming care delivery with information technology, through convergence of exponential technologies and data liquidity. He led the design and implementation of the largest integrated electronic health record in the US, and leads various national programs including virtual care. He has sponsored or led numerous digital innovations, and mentors many digital health startups. He chairs the eHealth Workgroup of the Global Alliance for Genomics and Health (GA4GH), and is a board member of Open mHealth, advisory board member of the NIH funded Policy and Ethics in Precision Medicine, teaches at multiple Universities including Singularity University, and has published widely on privacy, policy, security, IOT, global genomics collaboration, interoperability, mobile health, and healthcare transformation. He has published in Nature, JAMIA, JAMA, WSJ, Forbes, and has authored chapters for various books. He has keynoted or hosted many national and international healthcare conferences and has consulted in many countries. He is the founder of the international XML standard for health record interoperability known as CDA, CCD and CCDA, and is an active participant on several global initiatives to bring internet services to underserved communities providing access to both jobs and healthcare. Full bio available upon request.

MAYER-SCHONBERGER VIKTOR

Viktor Mayer-Schönberger is Professor of Internet Governance and Regulation at the Oxford Internet Institute / Oxford University. He is also a faculty affiliate of the Belfer Center of Science and International Affairs at Harvard University. He has published ten books, including the international bestseller "Big Data" (HMH, co-authored with Kenneth Cukier, translated into more than 20 languages) and the awards-winning "Delete: The Virtue of Forgetting in the Digital Age" with Princeton University Press (also available in multiple languages). He is the author of over a hundred articles and book chapters on the governance of information. After successes in the International Physics Olympics and the Austrian Young Programmers Contest, Mayer-Schönberger studied in Salzburg, Harvard and at the London School of Economics. In 1986 he founded Ikarus Software, a company focusing on data security and developed the Virus Utilities, which became the best-selling Austrian software product.

He was voted Top-5 Software Entrepreneur in Austria in 1991 and Person of the Year for the State of Salzburg in 2000. He has chaired the Rueschlikon Conference on Information Policy in the New Economy, bringing together leading strategists and decision-makers of the new economy. In 2014 he received a World Technology Award in the law category for his work. He is a frequent public speaker, and sought expert for print and broadcast media worldwide. He is also on the boards of foundations, think tanks and organizations focused on studying the information economy, and advises governments, businesses and NGOs on new economy and information society issues.

MAYOROV YU OLEG

Oleg Yu Mayorov earned as Doctor of medical sciences in 1989. He was elected as Professor of the Kharkiv National University of Radioelectronics in 1990, Prof Mayorov is Head of the Faculty of the Clinical Informatics and IT in Healthcare Management of the Kharkiv Medical Academy of Postgraduate Education (KhMAPE) since 1995, He was elected as Professor of the Faculty of Computer Technique and Mathematical Modeling, School of Medicine of the V. N. Karazin Kharkiv National University in 2000. Also, he is Expert in the field of Medical informatics and neuroscience; Senior VP of the Ukranian Association for Computer Medicine and IMIA and EFMI representative of Ukraine. The basic scientific direction of the professor O. Yu. Mayorov is the development of diagnostic technologies in neuro- and cardiodiagnostics, intellectual training systems, and information-processing in health care. He is the author of a computer system encompassing EEG and HRV programs (qEEG & qHRV), a new method of research multivariate linear neurodynamic systems of the brain and functional asymmetry of hemispheres. He has created the newest technology of research of nonlinear dynamics in the brain on EEG (deterministic chaos); technologies of objective estimation of functional systems in an organism with the aim of assessing the efficiency of medical treatment in schizophrenia, Alzheimer's disease, depression and a diabetes. Under his management, a fully-functional Hospital Information System Institute-MiT@Clinica®, using a post-relational database, an electronic signature. Professor O. Yu. Mayorov is the co-author of the Concepts of a State policy of the Public health informatization of Ukraine (1995, 2013) and Scientific director of the National Program and Action Plan for 2014-2016 years.

MAZZOLLENI CRISTINA

Cristina Macolleni is professor of Medical Informatics at University of Pavia. She has been former President of Italian Society of Medical Informatics. Also she long time represented Italian Society of Medical Informatics in EFMI Council (she was member of Board of European Federation for Medical Informatics). In 2012 she chaired MIE 2012 - 23rd European Congres of Medical Informatics, held in Pisa, where participated more than 500 medical experts from over the 50 countries in Europe and the world.

MAZZONCINI DE AZEVEDO MARQUES PAULO

Mazzoncini de Azavedo Marques Paulo, is Associate Professor in RDIDP by the Division of Sciences of Images and Medical Physics, Department of Clinical Medicine of Ribeirão Preto (FMRP), University of São Paulo (USP). He received the Bachelor and Master titles in Electrical Engineering and a PhD in Computational Physics from the University of São Paulo in 1986, 1990 and 1994 respectively. He did Postdoctoral internship at the University of Chicago (Chicago, IL, USA) in 2001, under the supervision of Professor Kunio Doi, where he studied various techniques for pattern recognition in medical imaging aiming to aid diagnosis (Computer-aided Diagnosis CAD) and Image Retrieval Based Content (Content-based Image Retrieval - CBIR). It is the coordinator and supervisor of Medical Physics and Biomedical Informatics Service of the images and Medical Physics Science Center (CCIFM) of the Hospital of the Ribeirão Preto Medical School (HCFM-RP) and academic coordinator of the Center for Information and Analysis (CIA) HCFMRP. Coordinator Ruth Center (Telemedicine University Network) and technical coordinator of the Center for Telehealth (NUTES) HCFMRP. Member of the Center for Technology Assessment in Health (NATS) HCFMRP. Since August 2012 he is Associate Professor at Department of Electrical and Computer Engineering at the University of Calgary, Canada. He is Vice President elected by the Brazilian Society of Health Informatics - SBIS (2015-2016). Mazzoncini's main area of expertise is in Computer Science in Medical Imaging, with an emphasis on management and processing of images to aid diagnosis and recovery for content.

Mc CALLIE DAVID, JR.
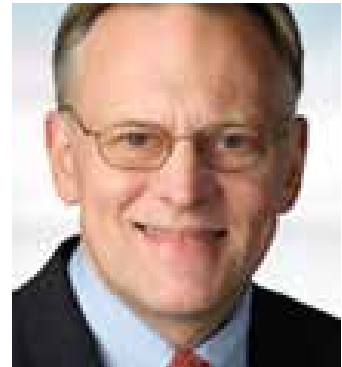
David McCallie, Jr., MD, FACMI, is Vice President of Medical Informatics Cerner Corporation and director of the Cerner Medical Informatics Institute. He is responsible for a research and development team focused on developing innovations at the intersection of computer science and clinical medicine. His most recently completed project was the design of Cerner's ePrescribing system and the Community Health Record. He is currently working on the definition of the next generation of personal health records, known as Independent Health Record Trusts. Dr. McCallie joined Cerner in 1991. He was previously responsible for the development of Cerner's clinical nomenclature system and the PowerNote™ structured clinical documentation tool. He also was the chief architect for open clinical foundation, Cerner's clinical data repository. He

is a member of Cerner's architecture cabinet. Prior to joining Cerner, McCallie was director of research computing at Children's Hospital in Boston, Mass., and an instructor in neurology at Children's Hospital and Harvard Medical School. His research background includes using computers to create three-dimensional models of seizure-induced brain electrical activity. McCallie earned a bachelor's degree in electrical engineering and computer science at Duke University. He earned his medical degree at Harvard Medical School. McCallie has published numerous articles and presented frequently on the subject of healthcare informatics. He is a member of the American Medical Informatics Association

Mc CARTHY P. STEPHEN

Stephen P. McCarthy, PhD, is Director of M2D2, University Professor Department of Plastics Engineering, University of Massachusetts Lowell. Professor McCarthy joined the faculty of the Plastics Engineering Department at the University of Massachusetts Lowell in 1984 and is currently a Distinguished University Professor. He founded and is director of the Massachusetts Medical Device Development Center (M2D2). M2D2 is a lifeline for the state's smaller medical device companies, offering inventors and executives easy, affordable, and coordinated access to world class researchers and resources at the Lowell and Worcester campuses of the University of Massachusetts. He is the Director of the BioPlastics and Medical Plastics Research Center where he is conducting research into Biodegradable Polymers and Blends. He also serves as Co-Director of the UMass Lowell Center for Irish Partnership. He is currently the Editor for the Journal of Polymers and the Environment. He received his B.S. from Southeastern Massachusetts University, a Masters in Chemical Engineering from Princeton University, and a Ph.D. in Macromolecular Science from Case Western University in Cleveland, Ohio. He worked as an Advanced Engineer in R&D for Owens Corning Fiberglas in Granville, Ohio.

Mc CORMACK JON

Jon McCormack is a researcher in computing and an internationally acclaimed electronic media artist. He is currently an ARC Australian Research Fellow in the Faculty of Information technology at Monash University in Melbourne. With a background in art, mathematics and computer science, his research seeks to discover new kinds of creativity using computers. This research spans visualisation and virtual environments, evolutionary systems, machine intelligence, human-computer interaction, music composition and sound arts. McCormack is the recipient of more than 15 international awards for both art and computing research, most recently the 2012 Eureka Prize for Innovation in Computer Science. His artworks have been widely exhibited at leading galleries, museums and symposia, including the Museum of Modern Art (New York, USA), Tate Gallery (Liverpool, UK), ACM SIGGRAPH (USA), Ars Electronica Museum (Austria) and the Australian Centre for the Moving Image (Australia). The book "Computers and Creativity" (Springer, 2012) edited by McCormack and Prof.

Mark d'Inverno (Goldsmiths) surveys how human creativity is being radically changed by technology and has become a significant reference text for the field, described by Professor Luc Steels as "required reading for everyone involved in the create arts and interested in the role of technology towards shaping its future."

Mc CORMICK KATHLEEN

Kathleen McCormick, PhD, RN, FACMI, FAAN, FHIMSS, HIMSS, is a senior practitioner, researcher, and policy executive in health informatics, bioinformatics, and gerontology. Dr. McCormick spent 13 years as an informatics scientist and clinical trial researcher within the NIH, the National Institute on Aging and Clinical Center. Dr. McCormick then joined the Agency for Health Care Policy and Research (AHRQ) and directed the first clinical practice guideline program, the computer decision support grant programs, and the accelerated electronic health record grant program. She retired as a 06 (Captain) in the USPHS after 30 years of service. Then Dr.

McCormick began her business career with SRA International, Inc. and developed their Genomics, Bioinformatics and Life Sciences Solutions program that supported the NIH, CDC, DoD, VA, and the FDA. She received the Vision Award from SRA for her business development in genomics and bioinformatics. In May 2004 Dr. McCormick became a Chief Scientist/Vice President at SAIC working to advance innovation in the Health Solutions business unit. In January 2009 she joined SAIC-Frederick (now Leidos Biomedical Research, Inc.) as senior principal scientist/vice president. This position principally supported the NIH, National Cancer Institute. She established SciMind, LLC in the spring of 2012. In 2013 she was honored for her work in innovation with the International Informatics Award from Sigma Theta Tau. This is in addition to her multiple awards for her professional accomplishments. She is a member of the prestigious National Academy of Sciences, Institute of Medicine, and Past-President of the Academy of Medicine of Washington, DC, a fellow of the ACMI, the HIMSS, and the Academy of Nursing (AAN). She has authored of several books, and the co-author of Essentials in Nursing Informatics, now in its 6th ed. (2015) which is considered a classic in nursing informatics and recommended for certification in primary care and nursing informatics. She is also the co-author of Healthcare Information Technology: Exam Guide for CompTIA and Health-

care IT Technician and HIT Pro Certifications, 2012. With over 150 publications, she is frequently sought after as a consultant and speaker for many national and international healthcare and professional organizations.

Mc CRAY T. ALEXA

Alexa T. McCray, PhD, is the Co-Director of the Center for Biomedical Informatics at Harvard Medical School. She is Associate Professor of Medicine at Harvard Medical School and the Department of Medicine, Beth Israel Deaconess Medical Center. Dr. McCray is also the Associate Director of the Francis A. Countway Library of Medicine at Harvard. She is the former Director of the Lister Hill Center for Biomedical Communications, a research division of the National Library of Medicine (NLM) at the National Institutes of Health. Before joining the NLM, she was on the research staff of IBM's T. J. Watson Research Center. She received a PhD from Georgetown University, and for three years was on the faculty there. She conducted pre-doctoral research at the Massachusetts Institute of Technology. Dr. McCray was elected to the Institute of Medicine of the National Academy of

Sciences in 2001. She is a fellow of the American Association for the Advancement of Science and a fellow of the ACMI. She served as the President of ACMI. She is a past member of the board of both the AMIA and IMIA. She serves as senior consulting editor of Methods of Information in Medicine, and she is a past member of the editorial board of the Journal of the American Medical Informatics Association. Dr. McCray conducts research in biomedical informatics, including research in scientific collaboration, scholarly communications, ontologies, autism spectrum disorders phenotype-genotype correlations, and health communication/literacy. methodology & tools, Multi-tier Web applications, Information systems audits, Open source systems and Quality Assurance in SW development.

Mc DONALD J. CLEMENT

Clement J. McDonald, PhD, works at The Indiana University School of Medicine and the Regenstrief Institute for Health Care. This institution is a privately endowed research institute renowned for the study of healthcare quality and economic issues, are establishing an endowed chair named in honor of Clem McDonald. Clem McDonald obtained his medical degree from the University of Illinois, and completed his internship in internal medicine at Boston City Hospital, Harvard Medical Service, and his residency in internal medicine at Cook County Hospital and the University of Wisconsin. Before beginning his residency, he earned an MS in Biomedical Engineering from Northwestern University, and completed a fellowship at NIH, where he managed the development of the first clinical laboratory computer system at the Clinical Research Center. Clement was director of the NLM Lister Hill National Center for Biomedical Communications (LHNCBC). Dr. McDonald is a distinguished physician and scientist, and one of the nation's most accomplished and most productive experts in the field of electronic health record (EHR) systems. Before becoming Lister Hill Center Director in 2006, he was Regenstrief Professor of Medical Informatics at the Indiana University School of Medicine and the Director of the Regenstrief Institute. Dr. McDonald developed the Regenstrief Medical Records System and directed its use in clinical trials that have illuminated the ways in which electronic records can improve patient care. He also created the Indiana Network for Patient Care, now considered a national model for regional health information exchange. He is also an internationally recognized pioneer in the development of health data standards. He directed an NLM-funded informatics training center at Indiana University. He has been the recipient of many research grants and contracts from NLM, other NIH components, other federal agencies, and several foundations. He was also one of the founders of the HL7 standards organization and is the developer of Logical Observation Identifiers, Names, Codes (LOINC), an identification system for tests and results that is a US clinical data standard and also used in many other countries. As director of the Lister Hill Center at NLM, Dr. McDonald also oversees five branches with investigators who conduct research and development in biomedical informatics related to consumer health, clinical data, image processing and visualization, and natural language processing to better inform and empower patients, health care providers, researchers, and the general public. Dr. McDonald is a member of the Institute of Medicine and recipient of the Morris Collen Award of the ACMI in 2004, among many other honors. He is a past-President the AMIA and a past member of the NLM Board of Regents.

Mc GAVIN COLLEEN

Colleen McGavin is a retired business educator having taught, among other things, courses in communication and information technology for nearly 25 years at Camosun College. After graduating with her BA and professional diploma in secondary education, she completed a post-graduate designation in computer based information systems, all at the University of Victoria. Colleen has extensive experience as a cancer patient and as a caregiver to her elderly parents and, since 2010, she has been an active volunteer with Patient Voices Network, a program that is supported under the banner of Patients as Partners through the Ministry of Health. In this capacity, she has worked with organizations such as the BC Patient Safety and Quality Council, Doctors of BC, the Ministry of Health, Island Health, and the Michael Smith Foundation for Health Research to make positive change in the health care system. She has been regularly invited to speak on subjects such as patient-centered care and patient engagement in health research and she is published in the Journal of Family Nursing on the subject of patient- and

family-centered care. In 2014, Colleen completed the training to become a certified member of the International Association of Public Participation (IAP2). Colleen's keynote address will relate a very personal patient story that illustrates the enormous human and financial costs associated with inefficient and ineffective health information systems.

Mc GOWAN J. JULIE

Julie J. McGowan, MA, MLS, PhD, FACMI, is Associate Dean for Information Resources and Educational Technology at Indiana University School of Medicine. She holds academic appointments as Professor of Knowledge Informatics and Professor of Pediatrics and is an Affiliated Scientist at the Regenstrief Institute. She received an MLS from the University of Maryland and an MA (Medical Iconography) and a PhD (Medical Education) from the University of South Carolina. Dr. McGowan's primary interest is application of information technology in support of clinical decision-making and medical education. Formerly

the Associate Dean for Health Sciences Informatics and Library Resources at the University of Vermont College of Medicine, she led development of VTMED-NET, a comprehensive statewide health information network that provided secure access to patient information, library and public health resources, as well as distributed learning. She is involved in similar citywide projects in Indianapolis through the Regenstrief Institute. Dr. McGowan's interest in informatics education at the undergraduate medical school level led to the development of an innovative four-year Vertical Curriculum in Information Literacy and Applied Medical Informatics at the University of Vermont and the re-engineering of a required fourth year clerkship in Medical Informatics at Indiana University. She is a founding faculty member of the IU School of Informatics, the first in the country, and a member of the participating faculty of the Regenstrief Institute Medical Informatics Fellowship program. Dr. McGowan worked to establish the Group on Information Resources for the Association of American Medical Colleges (AAMC), was a member of its first elected Steering Committee and served as Chair for 2002–2003. She is a member of AMIA's Public Policy Committee, Meetings Committee, and Finance Committee and just completed a three-year term on the Board of Directors of the Medical Library Association [1999–2002]. Dr. McGowan also is a member of the Biomedical

Library and Informatics Review Committee of the National Library of Medicine [1999–2003] and the Health Research Dissemination and Implementation Study Section/Special Emphasis Panel of the Agency for Healthcare Research and Quality [1998–2003].

Mc GUIRE MICHELLE

Michelle McGuire, BS, CPHIMSS, has a degree in computer processing and 17 years of experience in the health information industry. She has experience in managing deployment of solutions for clients changing business flow to electronic medical records. Ms. McGuire is currently a senior project manager for Kansas Health Information Network (KHIN), managing multiple projects for bringing hospitals and clinics into the health exchange. She has authored articles on sales and marketing, billing, and preparing for ICD-10 changes. She has her Certified Professional Health Information and Management Systems certification. Ms. McGuire is the health information exchange liaison on the Kansas chapter of Health Information Management Systems Society board of directors.

MCINTYRE PATRICK

Patrick McIntyre is senior vice president of Health Care Analytics, oversees WellPoint's enterprise-wide analytics capabilities including medical economics, restated financial reporting, net-work pricing, provider collaboration analytics, clinical informatics, client reporting, public and private exchange analytics, and analytic platforms. Patrick leads a team of approximately 1,200 associates whose primary goal is enhancing WellPoint's ability to analyze health care costs and develop meaningful cost management initiatives. Patrick joined WellPoint through the company's acquisition of Amerigroup in December of 2012. While at Amerigroup, Patrick served as senior vice president of Health Care Economics with responsibility for company-wide medical expense analytics, provider pricing, premium optimization, program integrity and analytic platforms. Patrick's career spans more than 25 years in health care and finance strategic management, business development, analytics, contracting, operations and administration. Patrick has held leadership positions including chief financial and chief operating officer positions in which he led business operations, finance, analytics and information technology functions. Prior to WellPoint, Patrick served as vice president of Healthcare Analytics for UnitedHealth Group, where he held responsibility for the strategic, operational and financial areas of the company's enterprise-wide health care analytics programs and business intelligence platforms. Before that, he held the title of vice president for UnitedHealthcare where he successfully integrated the analytic platforms for two of the organization's largest acquisitions. Patrick also held multiple roles at Optum (formerly Ingenix), Medica Health Plan, Doctor's Health Plan, Aetna and others. Patrick is a veteran of the United States Marine Corps and also served in the United States Army Reserves. He is also a certified management accountant, and a certified public accountant (inactive). Patrick has a Bachelor of Business Administration from Texas Tech University and a Master of Business Administration from Winthrop University.

Mc LAUGHLIN JAMES

James McLaughlin is Director of the Nanotechnology and Advanced Materials Research Institute, Director of NIBEC, Northern Ireland. Professor McLaughlin's research interests address nanotechnology and it's application in areas such as point of care sensors and medical diagnostics. This work has had a strong influence on the Universities commercialisation of IP relating to Connected Health companies. He has over three hundred publications, numerous successful patents and achieved outstanding paper awards at international conferences, as well

as being honoured as an invited speaker at over ten International Conferences. In recent years Professor McLaughlin over-arching strategy is aimed at developing a strong Connected Health Platform within the University of Ulster. This work involves linking bioengineering and computing sciences with sensor technology developed within NIBEC and thus encouraging clinically-led research initiatives to benefit the healthcare sector. He has attracted over £22M of funding to establish research that has led to the establishment of NIBEC, NICAM, NanotecNI and BEST. These centres have now lead to a vibrant Research Innstitute (NAMRI) with over eighty researchers carrying out both basic and applied research in topics such as integrated POC sensor systems, microfluidics, biosensing, nanotubes, DLC, micro-sensors, photocatalysis and tissue engineering. He is the co-founder of Intelesens Ltd. (formerly ST&D Ltd.) which specialises in the design and fabrication of wireless vital-signs monitoring systems, as well as incorporating new micro- and nano-scale technologies, thus enabling the miniaturisation and integration of low-cost medical device systems.

Mc LOUGHLIN AMBROSE

Ambrose McLoughlin, BDS, MBA, Secretary General of the Department of Health and Chairman of the Board of the HSE. Appointed in April 2012, he has over 30 years' experience as a practitioner, policy maker and within the management structures of the health services in Ireland. In recent years, he has been a leading advocate for and contributor to a number of major change programmes. His previous posts include; Registrar/ Chief Executive of the Pharmaceutical Society of Ireland (PSI), the pharmacy regulator; CEO North Eastern Health Board (NEHB) and Deputy CEO NEHB, responsible for Acute Hospitals and Community Services.

Mc CARTHY JOHN

John McCarthy (1927-2011) was an American computer scientist and cognitive scientist and one of the founders of the discipline of artificial intelligence. He coined the term "artificial intelligence" (AI), developed the LISP programming language family, significantly influenced the design of the ALGOL programming language, popularized timesharing, and was very influential in the early development of AI. McCarthy received many accolades and honors, such as the Turing Award for his contributions to the topic of AI, the United States National Medal of Science, and the Kyoto Prize. McCarthy was exceptionally intelligent, and graduated from Belmont High School two years early. McCarthy was accepted into Caltech in 1944. McCarthy showed an early aptitude for mathematics; during his teens he taught himself college mathematics by studying the textbooks used at the nearby California Institute of Technology (CALTECH). He served in the US Army and was readmitted to CALTECH, receiving a BS in Mathematics in 1948. It was at CALTECH that he attended a lecture by John von Neumann that inspired his future endeavors.

McCarthy initially did graduate studies at CALTECH, but moved to Princeton University. He received a PhD in Mathematics from Princeton University in 1951 as a student of Solomon Lefschetz. After short-term appointments at Princeton, Stanford University, McCarthy became an assistant professor at Dartmouth in 1955. A year later, McCarthy moved to MIT as a research fellow in the autumn of 1956. In 1962, McCarthy became a full professor at Stanford, where he remained until his retirement in 2000. By the end of his early days at MIT he was already affectionately referred to as "Uncle John" by his students. McCarthy championed mathematical logic for artificial intelligence. John McCarthy is one of the "founding fathers" of artificial intelligence, together with Marvin Minsky, Allen Newell and Herbert A. Simon. McCarthy coined the term "artificial intelligence", and organized the famous Dartmouth Conference in summer 1956. This conference started AI as a field. (Marvin Minsky later joined McCarthy at MIT in 1959.). In autumn 1956, McCarthy served on the committee that designed ALGOL, which became a very influential programming language by introducing many new constructs now in common use. In 1958, he proposed the advice taker, which inspired later work on question-answering and logic programming. John McCarthy invented LISP in the late 1950s. He helped to motivate the creation of Project MAC at MIT when he worked there. At Stanford University, he helped establish the Stanford AI Laboratory, for many years a friendly rival to Project MAC. In 1961, he was perhaps the first to suggest publicly the idea of utility computing, in a speech given to celebrate MIT's centennial: that computer time-sharing technology might result in a future in which computing power and even specific applications could be sold through the utility business model (like water or electricity). In 1966, McCarthy and his team at Stanford wrote a computer program used to play a series of chess games with counterparts in the Soviet Union. From 1978 to 1986, McCarthy developed the circumscription method of non-monotonic reasoning. McCarthy is also credited with developing an early form of time-sharing. It came to be called servers.... Now we call it cloud computing. That is still just time-sharing. John started it. In 1982 he seems to have originated the idea of the "space fountain", a type of tower extending into space and kept vertical by the outward force of a stream of pellets propelled from Earth along a sort of conveyor belt which returns the pellets to Earth (payloads would ride the conveyor belt upward). McCarthy often commented on world affairs on the Usenet forums. Some of his ideas can be found in his sustainability Web page, which is "aimed at showing that human material progress is desirable and sustainable". McCarthy saw the importance of mathematics and mathematics education. His Usenet .sig for years was, "He who refuses to do arithmetic is doomed to talk nonsense"; his license plate cover read, similarly, "Do the arithmetic or be doomed to talk nonsense." He advised 30 PhD graduates. His 2001 short story "The Robot and the Baby" farcically explored the question of whether robots should have (or simulate having) emotions, and anticipated aspects of Internet culture and social networking that became more prominent during the ensuing decade. In 1979 McCarthy wrote an article entitled "Ascribing Mental Qualities to Machines." In it he wrote, "Machines as simple as thermostats can be said to have beliefs, and having beliefs seems to be a characteristic of most machines capable of problem solving performance." In 1980 the philosopher John Searle responded with his famous Chinese Room Argument, disagreeing with McCarthy and taking the stance that machines can not have beliefs simply because they are not conscious (he says that machines lack 'intentionality', a term commonly used in the philosophy of mind). A vast amount of literature has been written in support of one side or the other. McCarthy received a lot of Awards and honors for his excellent work in AI field.

M

Mc NAIR PETER

Peter McNair is Honorary Fellow at EFMI since 2004. He coordinates project on Health Professional Information in EHR H:S Copenhagen Hospitals Cooperation, and Copenhagen County Health Care Administration. His recent project is Technical Project Manager and his fields of research include Health Information Systems, Laboratory Information & Production Support Systems, Electronic Health Records and Clinical Guidelines and Protocols.

MECHAEL PATTY PATRICIA

Patricia Patty Mechael is the Executive Director of the mHealth Alliance, which is hosted by the United Nations Foundation, and Faculty at the School of International and Public Affairs and Earth Institute, Columbia University. She has been actively involved in the field of International Health for over 15 years with field experience in 30+ countries primarily in Africa, the Middle East, and Asia. She has a Masters in International Health from the Johns Hopkins School of Public Health and Hygiene (1998) and a PhD in Public Health and Policy from the London School of Hygiene and Tropical Medicine (2006), where she specifically examined the role of mobile phones in relation to health in Egypt. For over 10 years, Dr. Mechael has published and spoken extensively on the strategic role of mobile telephony and relevant software applications within an ecosystem of eHealth, public health, and telecommunications actors in low and middle income countries as well as the increasing need to engage women and girls more effectively in designing and implementing the solutions aimed at improving their health and quality of life. She recently published the co-edited volume, mHealth in Practice: Mobile technology for health promotion in the developing world with Jonathan Donner from Microsoft Research.

MEHER KUMAR SUSHIL

Sushil K. Meher, MCA (NIT, Rourkela, Orissa), He earned MBA in Hospital Management, MSc in Computer Sciences and PhD in eHealth. He is Medical Informatics Specialist at AIIMS (All India Institute of Medical Sciences) for last 22 years. He is also heading the Technical group for making a paperless and filmless intuition. Mr. Meher is recognized as a leader in Hospital Digitization and Biomedical Informatics that provides scientific foundation for models of decision-making in health care and for medical education. His research interests include competent performance in the workplace, team decision-making, Processing Re-engineering, Clinical Research Informatics, Telehelath and mobile health, Public Health Informatics, PACS, Patient Safety and Medical Errors, Human-Computer interaction in health-care domains. He has already presented more than 40 national and 32 international conferences and published 22 research papers in different Journals and also written few chapters in the on Bio-Medical Informatics type books. He organized may work shop in India

and abroad. He was Honorary Secretary in IAMI during 2011-2012 and currently is President of IAMI. He have organized NCMI 2012 and Organizing Secretary of APAMI 2014 held in Delhi, India.

MELNICK E. DONALD
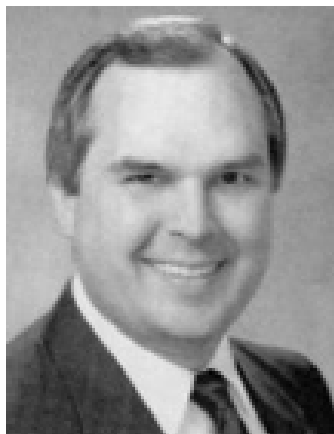
Donald E. Melnick, MD, FACMI, was Senior Vice President and Director, Division of Research and Development, at the National Board of Medical Examiners. A 1971 graduate of Columbia Union College in chemistry and German, he earned an MD from Loma Linda University in 1974. After a year as a Medical Assistance Program Fellow in Southeast Asia, he completed post-graduate training in General Internal Medicine at the Medical Center Hospital of Vermont, where he was an experimental subject as a user of the PROMIS electronic medical record system. He joined the faculty of Marshall University School of Medicine in 1978 as Assistant then Associate Professor of Pharmacology and Internal Medicine. He led the Section of General Internal Med-

icine at Marshall from 1979-1983. Concurrently, he served as Medical Director of John Marshall Medical Services, a multi-specialty faculty group practice. In this capacity, he adapted computer systems designed for business support to provide instructional information about their patients for students and residents. In 1983, he joined the staff of the National Board of Medical Examiners as Senior Medical Evaluation Officer to lead the Computer Based Examination (CBX) project. This project envisioned computer delivery of traditional multiple-choice question examinations, but, more importantly, developed a computer-based patient management simulation for assessment of doctors' patient management skills. The CBX simulation included free text entry in a simulated order sheet and provided time-realistic evolution of the patient's disease course, appropriately responding to the interventions of the test taker. The system utilized videodisc images displayed by the simulation to present radiographs, microscopic images, electrocardiograms, and other relevant medical images. He worked with Bell Laboratories to develop this technology, including the digitization of radiographs to allow image manipulation by the user. Later renamed Primum, the CBX simulation system was targeted for use in Part III of the NBME Certifying Examination program. During his tenure at the NBME, he has also served in an adjunct faculty role, providing resident and student

supervision at Hahnemann University School of Medicine and the University of Pennsylvania School of Medicine. He has been active in the American Society for Clinical Pharmacology and Therapeutics, American College of Physicians, the Society for General Internal Medicine, the American College of Physician Executives, and AMIA. He has been a regular participant at SCAMC, with a major plenary presentation on the CBX project at the 1987 SCAMC conference. His publications have appeared both in pharmacology and medical informatics journals. Since completion of the CBX project, he has moved to lead the NBME's research initiatives more broadly, including continued development of the computer-based examination program as well as work on assessment of clinical skills using standardized patients.

MELTON-MEAUX GENEVIEVE

Genevieve Melton-Meaux, MD, PhD, FACMI, is Associate Professor of Surgery and Core Faculty

in the Institute for Health Informatics at University of Minnesota (UMN). She is a practicing colorectal surgeon with interests in colorectal cancer, inflammatory bowel disease, minimally invasive techniques, and individualized treatment plans for complex patients. She serves as the Chief Health Information Officer (CHIO) for Fairview Health Services and University of Minnesota Physicians where she leads efforts to strategically optimize the institution's enterprise EHR and other HIT for patient care, data reporting and analytics, and quality. Her research interests include clinical colorectal surgery, improving note usage in EHRs, evaluating standards in practice, clinical natural language processing (NLP), and improving surgical care with informatics. She co-leads the UMN Clinical NLP-IE Research Group and serves nationally on the Clinical Informatics Subspecialty Board Examination Committee of the American Board of Preventative Medicine, the HITR study section for the Agency for Healthcare Research and Quality, Informatics Committee of the American College of Surgeons, Program Committee for the American Society of Colon and Rectal Surgery, and the Clinical Informatics Specialty Maintenance of Certification Committee for the American Medical Informatics Association

MERKLE HORST

Horst Merkle is President Continua Health Alliance. Director Diabetes Management & Platform Solutions. Roche Diabetes Care. Responsible for the innovation and development of key components of the Diabetes Care product portfolio. Focus on interoperability/connectivity and standardization as well as mobile and cloud based applications and decision support. With Roche's established engagement in Continua / Personal Connected Health Alliance over the past 8 years, Horst was appointed President of Continua and Chair of the Board of PCHA in September 2014.

MERRELL RONALD

Ronald Merrell, PhD, is Emeritus Professor of Surgery at Virginia Commonwealth University

where he was Stuart McGuire Professor and Chairman of VCU's Department of Surgery from 1999 to 2003. Dr. Merrell was also the Clinical Director of VCU Health Systems Telemedicine Program. Previously he was the Lampman Professor and Chairman of Surgery at Yale University School of Medicine. He was Vice Dean at the University of Texas Health Science Center Houston and Professor of Surgery at the MD Anderson Cancer Center. He obtained BS and MD degrees from the University of Alabama, which is his home state and trained in surgery and biological chemistry at Washington University in St Louis. Dr. Merrell has had a long relationship with NASA as advisor in aerospace medicine and researcher in telemedicine. He was awarded the Public Serve medal by NASA on three occasions. He is also a frequent advisor to the Department of Defense regarding telemedicine. Dr Merrell has established successful programs in industry and government in the field of informatics research. His innovative work in telemedicine includes early use of Internet telemedicine, sensor applications, transmission solutions and program design. His efforts in international telemedicine have led to significant programs in ten countries and extensive work in remote and hostile environments including Mt Everest, the Amazon and Africa. He has long been associated with telemedicine and surgical education programs. He is a member of the College of Fellows of the Ameri-

can Telemedicine Association. As a surgical educator he has been recognized by the universities he has served and their students with many awards including the Kaiser Award at Stanford, the John McGovern award at the University of Texas Houston, and the Edward Storer Award at Yale. At Yale he also founded the Yale Surgical Society. He has over 380 publications and serves on the editorial boards of several major surgical journals. Dr Merrell was named to the Best Doctors in America list for the last decade of his practice. He is an editor-in-chief of Telemedicine and E-Health, an official journal of the American Telemedicine Association and the International Society for Telemedicine and e-Health.

MEYSTRE STEPHANE

Stephane Meystre, MD, PhD, MS, FACMI, is Interim Chief Technology Officer at Health Sciences South Carolina. He is associate professor at the Medical University of South Carolina (MUSC) and Endowed Chair and Founding Director of the Translational Biomedical

Informatics Center at MUSC. Dr. Meystre has a medical training and background, with graduate education and experience in biomedical informatics and Natural Language Processing (NLP). He has developed and evaluated NLP systems for clinical practice and for research, and led several projects applying NLP to clinical text for automatic text de-identification, or clinical information extraction.

MICHIE SUSAN

Susan Michie is Professor of Health Psychology at University College London, UK. She studied Experimental Psychology at Oxford University, followed by Clinical Psychology at the Institute of Psychiatry, London University and a DPhil in Developmental Psychology. She is a chartered clinical and health psychologist, and elected Fellow of the Academy of Social Sciences, the US Society of Behavioural Medicine, the US Academy of Behavioural Medicine Research, the European Health Psychology Society and the British Psychological Society.

Professor Michie is Director of the Centre for Behaviour Change and of the Health Psychology Research Group at UCL. She

leads an extensive programme of research developing the science of behaviour change interventions and applying that science to intervention development and evaluation. Areas of application focus on prevention of ill health and implementation of evidence-based practice. Methodological projects include the Wellcome Trust-funded Human Behaviour-Change Project and the MRC-funded Theory and Techniques project.

MIDDLETON BLACKFORD

Blackford Middleton, MD., MPH, MSc, is corporate director of clinical informatics research and development at Partners Healthcare in Boston. He has joined Vanderbilt in the role of assistant vice-chancellor for Health Affairs and chief informatics officer for Vanderbilt University Health System. He succeeds John Doulis, MD. Kevin Johnson, MD, MS, professor and chair of the Department of Biomedical Informatics, had a key role in Middleton's recruitment. Middleton earned his bachelor's degree from the University of Colorado-Boulder, his MD from SUNY - Buffalo, and completed residency in internal medicine

at the University of Connecticut Health Sciences Center. He received his MPH from the Yale School of Public Health and his MSc in health services research with emphasis in clinical informatics from Stanford University. His early career included roles as medical director of information management and technology at Stanford University Hospital and senior vice-president for clinical informatics and chief medical officer for MedicaLogic, a provider of commercial electronic medical record software. In 2001 he joined the Harvard faculty in the division of general internal medicine and primary care at Brigham and Women's Hospital. He also led the Center for Information Technology Leadership. In 2008 Middleton was appointed to the National Committee on Vital and Health Statistics. He has served as the chair of the Healthcare Information and Management Systems Society. He is currently chair-elect of the American Medical Informatics Association. Middleton is principal investigator of the Clinical Decision Support Consor-tium. Funded by the Agency for Healthcare Research and Quality, the consortium includes academic medical centers, health systems, health care IT software vendors, publishers and consulting firms seeking to assess, define, demonstrate, and evaluate best practices for knowledge management and clinical decision support across multiple ambulatory care settings and electronic health record technology platforms.

MIHALAS GEORGE

George Mihalas, PhD, is professor and head of Department of Medical Informatics and Biophysics at University of Medicine and Pharmacy in Timisoara, Romania. He graduated University of Bucharest, 1967 (biophysics), and University of Timisoara, 1977 (informatics), Fulbright fellow at Medical College of Virginia, Richmond, Va (1972-1973) and got a PhD in physics, University of Bucharest in 1979. He was awarded "Gheorghe Marinescu" Prize of the Romanian Academy, 1990 and became full Member of the Romanian Academy of Medical Sciences in 1994. Prof. George Mihalas was President of Romanian Society of Medical Informatics RSMI (1998-2010) and Prorec Romania (2003-2011), president of European Federation for Medical Informatics EFMI (2006-2008), Vice-President of International Medical Informatics Association to IMIA (2008-2010), chair of EFMI WG MICIT (Medical Informatics in Countries in Transition 1996-2001) and of IMIA WG HIDC (Health Informatics in Developing Countries 1998-2004); expert-evaluator of European Commission DG Information Society, Brussels, since 2002. He also was CEO of National

Center for Health Statistics and Information, Ministry of Health, Bucharest, 2001. Member of Editorial Board of IMIA Yearbook of Medical Informatics, Methods of Information in Medicine, etc. He published over 20 books and 300 papers. His main topics of interest are: Sonic representation of medical data, mathematical modeling and computer simulation of biological processes, big data, quality of data and data protection in medicine, implementation of health information systems and development of e-health strategies and history of medical informatics.

MIKSCH SILVIA

Silvia Miksch, PhD, is professor and head of the Department of Information and Knowledge Engineering (IKE) at the Dahu-be-University Krems, Austria. Since 1998 she is head of the Information and Knowledge Engineering research group (IEG). Institute of Software Technology and Interactive systems (ISIS), Vienna University of Technology. She was scientific researcher at the Austrian Research Institute for Artificial Intelligence (ÖFAI), postgraduate research fellow at Knowledge System Laboratory (KSL), Stanford University, CA,

USA. Visiting/Guest Professor at the Otto-von-Guericke University Magdeburg, Visiting/Guest Professor at the Johannes Kepler University Linz, Austria, and scientific advisor of the Smart Agent Techologies (SAT) studio, Research Studios Austria, a department of the ARC Seibersdorf research GmbH. She aquired and led several national and international research projects, served on various program committees of international scientific conferences. Master and PhD committees, and has published more than 200 scientific publications (journals and conference contributions, contributions in books and books). Her main research interests include Information Visualization and Visual Analytics (in particular Focus&Context and Interaction techniques), Plan Management, and Evaluation of Knowledge-Based Systems. Real-World Evironments.

MILANI V. RICHARD

Richard V. Milani currently serves as the Chief Clinical Transformation Officer, Vice-Chairman of the Department of Cardiology at Ochsner Health System and Professor of Medicine, at Ochsner Clinical

School – The University of Queensland School of Medicine in New Orleans, Louisiana. He is also Medical Director of innovationOchsner ("iO"), an innovation lab and accelerator founded by Ochsner Health System in 2015 to reimagine and revolutionize the experience and delivery of healthcare in a way that dramatically enhances quality and access, decreases cost, and improves patient satisfaction and engagement and caregiver efficiency. After receiving his Internal Medicine training at the University of Florida, Dr. Milani completed fellowships in Critical Care Medicine at the University of Florida, Preventive Medicine and Clinical Epidemiology at Harvard University (Massachusetts General Hospital), and Cardiovascular Diseases at Ochsner Clinic Foundation. Dr. Milani's research interests involve healthcare delivery, information systems, clinical decision support, and chronic disease management and prevention. He is the author or co-author of over 500 medical publications including 20 book chapters and serves as a frequent lecturer for healthcare systems and Fortune 500 companies.

MILLER A. RANDOLPH

Randolph A. Miller, MD is the Cornelius Vanderbilt Professor of Biomedical Informatics and the University Professor of Biomedical Informatics, Medicine, and Nursing. After moving to Vanderbilt, Dr. Miller served as Chair of the Division of Biomedical Informatics from 1994-2004 to and as the founding Chair of the Department of Biomedical Informatics (DBMI) from 2001-2004. The initial DBMI mission was to develop and evaluate leading-edge biomedical software applications to improve the quality of care, promote research, and enhance patient safety. With faculty and staff colleagues, DBMI built Vanderbilt's CPOE and EMR systems "from scratch". Dr. Miller also helped Drs. Joshua Denny and Anderson Spickard III to create a new educational support system for Vanderbilt medical students, known as KnowledgeMap. Dr. Miller was the founding Principal Investigator on Vanderbilt's NIH - sponsored Training Program in Biomedical Informatics. Dr. Miller served as President/ Board Chair of the American Medical Informatics Association (1994-1995) and President of the

American College of Medical Informatics (2003-2004). He received a 1997 FDA Commissioner's Special Citation for his work on clinical software evaluation. He served as Editor-in-Chief of the leading journal in Biomedical Informatics, JAMIA, from July 2002 through December, 2010. Dr. Miller served on the Editorial Board of the Annals of Internal Medicine, 2000-2003. He served on the National Library of Medicine Biomedical Library Review Study Section (two terms) and the AHCPR Health Care Technology Study Section. In 2004, Vanderbilt made him a University Professor, and provided an endowed chair. He received Vanderbilt's 2004 William J. Darby Award for Translational Research. In October 2006, he was elected to membership in the Institute of Medicine, of the National Academy of Sciences. He received the American Medical Informatics Association's Lindberg Award for Innovation in Biomedical Informatics in 2007, and the Phillip S. Hench Distinguished Alumnus Award from the University of Pittsburgh School of Medicine in 2008. Over his career, Dr. Miller has been Principal Investigator on NLM/NIH grants and contracts totaling over $30 million. He has authored over 130 peer-reviewed publications. Prior Work: Randolph A. Miller majored in Physics at Princeton, then enrolled in medical school at the University of Pittsburgh in 1971. In 1973, he joined the pioneering INTERNIST-I computer-assisted medical diagnosis project, working under Dr. Jack D. Myers, a renowned former Chairman of Medicine at the University of Pittsburgh, and Harry E. Pople, Jr., a brilliant computer scientist. After taking a year-long sabbatical from medical school to do informatics research, he graduated in 1976, completed his residency in Internal Medicine at the University of Pittsburgh, and joined the Department of Medicine faculty in 1979. As an academic general internist, he cared for patients for a quarter-century. Dr. Miller founded the Section of Medical Informatics at the University of Pittsburgh in 1986. His work on refining, improving, and evaluating medical diagnostic decision support systems gained international recognition. He also authored a series of articles and book chapters on ethical and legal issues posed by using clinical information systems. In 1988, he received the University of Utah's first Priscilla Mayden Award in Medical Informatics for his work on Quick Medical Reference (QMR), the successor to INTERNIST-I. Dr. Miller served as PI for the University of Pittsburgh's participation in the National Library of Medicine's Unified Medical Language System (UMLS) Project (1986-1994). He was founding PI on Pitt's NIH-sponsored Training Program in Medical Informatics.

MILLER L. PERRY

Perry L. Miller, MD, PhD, FACMI, is Professor of Anesthesiology at Yale University School of Medicine. A 1966 graduate in physics and chemistry from Harvard University, he worked for two years at IBM after college, in Boston and London, England. He subsequently earned an MS degree in EE & Computer Science from University of California at Berkeley (1969), a PhD in Computer Science from MIT (1973), and an MD from the University of Miami (1978). He completed residency training in anesthesiology at the University of Pennsylvania (1981), after which he joined the faculty at Yale. His initial research focus has been on computer-assisted clinical decision support, with a particular focus on the "critiquing" approach to computer-based clinical advice.

MILL RAUL

Raul Mill is CEO. Estonian eHealth Foundation, Estonia. Raul Mill is the member of the management board of Estonian eHealth Foundation, and also the member of supervisory board of Software Technology and Applications Competence Centre. In addition, Raul Mill is also member of the Estonian eHealth Task Force of the Estonian Governement Office. Raul Mill has education in medicine, economics and IT. He has working experience in private and public sector both as a manager and analyst. From 1997 to 2003 Raul worked in Estonian Insurance Supervisory Authority, later reorganized into the Estonian Financial Supervision (an institutional part of Eesti Pank). From 2003 – 2006 he was the director of the Financial College of the Estonian Academy of Security Sciences and also member of the board of the organization. 2006 – 2011 he was involved in the IT-development in private sector, with main focus on edutainment and usability areas.

MINEAR MICHAEL

Michael Minear, MS, CHCIO, CPHIMS, has worked in the health-care industry for over 37 years and serves as the Chief Information Officer of the University of California Davis Health System, where he leads an IT division with 440 staff with an annual operating budget of $105 million dollars. He is a member of the Board of Directors for the California Telehealth Network. Minear has been a part-time associate faculty member at the Johns Hopkins University Bloomberg School of Public Health since 2002, where he teaches the graduate class entitled 'Health Management Information Systems.' He has a Master of Science Degree from Northwestern University in Medical Informatics, a Graduate Certificate in biomedical informatics from Oregon Health & Science University's School of Medicine, and a Bachelor of Business Administration degree from the University of Iowa with a double major in finance and financial economics.

MINSKY LEE MARVIN

Marvin Lee Minsky (1927-2016) was born in New York City, He attended the Ethical Culture Fieldston School and the Bronx High School of Science. He later attended Phillips Academy in Andover, Massachusetts. He then served in the US Navy from 1944 to 1945. He held a BA in mathematics from Harvard (1950) and a PhD in mathematics from Princeton (1954). He was on the MIT faculty from 1958 to his death. In 1959 he and John McCarthy founded what is now known as the MIT Computer Science and Artificial Intelligence Laboratory. He was the Toshiba Professor of Media Arts and Sciences, and professor of electrical engineering and computer science. Contributions in Computer Science 3D profile of a coin (partial) measured with a modern confocal white light microscope. Minsky's inventions include the first head-mounted graphical display (1963) and the confocal microscope (1957, a predecessor to today's widely used confocal laser scanning microscope. He developed, with Seymour Papert, the first Logo "turtle". Minsky also built, in 1951, the first randomly wired neural network learning machine, SNARC.

Minsky wrote the book Perceptrons (with Seymour Papert), which became the foundational work in the analysis of artificial neural networks. This book is the center of a controversy in the history of AI, as some claim it to have had great importance in driving research away from neural networks in the 1970s, and contributing to the so-called AI winter. He also founded several other famous AI models. His book "A framework for representing knowledge" created a new paradigm in programming. While his Perceptrons is now more a historical than practical book, the theory of frames is in wide use. Minsky has also written on the possibility that extraterrestrial life may think like humans, permitting communication. He was an adviser on Stanley Kubrick's film 2001: A Space Odyssey; one of the film's characters, Victor Kaminski, was named in Minsky's honor and Minsky himself is mentioned in the movie and in Arthur C. Clarke's tie-in novel: Probably no one would ever know this; it did not matter. In the 1980s, Minsky and Good had shown how neural networks could be generated automatically - self replicated - in accordance with any arbitrary learning program. Artificial brains could be grown by a process strikingly analogous to the development of a human brain. In any given case, the precise details would never be known, and even if they were, they would be millions of times too complex for human understanding. In the early 1970s, at the MIT Artificial

Intelligence Lab, Minsky and Papert started developing what came to be called the Society of Mind theory. The theory attempts to explain how what we call intelligence could be a product of the interaction of non-intelligent parts. Minsky says that the biggest source of ideas about the theory came from his work in trying to create a machine that uses a robotic arm, a video camera, and a computer to build with children's blocks. In 1986, Minsky published "The Society of Mind", a comprehensive book on the theory which, unlike most of his previously published work, was written for a general audience. In November 2006, Minsky published "The Emotion Machine", a book that critiques many popular theories of how human minds work and suggests alternative theories, often replacing simple ideas with more complex ones.

MISHRA NINAD

Ninad Mishra, MD is a lead health scientist with National Center for STD, HIV, Hepatitis and TB Prevention (NCHHSTP) at Centers for the Disease Control (CDC). Dr. Mishra's primary focus lies in the intersection of clinical informatics, clinical analytics, and quality-of-care. The common theme across Dr. Mishra's work relates to helping clinicians make better decisions, provide quality care, and improve care delivery processes through the use of health information technology. Dr. Mishra is currently leading a number of

CDC funded projects including one that uses cloud based services to provide contextual knowledge at the point-of-care through electronic health systems. The system has been undergoing testing and evaluation with partners namely Alliance of Chicago community health centers, National Association of Community Health Centers (NACHC) and GE Health. Dr. Mishra is also leading projects on quality related e-measures from (Electronic Medical Record) EMR Data. The latest e-quality project was showcased in partnership with Commonwealth Informatics based in Boston, MA under a small business innovation research grant. The goal of the project was to build and demonstrate a prototype for eMeasure calculation that conformed to the national specifications for both the numerator and denominator and that worked with clinical data from the Epic EMR at the Metro Health System of Northeast Ohio. A long-term goal is to develop an eMeasure application that will be easy to install, configure, and use with a broad variety of different EMR systems. Ninad had been consulted by the Institute of Medicine(IOM) to formulate strategies for digital health technologies in the past. He has previously served as Vice Chair of the Surveillance Science Advisory Group (SurvSAG) evaluation subcommittee and has served on the AMIA publication committee. He also assisted National Biosurveillance Advisory committee, established by a presidential directive, while

being on a short term detail to Biosurveillance Coordination Unit (BCU).

MITCHELL A. JOYCE

Joyce A. Mitchell, PhD, FACMI, is Associate Professor of Medical Genetics in the Department of Pediatrics at the University of Missouri-Columbia and Director of the Information Science Group. Her early work involved the use of computers in genetics. She is currently involved in an evaluation of AI/LEARN, an interactive videodisc authoring system, and end-user search behavior with Grateful Med for MEDLINE access. She is past chairman of the Biomedical Library Research Committee and is a member of the Board of Governors of AAMSI (American Association for Medical Systems and Informatics).

MKRTUMYAN IGOR

Igor Mkrtumyan (1939-) is Chairman of the Internet Society of Armenia and ISOC-Armenia Chapter, Administrative Contact of the AM TLD, Representative of AM NREN in CEENet, Deputy Chairman of the Management Committee at CEENet, IT Manager at Armenian Virtual College. From 1957 till 1962 he was student of the Yerevan Polytechnic Institute. From 1964 till 1969 he worked as Engineer of the Yerevan Computer Research Institute. From 1969 til 19 he finished Post graduate courses at the Moscow Institute of Transport Engineers. In 1972 he was candidate of Technical Sciences degree from the Moscow Institute of Transport Engineers. From 1972 till 1992 he was Head of Department of the Yerevan Computer Research Institute; 1993-1995 Participant of the INET'93 and INET'95 Internet Conferences; 1992-2009 Director of Computer Services Department of the American University of Armenia; 1995-present Chairman of the Internet Society of Armenia and ISOC-Armenia

Chapter, Administrative Contact of the AM TLD 2000-present Representative of AM NREN in CEENet; 2009-present Deputy Chairman of the Management Committee at CEENet and 2010-present Armenian Virtual College, IT manager

MOEHR R. JOCHEN

Jochen R. Moehr is Professor Emeritus. Staatsexamen Medizin. Dr. Moehr received his medical education in Marburg, Germany and Montpellier, France, and obtained his Dr. med. (MD) with a dissertation in clinical chemistry in 1965. After research and clinical work in the USA and Germany, he obtained his Habilitation (PhD) in Medical Informatics in 1976 at the Medical School of Hannover. As professor at the University of Heidelberg and Director of the Division of Medical Informatics, he spearheaded the development of a hospital information system for the University's large hospital complex and research and teaching facilities. He has also conducted research on the use of computers in medical practices, pharmacies, and other environments since the early seventies. His educational responsibilities included the direction of a spe-

cialized curriculum in health informatics in the early formative stages, and teaching of medical students, nurses and laboratory technicians in health informatics. In 1986, Dr. Moehr joined the School of Health Information Science of the University of Victoria. Here he conducted research on the integration of heterogeneous information systems, medical concept representation and analysis, privacy protection and security and information system evaluation in such areas as evidence-based practice, and telehealth. Apart from research and teaching, Dr. Moehr has served in numerous positions and functions in national and International learned societies, including GMDS (Germany), COACH (Canada), AMIA (USA) and IMIA (international) as well as on editorial boards of many major health informatics journals. He chaired IMIA Working Groups and organized national and international conferences for GMDS, COACH and IMIA. In 2005, Dr. Moehr retired from active university service.

MOEN ANNE

Anne Moen, RN, PhD, FACMI is adjunct professor, School of Nursing, University of Wisconsin

- Madision, USA and professor II, University college of South east Norway. She undertakes extensive, interdisciplinary research focusing at purposeful use of ICT for health, deployment and evaluation of welfare technologies in community health, strategies for self-management and patient activation, preventions and early intervention to maintain health and thrive, and development of expertise in collaborative knowledge practices. Professor Anne Moen holds a PhD (dr. polit) in social sciences from the University of Oslo (2002), and a master degree in nursing science (1996) also from the University of Oslo. Part of her PhD work took place at University of California - San Francisco, School of Nursing. The title of her doctoral dissertation is "Nursing Leadership when an Electronic Patient Record System is Introduced in Norwegian Hospitals". The title for her a master thesis is "Information Technology Introduced in the Nursing Service". She is a registered nurse (RN), 1985 from Røde Kors Sykepleierhøyskole i Oslo og Akershus, Norway. In 1989 she graduated as Regional College Candidate, in Business administration, Østfold Distriktshøgskole (Østfold University College), Halden, Norway. She studied University didactics and teaching at Univeristy of Oslo (2001) and Research Management (2010-2011) at Copenhagen Business School, Denmark. Dr. Moen worked as staff nurse and head nurse, Department of Internal medicine and the cardiac observation unit, at Sentralsyke-

huset i Akershus (Akerhus University Hospital), Norway from 1985 - 1991. From 1991 till 1994 she was one of the hospital's domain experts recruited to participate in design and deployment of an Electronic Patient Record System (EHR). The EHR was developed at the National Institute for Public Health and piloted at Sentralsykehuset i Akershus, Nordbyhagen, Norway. From 1996 till 2002 she was research fellow at Institute of Nursing Science, University of Oslo, and postdoc from 2002-2005 at InterMedia, Faculty of Education, University of Oslo. Professor Anne Moen was Fulbright Scholar at University of Wisconsin - Madison, College of Engineering and School of Nursing (2002), and continued the collaboration as a visiting research scientist at the University of Wisconsin - Madison (2002-2006). From 2005-2011 she was associate professor and project leader at InterMedia, Faculty of Education, University of Oslo. She joined the faculty at Institute of health and society, Department of nursing science, Faculty of Medicine, University of Oslo, in 2007, and was appointed full professor at Institute of health and society, Department of nursing science, Faculty of Medicine, University of Oslo in 2011. From 2015 she is also affiliated Faculty at University of Wisconsin - Madison. Professor Anne Moen has led and participated in important and innovative projects since she defended her PhD. Among the most important ones are "ICT-based information resources for patients

and relatives, demonstrated in design of the prototype REPAR-ERE (learning REsources for PAtients and RElatives during REcovery)" (2002-2005), "Developing Knowledge-Practices Laboratory" (KP-Lab), Integrated Project, EU's 6th framework" (2006-2012), "eLearning resources I and II"; (Comprehensive assessment and interventions with complex, composite care requirements) (2012-2014), "Strategic And Collaborative Capacity Development in Ethiopia and Africa (SACCADE)" (2013-2018) and "APPETITT (Application on Nutrition - Intervention for health and thrive)" (2013-2017). She has published more than 100 scientific papers in peer reviewed journals. Dr. Moen has been involved in EFMI and IMIA activities the past ten years as Norwegian representative, and president of the Norwegian society for medical Informatics. She is also a founding member of the Norwegian Nurses Association's special interest group on nursing informatics. Dr. Moen served as SPC co-chair, liaison and LOC co-chair for MIE2011, held in Oslo, Norway. She was also a member of SPC core for MIE2012. In 2015, Dr. Anne Moen was elected member of the ACMI. She has served on the EFMI Board as Vice-president (2012 -2014), and is the current president of EFMI (2014-2016).

MOGHADDAM RAMIN

Ramin Moghaddam (1972-) was born in Tehran, Iran. As medical doctor Ramin has an academic and professional medical and health informatics background. He has taken over a position as director of Medical informatics department at the Iranian Social Security Organization (ISSO), which is responsible for providing healthcare services to 27 million people, since 2000. He has many experiences at the national and international levels as e-health expert & advisor, researcher, national project manager and coordinator, strategist in the field of health informatics during last sixteen years. He represents the International Medical Informatics Association (IMIA) since 2003 in Iran and a UK based Faculty of health informatics since 2002 in the Middle East. He proposed to IMIA the establishment of the Middle East Association of Healthcare Informatics (MEAHI) as a new IMIA chapter in 2003. He has continued his efforts to grow up this association based on IMIA board recommendation since 2004. Dr Moghaddam proposed the MEAHI strategic plan (2007-

2012) entitled " Better Health through the Better Information: The agenda for the Middle East 2012 and beyond " in 2006 and is working with other experts in the region to make this agenda a reality. In the core of this strategic plan is to make a Biomedical/Health Informatics research and education hub in the Middle East region.

MOISIL I. IOANA

Ioana I. Moisil obtained the BSc and MD in mathematics-mechanics at the University of Bucharest in 1971, and later the PhD. in mathematics - statistics and probabilities at the Romanian Academy. She has as a second specialization informatics, and she obtained the scientific degree from the School of Public Health-Universite Libre de Bruxelles. She started her career at the Institute for Research in Informatics - ICI Bucuresti, then moved on to the „Carol Davila" University of Medicine, the Ministry of Health and since 1999 at the „Lucian Blaga" University of Sibiu. She was a full professor at the "Lucian Blaga" University of Sibiu (ULBS). She retired in 2010, but is continuing the collaboration in the frame of the Research Center for Informatics

and Information Technology - Faculty of Sciences - ULBS. She became seriously interested in medical informatics in 1985 through a project regarding an electronic directory for homeopathy, developed at the Institute for Research in Informatics - ICI Bucuresti. Since then she promoted medical informatics through lectures, presentations, publications, organizing conferences and workshops. After 1990 she was actively involved in several research projects, at national and European level. Her academic interests cover fields as: applied informatics in bio-medicine, nursing informatics, education and economics, statistical modeling, artificial intelligence, decision making. She promoted nursing informatics in Romania with the support of prof. Marianne Tallberg, IMIA SIG-NI and the Telenurse projects team. As a member of the Romanian Medical Informatics Society she coordinated until 2011 the Nursing Informatics Working Group. Among others, she contributed to the Telemedicine Glossary 3rd, 4th , 5th edition, Working document of EC, DG Information Society Technologies, Bruxelles, Belgium, 2001, 2002, 2003 and to the Nursing and Informatics for the 21st Century, by: Charlotte A. Weaver, Connie W. Delaney, Patrick Weber, Robyn Carr (eds), (HIMSS - Book of the Year Award 2006). Ioana Moisil is a member of the RMIS (Romanian Medical Informatics Society), EFMI, IMIA, ISCB, and several other international medical informatics associations. In 2010 she launched as editor the International Journal of Advanced Statistics and IT&C for Economics and Life Sciences.

MOLNAR EDWIN CHARLES

Charles Edwin Molnar (1935-1996) was a co-developer of one of the first minicomputers and a pioneer in cochlear modeling research. As a young researcher at the Lincoln Laboratory of the Massachusetts Institute of Technology in 1962, Molnar with another engineer, Wesley A. Clark - led a team of designers in developing the Laboratory Instrument Computer, or LINC. The machine, which was one of the few unclassified projects a the laboratory in the early 60s, was intended for doctors and medical researchers. Although it would be considered of insignificant power compared to modern personal computers, it was a self-contained machine that had a simple operating system and a small display and stored its programs on a magnetic tape. The LINC originated decades before the advent of the personal computer. Its development was the result of a National Institutes of Health (NIH) program that placed 20 copies of an early LINC prototype in selected biomedical research laboratories nationwide. Later, the LINC was produced in greater numbers by Digital Equipment Corp. and other computer manufacturers Molnar received a bachelor's degree (1956) and a master's degree (1957) in electrical engineering from Rutgers University, and received a doctoral degree (1966) from MIT in electrical engineering. His dissertation topic was the mechanics of the inner ear and how it translates auditory signals into neural responses. After leaving MIT, he established the Institute for Biomedical Computing at Washington University in St. Louis, where he worked from 1965 until 1995, when he became a senior researchfellow at Sun Microsystems in California. Molnar earned a worldwide reputation for his work in self-timed computer system theory, a design approach for ultrafast computers. While the operations of commercial computers are controlled by a single clock, most researchers in the field believe that significant speed breakthroughs await the advent of systems whose components can operate independently. At Sun, Molnar was continuing his work in this area. Molnar was known as an intensely curious researcher whose talents and interests ranged from physiology and bioengineering to electrical engineering and computers, music and furniture building, and hiking and canoeing. In the 1960s, Molnar and Clark obtained a patent for sending computer programs over cable television

lines to communicate data from central computers, which were expensive at the time, to less expensive bedside terminals in intensive-care units. The patent, which is now expired, turned out to be ahead of its time. Some companies are now starting to employ the cable technology, which allows users to send data much faster than by the more common telephone lines. Charlie Molnar was also well known as a pioneer in the modeling of the auditory system, especially numerical models of the function of the cochlea (the inner ear). When he died in 1996, he was working at Sun Microsystems on asynchronous circuits with Ivan Sutherland.

MONACO ALLESSANDRO

Allessandro Monaco is Project Chief Consultant. Italian Medicines Agency. Alessandro Monaco is a Scientific Consultant at the Italian Medicine Agency (AIFA) and for the internationalization process of the University of Brescia. He currently leads several international projects, supporting the scientific activities of the Presidency of the AIFA including the coordination

of the AIFA Consortium in the EIP. He received an international education at the National Institutes of Health (NIH) Bethesda (MD), focused on Molecular Genetics and Personalized Medicine and a Master in Healthcare and Pharmaceutical Administration.

MOONEY SEAN

Sean Mooney, PhD, FACMI, received his PhD in Pharmaceutical Chemistry from the University of California San Francisco. He co-directed the Indiana University School of Medicine Bioinformatics Core, and he was also an associate member of the Indiana University Cancer Center. Prior to his appointments at Indiana University, Mooney was an American Cancer Society John Peter Hoffman Fellow at Stanford University in the Department of Genetics and Medical Informatics. He has joined the faculty at the Buck Institute for Age Research as an associate professor and director of the bioinformatics core. He will continue his own work developing and applying methods in computational biology and bioinformatics to predict and treat

the molecular causes of genetic diseases. Mooney will also work closely with other Buck faculty to manage, analyze and generate hypotheses from the massive amounts of data generated from the 15 labs now active at the Institute. Bioinformatics typically refers to the field concerned with the collection, storage, analysis and dissemination of biological information. Computational biology involves developing algorithms and statistical models necessary to analyze biological data through the aid of computers. Mooney looks forward to applying these methods to the field of age research. "Aging involves a myriad of genetic changes that impact molecular function," said Mooney. "There is much to be gained from a detailed understanding of these factors. My goal is to translate that information into insights into human aging and age-related disease," Mooney said. Mooney was most recently an assistant professor of medical and molecular genetics at Indiana University School of Medicine. He and his colleagues in the Center for Computational Biology and Bioinformatics developed and launched Laboratree, a web-based collaboration and research management tool for scientists based on social networking. Sean will also play a crucial role in optimizing the work underway in geroscience program. Geroscience focuses on the intersection of normal aging and age-related disease. Geroscience at the Buck Institute includes molecular genetics, biochemistry, cell biology,

chemical biology, cancer biology, Alzheimer's disease research, endocrinology, invertebrate aging, nutrition, bioenergetics, Parkinson's disease research, molecular epidemiology, Huntington's disease research, ischemia (stroke), proteomics, human embryonic stem cells, genomic stability and statistics.

MOORE H. JASON
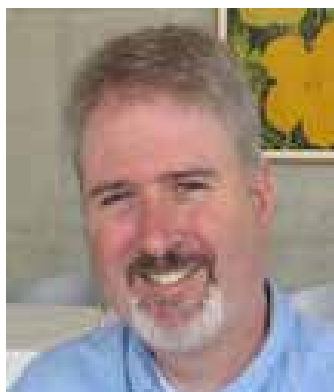
Jason H. Moore, PhD, FACMI, is a translational bioinformatics scientist and human geneticist, the Edward Rose Professor of Informatics and Director of the Institute for Biomedical Informatics at the Perelman School of Medicine at the University of Pennsylvania, where he is also Associate Dean for Informatics and Director of the Division of Informatics in the Department of Biostatistics and Epidemiology. He was the founding Director of the Institute for Quantitative Biomedical Sciences at Geisel School of Medicine of Dartmouth College r from 2010 until 2015. Moore's research focuses on the development and application of informatics methods for identifying combinations of DNA sequence variations and environmental factors that are predictive of human health and complex disease. For example, he developed the multifactor dimensionality reduction (MDR) machine learning method for detecting and characterizing combinations of attributes or independent variables that interact to influence a dependent or class variable. He then applied MDR for improved understanding of the interplay of multiple genetic polymorphisms of complex traits in genome-wide association studies. He is a former member of the National Library of Medicine grant review committee (BLIRC). He is the founding Editor-in-Chief of the journal BioData Mining. He has published more than 425 peer reviewed articles, book chapters and editorials. His translational bioinformatics research program has been continuously funded by multiple grants from the National Institutes of Health for the last 15 years. In 2011 he was elected as a Fellow of the American Association for the Advancement of Science (AAAS) and was selected as a Kavli Fellow of the National Academy of Sciences in 2013. In 2015 he was elected a Fellow of the American College of Medical Informatics (ACMI). He is author and co-author of a numerous articles in peer reviewed journals and other types of publications.

MORENO LUIS A.

Ph.D. in Medicine, Universidad de Zaragoza ,SpainPhD in Medicine, senior lecturer in the Faculty of Health Science in the University of Zaragoza. He is also Visiting Professor of Excellence at the University of Sao Paulo (Brazil) and affiliated member at the Johns Hopkins Global Center on Childhood Obesity. He studied Human Nutrition and Public and Community Health at the University of Nancy (France). He is the Principal Investigator of the GENUD research group (Growth, Exercise, Nutrition and Development) at the University of Zaragoza. He is the PI for UNIZAR in Feel4Diabetes Study and was the project leader for I-Family, ToyBox, IDEFICS and HELENA in Spain. He is a former member of the ESPGHAN Committee of Nutrition, current Vice-President of the Spanish Nutrition Society and President of the Danone Institut of Spain. His research interests are in epidemiological studies of diet and obesity, and obesity prevention programs in children and adolescents.

MORETIO-MOLEFI LYNETTE

Lynette Moretio-Molefi, Bsc, MB-CHB, TelemedDip, SMP, recently set up an eHealth consultancy business focusing on eHealth programme management, distance medical services and Telemedicine consulting. She is actively involved in the development of eHealth solutions for developing countries as well as giving strategic guidance in creating and implementing eHealth services both for clinical and educational purposes. The focus is on ICT - based systems that support all levels of healthcare including primary healthcare and tertiary care. Dr. Moretlo is currently consulting to the Medical Research council of SA on the implementation of a virtual hospital network involving 18 hospitals in one of the provinces in SA . Has spearheaded a successful rural connectivity pilot on Telemedicine in Partnership with Motorola and the State information Technology Agency using wireless systems in Limpopo province

MORRIS D. CYNTHIA

Cynthia D. Morris, PhD, MPH. has spent the majority of the last 10 years developing and nurturing clinical research education and career development at OHSU. She directs the education and career development core of OCTRI at OHSU. This includes a TL1 program for predoctoral students as well as the OCTRI educational platform which comprises the certificate program (Human Investigations Program), and the Master of Clinical Research. Dr. Morris co-directs a KL2 (formerly K12) at OHSU for mentored clinical and translational research and directs a T32 from AHRQ for health services research. Dr. Morris is the Assistant Dean in the School of Medicine with responsibility for medical school admissions, and a Professor and Vice Chair in the Department of Medical Informatics and Clinical Epidemiology. Dr. Morris has had continuous NIH support for more than 25 years and is respected for her expertise on the epidemiology of congenital heart defects, as well as methodologic expertise in registries and networks. At present, she

is the Research Director of the Oregon Rural Practice-Based Research Network and the Deputy Director of the National Endoscopic Database. In the last two decades, she has led multi-center clinical trial coordinating centers, has been the site PI of an NIH-sponsored clinical trial on preeclampsia, and founded and maintains the Oregon Registry of Congenital Heart Defects, a population-based registry that follows more than 5,000 individuals for natural history. Dr. Morris was awarded the 2004 Mentor Award from the Medical Research Foundation, an OHSU Excellence in Education award in 2006, and the John A. Resko Award for Faculty Research and Mentoring in 2007

MOURA JR LINCON DE ASSIS

Lincoln de Assis Moura Jr. is an Electronic Engineer with a MSc and a PhD from Imperial College of London. He has extensive experience in technology applications in medicine and health, having worked in organizations such as InCor or hospital of Sao Paulo, Oracle Brazil and the Ministry of Health. Currently, Dr. Lincoln works as an indepen-

dent consultant on projects that have focused on the strategic design of Health Information Systems. As part of his practice, Dr. Lincoln has always participated in technical and scientific societies and was president of SBEB–Brazilian Society of Biomedical Engineering Society, SBIS-Brazilian Society of Health Informatics and IMIA-LAC, the Regional Federation of Latin America for Health Informatics, he was also Coordinator of the Special Study of Health Informatics ABNT. Dr. Lincoln was the elected president of IMIA for the period 2011-2013. Early in his carrier Dr. Lincoln decided to seek a PhD to work in services with an academic focus that would ensure quality. As Head of R&D at the Heart Institute he led the development of methods and devices in cardiology and clinical systems. There, Dr. Lincoln learned to communicate in a jargon-free language that could be understood non-techies. As CIO for the Medical School Hospital, a complex with 2,200 beds in 6 Institutes, he devoted time building trust and creating consensus among stakeholders, an essential task in complex environments. That experience led him to the world of management of large Health Information Systems. In 2004, Dr. Lincoln led from conception to deployment of São Paulo City Health Information System, which includes today 800 facilities and 19 million people. This international success case granted them an Award at JavaOne 2005. As a volunteer, Dr. Lincoln is a former Chair of

several Brazilian Associations and a former President of the Latin-American Health Informatics Federation. He took office as the President of IMIA (www.imia.org), in August 2013, in Copenhagen, during MEDINFO 2013. Currently Lincoln creating project about National or Wide Regional eHealth Strategies using the very powerful ITU-WHO Tool Kit (http://goo.gl/DppsN) for that purpose. He has worked as a consultant in Africa and Latin-America, acted as an ad-hoc consultant to international organizations, such as IADB and PAHO, and participated in several government committees in Brazil and abroad. Dr. Lincoln also supervised 12 PhD students. He has published some 60 papers and delivered more than 200 speeches in Brazil and abroad.

MULA-HUSSAIN Y. I. LAYTH

Layth Y. I. Mula-Hussain, MB ChB, CCI, MSc, JB, EF, is the Founder Chairman (and Program Director) of the Scientific Council of Radiation Oncology at the Kurdistan Board for Medical Specialties (2003-present), Consultant Physician at the Zhianawa Cancer Center and Assistant

Professor at the School of Medicine of University of Sulaimani (Kurdistan, Iraq). He received his medical education, completed his clinical internship and clinical oncology training at the University of Mosul, College of Medicine (Mosul, Iraq). He completed radiation oncology residency at the King Hussein Cancer Center (Amman, Jordan) and radiation oncology fellowship at the Tom Baker Cancer Center/University of Calgary (Alberta, Canada). Beside the Jordanian Board certification in radiotherapy, he has MSc in advanced oncology and a Certificate in Clinical Investigation from Ulm University (Ulm, Germany). Layth was the 1st Middle Eastern who got the EF distinction (European Society for Radiotherapy and Oncology Fellow) after passing its examination (London, UK). He worked as a Consultant at the King Hussein Cancer Center and Expert at the International Atomic Energy Agency. He has over twenty publications, forty presentations, and thirty educational lectures and he is a member at several national and international scientific and professional societies and committees, including IMIA.

MUNTZ DAVID

David Muntz, is Senior Vice President and CIO, GetWellNetwork. He joined GetWellNetwork in October 2013 as the Senior Vice President and CIO working at the intersection of patient engagement, health information technology, and policy. He also leads the Health Informatics

Council of the O'Neil Center. He has now joined the Board and serves in a consulting role. From the period 2012 through 2013, David accepted a White House appointment to serve as the first Principal Deputy National Coordinator and Chief of Staff at the Office of the National Coordinator for Health Information Technology (ONC) at the U.S. Department of Health and Human Services in Washington, DC. During his tenure, David established the Office of Consumer e-Health and the Office of Chief Medical Officer, and implemented a private sector approach to internal governance and demand management. For the first 18 years of his career, David worked at the Wadley Research Institute and Blood Bank in Dallas, Texas, an organization whose entities included a hospital, outpatient facilities, research institute, computer institute, and the blood bank for Dallas County, starting as a biostatistician and ultimately assuming the role of CEO. He returned to health care information technology (IT) at Texas Health Resources, where he functioned as Senior Vice President and Chief Information Officer for 15 years. He then worked for 5 years as the SVP & CIO at Baylor Health Care System where he had responsibility for more than 700 employees. His organizations have been recognized nationally for innovation in information technology every year for more than 25 years including his time in the federal government. In 2014 the CHIME Board presented him

the CHIME CIO Legacy Award. In 2014, David was appointed as the first Advisor to the AHIMA Board of Directors. He is currently an active member of CHIME and HIMSS. David received an MBA from Southern Methodist University in Dallas, Texas and an AB degree in pre-medicine with a concentration in English from Columbia College in New York City.

MURPHY JUDY

Judy Murphy, RN, FACMI, FHIMSS, FAAN, is Chief Nursing Officer (CNO) with IBM Global Healthcare. Prior to this she was CNO/Director-Office of Clinical Quality & Safety, and Deputy National Coordinator for Programs and Policy at the Office of the National Coordinator for Health IT (ONC), Department of Health and Human Services (HHS) in Washington DC. In both roles she served to advance the vision of using health IT to improve health care, lower costs, and promote consumers' use of health IT for their own health. She came to ONC in Dec 2011 with more than 25 years of health informatics experience at Aurora Health Care in Wisconsin. As VP-EHR Applications, she

led their EHR program since 1995 and managed the organization's achievement of EHR Meaningful Use. Her informatics interests lie in system implementation, project management, patient engagement, and use of technology to support evidence-based practice; she has published and lectured nationally and internationally on these topics. She has a long-standing reputation of patient advocacy and maintaining a patient-centric point of view, and approaches her work with unyielding energy as well as passion and commitment to the healthcare transformation enabled by technology. Judy was on the Health IT Standards Committee for 3 years, where she co-chaired their Implementation Workgroup, and was a member of the Meaningful Use Workgroup. She served on the AMIA Board of Directors and the Health Information and Management Systems Society (HIMSS) Board of Directors. She is a Fellow in the American Academy of Nursing, the ACMI and HIMSS. She received the 2006 HIMSS Nursing Informatics Leadership Award, was named one of the "20 People Who Make Healthcare Better" in 2007 by HealthLeaders magazine, and was selected as one of 33 Nursing Informatics' Pioneers to participate in the Nursing Informatics History Project sponsored by AMIA, NLM, AAN, & RWJF.

MURPHY N. SHAWN

Shawn N. Murphy, MD, PhD, FACMI, received his bachelor's degree in chemistry from Notre Dame, and his MD and PhD in Neurobiology from the University of Chicago. After a medicine internship at Beth Israel in Boston, he undertook a neurology residency, epilepsy fellowship, and computer science fellowship all at the Massachusetts General Hospital. He then joined the faculty of the Laboratory for Computer Science at MGH and serves as an attending neurologist and instructor in medicine at Harvard. Dr. Murphy's informatics interests have centered on the use of clinical data to support research. He has designed 'complex adaptive systems' with mobile software agents to organize the unstructured elements of electronic medical records into formats that are usable for research purposes. He is the director of the Partners Research Patient Data Registry, which was architected in 1997, became operational in 2002, and has since supported more than

500 research projects. He also developed intuitive visual query models for both text and image data, and methods for representing research-related metadata.

MURRAY J. PETER

Peter J. Murray is a registered nurse, educator and health informatician. He is CEO of IMIA; he previously represented the United Kingdom (UK) to IMIA and held several Board positions. He started working in the health services (NHS) in the UK over 30 years ago, as a coronary/cardiac care nurse and a nurse educator. In parallel, he became involved in distance and online education, and in Health informatics and Nursing Informatics. He has worked for The Open University in the UK, developing distance and online educational materials for nurses and other health professionals. He has been a reviewer for many conferences and journals, and has presented at more than 100 events. He is a Fellow and Chartered Information Technology Professional of the British Computer Society. His current research interests include using social media for collaborative virtual engagement with health informatics events, and use of free/libre and open

source software. He has taught on several graduate level health informatics courses, most recently at University of Winchester in the UK and Walter Sisulu University in South Africa.

MUSEN A. MARK

Mark A. Musen is Professor of Biomedical Informatics at Stanford University, where he is Director of the Stanford Center for Biomedical Informatics Research. Dr. Musen conducts research related to intelligent systems, reusable ontologies, metadata for publication of scientific data sets, and biomedical decision support. His long-standing work on a system known as Protégé, the world's most widely used technology for building and managing terminologies and ontologies. Protégé is an open-source technology now used by thousands of developers to build intelligent computer systems and new computer applications for e-science. He is principal investigator of the National Center for Biomedical Ontology, one of the original National Centers for Biomedical Computing created by the U.S. National Institutes of Heath (NIH). He is principal investigator of the Center for Expanded Data Annotation and

Retrieval (CEDAR). CEDAR is a center of excellence supported by the NIH Big Data to Knowledge Initiative, with the goal of developing new technology to ease the authoring and management of biomedical experimental metadata. Dr. Musen chairs the Health Informatics and Modeling Topic Advisory Group for the World Health Organization's revision of the International Classification of Diseases (ICD-11) and he directs the WHO Collaborating Center for Classification, Terminology, and Standards at Stanford University. Early in his career, Dr. Musen received the Young Investigator Award for Research in Medical Knowledge Systems from the American Association of Medical Systems and Informatics and a Young Investigator Award from the National Science Foundation. In 2006, he was recipient of the Donald A. B. Lindberg Award for Innovation in Informatics from the American Medical Informatics Association. He has been elected to the American College of Medical Informatics and the Association of American Physicians. He is founding co-editor-in-chief of the journal Applied Ontology.

MYERS D. JACK

Jack D. Myers (1914-1998), a doctor who was widely regarded as one of the nation's best at diagnosis and who developed one of the first computer programs to help doctors diagnose complex cases. Dr. Myers was born in New Brighton, Pa. At Stanford University, he received a bachelor's degree in 1933 and a medical degree in 1937. He then worked at Stanford and at Harvard Medical School, Peter Bent Brigham Hospital in Boston and Duke University before joining the University of Pittsburgh where worked for the big part of his life. Dr. Myers, whose field was internal medicine, was the chairman of the Department of medicine at the University of Pittsburgh from 1950 to 1970 and later developed his software there using the principles of artificial intelligence. He once said his system might have quickly identified Legionnaire's disease as a new strain of pneumonia when it broke out in Philadelphia in 1976 and baffled medical science. He compared his software to a doctor's stethoscope. A 1994 article in the New England Journal of Medicine rated Dr. Myers's system and four others, giving them a collective report card with "a C minus," Dr. Miller said, noting that the rating was based on only the first response by the computer and ignored the program's ability to ask follow-up questions and apply further reasoning. When he began work on the program in 1970, Dr. Myers sought help from computer experts with experience in applying artificial intelligence to medicine. His first program could match 3,550 symptoms with more than 500 diseases that made up about three-quarters of the diagnoses in internal medicine. It was used at a number of hospitals and medical schools. In the 1980's, Dr. Myers shifted away from his original method, he built a system that would scan a computer library gleaned from medical research reports. Dr. Myers assigned doctors to study medical articles and code the information for entry into a single database, supplemented by Dr. Myers's own knowledge. That system, called "Q.M.R." for quick medical reference and sold by a company called First Databank, is still in use helping doctors make diagnostic decisions at medical schools and hospitals. He was president of the American College of Physicians in 1976-77, and was chairman of the National Board of Medical Examiners from 1971 to 1975.

MYKKÄNEN JUHA

Juha Mykkänen, PhD, is an adjunct professor of health information management in University of Eastern Finland, Kuopio, Finland. He is a researcher, research director and expert in health and wellbeing information systems, software engineering and information systems development research and development. He has managed several research and development projects and acted in various international and national expert and steering groups related to health information management. His main areas of expertise include health information systems, social and healthcare services innovation, application integration, interoperability, standardization, service-oriented architectures, enterprise architecture, enterprise modeling, healthcare information strategy, component-based systems development and web technologies. He has authored more than 170 scientific articles, professional books, reports and specifications. He has coordinated, managed and acted as a senior expert in projects related to architecture, interoperability and standards including HL7 and IHE, and coordinated various research proposals and events. He has been invited to expert positions in several national programs and has given many invited lectures in courses and events on national and international level. His main R&D interests include integrated care of social and health services, personal health information management, task and process analysis in HIS design and the architectural design of national and regional health information exchanges. His teaching and lecturing portfolio focuses on applications of enterprise architecture, interoperability standards, activity-driven systems development methods and design traceability in large-scale development initiatives. He has been leading the Health Information Systems research group of University of Kuopio and University of Eastern Finland for more than 10 years, along with many networked research and development projects with various partner universities, national authorities and companies. For several years, he has been a vice chair of the Finnish Social and Health Informatics Association and the representative of Finland in IMIA general assembly.

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NADKARNI PRAKASH

Prakash Nadkarni, MD, FACMI, is an Professor at the Center for Medical Informatics, Yale University School of Medicine. Dr. Nadkarni received his under-graduate medical degree from Bombay University, India, and subsequently obtained a specialty degree in pharmacology, a diploma in computer management, and a diploma in radiation medicine from Bombay University. Dr. Nadkarni's research interests focused originally on parallel computation in biomedicine and later on representation approaches and algorithms concerned with chromosomal maps generated by a variety of experimental methodologies. He is now involved in creating applications that use databases and database-related technology to address a variety of biomedical problems. An active area of recent research is the development of a generic (entity-attribute-value, or EAV) Web-accessible database for management of clinical studies. TrialDB, the database package resulting from these efforts, is available to informatics investigators as open source; it continues to be enhanced to better meet the needs of investigators and study management personnel. Dr. Nadkarni also studies the application of EAV database design to represent highly heterogeneous scientific data, and the EAV/CR framework is being employed for a neuroscience database at Yale that is focused on the olfactory system. Both TrialDB and EAV/CR have been developed from a common basis - the use of metadata stored in the database to automate various tasks related to the creation of robust Web-based applications, notably the automatic generation of user

interfaces for browsing as well as editing data. An offshoot of the focus on clinical databases has been research in the processing of textual medical data, such as discharge summaries and surgical notes. Prior to joining Yale University, Dr. Nadkarni was lecturer in pharmacology at GS Medical College and King Edward VII Memorial Hospital, Bombay, India; a consultant with Tata Unisys (an affiliate of Unisys Corp.) for computer applications in medicine, and a contributing editor to Science Today (now renamed 2001), India's leading science magazine. He is a member of the editorial boards of JAMIA, the Pharmacogenomics Journal (published by the Nature group), and the Journal of Postgraduate Medicine, Bombay.

NAFTALI BILLY

Billy Naftali is head of telemedicine departement in Satunol, a telecommunication-electronics company in Indonesia & medical advisor to two Fortune 500 companies. He has 13 years of experience in clinical & managerial positions in multiple medical & IT businesses. Billy received his medical degree from Padjadjaran State University Bandung &

studied healthcare law at Soegijapranata Catholic University. He has training in clinical quality assurance & breast diagnostics from the renowned Breast Assessment Center. He got certifications in healthcare business & biomedical engineering from 2 leading technology universities in Bandung.

NAGPAL K. SUMIT

Sumit K. Nagpal is the President and CEO of Alere Accountable Care Solutions, previously Wellogic, a market leader in providing clinical software solutions that connect healthcare information and workflows across the continuum of care. Under his direction, Wellogic delivered high-profile successes to clients and partners ranging from world-renowned hospitals to the industry's largest healthcare IT companies. Sumit's professional background includes more than 20 years of experience in software design, engineering, management, and executive leadership in healthcare information systems. He is a passionate advocate for the centrality of the provider-patient relationship and improved

communication for enhanced healthcare outcomes. Sumit is a frequent speaker on health information technology, patient-centered community-based infrastructures, user experience, design, security, and privacy at conferences around the world.

NARDONE BRUNO

Bruno Nardone, MHSA, FACHE is a Vice President at Health Advances, a strategy consulting firm that operates at the intersection of science, technology, and business strategy. He has over two decades of experience in the healthcare industry, largely focused on Health IT strategic planning, business development, and leading teams in the development and integration of health-related solutions. Prior to Health Advances, Bruno served as VP of Connected Health Solutions at Allscripts. He led several cross-organizational initiatives to develop new profit centers for Value Based Care/Population Health Management, integrate mobile platforms, and identify and integrate key acquisitions. He previously worked at SAIC, serving as first Vice President for Healthcare Transformation, leading high performance teams in the development and execution of new solutions, and then as SVP for the acquisition and integration of Vitalize Consulting Solutions focused on Patient Centered Care models. While at IBM Global Business Services, he served in a variety of roles across private sector and government healthcare, honing

expertise in enterprise strategic planning and business development, as well as a wide range of health-related solutions, such as electronic health records, public health, and health information exchanges. Bruno started his career as a Hospital Administrator in the New York metropolitan area where he managed clinical and non-clinical departments, as well as strategic projects ranging from Joint Commission Survey coordination to facilities redesign and satellite care site development. Bruno earned his BS at Cornell University and Master of Health Services Administration and Policy at George Washington University. He is a Fellow of the American College of Healthcare Executives.

NASZLADY ATTILA

Attila Naszlady (1931-2015) graduated Faculty of medicine at Semmelweis University, Budapest, Hungary in 1958. He was a member of the Academy of Science of St. Stephen. Also, he was member of the Hungarian Academy of Sciences. Professor Naszlady has teached clinical physiology at Medical University in Budapest, Cardiology in Postgraduate Medical School and Bioengineering at Technical University, Budapest, Hungary. Naszlady was Research Fellow of World Health Organization in Göteborg (Sweden), Naples, Milano (Italy) Academic PhD he achieved in 1979. As IMEKO member of TC-13, as representative for Hungary, he served from 1985-1997. Academician in Pontificia Accademia Tiberina, Rome, Vatican in 1999. Specialist in Internal medicine he became in 1965, Member of European Society for Cardiology he became in 2000. Medical Director of Hungarian Maltese Charity Service was in 1996. His interest in Medical informatics begun from 1989. He was representing member for Hungary of EU DGXIII CEN/TC251; General Medical Director of Policlinic of Hospitaller Bros. of St. John of God in Budapest was in 2000. His scientific work was based on interactions between structure and function in the cardio-pulmonary system - experimental, clinical and 3-D computer modeling. His results published in more than 120 scientific articles, in book chapters and invited lectures on International Congresses in a lot of Medical informatics conferences. Professor Attila Naszlady received many awards: Knighted in O.E.S.S.H. in Castle of Bouillon (Belgium) in 1993; Denis Gabor award for innovation in 1998 and Golden Cross Medal of Merit from Sovereigne Maltese Knight Order in 1999. His innovations and patent are: in 1963 - Capillar microscope, in 1964 - balloon for reanimation, in 1964 - extracorporal cardiac pacemaker, in 1966 - laboratory fraction collector, in 1984 - SANINFORM memory chip system (OTH Pat. reg No 190572), in 1995 - patient documentation on chip card and in 1997 - Chip-doki software. Professor Attila Naszlady was Hungarian representative in EFMI and IMIA from 1994 till 2002 and served as General secretary, Vice-President and President of EFMI (1998-1999) and IMIA Vice-President (2000-2002).

NATENZON YAKOVLEVICH MIKHAIL

Mikhail Yakovlevich Natenzon (1949-) is Chairman of Board of the «National Telemedicine Agency» Research-and-Production Union, Russian Federation. Mikhail Ya. Natenzon was born in Moscow. In 1972 graduated from the Applied mathematics faculty of the Moscow Electronic and Mechanical Engineering Institute, Degree of Doctor. He is Member of the Russian Academy of the Natural Sciences and author of over 150 scientific works, inventions and patents. From 1972 till 1997 – Senior research assistant of the USSR Space Research Institute of the Academy of Sciences; Participant of large

international space scientific projects. Mikhail is 1993 – Founder of the «TANA» group of companies; 1993 till now – Director General of the company «TANA – telemedicine systems» Co.; 2000 till now – Director General of the «VITANET» Ltd., 2002 till now – Chairman of board of the «National Telemedicine Agency» Research-and-production Union; 2002 till now – Vice-Rapporteur of the Working group on telemedicine of the International Telecommunication Union (ITU), 2005 till now – Deputy Head of the CIS Regional working group on telemedicine; 2010 till now – Head of the «Mobile Telemedicine Clinics and Mobile eHealth Terminals» Focus Group of the International Telecommunication Union. The «TANA» Group of Companies is established in 1993 and specializes on development, production and providing of the info-communication systems operating, including telemedicine systems, Public Health technologies and equipment. The main spheres of his activity are: development and implementation of the telemedicine and info-communication projects in Russia, the CIS and other countries; development and production of hardware-software facilities, telemedicine equipments, telemedicine consultation and diagnostic centers, full specter of Mobile Telemedicine Laboratory-Diagnostic Units; rendering of telemedicine services:

NELSON J. STUART

Stuart J. Nelson, was born and raised in California. His undergraduate education was at the University of California at Berkeley, where he took a Bachelor's degree in Mathematics. He attended medical school at the State University of New York in Brooklyn. After obtaining the MD degree, he interned at Philadelphia General Hospital on the University of Pennsylvania's medical service, and completed a residency in Internal Medicine at Metropolitan Hospital Center in New York City. He is certified by the American Board of Internal Medicine, and a Fellow of the American College of Physicians. He served on the faculty of the State University of New York at Stony Brook, in the Departments of Internal Medicine and of Community and Preventive Medicine, and at the Medical College of Georgia in the Department of Internal Medicine. He collaborated for several years with Dr. Marsden S. Blois, one of the founders of the field of Medical Informatics., on the RECONSIDER program and later on the Unified Medical Language System. In 1996 he moved to the National Library of Medicine as the Head of the Medical Subject

Headings Section. While at NLM, he revised the data structure of the Medical Subject Headings, managed the transition to a new database management system, and designed a new editing interface. In collaboration with the Food and Drug Administration, he designed and implemented DailyMed, a website of FDA approved drug labels. He also designed and developed of RxNorm, a standard vocabulary of clinical drugs. In 2001, he was elected Fellow of the American College of Medical Informatics. He has published extensively, especially in the area of computerized vocabularies.

NERLICH MICHAEL

Michael Nerlich (1953-), MD, PhD, is professor and Head of the Department of Trauma at the University of Regensburg Academic Medical Center Surgery and former President of the International Society for Telemedicine and eHealth (ISfTeH). Professor Michael Nerlich was born in Landshut, Germany. He received his approbation in medicine in 1978 from Munich University, where he earned his medical doctor degree in 1979. He finished his surgical training at Hannover Medical School in 1985, special-

ized in trauma surgery, got his PhD. degree in 1988. He spent research fellowships at the University of California, Davis, USA and at the Inselspital in Berne, Switzerland. He was elected full professor of trauma surgery at the Medical Faculty of the University of Regensburg and became head of the Department of Trauma at the University of Regensburg Academic Medical Center Surgery in 1992. He received several awards in trauma surgery and emergency medicine and is honorary member of several national trauma societies. He additionally serves currently as chair of the Regensburg Emergency Services Center at the University (RESCU). He has been principal investigator in many European and national research programs, especially in the field of telematics in healthcare. He has published over 160 research articles and book chapters and edited several books. His interest in telemedicine made him a founding member of the German Health Telematics Association, he is board member of the European Society of Telemedicine.

NESVIZHSKII ALEXEY

Alexey Nesvizhskii is a tenured Associate Professor in the Departments of Computational Medicine & Bioinformatics and Pathology at the University of Michigan, Ann Arbor. His research laboratory (www. nesvilab.org) is working in the area of bioinformatics, proteomics, and systems biology. The computational tools previously developed by Dr. Nesvizhskii and his colleagues, such as Trans-Proteomic Pipeline (including PeptideProphet and ProteinProphet), PeptideAtlas, SAINT, CRAPome, and DIA-Umpire are among the most cited proteome informatics tools and used by hundreds of laboratories worldwide. His lab actively collaborates with technology developers, biologists, and clinical scientists on a variety of projects, including analysis protein interaction networks, integrative modeling of multi-omics data to reconstruct targetable pathways in cancer, and biomarker discovery. Since 2015 Dr. Nesvizhskii serves as the Director of the Proteomics Resource Facility at the University of Michigan which aims to provide cutting-edge proteomics capabilities to the University-wide research community. As an enthusiastic educator, Dr. Nesvizhskii directs the NIH funded T32 Proteome Informatics of Cancer Training Program at the University of Michigan, and teaches graduate-level courses in the area of bioinformatics, proteomics, and systems biology.

NEWELL ALLEN

Allen Newell (1927-1992) was a researcher in computer science and cognitive psychology at the RAND Corporation and at Carnegie Mellon University's School of Computer Science, Tepper School of Business, and Department of Psychology. He contributed to the Information Processing Language (1956) and two of the earliest AI programs, the Logic Theory Machine (1956) and the General Problem Solver (1957) (with Herbert A. Simon). He was awarded the ACM's A.M. Turing Award along with Herbert A. Simon in 1975 for their basic contributions to artificial intelligence and the psychology of human cognition. Newell com-

pleted his Bachelor's degree in physics from Stanford in 1949. He was a graduate student at Princeton University during 1949-1950, where he studied mathematics. Due to his early exposure to a new field known as game theory and the experiences from the study of mathematics, he was convinced that he would prefer a combination of experimental and theoretical research to pure mathematics, In 1950, he left Princeton and joined the RAND Corporation in Santa Monica where he worked for a group that was studying logistics problems of the Air Force. His work with Joseph Kruskal led to the creation of two theories: A Model for Organization Theory and Formulating Precise Concepts in Organization Theory. Newell eventually earned his PhD from the now Tepper School of Business at Carnegie Mellon with Herbert Simon serving as his advisor. Afterwards, Newell turned to the design and conduct of laboratory experiments on decision making in small groups. He was dissatisfied, however, with the accuracy and validity of their findings produced from small-scale laboratory experiments. He joined with fellow RAND teammates John Kennedy, Bob Chapman, and Bill Biel at an Air Force Early Warning Station to study organizational processes in flight crews. They received funding from the Air Force in 1952 to build a simulator that would enable them to examine and analyze the interactions in the cockpit related to decision-making and information-handling.

From these studies, Newell came to believe that information processing is the central activity in organizations. In September 1954, Newell enrolled in a seminar where Oliver Selfridge described a running computer program that learned to recognize letters and other patterns. This was when Allen came to believe that systems may be created and contain intelligence and have the ability to adapt. With this in mind, Allen, after a couple months, wrote in 1955 The Chess Machine: An Example of Dealing with a Complex Task by Adaptation, which outlined an imaginative design for a computer program to play chess in humanoid fashion. His work came to the attention of economist (and future nobel laureate) Herbert A. Simon, and, together with programmer J. C. Shaw, they developed the first true artificial intelligence program, the Logic Theorist. Newell's work on the program laid the foundations of the field. His inventions included: list processing, the most important programming paradigm used by AI ever since; the application of means-ends analysis to general reasoning (or "reasoning as search"); and the use of heuristics to limit the search space. They presented the program at the Dartmouth conference of 1956, an informal gathering of researchers who were interested in simulating intelligence with machines. The conference, now widely considered the "birth of artificial intelligence", was enormously influential and those who

attended became the leaders of AI research for the next two decades, Newell included. Newell and Simon formed a lasting partnership. They founded an artificial intelligence laboratory at Carnegie Mellon University and produced a series of important programs and theoretical insights throughout the late fifties and sixties. This work included the General Problem Solver, a highly influential implementation of means-ends analysis, and the physical symbol systems hypothesis, the controversial philosophical assertion that all intelligent behavior could be reduced to the kind of symbol manipulation that Newell's programs demonstrated. Newell's work culminated in the development of a cognitive architecture known as Soar and his unified theory of cognition, published in 1990, but their improvement was the objective of his efforts up to his death (one of the last Newell's letters). Newell received a lot of Awards and honors for his excellent work in AI fields..

NGUYEN VIET

Viet Nguyen, MD, is Chief Medical Information Officer (CMIO), Health and Life Sciences, Systems Made Simple, a Lockheed Martin Company. Viet Nguyen is working toward improving continuity of care and patient safety through integrated technology. He works as an informaticist with federal agencies, supporting terminology and interoperability efforts. He is also a clinical champion for the FHIR

community, leading clinical connectathons at HL7 meetings. Dr. Nguyen trained at the University of Utah as a medical informatics fellow.

NILSEN WENDY

Wendy Nilsen, PhD, is a Program Director for the Smart and Connected Health Program in the Directorate for Computer & Information Science & Engineering at the National Science Foundation. Her work focuses on the intersection of technology and health. This includes a wide range of methods for data collection, data analytics and turning data to knowledge. Her interests span the areas of sensing, analytics, cyber-physical systems, information systems, big data and robotics, as they relate to health. More specifically, her efforts include: serving as cochair of the Health Information Technology Research and Development community of practice of the Networking and Information Technology Research and Development Program; the lead for the NSF/NIH Smart and Connected Health announcement; convening workshops to address methodology

in mobile technology research; serving on numerous federal technology initiatives; and, leading training institutes. Previously, Wendy was at the NIH Office of Behavioral and Social Sciences Research (OBSSR).

NOHR CHRISTIAN

Christian Nohr, MD, PhD, is Professor at Aalborg University, Aalborg, Denmark. During 1972 - 1975 he studied Electronic technician apprentice, Danfoss A/S. In the period April - June 1974 he worked as Electronic Technician, Morse Chain, Ithaca, New York, USA. and in 1977-1978 as Electronic technician, Danfoss A/S. In the period July-August 1982 he was Electronic technician at Aalborg Hospital. From September 1984 till February 1986 he worked as Lecturer, Aalborg University. From December 1985 till August 1986 he was System Manager on Borroughs computer system in the municipal administration in Aalborg. From February till July 1989 he worked as Assistant Professor in Humanistic Computer Science at Department of Communication, Aalborg University. In the period 1986 - 1991 he was Research associate at Department of Development and Planning at Aalborg Univer-

sity. He earned MSc. Engineering (Biomedical Engineering and Health-care Planning) in 1984 at Aalborg University. PhD thesis he earned (Technology Assessment and Health Care Informatics) in 1991 at Aalborg University. In May 1995 Christian Nohr became Associate Professor in Health Care Informatics and Planning, Department of Development and Planning, Aalborg University. From January to December 1990 he was Visiting Fellow at University of Texas Health Science Center at Houston, Program on Humanities and Technology in Health Care. From October 1996 till May 1997 he was Visiting Academic at Center of Medical Informatics, Monash University, Melbourne, Australia, and from August 2003 till February 2004 he was Visiting Academic at Monash Institute of Health Services Research, Monash University, Melbourne, Australia. His professional Interests is in the fields: Health Informatics; Organizational change; Evaluation and Technology assessment.

NOGUEIRA PAULO

Paulo Nogueira has Degree and a Master in probability and statistics, as well as a PhD in international health (health and development policies). He is currently Director of Information and Analysis Department in the Directorate General of Health, invited Assistant Professor in Faculdade de Medicina, University of Lisbon and researcher in the Environmental Health Institute (ISAMB of the Faculdade de Medicina, University of Lisbon). He was statistician for more than 16 years at the National Health Institute and has authored many national and international publications.

NOLAN CHRISTOPHER

Christopher (Chris) Nolan has more than 35 years of experience in health IT, including nine years with the Irish Government Health Service and five years with the UK NHS. He has also worked on projects with large multinational Health IT companies globally. In his current position as Director of the Institute of Health Care Informatics in Ireland, Chris Nolan has worked on acute care hospital information systems, laboratories, pharmacy, radiology and imaging, as well as all other departments including finance and administration. His past and current positions also include Director of Healthcare Informatics Training Services Ltd. in Ireland, founder member of the HealthCare Informatics Society of Ireland and the Healthcare Informatics Standards Committee of the National Standards Authority of Ireland, board member of the EuroRec Institute and joint owner of a nursing home, residential home and community care organization. He also works on a number of European Community projects covering the Electronic Health Record.

Nolan's credentials include: Fellow Irish Computer Society, Fellow Institute for Management Information Systems, Charted IT Professional Fellow of the British Computer Society, Fellow Institute of Directors and Fellow Royal Academy of Medicine in Ireland.

NORDBERG RAGNAR

Ragnar Nordberg was Chair of the MIE 2008 organizing committee and is currently member of the EFMI Council. From 2015 active as treasurer of EFMI. He is CIO Emeritus of Sahlgrenska University Hospital, CEO for JMP R&D AB and member of SFMI (Swedish Federation of Medical Informatics) since 1979. He has been Chairman and Secretary of the Board of SFMI during different periods. His field of research includes Hospital information systems, in particular; Security, Integrity and Ethics of medical informatics. He is also a member of the EFMI working group for security in medical informatics and was active as Chairman of the CEN/TC 251 WG III Swedish mirror-group until 2009. He also participated in CEN/TC 251 WG III and ISO/TC 215 WG 4 for many years.

NORMAND SHARON-LISE

Sharon-Lise T. Normand, PhD, is a professor of health care policy (biostatistics) in the Department of Health Care Policy at Harvard Medical School and in the Department of Biostatistics at the Harvard School of Public Health. Her research focuses on the development of statistical methods for health services research. She has developed a line of research on methods for the analysis of patterns of treatment and quality of care in cardiovascular disease and mental disorders. Dr. Normand earned her BSc and MSc degrees in statistics from the University of Western Ontario and her PhD in biostatistics from the University of Toronto. She is a fellow of the American Statistical Association, a fellow of the American College of Cardiology, and an Associate Member of the Society of Thoracic Surgeons. She serves on task forces for the American Heart Association, the American College of Cardiology, and the Society of Thoracic Surgeons; and is currently a member of the Committee on Aerospace Medicine and the Medicine of Extreme Environments; and the Committee on Future Directions for the National Healthcare Quality and Disparities Reports.

NORMANDIN R. STEVEN

Steven R. Normandin (USA) is President, AMD Global Telemedicine, Inc; Board Member, International Society for Telemedicine and eHealth (ISfTeH). Mr. Normandin joined AMD Telemedicine in 1991, was named Vice President and Director in 1994 and in 2006, Mr. Normandin led a management buyout of the clinical business of AMD Telemedicine and formed AMD Global Telemedicine, where he became President. Steve has over 25 years of management experience in various entrepreneurial ventures with primary focus on growing technology and service related businesses. As founder and President of Communicore, Inc., a 24-hour call center service business, he was responsible for management of the company through years of rapid growth until its final sale to a national concern in 1992. He was also Vice President of Operations for Custom Sentry Alarms, Inc, one of the largest privately held electronic security companies in New England until its sale in 1990. Steve has presented at numerous telemedicine forums throughout the North America, Africa and Asia. Steve is on the Board of Directors of the International Society for Telemedicine and eHealth in Zurich, Switzerland, a member of the Executive Committee of the American Telemedicine Association Industry Council and a member of the Board of Governors of Lowell General Hospital in Lowell, MA. He was previously a member of the Board of Directors of Canadian Society of Telehealth, the American Telemedicine Association, where he served as Chairman of the Industry Council, and on the Executive Board of Directors of the Greater Lowell Chamber of Commerce. Steve also previously served on the AT&T Healthcare Executive Advisory Committee. In 2006 Steve was the first recipient of the annual "Industry Council Award for Leadership in the Advancement of Telemedicine" by the American Telemedicine Association. In 2011, Steve was elected into the American Telemedicine Association College of Fellows. Steve holds a Bachelors of Science in Management from Merrimack College and resides in Chelmsford.

NYKANEN PIRRKO

Pirkko Nykänen, PhD, professor in health informatics in University of Tampere, School

of Information Sciences, since 2009. She has worked as a senior researcher, VTT Technical Research Center of Finland, Medical Engineering (1975-2001) and as a development manager in the National Institute for Health and Welfare (2001-2003). She has been a visiting lecturer in Fudan university, Medical Faculty, Key Lab for Health Technology Assessment, Shanghai, PR China (2008); in Pennsylvania State University (PennState), School of Information Sciences and Technology, USA (2000-2001); and in Universite de Lille, Center d'Etudes et de Recherche en Informatique Medicale, France (1994). She has been chairing the editorial board of the Finnish Journal for eHealth and eWelfare (2013-2014), and the Finnish Society for Social and Healthcare Informatics, being a board member of both today. Her research has been focused on personal health and wellness information ontologies and modeling, development of health information systems, evaluation methodologies for health information systems and technology, analysis and assessment of national health information systems development and adoption. Some of the recent research projects are: Development of an ecosystem and methodological guidelines for procurement of comprehensive eHealth systems (2014-2015); Trusted eHealth and eWelfare Information Space, Finnish Academy of Sciences (2009-2012); Development of guidelines and principles for adoption of the Finnish nursing classification in the nursing doc-

umentation systems, Ministry for Social Affairs and Health, National Institute for Health and Welfare (2010-2011); Review of the Finnish National Health IT services, Ministry for Social Affairs and Health (2005- 2010); Evaluation and assessment of the Finnish nursing classification and nursing documentation systems, Ministry for Social Affairs and Health (2010); Integration alternatives of the electronic patient record systems with the national health IT infrastructure, SITRA (2009); MyWellbeing, Citizen-centered health services, TEKES FinnWell-programme (2008-2010); Further development of reference-based regional health IT systems, Itella Information Oy (2009); Multimodal gaming environment promoting awareness of health in a social and positive way, TEKES FinnWell program (2008-2009); Medication information management in health information systems, TEKES FinnWell-programme (2006-2008); China-Finland eHealth Partnership, Citizen-centered health care services, integration and interoperability of health IT systems, TEKES FinnWell program (2006-2008) and Guidelines for good evaluation practices of health information systems and technology, EFMI WG HISEVAL (Evaluation of Health Information Systems) (2004 -). She has more than 160 publications in the medical informatics domain.

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O'CARROLL PATRICK

Patrick O'Carroll, MD, MPH, FACPM, FACMI, is faculty and frequent guest lecturer at the Summer Institute for Public Health Practice for NWCPHP. Patrick is currently a Rear Admiral and Assistant Surgeon General in the US Public Health Service, serving since January 2003 as the Regional Health Administrator for Region X. As the Regional Health Administrator, Patrick serves as the region's principal federal public health physician and scientist representing the Assistant Secretary of Health and the US Department of Health and Human Services. He also holds Affiliate Professor appointments in the Departments of Epidemiology and Health Services at the University of Washington School of Public Health, and in the Department of Biomedical Informatics and Medical Education in the School of Medicine. Areas of Expertise: Public health systems, especially at the federal level; Public health informatics; General public health practice. Patrick has received numerous awards and recognition for his 27

years in the United States Public Health Service as an epidemiologist, informatician, program director, and leader.

O'BRIEN JOHN

John O'Brien is on secondment from his post of Chief Executive at St. James's Hospital, the largest Academic Teaching Hospital in Ireland as Adviser to the CEO of the HSE on strategic issues, pertaining mainly to Hospitals. He has extensive experience in Health and Hospital Management both Nationally and Internationally covering some 30 years. John has led and executed a large range of special interest initiatives in the Health Sector covering areas such as Information Systems, Strategy Planning, Commissioning of major health Enterprises, Corporate Governance and Executive systems design and large scale organization reconfiguration and change. He has also participated as a member of a number of Ministerial/Department of Health & Children sponsored review groups including Steering Panels for the Value for Money Review of the Health System (Deloitte & Touche) and more recently the Audit of Structures and Functions in the Health System (Prospectus),

which report formed the basis for the Major Reform Program at present in implementation in the Irish Health System. John holds graduate qualifications in Economics, Political Science and Health Management and a Masters degree in Public Administration. He also holds a Senior Lecturer position in Health Policy and Management with the University of Dublin, Trinity College. John is a Fellow of the Royal Academy of Medicine in Ireland and a member of the Irish Statistical and Social Enquiry Society. In the area of quality, John has acted as Project Director of the National initiative established to develop an Accreditation Scheme for the Irish Health System. Up to 2004, he held the position of Transitional Executive Head of the Irish Health Services Accreditation Board (IHSAB), the Statutory Body established to, inter alia, administer this scheme. He was appointed Surveyor as part of the first wave initiative in this area in 2000 and has led surveys in Major Academic and large group Hospitals both in and out with Ireland (including Canada, South East Asia, Australia etc.).

O'CONNOR BRIAN

Brian O'Connor is Chair of European Connected Health Alliance. Brian O'Connor was born in Belfast, Northern Ireland and has developed his career as a consultant, manager and/or investor in both private and public companies. He has worked in the UK, the US and lived in Hong Kong for eleven years. He has gained vast experience as a company director in a variety of industries and professions, and has raised significant sums for companies through both private equity structures and stock exchange listings. Through his long established consultancy company, Corporate Direction Ltd, he is currently providing strategic advice to Governments, International organisations and companies on the challenges facing healthcare in general and specifically on the Connected Health opportunity. Brian has founded a number of companies in the healthcare services area in the UK, Ireland and Hong Kong and thus has experience of the public and private health care systems in a number of countries. He has understanding of the often difficult balance

between delivering care and making profit. He believes that overcoming the cultural and other barriers within healthcare is an interesting if sometimes frustrating challenge, but worthwhile if it leads to better patient care. Brian is Chair of the European Connected Health Alliance organisation www.echalliance.com the rapidly expanding not for profit membership organisation. It has created an International Network of Permanent Connected Health Ecosystems throughout Europe, to provide sustainable and structured opportunities for industry, academia and health and care providers and payers to meet and provide solutions to specific problems. Brian is a member of the European Commission's EHealth Stakeholder Group and a member of the European Innovation Partnership B3 Action Group on Integrated Care. He also sits on the board of the Scottish Digital Health Institute and the Connected Health and Prosperity Board in N.Ireland. He is also a Director and Shareholder of the China Connected Health Alliance, which is based in Shanghai and Beijing. He is a director and shareholder in Connected Health Ltd, a start up in N.Ireland and makes investments in health and non-health companies from time to time.

O'DONNELL RONALD R.

Doctor of Behavioral Health, Clinical Professor (FSC), Arizona State University College ,USA. Dr. O'Donnell is a Clinical Professor, psychologist and founding Director of the Doctor of Behavioral Health program (2008 – 2014) in the College of Health Solutions at Arizona State University, in Phoenix, Arizona. He is president of SunCrane Health Solutions, LLC, an international behavioral health consulting company, and is Education Director for HSAIG, a medical consultation and training company. Dr. O'Donnell is a leader in the field of education and training on "integrated behavioral healthcare", the use of behavioral interventions to improve both medical and psychiatric problems, such as diabetes and depression. Dr. O'Donnell has led the development of the Doctor of Behavioral Health degree curriculum and internship training program and expansion to include both clinical and health management concentrations. Dr. O'Donnell is now working on the development of international education programs for the College of Health Solutions, as well as the development of new integrat-

ed health care degrees and physician certificate education programs. Dr. O'Donnell has over four years of experience as a consultant, trainer and lecturer in China and Southeast Asia. He continues longstanding physician training programs in Beijing and has presented many other training sessions in Shanghai, Guangzhou and Shenzhen. Dr. O'Donnell has presented at conferences in the United States and in China, Taiwan and Malaysia. He has coordinated training visits for Chinese physicians to the United States. He has been a faculty teaching courses at Sichuan University and Beijing Normal University. He is on the editorial board for the journal The International Journal of Psychotherapy, Counseling & Psychiatry: Theory, Research & Clinical Practice and also the journal Family Medicine and Community Health. Prior to his current position Dr. O'Donnell spent over 10 years as a leader in health plans as director of disease management programs. He directed teams of physicians, nurses, dieticians and behavioral health consultants on providing patient prevention and disease management programs for conditions such as hypertension, diabetes and depression. He has consulted with national companies on the design, implementation and evaluation of health management programs that incorporate web-based patient education and self-management tools. He is a leader in the application of phone and table Apps for health manage-

ment outcomes and behavior change for patients with chronic illness. Earlier in his he served as director of outpatient behavioral health clinics that were connected with the patient community health clinic and family physician. He provided physician consultation and training on behavioral health problems. Earlier he was director of psychiatric hospital inpatient units. He trained psychiatrists and nurses on behavioral health and launched a comprehensive group education treatment program for patients with severe mental illness. Dr. O'Donnell has significant experience treating the severely mentally ill, including as a community based care manager providing crisis management. Dr. O'Donnell's clinical experience includes treatment of adult depression, anxiety, and trauma, substance abuse, child treatment of attention deficient disorder, autism spectrum disorders and oppositional defiant disorders, and adolescent treatment for family conflict, substance abuse and school behavior problems. He is experienced in individual, couples and family, and group psychotherapy treatment techniques.

Dr. Dr. O'Donnell has dedicated his career to the delivery of healthcare programs that improve patient satisfaction and clinical outcomes while also improving cost-efficiency. He has blended a career that combines deep management and clinical experience. He has a successful track record in aca-

demic education with the highly successful Doctor of Behavioral Health program. Finally, he has developed an extensive catalog of education and training programs designed specifically for the China and Southeast Asia healthcare system.

OFOMATA-ADEREMI OJU

Uju Ofomata-Aderemi is currently Programme Director, Mobile4Good projects at OneWorld UK, where she oversees mobile and Web-based community empowerment projects in Africa. In the last 6 years, she has overseen the development and implementation of the Learning about Living Programme, a sexual and reproductive health educational project which uses new media to empower adolescents (especially young girls), to improve their life chances. Following a successful two-year pilot in Nigeria, the programme is being scaled up across Nigeria, launched in Senegal and Morocco, and more recently in 2012, Mali and Egypt. Uju has worked previously as a Pharmacist with GlaxoSmithKline Pharmaceuticals in Nigeria, and as the Head of Corporate Affairs, led

the Corporate Social Responsibility initiatives of a bank in Nigeria. She has an MBA and a MPH from the University of Birmingham, United Kingdom and her interest is in Public-Private and Voluntary sector partnerships for social development and poverty alleviation

OHNO-MACHADO LUCILA

Lucila Ohno-Machado, MD, PhD, FACMI is Associate Director of the Department of Radiology Decision Systems Group at Brigham & Women's Hospital and Associate Professor of Radiology at Harvard Medical School. She also is an Affiliated Faculty member in the Health Sciences and Technology Division for Harvard and MIT. Dr. Machado earned an MD from the University of Sao Paulo School of Medicine in Brazil, an MHA from Escola de Administracao de Sao Paulo, FGV, Brazil, and a PhD from Stanford University. From 1990 to 1991, Dr. Machado served as the director of the Medical Informatics program in the University of Sao Paulo Radiology department. She has been an Information Technology Services consultant for Kaiser Permanente in Walnut Creek, California and has taught

as both an Instructor and an Assistant Professor in the Harvard Medical School Radiology department. Dr. Machado has received numerous honors for her work in medical informatics. She received the Doctoral Dissertation Award from the Agency for Health Care and Policy Research in addition to an award for Best Theoretical Paper in the Student Paper Competition at the Eighteenth Symposium on Computer Applications in Medical Care, AMIA. She has also been recognized by AMIA as a Best Paper Award finalist at the 1996 Fall Symposium and as a Martin Epstein award recipient in 1994. Dr. Machado also received the Dean's fellowship award from the Stanford University School of Medicine, the James A. Shannon Director's Award from the National Institute of Health, the Award for Outstanding Contributions to Research from Brigham & Women's Hospital, and the Taplin Award from the Division of Health Sciences and Technology, conferred by Harvard and MIT. She has also given of her time by sitting on several review committees and panels, including the Biomedical Library Review Committee for the National Library of Medicine and the Special emphasis panels of the NIH's National Center for Research Resources, the National Institute of Environmental Health Sciences, and the National Heart, Lung, and Blood Institute. Dr. Machado currently serves as a Reviewer for the Norges Forskningsrad (Norwegian Research Council) and

was an Editorial Board member of the Journal of Biomedical Informatics.

OJALA SARI

Sari Ojala is Marketing Communication Manager at Invest in Finland. Sari has a Msc in Economics. She is a promotion professional and owner in KivaKoti. Sari's background is in ICT and media sectors. Sair is Marketing Communication Manager at Invest in Finland. Invest in Finland is the government agency that promotes foreign investments into Finland. IIF assists international companies in finding business opportunities in Finland and provide all the relevant information and guidance required to establish a business in Finland.

OKARAFOR EKPE

Ekpe Okorafor is the founder of and chief consultant for RadiCube LLC. Dr. Ekpe Okorafor brings a combination of research and development skills and more than 15 years of experience in large complex computing systems, network architectures and IT solutions. Dr. Ekpe Okorafor received the received the MSc and PhD degrees in Electrical and Computer Engineering in 2002 and 2005 respectively, from Texas A&M University. He has worked in leading research labs including IBM Watson Research and Almaden Research Centers and has managed a large Information Technology department. He is also a visiting professor at the African University of Science & Technology. Dr. Ekpe Okorafor's expertise includes computer architecture, mobile networks, virtualization, grid/cloud computing, embedded systems, security, performance modeling and optimization. He has authored and co-authored many conference papers and journal publications.

OKUN SALLY

Sally Okun is Vice President for Advocacy, Policy and Patient Safety at PatientsLikeMe, an online patient powered research network. She is responsible for bringing patient voice and insight to diverse advocacy and policy discussions at national and global levels, and is the company's liaison with government and regulatory agencies. Sally joined the company in 2008 as the Manager of Health Data Integrity and Patient Safety overseeing the medical ontology and development of the Drug Safety Platform. She is a member of numerous advisory and expert panels. Sally, an RN palliative care specialist, received her Master's degree from The Heller School for Social Policy & Management, was a fellow at NLM Program in Biomedical Informatics and a Salzburg Global Fellow.

OLUOCH TOM

Tom Oluoch was born in Kisumu, Kenya. He studied applied mathematics and computer science at the Universities of Nairobi (Kenya) and Manchester (UK) before obtaining a PhD in Medical Informatics from the University of Amsterdam. Dr. Oluoch has 21 year of experience designing and implementing large informatics projects in a number of African countries including Nigeria, Ghana, Zambia, Uganda, Congo Brazzaville, Malawi and Tanzania. He started his career in 1993 in Kisumu, Kenya as a systems analyst for a bilateral water project between the Governments of Kenya and Netherlands. In 1998, he joined the Wellcome Trust/Kenya Medical Research Institute (KEMRI) research collaborative program as the head of data management and ICT. Dr. Oluoch developed data management systems to support several studies and helped researchers prepare data for statistical analysis. He was also responsible for the ICT installations which included a local area network, VSAT communication, email and database servers and a helpdesk system. From 2005 to date, he has provided leadership in national eHealth projects supported

by the US Centers for Disease Control and Prevention (CDC) in Kenya. Such projects include the development and scale-up of interoperable electronic health records (EHRs) and a national health data warehouse. These systems are grounded in global standards and protocols for information exchange. Dr. Oluoch also oversees capacity building projects that aim at supplying qualified health informatics graduates through didactic training, internship and fellowship programs. Dr. Oluoch is the founding and current chairman of the Kenya Health Informatics Association (KeHIA). KeHIA, which is affiliated to the International Medical Informatics Association (IMIA), brings together professionals from diverse backgrounds with an interest in health informatics. He previously served as the secretary to the board of management for the Consortium for National Health Research in Kenya and was responsible for health systems and informatics activities (2008 – 2012). At CDC-Kenya, he is actively involved in evaluation studies for Health IT and has authored several informatics papers in peer-reviewed journals.

OMENN GIL

Gil Omenn, MD, PhD, FACMI, received his AB degree from Princeton and his MD from Harvard. After internship and residency in Internal Medicine at Massachusetts General Hospital, he was a US Public Health Service officer and research fellow at the National Institutes of Health (NIH). He then undertook a fellowship in Medical Genetics at the University of Washington in Seattle, where he earned a PhD in Genetics. He stayed on as faculty at the University of Washington, became an Investigator of the Howard Hughes Medical Institute, and climbed the academic ranks to Professor of Medicine in 1979. He diversified his portfolio of achievement by serving as White House Fellow at the US Atomic Energy Commission in 1973–1974, Associate Director of the White House Office of Science and Technology Policy from 1977 to 1980, Associate Director of the federal Office of Management and Budget, 1980–1981, Visiting Professor in the Woodrow Wilson School at Princeton in 1981, and the first Science, Engineering and Public Policy Fellow of the Brookings Institution, 1981–82. From 1982

to 1997 he was Professor of Environmental Health and Dean of the School of Public Health and Community Medicine at the University of Washington, then moved to Michigan to become Executive Vice President for Medical Affairs and CEO of the University of Michigan Health System from 1997 to 2002 and Professor of Medicine, Genetics, and Public Health (continuing). Dr Omenn is a leader in the emerging discipline of Proteome Informatics. He launched the Human Plasma Proteome Project of the international Human Proteome Organization. The Human Proteome Organization has enhanced the development of protein-related research databases that are an essential infrastructure for work in protein identification, characterization, and systems biology. At the time of his election, Dr Omenn was Director of the University of Michigan Center for Computational Medicine and Bioinformatics and a senior director of the NIH National Center for Integrative Biomedical Informatics, one of the seven National Centers for Biomedical Computing. He has been active in the AMIA Translational Bioinformatics Summit meetings. He is an elected fellow of the American College of Physicians, American Academy of Arts and Sciences, American Association for the Advancement of Science (president in 2006), and member of the Institute of Medicine.

ONOKIOJARE EPHRAIM DAFIEWHARE

Dafiewhare Ephraim Onokiojare is Head of Family Medicine and General Outpatient Department in KIU/KIUTH of Kampala International University, Western Campus, Bushenyi, Uganda. He graduated at University of Benin. He worked as medical doctor at KIU Teaching Hospital, Ishaka in Uganda from October 2006 till Present (8 years 7 months). He is national representative of Uganda in International Association of Medical Informatics.

OREL ANDREJ

Andrej Orel is a member of Slovenian Medical Informatics Association and Slovenian representative in the Council of the European Federation for Medical Informatics (EFMI). He also represents Slovenia in the General

Assembly of the International Medical Informatics Association (IMIA). He is currently positioned as Edu & QA Manager. His field of research includes; Distributed & object-oriented systems, HIS and EPR, UML methodology & tools, Multi-tier Web applications, Information systems audits, Open source systems and Quality Assurance in SW development.

ORTHNER F. HELMUTH

Helmuth (Helly) Franz Orthner (1941-2009), PhD, FACMI, was born in the small Alpine village of Silz, Austria. He showed an early aptitude in math and science which he pursued at the Higher Technical Institute in Innsbruck, followed by the Technical University of Munich, where he earned a Masters Degree in Electrical Engineering and Communication Technology. In the mid-1960's, Dr. Orthner became interested in a new educational discipline called Biomedical Engineering, which combined his love of engineering with the long Orthner family tradition of medicine. He im-

migrated to the US in 1967 after being offered a full graduate fellowship from the Biomedical Engineering Department at the University of Pennsylvania, a relatively new program and one of the first in the US. He earned his PhD in Biomedical Engineering from Penn in 1973. In 1972, at the invitation of his mentor and friend, Dr. William S. Yamamoto, Dr. Orthner joined the faculty of the Department of Clinical Engineering at the George Washington University (GWU) School of Medicine, where he rose through the ranks becoming Professor of Computer Medicine and Director of the Office of Academic Computer Services. It was during his early years at GWU that Dr. Orthner recognized a rising interest in the application of computers to medicine and health, and co-founded SCAMC (Symposium on Computer Applications in Medical Care). Through his vision and leadership, SCAMC evolved into the premier and largest annual congress of its kind in the US, and was instrumental in fostering the development of the then fledgling field of medical informatics. In 1988, SCAMC, Inc. was one of three organizations that merged to form the American Medical Informatics Association (AMIA). Dr. Orthner was a founding Board member of AMIA, a founding Fellow of the American College of Medical Informatics (ACMI) and continued to serve for several years on the AMIA Board of Directors and on various councils and committees. In 1993, following a sabbatical with Dr. Homer

Warner, Dr. Orthner became a Professor of Medical Informatics at the University of Utah Health Sciences Center. In 1998, he became Professor and Director of the Health Informatics Program at the University of Alabama at Birmingham (UAB). Dr. Orthner's more recent research involved developing a communication infrastructure for pre-hospital emergency medical care, which was funded by the National Library of Medicine (NLM) since 1998. Dr. Orthner was the Series Editor for the Springer Verlag-New York Series on "Computers and Medicine" for 10 years. He also served on NLM's Biomedical Library Review Committee, as well as various study sections reviewing grants and contracts for the National Institutes of Health. Dr. Orthner received several awards during his career, including the 2001 President's Award from AMIA "in gratitude and acknowledgement for outstanding intellectual leadership and education vision to the field of medical informatics". However, it was the accomplishments of his many students over the years that gave him the greatest pleasure and pride. Dr. Orthner retired from UAB at the end of 2008 and returned to Utah becoming an Adjunct Professor of Biomedical Informatics. In 2009, the Helmuth F. Orthner Endowed Scholarship was established in honor of the commitment and service of this beloved teacher, mentor, colleague and friend.

OSHEROFF A. JEROME
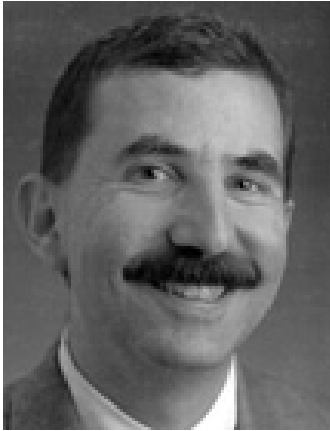
Jerome A. Osheroff, MD, FACP, FACMI, after training in electrical engineering and medicine at George Washington University in the 1980s moved to the University of Pittsburgh for his internal medicine residency and fellowship. It was there that he became familiar with the university's dynamic work on internist/QMR and was admitted to the medical informatics fellowship program. After a brief period on the clinical faculty at Pitt, he was attracted to the American College of Physicians (ACP), where he served as an associate in clinical information management and, in time, as deputy editor for their work on integrated clinical information resources. In 1999, he assumed the role as Director of Informatics at Praxis Press and has become Chief Clinical Informatics Officer with Thomson MICROMEDEX since it acquired Praxis in early 2002. He also serves on the faculty and medical staff of the University of Pennsylvania Health System.

Dr. Osheroff is recognized for his effective efforts to enhance the use of computers in clinical practice, especially among physicians. His book with the ACP, Computers in Clinical Practice, has been especially well received, and he has also developed videos, CDs, lectures, self-assessment programs, curricula, and Web offerings. Also important have been his articles reporting on empiric efforts to categorize clinical information needs. This work has resulted in the promulgation of recommendations for clinical information resource developers, and also in his recent work with the NLM to produce a national databank for clinical questions. Motivating much of his work has been his belief in clinical decision-support systems, emanating from his work with QMR but continuing with the development of the early Physicians' Information and Education Resource (PIER) system at the ACP, the "Best Practice of Medicine" resource at Praxis MD, and next-generation offerings at Thomson MICROMEDEX. He leads a work group of the HIMSS Patient Safety Task Force in developing resources to help health care institutions successfully implement decision-support technologies to improve outcomes, including a clinical decision support (CDS) implementers' workbook (freely available on the HIMS

OSHIMA MASAMITSU

Masamitsu Oshima was born in Nagano. Immediately after graduating from the medical departments of the University of Tokyo, he spent 3 months at the Kakinuma Internal Medical Office of the department attached to the hospital. After the war he became a chief researcher at the Institute for Science of Labour, applying his knowledge from his time at the Naval Institute to the improvement of the conditions of working people, based on laboratory and practical research activities of nearly 10 years. In 1975, he was assigned to be the Director of the Division of Hygiene, in the department of aeronautical staff office, Japanese defense air force, and later, he became commanding officer of the aeronautical medical laboratory, first established in Japan after the war. He was then offered the position of professor of medical electronics, in the Medical Department, University of Tokyo in 1963. He worked for the Institute of Health Sciences as director and as adviser to the Medical Information Center. He has published over a thousand articles and more than one hundred books were published, the contents covering not ergonomic

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topics, but also environmental physiology and hygiene, work physiology, industrial hygiene, toxicology, nutrition, medical electronics and cybernetics, information technology, nursing, space medicine etc., related to the design of clothing, vehicle drivers, color design, practitioners, and dentists. His many scientific findings obtained over the years have been applied in real work places, work conditions, work methods, in the field of health care and product design, etc. He organized and collaborated in countless domestic and international congresses. He was awarded many honors, distinctions, and prizes by domestic, as well as international organizations, societies, and government, including the first medical contribution prize from the Japan Medical Association (1948), award for the development of medical informatics (1978), award for the preventive activities of labor accidents (1981), Okinaga memorial prize for his book Hito (1985), IEA Research Award (1985), the Order of the Sacred Treasure, Gold and Silver Star (1986), and Japan Ergonomics Association Award (2000). He established the Oshima Award given annually for the most excellent ergonomics research study. He became an honorary fellow in aerospace medicine (1994), IEA fellow (2000), and received the Japan Ergonomics Association Award for the contribution toward JES activities (2002). Oshima was appointed a member of the Japan Science Academy and is contributing to the development

of the many scientific activities in Japan.

OSTELL JAMES

James Ostell, PhD, FACMI, has been Chief of the Information Engineering Branch of the National Center for Biotechnology Information since NCBI was created within the National Library of Medicine in 1988. He received his BS and MS degrees in zoology from the University of Massachusetts. His earned his PhD in cellular and developmental biology from Harvard University. Prior to coming to NCBI, Dr. Ostell was the author of a successful commercial software package for molecular biologists, now called MacVector, which is still on the market today. Moving to the public sector, Dr. Ostell came to NCBI on its founding. As Chief of the Information Engineering Branch, Dr. Ostell has been responsible for all major production resources at NCBI. These resources include such familiar names as GenBank, Entrez, PubMed, BLAST, RefSeq, and many others. Dr. Ostell has

taken many roles in the different projects, from original designer in some to top level manager in others, and everything between. He has had to balance the freedom of the many talented and creative people behind each of these projects with the institutional needs for stability, standardization, and unification of effort, while attempting to respond to the rapidly changing science, politics, and user needs of the last decade. The growth of NCBI public resources from zero to more than two million unique users a month in ten years is the measure of his success in this endeavor. Dr. Ostell is a member of the Senior Biomedical Research Service at NIH. He has received the NIH Award of Merit, the NLM Director's Honor Award, and the "Hammer" Award for Reinventing Government

OVERHAGE J. MARC

Marc J. Overhage, MD, PhD, FACMI, is Professor of Medicine at Indiana University School of Medicine and an Investigator at the Regenstrief Institute for

Health Care. Dr. Overhage is also a staff physician at Wishard and Indiana University Hospitals. Dr. Overhage received his MD and PhD from the Indiana University School of Medicine. After completing fellowship training in medical informatics with Dr. Clement J. McDonald and in clinical pharmacology, Dr. Overhage served as an Information Advisor for Eli Lilly & Company, a major pharmaceutical and information company. Dr. Overhage has more than 15 years of computing experience, including developing one of the earliest commercial object-oriented database systems and real-time data acquisition and control systems. He has applied this experience to the evolution of the Regenstrief Medical Record System, which has been used for more than 25 years and is evolving toward a city-wide electronic patient record. While he has broad interests in the use of informational interventions to modify physician behavior, development of rule-based systems to implement guidelines and protocols has been a major focus of Dr. Overhage's research for the last seven years. Using these tools he is completing two large-scale studies of implementing guidelines in the outpatient and inpatient settings, which examine the impact of process measures, costs, and patient outcomes. Dr. Overhagewas a member of the American Medical Informatics Association Meetings Committee.

OYRI KARL

Karl Oyri is Research Fellow at The Intervention Center, Faculty of Medicine, University of Oslo. He graduated Nursing at Akershus University College of Oslo in 1987. BS, Critical Care Nursing earned in 1991-1993 at Ullevaal University Hospital in Oslo and MSc of Nursing Research from 1988-2000 at University of Oslo. He worked at Oslo Universitetssykehus from 2000 till 2013 and in NORWAC from 2009 till 2014. His professional experience comes from clinical work as a Critical Care Registered Nurse, Nurse Manager working and as a researcher. He had been involved in international organizations for more than 10 years; Norwegian Society for Medical Informatics (FDH), European Federation for Medical Informatics (EFMI), International Medical Informatics Association (IMIA). His engagement includes involvement in several special interest groups and work groups. His main current goal is to perform research on implementations of wireless technologies in healthcare He was member of Local Organizing Committee of MIE 2011 held in Oslo in August 2011.

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PANGALOS GEORGE

George J. Pangalos was born in Athens, Greece. He received a BSc degree in mathematics from the University of Athens and MSc. and PhD degree in computer science from the University of London (University College London, UK). Since 1990, he has been with the Faculty of Technology of the Aristotle University of Thessaloniki, Greece, where he is currently a professor in the Department of Electrical and Computer Engineering (ECE) and also the director of the Informatics and Information Security laboratory of the same faculty. He has also taught in several universities in Greece and USA. His research interests include the areas of Information Systems Design, Information System security, Health Information Systems, Database systems Security, Access control, e-Identification and e-Authentication, IT Forensics and IT security audit, Internet security and secure Internet transactions, e-Health and applications, e-Gov Applications. He has published over 200 articles in international scientific journals and conference proceedings. He has also been the author

or co-author in several (more than 20) International and Greek books. He has also been involved as project leader /expert in a significant number (more than 50) major international (mostly EU funded) research and development projects in the above areas. He has also participated as an expert evaluator, after an invitation from the EU, in the selection and the assessment of several (more than 20) EU projects and studies and the formulation of EU framework research programs (FP). He has also been for several years (2004-2012) the National Representative of Greece to the European Union's Security Research Program. He has been president and member of the board in several national and international scientific and professional bodies (President of the Greek Computer Society (NG), President of the Education and Research section of GCS , President and Member of the Board of the (Brussels based) European Informatics Association CECUA, Representative of Greece to the IMIAetc.). He has also been director/CEO of several IT related organizations and departments (President of the Greek Center for e-Government Applications in Social Security and Health (IDIKA), President and CEO of the Regional Health System (PESY) of Thessaly, Director of the Informatics Institute and of the under and post graduate IT schools of the Greek Productivity Center, Member of the AUTH research management committee, Co-founder and

Director of the IT Support center of AUTH (1991-2001), etc.).

PANKO B. WALTER

Walter B.Panko, PhD, FACMI, received his bachelors degree in Chemistry from the University of Illinois, his PhD in biochemistry from the University of Missouri, and was a postdoctoral fellow in the Biology Division of Oak Ridge National Laboratory. He was appointed to faculty positions at the University of Virginia School of Medicine, and the Department of Pathology at Baylor before trying his hand in information technologies as a Senior Scientist and Manager of the Information Technology Group at Bolt Baranek and Newman in the late 1980's. In 1990 he became Director of Information Technology and Networking at the University of Michigan Medical Center, and at the time of election to the College was Professor and Director of the School of Biomedical and Health Information Sciences, and Assistant Vice Chancellor for Health Informatics at the University of Illinois, Chicago. Dr. Panko has been a longstanding proponent

of wide area networking in support of education, research and patient care. He is editor in chief of the journal Clinical Laboratory Science and a frequent contributor to AMIA conferences, including serving as vice chairman of the 1994 AMIA Spring Congress.

PAPERT A. SEYMOUR
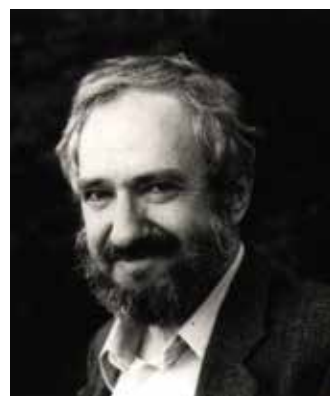
Seymour Aubrey Papert (1928-2016) was a South African-born American mathematician, computer scientist, and educator, one of the pioneers of artificial intelligence. He was co-inventor, with Wally Feurzeig, of the LOGO programming language. Papert attended the University of the Witwatersrand, receiving a BA in philosophy (1949) and a PhD in mathematics (1952). He then went on to receive another PhD, also in mathematics, at Cambridge University (1959), where he was supervised by Frank Smithies. He was a leading figure in the revolutionary socialist circle around Socialist Review while living in London in the 1950s. Papert was also a prominent activist against

South African apartheid policies during his university education. Papert worked as a researcher in a variety of places, including St. John's College, Cambridge, the Henri Poincaré Institute at the University of Paris, the University of Geneva, and the National Physical Laboratory in London before becoming a research associate at MIT in 1963. He held this position until 1967, when he became professor of applied math and was made co-director of the MIT Artificial Intelligence Laboratory by its founding director Professor Marvin Minsky, until 1981; he also served as Cecil and Ida Green professor of education at MIT from 1974-1981. Papert worked on learning theories, and was known for focusing on the impact of new technologies on learning in general, and in schools as learning organizations in particular. At MIT, Papert went on to create the Epistemology and Learning Research Group at the MIT Architecture Machine Group which later became the MIT Media Lab. Here, he was the developer of a theory on learning called constructionism, built upon the work of Jean Piaget in constructivist learning theories. Papert had worked with Piaget at the University of Geneva from 1958 to 1963 and was one of Piaget's protégés; Piaget himself once said that "no one understands my ideas as well as Papert". Papert has rethought how schools should work, based on these theories of learning. Papert used Piaget's work in his development of the Logo programming language while at MIT. He created Logo as a tool to improve the way children think and solve problems. A small mobile robot called the "Logo Turtle" was developed, and children were shown how to use it to solve simple problems in an environment of play. A main purpose of the Logo Foundation research group is to strengthen the ability to learn knowledge. Papert insisted a simple language or program that children can learn - like Logo - can also have advanced functionality for expert users. As part of his work with technology, Papert has been a proponent of the Knowledge Machine. He was one of the principals for the One Laptop Per Child initiative to manufacture and distribute The Children's Machine in developing nations. Papert also collaborated with the construction toy manufacturer Lego on their Logo-programmable Lego Mindstorms robotics kits, which were named after his groundbreaking 1980 book. Papert's work has been used by other researchers in the fields of education and computer science. He influenced the work of Uri Wilensky in the design of NetLogo and collaborated with him on the study of knowledge restructurations, as well as the work of Andrea diSessa and the development of "dynaturtles". In 1981, Papert along with several others in the Logo group at MIT, started Logo Computer Systems Inc. (LCSI), of which he was Board Chair for over 20 years. Working with LCSI, Papert designed a number of award-winning programs, including LogoWriter and Lego/Logo (marketed as Lego Mindstorms). He also influenced the research of Idit Harel Caperton, coauthoring articles and the book Constructionism, and chairing the advisory board of the company MaMaMedia. He also influenced Alan Kay and the Dynabook concept, and worked with Kay on various projects. Papert won a Guggenheim fellowship in 1980, a Marconi International fellowship in 1981, the Software Publishers Association Lifetime Achievement Award in 1994, and the Smithsonian Award from Computerworld in 1997. Papert has been called by Marvin Minsky "the greatest living mathematics educator".

PARRA CALDERÓN LUIS CARLOS

Carlos Luis Parra Calderon (1966-) born in Seville, Spain. Carlos Luis has an economics degree and Master of Research in Industrial Organization from the University of Seville. He is the Head of Innovation Technology at "Virgen Macarena" and "Virgen del Rocío" University Hospitals. Over the last 5 years, has published 31 review articles and 2 book chapter. He is member of the EHR WG of HL7, member of

the Board of the Spanish Society of Health Informatics, and a representative of this organization in the European Federation in Medical Informatics (MIE 2015 LOC Chair), a member of AENOR TC 139 of "Medical Informatics" corresponding to CEN TC251 and ISO TC 215, and also a member of the Board of Andalusian Health Informatics Professionals Association (APISA). He has participated in the following European projects with a high focus on interoperability: epSOS (CIP Call 6), Trillium Bridge (FP7-ICT-2013-5.1 e4) and eHealth: RE-WIRE (FP7-ICT-2011-5.1) Health@ Home (AAL 2008) and European COST Action IS1303:CHIP ME.

PARK HYEOUN-AE

Hyeoun-Ae Park is Professor and Dean at Seoul National University College of Nursing, Seoul, Korea. She is Vice President of IMIA for WG/SIG , and also Chair of IMIA-Nursing Informatics Special Interest Group. Currently she served as President of the International Medical Informatics Association (IMIA) for period 2015-2018. She is the third Asian, and second female, appointed president in IMIA's 34-year history (after Marion J. Ball,

1992-1995 and Nancy M. Lorenzy, 2004-2007). Park graduated from SNU's College of Nursing in 1980, and studied at the University of Minnesota, where she earned two master's degrees and a doctorate, in 1984, 1986 and 1987, respectively. She studied nursing and health. She has been serving as dean of SNU's College of Nursing since January 2015. She served as a researcher at the Korea Institute for Health and Social Affairs before launching her career in education. Among her numerous important tasks, she will be responsible for serving the IMIA Board activities in 2015-2017 and preparing MED-INFO'15 in Sao Paulo (Brasil) and MEDINFO'17 which will be held in 2017, Beijing, China.

PATEL LODHIA VIMLA

Vimla L. Patel is a Senior Research Scientist and Director of Center for Cognitive Studies in Medicine and Public Health at the New York Academy of Medicine. She holds a BSc in Biochemistry from Otago University in New Zealand and a MA and PhD (1981) in Educational Psychology (Medical Cognition) from McGill University in Montreal. As Professor of Medicine and the director of Cognitive Science

Center at McGill, her early research focused on scientific foundations for medical and health education, particularly in cognitive foundations of medical decision-making. Subsequently, she expanded these research activities with an informatics focus at Columbia and Arizona State Universities as well as at University of Texas-Houston, where she was appointed as professor in their departments of Biomedical Informatics with joint or adjunct appointments in the NY Institute of Mental Health (Columbia), Department of Psychology (ASU) and School of Psychiatry and Behavioral Health Science (UTH). This allowed her to explore the relationship between Cognitive, behavioral and information sciences in the biomedical domain. An elected fellow of the Royal Society of Canada (Academy of Social Sciences), the American College of Medical Informatics, and the New York Academy of Medicine, she received an Honorary Doctor of Science degree from the University of Victoria in 1998, in recognition of her contributions through cognitive studies in the domain of health informatics. She is an associate editor of the Journal of Biomedical Informatics and sits on the editorial boards of Artificial Intelligence in Medicine and Advances in Health Science Education. She is a past assistant editor of Artificial Intelligence in Medicine and has served on the editorial boards of Medical Decision Making, the Journal of Experimental Psychology, Topics

in Cognitive Science and Computers in Biology and Medicine. In her 28-year career dedicated to academic research and education, Prof. Patel spent the first 17 on research related to cognitive mechanisms underlying human performance in health care and in medical decision-making. The last decade has been spent working on human cognition in health care, addressing issues of cognition in biomedical informatics (human-computer interaction, cognitive design, decision support, and team decision making, especially in critical care settings). Her research has been funded by Canadian Medical and Social Science Research Councils, NIH (NLM), NIMH, AHRQ, Science Foundation Arizona and the Office of National Coordinators (ONC) in Washington DC, and a major 5-year award from the US James S. McDonnell Foundation. She has mentored numerous graduate students, as well as postdoctoral and research fellows and has with over 300 scholarly publications spanning biomedical Informatics, education, clinical, and cognitive science journals.

PATEL-MISRA DIPTI

Dipti Patel-Misra, PhD, is Chief Data and Analytics Officer, CEP MedAmerica. She has two decades experience with a unique background in healthcare finance, insurance, health economics, outcomes, informatics, and healthcare analytics, including prominent leadership roles at Blue Cross Blue Shield of North Carolina, SAS, and Best Doctors. She is currently the Chief Data and Analytics Officer at CEP MedAmerica. She specializes in strategically using analytical insights to drive enterprise objectives. Her key projects include Population health management predictive models, episode analytics, personalized healthcare models, risk based clinical models, and predictive behavior analytical models. Dr. Patel-Misra's is also a valuable member of University of North Carolina, Charlotte adjunct faculty and executive-in-residence, where she teaches and advises graduate students in leadership development and Health Informatics Program. She is the Chair of the Health Informatics Board at UNC Charlotte, leading the big data innovation lab initiative for academia - industry collaboration. She is a leadership coach, advising rising stars in engineering, analytical, and technical fields on how to effectively transition from contributor to manager to executive. She is the co-founder of CT3Lead, a center focused on technical talent transformation and leadership. Dr. Patel-Misra earned her PhD in chemistry at Johns Hopkins University and a Master of Business Administration from the University of North Carolina. She has her professional coaching certificate from the international coach federation.

PATHAK JYOTISHMAN
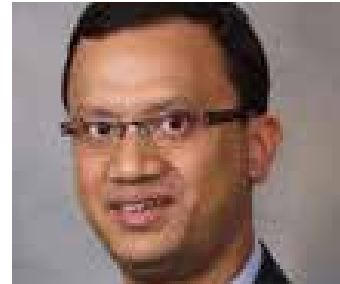
Jyotishman Pathak, PhD, is Associate Professor of Medical Informatics at Mayo Clinic, Rochester, Minnesota. He graduated in 2007 his PhD in Computer Science at Iowa State University, Ames, Iowa. In the year 2002 he graduated B. Eng. Computer Science and Engineering at National Institute of Technology, Jamshedpur, India. His scientific and professional interesting fields are at the intersection of computer science, engineering, and clinical practice in the healthcare industry, where the role of advanced informatics methodology and its applications can help us understand our current practice of healthcare today and develop approaches by which we can study and hopefully improve on the future of medicine. From its inception more than 150 years ago, the Mayo Clinic founders instilled a core value: "the needs of the patients come first", and he strongly believes that informatics is pivotal in achieving this mission. As healthcare is becoming more and more data-intensive and rapidly exceeding the capacity to deliver personal or public health benefit from analyzing these

data, there is a compelling need to make informatics an integral part of the healthcare ecosystem. He attended a lot of JAMIA and the AMIA meetings which helped him to provide a very different perspective in the role of science and technology in our daily lives, including health and wellbeing.

PATIL S. RAMESH
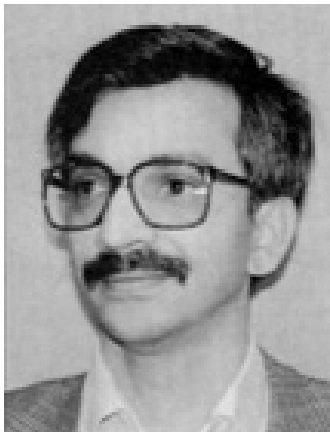
Ramesh S. Patil received his PhD in computer science from MIT. in 1981. He is currently an assistant professor in the Laboratory for Computer Science at MIT. His current research interests include the application of artificial intelligence techniques to medicine, with an emphasis on fundamental issues of representation and reasoning with causal knowledge and explanation of consultant program reasoning..

PATON CHRIS

Chris Paton is a Health Informatics Clinical Researcher at the University of Oxford. He completed his medical training at the University of Nottingham in the UK and has worked in clinical and academic roles in the UK and NZ. He was the founding Chair, and now Vice-Chair, of the International Medical Informatics Association (IMIA) Social Media Working Group and is a Fellow of the Australasian College of Health Informatics. He is also the Founder of the Health Informatics Forum (http://www.healthinformaticsforum.com), a social networking website that runs a popular Massive Open Online Course (MOOC) for HI professionals and students.

PATRICIO LIA

Lia Patrício BS, MBA, PhD, from University of Porto, is Assistant Professor at the School of Engineering of the University of Porto (FEUP). Her research focuses on Service Design and Customer Experience, particularly the design of technology enabled services and complex service systems. She has published in several scientific journals on service design, such as the Journal of Service Research or the Journal of Service Management. She has been involved in service design projects in several service industries, such as retailing, banking, IT and health care. She is the coordinator of FEUP's project that supports the design of the Portuguese Electronic Health Record project, collaborating with the Portuguese Ministry of Health.

PAUKER G. STEPHEN

Stephen G. Pauker received his MD from Harvard Medical School in 1968 and trained in internal medicine and cardiology at New England Medical Center, Boston City Hospital, and

Massachusetts General Hospital. He is currently a professor of medicine at Tufts University School of Medicine and chief of the Division of Clinical Decision Making at New England Medical Center. His research interests involve the applications of decision analysis to clinical medicine and the development of computer-based decision aids. .

PAVLICKOVA ANDREA

Andrea Pavlickova is European Service Development Manager. at NHS24/Scottish Centre for Telehealth and Telecare in Scotland. Andrea is responsible for the management of the European projects focusing on the development and deployment of teleservices and integrated care in Europe. She is also the coordinator of the B3 Action group on Integrated Care of the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA). Specifically, Andrea coordinates the Action Area on ICT and Teleservices with an ultimate objective to develop concrete easy-to-use tools (toolkits, policy recommendations, maturity models) to highlight the potential of ICT to underpin the delivery of integrated care services in Europe. She also provides support with the engagement for the EU funding opportunities, knowledge exchange and dissemination of good practices in Scotland and wider Europe. She studied at the University of Matej Bel in

Slovakia where she was awarded MA and PhD in International Relations and Diplomacy. Andrea also continued her studies at the University of Northern British Columbia (UNBC) in Canada with a curriculum focusing on International Development.

PAYNE H. THOMAS

Thomas H. Payne, MD, FACMI works at University of Washington. His major professional interest is the use and evaluation of clinical computing systems, especially computer-based medical record systems in patient care, clinical research, and quality improvement. He is also interested in electronic documentation in EMRs, natural language processing, and in studying operations of clinical computing systems: how we support users, plan maintenance, recover from downtime and in general keep them continuously operating.

PAYNE R.O PHILIP

Philip R. O. Payne, PhD, FACMI, is Professor at Washington University. He works as Director, Institute for Informaticsand Adjunct Professor of College of Medicine, Department of Biomedical Informatics. His Research Interests ar: Knowledge-based approaches to the discovery and analysis of bio-molecular and clinical phenotypes and the ensuing identification of precision diagnostic and therapeutic strategies in cancer; Interventional approaches to the use of electronic health records in order to address modifiable risk factors for disease and enable patient-centered decision making; The study of human factors and workflow issues surrounding the optimal use of healthcare information technology; and, The design and evaluation of open-science platforms that enable collaborative and cumulative approaches to biomedical data analytics.

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PEAY J. WAYNE
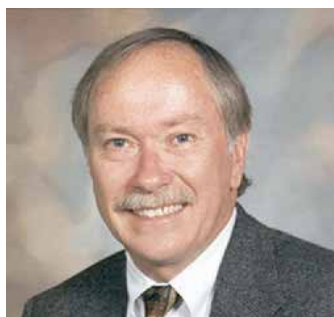
Wayne J. Peay, MLS, FACMI, received his bachelor's in history from the University of Utah and master's of library science from Columbia, while serving as Assistant Director of the Data Processing Department of the Medical Library Center of New York. He returned to the University of Utah, was appointed to a series of positions of increasing responsibility at the Eccles Health Sciences Library, and has been the library director there since 1984. Since 2001 he has also been the Director of the Midcontinental Regional Medical Library of the National Network of Libraries of Medicine. As noted in his nomination to the College, Wayne Peay has been a prime mover in virtually every initiative to use computers and networking technology to support education and improve information services in the state of Utah - conceiving the projects, obtaining the grant funds, overseeing implementation, and managing the inevitable stresses among participating organizations with very different missions and priorities. He has effectively deployed successive generations of new technologies,

almost always on the leading edge of adoption and with a number of notable successes that predated broad Internet access and the development of the Internet. These efforts have improved access to high-quality health information in academic centers, community hospitals, public libraries, and other tribal and local organizations serving diverse populations. He has implemented the technical and interorganizational connections that are essential to delivering the promise of medical informatics. These efforts have been recognized by his election as a fellow of the Medical Library Association, inclusion on the National Honor Roll of the American Library Association, and to the American College of Medical Informatics.

PEETSO TERJE

Terje Peetso, MD, is Policy officer, Health and Wellbeing Unit, Directorate-General Communications Networks, Content and Technology (DG CONNECT) European Commission. Terje Peetso was graduated as a medical doctor in the University of Tartu, Estonia, in 1988. She joined

the European Commission in 2003 and since June 2011 she is working as a policy officer in the Unit Health and Wellbeing in the Directorate-General for Communications Networks, Content and Technology.

PERAKSLIS D. ERIC

Eric Perakslis is Executive Director of the Center for Biomedical Informatics and the Countway Library of Medicine at Harvard Medical School, USA. Eric was most recently the Chief Information Officer and Chief Scientist (Informatics) at the U.S. Food and Drug Administration. In this role, Eric authored the first IT Strategic Plan for FDA and was responsible for modernizing and enhancing the IT capabilities as well as the in silico scientific capabilities at FDA. Prior to FDA, Eric was Senior Vice President of R&D Information Technology at Johnson & Johnson Pharmaceuticals R&D and was a member of the Corporate Office of Science and Technology. Eric serves on the editorial board of Cancer Today magazine and serves on the editorial board and as the Associate Editor for Novel Communications for the DIA flagship

publication, the Journal of and Therapeutic Innovation and Regulatory Science. Eric has a PhD in chemical and biochemical engineering from Drexel University and also holds BS.Che and MS degrees in chemical engineering. Eric's current research interests are enterprise knowledge management, patient stratification, healthcare IT and translational informatics with the specific focus on precompetitive data sharing, risk-based analytics and open source systems globalization.

PERALA-HEAPE MARITTA

Maritta Perala-Heape is Director. Centre for Health and Technology, University of Oulu, Finland. Dr. Perala-Heape is coordinating the strategic R&D collaboration between academia, business and public healthcare sector in the Oulu Innovation Alliance (OIA) concept. Main focus of R&D is personalized health and care, service innovations and business development. She is leading the Digital Health Revolution -initiative and is involved in several international projects.

Her expertise areas are R&D and innovation management, research to business, business development, RDI funding, innovation politics and international network building.

PEREIRA DA COSTA ALTAMIRO

Altamiro Manuel Rodrigues da Costa Pereira (1059-) was born in Porto, Portugal, He graduated in Medicine, at the Faculty of Medicine, University of Porto, 1983 and started his academic career as teaching assistant in Epidemiology and Public Health, in 1985. Between 1987 and 1993 he trained as a Pediatrician at the Hospital de S. João, Porto. He attended several post-graduate courses at the universities of Johns Hopkins, USA, McGill, Canada, Nijmegen, Netherlands and Dundee, Scotland; In 1993 he obtained the degree of Doctor of Philosophy (PhD) from the University of Dundee, Scotland. Since 1995, he has initiated and has been responsible for several under and post-graduate disciplines and courses, including master programs in Medical Informatics and Evidence and Decision Making in Health Sciences and a doctoral program in Clinical

and Health Services Research, at the Faculty of Medicine, University of Porto. He undertook research projects in national and international institutions, in the fields of epidemiology, medical informatics and clinical research, publishing more than 300 scientific papers, 134 of those indexed by the Institute for Scientific Information (ISI) and participated in more than 50 national and international panels and evaluating commissions of fellowships, projects and scientific research teams in the field of life and health sciences and technologies, being regularly invited by the European Commission as an expert in information technologies applied to healthcare, since 1999. He is supervisor of 23 PhD dissertations, 7 of them already successfully concluded, director of the Department of Health Information and Decision Sciences, since 2011, he also coordinates the Center for Research in Health Technologies and Information Systems (CINTESIS), since 2004.

PERL YEHOSHUA

Yehoshua Perl, PhD, FACMI, received his Bachelors degree in Mathematics from Bar-Ilan University, and a Masters and PhD in computer science from the Weizmann Institute in Israel. He emigrated to the US in the early 1980's and climbed the academic ladder to the rank of Professor of Computer Science at the New Jersey Institute of Technology (NJIT). Dr. Perl had been developing methods for organizing and visualizing complex data structure for more than 30 years, and in the mid-1990's he began applying these to the biomedical domain. He founded the Medical Informatics Laboratory at NJIT, which evolved into the Structural Analysis of Ontologies Center, and has undertaken work which has contributed to vocabulary systems maintained within the Unified Medical Language System and the Systematized Nomeclature of Medicine (SNOMED). Dr. Perl has been an active contributor to national and international societies and scholarly meetings in computer science and informatics, with more than 80 journal and 60 conference proceedings articles, and an academic mentor whose students have gone on to their own productive careers as informatics faculty.

PERRIN MAUREEN

Maureen Perrin is an epidemiologist and leads Gevity's Population and Public Health Practice. With more than 15 years of experience in transforming data from paper reports into integrated digital information, Maureen focuses on creating a world where evidence informs decisions and drives the actions required to improve health. From working with clients to develop strategic plans to ensuring program solutions are effectively and efficiently implemented, Maureen combines her deep knowledge of public health with informatics and business methodologies to deliver results. Maureen is an articulate and skilled facilitator, engaging stakeholders with disparate needs to reach agreements that advance project goals. Her gregarious nature and leadership ability first emerged in an unconventional location: in the pool as Most Valuable Goalie for her university water polo team. When not working with her team and clients, you can find Maureen relaxing by trying out new recipes in her kitchen, enticing her family to play a game of cribbage, or running with her dog along the Trans-Canada Trail. Maureen has an MSc in Epidemiology from the London School of Hygiene and Tropical Medicine/University of London and a Graduate Certificate in Information Technology Project Management from the University of Ottawa. She maintains a number of professional certifications, including CPHIMS-CA (Certified Professional in Health Informatics), change management, and project management.

PERLIN B. JONATHAN

Jonathan B. Perlin, MD, PhD, MSHA, FACP, FACMI, is president, Clinical Services and Chief Medical Officer of Nashville, Tennessee-based HCA, the nation's leading provider of healthcare services. He provides leadership for clinical services and improving performance at HCA's 169 hospitals and more than 800 outpatient centers and physician practices. Some of Dr.

Perlin's current activities include advancing electronic health records for learning healthcare and continuous improvement; driving value through (big) data science and advanced analytics; and elevating measured clinical performance and patient safety to benchmark levels. His team recently completed the landmark REDUCE MRSA study that demonstrated a 44 percent improvement on known best practices for reducing bloodstream infections. Before joining HCA in 2006, "the Honorable Jonathan B. Perlin" was Under Secretary for Health in the U.S. Department of Veterans Affairs. Nominated by the President and confirmed by the Senate, as the senior-most physician in the Federal Government and Chief Executive Officer of the Veterans Health Administration (VHA). A champion for early implementation of electronic health records, Dr. Perlin led VHA quality performance to international recognition as reported in academic literature and lay press and as evaluated by RAND, Institute of Medicine and others. Dr. Perlin was the 2015 chairman of the American Hospital Association. He also serves as chair of the Secretary of Veterans Affairs Special Medical Advisory Group. From July to September, 2014 Dr. Perlin took a "sabbatical" to serve as Senior Advisor to the Secretary of Veterans Affairs to help improve operations, accelerate access and rebuild trust with America's Veterans. Dr. Perlin has served previously on numerous Boards and Commissions including the National Quality Forum, the Joint Commission, and the National Patient Safety Foundation and currently serves on the Board of Meharry Medical College. He was the inaugural chair of the U.S. Department of Health and Human Services Health IT Standards Committee. A member of the Institute of Medicine (National Academy of Medicine) and recognized perennially as one of the most influential physician executives and health leaders in the United States byModern Healthcare, Dr. Perlin has received numerous awards including Distinguished Alumnus in Medicine and Health Administration from his alma mater, Chairman's Medal from the National Patient Safety Foundation, the Founders Medal from the Association of Military Surgeons of the United States, and is one of the few honorary members of the Special Forces Association and Green Berets. Broadly published in healthcare quality and transformation, Dr. Perlin is a Master of the American College of Physicians and Fellow of the ACMI. He has a Master's of Science in Health Administration and received his PhD in pharmacology (molecular neurobiology) with his MD as part of the Physician Scientist Training Program at the Medical College of Virginia of Virginia Commonwealth University (VCU). Dr. Perlin has faculty appointments at Vanderbilt University as Clinical Professor of Medicine and Biomedical Informatics and at VCU as Adjunct Professor of Health Administration.

PETERSEN ELBAEK MORTEN

Morten Elbaek Petersen has been the CEO of the Danish eHealth portal, sundhed.dk, since it was founded in 2003. He has more than 20 years of management experience in public administration with a primary focus on implementing eHealth, quality development, prevention and patient empowerment. Morten E. Petersen holds a Master's degree in Economics and Social Science from the University of Odense. He also serves as an external lecturer and examiner for Public Health IT Masters programmes af Danish universities.

PETERSEN JAN

Jan Petersen is Head of International Unit. MedCom–the Danish Health Care Data Network, Denmark. Jan Petersen has worked in the field of health informatics for the past 20 years. He has a clinical background as a registered nurse and holds a Master degree in Health Informatics from Aalborg University. For 10 years Jan was employed at the Health Informatics section at the National Board of Health (a division of the Ministry of Health). Jan has a broad experience with international standardisation, terminology, concept development, data formalisation and information modelling. Jan is manager of the International section in MedCom. Alongside, Jan has managed a wide scale national cross sector home monitoring program involving over a thousand citizens, and through this gained practical experience regarding profiling and implementing international standards related to telemedicine.

PETERSON HANS

Hans Peterson became a certified physician in Sweden in 1958 and was awarded a doctorate in Medicine in 1967. He was an ophthalmology fellow at the Karolinska Institute, Stockholm University, and was appointed to faculty positions in Ophthalmology and Medical Informatics at the Karolinska in the late 1970's. At the time of his election to the College Dr. Peterson was an internationally prominent and prolific author, with more than 100 published papers. He served as editor for textbooks on Communication Networks in Health Care and Human-Computer Communications in Health Care. He has served on the editorial boards of a number of journals, including Methods in Information in Medicine, Medical Informatics, Lecture notes in Medical Informatics, and the Journal of Clinical Computing. He has served on numerous government committees in Sweden, helping to create legislation for patient records and the creation of national information structures for health care. Dr. Peterson was named an honorary fellow of the European Federation for Medical Informatics and a fellow of the International Medical Informat-

ics Association. He also served as President of IMIA from 1983 through 1986. His election as an International Associate of the College recognizes these sustained achievements. In 1983, after three years as president elect, Hans Peterson became president of IMIA. "What I remember best", he says, "is that there was no money." MEDINFO '83 had diminished already limited funds, and money was simply not available for what was needed for MEDINFO '86 and subsequent activities. IMIA's officers ended up providing IMIA with free services, from printing and stationery to mailing and telephones. Grants to working conferences were impossible, and IMIA's officers had to spend almost all their time on finances. The final blow came when IMIA closed its permanent secretariat in Amsterdam and its small remaining treasury vanished. The bottom line was "very little time for accomplishments and achievements. The goal was to survive." Now, after completing his 18th year as national representative for Sweden in 1993, Peterson continues to work for the recognition and acceptance of Medical Informatics. In his view, growing decentralization makes standardization critical. For Peterson, "an international body free from political and governmental influence is absolutely necessary. In this body we have to cooperate also with the industry and get a mutual understanding that cooperation is the only way out."

PETITET ANDRÉ

André Petitet is a Medical Doctor (MD), graduated at Faculty of Medicine of University in Paris, France. He is certified in Anaesthesiology and in Space and Aeronautic Medicine. He was a successful Candidate in the "Médecin des Hôpitaux" contest. Dr. Petitet has had a quite complete yet complex medical carrier: Anaesthetist in several hospitals and private surgical centers: Cardiac Surgery Department in Broussais General Hospital (Paris), Poissy Regional Hospital (Paris area), Main Hospital Center Bayonne), St. Roch Surgical Center (Cavaillon), North University Hospital (Marseille), Ambroise Paré Hospital(Paris), Cochin Hospital (Paris). Developed an original analgesic method by using opiates in sub-dural space. He was Medical Director, then Head of R/D department in the pharmaceutical industry: Bristol-Myers, Synthelabo, Byk Gulden. He developed in France several original drugs: Urapidil (antihypertensive), Pantoprazole (proto-pump inhibitor), Theophyllin LP (bronchodilatator), Magaldrate (stomach anti-acid). He was the manager of a very high scientific international group and met a lot of scientific leaders worldwide Co-manager as medical advisor of CardioGap, company specialized in high Technology level devices for cardiology and telemedicine. Dr. Petitet is involved in Telemedicine and eHealth since 1997. He became ISfT member back in 1999, then one of the re-founders of ISfTeH in 2002-2003. He is currently an ISfTeH board member (2012-2014), after having fulfilled already two mandates in the past. Dr. Petitet is very active in the telemedicine field, specialist of telemedicine mobile units (telemedicine suitcases). He is Head of the CATEL International Commission. CATEL is a French non-for profit association dedicated to promote and disseminate telemedicine and eHealth in France and abroad. CATEL is the ISfTeH national member representing France. He is member of several telemedicine and eHealth organizations: ATA, SETeS, and is considered as an International Telemedicine/eHealth Expert. Dr. Petitet was an active member of the French Red Cross medical instructors team and served as physician for Fire Brigades staff.

PETRATOS GERASIMOS

Gerasimos (Gerry) Petratos earned an MD from Howard University in Washington, DC, and a master's degree in health service administration and Medical informatics from the University of Utah. He is global head of healthcare data analytics at the Roche Group, a global pharmaceutical company focused on cancer therapeutics and diagnostics. His pharmaceutical career includes experience in the research, development and medical affairs divisions, and for the past seven years has worked on phases 2–4 drug projects at Schering Plough and Roche. He was previously director of clinical decision support at Roche, where he oversaw data-driven applications of clinical information management in protocol design, graphical medical review, analysis, reporting and publications that supported the discovery, approval and promotion of medicines. Petratos previously conducted clinical research at Intermountain Healthcare and the University of Utah Health Sciences Center as part of a National Institutes of Health fellowship with the National Library of Medicine

in Biomedical Informatics. He heads the alumni network for the biomedical informatics department of the University of Utah and is active in the Hellenic Medical Society of New York and the Global Hellenic Medical Network.

PETROVECKI MLADEN

Mladen Petrovečki (1960-2016), MD, PhD, is Full Professor of Medical Informatics at the Department of Medical Informatics, Rijeka University School of Medicine in Rijeka, and Head of the Immunology Division at the Department of Laboratory Diagnosis, Dubrava Clinical Hospital in Zagreb. He is experienced in laboratory immunology, medical informatics, statistical analysis of biomedical data, and teaching of medical informatics, biostatistics and research integrity. He is teaching at graduate and postgraduate studies at the Rijeka and Split University Schools of Medicine, and Zagreb University Schools of Dental Medicine and Pharmacy & Biochemistry. He is a Statistical Editor in the Croatian Medical Journal, Acta Stomatologica Croatica, and Biochemia Medica,

and Medical Informatics Editor in the Medix Journal. During 2004–2006 he was Assistant Minister for Science at the Ministry of Science, Education and Sports of the Republic of Croatia, and during 2005–2013 he was heading Working Group for Science and Research Chapter in the negotiating team for the Accession of the Republic of Croatia to the European Union. His main scientific research domain in last two decades covers research integrity.

PHAROW PETER

Peter Pharow studied cybernetics and automation technology during 1981-1986, with a focus on data protection (backup) and safety of people, information and data (safety and security). After graduation, he worked in several companies, including as a Data Protection Officer in with an emphasis on ICT-related work-archived personal documents. From 1996 to 2004 he was a research assistant at the Institute of Medical Biometry and computer science at the University Hospital Magdeburg with the work focus health cards, data protection, data security and security infrastructures. This was followed by a

position as a research assistant at the Fraunhofer Institute for Integrated Circuits IIS in Erlangen. Since 2006 Pharow works for the eHealth Competence Center at the University Hospital Regensburg. He is also head of the working group "Privacy in Health Information Systems (DGI)" of the German Society for Medical computer science, Biometry and Epidemiology (GMDS) and since 2006 Co-Chair of the Working Group EFMI "cards".

PICKETT LARRY

Larry Pickett is Vice President and Chief Information Officer at Purdue Pharma LP, a research-based pharmaceutical company located in Stamford, Conn. Larry has responsibility for all information technology functions at Purdue Pharma, including IT strategy, business process transformation, technology infrastructure, and applications development. In the 18 years since joining Purdue Pharma, Larry has led the company's implementation of core business systems and international research and development systems. Current areas of focus include business analytics, sensor and wearable tech, IT value, cloud computing, virtualization, enabling mobile solutions, and creating competitive advantage through innovative software and business process optimization. He is a founding member of the Westchester/Fairfield chapter of the Society for Information Management and is active with the Pharmaceutical Informa-

tion Systems Association, an association of CIOs in the pharmaceutical industry. He is on various CIO Customer Advisory Boards and similar life sciences advisory boards. He has also served on committees within the Pharmaceutical Research and Manufacturers of America (PhRMA). Before joining Purdue, he held senior IT positions with Merck, Glaxo Welcome, and GE. He earned his Bachelor's degree from the University of North Carolina at Chapel Hill and MBA from the University of North Carolina at Greensboro.

PIECHOWSKI ROD

Rod Piechowski, MA, is Senior Director, Health Information Systems at HIMSS where he serves as the staff liaison to HIMSS Committees and Communities engaged in the health information technology User Experience and Innovation. He is a primary strategist and developer of the HIMSS HIT Value STEPS framework, which offers a universal classification system for types of value and their optimization using information technology. The STEPS framework is part of a larger collection of resources around value,

including a growing database of tangible examples demonstrating the value of HIT around the world. Prior to joining HIMSS, Rod was Senior Associate Director, Policy, at American Hospital Association. He has also served as Vice President, Technology Leadership at the National Alliance for Health Information Technology. He holds an MA in Bioethics and Health Policy from Loyola University's Neiswanger Institute for Bioethics, concentrating on organizational ethics and the intersection of emerging technologies. He also holds a BS in English Literature from Northern Michigan University. Rod is based in the HIMSS Chicago office.

PIEMME E. THOMAS

Thomas E. Piemme, MD, FACMI, is Emeritus Professor of Health Care Sciences, Computer Medicine and Medicine at George Washington University. He received his undergraduate (1954) and medical education (1958) at the University of Pittsburgh. He then trained in internal medicine and cardiology at Pitt, and at the Peter Bent Brigham Hospital in Boston. While at the Brigham, working with G. Octo Barnett, he pioneered in the use of high

frequency response transducers to record pressure, flow, and sound from within the heart to document the precise timing of events of the cardiac cycle. Following two years in the United States Air Force at the Aerospace Medical Research Laboratory at Wright Patterson Air Force Base, working on environmental issues facing the forthcoming Apollo missions, he joined the faculty of the Department of Medicine at the University of Pittsburgh where he was a Scholar in Academic Medicine of the Markle Foundation. In 1970, Dr. Piemme moved to the George Washington University as Professor of Medicine, where he became the founding director of the Division of General Medicine. Responsible for outpatient and emergency services at the Medical Center, he founded a Physician Assistant training program, and established a pre-paid health maintenance organization, the George Washington University Health Plan. Appointed to direct Continuing Medical Education at the Medical School in 1977, Dr. Piemme met with William Yamamoto and Helmuth Orthner, who had conducted two regional meetings of the fledgling Symposium on Computer Applications in Medical Care (SCAMC). Anticipating a wider interest, he invested the resources to undertake an international marketing effort that resulted in a tripling of attendance in the next year. He then saw to the incorporation of SCAMC, now recognized as the premier meeting of medical informatics in the

United States, and became its Executive Director. Within the next few years, Dr. Piemme was elected to the Board of Directors of the American Association for Medical Systems and Informatics (AAMSI), and appointed to the Biomedical Library Review Committee of the National Library of Medicine. Having been involved with the National Board of Medical Examiners for some years, he became the first Chair of the Computer Based Examination Test Committee, responsible for developing simulations to test a candidate's ability to manage clinical problems. In 1983, together with co-author Marion J. Ball, he wrote the influential monograph, Executive Management of Computer Resources in the Academic Health Center, published, and widely distributed, by the Association of Academic Health Centers. Dr. Piemme was one of five persons (with Scott Blois, Morris Collen, Don Lindberg, and Ted Shortliffe) who conceived and implemented the concept of the American College of Medical Informatics. Elected to Fellowship in the first year, Piemme served as the Founding Secretary. Dr. Piemme went on to become Associate Dean for Continuing Medical Education and Chair of the Department of Computer Medicine. Nationally he has played roles with the Association of American Medical Colleges (Chair, Primary Care Task Force); National Commission for Health Certifying Agencies (President); Symposium on Computer Applications in Medical Care (Executive Director);

Alliance for Continuing Medical Educational (Council Member and Program Chair); Society for Medical Decision Making (Executive Director); National Library of Medicine; and the American Academy of Family Physicians.

PIHA TAPANI

Tapani Piha works as Head of eHealth and Health Technology Assessment Unit in the European Commission, Belgium, dealing also with data in healthcare and advice for health systems. Previously he was responsible for health information, strategy and law, and human resources. After medical studies he carried out epidemiological and health intervention research. He has held positions at the Finnish Ministry of Health, and coordinated EU policies in health. At the WHO Regional Office for Europe in 1989-94 he led action for a Tobacco-free Europe.

PINCIROLI FRANCESCO

Francesco Pinciroli is professor of Bioengineering and Head of the eHealthLAB at the Politecnico di Milano, Italy, where he is in charge of the eHealth track in the curriculum of Biomedical Engineering. He gives courses on BioMedical Informatics, Health Information Systems and Telemedicine, Biolanguages and Bioarchives. Also he is former Honorary Visiting Professor at the Center for Health Informatics, City University London, UK. His research interests cover the areas of medical databases, biosignals and bioimages digital archives, electronic medical records, medical lexicons and terminologies, sustainable privacy of patient digital data, continuing education for healthcare Chief Information Officers. More recent interests are for Media Tablets and Apps for Medicine, Health and Home-Care. He established long lasting cooperation with Cilea Interuniversity Consortium for Information and Communication Technologies and the Institute for Biomedical Engineering of the Italian National Research Council. He started and coordinated the

Visible Human Dataset - Milano Mirror Site, built up as a cooperation between the Politecnico di Milano and the US National Library of Medicine. He advises companies, governmental bodies, and public and private hospitals. He is active in the international scientific publishing community. He edited several books, including "Elementi di Informatica Bio-Medica" [Elements of BioMedical Informatics], and "Applicazioni di Sanità Digitale", [eHealth Applications], translations of which are on the way. He is author of hundreds of scientific papers, frequently appeared in top level journals of the area.

PIPBERGER HUBERT

Hubert V. Pipberger (1921-) graduated from Rheinische Friedrich Wilheim University in Bonn, 1951. During WW2 he served as a medic in German air force and was taken as prisoner of war in France sometime after the 1944 Normandy invasion. In 1955 Pipberger immigrated to the US, working first with Prinzmetal in Los Angeles in basic cardiac electrophysiology projects. His early works are related with digitizing and using digital analysis of ECG during 1958. Pipberger is one of the very first who processed

adult ECG. In 1957 VA established the Research Center for Cardiovascular Data Processing with Pipberger as the chief. In 1960, Pipberger obtained funding from the VA for computerized ECG development as a collaborative project with eight VA hospitals, with Alan Berson as an engineer for the project. 1957. He had a computer, a CDC 3100 and one of the most successful analytic approaches to computerized ECG interpretation is his work. He has developed a system, validated from independent data which competes well with expert cardiologists. The pioneering efforts of Pipberger in computerized ECG are well known and his extensive contributions to VCG research were published in many cardiology journals. Pipberger contracted National Bureau of Standards to build a device for analog-to-digital conversion of the XYZ leads introduced by Frank in 1956. Caceres and Pipberger both used Otto Schmitt as a consultant for their systems design specifications. Pipberger's initial results from automatic ECG wave recognition were documented in 1961. Pipberger provided firm leadership for this pioneering collaborative project in acquisition of digital ECG diagnostic data base with diagnostic classification established using non-electrocardiographic information. Pipberger also provided active leadership to interdisciplinary teams of investigators in formulating the American Heart Association's recommendations for ECG instrumentation published in 1967 and 1975. He was elected ACMI fellow in 1984.

POHJONEN HANNA

Hanna Pohjonen is Healthcare IT consultant. Rosaldo Oy, Finland. She is a Finnish healthcare IT consultant, but working globally. She is also a part-time associate professor in eHealth in Tallinn University of Technology. She has been involved as a healthcare IT consultant in 24 different countries in Europe, North-America and Middle-East having extensive knowledge on the current and past national/regional eHealth projects. Before consultancy she worked in the research area both in UK and Finland, in the hospital sector in several assignments as well as in the Ministry of Trade and Industry leading a healthcare IT financing program for companies and research institutes.

POLITAKIS G. PETER

Peter G. Politakis (1948-2007) was born in Boston, MA and raised in Woburn, MA. He attended Woburn Public Schools. He graduated from UMass Amherst, Boston University and received a PhD in Artificial Intelligence from Rutgers University in New Jersey. He worked for Digital Equipment Corporation and Hewlett-Packard Company as a Senior Technology Consultant. After his retirement from Hewlett-Packard Company, he taught middle school math in New York City, NY. He was a kind, gentle, respectful gentleman.

POPLE E. HARRY
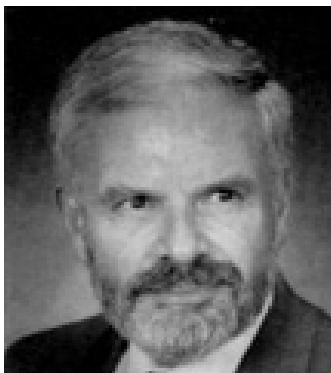
Harry E. Pople (1934-2011) graduated at Massachusetts Institute of Technology in electrical engineering in the early 1950s. He obtained graduate and doctorate degrees from Carnegie Mellon University and ended up teaching and collaborating on pioneering research at the University of Pittsburgh. He was a perennially inquisitive man with the sharpest of minds who spent decades studying the intersection of medicine and computer technology. Starting in the early 1970s, he became a Pitt professor teaching overlapping disciplines in business, computer science and neurology. He collaborated with Jack Myers, chairman of internal medicine in Pitt's School of Medicine, in developing a computer program called INTERNIST that was far advanced for its time in diagnosing disease based on information about symptoms. In the 1980s, Mr. Pople was director of Pitt's Decision Systems Lab where he continued working with Dr. Myers and other Pitt medical experts while overseeing work by research assistants, graduate students and others in analyzing how useful computers could become in the practice of medicine. The bearded, deep-voiced Mr. Pople was known as a straight shooter who enjoyed exploring how people came to decisions in all kinds of realms. He started a small private company of computer scientists, Seer Systems, during the 1980s, and it grew over the following decade as the research work at Pitt was being phased out. He handled numerous research projects over the years for NASA, the Nuclear Regulatory Commission, the National Security Agency and other government agencies. The NRC used him after the Three Mile Island accident to study what went wrong in the decision-making at the plant that could be used to avoid similar meltdowns. While such work was significant, he tended to do it in a quiet way, focused on intellectual discoveries rather than on self-promotion or zealous pursuit of more and more research funding.

POSNACK STEVEN

Steven Posnack, MS, MHS, is Director, Office of Standards and Technology, Office of the National Coordinator for Health Information Technology (ONC). He joined ONC in July 2005. Prior to serving as the Director of the Office of Standards and Technology, Steve led ONC's Federal Policy Division within the Office of Policy and Planning from 2010 to 2014. In this capacity, Steve led ONC's regulatory affairs, legislative analysis, and several federal policy development and coordination activities. As the Federal Policy Division Director, Steve developed the health IT standards and certification policy necessary to support the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs. Steve authored and supervised the drafting of all regulations issued by ONC during this time period, including several standards and certification criteria regulations, the regulations necessary to establish the ONC Health IT Certifica-

tion Program, and an advanced notice of proposed rulemaking on metadata standards. Steve co-led many of ONC's high-priority health IT policy development and coordination activities, including the rulemakings related to the CMS and HHS OIG proposed and final rules to modify the EHR donation rules under the Physician Self-Referral Law (Stark) and Anti-kickback Statute; the 2012 RFI on a governance mechanism for the nationwide health information network; the 2013 Governance Framework for Trusted Electronic Health Information Exchange; the 2014 draft report on a risk-based regulatory framework for health IT as required by the Food and Drug Administration Safety and Innovation Act (FDASIA) Section 618; the FDA guidance on mobile medical applications; and various aspects of privacy and security policy related to the Health Information Technology for Economic and Clinical Health Act (HITECH Act) modifications to the HIPAA Privacy and Security rules and breach notification requirements.

POWELL KIMBERLY

Sr Director, Business Development at NVIDIA. Kimberly Powell is the business development manager for Healthcare at NVIDIA, where she promotes GPU computing into the bio/life sciences and medical imaging fields. Kimberly is responsible for NVIDIA's healthcare market strategy, bringing healthcare industry requirements into the product development process. Prior to joining NVIDIA, she was a product manager of diagnostic imaging display systems for Planar Systems Medical Business. Prior to that, she was a hardware engineer at DOME imaging systems, primarily concentrated on FPGA design. A graduate of Northeastern University, Kimberly holds a bachelor of science in electrical engineering with a concentration in computer engineering.

PRATT ARNOLD

Arnold "Scotty" Warburton Pratt (1920-2003), MD, FACMI, was the first director of the Division of Computer Research and Technology (DCRT, the forerunner of the Center for Information Technology). He retired from NIH in 1990, after 42 years of distinguished service. In 1966, he was appointed the first director of DCRT by then NIH director Dr. James Shannon. Pratt's leadership was instrumental in introducing an enduring vision for the application of computer science and technology to NIH programs. Pratt received many awards over the years, including a Department of Health, Education, and Welfare Superior Service award in 1968, an honorary Doctor of Science degree from Hobart and William Smith Colleges, Geneva, N.Y., and a Meritorious Executive Presidential Rank Award for the Senior Executive Service in 1980. Upon his retirement from NIH, he remarked, "As fruitful as the past has been, the future promises even more as the ideas and

aspirations of computer science are realized in the laboratory and the clinic." His vision of computers becoming an integral part of biomedical research endures at NIH.

PRATT WANDA

Wanda Pratt, PhD, FACMI, received her Bachelors degree in electrical engineering from the University of Kansas, a Masters in Computer Science from the University of Texas at Austin, and a PhD in Medical Informatics from Stanford. She began her academic career as an assistant professor in the information and computer science department at the University of California, Irvine, then migrated north to the University of Washington, where she was at the time of election to the College an associate professor of biomedical and health informatics, with a joint appointment in the Information School at UW. Dr. Pratt has parlayed her graduate work in information retrieval and computer-supported cooperative work into a highly successful research

program directed at understanding and meeting the needs of patients as they undertake their work of battling serious diseases and staying alive. She designed and implemented a patient-oriented online system called HealthWeaver that helps cancer patients manage information about their care, get questions answered and interact with others online. Early on, Health-Weaver embodied technologies for social networking, anticipating the subsequent wave of such applications on the Internet. Dr. Pratt's excellence and creativity in research are matched by her excellence in teaching and mentorship, and many of the trainees she has mentored have gone on to careers in informatics research.

PREMIK MARJAN
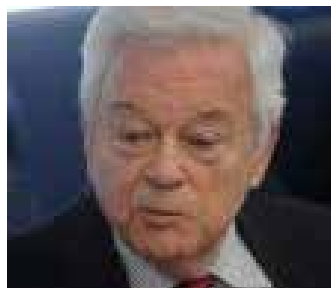
Marjan Premik (1937.), MDD, PhD, was born in Celje, Slovenia. He graduated from the Faculty of Medicine in Ljubljana in 1963. He specialized in Orthodontics in 1970 and in Social medicine in 1982. He gained his master's degree at Public Health School "Andrija Stampar" in Zagreb, Croatia in 1978. He successfully defended his PhD thesis from the Faculty of Medicine in Ljubljana in 1989

and was elected an assistant professor of Social medicine. In 1992 he became Head of the Hygiene, Social Medicine and Occupational Health Department and had held this position until his retirement in 2003. He has remained active in the field of public health as a lecturer and an expert. His bibliography includes over 250 entries, 194 of which are research articles. He published three university textbooks on his own or in collaboration with his colleagues. Between 1981 in 1988 he was the Director of The UNDP project »Computer supported Health information system in the Socialist Republic of Slovenia«, in which the first documentation of all formal communication in the field of health care was recorded (data origin, flow of documents, data users and data warehouse). Results of the project were used as a professional foundation for setting up the current informational infrastructure (data banks of: users, providers, compulsory payers and organizational units in health care) and introduction of a personal health card in Slovenia. Together with Stefan Adamic and Franc Kosir he founded Slovenian Medical Informatics Society - SDMI in 1988. In 1999 he chaired MIE '99 Conference in Ljubljana.

PREZIOSI PETER

Peter Preziosi, PhD, RN, CAE is Healthcare Innovation Strategist, Verizon. Expertise: Strategic development, change management, alliance-building. Peter has worked over 20 years on healthcare reform efforts and in building public/private partnerships in national organizations including the Association for Healthcare Documentation Integrity, Planned Parenthood Federation of America, the National League for Nursing and the AMDEC Foundation, a New York State biomedical research consortium. He also worked for the City of New York's Health & Hospitals Corporation and directed the Mayor's Office of Medicaid Managed Care. He holds a PhD and MGA in Health Policy and Government Administration from the University of Pennsylvania, an MEd from Columbia University's Teachers College, and a Bachelor of Science in Nursing from Florida State University.

PROKOSCH HANS-ULRICH

Hans-Ulrich Prokosch is Chair of Medical Informatics and CIO. Erlangen University Hospital, Germany. Prof. Prokosch has a background in Mathematics and a PhD in Medical Informatics. Today he holds the Chair of Medical Informatics at the University of Erlangen-Nuremberg. His research interests focus on health care information system architectures, workflow and hospital process support, integrated decision support functionalities, evaluation of information technologies as well as clinical research informatics, especially reusing data from the electronic health record for clinical and translational research. Further he is also the CIO of Erlangen University Hospital and responsible for its strategic planning.

PROTTI DENIS

Denis Protti, PhD, was Professor and the founding Director of the University of Victoria's School of Health Information Science in 1981, a position he relinquished in 1994. He retired from teaching in July 2010. Prior to joining the University he held senior information systems executive positions in Manitoba and British Columbia hospitals. He continues to do research and publish in the following areas: National Health Information Management & Technology Strategies, Electronic Health Records, and Evaluating Information Systems. Professor Protti was a founding member of COACH - Canada's Health Informatics organization. He served as its 2nd President and was granted lifetime member status in 1981. He was a founding member of the American Medical Informatics Association; in 1989 he was one of the first non-Americans elected a fellow of the American College of Medical Informatics. He became a lifetime member of the British Computer Society in 2003. He chaired and served on numerous international, federal and provincial committees and councils over his 44 year career. In 2004, an Endowment Fund

was created at the University of Victoria in the name of Denis and Pat Protti by the Partnership & Productivity Colloquium - a group Professor Protti founded in 1984 - for their contributions to Canada's healthcare system. Professor Protti has received a number of awards including the COACH leadership award. He was also the first recipient of the Canadian Health Leadership Network's MacNaught-Taillon Award for his contributions to Canadian health care. In 2012, he was the inaugural recipient of the Techna Health Innovator Award. Professor Protti has written hundreds of publications in books and journals and has given even more presentations to a wide range of audiences around the world. He continues to advise and sit on expert panels for health care organizations and government agencies in both Canada and abroad. He was most recently chair of the Informing Healthcare's International Advisory Group for NHS Wales, is a member of the TicSalut Scientific Council in Catalonia Spain, and the World Economic Forum's Global Agenda Council on Digital Health; he also serves as an external eHealth reviewer for the European Commission. Professor Protti was commissioned by the Her Majesty's Treasury to review the proposed 1998 National Health Service (NHS) Information for Health Strategy for England prior to its release. He later developed the evaluation methodology that was used to monitor the local implementation of their national

strategy. For the past 25 years, he has been invited annually by the Government and a variety of English organizations to conduct on-site reviews, take part on research teams, give seminars, and comment on the UK's progress with their Electronic Health Records journey. In May 2009, he was granted an Honorary Doctor Science from City University London for his contributions to the British health care system.

PURCELL PATRICK

Patrick Purcell (1931-2007). worked for over four decades and he has reflected an abiding interest in the application of media technology to various aspects of human affairs, both from the perspectives of the social group and the single personal user. The current transition to a fully fledged digital infrastructure of information and communication technology provides the impetus for much of Purcell's current research and writing. The underlying impetus informing this work seeks to identify how advances in the technology of the information society may be utilized most constructively in various social and personal situations. His recent research work has focused on developments in

Social Computing applications of Digital Media Technology, and the Human/Computer Interface. His career as an academic researcher has included professorial appointments and/or senior research fellowships in a number of leading academic institutions, including Imperial College of Science, Technology & Medicine, London (1994-to date), University of Ulster, UK (1990-1994), Massachusetts Institute of Technology, USA (1982-1990) and the Royal College of Art, London (1964-1981). During this time, he has participated as a founding member, in the establishment of four research laboratories, both in the UK and USA. His publication list extends to over seventy papers and the editing of several books in his research domain. Most recently he edited Networked Neighborhoods: The Connected Community in Context, which came out in July 2006. Purcell's academic and professional background is interdisciplinary, spanning informatics, design theory and digital media technology. His professional affiliations are Fellow of the British Computer Society and Fellow of the Chartered Society of Designers in the UK. He is, or has been, a member of several advisory publishing boards, including Image & Vision Computing and Design Studies (both Elsevier Science) and the Computer Bulletin (British Computer Society).

PYLE KATHRYN

Kathryn I. Pyle, AMLS, MA, assistant professor of medical informatics and clinical epidemiology, teaches the scientific writing and communication course in the biomedical informatics program, Ms. Pyle has served as administrator of the Oregon Evidence-based Practice Center and editorial manager of Medical Decision Making under editors-in-chief J. Robert Beck, MD, and Mark Helfand, MD, MPH. She provides grant and contract proposal coordination for the department and is editor of DMICE Tracks, the departmental newsletter. Ms. Pyle holds master's degrees in library science and journalism.

Q
QUANTIN CATHERINE

Catherine Quantin has headed the Biostatistics and Medical Informatics Unit of Dijon Teaching Hospital since 1998, and is a member of the INSERM U866 team and INSERM CIC (Clinical Investigation Center) 1432. The Biostatistics and Medical Informatics Unit directed by Professor Catherine Quantin specializes in the statistical analyses of data contained in major medical databases in the field of public health. Her team includes hospital practitioners, analysts, statisticians and public health researchers. This team is responsible for the collection, coding and statistical analysis of hospital Medical Information System Program (PMSI) data. Its research activities include the development, the comparison and the application of statistical methods and models (notably to identify prognostic factors) to meet the challenges associated with the exploitation of health data. In this context, her team was one of the first to obtain authorization to extract data from the SNIIRAM database (a nationwide centralized administrative database of all health services) for methodological research (pharmaco-epidemiology). Professor Quantin has also developed new methods in anonymous identification and linkage, one of which was patented. The ANONYMAT software was approved by the CNIL, the body that supervises and ensures the confidentiality of private data in France. In addition, Professor Quantin's methodology for anonymity and linking has been approved and is currently being used at regional, national and international levels. At the national level, it is being used for surveillance by the PMSI for linking hospital discharge abstracts, the national health insurance program with the SNIIRAM database, the French Institute for Public Health Surveillance (InVS) for diseases for which declaration is compulsory, the National Education Ministry for pupils and students, the National Monitoring Institute For Children In Danger. At the international level, in Switzerland, her methodology is being used to link hospital data. Catherine Quantin has led a large number of national projects and has supervised nine doctoral theses in sciences and seventeen Masters Degrees. She is or has been the President of the College of Biostatistics and Medical Informatics Teachers (CIMES), General Secretary of the Association of French-Speaking Epidemiologists (ADELF), President of the College of Practitioners Specialized in Medical Information and Communication (COPSICOM) and Chair of

the Education Committee of the International Society for Clinical Biostatistics (ISCB). She is a member of the Expert Committee of the Institute of Health Data (IDS), the National Qualification Commission in Public Health of the National College of Physicians (CNOM), the Scientific Board of the Center for Secure Access to Confidential Statistical Data (CASD), the Scientific Council of the InVS and the Scientific Council of the Institute for Research and Documentation in Health Economics (IRDES). As President of the Scientific or Organizing Committee, she has organized twelve national or international conferences (ISCB, ADELF, EMOIS) or workshop (IMIA). She is the Editor-in-Chief of the Journal d'Economie et de Gestion Médicales. She is the lead author/co-author of almost 140 international publications.

QUARSHIE SAMUEL

Samuel Quarshie is the Head of ICT Department, Ghana Health Service. His primary role as the head of ICT is to provide leadership and direction in the use of Information Technology and Information Systems in the

Ghana Health Service. The pursuance of good IT governance and the alignment of IT strategy with business strategy and programmes of the healthcare sector are a few of his responsibilities. He also holds several IT certifications in the area of Security, IT Auditing, Systems and Networking administration. He is familiar with the Health Insurance Portability and Accountability Act (HIPPA), a member of the Project Management Institute (PMI) and Information Systems Audit and Control Association (ISACA). He is a Chartered Accountant and a fellow of the Association of Chartered Certified Accountants (ACCA), UK.He was previously a Deputy Director of Finance in charge of financial management information systems.

R

RAO GOWTHAM

Gowtham Rao, MD, PhD, is Chief Medical Informatics Officer, BlueCross BlueShield of South Carolina. Dr. Rao is a board certified physician with a PhD in Epidemiology, who brings in a unique combination of clinical, health IT, quality and measurement science expertise. His experience includes working as a provider in community hospitals, as researcher in the Department of Veterans Affairs and as an executive in a health plan. Currently, he serves as the chief medical informatics officer at BlueCross BlueShield of South Carolina. Through his hands on

approach he has worked on several projects to draw meaningful insights from large clinical data and accelerate quality initiatives within a health system.

RAMONI F. MARCO
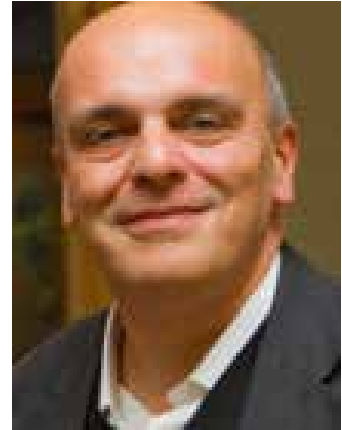
Marco F. Ramoni (?-2010), PhD, FACMI, received his Bachelors and PhD degrees from the University of Pavia in Italy. He undertook a postdoctoral fellowship in Cognitive Science and Artificial Intelligence in Medicine at McGill University, and was a research fellow at the United Kingdom's Knowledge Media Institute. He emigrated to the US where he was a Senior Visiting Fellow at the University of Massachusetts, then joined the faculty at Harvard Medical School where he was at the time of his posthumous election to the College an Associate Professor of Pediatrics and Medicine. He also served as Director of the Biomedical Cybernetics Laboratory at Harvard, Associate Director of Bioinformatics at the Harvard-Partners Center for Genetics and Genomics, and Direc-

tor of the biomedical informatics training fellowship at Childrens Hospital, Boston. Dr. Ramoni was a pioneer of the application of molecular bioinformatics methods to medicine, particularly in the areas of cancer biology and human genetics. He developed novel Bayesian approaches to learning and reasoning with high dimensionality molecular data, and advanced the science of gene expression analysis and gene expression temporal profiling in cancer. He developed methods for correlating clinical phenotypes with single nucleotide polymorphism data, and applied genome-wide association analysis to a variety of health problems including asthma, cholera, nicotine dependence and neoplasia. Dr. Ramoni's professional service included leadership in establishing the AMIA Summit on Translational Bioinformatics. He was a respected educator whose students have gone on to productive careers in biotechnology and academic medicine. Dr. Ramoni's untimely death in 2010 cut short a stellar career, and in recognition of his academic and professional service achievements, he was elected by his peers to fellowship in the FACMI posthumously.

RAPTOPOULOS ANDREAS

Andreas Raptopoulos, MSc, MA, is Research Consultant. EXUS GR. Andreas received his diploma in Computer and Informatics Engineering from the University of Patras in 2005, his MSc in Computer and Telecommunications Networks from University of Athens in 2009 and his MBA from Athens Laboratory of Business Administration in 2012. He joined EXUS in 2010 as a Research Consultant in the Innovation department. Over the years he has been technically involved and coordinated more than 10 EU projects mainly in the ICT for Health field. Currently he is the the coordinator of FP7 WELCOME and H2020 AEGLE projects.

RAUCH JAN

Jan Rauch, RNDr, PhD, graduated from Faculty of Mathematics and Physics, Charles University, Prague in 1972. He received his PhD in Mathematical logic at Mathematical Institute of Czechoslovak Academy of Sciences in 1986. He joined Department of Information and Knowledge Engineering of the University of Economics, Prague in 1999. He became an associate professor in 1999 and full professor of Informatics in 2011. He is interested in knowledge discovery in databases, especially in its logical principles and applications in medical informatics. He is author of a monograph at Springer and co-author of two additional monographs. He is also author or co-author of more than 120 papers in scientific journals, chapters in books and papers in proceedings from international conferences. He served as a member of steering committees of conferences PKDD (Principles and Practice of Knowledge Discovery in Databases) and ISMIS (International Symposium on Methodologies for Intelligent Systems) and as a member of program committees of tens of international conferences. He

was a principal investigator of several national and two international projects funded by Czech institutions. Between 2000 and 2004, he was the representative of the University of Economics in the research center EuroMISE – Cardio (project of the Ministry of Education, Youth and Sport of the Czech Republic). Here he conducted research on applications of methods of knowledge discovery in medical databases. He is a member of the EuroMISE Mentor Association.

REAGIN MICHAEL

Michael Reagin is the Chief Information Officer for Cleveland Clinic Abu Dhabi. As CIO, he leads all information technology and Clinical engineering initiatives designed to deliver the next generation digital hospital to the region. Michael has 19 years of experience in Information Technology management and has extensive experience managing global teams in the United States and Asia. Prior to joining CCAD, Michael served as Providence Health and Services Chief Technology and Strategy Officer. In 2006, Michael was named one of the Top 25 Most Innovative People in Health Care IT by Health IT and Imaging Magazine for his work in provider based disease management. In 2002, he was recognized by InfoWorld for his leadership and innovation in Service Oriented Architecture. Michael is a member of the IBM Board of Advisors, and has also served on the board of Microsoft Health Users Group and Techni-

cal Advisor to McKesson Corporation in the areas of electronic medical record (EMR) standards and integration strategy.

RECTOR L. ALAN
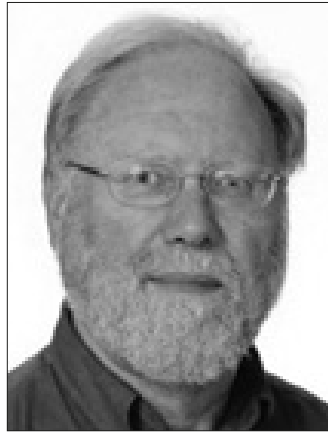
Alan L. Rector, MD, PhD, FBCS, FACMI, was born in the United States and went to college at Pomona in California before obtaining additional training at the University of Chicago and the University of Minnesota (where he obtained his MD degree in 1970). After a year of internship in Minnesota, he was drawn to the research program of Dr. Tim deDombal in Leeds, England. The rest is history, for his newfound homeland in the United Kingdom became the basis for all his subsequent training (a PhD from the University of Manchester in 1986) and his medical informatics research. He is now professor of medical informatics in the Department of Computer Science, University of Manchester, and an elected fellow of both the British Computer Society and the British Medical Informatics Society. Dr. Rector is one of the

pioneers in the use of description logics in medical terminologies. In the PEN&PAD Project, he showed informaticians how to use knowledge representation methods to drive adaptable intelligent user interfaces based on user-centered design. He is also a pioneer, through his GALEN program, in the use of description logics in developing medical terminologies. He has been a consistent contributor to our understanding of the challenges in medical terminology and in the structure of medical records, including the relationships between terminology and EMRs. Alan now leads the Medical Research Council (MRC)- sponsored Cooperative Clinical E-Science Framework consortium of seven UK universities, National Health Service (NHS) trusts, and Cancer Networks. He represents the epitome of a dedicated, diligent, and thoughtful academic who has made medical informatics his career.

REDDY C. MADHU

Madhu Reddy, PhD, FACMI, is a professor in the Department of Communication Studies and

a faculty member in the Center for Communication and Health. He earned BA in Political Science at UC Irvine, BS in Biological Science at UC Irvine, MS in Health Care Administration at Cal State, Long Beach, MS and PhD in Information and Computer Science at UC Irvine. His primary interests are in understanding how we can better design and implement health information technologies to improve communication and collaboration in clinical settings. His interdisciplinary research connects medical informatics, computer-supported cooperative work, and information sciences. Reddy's research has been supported by the National Science Foundation, Lockheed Martin, and the Commonwealth Fund. He was awarded the American Medical Informatics Association's Diana Forsythe Award in 2002 and 2010. Reddy was elected as a Fellow of the American College of Medical Informatics in 2015 for his contributions to the field of informatics.

REDHA MOHAMMAD

Mohammad Al-Redha is Head of Planning & Development and Acting Director of the Health Data and Information Analysis

Department Health Policy and Strategy Sector in Dubai Health Authority, Government of Dubai, Dubai, United Arab Emirates. He graduated at Royal College of Surgeons in Ireland. He worked as Fellow in BIDMC Harvard Medical School as Acting Chief Operating Officer at Rashid Hospital (December 2004 – July 2008 (3 years 8 months). He is national representative of United Arab Emirates in International Association of Medical Informatics.

REDRADO JESUS

Jesus Redrado currently holds the position of CIO at the Clínica Universidad de Navarra. He is a graduate in Computer Science from the University of Deusto (1997) and AMP from IESE (2005). He was director of the Center for Data Processing (2004-2005) and the Information Technology Services of the University of Navarra (2005-2007). Before joining the Clínica he headed the Research & Development deparment of the security firm Optenet in Mexico.

REED GREG
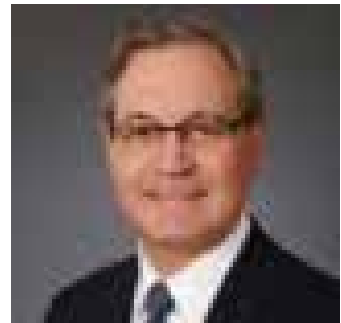
Greg Reed is President and Chief Executive Officer of eHealth Ontario. Greg was hired in April 2010 to rebuild the Ontario government agency responsible for implementing an electronic health care system for the province of Ontario. Prior to joining eHealth Ontario Greg spent 20 years with international strategy consulting firm McKinsey & Company in New York, London (U.K.) and Toronto. He has also served as the CEO of an investment management firm and a Canadian bank. Greg holds an MBA from Harvard Business School and a BSc in Computer Science from the University of Toronto. He is a Director of the National Arts Centre Foundation where he chairs the Finance Committee, is Vice-Chair of Business for the Arts, and is a former Director of the National Ballet of Canada.

REES BLEDDYN

Bleddyn Rees is Head of Healthcare, Wragge and Co LLP, London. Bleddyn is a vastly experienced commercial lawyer with 25 years advising on outsourcings, privatisations, complex contracts and projects. Bleddyn leads the Healthcare practice at International law firm Wragge & Co. and has unique experience for private sector lawyer having spent 3 and a half years on secondment as the General Counsel of the Commercial Directorate of the UK Department of Health. Bleddyn has advised Health Ministers, the Secretary of State for Health, the Prime Minister and Special Health Advisors during his time on secondment. He has spoken at International Health conferences and visited International Health facilities and systems on behalf of the NHS. He provides extensive advice on healthcare regulations, commissioning and contracting for healthcare services, partnerships, collaborations and public private partnerships in the health sector. His Clients include the UK Department of Health,

Strategic Health Authorities, NHS Hospitals & Commissioners as well as private healthcare providers, healthcare supplier, technology businesses, banks and private equity funders. Also, he advises a number of Countries in the Middle East on the development of their healthcare systems. He has a special interest in International telemedicine, e-health and m-health.

REGGIA A. JAMES

James A. Reggia, MD, PhD, FACMI, received his MD (1975) and PhD in Computer Science (1981) from the University of Maryland. His research has been in the areas of computer-assisted medical decision making, modeling of human diagnostic reasoning, and applications of computers in clinical neurology.

REICH J. JOEL

Joel J. Reich is Chief Medical Officer for Eastern Connecticut Health Network and Clinical Associate Professor at The University of New England

College of Medicine. He previously served as ECHN's Chair of Emergency and Ambulatory Care and Medical Director of EMS. Dr. Reich is leading the development of the clinically integrated network, including a new physician-led governance structure, linking the acute care and post-acute care providers via people-to-people and electronic exchange, and developing an innovative community-based primary care medical education program. Dr. Reich received his A.B. from Brandeis University, M.D. from SUNY at Buffalo, M.S. (Technology & Human Affairs: Telemedicine) from Sever Institute of Technology (Washington University), M.M.M. from Heinz School of Public Policy and Management (Carnegie Mellon University), and M.S. in Health and Medical Informatics from Brandeis University.

REICHERT ASSA

Assa Reichert (1943-2015) directed the first computer Department in the Israel Ministry of Health. Assa holds a BA in Life sciences and a MA in Life science s and Computer science from Bar-Ilan University, Israel. He was assistant director of Sheba Medical Center, the largest in Israel, and

VP of COMET, an Israeli-American software house specializing in medical institution management & EMR software. He served as consultant to the MOH. Assa was appointed aa a member of EFMI Council since 1994 as Israel national representative, later as Working Group chair, and Board member. He served EFMI as President (2002-2003), and represented EFMI in IMIA as Vice-President (2003-2005). Also, he chaired a lot of sessions and committees at MIE Conferences.

REICHERT MANFRED

Manfred Reichert is Director of the Institute of Databases and Information Systems, University of Ulm, Germany. Manfred Reichert holds a PhD in Computer Science and a Diploma in Mathematics. Since 2008 he has been appointed as full professor at the University of Ulm, where he is director of the Institute of Databases and Information Systems. Before, he was associate professor at the University of Twente in the Netherlands and a member of the management board of the Centre for Telematics and Information Technology (CTIT), which is one of the

largest academic ICT research institutes in Europe. At CTIT he was coordinator of the strategic research initiative on e-health. Manfred's research interests include business process management (e.g., process flexibility, process lifecycle management, and object-centric processes), service-oriented computing (e.g., service interoperability, mobile services, and service evolution) and e-health. Manfred has been PC Co-chair of the BPM'08, CoopIS'11, EMISA'13 and EDOC'13 conferences, and General Chair of the BPM'09 and EDOC'14 conferences. Recently, he co-authored a Springer book on process flexibility and obtained the BPM Test of Time Award at the BPM 2013 conference.

REICHERTZ LEO PETER

Peter Leo Reichertz (1930-1987) was a physician and university professor in the field of medical computer science. He studied physics, mathematics and medicine at the different universities throughout the Europe, in universities of Göttingen, Köln, Geneva, Munich and Bonn. During that period he persuaded PhD and directed himself toward internal medicine. His main

scientific activity in this period was in the field of cardiology. The experiences in practice and the emerging possibilities of data processing have convinced him of the importance of computer science in medicine and made him a pioneer of medical computer science. His path led him in time from 1966 to 1969 to USA at the University of Texas and the University of Missouri. There Reichertz Peter led the radiological computer research was responsible in a project to create a medical information system in the hospital worked and was director of a general university computer center. In 1969 he returned to Germany and took over the Department of Medical computer science at the Medical School of Hannover, which he designed from the ground up. From that Hanover was one of the centers of medical computer science, nationally and internationally. Peter Reichertz ambition was to reject the medical computer science closely to the core computer science and to create an understanding of the problems and possibilities of each other's discipline and bring a discussion. The means to do so were joint meetings with the Society for computer science and GMDS to an Advanced Course in Medical Informatics. The external sign is that of him initiated certificate 'Medical Informatics', which is awarded jointly by the GMDS and GI. From 1975 to 1988 he was also a lecturer at the Technical University of Braunschweig. He was 1976/1977 President of the GMDS, co-founder of

the IMIA (International Medical Informatics Association) and EFMI (European Federation for Medical Informatics), as its first president. His work on the international level, the term 'Medical Informatics' and its contents significantly affected. In his honor, Peter L. Reichertz Instituts für Medizinische Informatik was formed in 2007. It was founded by the Technical University Carolo-Wilhelmina on two locations, in Braunschweig and Hannover. Founding goal was the formation of a regional cluster of excellence.

REMENTERIA ALVAREZ FERRERO JAVIER

Javier Ferrero Alvarez Rementeria works as CIO for the Andalusian Agency for Healthcare Quality, a public foundation of the Health Department of Andalusia to promote and develop quality policies. He is the coordinator of the quality and safety strategy in mHealth. Master Degree in Telecommunication Engineering (Seville, Spain) and Master in Networks and Telecom (Lyon, France). Previously he worked as project manager and head of

department for an international engineering company (Telvent, Abengoa). He alsoserved at the Pablo Olavide University in Seville as a professor in e-commerce specialization.

REMOND ANTOINE

Antoine Remond (1917-1998) is a French researcher, neurologist and clinical electrophysiologist. He is considered one of the founders of cognitive neuroscience He was born in Argentina in 1917 in a scientific family. After his graduation as a doctor, his parents suggested that he "do his medicine", seeing his fascination by brain and its waves. His father, a chemist, remembers an uncle in a hospital in Paris who was interested in similar problematics. Remond remembered an invitation by his parents uncle, Alphonse Baldwin, Professor of General Pathology at the Faculty of Medicine of Paris, who also had a service at the Hôtel-Dieu. After hearing for work of Hans Berger, he went to see him. Then, on his return to Paris, he found ways to implement instrumentation electroencephalography, one of the first in France. When Remond was the first year of medicine at Paris in 1936, he was working at his un-

cle's hospital and learning about the pathology with the highly respected and feared anatomy professor André Hovelacque (1880-1939). When war broke out, Remond managed to escape. He spent the war hidden in the pathology laboratory in Sainte-Anne and discovered electroencephalographic experimentation with his wife, Fischgold who have already published some articles with A. Baldwin, R. and J. Caussé Lerique. On a device with two feathers and another four feathers, the laboratory technician is able to achieve a six feathers; the Faraday cage. Remond also had the opportunity to work at the end of the war with Pierre Puech, in its new service neuro-psycho-surgery Sainte-Anne supported by Baldwin, where he experimented with psycho-surgery, but also the location of tumors brain by electroencephalography, after the pioneering work of Grey Walter, and patients with encephalitis or epilepsy. The first International Congress of Electroencephalography held in London in 1947, and gave Remond opportunity to visit the laboratory of Grey Walter in Bristol, pioneer of electroencephalography, in which he met the neurologist Marseille, Henri Gastaut, who practices electroencephalography for the clinical diagnosis of epilepsy. In 1948, the French society for electroencephalography formed and Remond became its secretary. In 1957-1958 Remond opened a private practice and conducted experiments in treatment of parkinsonism and stereotactic

ablative stimulation, like those practiced in the same period.

REPGES RUDOLF

Rudolf Repges (1927-), Professor Dr. med. Dipl. Math., was born in Wesel, Germany. After community service and war captivity, he finished high school in 1946 and studied mathematics and physics at RWTH Aachen University and thereafter medicine at the Universities of Cologne, Freiburg, and Giessen. His MD work was on ECG analysis using conformant transforms. He started general practice before he continued his studies in physics and math at Aachen and Giessen Universities. In 1963, he graduated in mathematics and in 1969, he performed his habilitation in biomathematics. In 1971, he was appointed as Director of the Institute of Medical Statistics and Documentation, RWTH Aachen University, which in fact was one of the first institutes of medical informatics in Germany. Until his retirement in 1996, Prof. Repges actively supported medical informatics in Germany and many of his students followed his visionary way of interdisciplinary work in science and medicine. Prof Thomas Deserno (Aachen), Prof. Heinz

Handels (Lübeck), Prof. Reinhold Haux (Brunswick), Prof. Thomas Tolxdorff (Berlin), Prof. Thomas Wetter (Heidelberg), and Prof. Alfred Winter (Leipzig) are just some of his former students, which are also biographed in this book. As such, Prof. Repges can be regarded as father of academia in medical informatics in Germany. He also was President of the International Biometric Society and active member of the Germany Association of Medical Informatics, Biometry, and Epidemiology. Publishing numerous books and scientific papers, in particular in the field of medical image processing, he returned to medical statistics and gave his farewell lecture on medical biometry "Medical Biometry – Perspectives and Visions".

RESNIC FREDERIC

Frederic Resnic, MD MSc serves as the Chairman of the Department of Cardiovascular Medicine at the Lahey Clinic Medical Center, a teaching affiliate of Tufts University School of Medicine. Beyond his clinical training in

cardiovascular medicine, Dr. Resnic holds degrees in engineering from Duke University, and Medical Informatics from the Massachusetts Institute of Technology. He is an active clinical interventional cardiologist, participating in the development and evaluation of numerous cardiovascular devices used for a variety of cardiac conditions. Dr. Resnic has led NIH and FDA funded research programs exploring the automated surveillance of medical device and medication safety as well as automated quality surveillance for hospital and physician performance. Dr. Resnic has published over 70 articles and book chapters related to the quality and safety of medical procedures and devices.

RETI SHANE

Shane Reti has been a GP Dermatologist and Maori doctor in New Zealand since 1990. In 2007 he was a Commonwealth Fund Harkness Fellow in health policy to Harvard. Dr Reti has been a board director of a New Zealand health area responsible for 4 hospitals, is a provisional member of the New Zealand Institute of Chartered Accountants, and is a US certified project manager. In

2006 he was acknowledged by Her Majesty Queen Elizabeth II with the Queens Service Medal (QSM) for public services to medicine, Maori health, education and research. Dr Reti has research interests in governance and minority health. He is currently the Chief Operating Officer for the Division of Clinical Informatics (DCI), an affiliate of Harvard Medical School in Boston.

RHEVIHARINALA NILSEN

Nilsen Rheviharinala, MS, MD, is Assistant Director of Medical informatics Department at Center Hospitalier of Valenciennes. He earned MD in 2002 at Mahajanga Medical Faculty, Madagascar and a Postdoctoral degree on Information and health Information technology in 2004 from CERIM, University of Lille, France. He worked for different Private Hospital corporations as Head of Medical informatics Department where main objective is to improve quality of health information according to the new implemented French DRG based medical billing system, securing financial health of the clinics. Since 2012 he is working on EMR full text semantic based decision support system to improve pertinence of health data transcription used by French medical billing system (PMSI) at Center Hospitalier of Valenciennes .

RICE PAUL

Paul Rice is Head of Technology Strategy. NHS England, UK. Paul leads the team that will be instrumental in delivering a digitally enabled and paperless NHS. On a day to day basis he is responsible for overseeing the delivery of two major capital funds worth in excess of £600m that help the NHS build the capability to introduce integrated digital care records. Paul has 15+ years experience in health policy, innovation and NHS management. He is also active on major European funded collaborative projects on assisted living.

RICHARDS BERNARD

Bernard Richards, MSc, PhD, FIMA, FBCS, FIHRIM, FUSCM, FRAMS, CMath, CEng, CScie, CITP is Professor of Medical Informatics, the University of

Manchester. Professor Richards has degrees in Mathematics, Physics, and Computing. He was also a University demonstrator in Electrical Engineering. Subsequently he studied medicine. He has published over 100 papers in the medical and computing journals. He has lectured in most of the countries of Europe, in America, Canada, Australia, New Zealand, and in Japan, Korea, Hong Kong, Thailand, and Singapore. Working with Alan Turing, the Famous Code-breaker, until his death, he was the first person to vindicate Turing's Equations of Morphogenesis. He showed that the solution of the Equations in spherical co-ordinates could lead to spherical shapes which had all the characteristics of the tiny marine creatures 'Radiolaria'. In the world of Physics he solved completely Maxwell's Equations of Light and detailed the distribution of light on the Focal Plane brought to a focus by a lens. He was the first to show how energy flowed back towards the light source in a now famous publication which has now been cited over 1,100 times. In 1998 he was made the British Computer Society's "Fellow of the Year" for services to Medical Informatics in the UK. In 1999 he was awarded the 'Wenceslas Medal' of Charles University in Prague for "Services to Medicine in Prague" In 2001, IMIA awarded him a Plaque in recognition of the fact that he was the "ONLY PERSON IN THE WORLD" to have presented one or more papers in all of the first TEN World MEDIN-FO Conferences organized by the

International Medical Informatics Association (IMIA) over a span of 27 years He is a Council Member and Fellow of the "Ukrainian Society of Computer Medicine, he is a Fellow of the Hungarian "John von Neumann Computer Society", a Member of the "Romanian Society for Medical Informatics", a Member of the "Polish Society for Medical Informatics", a Member of the "Czech Society of Medical Informatics", and a Fellow of the "Romanian Academy of Medical Science".Amongst his other achievements in Medicine are being the creator of the World's first "Mother and Baby Database", and the world's first "Expert Computer System for Open Heart Surgery". In addition he has produced Expert Systems for use in Hospital Intensive Care Units, such systems being in use in the UK, Poland, and the Czech Republic. In the medical journals, he has published papers in Gynecology, Obstetrics, Neonatology, Paediatrics, Genetics, Intensive Care, Stroke, and Gastroenterology. More recently, he lectured at the European Conference on 'Obstetrics' and the European Conference on 'Neonatology'. Within the UK, he is currently the Chairman of the BCS Health Northern Group, a member of the BCS Health Executive, and a member of the Manchester Literary and Philosophical Society.

RICHARDSON SARAH

Sarah Richardson is CIO at NCH Healthcare Systems. Promoted three times in her ten-year tenure with HCA, culminating in a Division CIO position, Sarah's contributions centered on leading the development and delivery of IT in a shared service model along with scalable operational programs and improvement activities. She is most proud that her work focused on building long-lasting, loyal relationships across the continuum, resulting in collaborative strategies to meet project delivery needs, productivity gains, and the use of technology to advance patient care resulting in better outcomes. Her ability to coordinate teams of technology experts, strategic business partners, physicians, and clinicians, has enabled her to repeatedly deliver programs, services, and tailored solutions in the healthcare setting. Today, Sarah serves as the CIO for NCH Community Health System in Naples, FL. NCH is a non-for-profit, multi-facility healthcare system in Naples, Florida. NCH Downtown Naples Hospital and NCH North Naples Hospital provide personalized care for over 30,000 patients a year in their two-hospital, 715 bed system. NCH's outstanding reputation is confirmed by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), in its award of accreditation to both NCH hospitals and the 35 clinic offices providing outpatient services to the surrounding counties

RICHESSON L. RACHEL

Rachel L. Richesson, MS, PhD, MPH, FACMI, a noted informaticist, joined the DUSON faculty in December 2011. Dr. Richesson earned her BS (Biology) at the University of Massachusetts in 1991, and holds graduate degrees in Community Health (MPH, 1995) and Health Informatics (MS, 2000 and PhD, 2003) from the University of Texas Health Sciences Center in Houston. Her dissertation involved the integration of heterogeneous data from multiple emergency departments. Dr. Richesson spent 7 years as at the University of South Florida College of Medicine directing strategy for the identification and implementation of data standards for a variety of multi-national multi-site clinical research and epidemiological studies housed within the USF Department of Pediatrics, including the NIH Rare Diseases Clinical Research Network (RDCRN) and The Environmental Determinants of Diabetes in the Young (TEDDY) study. Dr. Richesson has conducted original research on the quality and usability of various

terminological data standards, particularly in the context of clinical research, and has presented dozens of posters and invited talks on the topic of data standards in clinical research. She has fostered numerous interdisciplinary research collaborations and is nationally and internationally recognized for her extensive clinical informatics experiences. In 2012, she edited Clinical Research Informatics, the first textbook dedicated to this topic, and co-authored several chapters. She co-leads the Phenotyping, Data Standards, and Data Quality Core for the NIH Health Care Systems Research Collaboratory, a demonstration program for the transformation of clinical trials based upon use of electronic health records (EHRs) and healthcare systems partnerships. In this role, she is developing standard approaches and guidance for the extraction of clinical data to support research and learning healthcare systems. She is also the co-lead of the Rare Diseases Task Force for the national distributed Patient Centered Outcomes Research Network (PCORnet), specifically promoting standardized EHR-based condition definitions ("computable phenotypes") for rare diseases, and helping to develop a national research infrastructure that can support observational and interventional research for various types of conditions.At DUSON, Dr. Richesson teaches Health Information Exchange Standards, Methods and Models (N410) and Health Informa-

tion Systems (N409), supports informatics practica (N498), and co-teaches Data-Driven Health Care Improvements (N653). She also engages in informatics-focused initiatives across the Duke campus, particularly within the Duke Center for Health Informatics and Duke Clinical Research Institute programs.

RICHMAN JESSICA

 Jessica Richman is Co-founder and CEO, uBiome. Jessica attended Stanford University, where she studied economics and computer science, and Oxford University, where she studied as a Clarendon Scholar, also receiving a Fulbright Scholarship for further study. Along the way, she worked for Google, McKinsey, Lehman Brothers, the Grameen Bank, and top-tier Silicon Valley venture firms as well as other entrepreneurial projects and adventures. Her work has been published in The New York Times and other national publications. Her work has been featured in Wired, MIT Technology Review, Scientific American, NPR, FoxNews, ABC News, and dozens of other media outlets. She has spoken at TEDMED,

TEDxBrussels, Partnering for Cures, the American Society for Microbiology, HealthFoo, SciFoo, Oxford University, the University of California San Francisco, and many other conferences and venues.

RICKERBY DAVID

David Rickerby is Partner and Chair Technology Transactions & Licensing Group at Choate Hall & Stewart. David handles high profile and mission critical agreements and joint venture arrangements for companies of all sizes, finding solutions through creativity, perspective and experience. He is highly knowledgeable in cross border and international transactions and frequently represents US and European companies licensing prime intellectual property assets into and out of the US markets. David was named in The Legal 500 for technology transactions, has been listed as a Massachusetts Super Lawyer, and was selected as one of 15 "Up and Comers" to watch in Massachusetts by Massachusetts Lawyers Weekly in 2006. He received his JD, with honors, from the University of Connecticut Law School in 1996 and his BA,

magna cum laude, from Cornell University in 1991.

RIDJANOVIC ZORAN

Zoran Ridjanovic (1947-), MD, was born in Sarajevo, Bosnia and Herzegovina. He has an extensive work experience on the process of the reform and strengthening of health care systems on the local and international levels. He worked as team leader and manager on several international projects related to the strengthening of the health care systems in Bosnia and Herzegovina. He has participated in a number of educational programs and conferences on the local and international levels as a lecturer. He has also published scientific papers on the use of information and communication technologies in health care systems. Before wartime in Bosnia and Herzegovina (1992 - 1995) Ridjanovic worked as a member of a team for developing of Health Information System in Bosnia and Herzegovina. Since 2005, he has worked as the director of Agency for Quality and Accreditation in the Health Care in the Federation of Bosnia and Herzegovina (AKAZ), being involved in the activities related to accreditation of institutions and organizations in the sector of health care in the Federation of BiH. Dr. Ridjanovic is author and co-author several book (Medical Informatics book, Decision Making Book, etc) and more than 50 papers in peer reviewed journals.

RIENHOFF OTTO

Otto Rienhoff, MD, PhD. graduated Faculty of medicine in 1973 at University of Münster, Germany. Basic clinical training realized at Medical School Hanover (MHH) in 1974, from 1975-1977 he passed Postdoctoral training at Department of Medical Informatics, MHH. In a period 1978-1983 he was Head of medical computer applications, MHH, and in 1983/84 he was Clause 18 Visitor to University of Cape Town and Groote Schuur Hospital. His was elected as Assistant Professor and deputy head of Department of Medical Informatics, MHH (1982-1984), as Full Professor and Head of Department of Medical Informatics of University Marburg (1984-1995) and since 1995 as Full Professor and Head of Department of Medical Informatics of University in Göttingen. Professor Rienhoff's awards are: corresponding member of South African and Brazilian Medical Informatics Associations; Honorary Fellow of the International Medical Informatics Association and International Fellow of the American Medical Informatics Association. Rienhoff's national and international academic and professional duties are: 1993 - 1995 - President of German Society for Informatics, Biometry and Epidemiology GMDS; 1995-1998 - President of IMIA; 2003-2005-Vice President of European Health Telematics Association EHTEL; 2001-2008 - member of Computer Commission (KFR) of the German Research Foundation; 2003-2004 - Chair Advisory Committee to Federal Ministry of Health regarding national IT-Infrastructure; 1999-2007 - Chair/Deputy Chair of the German Telematics Platform for Medical Research Networks, since 2008 - Chair of the TMF Advisory Board; 2010-2012 - Chair of Scientific Advisory Board, Qualitätskliniken.de, and Since 2014 he is Chair of German National Council for Research Information Infrastructures. Professor Rienhoff's research fields are - Clinical - Data Management for medical research, clinical decision support systems; and Scientific: Evaluation of new information technologies for clinical and health services; quality management of health services; management of IT for health. Since the year 1974 professor Otto Rienhoff published numerous papers, editorial roles in several journals and book series.

RIKLI E. ARTUR

Arthur E. "Buck" Rikli (1917-2015) earned his BA from North Central College, Naperville, Illinios, MD from the University of Illinois and MPH from John Hopkins University. Buck served in the United States Public Health Service (USPHS) for 23 years, first as director of the tuberculosis control program in Montana and Denver and later as the Chronic Disease Consultant in Chicago. In 1959, Buck became director of the National Heart Disease Control Program in Washington, D.C., and managed programs to screen populations for TB and heart disease. In this role, he recognized the potential diagnostic capability of computers and created a schematic diagram that contributed to the design of the first clinical diagnostic computer. In 1964, he served as the Health Attaché to the U.S. Mission in Geneva, Switzerland, working on international health relations, and then returned to D.C. to work at the Hospital and Medical Education Facilities Program. Buck retired from the USPHS in 1968 and accepted a position with the University of Missouri as Coordinator of the Missouri Regional Medical Program and Professor in the School of Community Health and Medical Practice. He retired as Professor Emeritus from the University of Missouri in 1984 and became a consultant for the National Library of Medicine and University Missouri Department of Health Management and Medical Informatics.

RIND M. DAVID

David M. Rind, MD, MS, FACMI, obtained his undergraduate degree in chemistry from Yale University in 1981 and then moved to the University of Rochester where he earned his MD degree in 1986. Even while a medical student, he was a programmer with the Gartner Group and Merrill Lynch, honing his informatics skills until he became immersed in his medical residency at the University of Massachusetts Medical Center from 1986 to 1989. He then turned to a combined fellowship in general internal medicine and clinical computing at the Beth Israel Hospital and Harvard Medical School in Boston, leading to his appointment as an instructor there from 1991 to 1999. He has been an assistant professor of medicine since 2000, the confidentiality specialist for CareGroup from 2001 to 2003, and Deputy Editor of Up-to-Date since 2003. Dr. Rind has made several contributions to medical informatics during his years at the Beth Israel Deaconess Medical Center. He showed that real-time inpatient alerts, generated from laboratory and pharmacy systems and linked to e-mail, could reduce the incidence of acute renal failure on an inpatient medical service, a study that is widely cited in the patient safety and CPOE literature. He led a Boston-based collaborative on the EHR to develop policy and procedures for sharing health information over the Internet. This work was the first such publication and has been cited and used by many groups grappling with the promise and problems of sharing health information among institutions. Dr. Rind was largely responsible for the development of the EHR used at the Beth Israel Deaconess Medical Center. He was also responsible for embedding guidelines for HIV care into this EHR and for developing rigorous methodology for evaluating these alerts and reminders. Most recently, Dr. Rind was Program Chair of HELINA 2003, held in Johannesburg, South Africa. He organized and directed this three-day international meeting on the use of informatics in the global fight against HIV/AIDS. He

also serves on the editorial board of the International Journal of Medical Informatics and has served on the scientific program committees for two AMIA Fall Conferences.

RINDFLEISCH C. THOMAS
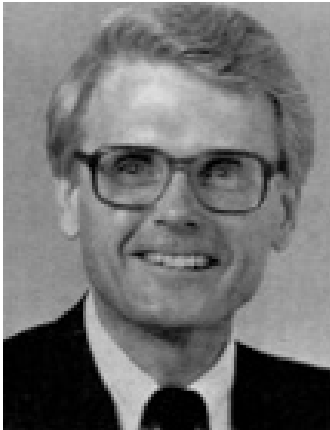
Thomas C. Rindfleisch, MS, FACMI, has served as Director of the national SUMEX-AIM resource for applications of artificial intelligence in biomedicine since 1971, and as Director of the Knowledge Systems Laboratory for interdisciplinary artificial intelligence research in the Stanford Departments of Computer Science and Medicine since 1982. These groups developed many of the best-known expert systems (e.g., DENDRAL, MYCIN/EMYCIN, VentPlan, PathFinder, ONCOCIN, MOL-GEN, PROTÉGÉ, and T HELPER). The SUMEX-AIM systems group developed, integrated, and operated network-based computing resources for the Stanford and national SUMEX-AIM user communities, including tools to fa-cilitate communication and collaboration among remote users as well as open, shared software development and information dissemination tools. Software developed under Mr. Rindfleisch's leadership was the basis for four successful Silicon Valley start-up companies, including Cisco Systems. Before coming to Stanford in 1971, Mr. Rindfleisch developed some of the earliest digital image processing technologies at the Caltech/NASA Jet Propulsion Laboratory for early unmanned space missions and for civilian biomedical applications. He has been a frequent advisor on information technologies to the National Institutes of Health, the National Science Foundation, and Stanford University. He holds an MS degree in theoretical physics from the California Institute of Technology in1965.

RINDFLESCH C. THOMAS
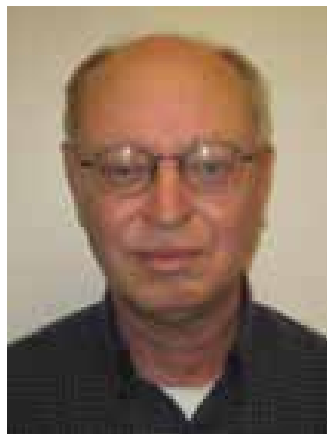
Thomas C.Rindflesch, PhD, FACMI, received his bachelor's degree in Arabic and master's and PhD degrees in linguis-tics, all from the University of Minnesota. He then went to the Lister Hill National Center for Biomedical Communications, where he has been working as a computational linguist since 1991. There he has developed and demonstrated the effectiveness of techniques for combining relatively simple "minimum commitment" (otherwise known as "shallow") text parsing with electronic domain knowledge to extract domain concepts and interpret their relationships in biomedical text. Dr. Rindflesch has worked effectively with a wide variety of collaborators to make steady progress on developing programs that extract usable semantic information from text and has made his tools readily available for use by other researchers. He has also applied them to operational systems at the NLM, for example, using natural language processing techniques on the published clinical trials literature to audit compliance with registration of National Institutes of Health clinical trials in ClinicalTrials.gov. Dr. Rindflesch's election to the College recognizes the substantial impact his contributions have had on the productivity of other researchers and on the increasing value of NLM's global information services.

RISHEL WESLEY

Wesley Rishel is Research Vice President, Government and Healthcare, Gartner Inc. Wes Rishel is a vice president in Gartner's healthcare provider research practice. He covers interoperability, health information exchanges (HIE), the US nationwide health information network (NHIN) and the underlying technologies of healthcare IT, including application integration and standards. Mr. Rishel is a commissioner of the Certification Commission for Healthcare Information Technology. He served as a member of the Healthcare Information Technology Advisory Panel of the Joint Commission on Accreditation of Healthcare Organizations. He was also one of the technical leads and a member of the steering group for the Connecting for Health program on regional health information networks. He was the founding technical chair of Health Level Seven, served as its chair in 2002-2003, and continues on the board. He has served on the boards of directors of the Workgroup for Electronic Data Interchange (WEDI), the Health-care Information Management Systems Society (HIMSS) and the eHealth Initiative (eHI). He was the primary author of the Gartner report summarizing the NHIN Prototype Architecture contracts of the Office of the National Coordinator (ONC) for Health IT.

ROBERTS JEAN

Jean Roberts, PhD, is one of the founding members of UKCHIP. Jean Roberts was Head of Communication Task Force, Health Informatics Committee, British Computer Society. For her excellent professional and scientific work within several areas of Medical informatics and for her outstanding contribution to ehealth in Europe Jean Roberts received HIMSS Europe leadership award in 2011. The citation said the award was for Dr Robert's "many years of service to eHealth in Europe, her extensive, multi-faceted experience in academic research and her ability to design and implement strategic health initiatives and manage complex programs and projects in informatics and e-health business areas." Dr Jean Roberts works as an independent health informatics consultant in Phoenix Associates, Staffordshire, and is a member of the British Computer Society's Professional Development Board. Dr Jean Roberts several years was national representative of UK Society for Medical informatics in IMIA. Also, she was Vice-President of IMIA from 1995-1999 and Chair of MEDINFO Congress held in London in 2001. Dr Roberts' work in "driving professionalisation in health informatics", for "her leadership in helping to grow the next generation of eHealth professionals", and her "research work on operational deployment of healthcare informatics into everyday healthcare services provision. Her opinion about eHealth is „that the challenge for the current generation is to move eHealth from the back office to being an integral part of healthcare policy, development, delivery, management and research. When we succeed, the 'e' of eHealth will be subsumed ubiquitously into the term health. Then, the next generation will be more mobile, will practice IT and informatics more sensitively and will be a more agile workforce."

ROCHA A. ROBERTO

Roberto A. Rocha, MD, PhD, FAC-MI, received his medical degree from the Federal University of Paraná, in Curitiba, Brazil, and in 1990 completed a residency in Medical Informatics at the Department of Pathology, University of São Paulo School of Medicine, Brazil. He continued his informatics training in the USA and received a PhD in Medical Informatics from the University of Utah in 1996. Dr Rocha returned to his alma mater in Curitiba as Associate Professor, initially teaching Medical Informatics courses and later serving as Chief Information Officer of the University hospital. In 2001, Dr Rocha was recruited back to Salt Lake City as Assistant Professor of Biomedical Informatics at the University of Utah and Senior Medical Informaticist at Intermountain Healthcare. At Intermountain, he managed the enterprise teams responsible for knowledge and terminology management until mid 2006. For his contributions at the University of Utah, Dr Rocha was selected as the first recipient of the Reed M Gardner Award for Faculty Excellence in teaching and mentoring. In 2008, Dr Rocha accepted a position at Partners HealthCare as the Senior Corporate Manager for Knowledge Management and Clinical Decision Support at the Clinical Informatics Research and Development group, and a faculty member of the Division of General Medicine, Brigham and Women's Hospital, Harvard Medical School. Dr Rocha's nomination cites publications related to biomedical terminologies and clinical knowledge management, including mapping algorithms, information modeling techniques, and contributions to interoperability standards and collaborative knowledge engineering and peer review.

ROCHE CHRIS

Chris Roche is Chief Technology Officer, EMC EMEA, England UK. Chris is a keen horseman who travels to County Meath in Ireland to join Cross Country Chases. That is up to 300 horses and riders travelling at speed over ditches and hedges across the countryside for 10 miles. He developed his taste for chasing while he was EMC's Ireland Country Manager. So taking on exciting challenges is part of his make up so when EMC asked him to be EMEA CTO he "jumped" at the opportunity. He seemed perfectly suited for the role which combines his experience of business transformation, Artificial Intelligence and 12 years EMC tenure. Chris has spent the last 15 years in business transformation roles he has lead and transformed EMC's UK&I Big Data Division Greenplum, the EMC consulting organization and also the overall UK&I Services business. Chris has a First Class degree in Computing and Information Technology specializing in Artificial Intelligence and Natural Language Processing. His career began as a database designer and he was awarded Chartered Engineer and Chartered Information Systems Practitioner four years later by the BCS and Engineering Council.

ROCHE MARK

Mark Roche is Clinical and Technical Expert Advisor. U.S. Office of the National Coordinator (ONC) for Health Information Technology. Dr. Roche is a physician informaticist with over 15

years of experience in working on national health-IT initiatives and interoperability standards in the U.S. and Canada. He is currently working as clinical and technical expert advisor at the U.S. Office for Health Information Technology where he formulates plans, strategies and standards for the U.S. nationwide health information exchange. Dr. Roche completed his medical training at the University of Vienna Medical School (Vienna, Austria), and his Masters of Science in Medical Informatics degree from Northwestern University (Chicago, IL, USA).

RODERER K. NANCY

Nancy K. Roderer, MLS, FACMI, received a bachelor's degree in mathematics and science from the University of Dayton and a master's degree in library science from the University of Maryland. She began a career of creating and evaluating informatics systems and services as a coauthor of an evaluation of NLM's prototype Hepatitis Knowledge Base system in the late 1970s. She was appointed as IAIMS System librarian at Columbia University, later served as Director of the Cushing/Whitney Medical Library at Yale, and is now Director of the Welch Medical Library. She has been a prime mover in the establishment of the Division of Health Information Sciences at Johns Hopkins University, where she is an associate professor and currently interim director, which was designed to include public health issues from its inception. Her work positioned the University to compete successfully for an NLM Informatics Training Grant and, most recently, for Robert Wood Johnson funding for a Public Health Informatics Track within this broader training program.

RODRIGUES JEAN MARIE

Jean Marie Rodrigues, MD, PhD, is since 1985 professor of Public health and Medical Informatics in Saint Etienne Medical School, University of Saint Etienne Jean Monnet and since 2014 Senior Researcher in INSERM LIMICS unit 1142 in Paris. From 1997 to 2013 he was Head of the department of Public health and Medical Informatics in University Jean Monnet. Initially trained as a physician in Gastroenterology, Radiology, Public Health and Occupational medicine in the University of Nancy he obtained university degrees in epidemiology, biostatistics, medical informatics and health economy in the Universities of Paris, Strasbourg and Nancy (1964-1978). After Graduation from Universities Jean-Marie Rodrigues was assistant professor in the University Hospital of Nancy in the Imaging department and developed researches on clinical decision making in Pneumology and Gastroenterology (1976-1985). He was the first DRG Project Director (PMSI French acronym) within the French DOH from 1982 to 1986 and responsible for the definition of the hospital discharge summary, the statistical tests of hospital data bases, the initial definition of the French DRG (GHM) algorithm including the ICD 9 and CDAM. From 1991 to 1994 he was strategic adviser on healthcare smart cards within the DOH. In 1985 Jean-Marie Rodrigues as the founding chair of the Department of Public Health and Medical Informatics at the University of Saint Etienne hospital has developed a research and training team in 2 direction medical informatics and health economics including the processing of the 17 millions French hospital discharges a year. From 1996 to 2002 he was member of the advisory board of PERNNS organization in charge of maintaining French clinical

classifications for diagnosis, health care procedures and French DRG groupers named GHM for acute care and GHJ for rehabilitation. From 2000 to 2013 Auditor with Haute Autorité de Santé (HAS). French national agency for hospital accreditation and from 2002 to 2007 member of the board of the French case mix agency ATIH. From 1983 to 2014 he has been visiting professor in several Universities in the US, UK, Sweden, Australia, Hungary, Russia, Japan, Austria, Tunisia. From 1989 he has developed active participations in different health informatics European and national research projects on case mix and on terminology as CAMAC, CHIC, CAMISE, SHINE, STAR, SESAME, GALEN In Use, TOMEL0, CCAM, French version of ICPC and multiple terminologies systems in French language VUMF and INTerStis. He has worked as well as part time consultant on Case-mix and clinical terminology with ministries or organizations from France, Australia, Bulgaria, Czech Republic, Germany, Hungary, Ireland, Italy, Japan, Romania, Russia, Spain, Sweden, Switzerland, UK, USA, WHO, and OCDE. From 1994 his research interest moved to terminology, knowledge representation and ontology. He has organized the collaborative work between the French project developing the new coding system of surgical procedures CCAM and the EU funded GALEN. Since 1990 he is involved in health informatics standardization process within CEN/TC 251/WG2, ISO/

TC 215/WG3 and AFNOR being the editor of 3 European full standards in Health informatics on Categorial structure: ENISO 1828 2014 on surgical procedures developed from different procedures classifications and namely SNOMED CT procedures, EN12264 2005 on Categorial structure (a light ontology) and EN 15521 2007 on Anatomy. He has worked on the alignment of Categorial structures with upper level ontology (BFO and BioTop). He was the initiator of European Union Roadmap on Semantic Interoperability Semantic Health (2005-2008) and is presently involved in several EU Research and Development Programs. He is member of the Advisory group of United Nations University International Case mix group based in Kuala Lumpur (Malaysia). He is Involved in several French ANR funded project on Terminology and Ontology: Interstis a French speaking multiple terminology server and Vigiterm on Pharmacovigilance TerSAn on interface terminologies and LOINC and TOLBIAC. He is the founding chair (1984-2002) and emeritus president of the NGO Patient Classification Systems International which groups teams and individual working on case mix in 35 countries from the 5 continents. He is since 2013 president of AIM (Association Informatique Médicale) French member of IMIA and EFMI. He has done several oral presentations and participated in several workshops and panels in MIE and MEDINFO since 1989.

RODRIGUES JOEL

Joel Rodriguws is a professor at the Department of Informatics of the University of Beira Interior, Covilhã, Portugal, and researcher at the Instituto de Telecomunicações, Portugal. He is the president of OASIS (Observatório Académico de Sistemas de Informação em Saúde), the leader of NetGNA Research Group), the Vice-chair of the IEEE ComSoc Technical Committee on Communications Software, the Vice-Chair of the IEEE ComSoc Technical Committee on eHealth, and Member Representative of the IEEE Communications Society on the IEEE Biometrics Council. He is the editor-in-chief of the International Journal on E-Health and Medical Communications, the editor-in-chief of the Recent Patents on Telecommunications, and editorial board member of several journals. He has been general chair and TPC Chair of many international conferences. He is the General Chair of the IEEE Healthcom 2013 (Lisbon, Portugal), a member of many

international TPCs and participated in several international conferences organization. He has authored or coauthored over 200 papers in refereed international journals and conferences, a book, and 2 patents. He had been awarded the Outstanding Leadership Award of IEEE GLOBECOM 2010 as CSSMA Symposium Co-Chair and several best papers awards. Prof. Rodrigues is a licensed professional engineer (as senior member), member of the Internet Society, an IARIA fellow, and a senior member of ACM and IEEE.

ROESEMS-KERRAMANS GISELE

Gisele Roesems-Kerramans is Deputy Head of Unit of the "(ICT for) Health and Wellbeing" unit within DG CONNECT, the Communications Networks, Content and Technology DG. She joined the European Commission in 1994 as a Scientific officer in the domain of Software technologies in the ICT research program and then moved on to the areas Micro/Nanosystems and Nanoelectronics. She studied Civil Engineering/Computer sciences at the University of Leuven (Belgium) and started her career as a

system engineer in the telecommunication sector and later in the automotive industry.

ROGER FRANCE FRANCIS

Francis Roger France (1941-), MD, PhD, was born in Etterbeek (Brussels), Belgium in a family that contributed to open his mind to health, economics and information processing. Francis Roger France worked as Associate Chief of Service for General Internal Medicine (St Luc Hospital in Brussels (1988-2006) and President of the School of Public Health of the U.C.L. (1995-2001). As Professor, Francis was a teacher of the first courses of Medical informatics in Belgium (since 1968, at the Faculty of Medicine, University of Louvain, U.C.L). He is an author of a book "Médecine et Informatique" (Maloine, Paris, 1979), largely diffused in French speaking countries, a basis for students notes and an introduction for the public. Also he is author of recommendations issued by the Council of Europe in 1984 for education and training in Medical informatics in Europe. Professor Francis contributed to the Development of Electronic

Health Records (EHR) in the Center for Medical Informatics. (UCL) and trials for archiving medical records on computerized systems, using a unit record by patient. He is author of the European MBDS (Minimum Basic Data Set) allowing to register all diagnoses by hospital stay and by patient, enabling to link diagnoses to activities and costs, to estimate severity of cases and to measure quality of care. (document EUR 7162, EEC 1981) (Thèse d'agrégation de l'enseignement supérieur). He is president of the AIM (Advanced Informatics in Medicine) Requirements Board of the European Commission that led to a large number of AIM international projects. He contributed to the development of an infrastructure for research in Medical Informatics in Europe (FRF and G. Santucci, Springer Verlag, Berlin, New York, 1991). He participated to EEC research projects: (EHR, security, DRGs, telemedicine) and Information analysis of the diagnostic process (from case studies of the NEJM) in order to apply it in Internal medicine, in association of a modified version of the "Problem oriented medical record" proposed by L. Weed; Methods and issues for security in health informatics. His special interest was for applications of Telemedicine, especially in case of major disasters (Tsunami) and - How to organize health practice in future? Professor Francis was: a founding member and President of Scientific Societies in Medical Informatics; the MIM (Belgium), EFMI past President and

Honorary Fellow; IMIA founding member and Vice President; Expert to Ministers of Health and Social Security in Belgium who introduced a new financing system for hospital inpatients; President of the Commission Norms for informatics in the health care sector; International expert for governments (Ireland, Italy, Portugal, etc.); member of Committees (CNEH in France, Swiss Parliament, etc.); as well as in most Eastern European countries and in Asia (Japan) mainly for security issues and health economics. Also, he was Expert to EEC, WHO, Council of Europe and the World Bank for the development of indicators of quality of care, for the use of terminology in EHR and statistical, ethical or educational issues.

ROGERS MICHAEL

Michael Rogers is the Market Access and Compliance Attaché at the U.S. Mission to the European Union in Brussels, Belgium. One of his primary tasks is to help U.S. exporters overcome barriers to trade within the EU and its member states. He is also responsible for monitoring a number of work streams within the Transatlantic Economic Council (TEC) including e-health. Mr. Rogers joined the U.S. Department of Commerce in 2000 and prior to arriving in Brussels in June 2013, he was the Deputy Director of the Intellectual Property Rights Office at the U.S. Department of Commerce's International Trade Administration. Mr. Rogers has also served as the Department

of Commerce desk for a number of EU member states including Poland and the Czech Republic. A native of Toledo, Ohio in the United States, Mr. Rogers has a J.D. from The George Washington University Law School in Washington, DC, an M.A. in International Affairs from American University also in Washington, DC, and a B.A. in Political Science from Baldwin-Wallace College in Berea, Ohio.

ROLSTADÅS ASBJØRN

Asbjørn Rolstadås is professor of Production and Quality Engineering at the Norwegian University of Science and Technology and Vice Dean for research at the Faculty of Engineering Science and Technology. His research covers topics like numerical control of machine tools, computer-aided manufacturing systems, productivity measurement and development, computer-aided production planning and control systems and project management methods and systems. He has published more than 280 papers and books in these fields. Rolstadås has about 30 years of experience from education, research and

consulting in project management. He has done studies of project execution of some major governmental projects, mainly within development of oil and gas in the North Sea. He has done research on risk analyses and contingency planning in cost estimates, and developed training courses in project planning and control using e-learning technology. He has been managing large national projects involving cooperation between industry and academia, and he has experience from managing complex, international research projects. He is former president of the Norwegian Academy of Technical Sciences (NTVA) and member of The Royal Norwegian Society of Sciences (DKNVS), the Royal Swedish Academy of Engineering Sciences (IVA) and the European Academy of Industrial Management (AIM). He serves on the editorial board of number of journals, and is the founding editor of the International Journal of Production Planning and Control. He is honorary member and past president of IFIP, and is the initiator of the IFIP working group WG5.7 on Production management. He is honorary member of the Norwegian Computer Society.

ROMANO A. CAROL

Carol A. Romano, Rear Admiral, USPHS (Ret) is Professor and Dean of the Daniel K. Inouye Graduate School of Nursing at the Uniformed Services University of the Health Sciences (USU) in Bethesda, Maryland.

She directs the organization, operations and strategic planning of the School and serves on the University executive cabinet. She directed implementation of curriculum reform for a new Doctor of Nursing Practice Degree Program for advanced practice nursing and successful accreditation program review for masters, doctoral and specialty accreditations. She received a diploma in nursing (1971) from the Geisinger Medical Center School of Nursing in Pennsylvania and earned her Bachelor of Science (1977), Master of Science (1985) and PhD (1993) degrees in nursing from the University of Maryland School of Nursing. She also completed the Interagency Institute for Federal Executives at George Washington University (1993) and the Harvard University Senior Managers in Government Program at the Kennedy School of Government (1997). She is board certified in nursing informatics and as an advanced nurse executive. Dr Romano is a fellow in the American Academy of Nursing and the American College of Medical Informatics. She has served in a variety of leadership positions in the United States Public Health Service (USPHS) in the Office of the Surgeon General (OSG) where she was responsible for oversight and operations that affected 6800 commissioned officers, 4000 reserve officers and 3000 nurses. Her roles involved strategic planning, policy development and advising senior government officials and included Acting Deputy Surgeon General, Acting

Chief of Staff OSG, Director of the Office of Reserve Affairs and Chief Nurse Officer, USPHS . Dr . Romano also worked for 34 years at the National Institutes of Health, Clinical Research Center where she served as associate investigator, clinical research nurse, educator, director of nursing communications and recruitment, nursing system specialist, director of clinical informatics and quality assessment, deputy chief information officer and senior advisor for clinical research informatics. She is recognized as a pioneer in nursing informatics and she helped design and implement one of the first computerized medical information systems in 1976, which provided electronic medical orders and clinical documentation for physicians and nurses in ambulatory and hospital environments. She was also co -architect of the world's first graduate curriculum in nursing informatics at the University of Maryland School of Nursing. In addition, Dr. Romano served as advisor to the WHO on the management of manpower and health information in developing countries. She has authored over 50 professional published papers, given numerous presentations at national and international conferences, and has held several university faculty appointment s. She served as editorial board member for referred journals, and co -developer of the National Institutes of Health Nurse Scientist Training Program. Her research includes published studies in the area of informat-

ics education, confidentiality of health records, satisfaction and efficiencies of electronic health records and the adoption of innovations. Romano's numerous awards include the USU Outstanding Service Medal, NIH Director's Award, Assistant Secretary for Health Award, the Surgeon General's Medallion and Exemplary Service Award, the PHS Meritorious, Outstanding Service, Commendation. She has been named to the World's Who's Who of Women and Who's Who in American Nursing and recipient of the University of Maryland Illustrious Alumni and Visionary Pioneer awards.

ROOFE E. MICHELE

Michele E. Roofe is Director, Health Information and Technologies at Ministry of Health, Jamaica. Dr. Michele Roofe received training in Medicine at the University of the West Indies, Mona and graduated in 1989. In 1997, she successfully pursued a Master's degree in Public Health at the University of Alabama at Birmingham in the USA. Over the past decade, her passion for technology has evolved into an interest in the applications of Information and Communication Technology

(ICT) to the health sector. This led to her enrollment in 2009 in the MSc degree program in Health Informatics, which was jointly offered by the Royal College of Surgeons of Edinburgh and the University of Edinburgh. She was awarded the MSc degree in Health Informatics with Distinction in November 2012. Within this relatively new field, her special interest areas include Mobile Health, Public Health Informatics and Consumer Health Informatics. She was transferred to the Head Office of the Ministry of Health, Jamaica in December 2010 as the acting National Epidemiologist. During the period April 2010 to September 2013, she was appointed as the Chairperson of the Ministry's newly established Health Information and Technologies Steering Committee, which was charged with the mandate of strengthening and modernizing the National Health Information System. Dr. Roofe is currently responsible for Health Informatics at the Ministry.

ROSENAL TOM

Tom Rosenal, BSc, MSc, in Computing Science, graduated Faculty of medicine in Calgary, Canada. Tom Rosenal is a critical care physician with 27 years of clinical experience who has led a wide variety of clinical informatics projects. He has worked on systems from a clinical, research and educational perspective focusing on decision support, clinical outcomes and user engagement. In his role as Medical Director of Clinical Informatics at the Calgary Health Region, his team implemented an integrated clinical information system that now supports patient care at all of the over 2000 acute care beds in Calgary's five hospitals and benefits from direct entry of virtually all orders by all physicians. This project won the 2007 American Medical Directors of Information Systems organizational award for Calgary. He is an Associate Professor Emeritus at the Cumming School of Medicine, University of Calgary. Tom is engaged in consulting and education in clinical system design, change leadership, adoption and evaluation. He also works in the fields of humanistic care, health humanities and professionalism...

ROSENBLOOM TRENT SAMUEL
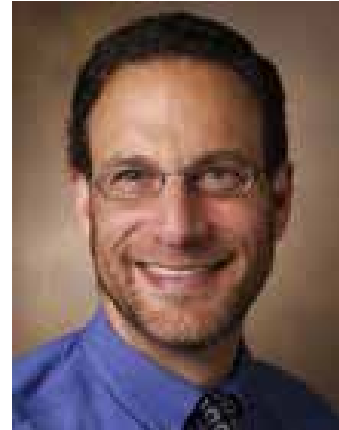
Samuel Trent Rosenbloom, MD, MPH, FACMI, received his Bachelors degree in the History and Literature of Religion from Northwestern, and MD and MPH degrees from Vanderbilt. After completing training in medicine, pediatrics and informatics, he joined the faculty at Vanderbilt. He was an associate professor of Biomedical Informatics, Medicine, Pediatrics and Nursing. Dr. Rosenbloom combined his skills as an active clinician with technology development and evaluation in clinical settings. He has an active research program in Interface Terminologies, and contributed to the development of automated growth charts for electronic health records, with specific adaptations for special populations such as premature infants and children with Down Syndrome. At the time of election he was actively engaged in the development of automated systems for clinical documentation, driving toward the grand challenge of the 'self docu-

menting clinical encounter'. Dr. Rosenbloom has mentored many undergraduate, informatics graduate and health professions students, several of whom have gone on to faculty careers. He has been an active contributor to professional societies, including the American Academy of Pediatrics, the HL7 Child Health Working Group, and AMIA as a member of the JAMIA Editorial Board, AMIA Scientific Program Committees, and the EHR Working Group on Unintended Consequences.

ROSENMÖLLER MAGDALENE

Magdalene Rosenmoller is Professor of IESE's Operations Management Department. IESE Business School, Barcelona. She holds a PhD in Health Policy (University of London), a Medical Doctor (University Louis Pasteur, Strasbourg, France), and an MBA from IESE. She teaches the MBA elective on health management at IESE, and in executive education in Europe, Asia, Africa and Latin American business schools. Her areas of interests are health management, eHealth, managing innovation in health care, European health and research policies and global health issues. She served as senior expert in different assignments for the European Commission (health research and policy), the European Parliament and ECDC, such as rapporteur on the Role of Universities in Regional Development (2013), the Innovative Medi-

cine Initiative (IMI): first interim evaluation (2011) and earlier, the social economic impact analysis (2007). Scientific Coordination of FP7: Project Integrate, SDH-Net, and FP6: Europe 4 Patients, and Health Research for Europe.

ROSSE CORNELIUS

Cornelius Rosse, MD, DSc, FAC-MI, is a Professor of Biological Structure at the University of Washington School of Medicine. He received his BSc degree in anatomy with honors, and his medical degree (MB, ChB) from the University of Bristol, England. The same university also granted him both the MD and DSc degrees in recognition of his research on hematopoietic cell differentiation and lymphocyte biology. Dr. Rosse has combined his biological research with medical education and administration. Until recently, he was Chairman of the Department of Biological Structure at the University of Washington. He has published three textbooks related to anatomy, taught anatomy at the Royal College of

Surgeons of England, and has worked extensively with the National Board of Medical Examiners. More recently, Dr. Rosse has focused his research interests on knowledge representation in anatomy. He established the Digital Anatomist Program at the University of Washington, which has served as an impetus and prototype for the National Library of Medicine's Visible Human Project. In collaboration with investigators from computer science, informatics, and clinical medicine, the laboratory pursues spatial and symbolic modeling of anatomy in parallel. These knowledge sources are integrated and made available on-line for anatomy education as a test bed for an information system. Dr. Rosse is a member of the Biomedical Library Review Committee of NLM, serves on the Executive Board of the National Board of Medical Examiners and has been elected a Fellow of AAAS. Dr. Rosse's contributions to education have been recognized by numerous teaching awards at the University of Washington, and he has also received the national Distinguished Basic Science Teacher Award from the Alpha Omega Alpha Honor Medical Society sponsored by the Association of American Medical Colleges.

ROSSING NIELS

Niels Rossing headed up the European Union's Advanced Informatics in Medicine (AIM) program for many years. A wide variety of multi-national projects were undertaken over a period of at least 6 years with groups of Medical Informaticians pro- posing various projects taking typically about 3 years. Many of these projects were written up in a series of books published by IOS Press of Amsterdam. The first was "Data Protection & Confidentiality in Health Informatics" in 1991, which was the result of an AIM working conference. Many projects were published in the following series - ones were about Security and Data Protection SEISMED Vols l, ll & lll which were IOS Studies in Health Technology & Informat- ics vols 31, 32 & 33. The follow-on project ISHTAR was published as 66 in 2001 and he became involved in Security standards with MEDSEC published as vol 69 in 2002. At some time Niels Rossing retired from the leader- ship of the EU AIM program to run a hospital in Denmark. Niels was in large part responsible for making all this work possible. It provided another international

stream of European activity in addition to the conferences and working groups of the European Federation for Medical Informat- ics (EFMI) and the International Medical Informatics Association (IMIA.

ROUKENS JAN

Jan Roukens (1937-), was born and grew up in Indonesia. He moved to the Netherlands in 1950 where he obtained a degree in Physics at the Delft Technical University in 1961. After military service he worked for several companies and universities: IBM, Leiden University and Philips. From 1973-1981 he managed a company for the computeriza- tion and networking of a dozen hospitals in the Netherlands. During this period he founded the worldwide International Medical Informatics Associa- tion and chaired the Medical Information WG of the Europe- an Commission (EC). In 1981 he joined the new R&D framework program of the EC and was involved with the EC strategy to promote the European Language Industry. In the early 90s he launched the EU's Multilingual Information Society program (Luxembourg, 1995). Since his retirement early 2002 he advises

companies and non-profit organizations in the language & terminology fields. He favors the promotion of the diversity of European languages and he is particularly concerned about the trend in universities and in international companies active in Europe, to use English as their common language instead of the country's national languages. In his view this will lead to serious social and cultural tensions in those countries and to the degradation of their languages. With inevitable consequences for the quality in all domains of life. He is a board member of Dutch-Flemish and European cultural and language associa- tions and member of the Europe- an Platform for Multilingualism representing the EAFT.

ROULEAU GENEVIÈVE

Laval University Canada. Gene- vieve Rouleau has a Masters of Nursing Science from Faculty of Nursing, University de Montreal, Canada. She is now a doctoral candidate at Faculty of Nursing, University of Laval, under the supervision of Marie-Pierre Gag- non and Jose Cote. Her research interests are based on the devel- opment and evaluation of virtual

nursing interventions as well as the effects of information and communication technologies on nursing care. She has been working at the at the Research Chair in Innovative Nursing Practices at the CRCHUM in Montreal city for more than nine years.

ROY SUSHMITA

Sushmita Roy is an assistant professor at the Biostatistics and Medical Informatics department and in Systems Biology at the Wisconsin Institute for Discovery, University of Wisconsin, Madison. She got her PhD in 2009 from the University of New Mexico and a post-doctorate at the Broad Institute of MIT and Harvard. Sushmita's research focuses on the development and application of statistical machine learning methods to problems in regulatory network inference and analysis. Sushmita is a recipient of an Alfred P. Sloan Foundation fellowship and an NSF CAREER award.

RUCH PATRICK
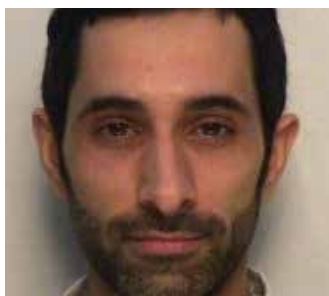
Patrick Ruch is currently a professor in the Information Sciences department of the University of Applied Sciences Western Switzerland (HES-SO) in Geneva. He is also leader of the Text Mining group of the SIB Swiss Institute of Bioinformatics (link is external), which maintains text analytics services to support the curation of SIB databases such as Swiss-Prot and neXtprot (~ one million queries a year). Before these appointments, he has been working for a dozen years in several clinical & research environments, including the National Library of Medicine (Bethesda, MD), the University Hospitals of Geneva, and IBM Research in Zürich, where he developed text-driven decision support systems for life scientists and healthcare professionals.

RUDEL DRAGO

Drago Rudel (1952-), PhD. was born in Ravne na Koroskem, Slovenia. He is Univ. Dipl. Eng. and leads a private research company MKS Ltd. in Ljubljana, Slovenia. His expertise is in designing and establishing telecare and telehealth services delivered to disabled and chronically ill population in their home environment. As a research fellow Dr. Rudel has worked also part time at Faculty of Medicine (ERASYS-Bio+ ModUE_PTL EU project) and at the Ljubljana Rehab Institute (EASY-IMP EU project). With his over 25 years of experiences in the area he contributes to national strategies and legislation in the field of telecare/telehealth. Dr. Rudel has, also, rich experiences in European projects as a partner and as an EU expert evaluator for the European Commission (eInclusion in FP5, FP6, AAL Calls 2-6). His expertise extends to information security management - ISO27001, ISO9001 standard auditor - and quality management - ISO 9001 standard auditor).

RULAND CORNELIA

Cornelia Ruland, RN, PhD, FACMI, is Director of the Rikshospitalet-Radiumhospitalet Medical Center in Oslo, Norway. She has an RN degree and a PhD in nursing informatics, and holds the title of Professor of Medicine at the University of Oslo. She also holds an adjunct faculty position in biomedical informatics at Columbia University in New York. She has made sustained and influential contributions to the field in the areas of eliciting and incorporating patient preferences into decision making by care providers, use of hand-held technologies for preference-based care planning, and creation and evaluation of shared decision making based in informatics principles. Her nomination notes that Dr. Ruland is one of the most productive nursing informatics researchers in the world, who has methodically evaluated the innovative systems she has designed using prospective randomized clinical trials. She has been principal investigator on 30 grants, and her ideas have been influential in nursing practice in many countries, including the US.

RUEBEN BRUCE

Bruce Rueben, MBA, BBA, is president of the Florida Hospital Association (FHA), a state association that represents 238 hospitals and health care systems. As president, Mr. Rueben leads a staff of 44 professionals who provide state and federal advocacy, representation, data and research, regulatory, communications, and a myriad of services to member hospitals. Prior to joining FHA, Mr. Rueben was president of the Minnesota Hospital Association (MHA). He led the hospital community's efforts to enact effective health policy in Minnesota and helped shape health policy nationally. The association's primary efforts centered around health care financing, patient safety, workforce development, and data collection, in addition to advancing health care reform initiatives. Prior to joining MHA, Mr. Rueben served as president of the Maine Hospital Association, senior vice president of the Virginia Hospital and Healthcare Association, and vice president for Diamond Healthcare Corporation in Virginia. Born and raised in Richmond, Virginia, he has a bachelor's degree from Virginia Commonwealth University School of Business, a post-graduate certificate in healthcare financial management from the University of South Carolina College of Business Administration, and an M.B.A. from the University of South Carolina.

RUTLEDGE W. GEOFFREY

Geoffrey William Rutledge, MD, BSc, MDCM, PhD, FACMI, also known as Geoff, is the Chief Executive Officer at Healthtap. He co-Founded HealthTap, Inc. and serves as its Medical Technology Lead. Dr. Rutledge served as the Chief Medical Information Officer of The HealthCentral Network, Inc. Dr. Rutledge oversaw the medical information team, which comprised physicians and pharmacists who created and maintained Epocrates' award-winning clinical content. He was also leveraging his medical informatics expertise to guide Epocrates's product roadmap and lead development on high-growth platforms. Dr. Rutledge served as an Executive Vice President of Product Development and Chief Medical Officer at Epocrates, Inc. since December 2009. Dr. Rutledge served as Chief Medical Information Officer of Wellsphere Inc., and joined the team in the Spring of 2006. He began his career as a physician, who carried out research in Medical Informatics. He transitioned from

faculty positions at Stanford and Harvard medical schools when he realized that the Internet would become a powerful tool to enable people to learn about and manage their own healthcare. He built the online consumer health service at WebMD.com where he served as the Senior Vice President. Dr. Rutledge joined Wellsphere to take the next step: help build networks of people who would support each other to improve their health and achieve their wellness goals. He is a Member of US Advisory Board at RecapHealth Ventures. He has experience as a practicing physician, medical executive and information technology leader. He has practiced clinical medicine for more than 25 years. Dr. Rutledge is board certified in internal and emergency medicine and was a faculty member of Harvard Medical School and Stanford University School of Medicine.is the Chief Executive Officer at Healthtap. He co-Founded HealthTap, Inc. and serves as its Medical Technology Lead. Dr. Rutledge served as the Chief Medical Information Officer of The HealthCentral Network, Inc. Dr. Rutledge oversaw the medical information team, which comprised physicians and pharmacists who created and maintained Epocrates' award-winning clinical content. He was also leveraging his medical ...

RYAN JASON

Jason Ryan is Vice President Finance, Foundation Medicine, MA USA. Jason joined Foundation Medicine in May 2011 and brings over 12 years of financial and operations experience in emerging life science companies. Prior to joining Foundation Medicine, he led the finance and strategic planning functions of Taligen Therapeutics (acquired by Alexion Pharmaceuticals), Codon Devices, and Genomics Collaborative (acquired by SeraCare Life Sciences). He began his career at Deloitte & Touche. Jason holds a BS in economics from Bates College and an MBA from Babson College, and earned his CPA in Massachusetts.

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SABANOVIC ZEKERIJAH

Zekerijah Sabanovic, PhD, is associate professor of Medical informatics at the University of Tuzla, Bosnia and Herzegovina. His research area is connected with health management, health informatics, programming and development of databases, especially from healthcare and pharmacy areas. In January 2000, at Tuzla University, he defended doctoral thesis under the title: „Informational Support to Decision-Making Process of Allocation of Financial Resources in Public Health System". As Fulbright Scholar, he has spent nine months at Temple University-Philadelphia doing his research through project: „The Development of the Organization and Management of Public Health System in Undeveloped Countries". During his 9-month stay he taught a one-semester long graduate course, HM 504 – Health Information Technology in the Fox School of Business at Temple University. He also had the opportunity to provide a series of lectures as a visiting professor at the WP Carey School of Business at Arizona State Uni-

versity. At Tuzla University, he teaches medical informatics and medical statistics at the Faculty of Medicine and Informatics at the Faculty of Pharmacy. Several years he was a member of the Board of Bosnian Society of Medical Informatics (BHSMI).

SABA VIRGINIA

Virginia Saba is one of pioneers in the field of informatics, Dr. Saba's achievements are numerous including: authoring more than 90 publications on nursing informatics and/or computer technology in nursing. Beginning in 1960s, as a commissioned officer in the US Public Health Service (PHS), Department of Health and Human Services (DHHS), she provided national leadership to improve quality and nursing practice; conducted numerous surveys of public health and home health processed by computer; and supported the design and implementation of computerized information systems primarily in community health. She organized the first nursing track at SCAMC (Symposium on Computer Applications in Medical Care) in 1981 and also initiated at that conference the first Nursing Informatics-Special Interest Group at SCAMC, which

became the AMIA Nursing Informatics Working Group in 1991; was instrumental in creating the American Nurses Association Council on Computer Applications in Nursing (CCAIN) in 1986, which became the Steering Committee on Databases to Support Nursing Practice in 1990, and which is currently the Committee for Nursing Practice Information Infrastructure (CNPII); and initiated the first national workshops and conferences on this new nursing specialty. She also developed, from a federally funded research, the Home Health Care Classification (HHCC) System consisting of two Taxonomies: HHCC of Nursing Diagnoses, and HHCC of Nursing Interventions classified by 20 Care Components. She remains very active in informatics today as the current Chair of the Nursing Informatics Special Interest Group for the International Medical Informatics Association (IMIA), the current Chair of the Steering Committee of the International Standards Organization (ISO/TC215 WG3) - An Integrated Reference Terminology Model for Nursing initiative. She participated in several other health-related national standards committees. She is. also, a Distinguished Scholar at Georgetown University; an Adjunct Professor at The Graduate School of Nursing; The Uniformed Services University of the Health Sciences. She teaches several online informatics courses offered by schools of nursing; and is involved in

numerous other informatics activities.

SABBATINI M. E. RENATO

Renato Marcos Endrizzi Sabbatini (1947-) was born in Campinas. He is a retired professor at the Department of Biomedical Engineering and at the State University of Campinas Institute of Biology. He earned Bachelor in Biomedical Sciences at Faculty of Medicine at Ribeirão Preto, University of São Paulo, Brazil (1965-1968); Doctor of Sciences (in Physiology), at Department of Physiology, Faculty of Medicine at Ribeirão Preto, University of São Paulo, Brazil in 1977 and Postdoctoral Studies (Neurophysiology of Behavior) at Department Primate Behavior, Max Planck Institute for Neurobiology (formerly Max Planck Institute for Psychiatry), Munich, Germany (1977-1979). He founded the Center for Biomedical Informatics and helped create the Brazilian Society for Health Informatics. Sabbatini received the 1992 Prêmio José Reis de Divulgação Científica award for popular science writing, and was named one of Info Exame Magazine's "50 Champions of Innovation" for 2007. He is currently president

of the Edumed Institute for Education in Medicine and Health, a "not-for-profit educational, research and development institution." His interesting scientific fields are: Biomedical Sciences, Neuroethology, Neurophysiology, Medical Informatics, Telemedicine, Distance Learning. He is author and co-author more than 100 published articles in indexed journals within the Medical informatics domain.

SABESAN SABE

Sabe Sabesan, BMBS, FRACP, PhD is the Clinical Dean of the Northern Clinical Training Network (NCTN) Townsville and the director of the department of medical oncology at the Townsville Cancer Centre, Townsville Hospital, Queensland, Australia. He established the Townsville teleoncology network (TTN) and the Tropical Centre for Telehealth Practice and Research (TC-TPR) in North Queensland to decrease the disparity in access to specialist care faced by rural and remote Australians. Under the auspices of the TTN and TC-TPR, he has conceptualised, developed and implemented various telesupervision models for medical training, teleoncology models for service delivery, re-

mote chemotherapy supervision model for rural chemotherapy administration (Queensland Remote Chemotherapy Supervision model (QReCS), for Queensland Health), and shared care models with general practitioners for cancer care closer to homes. Research into various aspects of the Townsville teleoncology models lead to the development other models such as the Australasian Teletrial Model for improving rural access to clinical trial medications. As the chair of the regional and rural group of the Clinical Oncology Society of Australia (COSA), he led the development of the COSA teleoncology guidelines for use by clinicians and managers.

SADAN BATAMI

Sadan Batami, has a PhD in Medical Informatics and Medical Ethics, and an MSc. in Information Science. Currently she is the President and Co-Founder of Vaica Medical Ltd since 2010 and was the CEO of Vaica Medical Ltd from 2007-2010. Vaica Medical is a private Israeli company which provides products and technologies designed to improve medication compliance at home among the elderly and the chronically ill, enabling them

to stay active at home longer, optimize treatment outcomes and reduce overall healthcare costs. She is chair of the Israeli Association for Medical Informatics and Israeli representative in IMIA since 1997 and served as Board Member as IMIA Treasurer (2001-2007). Dr Sadan is Vice Chair SIG- Technologies for Aging Well, Society of Electrical and Electronic Engineers in Israel; a member of the Advisory board of the American Israel Chamber of Commerce SE Region, A member of Women leading Healthcare (WBL). Also, she is Adjunct Professor at Peres Academic Center, Rechovot Israel . She was Faculty member at Haifa University, Israel lecturing Medical Informatics at the School of Public Health; 3 years (2001-2004) VP of Information Technology at MDG Medical. MDG Medical Inc. established in 2001 with the goal of improving patient safety by raising the standard of medication management and improving medical team efficiency and healthcare costs with computerized closed-loop workflow systems (ServeRx). Her responsibilities included the software design and development of all system components, quality assurance (QA) and professional services (Customers' training, implementation and support); 11 years CIO (Chief Information Officer) of Hadassah University Hospital in Israel; Hadassah Hospital is a one thousand-bed university medical center that provides primary, secondary and tertiary care. Hadassah's information systems have been

the most comprehensive and advanced systems in Israel.

SADOUGHI FARAHNAZ

Farahnaz Sadoughi holds a PhD in Health Information Management (HIM) from Iran University of Medical Sciences in 2003. She is currently holding the full professor position and teaching MI/HIT/HIM courses in Iran University of Medical Sciences and also currently is the manager of the "Health Information Management" department at the School of Health Management and Information Sciences of Iran University of Medical Sciences in Tehran. She is a committee member of the board of "Evaluation and Examiners of Health Information Management and Medical Informatics" at Iran ministry of Health and Medical Education. Dr. Sadoughi was the lead and founder of "Medical Informatics" program at the School of Health Management and Information Sciences at Iran University of Medical Sciences. She has published over 70 articles and written several books in the fields of HIT/HIM that have been used as text books or references in Iran universities. She has been honored and recognized by different authorities and organizations for her scientific contributions to HIM/HIT fields. Her current interests include Healthcare Information Systems, Electronic Health Record (EHR), Data mining, Healthcare Project Management, Data Management and Analysis, Medical Coding, Decision Support Systems (DSS), and Expert System (ES).

SAEZ AYERRA LUCIANO

Luciano Sáez Ayerra, holds a Computer Science degree from Politécnica de Madrid University and a Masters Degree in Management Systems and Information Technology and Communication from the National Institute of Public. His started working in 1974 at the IT department of the La Paz Hospital at Madrid where he developed multiple applications as Chief of the IT service from 1982 till 1986, when he joined to the Ministry of Health as a general manager of systems and information technologies, where he created a specific system of processing data and laying the foundations for the development of health informatics in Spain: health card, national implementation plan of introducing computing services in the National Healthcare Systems, Hospitals and Primary Care Centers, a National System of Medicine Information, food log , disease registries , etc. In 1992, he drafted the nation´s first multihospital digital patient history. He has participated on the design and implementation of large Healthcare IT plans for the Government of Spain. In 1996 he joined the Carlos III Health Institute to develop its National Center of Health Informatics. In 2000 he launched its coordinating Unit of Health Informatics. He is a founding member of the Spanish Society of Medical Informatics since 1977. He was the general secretary of the organization in 1987. In 1990 he lead the transition the Society towards becoming Spanish Society of Health Informatics. He has presided it since 1991. He is a member of the Madrid Computer Engineer Association. He has written multiple articles for the promotion of IT in the healthcare sector.

SAFIR ARIN

Arin Safir began his career working as an electrical engineer, then became interested in medicine and received his MD from New York University in 1954. He trained in ophthalmology at the New York Eye and Ear Infirmary during 1956-1959. Dr. Safir also completed a fellowship in physiological optics at the University of Cambridge, in Cambridge, England, in 1962. He was the director of the Institute

of Computer Science at Mount Sinai Medical Center in New York City for six years and is currently a professor and chief of ophthalmology at the University of Connecticut School of Medicine in Farmington.

SAFRAN CHARLES

Charles Safran, MD, PhD, is a primary care internist who has devoted his professional career to improving patient care through the creative use of informatics. He is Chief of the Division of Clinical Computing, Beth Israel Deaconess Medical Center and Harvard Medical School. He is a senior scientist at the National Center for Public Health Informatics at Center for Disease Control and Prevention. He is the immediate past President and Chairman of American Medical Informatics Association was previously Vice-President of the IMIA. He is an elected fellow of both the American College of Medical Informatics and the American College of Physicians. Dr. Safran is co-Editor of the International Journal of Medical Informatics and on the Health on the Net (HON) Foundation Council. He is a member to the Consumer Empowerment workgroup of the American Health Information Community formed by the US Secretary of Health and Human Services. During his career he has helped develop and deploy large institutional integrated clinical computing systems, ambulatory electronic health records, clinical decision support systems to help clinicians treat patients with HIV/AIDS and most recently personal care support systems for parents with premature infants which he calls collaborative healthware. He founded a company, Clinician Support Technology and as its CEO successfully brought his ideas to a national market. The company's products and technology were acquired by a major public company. He has over 150 peer-reviewed publications and speaks to national and international audiences. He has recently testified for the U.S. Congress on Health IT. He graduated cum laude in Mathematics and hold a Masters degree in mathematical logic and a Doctor of Medicine all from Tufts University.

SAKA OSMAN

Osman Saka (1946-), PhD was born in Amasya, Turkey. In 1974, he graduated from Hacettepe University, Department of Statistics, Ankara, Turkey. He received his masters degree in 1976 and PhD. in 1982 in Biostatistics at Hacettepe University, Faculty of Health Science, Ankara, Turkey. Between 1974-1982, he worked as an instructor in the Department of Public Health and between 1982-1988 in the Department of Biostatistics, Hacettepe University, Ankara. Dr. Saka became Assistant Professor in 1988, Associate Professor in 1989, Full Professor in 1996, and worked as the Chief of Biostatistics and Medical Informatics Department in Faculty of Medicine in Akdeniz University, Antalya until 2013. When he was working for Akdeniz University he founded the Information Processing and Computer Center in 1989 and managed until 1996. At this time period, he developed the first in-house Hospital information system in Turkey. As a founder and head of the Department of Biostatistics and Medical Informatics in Faculty of Medicine in Akdeniz University, he initiated the first Medical Informatics Master program in 1992 and PhD program in 2004. He also spends great efforts to develop medical informatics curriculum for undergraduate medical education and nursing education in Turkey. After the foundation of Turkish Medical Informatics Association (TurkMIA) in 1999, Prof. Saka was worked as a president of TurkMIA from 2005 till 2010. He is currently working as a Board Member of TurkMIA and the representative of Turkey in European Federation for Medical Informatics (EFMI). On behalf of TurkMIA, Prof. Saka

had a leading role in organizing numerous national-international congresses and activities. He worked as a Local Organizing Committee Chair for EFMI STC 2009, held in Antalya, Turkey and the 25th European Congress of Medical Informatics (MIE 2014), held in İstanbul, Turkey. Prof. Saka's research interests focus on Evaluation Methods in Medical Informatics, Electronic Health Records, Research Methods in Health Sciences, Health Information Standards, and Decision Making in Medicine, Multivariate Statistical Methods and Biostatistics. He has several publications including books as a writer and editor in the field of Biostatistics and Medical Informatics and gave several graduate courses at different universities in Turkey.

SALAH ALI ALBERT

Albert Ali Salah received the PhD degree from the Computer Engineering Department of Boğaziçi University, Istanbul, Turkey. Between 2007-2011 he worked at the CWI Institute, Amsterdam and the Informatics Institute of the University of Amsterdam. He is currently an assistant professor at Boğaziçi University Computer Engineer-

ing Department and the chair of the Cognitive Science program. He works on computer vision, multimodal interfaces, pattern recognition, and computer analysis of human behavior, with more than 100 publications in related areas, including an edited book on computer analysis of human behavior. For his work on facial feature localization, he received the inaugural EBF European Biometrics Research Award in 2006. In 2010 he co-chaired the eNTERFACE Workshop on Multimodal Interfaces, and thereafter served in the eNTERFACE Steering Committee. He initiated the International Workshop on Human Behavior Understanding in 2010 and acted as a co-chair between 2010-2014. He is a General Chair of the 2014 ACM Int. Conference on Multimodal Interaction (ICMI). He served as a Guest Editor for special issues in IEEE Trans. Affective Computing, Journal of Ambient Intelligence and Smart Environments (JAISE), Journal on Multimodal Interfaces, IEEE Trans. Autonomous Mental Development, IEEE Pervasive Computing and ACM Transactions on Interactive Intelligent Systems. He is an editorial board member of JAISE, EAI Endorsed Transactions on Creative Technologies, and IEEE Trans. Autonomous Mental Development. He is a member of ACM, IEEE, EUCogIII, the IEEE AMD Technical Committee taskforce on Action & Perception, IEEE Biometrics Council, and the Turkish RoboCup National Committee.

SALAMON ROGER

Roger Salamon, MD, PhD, is a medical doctor, doctor of human biology and professor of Public health. He is also a graduate of the Ecole Normale Superieure de Cachan (mathematics section). Professor Salamon is Chairman of the HCSP in Bordeaux, the Institute of Public Health, Epidemiology and Development (ISPED), of which he is honorary director. In addition, he directs the Inserm research center "Epidemiology-Biostatistics" and the unit "Epidemiology, Public Health and Development." He is also Chairman of the Public Health Section of the National Council of Universities. His research activities focus on three areas: epidemiological methodology (cohort studies with the problems censored data), the normal and pathological aging (Alzheimer's) and the study of HIV infection. On this theme, Roger Salamon led many works in France and Africa (Rwanda, Ivory Coast).

SALANTI GEORGIA

Georgia Salanti studied Mathematics, Epidemiology, Statistics and Sociology in Athens, Brussels and Munich. She is Associate Professor of Biostatistics and Epidemiology at the Universities of Bern, Switzerland. Her research focuses on statistical modelling for evidence synthesis and the methodology of systematic reviews. To date she has published more than 100 research articles and several of her methodological developments have been applied to answer clinical questions in mental health. She works closely with the Cochrane Collaboration where she co-convenes the Statistical Methods Group and the Comparing Multiple Interventions Methods Group. She is feature's editor for Research Synthesis Methods..

SALTZ H. JOEL

Joel H. Saltz, MD, PhD, FACMI, received his Bachelors degree in Mathematics and Physics, and Masters degree in Mathematics from the University of Michigan, and an MD and PhD in computer science from Duke. His computer science training led him to a faculty position in the Department of Computer Science at Yale, and to NASA's Langley research facility where he was lead computer scientist from 1989 to 1992. He returned to academia as Associate Professor of Computer Science at the University of Maryland, and then back to academic medicine for a residency in Clinical Pathology at Johns Hopkins. After completion of his residency he joined the Pathology faculty at Hopkins working in the area of pathology informatics and image analysis. In 2001, he was named Professor and chair of the Department of Biomedical Informatics at Ohio State, and Associate Vice-President for Health Sciences. In 2008, became Director of the Center for Comprehensive Informatics and Chief Medical Information Officer at Emory University, with a goal of starting a Biomedical Informatics Department as a joint venture between Emory and Georgia Tech. He will be the Founding Department Chair there. Dr. Saltz has applied parallel computing approaches to a wide variety of biomedically relevant problems, and has been a strong proponent of grid computing architectures. As the CaBIG principal investigator at Ohio State, he was a key designer of the architectures for grid computing that have been deployed within the CaBIG Community. He was the biomedical informatics lead for Ohio State's successful Clinical and Translational Science Award (CTSA) application, and guided the adaptation of CaBIG grid infrastructures for the CTSA. His research support has come from a variety of sponsors including the Department of Energy for Computational Biology, NIH for Image Mining, and NSF for High-end parallel and grid computing. In the course of his computational and biomedical informatics activities he has amassed more than 320 peer reviewed publications. Over the years Dr. Salz has created a variety of technical innovations around the idea of the Virtual Microscope, which is a set of parallel, grid-based image viewing and manipulation applications.

SANCHEZ MENDIOLA MELCHOR

Melchor Sanchez, MD, PhD, is a mexican pediatrician and medical educator. He studied medicine and pediatrics at the Mexican Army Medical School, Mexican Army and Air Force University. He worked as a clinical research fellow in the Laboratory of Human Nutrition and Metabolism, Massachusetts Institute of Technology in Cambridge. He has the degree of Master in Health Professions Education from the University of Illinois at Chicago. Since 2006 he has worked as a full-time Professor in Medical Education and Biomedical Informatics at the National Autonomous University of Mexico (UNAM) Faculty of Medicine. He is responsible for the Master's and Doctorate in Education in Health Sciences at UNAM. He has been a lecturer in about 400 continuing education courses in Mexico and abroad, on issues related to medical education, evidence-based medicine, pediatrics, medical decision making and biomedical informatics. Professor Melchor is author and co-author of 70 articles in national and international journals, 24 book chapters,

author-editor of 7 books and 28 thesis. He is Associate Editor of the journal "Advances in Health Sciences Education", and Editor of the journal "Research in Medical Education", Faculty of Medicine, UNAM. He is member of several academic organizations, including the Mexican National Academy of Medicine, the American Academy of Pediatrics, the Society of Directors of Research in Medical Education, the Association for Medical Education in Europe, and the American Educational Research Association.

SANDS Z. DANIEL

Daniel Z. Sands, MD, MPH, FACMI, after undergraduate and medical training at Brown and Ohio State Universities moved to Boston to pursue housestaff and informatics training, first at Boston University and then at Beth Israel Hospital. Currently on the faculty of medicine at Harvard Medical School, Dr. Sands has also served as Director of the Douglas Porter Fellowship in Clinical Computing, as Clinical

Informatics Advisor to the Electronic Patient Record Project at Beth Israel Deaconess Medical Center, as Medical Director of Beth Israel's Clinical Workstation Initiative, as Director of Electronic Patient Records in the Center for Clinical Computing, and as Clinical Director of Electronic Patient Records and Communication. Dr. Sands is one of the principal architects of the primary care component of the hospital-wide computing system at Beth Israel Deaconess Medical Center. This system is now used in lieu of the traditional paper record by the majority of primary care physicians. He has designed and implemented programs that perform calculations required by clinical formulas, and these resources are consulted by clinicians more than 600 times per week, both for clinical and educational uses. Dr. Sands has been among the leading advocates of the use of electronic mail in patient care. His publication with Dr. Beverley Kane is widely recognized as the definitive set of recommendations for using electronic mail wisely and well in medical practice. More recently, Dr. Sands has turned his efforts to improving communication between physicians and patients by means of a patient-oriented Web site - PatientSite - that offers patients access to their electronic medical records and a means whereby they can readily communicate with their physicians. This program is widely recognized for its excellence in patient-centered communication. A natural leader

and excellent communicator, Dr. Sands is a regular contributor to informatics meetings as well as to influential educational programs.

SANYAL SANTANU

Santanu Sanyal graduated at Tata Institute of Social Sciences in Kabul. He works as Hospital Manager in Bamiyan Provincial Hospital in Kabul, Afganistan. He is Senior Hospital Management Professional, medical practitioner & visionary; 29+ years of work experience and documented record of strong and decisive leadership in Hospital Operations Management, Strategic Planning, Healthcare Facility Management and Operations, Service Delivery, Clinical Specialization and Hospital Project Management, Human Resource Management, Decentralisation in healthcare sector. Talent for proactively managing procurement cycle with repeated success in international environments, extending technical advice, building hospital brand image, driving vision and achieving critical strategic goals. He has exhaustive experience in executing medical projects, capacity enhancement through optimal resource utilization, per-

sonnel and finance management, liaison, ICT, event management, relief work and volunteering in various natural calamities. Career span underscored with 5 years of international experience and hands-on exposure to both private and public sector set-ups. Exemplary communication, training and presentation skills. World Bank fellow in Healthcare financing. His specialties are: Hospital Management; Hospital Administration Quality Management in Hospital. Dr. Santanu Sanyal worked as hospital management advisor at Ministry of Public Health of Islamic Republic of Afganistan (2012-2014), as Consultant for Quality Assurance & International Standards, as Chief Medical Officer at Brades, Montserrat, also, as Deputy Project Director, Libyan European Hospital, EPOS Health Management GmbH, Germany (2010) in Benghazi, Libya, as Hospital Reform Expert, EPOS Health Management GmbH (2007 - 2010) in Kabul, Afghanistan, as Freelance Technical Advisor, Turning Point (2006 - 2007) in Kolkata, India, as Hospital Manager, Bamyan Provincial Hospital, Aga Khan Development Network, Afghanistan (2005 - 2006) in Bamyan, Afghanistan, as Selection Grade Officer (General Administration), Indian Railways Medical Service, Ministry of Railways, Government of India (1983 - 2005) in Kolkata, India.

SARACEVIC TEFKO TEUFIK

Teufik Tefko Sarasevic studied electrical engineering at the University of Zagreb, Croatia and completed PhD (1970) studies in information science at Case Western Reserve University, Cleveland, Ohio. As principal investigator or co-principal he has received research grants from the National Science Foundation, National Institutes for Health, Department of Education, Council for Library Resources, the Rockefeller Foundation, UNESCO, and several other national and international organizations. His results are widely reported, distributed, and cited. He is recipient of honorary doctorate from the University of Zadar (the oldest Croatian university, founded in 1396). Studied electrical engineering at the University of Zagreb, Croatia and completed his master (1962) and PhD (1970) studies in information science at Case Western Reserve University, Cleveland, Ohio. Taught and conducted research at Case till 1985, when moved to Rutgers.

Promoted to Professor II (highest academic rank at Rutgers Univ.) in 1991. Associate Dean from 2003 to 2006. Professor Emeritus since 2010. Over the years he conducted research and published widely on: test and evaluation of information retrieval systems; notion of relevance in information science; human aspects in human-computer interaction in information retrieval; user and use studies in information science and librarianship; studies of user-derived value of information and library services; evaluation of digital libraries; and analysis of Web queries as submitted to search engines. As principal investigator or co-principal he has received research grants from the National Science Foundation, National Institutes for Health, Department of Education, Council for Library Resources, the Rockefeller Foundation, UNESCO, and several other national and international organizations. Results are widely reported, distributed, and cited. Active internationally, particularly in relation to information problems in developing countries. For over a decade he was involved with the Rockefeller Foundation in design, deployment, and evaluation of compact high-quality, low-cost medical information systems in developing countries. He was a visiting professor at four universities abroad. He also worked and consulted with a number of international organizations on development and evaluation of information systems and libraries. He has given

seminars, lectures and courses, or consulted, and presented papers at international meetings in 43 countries, and was an invited keynote speaker at over a dozen international conferences. Co-chair of the biennial conference and course Libraries in the Digital Age (LIDA) held in Zadar, Croatia. He is active in a number of professional associations. He was the president of the American Society for Information Science (ASIS) in 1991. He received the Gerard Salton Award for Excellence in Research, by the Special Interest Group on Information Retrieval, Association for Computing Machinery (SIGIR/ACM) in 1997; the ASIS Award of Merit (highest award given by the Society) in 1995; the 1989 Best Paper Award in the Journal of the American Society for Information Science; the ASIS Outstanding Information Science Teacher Award in 1985; and the Rutgers University Board of Trustees Award for Excellence in Research in 1991. In 1994 he was a Fulbright Scholar at the University of Zagreb, Croatia; he was granted a second Fulbright scholarship for 1999. He was and is a member of a number of editorial boards. He was Editor-in Chief from 1985 to 2008 of Information Processing & Management, an international journal published by Elsevier Science Ltd. Regular reviewer for a number of journals and granting agencies. Professor Saracevic is one of most cited author within Information Sciences in ISI database.

SARANTO KAIJA
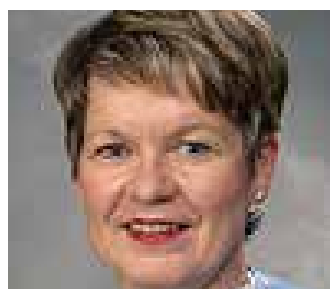
Kaija Saranto, RN, PhD, has launched the first master's degree program in health and human services informatics in the University of Kuopio, Finland in 2000 following the international development in the field. She has actively promoted the educational premises for both university level and continuing education students. Dr. Saranto has a number of memberships both in academic and expert groups focusing on nursing documentation and ICT use in the society. She is the president of ACENDIO (Association of Common European Nursing Diagnosis, Interventions and Outcomes) and the chair of the scientific program committee for the 10th International Nursing Informatics Congress 2009. Professor Saranto has published several books on nursing and health informatics in Finland and has also coauthored several chapters in international books. She is an active speaker in the field of health informatics and her main research interest lies in usability questions of Personal Health Record and development of electronic services for citizens.

SARKAR NEIL INDRA
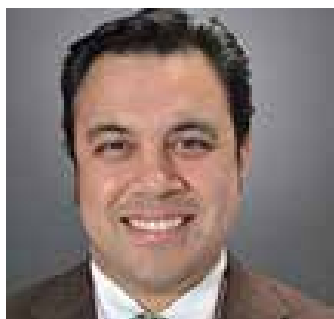
Indra Neil Sarkar, PhD, MLIS, FACMI is director of Biomedical Informatics at Center for Clinical and Translational Science and Associate Professor at Department of Microbiology and Molecular Genetics. He is also Assistant Professor at Department of Computer Science at University of Vermont. He earned: BSc in Microbiology at Lyman Bridge College, Michigan State University in 1999; MPhil (in 2002) and PhD (in 2004) in Biomedical Informatics at Department of Biomedical Informatics, P&S, Columbia University and MLIS in Library Science at School of Information Studies, Syracuse University in 2008. His work is dedicated to furthering a biomedical informatics research agenda across the entire spectrum of biomedicine, from molecules to populations. His specific research involves the development and use of a range of computational techniques (including knowledge gathering and discovery methods, phylogenetics, information theory, ontology development, semantic indexing, information retrieval, and natural language processing) to facilitate the analysis and

linking of molecular and public health data. Ultimately, Dr. Sarkar's research aims to enable the creation of testable models of disease and provide a framework to enable the assessment of comparative hypotheses across the spectrum of biomedicine and health care. His interesting research areas are: Biomedical Informatics, Translational Bioinformatics, Biodiversity Informatics, Clinical and Translational Science, Information Retrieval, Data Mining, Vector Space Modeling, Unstructured Information Management, Natural Language Processing, Vocabulary Mapping & Alignment, Bio-Ontology Development, DNA Barcoding, Phylogenetic Classification, Simultaneous Analysis Phylogenetic Inferencing.

SAVOVA GUERGANA

Guergana Savova, PhD, FACMI, is Associate Professor at Harvard Medical School and Computational Health Informatics Program (CHIP) at Boston Children's Hospital. Her research interests are in natural language processing (NLP) and information extraction especially as applied to the text generated by physicians (the clinical narrative). Dr. Savova has been creating gold standard annotated resources

based on computable definitions and developing methods for computable solutions. The focus of Dr. Savova's research is higher level semantic and discourse processing of the clinical narrative which includes tasks such as named entity recognition, event recognition, relation detection and classification including coreference and temporal relations. The methods are mostly machine learning spanning supervised, lightly supervised and completely unsupervised. The result of Dr. Savova's research with her collaborators has led to the creation of the clinical Text Analysis and Knowledge Extraction System (cTAKES), an information extraction system comprising of a number of NLP components. As would be expected of any biomedical NLP tool, cTAKES can supply commonly extracted biomedical concepts such as symptoms, procedures, diagnoses, medications and anatomy with attributes and standard codes. However, setting it apart from other available biomedical NLP systems that focus on a specific NLP task and domain and are difficult to extend, cTAKES has been engineered in a modular fashion employing the latest machine learning probabilistic methods. These latest and leading edge methods from research investigations have directly been implemented as components in cTAKES. These components can, for instance, identify such things as complex relations between entities (e.g. the location of a tumor). cTAKES can also perform the extremely

important task of identifying temporal events, dates and times – resulting in the absolute and relative placement of events in a patient timeline. It is the only biomedical open source NLP system using components with rule-based and supervised methods trained on gold standards from the general as well as the biomedical domain thus affording usability across different types of clinical narrative (e.g. pathology, radiology, clinical notes, etc.) from different institutions as well as other health related narrative (e.g. twitter feeds). cTAKES has been applied to a number of biomedical use cases to mine the data within the clinical narrative such as i2b2, SHARPn, PGRN, eMERGE, PCORI. Within the Integrating Informatics and Biology to the Bedside (i2b2), cTAKES has been used to extract patient characteristics for determining their status related to a specific phenotype (Multiple Scleroris, Inflamatory Bowel Disease, Type 2 Diabetes). Within the Pharmacogenomics Research Network (PGRN), cTAKES has been applied to automatically determine patient's disease activity and detect responders versus non-responders to a specific treatment. Within the Electronic Medical Record and Genomics (eMERGE), cTAKES has been applied to automatically discover patients with Peripheral Arterial Disease, Autism Spectrum Disorder, Appendicitis, Early Childhood Obesity. Within the Patient-Powered Research Network, cTAKES is applied to create a comprehensive phenotype picture for pa-

tients with one very rare disease Phelan-McDermid Syndrome. cTAKES-extracted data can be embedded in the i2b2 platform as well as PheWAS/GWAS platforms such as tranSMART, thus combining it with genotypic data for even bigger data analysis. Dr. Guergana Savova is on the editorial board of the Journal of the Medical Informatics Association (JAMIA), and is a reviewer for several journals including Journal of the Biomedical Informatics (JBI), Journal of Language Resources and Evaluation (LREC), and many conferences/workshops. She is also a member of the National Library of Medicine's Biomedical Library and Informatics Review Committee. Dr. Guergana Savova holds a PhD in Linguistics with a minor in Cognitive Science and a Master's of Science in Computer Science from University of Minnesota. Before joining Boston Children's Hospital and Harvard Medical School in 2010, Dr. Savova was faculty at the Biomedical Statistics and Informatics Department, Mayo Clinic (2002-2010).

SAWA TOMOHIRO

Associate Professor, Department of Anesthesia, Chief Information Officer, Headquarters, Teikyo University, Tokyo, JapanEducation: PhD, Graduate School of Medicine, Sapporo Medical University, Japan, 2003; MS, Medical Informatics, Massachusetts Institute of Technology, 2001; MD, Sapporo Medical University, 1993Board Memberships: Board Member, Committee of Perioperative Incident, Division of Patient Safety, Japanese Society of Anesthesiologists; Board Member, Committee of Perioperative Database, Japanese Society of Anesthesiologists; Trustee, Japanese Association for Medical SimulationJournal Reviewer / Editorial Board: Simulation in HealthcareDr. Sawa's research interest focuses on large-scale clinical/research databases. He has been involved in the development of a perioperative incident database for the Japanese Society of Anesthesiologists. He has also been leading the development of a clinical research database specialized in cancer registry management for Ministry of Health, Labour and Welfare in Japan. As a CIO of

Teikyo University, Dr. Sawa has been designing and developing the hospital information system for one of the largest hospitals in Japan.

SCHAFFER JONATHAN

Jonathan L. Schaffer, MD, MBA is managing director of the Distance Health team in the Office of Clinical Trans-formation and of eClevelandClinic in the Information Technology Division at Cleveland Clinic. He leads the My-Consult program, an online second medical opinion program that is used by consumers and corporations world-wide to provide access to care while removing the geographic barriers. He also leads the DrConnect series of portals which securely connect referring physicians, facilities and external reviewers to their patient's care at Cleveland Clinic. An active board certified joint replacement surgeon, Dr. Schaffer is also a staff member in the Center for Joint Replacement in the Orthopaedic and Rheumatologic Institute where he is the physician champion on the ICD-10 transition and leads the Advanced Operative Technology Group, developing novel

technologies for the arthroplasty patient population including the physical and technology up-grading of the operating rooms. Prior to the Cleveland Clinic, Dr. Schaffer was Assistant Professor of Orthopaedic Surgery at Brigham and Wom-en's Hospital and Harvard Medical School. Dr. Schaffer was Associate Director of the Decision Systems Group, a medical informatics laboratory and President and subsequently Chief Executive Officer of Harmonie Group, Inc., a corporate software spin-off from the laboratory with external venture and corporate funding. Dr. Schaffer has participated in many healthcare software development projects from clinical applications to supply chain management systems and has served on medical industry and venture capital advisory boards including participation in a number of successful medically related start-ups. Currently, he is a founder of SnappSkin, Inc., has technology that formed the basis for Flex Life Health, Inc. (Life Watch, Inc.) and is Lead Physician Advisor of Compliant Innovations, Inc., developer of DocSpera. A graduate of Haverford College and Case Western Reserve University School of Medicine in Cleveland, he completed his residency in orthopaedic surgery at the University of Pennsylvania, a fellowship in adult reconstruction at the Brigham and Women's Hospital and Harvard Medical School and a research fellowship at Children's Hospital of Boston and Harvard Medical School. Dr. Schaffer also holds a MBA from

the Kellogg Graduate School of Management at Northwestern University.

SCHAPER LOUISE

Louise Schaper, PhD, works as CEO Health Informatics Society of Australia, North Melbourne, Victoria, Australia. She is the leader of Australia's peak professional organization for digital health, a renowned advocate for the transformation of healthcare through technology and information. Louise is intimately connected to Australia's substantial national health reform efforts, where e-health is acknowledged as a key enabler to achieving high quality, safe, sustainable and patient-centred care. With her passion for innovation and commitment to entrepreneurship within Australia's digital health community, she has achieved a global reputation in the rapidly evolving field of health informatics. In addition to her leadership of HISA, Louise sits on the Advisory Board for the Stanford Medicine X conference, is a National E-Health Transition Authority Clinical Leader, and previously chaired the E-Health International Advisory Group of the World Federation of Occupational Therapists.

Louise has a background as an occupational therapist, a PhD on technology acceptance amongst healthcare professionals and is a graduate of Stanford University's Executive Leadership Program.

SCHARNHORST ANDREA

Andrea Scharnhorst, PhD, is Head of Research and Innovation at Data Archiving and Networked Services (DANS) a Dutch institute of the Royal Netherlands Academy (KNAW) and NWO. DANS hosts two services EASY - a Trusted Digital Repository for research data primarily from the social sciences and humanities, and NARCIS - a portal to Dutch Research Information. Dr. Scharnhorst is also affiliated as scientific coordinator of the Computational Humanities Program with the e-humanities group of the KNAW in Amsterdam. Starting in physics she got her PhD in philosophy of science. She co-edited books on Innovation Networks (with A. Pyka) and on Models of Science Dynamics (with K. Börner and P. van den Besselaar). She is editorial board member of Scientometrics. Her current work in the information sciences is devoted to the development of knowledge maps for library collections, research data archives and on-line knowledge spaces such as Wikipedia. She is chair of the COST Action TD1210 KnoweScape (2013-2017).

SCHERRER JEAN-RAOUL

Jean–Raoul Scherrer (1932-2002) was a pioneer in the development of clinical information systems. He received in 2000 the Morris F. Collen Award of Excellence in medical informatics. Jean-Rauol Scherrer was born in the Canton of Jura, Switzerland, in October 1932 but has lived most of his life in Geneva, Switzerland. He went to college in Fribourg, at a Jesuit School called College of Saint Michel, and followed the classical pathway - ancient Greek, Latin, and strong mathematics studies. In 1959, he graduated from the Medical School of the University of Geneva, where he studied Physiology and Internal medicine. From 1967 until 1969, Professor Scherrer did postgraduate work in Medical physics at Brookhaven National Laboratory, on Long Island, and then returned to Geneva and the Cantonal Hospital of the University of Geneva, where he began to design and build what was to become DIOGENE, the Hospital's patient information system. The idea was to have a system that would be patient-centric. Professor Scherrer addressed the needs of the physician, and not only that, he did not encumber the physician with the need to learn the computer. The basic principle was : One puts orders in through the telephone. One could immediately see on the screen what he had ordered. Behind this outward façade was a bank of individuals who were keying in the information for orders, for medications, for laboratory work, and for radiology. But his objective was to see how the computer could be an enabling tool, to assist the health care provider in doing what he or she needed to do to be giving the best possible care for the patient. Starting with the mainframe-based patient-centered hospital information system DIOGENE in the 70s, Prof. Scherrer developed, implemented and evolved innovative concepts of man-machine interfaces, distributed and federated environments, leading the way with information systems that obstinately focused on the support of care providers and patients. Through a rigorous design of terminologies and ontologies, the DIOGENE data would then serve as a basis for the development of clinical research, data mining, and lead to innovative natural language processing techniques. In parallel, Prof. Scherrer supported the

development of medical image management, ranging from a distributed picture archiving and communication systems (PACS) to molecular imaging of protein electrophoreses. Recognizing the need for improving the quality and trustworthiness of medical information on the Web, Prof. Scherrer created the Health-On-the-Net (HON) foundation. He had groups working on natural language processing and image processing and manipulation in the OSIRIS system. Another of his groups was determining protein constellations in human patients by the use of bi-dimensional electrophoresis of human serum, and correlating these patterns with the identification of genes, using several scattered remote data bases. This Web-based system is called ExPASy. This was one of the first bioinformatics groups assembled any place in the world. In Geneva in 1992, researchers at CERN, a high-energy physics laboratory, invented the World Wide Web. Luckily, the director of CERN was a neighbor of Professor Scherrer, and because of this neighborhood collaboration, the group at Geneva Hospital was really the first to apply World Wide Web technology in health care. They made their protein research databases available to colleagues around the world via the Web and were really the first to do this. Dr. Scherrer was Executive Vice President of IMIA (International Medical Informatics Association) in charge of Working Groups and Special Interest Groups from

1993 to 1996: and President of the EFMI (1996-1998).

SCHIMA HEINRICH

Heinrich Schima (1957-), PhD, FEAMBES is professor for Biomedical Engineering at Medical University of Vienna, Austria. He is Board Member of the Ludwig-Boltzmann-Cluster for Cardiovascular Research, also, Immediate Past President of the ESAO (European Society for Artificial Organs), and Treasurer of the OEGMBT (Austrian Society for Biomedical Engenering). He achieved in 1981 Master thesis with title "Electronics and control engineering" at Technical University of Vienna, and in 1985 PhD thesis with distinction at the Technical University of Vienna with topic: "Functional studies in isolated hearts". In the year 1993 he made Habilitation (i.e. Tenure) for Biomedical Engineering at the University of Vienna. In 1997 he became assistant Professor at the Institute of Biomed Engineering and Physics and the Department of Cardiac Surgery of Medical University of Vienna. His major scientific interests are: Mechanical Cardiac Assist, Applied Research and Clinical Application: Driving, monitoring and automatic control for blood

pumps, clinical application, usability, education, infrastructure organization; Biomechanics and flow in cardiovascular prostheses, bioreactors and diagnostic systems; Vascular Grafts: Biomaterials, production with micro- and nanotechnology, experimental evaluation and Dialysis and blood purification systems. In those fields he published more than 150 full articles in indexed journals, cca 400 abstracts and congress proceedings, and he is author or co-author of 13 patents (of which 3 international patent families). He has more of 1970 citations and h-index 25. Professor Schima is member of a lot of international scientific boards (Board Member of the International Society and Federation for Artificial Organs (ISAO, IFAO); Board Member, GenSec and President (2006-2007) of the Int Soc Rotary Blood Pumps (ISRBP); Board Member, GenSec and President (2010-2012) of the European Society for Artificial Organs; Cashier of the Austrian Society for Biomedical Engineering (ÖGBMT); 2006 – (Board Member 1997-) and Founding Fellow of EAMBES. For his scientific work he received: Austrian state award on reduction of animal-experiments 1992; Annual Award (Stefan-Schuy-Award) of the Austrian Society for Biomed. Eng. - OEGBMT 1992; Koyanagi Young Investigator Award (Main Award) of the Int. Soc. for Rotary Blood Pumps 1992; Presidential Award for Excellence in Science of Artificial Organs, IFAO 2009; 1st Kolff-Olsen-Award of the

ASAIO) and also, he is co-author of 14 major scientific awards.

SCHIZAS CHRISTOS

Christos Schizas was born in Cyprus, undergraduate studies at Queen Mary College, University of London, UK (BSc in Electronic Engineering, 1978). Graduate studies at the University of Indianapolis, USA (MBA, 1988) and at Queen Mary College, University of London, UK (PhD in Systems Theory, 1981). He received the 1979 William Lincoln Shelley award from the University of London for excellence in research, and a Fullbright fellowship for collaborative research in the USA in 1993. He was a Postdoctoral Fellow at the University of London (1980-1983), and Professor of Computer Information Systems at the University of Indianapolis (1989-1991). Since 1991 he has been with the Department of Computer Science, University of Cyprus. He served as Vice Rector of the University of Cyprus (2002-2006). His research interests include computational intelligence, medical informatics, diagnostic and prognostic systems, system modeling and identification of brain activity, and eHealth systems. He edited conference

proceedings and served as associated editor of the journal Technology and Health Care, area editor of the journal, IEEE Transactions on Information Technology in Biomedicine, and member of the editorial board of the journal, Intelligent Systems. He is the founder of the Computational Intelligence laboratory and co-director of the eHealth laboratory of the University of Cyprus. He has taken part in European Commission initiatives for promoting the Information Society, especially the Euro-Mediterranean partnership and the eHealth initiatives. He designed and teaches two courses on eHealth at the University of Cyprus for the School of Medicine and the Department of Computer Science

SCHLEYER K. TITUS

Titus K. Schleyer, DMD, MBA is professor of Health Information and Translational Sciences at University in Indianapolis. Titus Schleyer graduated Master Business Administration at Temple University, academic title Doctor of Philosophy he received at University of Frankfort and degree of Doctor of Dental Medicine at University of Frankfort, Kentucky.

SCHMIDT ANDREAS

Andreas Schmidt is EHR4CR Project Coordinator Deputy. Hes is acting Manager European External Collaborations at F. Hoffmann La Roche Ltd., Pharma Product Development–Strategic Innovation joined the company in Dec 2008. Since then Andreas is involved in European public-private partnership projects on re-using Electronic Health Record patient level data for clinical research purposes. In the past 20 years, he has held various roles in Pharma clinical development including clinical research, cardiac safety, project and portfolio management, business development in emerging markets and information management.

SCHMUCKER PAUL

Paul Schmucker (1949-) is a professor of Computer science at the Medical University of

Applied Sciences Mannheim, Germany. He (1972-1979) studied of computer science and business administration at the University of Kiel. In 1998 he earned Doctorate (Dr. sc. Hum) at the Medical Faculty of the University of Heidelberg. From 1977 till 2002 he worked in the Institute of Physiology of the University of Kiel, Institute of Medical computer science at the University of Giessen and in the Department of Medical and computer science at the Center for Information Management of the University of Heidelberg in various positions for various IT projects. Since 1993, he was head of the working group "Archiving of medical records" of the GMDS, since 1997 he is member of the Technical Committee "Medical computer science" of the GMDS and board member of the health network Rhine-Neckar Triangle Association since 2001 he lead in the BMWA joint project ArchiSig. Since 2002 he is Professor of the Chair of Medical computer science, since 2004 he is Dean of the Faculty of computer science at the University of Applied Sciences Mannheim. The focal points of Professor Schmücker be on the following topics: "Strategic and Tactical Information Management in Health Care"; "Workflow in the hospital"; "Electronic document management and digital archiving"; "Electronic Health Record"; "Electronic Health Record"; "Electronic Health Card"; "E-health and telemedicine applications"; "Clinical workplace systems"; "Legal questions about the documentation,

archiving and communication in health care" and "Review of healthcare information systems". On these issues, it is represented at numerous conferences and seminars as a speaker. It can also refer to more than 150 technical papers in journals and anthologies. He organizes over 30 conferences to electronic document management and archiving systems or computer-aided healthcare information systems.

SCHOLES MAUREEN

Maureen Scholes (1929–) was born in Doncaster and educated at the Doncaster Girls High School and obtained her Higher Schools Certificate in Chemistry, Biology, Mathematics and French. She trained as a nurse at The (now Royal) London Hospital. Her training posts were as a neuro-surgical Ward Sister, a Night Superintendent, a 1 year Administrative course at the Royal College of Nursing, an Assistant and Deputy Matron, then Matron and finally Acting Chief Executive. She was closely involved in a multi-disciplinary group studying Drug Administration errors and devising a paper-based system to reduce the

errors observed. Subsequently, her work as the Nurse Allocation Sister in charge of allocation of a thousand learner nurses for experience and staffing of the wards led to her initial interest in the use of computers within hospitals. This was a "giant crossword" that the hospital's Elliott 803 could not cope with. When the initial planning started on the hospital's real-time computer system, Maureen Scholes was included as the nurse member on the multi-disciplinary Executive together with the senior doctor and administrator and the Directors of Computing and Operational Research – the group as a whole had 100 man-years experience of working at The London Hospital. For the clinicians and the administrator, this was an added responsibility on top of their normal workload. This Computer Executive was responsible to the Board of Governors for all aspects of the development of the hospital's Real Time Patient Administration System. Apart from the responsibility for the strategic development of the system, the review and acceptance of the detailed proposals for each implementation area, the Executive undertook the training of all the senior staff in the developing computer system. Although there had been papers from nurses in IMIA and EFMI conferences from the begining, the issues of nursing informatics began to be raised during the IMIA working conference on Hospital Information Systems in Cape Town in 1979. MEDINFO 80 in Tokyo, brought many nurses

together to explore common issues. Following that Maureen Scholes chaired the first International Conference on "The Impact of Computers on Nursing" in London in 1982 which was under-written by the British Computer Society. It was sponsored by IMIA and EFMI and 550 delegates came from across the world and it was followed by a smaller working conference in Harrogate of the 59 delegates most close involved internationally. This was the beginning of the International Nursing Informatics Association and Maureen went on to chair INIA for its first formative years. In addition she had been involved in IMIA WG4 on Data Protection issues.

SCHMAUS-KLUGHAMMER E. ANNA

Anna E. Schmaus-Klughammer is CEO of Klughammer GmbH, Germany since 1989. Klughammer GmbH develops web-based telemedicine platforms. She is president of One World Medical Network (OWMN) where she works with leading funding organisations to create and implement projects in Low and Middle Income Countries (LMICs). She gives lectures at the faculty of Health Sciences at Deggendorf University of Applied Science for Master Medical Informatics, as well as for Tourism Management and Economics. The lectures she gives are International Health Care Management, International Health Law, Case Study Telemedicine and Case Study International Project Management. She teaches in blended learning intervals where she uses the teleteaching software developed by her company. She received her law degree from the Trent University Nottingham, UK. Ms. Schmaus-Klughammer is consultant for eHealth and Telemedicine for the German KfW Bank and the Asian Development Bank (ADB). Within several projects in Asia, Africa and South America she is part of a group of IT people and medical doctors. She has a strong knowledge in project management and sustainability. She works in projects funded by the Swiss Development Corporation (SDC), LuxDev, UNFPA, ADB, Millennium Challenging Account (MCA) and she works with Ministries of Health from different countries. Since 2015 she is a leading member in the European funded Horizon2020 scientific project "CREDENTIAL" where secure encryption for transmission of personal data (e.g. health data) will be developed.

SCHMITT JÜRGEN KARL

Karl Jurgen Schmitt, PhD, is appointed Vice-President for European Governmental Affairs for Siemens AG, Healthcare Sector since 1998. In his position, he internationally fosters the change process of healthcare systems towards more prevention and increase of efficiency. The goal is to support regions, countries and decision makers in healthcare in ensuring high quality and becoming more efficient–based on innovative technologies, process optimization, more transparency and competition. Being recognized as an expert on a wide range of healthcare issues including eHealth, he is speaker at international conferences and a Member of the Board of the European Health Forum Gastein (EHFG). Dr. Schmitt started his career in the Healthcare Industry, when in 1989 he joined the Diagnostic Ultrasound Division of Siemens AG, Healthcare, in Erlangen/Germany. He has held increasingly responsible positions from R&D to marketing and sales, spending two years as a Senior Product Manager at the Siemens Healthcare Ultrasound Division in Issaquah, WA, USA.

A German citizen, he graduated from the Friedrich-Alexander-University, Erlangen (Germany) in 1988 earning his degree as Doctor of Physics (PhD). From 1988 to 1989 he worked as an academic counselor at the Institute for Theoretical Physics at the Friedrich-Alexander University, Erlangen. (3)

SCHROEDER ANDREW

Andrew Schroeder, PhD, MPP, is the director of research and analysis for Direct Relief. Starting in 2008 he built Direct Relief's program in geographic information system (GIS) and spatial analytics for humanitarian medical assistance. Since then he has built numerous interactive mapping applications covering topics from the prevention of mother-to-child transmission of HIV, laboratory strengthening in east Africa, disaster response in Haiti, New York City, and the U.S. Gulf Coast, and the implementation of the Affordable Care Act by primary care health clinics across the United States. In 2013, he and Direct Relief were awarded the President's Award by Esri for outstanding achievements in GIS. He also plays a lead role in Direct Relief's publication of the annual State of the Safety Net report, which tracks key economic and epidemiological conditions among U.S. safety net health providers. Dr. Schroeder received his Ph.D. from New York University's Department of Social and Cultural Analysis

and his master of public policy from the Gerald R. Ford School of Public Policy at the University of Michigan, with a focus on science and technology policy.

SCHNEIDER WERNER

Werner Schneider (1935-) was bornwrote The Internet of Things. A critique of ambient technology and the all-seeing network of RFID, Network Notebooks 02, Institute of Network Cultures. in Bern, Switzerland. After studies at the Department of Mathematics and Physics, Swiss Institute of Technology (ETH), Zurich, he obtained his Master Degree in Experimental Nuclear Physics in 1959. From 1959-1963 he created the Section of Computational Physics at the Institute of Physics, Uppsala University, on behalf of the later Nobel Prize winner Professor K. Siegbahn. After having obtained his PhD, he presented an inaugural dissertation on "Applications of Digital Computer Techniques to Theoretical Investigations and to the Analysis of Experimental Data in Nuclear Spectroscopy" in 1963, and became Assistant Professor in Computational Physics at Uppsala University. From 1963-1965 he was Assistant Professor in Technical Physics at

the Swiss Institute of Technology (ETH). From 1965-1995, Schneider was director of UDAC, an Uppsala based IT&T service organization. From 1987-1997, he was head of CMD, the Center for Human-Computer Studies at Uppsala University. From 1998-2000 he was professor in the field of Human-Computer Interaction at the Department of Information Science (DIS), Uppsala University, and professor in IT&T at Mid-Sweden University. From 2001 until July 2003, Schneider was Main Advisor to the Portuguese Catholic University, Campus Regional da Beiras, Viseu, in the fields of Health Informatics and Innovative Learning Environments and Methods. From September 2003 until April 2007 he was contracted by Lusitânia ADR, Ranhadas-Viseu, as Assistant Project Leader of "ViseuDigital", a project, aiming at transforming Lusitânia region into a showcase of a digital societal region, both in a national and international context and perspective. Schneider has been heavily engaged in research and development of medical informatics since 1960. In addition to a considerable number of papers in national and international scientific journals and conference proceedings, he was engaged in various international scientific projects, as well as in international cooperative work, such as different activities within IMIA, the International Medical Informatics Association. From 1980-1995, Schneider was head and main investigator of the WHO Collaborating Center

in Medical Informatics at UDAC, Uppsala. From 1970 until 2003, he was scientific counselor to the Swedish National Board of Health and Welfare in the field of data processing. He was named Doctor h.c. in Medicine by the University of Uppsala in 1978, and by the Medical Academy of Dresden in 1987. He is Honorary Fellow of EFMI. Informatics. Since 1963 Schneider has specialized in research work concerning the possibilities and limitations of formal representation of human 'interactive behavior', 'knowledge', 'know-how', 'competence' and 'skill', the domains of special interest being theory formationin clinical psychology and human-computer interaction. Since 1987 he is professor in the field of human-computer studies at Uppsala University. In 1984 he received an award for human computer technology by the Swedish Confederation of Professional Employees. Schneider's R&D-work comprises multimedia and virtual reality based decision support systems, with special regard to the potential and limitations of human information handling and processing. In the EC sponsored R&D-project ORATEL, Telematic Support System for Quality Assurance in Oral Health Care (1992–94), Schneider was responsible for the technical part of the proactive support components of ORATEL at the chairside. He was technical manager of the EC-TAP-ORQUEST-project (Telematic System for Quality Enhancement in Oral Health Care, 1996–99), and from late 1995 until 1998 manager of CMD's participation in the Esprit-projects VIP (Virtual Plane), and VIP+. From 1998 until 2000, Schneider acted as member of the leading team of the G7/G8-health project SIPP, Special Interactive TV & and MultiMedia Programs for Professionals and Public in Dentistry. Schneider has published more than 100 scientific papers.

SCHWARTZ B. WILLIAM

William B. Schwartz (1922-2000) was born in Montgomery, Ala. He served in the Army during World War II and received his undergraduate and medical degrees from Duke University. Dr. Schwartz, a renowned kidney disease specialist and researcher who later turned his attention to health policy and began sounding a warning in the 1980s that rising healthcare costs would force America to begin rationing medical care. Schwartz was an emeritus professor of medicine at USC. He was the founder of the Division of Nephrology at what is now Tufts Medical Center in Boston in 1950, Schwartz served as its chief until 1971. He then became the medical center's Chairman of Medicine and physician-in-chief. From 1976 to 1992, the year he joined the faculty at USC, Schwartz was the Vannevar Bush University Professor and Professor of Medicine at Tufts University. During Schwartz's early decades at Tufts Medical Center, he was one of a small number of people who developed the field of nephrology - the specialty devoted to kidney diseases - and led landmark studies in the investigation of disorders in blood chemistry. He was one of the founding fathers of nephrology. He had an exceptional breadth of interests. In the early '70s, Schwartz became interested in how doctors should make decisions, and he began working in the field called decision analysis. He, with other people as well, published an important paper showing that artificial intelligence computer programs could be used for diagnosis and management of kidney disease. But it was never implemented as a practical strategy. Schwartz left his administrative post at Tufts Medical Center in 1976 after being awarded an endowed professorship at Tufts University. He then launched his second career studying various aspects of the American healthcare system. That included things such as hospital costs, the geographic distribution of specialists, malpractice insurance and the possible need for the rationing of healthcare. Dr. William B. Schwartz was generally credited as one of the earliest pioneers in AI in medicine. After he received his medical degree,

he became active in both medical and computer science research. In 1970, Schwartz published an influential paper in the New England Journal of Medicine that included the following paragraph: "Rapid advances in the information sciences, coupled with the political commitment to broad extensions of health care, promise to bring about basic changes in the structure of medical practice. Computing science will probably exert its major effects by augmenting and, in some cases, largely replacing the intellectual functions of the physician. As the 'intellectual' use of the computer influences in a fundamental fashion the problems of both physician manpower and quality of medical care, it will also inevitably exact important social costs - psychological, organizational, legal, economical and technical." In the article, he stated that computer could be a useful clerk in filing medical records, but the real power was its ability to act as decision makers and perform intellectual functions. His article created much enthusiasm among the AI community. They began to think that computer science would eventually revolutionise the practice of healthcare. As a result, many scientists were attracted to study the applications of computer science in medicine.

SCOTT E. RICHARD

Richard E. Scott, PhD, focuses his interests on examining the role of e-health in the globalization of healthcare, including aspects impacting the implementation, integration, and sustainability of e-health globally and locally (termed 'glocal' e-health). He promotes the application of 'culturally sensitive and technologically appropriate' e-health solutions. His primary interests are directed towards strategic implementation (developing needs/evidence-based and defensible e-health strategies to guide countries and facilities in the application of appropriate e-health solutions), inter-jurisdictional e-health policy (management and facilitation of e-health's complex trans-border setting), outcomes and evaluation (identifying and defining suitable outcome indicators, and developing tools and frameworks for rigorous yet pragmatic demonstration of the 'value' of e-health), disaster response (understanding and promoting the role of e-health in facilitating all stages of the disaster management life-cycle), and environmental e-health (understanding

the environmental costs and benefits of e-health).

SEDICK ISAAC

Isaacs Sedick, PhD (1940-2012) was born and grew up in the Bo-Kaap, Cape Town, Western Cape. From an early age, Isaacs was fascinated with science and was engaged in performing science experiments at home. At the age of 13, he was involved in distributing political pamphlets and attending meetings of the Teachers League of South Africa (TLSA) and the Non European Unity Movement (NEUM). After completing his education, Isaacs worked as teacher at Trafalgar High School in Cape Town. It was while teaching at the school that he met Achmad Cassiem. Isaacs with his knowledge of explosives tried to train some of his friends in the use of this. This attracted the attention of the security police who monitored their activities. Consequently, Isaacs, his friends Achmad Cassiem, Marnie Abrahams were arrested in 1964 following the testing of explosives at Strandfontein Beach, Cape Town. They were taken to Caledon Police Station. However, the guards caught them and as punishment their food privileges were stopped

and their supply of toilet paper withdrawn. In the ensuing 'trial' held on the Island, where the he was officially 'charged' for writing unauthorised letters (related to the hunger strike), the prison authorities found Isaacs guilty and sentenced him to be flogged. Furthermore, his study privileges were also withdrawn. After his release from solitary confinement, Isaacs resumed his duties as chair of the Education Committee in prison and later the chair of the First Aid Unit. He taught mathematics and physical science to his fellow inmates. Isaacs completed a Bachelor's degree in Mathematics while on the Island. When he attempted to enrol for postgraduate studies (a MSc degree), this was blocked. He was compelled to enrol for another undergraduate degree in Information Science, Mathematical Statistics and Computer Science. Upon his release, he became a Specialist Scientist in Medical Informatics and Statistics and then the Head of Department of Medical Informatics at Groote Schuur Hospital on Cape Town. Isaacs made five attempts to escape from the Island, albeit all unsuccessful. Upon his release, he was banned for seven years. He was even refused permission by the then Minister of Justice to attend the University of Cape Town (UCT) for postgraduate studies. Nevertheless, he managed to register at the UCT and was forced to meet with his lecturers, clandestinely, in the Cape Town Botanical Gardens. Due to his banning orders, it was extremely

difficult to obtain employment even when vacancies were open to him. After his banning orders expired in 1986, Isaacs was elected as an Honorary Fellow of the IMIA for outstanding contribution to Medical and Health Informatics. He also obtained a visa to undertake a sabbatical in Germany in 1990 where he was able to complete his PhD. He was then elected Fellow of the Royal Statistical Society and a Chartered Member of the British Computer Society. In 2010, Isaacs was elected Honorary Fellow of the IMIA and in 2011, he was nominated as a Companion of Demontford University in the United Kingdom. Again, in 2010 Isaacs was nominated as a Sports Icon by the Department of Arts, Culture and Recreation for his contribution to Sport on Robben Island. He was a driving force behind the development of health informatics in South Africa, in Africa though HELINA, and internationally - in addition to the contributions and sacrifices he made for the freedom of his country, especially during the time he was imprisoned on Robben Island. Isaacs was 23 when he began a 13-year sentence for sabotage, sharing time with Nelson Mandela, after the apartheid police captured him in 1964.

SERIO ANGELO

Angelo Serio was Professor of Medical Statistics at the University of Palermo and later at the University "La Sapienza" of Rome until 1984, then Professor of Medical Statistics and Biometry

at the same university from 1985 to 2001. He was Lecturer at the School of Specialization in Medical Statistics, University La Sapienza 1969 to 2008 and at numerous other specialized schools of the same University from 1986 to 2001. He was coordinator of the Integrated Course of Statistics and Computer Science at the Faculty of Medicine, University Biomedical Campus in Rome, and Professor in Integrated Course of Clinical Methodology and Integrated Course of Nursing in Public Health at the same University from 1993 to date. He's been a consultant to the World Health Organization study on the use of social insurance data as sources of information for health statistics and member of the Expert Committee for the revision of the IX International Classification of Diseases and the Committee of experts of the Council of Europe for the application of the ICIDH (International Classification of Impairments, Disabilities and Handicaps) (1989-1992). He was a member of the Commission of Experts established by the Central Institute of Statistics with the task of formulating proposals for the ISTAT surveys concerning statistics biological insurance. In 1978 he was appointed by the Minister of Health component, as an expert, of the Scientific Committee for Health Planning established under L.833/1978. Appointed by the Minister of Health member of the Health Council of which he was a member from 1982 to 1987 and from 1991 to 1993. From 1971

to 1981 he was Chief Editor of the "Italian Journal of Economics and Demography Statistics", the official organ of SIEDES (Italian Society of Economics, Demography and Statistics), as well as a member of the Editorial Board of the journal "Medical Informatics" (Taylor and Francis Ed., London), President of the Italian Association of Medical Informatics and Italian representative on the EFMI and IMIA (1994-2003(.

SEROUSSI BRIGITTE

Brigitte Séroussi (1958-), MSc, PhD, was born in Tunis, Tunisia. She is Assistant Professor at the University Paris 6 (UPMC). She graduated in 1982 from the Ecole Centrale Paris (top three of French engineer schools), then she acquired a Master of Science in Computer Science at the University Paris 6 (major in Artificial Intelligence) in 1984, and a PhD in Biomathematics at the University Paris Diderot (Paris 7) in 1988. In parallel to Biomedical Informatics, she studied medicine at the University Paris Descartes (Paris 5) and graduated in General Practice in 1992. Thanks to her double education, she could work according to logic and sense of formal analysis, but also

manage the fuzzy, uncertainty and incompleteness, specific to medical practice. She combined these two opposed paradigms to model, develop, implement and evaluate clinical decision support systems (CDSSs) based on clinical practice guidelines. Another dimension of her work is to assess the impact of CDSSs on clinicians' behavior, including understanding why these tools sometimes fail in reaching their goals. Her main achievements are the systems SEPIA (follow up of chemotherapies), OncoDoc (management of breast cancer), UroDoc (management of bladder cancer), PneumoDoc (diagnosis of drug-induced pneumonia), and the RecosDoc suite (with RecosDoc-Diabète), as well as the ASTI systems applied to the management of the cardiovascular risk. As a health practitioner in the Department of Public Health at the Tenon Hospital (Assistance Publique – Hôpitaux de Paris), she has been chairing the board in charge of care quality and patient safety (CQSS) since 2011. Since 2012, she works part-time at the French Ministry of Health, in the Strategy Direction for Health Information Systems, on the promotion of Telemedicine, the implementation of the nationwide electronic personal medical record (DMP), and the development of the communicating electronic cancer record (DCC). She is a member of the Decision Support team at the LIMICS research laboratory (UMRS 1142, Paris, France) from its creation in 2014. She has coordinated and participat-

ed to numerous national and international projects (European projects). She has been a member of different scientific program committees for a wide range of international health informatics conferences and journals. She was co-chair of the SPC of MIE 2014. She currently serves as editor of the IMIA Yearbook of Medical Informatics. She is Vice-President of the French association of Medical Informatics (AIM) and the representative of France at EFMI.

SEVILLANO L. JOSE

José L. Sevillano (1966-), PhD, is Academic Representative of the University of Seville on the International Medical Informatics Association. He received his PhD in Physics (Electronics) in 1993 from the University of Seville, Spain, where he is now Associate Professor. He has served as Vice-Dean of the Computer Engineering School (2004-2007), Director of Innovations for Teaching (2007-2008) and Undergraduate Program Coordinator of Health Engineering (2012-2014), a new degree taught jointly by the University of Seville and the University of Malaga, with specializations in Clinical Informatics, Bioinformatics and Biomedical Engineering. He has been recently appointed Director of the Computer Engineering School, where this degree is imparted. He's also Coordinator of the Telefónica Chair on Intelligence in Networks. Prof. Sevillano served as Vice President of Membership of The Society for

Modeling and Simulation International (SCS) in 2009-2011. He is Associate Editor of Simulation (Sage) and the International Journal of Communication Systems (Wiley). He has served in the organizing committee of several international conferences, including General Chair of ICETE 2011, SPECTS 2011 and SPECTS 2012. He is also a member of the Steering Committee of SPECTS and CITS. He is author/co-author of more than 80 papers in refereed international journals and conferences, and has participated in more than 20 national and international research projects and contracts. His research interests include real-time communications and architectures, Mobile Robots and eHealth and Rehabilitation Systems. Prof. Sevillano is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE).

SHABO (SHVO) AMNON

Amnon Shabo (Shvo), PhD, specializes in health informatics and worked at IBM Research Lab in Haifa in years 2000-2014. He co-founded and chaired the Medical Informatics Community in IBM Research and headed the IBM worldwide program on healthcare & life Sciences standards. Amnon established and chairs two professional work groups: (1) the IMIA Work Group on Health Record Banking; and (2) the EFMI Work Group on Translational Health Informatics. Amnon has been leading a few standardization activities: he established and co-chairs the HL7 Clinical Genomics Work Group and is a co-editor of the Clinical Document Architecture (CDA), Continuity of Care Document (CCD), the Family Health History (Pedigree) and the Genetic Testing Report (GTR) standards. Amnon specializes in longitudinal and cross-institutional Electronic Health Records and is a pioneer of the Independent Health Record Banks vision. He is currently a Research Fellow at the Department of Information Systems, University of Haifa.

SHABOT M. MICHAEL

Michael Shabot, MD, FACS, FCCM, FACMI, was Associate Director of Surgery and Director of Surgical Intensive Care at Cedars-Sinai Medical Center in Los Angeles, California. He is Clinical Associate Professor of Surgery and Anesthesiology at the UCLA School of Medicine. He received his medical degree from Southwestern Medical School in Dallas and completed his surgical training at Harbor/UCLA Medical Center in Los Angeles. His specialties include General Surgery, trauma and surgical critical care. In 1974, Dr. Shabot implemented a first generation clinical information system for the real time management of critically ill patients. Since then he has implemented successive generations of clinical information systems and authored many new computer applications. He has written extensively on automation in the ICU and the use of computerized information for decision support, quality management, utilization review and clinical research.

SHAH NIGAM

Nigam Shah, MBBS, PhD, FACMI, is Associate Professor of Medicine (Biomedical Informatics) at Stanford University, Assistant Director of the Center for Biomedical Informatics Research, and a core member of the Biomedical Informatics Graduate Program. He is also Associate Professor of Biomedical Data Science at SU and member at Stanford Cancer Institute. He earned MBBS in Medicine at Baroda Medical College in 1999; PhD in Molecular Medicine at The Pennsylvania State University in 2005. He graduated Postodoctoral study in Biomedical Informatics at Stanford University in 2007. Dr. Shah's research focuses on combining machine learning

and prior knowledge in medical ontologies to enable use cases of the learning health system. Dr. Shah received the AMIA New Investigator Award for 2013 and the Stanford Biosciences Faculty Teaching Award for outstanding teaching in his graduate class on "Data driven medicine". Dr. Shah was elected into the American College of Medical Informatics (ACMI) in 2015 and is inducted into the American Society for Clinical Investigation (ASCI) in 2016. He holds an MBBS from Baroda Medical College, India, a PhD from Penn State University and completed postdoctoral training at Stanford University. His Administrative Appointments are: Scientific Program Chair, AMIA Summit on Translational Bioinformatics (2011-2012); Member, Cancer Institute Informatics Steering Committee (2011-Present); Advisory Committee Member, Stanford Center for Clinical Informatics (2011-2012); Advisory Board Member, Medicine X (2011-2012), and Assistant Director, Stanford Center for Biomedical Research (BMIR) (2013-Present). He received a lot of honors and awards from AMIA and other scientific and professional associations.

SHAHA STEVE

PhD, DBA, Professor, Center for Public Policy & Administration, University of Utah, Harvard University, Zayed University (UAE). Dr. Shaha is a seasoned, internationally recognized outcomes researcher and expert in IT, Outcomes Research and continuous improvement with over 30 years of consulting, lecturing and speaking nationally and internationally. He has consulted for over 150 healthcare organizations, and has testified before the legislatures for four U.S. States on healthcare issues, including New York, Massachusetts, Utah and California. He has provided advisory and consulting work to many recognized healthcare organizations, including Johns Hopkins, New York Presbyterian, Yale-New Haven, University of Michigan, Memorial Sloan Kettering, MD Anderson, NYU, Cornell and Columbia. He has also accomplished major research and program validation efforts for educational organizations, district and States throughout the US. Dr. Shaha has also performed consulting work for 10 foreign governments, among them France, Spain, the United Kingdom, Switzerland, Australia, Singapore, Netherlands, Switzerland, Canada and Malaysia.

He has also served over 50 of the top 100 non-healthcare organizations, including The Ritz-Carlton, Disney, IBM, AT&T, Coca-Cola, Time Warner, Kodak, Johnson & Johnson, Marriott, U.S. Department of Defense, and New Line Cinema, among others. Steve has accumulated over 200 professional national and international papers, white papers and technical reports, over 100 peer-reviewed publications in print, and over 35 technical notes and two books. He has made substantive contribution to over 20 grant-funded initiatives. Steve is a full Professor of Research Methods, Applied Statistics and Program Evaluation, and has taught and lectured at 11 major universities, including Harvard, UCLA, Princeton, University of Michigan, New York University, Cornell, Columbia and others in Australia and the Middle East. Dr. Shaha served on the 15-member team that authored and piloted the Malcolm Baldrige National Quality Award for Health Care, including the development of criteria and case study, and acting as an examiner. He has also contributed to the Baldrige for Education. He holds two master's degrees and accomplished doctorates in Research Methods and Applied Statistics and in Business Administration. Steve currently serves as the Principal Outcomes Consultant for Allscripts and on University faculties as Professor at the Center for Policy and Public Administration, University of Utah, and as Professor at Zayed University (UAE).

SHAHAR YUVAL

Yuval Shahar, MD, PhD, FACMI, is Head of the Medical Informatics Research Center at Department of Information Systems Engineering, Ben Gurion University of the Negev. Yuval. Shahar is a professor and previous chair of BGU's Information Systems Engineering department. He holds a BSc and an MD degree from the Hebrew University, an MSc in computer science from Yale University, and a PhD in Medical Information Sciences from Stanford University. After a decade at Stanford as a researcher and full time faculty member in Computer Science and Medicine, he has joined BGU in 2000 to found and head its Medical Informatics Research Center. Over the past 25 years, Prof. Shahar's research has focused on temporal reasoning, temporal data mining, therapy planning, decision analysis, information visualization, knowledge acquisition, knowledge representation, and knowledge based systems, applying his work mostly in biomedical domains, as well in domains such as homeland security and information security. Among multiple awards, Prof. Shahar was granted in 1995 a NIH 5 year FIRST career award and an NSF award to explore the theoretical and practical implications of the temporal reasoning methodology he had developed; in 2005 an IBM Faculty Award, and in 2008 an HP Worldwide Innovation Program award. He was elected in 2005 as an International Fellow of the American College of Medical Informatics (ACMI).

SHAHROUR GHASSAN

Ghassan Shahrour is MD, Otolaryngologist, Syria. Dr. Shahour was trained at Damascus University, with further training at the University of Birmingham. He is the founder and president of the Syrian Medical Informatics Association, SYRMIA, which was established in 2005. He has been an expert on ICT and disability. He has published many articles on health, ICT and disability, and very well trained in research design. Syrian Medical Informatics Association has focused on the application of information science and technology in the fields of healthcare and research in medical, health and bio-informatics. The basic goals and objectives of the association are to: Move informatics from theory into practice in all range of health delivery settings, from physician's office to acute and long term care; Further the dissemination and exchange of knowledge, information and technology among health professionals in Syria; Promote health education and community involvement in public health issues. He has published many articles, conference papers and presentations. He is a member of a number of national, regional and international professional and civil society associations. He has also organized a number of scientific events in the field of Medical Informatics, Telemedicine, eHealth, ICT, etc. Dr. Shahrour has published many media interviews and public media articles in the Arab Media on Internet based health education, e-health, e-prescription, Arabic language use and content on the Internet, e-health and people with Alzheimer and other dementia diseases, digital divide, ICT and disaster risk reduction, ethics in information era as well as social media in the Arab countries, toward enabling environment for persons with disabilities and many others. In recognition of his contribution in health and disability issues, Dr. Ghassan Shahrour has been awarded with certificates from Middle East Countries and some other international distinguished awards.

SHEIKH AZIZ

Aziz Sheikh, PhD, FACMI, is is Professor of Primary Care Research and Development at the University and Co-Director of its Centre of Medical Informatics. He is also Co-Director of the 14-university Asthma UK Centre for Applied Research. Before joining the University. Prof Sheikh held a series of NHS R&D national fellowships based at Imperial College, London and St. George's Hospital Medical School. He undertook his undergraduate training at University College London and his postgraduate training at Imperial College, London, the London School of Hygiene and Tropical Medicine and Harvard Medical School. He is one of the most widely published authors in primary care and population health sciences in the world. He was awarded an OBE for Services to Medicine in 2014. Prof Sheikh has been honoured with 7 fellowships from learned societies, namely: Fellow, Royal College of General Practitioners; Fellow, Royal College of Physicians; Fellow, Royal College of Physicians of Edinburgh; Fellow, Faculty of Public Health; Fellow,

Royal Society of Edinburgh; Fellow, Academy of Medical Sciences and Fellow, American College of Medical Informatics. In addition to his University responsibilities, Prof Sheikh holds a number of honoured positions, including: Adviser to the World Health Organization; Member of the World Allergy Organization's Special Committee on Anaphylaxis; Member of the Review of Information Technology in NHS England; Consultant Adviser, Chinese Alliance for Respiratory Diseases in Primary Care, China; Joint Editor-in-Chief of NPJ Primary Care Respiratory Medicine; Associate Editor, International Journal of Medical Informatics; Associate Editor, Journal of the Royal Society of Medicine and Co-Director of Harvard Medical School's Safety, Quality and Informatics Leadership (SQIL) Programme. Prof Sheikh's research interests span a range of areas of global health matters. These include: Epidemiology and clinical management of asthma and allergic disorders; Exploiting innovations in health informatics technology (HIT) to promote patient and population health and to increase the efficiency of care; Investigating the burden, causes and consequences of medical error and development of strategies and interventions to enhance patient safety; Reducing health inequalities. Other activities of Prof Sheikh are: Undergraduate: Supervision of Erasmus, Socrates and SSC4 students and Postgraduate: Supervision of MSc, MD and PhD students; Mentorship of doctoral,

post-doctoral and career scientist award holders.

SHEIN DAVID

David Shein is the Founder of Dimension Data Australia. Mr. Shein serves as Executive Director of OurCrowd. He served as Managing Director of Dimension Data Australia Pty Ltd. Mr. Shein established Dimension Data Australia (formerly Com Tech Communications) in July 1987 as a Specialist Supplier of networking and communications products. Mr. Shein emigrated from South Africa to Australia in November 1986 to take up the position as National Sales Manager at Ozisoft. Mr. Shein was employed by Price Waterhouse in South Africa where he was responsible for establishing a micro computer division within the Small Business Department of Price Waterhouse. Over the past 10 years, Mr. Shein was involved in investing in and managing a number of start-up and early stage technology companies, many of which have been successfully exited. Mr. Shein actively mentors management teams. He serves as the Non-Executive Chairman of Montech Holdings Limited. He served as Chairman and Founding Inves-

tor of Macromatix. He served as the Chairman of Findex Advice Services Pty Ltd (doing business as Centric Wealth Advisers Ltd). Mr. Shein served as Chairman of Holly Connects, Inc. He serves as a Member of Advisory Board at Zipmoney Limited. He has been a Director of Sirius Corporation Limited since February 17, 2014. He has been a Non Executive Director at Montech Holdings Limited since February 17, 2014. Mr. Shein has Accounting degree.

SHEPPARD C. LOUIS

Louis C. Sheppard, PhD, FACMI, was Assistant Vice President for Research at the University of Texas Medical Branch at Galveston (UTMB). He is Professor of Physiology and Biophysics at UTMB and Professor of Biomedical Engineering at the University of Texas at Austin. Dr. Sheppard's research interests include biomedical applications of computer based techniques in monitoring. modeling, control. signal analysis, and expert systems. From 1966 until 1988 while a member of the faculty of the Department of Surgery at the University of Alabama at Birmingham, he was developing and implementing computer-based systems for intensive care that included automated drug infusion for closed-loop, feedback control of clinical variables.

SHIFFMAN N. RICHARD

Richard Shiffman, MD, MCIS, FACMI, was Associate Director of the Center for Medical Informatics and Professor of Pediatrics at Yale University School of Medicine. Dr. Shiffman received BA and MD degrees from the University of Pennsylvania and served as pediatric resident at Children's Hospital of Philadelphia and the James Whitcomb Riley Hospital for Children. He was Chief Resident at the University of Colorado Medical Center and completed a fellowship there in developmental pediatrics. Dr. Shiffman practiced primary care pediatrics in Colorado for 12 years and earned a Masters in Computer Information Systems from the University of Denver. He completed a fellowship in medical informatics at the Decision Systems Group, Brigham and Women's Hospital, before joining the faculty at Yale. Dr. Shiffman's primary research activities have been directed toward the use of guideline knowledge in computer-based decision support systems. He pioneered the use of decision tables for guideline knowledge representation and verification of completeness and consistency. The model was extended to create "augmented" tables that can store and manipulate information about evidence quality, test parameters, costs, and patient preferences. This work served as a basis for the Guideline Elements Model (GEM), an XML-based hierarchic document model for guidelines. Dr. Shiffman studied the effectiveness of an asthma decision support system on handheld computers in private practice and led a group that developed a computer-based system to support pediatric health maintenance activities at Yale, using a variety of scanning technologies for structured recording, storage, and manipulation of data. Dr. Shiffman served as Chair of an Expert Meeting on Information Technology in Children's Healthcare sponsored by AHRQ. He is a Fellow of the American Academy of Pediatrics (AAP) and served two terms as chairman of its Section on Computers and Other Technology. In addition, he serves on the AAP Task Force on Medical Informatics and the Steering Committee on Quality Improvement and Management. Dr. Shiffman won a Generalist Physician Faculty Scholars Award from the Robert Wood Johnson Foundation and served on an Institute of Medicine Committee to advise the AHCPR.

SHIFRIN MICHAEL

Michael Shifrin is a Russian Federation Representative at Europen Federation for Medical Informatics (FMI). He is Head of Medical Informatics Lab, N.N.Burdenko Neurosurgical Institute. He is member of European Federation for Medical Informatics Council and Association of Medical Informatics in Russia. His field of research includes; EPR and other medical information systems, Professionals' knowledge eliciting and formalization, Medical data analysis, Medical informatics as a whole, foundations of informatics.

SHIRES B. DAVID

David Shires (1931-2011) is Professor of Family Medicine and Community Health & Epidemiology at Dalhouaie University, Canada. Dr. Shires has practiced medicine in Africa, United Kingdom and United States and has been a resident in Canada for the past 20 years. His early work includes development of a computerized medical record system for the Apollo astronauts. Dr. Shires was elected President of the International Medical lnformatics Association (IMIA) in 1980 and holds Honorary Fellowship, in IMIA as well as the Hritish Computer Society. In 1983 in Paris, he received the Silver Core award for meritorious services to international computing by the International Federation for Information Processing (IFIP). In 1974 he published a book on Computer Technology called "Computer Technology in the Health Sciences" and in 1986 he co-authored "Family Medicine: A Guidebook for Practitioners of the Art". David B. Shires assumed the IMIA presidency in 1980, one year after the transition from TC4. During his term (1980-1983), Shires reached agreements with the regional group for Central and South America, known as IMIA-LAC (Latin American Countries), and the most populous country in the world, the People's Republic of China (PRC), making them active participating members in IMIA. Shires saw IMIA as a family, within which "the then USSR and Eastern Bloc countries as well as other countries such as Cuba, could indulge in animated and mutually productive discussions with their western counterparts with each respecting the other's political differences." IMIA worked to become meaningful to developing countries and forged new bonds with the World Health Organization. In 1992, Shires reflected that "IMIA has grown considerably in reputation, recognition and credibility in the ten years since I left the presidency, largely due to the continuing hard work of Presidents Peterson, Kaihara and Willems." Today IMIA reflects Shires' goal for his presidency in its international constituency, which goes "beyond the Europe - North America-Japan axis to a much greater world vision." Today, the IMIA family includes a newly invigorated African region (HELINA) and is well on its way to facilitating the establishment of a Middle East Region. (MED-INFO 1983, Amsterdam, The Netherlands).

SHORTLIFFE EDWARD

Edward Hance Shortliffe (1947-) is Professor of Biomedical Informatics and Senior Advisor to the Executive Vice Provost in the College of Health Solutions at Arizona State University (35% time, 2012-present). He is also a Scholar in Residence at the New York Academy of Medicine in New York City, Adjunct Professor of Biomedical Informatics at Columbia University's College of Physicians and Surgeons, and

Adjunct Professor of Healthcare Policy and Research (Health Informatics) at Weill Cornell Medical College. Previously he served from July 2009 through March 2012 as President and Chief Executive Officer of the American Medical Informatics Association (AMIA), headquartered in Bethesda, MD. From November 2009 until October 2011 he held a position as Professor in the School of Biomedical Informatics at the University of Texas Health Science Center in Houston. Between 2007 and 2009 he was Professor of Biomedical Informatics at Arizona State University and Professor of Basic Medical Sciences and Professor of Medicine at the University of Arizona College of Medicine. Until May 2008 he served as the founding dean of the Phoenix campus of the University of Arizona's College of Medicine. Before that he was the Rolf A. Scholdager Professor and Chair of the Department of Biomedical Informatics at Columbia College of Physicians and Surgeons in New York City (2000-2007) and Professor of Medicine and of Computer Science at Stanford University (1979-2000). After receiving an A.B. in Applied Mathematics from Harvard College in 1970, he moved to Stanford University where he was awarded a Ph.D. in Medical Information Sciences in 1975 and an M.D. in 1976. During the early-1970s, he was principal developer of the medical expert system known as MYCIN. After a pause for internal medicine house-staff training at Massa-

chusetts General Hospital and Stanford Hospital between 1976 and 1979, he joined the Stanford internal medicine faculty where he served as Chief of General Internal Medicine, Associate Chair of Medicine for Primary Care, and was director of an active research program in clinical information systems and decision support. He spearheaded the formation of a Stanford graduate degree program in biomedical informatics and divided his time between clinical medicine and biomedical informatics research. In January 2000 he moved to Columbia University, where he was also Deputy Vice President (Columbia University Medical Center) and Senior Associate Dean (College of Physicians and Surgeons) for Strategic Information Resources, Professor of Medicine, Professor of Computer Science, and Director of Medical Informatics Services for the NewYork-Presbyterian Hospital. He continues to be closely involved with medical education and biomedical informatics graduate training. His research interests include the broad range of issues related to integrated decision-support systems, their effective implementation, and the role of the Internet in health care. Dr. Shortliffe is an elected member of the Institute of Medicine, the American Society for Clinical Investigation, the Association of American Physicians, and the American Clinical and Climatological Association. He has also been elected to fellowship in the American College of Medical Informatics

and the American Association for Artificial Intelligence. He is a Master of the American College of Physicians (ACP) and was a member of that organization's Board of Regents from 1996-2002. He is Editor-in-Chief of the Journal of Biomedical Informatics. In the early 1980s he was recipient of a research career development award from the National Library of Medicine. In addition, he received the Grace Murray Hopper Award of the Association for Computing Machinery in 1976, the Morris F. Collen Award of the American College of Medical Informatics in 2006, and has been a Henry J. Kaiser Family Foundation Faculty Scholar in General Internal Medicine. Dr. Shortliffe has authored over 350 articles and books in the fields of biomedical computing and artificial intelligence. Volumes include Computer-Based Medical Consultations: MYCIN (Elsevier/North Holland, 1976), Readings in Medical Artificial Intelligence: the First Decade (with W.J. Clancey; Addison-Wesley, 1984), Rule-Based Expert Systems: The MYCIN Experiments of the Stanford Heuristic Programming Project (with B.G. Buchanan; Addison-Wesley, 1984), Medical Informatics: Computer Applications in Health Care and Biomedicine (with L.E. Perreault, G. Wiederhold, and L.M. Fagan; Reading, MA: Addison-Wesley, 1990; 2nd edition, New York: Springer-Verlag, 2000), and Biomedical Informatics: Computer Applications in Health Care and Biomedicine (with J.J. Cimino; 3rd edition, New York: Spring-

er, 2006; 4th edition, London: Springer, 2014).

SICURELLO FRANCESCO

Francesco Sicurello (1949-), PhD, is Doctor in Physics. He specialized in electronics and cybernetics at University of Milan in 1975. He has several years of scientific and technological experience (since 1978) in Medical Informatics, Telemedicine, e-Health, Neuroinformatics and statistical software for data analysis in epidemiology and biomedicine. Today he is President of International Institute of Tele-Medicine (IITM)/Italian Association of Telemedicine and Medical Informatics (@ITIM) and Adjunct Professor of Medical Informatics and Telemedicine at University of Milan-Bicocca (since 1999) and scientific coordinator of university masters and advanced courses on ICT applied to biomedicine and Health care sector. During the years 1987-1999, he was member of the board of Italian Association of Medical Informatics (AIIM) and of National Association of Informatics in Neurosciences (ANINs). He was scientific director of Italian magazine on New Technologies

in Medicine (2000-2010) and before (1989–1995) associate director of the bilingual (Italian/English) magazine "Medicine & Informatics". Francesco Siccurelo was professor of Ontology and its applications (2007-2012) at University of Insubria (Como) and of Electronic Documents at University of Macerata (1996-1999), also, Professor of Informatics applied to Medicine and Statistical Software at School of Computer Science of Milan University (1984-2000) and assistant professor on Medical informatics and statistical software at the Health Physics Specialization School of Milan University (1986-1990). He was: Coordinator (2004-2014) of Technological University Center in Desio (Monza) relating advanced courses, projects and technological transfer on ICT in Healthcare System. Since 2000 to 2012, he was referent for Telemedicine in the Scientific and Technological Cooperation of Italian Ministry of Foreign Affairs: during this period he promoted and realized several research projects and schools in Mediterranean countries on medical Informatics and Telemedicine, in the frame of Italian, European and International R&D Programs. In particular in the frame of the scientific and technological cooperation between Italy and Romania, Croatia, Greece, Slovenia, Hungary, Albania, Lebanon, Egypt, Canada, Australia, etc. Sicurrelo was Expert professional in health informatics and head of operating unit (2001-2008) at the Health General Director-

ate (Research and Innovation Office) of Lombardia Region and Head of Information Systems Service at National Neurological Institute C. Besta of Milan (1996-2000). Also, he was responsible of Research Operating Unit of Medical Informatics at Institute of Biomedical Technologies of National Research Council in Milan (1990-1998) for the computerization of medical record in the frame of the Finalized Research Program FATMA/CNR. He was member of management Board (Administration Council) of University of Pavia (1991 -1994). From 1994 to 1999 he was member of the Steering Committee of the EUROCARDS (Action for the standardization of data cards in healthcare). He was visiting researcher at the Applied Physics Laboratory, John Hopkins University of Baltimore in 1992, for researches in software engineering for knowledge-based medical information systems. He has been (1985-1995) the Italian representative of MUG-E, Mumps Users' Group-Europe. (MUMPS-is programming language used in medical field).He was Senior researcher in medical informatics and statistical data analysis at Policlinic Hospital of Milan, (1987 to 1989). Since 1978 till 1986 he was designer, developer and responsible at Desio Hospital, implementing the medical information system in the frame of the public health and epidemiologic program promoted by Lombardia Region. He is author of more than 400 scientific and professional papers in Medical informatics domain.

SIEGEL R. ELLIOT

Elliot R. Siegel, PhD, FACMI, was Associate Director for Health Information Programs Development at the National Library of Medicine, National Institutes of Health. He directs the NLM's offices of international programs, planning and evaluation, and outreach development. Dr. Siegel received a PhD in communication research (1969) and an MA in industrial-social psychology (1966), both from Michigan State University. He received a BA in Psychology from Brooklyn College of the City University of New York. Dr. Siegel's work in medical informatics began at NLM in 1976 where, as Senior Information Scientist in the Lister Hill National Center for Biomedical Communications, he co-developed the hepatitis knowledge base system for physicians. He later established and still leads the evaluation research program that supported the development of such NLM innovations as the first-generation online public access catalog and the Grateful Med end-user

search system. His research interests include the creation of new methodologies and metrics that have been applied to the study of information system performance, use, and impact. Dr. Siegel put in place the long-range planning function that for nearly two decades has strategically set the goals and priorities for NLM's research and service activities. He launched the Library's nationwide outreach initiative for minority and underserved health professionals and, most recently, undertook on behalf of NIH the leadership of a multilateral capacity development initiative in sub-Saharan Africa to connect remote malaria research sites to the Internet. Dr. Siegel represented the medical informatics community on the first High-Performance Computing, Communications, and Information Technology Committee (HPCCIT) of the Office of Science and Technology Policy. With the NLM director, he currently coordinates U.S. participation in the G-7 Global Healthcare Applications Project and represents U.S. government interests in this international forum. He represents NLM on the International Council for Scientific and Technical Information (ICSTI) and the consortium of senior federal information managers (CENDI). He is a fellow of the American Association for the Advancement of Science and past secretary and chair of the Section on Information, Computing and Communications. He is a member of the International Affairs Committee of AMIA. Dr.

Siegel is a recipient of the NLM Director's Award, the NIH Award of Merit, and the Senior Executive Service Performance Award.

SIEVERT ELLEN MARY

Mary Ellen Sievert, PhD, FACMI, originally trained in English at Emmanuel College and the University of Iowa, Dr. Sievert went on to obtain her master's degree in library science from the University of Missouri and then a 1985 PhD in educational media and information science from the same institution. She joined the faculty on completing her degree and is now professor in the School of Information Science and Learning Technology and clinical professor in the Department of Health Management and Informatics. Beginning with her work on evaluation of methods for training expert searchers in the early 1980s, Dr. Sievert has systematically examined key factors that affect online access to medical literature. Her groundbreaking work on the comparative effects on information retrieval of electronic full-text, abstracts, titles, and human-assigned subject headings provided data to support or refute a range of hypotheses regarding medical full-text retrieval. Her research on retracted articles, errata notices, and corrected and republished articles will only grow in importance as electronic publishing makes these and other alterations to published articles both more feasible and potentially less noticeable. She

has also done important work on the analysis, display, and development of controlled terminologies, including serving as first author of the Thesaurus of Health Informatics. Dr. Sievert's career and accomplishments reflect the multidisciplinary nature of the field of medical informatics. She has published in (and served as a reviewer for) general information science and library science journals as well as in publications directly associated with informatics, medical librarianship, and medicine. People in all of these fields cite her! As a professor, Dr. Sievert has also helped to recruit and educate informatics professionals from a wide range of backgrounds. Dr. Sievert brings to ACMI a broad perspective and expertise in multidisciplinary research and collaboration, the education of informatics professionals, medical information retrieval, journal publication practices, and related ethical issues that are likely to grow in importance in the electronic era.

SILVERSTEIN C. JONATHAN

Jonathan C. Silverstein, MD, MS, FACS, FACMI, works at Research Institute Center for Biomedical Research Informatics Davis Family Chair of Informatics. He is Vice President, Biomedical Research Informatics and Head, Center for Biomedical Research Informatics. He graduated: BS, Microbiology, University of Illinois at Urbana-Champaign, IL, MS, Clinical Epidemiology, Harvard School of Public Health, Boston, MS, Graduate: MD, Medicine-Surgery, Washington University Medical School, St. Louis, MO and Informatics, Washington University. Residency: Surgery, Rush-Presbyterian-St. Luke's, Chicago, IL.Jonathan C. Silverstein, Vice President, Clinical Research Informatics at NorthShore University HealthSystem (NorthShore) heads the Center for Clinical and Research Informatics (CCRI), whose mission is to preserve and improve human life through innovative collection and use of clinical data. CCRI supports matrix staff reporting across NorthShore (e.g. Enterprise Data

Warehouse team, Epic Optimization team) and is recruiting six faculty directors of informatics working across a wide range of medical domains and computational methods. Dr. Silverstein joined NorthShore after serving as the associate director of the Computation Institute at University of Chicago and Argonne National Laboratory where he became internationally known for his expertise, and federally funded research, in the application of advanced computing architectures to biomedicine. He is recognized as one of three founding scientific directors of the Chicago Biomedical Consortium; and was an attending general surgeon for seven years while he was a lead physician informatician for enterprise electronic medical record deployments at the University of Chicago and the University of Illinois at Chicago. Dr. Silverstein holds an MD from Washington University (St. Louis) and an MS from Harvard School of Public Health. He is a Fellow of the American College of Surgeons and a Fellow of the ACMI. His professional Memberships/Affiliations/Activities (excludes teaching, Hospital committees, panels) are: (1989-present) Member of AMIA); (1995-present) Member, American Medical Association, Illinois State Medical Society and Chicago Medical; (1997-present) Certified, American Board of Surgery; (1997-2001) Physician advisor to Cerner Corporation for Physician Order Entry; (1997-2003) Creator and Manager web-based Resident Case Log

system (used by 5 universities); (1998-present) Member, Association for Academic Surgery, Illinois Surgical, and Chicago Surgical; (1998, 2002) Special Emphasis Panel Reviewer for National Library of Medicine, NIH; (1999-present) Fellow, American College of Surgeons and Member, Association for Surgical Education; (1999-2001) Creator and Manager UIC Division of General Surgery clinical database; (2000-2006) Member, Regents Committee on Informatics, American College of Surgeons; (2002-2006) Member, Biomedical Library and Informatics Review Committee, NLM/NIH; (2003-2009) Member, Association of Medical Directors of Information Systems; (2003-2006) Member (Chair FY06), Board of Computing Activities and Services, University of Chicago; (2003) Reviewer, NASA Peer Review Services; (2003-present) Executive Committee, Computation Institute of The Univ. of Chicago and Argonne Natl. Lab; (2004-2009) and member of a lot of SPCs Conferences and Reviewer of a lot of peer review journals and Conference Proceedings. He received a lot of Honors and Awards.

SIM IDA

Ida Sim, MD, PhD, FACMI, is Co-Director, Biomedical Informatics, UCSF Clinical and Transitional Sciences Institute Professor of Medicine, UCSF and co-Founder, Open mHealth. Ida is Co-Director of Biomedical Informatics, USCF Clinical and Translational Science Institute, and Co-Founder of Open mHealth, a non-profit organization that is promoting app and data integration through open APIs for mobile health. Her work centers on knowledge-based technologies for evidence-based care and research, with an expert focus on data sharing and representation. She is a co-investigator with the Mobile Data to Knowledge NIH Center of Excellence and the Health eHeart patient-powered research network. Ida also led the development of the WHO's Trial Registration Data Set that all trial registers worldwide adhere to. She continues to be active around clinical trial data sharing policy.

SIMBORG W. DONALD

Donald W. Simborg, MD, FACMI, is Professor of Medicine at the University of California, San Francisco School of Medicine and is a member of the Division of Internal Medicine. He also serves as the Chief Information Officer for the UCSF Hospital. He received his MD in 1966 from the Johns Hopkins School of Medicine and completed residency training as an Osler Medical Resident at the Johns Hopkins Hospital. He continued on the faculty of the Johns Hopkins School of Medicine with a joint appointment in the Departments of Medicine and Biomedical Engineering until 1976. During this period he also served as the Chief of Clinical Information Systems for the Johns Hopkins Hospital. In 1976 he assumed his current positions at UCSF. He is Board Certified in Internal Medicine. His informatics career began in the early 1960s as a computer programmer working at the Argonne National Laboratory. During medical school from 1962 to 1966 he developed software for analyzing cardiac arrhythmias from electrocardiograms resulting in his first informatics related publication. As a medical resident in 1969, he developed a comprehensive order entry and nursing unit information system known as WIMS (Ward Information Management System) which was implemented on a medical unit of the Johns Hopkins Hospital.

In the outpatient medical clinic at Hopkins he implemented a patient problem-list tracking system. As Chief of Clinical Information Systems until 1976, he collaborated with other clinicians in developing a Radiology Reporting System which was later marketed by the Siemens Corporation and an inpatient Pharmacy Unit-dose dispensing system. While at UCSF from 1976 to the present, in addition to managing the hospital's Information Systems Department, he has been involved extensively in informatics research and development receiving multiple federal and foundation grants. The most significant result of these efforts is the development and deployment of the first true peer-to-peer network in a hospital connecting multiple systems over a fiber optic medium utilizing an application-level data interchange protocol. This was deployed in 1979 to connect four departmental systems at the hospital. Dr. Simborg participates as a faculty member of the degree program in Medical Informatics under the direction of Dr. Marsden Blois. As a preceptor in this program as well as the Clinical Scholars program, significant informatics applications have been implemented at UCSF including STOR (Summary Time-Oriented Record) with Dr. Whiting-O'Keefe and the first hospital-based Patient Identification System utilizing a probabilistic record-matching algorithm with Max Arellano. He was a frequent speaker at medical informatics meetings and a participant in many informatics-related organizations.

SIMOES EDUARDO J.

MD, MSc, DLSHTM, MPH, Chair and Health Management and Informatics Alumni Distinguished Professor, University of Missouri ,USA. Eduardo J Simoes, MD, is Chair and Alumni Distinguished Professor of the Department of Health Management and Informatics-University of Missouri School of Medicine (2011-current). He has a medical degree from Faculdade de Medicina, Universidade de Pernambuco in Brazil (1981), diploma and a Master of Sciences degree from University of London School of Hygiene Tropical Medicine (1987) and Master of Public Health degree from Emory University School of Public Health (1991). He is a fellow of the American College of Epidemiology. He has published 106 articles, eight book chapters and 18 reports, made 142 conference presentations, and reviewed/edited for 12 journals.

SIMON A. HERBERT
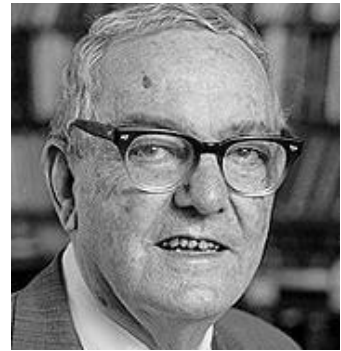
Herbert Alexander Simon (1916-2001), a Nobel Prize laureate, was an American political scientist, economist, sociologist, psychologist, and computer scientist whose research ranged across the fields of cognitive psychology, cognitive science, computer science, public administration, economics, management, philosophy of science, sociology, and political science, unified by studies of decision-making. With almost a thousand highly cited publications, he was one of the most influential social scientists of the twentieth century. For many years he held the post of Richard King Mellon Professor at Carnegie Mellon University. Simon was among the founding fathers of several of today's important scientific domains, including artificial intelligence, information processing, decision-making, problem-solving, organization theory, complex systems, and computer simulation of scientific discovery. He coined the terms "bounded rationality and satisficing", and was among the earliest to analyze the architecture of complexity

and to propose a preferential at-tachment mechanism to explain power law distributions. He also received many top-level honors later in life. These include: be-coming a fellow of the American Academy of Arts and Sciences in 1959; election to the National Academy of Sciences in 1967; APA Award for Distinguished Scien-tific Contributions to Psychology (1969); the ACM's Turing Award for making "basic contributions to artificial intelligence, the psy-chology of human cognition, and list processing" (1975); the Nobel Memorial Prize in Economics "for his pioneering research into the decision-making process within economic organizations" (1978); the National Medal of Sci-ence (1986); the APA's Award for Outstanding Lifetime Contribu-tions to Psychology (1993); ACM fellow (1994); and IJCAI Award for Research Excellence (1995). Simon is currently, as of 2016 the most cited person in Artificial Intelligence and Cognitive Psychology on Google Scholar. As a testament to his interdis-ciplinary approach, Simon was affiliated with such varied Carn-egie Mellon departments as the School of Computer Science, Tep-per School of Business, depart-ments of Philosophy, Social and Decision Sciences, and Psycholo-gy. Simon received an honorary Doctor of Political science degree from University of Pavia in 1988 and an honorary Doctor of Laws (LL.D.) degree from Harvard University in 1990.

SINACI ANIL

Anil Sinaci is Deputy Coordina-tor of the SALUS Project. SRDC Software Research, Development and Consultancy, Turkey. Anil is a software engineer and holds a PhD in Computer Engineer-ing; his research areas include eHealth and eBusiness Infra-structures, Clinical Research In-formatics, Data Interoperability, Semantic Web, Service Oriented Architectures, Interoperability Standards, and Conformance and Interoperability Testing. He has actively worked for many European Commission supported research projects. He authored many papers published in peer-reviewed journals and conferences. He is currently working as a project manager and senior researcher at SRDC Ltd.

SINGH HARDEEP

Hardeep Singh, MD, MHP, FACMI, is Chief, Health Policy, Quality and Informatics Pro-gram, Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center. He is Director, VA Center of Inquiry to Improve Outpa-tient Safety through Effective Electronic Communication. He is also Associate Professor, Department of Medicine, Section of Health Services Research, Bay-lor College of Medicine. Singh earned MD at All India Institute of Medical Sciences, New Delhi, India; Residency, Baylor College of Medicine, Houston, Texas and MPH at Medical College of Wisconsin, Milwaukee, Wiscon-sin. His research interests are: Understanding and reducing diagnostic errors in the ambu-latory care setting, especially those that involve missed and delayed cancer diagnosis; Use of health information tech-nology to identify and reduce diagnostic errors; Patient safety related to electronic health record implementation and use. Awards and Activities: Co-Chair, National Quality Forum HIT Patient Safety Expert Panel for the Prioritization and Identifi-cation of Health IT and Patient

Safety Measures (2015); Elected Fellow of the American College of Medical Informatics (ACMI) for significant and sustained contributions and advancements in the field of biomedical informatics (2014); Recipient of the 2012 Presidential Early Career Award for Scientists and Engineers from President Barack Obama (April 2014); Appointed by Secretary of Health and Human Services to the Clinical Laboratory Improvement Advisory Committee, 2013-2017 (advisory role to the Centers for Disease Control, Food and Drug Administration, and Centers for Medicare and Medicaid Services); Recipient of the AcademyHealth (2012); Alice S. Hersh New Investigator Award for high-impact work of international significance in the area of patient safety and diagnostic errors; Recipient of a K23 research career development award from the NIH (2007-2012) and several federally funded research grants from the VA and AHRQ; Patient safety and informatics work heavily cited in several national policy reports, including the AMA report, "Research in Ambulatory Patient Safety, 2000-2010: A 10-year Review" (9 papers) and the 2011 Institute of Medicine Health IT Safety report "Health IT and Patient Safety: Building Safer Systems for Better Care" (4 papers); Co-developed "ONC SAFER Guides" for safe and effective electronic health record use under a contract with Office of the National Coordinator for Health IT. Guides were disseminated nationally in January 2014; Committee Co-Chair, VHA Order-ing and Reporting Test Results Directive Revision Work Group (2013-present; Associate Editor, Diagnosis (2013-present).

SIN YOKE CHONG

Chong Yoke Sin is CEO of Integrated Health Information Systems, a subsidiary of Singapore's Health Ministry. IHiS architects, manages and operates highly integrated systems across Singapore's public healthcare sector, supporting over 40,000 users at all public hospitals, national specialty centres and polyclinics. IHiS played a key role in five Singapore hospitals becoming the first public institutions in Asia Pacific to achieve HIMSS EMRAM Stage 6, an international benchmark for advanced technology used in patient care. Dr Chong was previously CEO of NCS, the largest systems integration company in Singapore, and was instrumental in its growth as a regional IT company with businesses in China, Australia, Middle East and Southeast Asia. Dr Chong is a worldwide Board member of Healthcare Information and Management Systems Society (HIMSS), and Chair of HIMSS Asia Pacific governing council. She is also a Board member of National Kidney Foundation, Assisi Hospice, as well as a member of Republic Polytechnic's Board of Governors and Chair of its School of Infocomm Technology. She has also been appointed as a board member of Singapore Enable, a new organization formed under the arm of Ministry of Social and Family Development. Dr Chong holds a PhD in Chemistry and attended the Advanced Management Program of Harvard Business School in 1998. She is also a Certified Healthcare Informatics Management Professional (CPHIMS). Dr Chong received the National University of Singapore Outstanding Alumni Award in 2007.

SITTIG F. DEAN

Dean F. Sittig, PhD is a professor of Biomedical Informatics at the University of Texas Health Sciences Center in Houston, Texas, USA and a fellow of the American College of Medical Informatics since 1992. He has spent over 25 years working in the field of medical informatics to design, develop, implement, and evaluate all aspects of clinical information systems at many of the leading academic and commercial health information tech-

nology-enabled organizations in the USA. He has led numerous projects that focused on the automated collection, integration, synthesis, and summarization of clinical data. For example, at LDS Hospital in 1988 he designed, developed, implemented, and evaluated the first version of the automated ventilator management program that is still in use throughout the Intermountain Health Care system. He took his ideas to Vanderbilt in 1991 where he participated in the design and implementation of their first campus-wide, fiber-optic backbone network. That project was his introduction to the myriad organizational issues surrounding implementation of integrated, multi-user, geo-graphically distributed, clinical systems. At the Brigham & Women's Hospital in 1996 he led the team that designed, developed, and implemented the clinical application suite, a software architecture that allowed all of the individually developed clinical applications (e.g., CPOE, results review, longitudinal medical record, information resources, referrals) to work together to create a seamless, single-sign-on, clinical context object workgroup-compliant (CCOW), clinical information system. At WebMD in 2001, he co-developed a medical knowledge-based search engine that greatly improved the user experience. Upon moving to Kaiser Permanente and the Oregon Health & Science University (OHSU) in 2001, he began to focus in earnest on computer-based provider order entry and the accompanying clinical decision support (CDS) interventions. Over the last 5 years, he has spent the majority of his time working at the intersection of patient safety and electronic health records. A major accomplishment of this work was development of the Safety Assurance Factors for EHR resilience (SAFER) guides for the Office of the National Coordinator for Health Information Technology.

SLAGLE R. JAMES

James R. "Robert" Slagle (1934-) is an American computer scientist notable for his many achievements in Artificial Intelligence. Since 1984 he has been the Distinguished Professor of Computer Science at the University of Minnesota, Minneapolis, with former appointments at Johns Hopkins University, the National Institutes of Health (Bethesda, Maryland), the Naval Research Laboratory, Lawrence Radiation Laboratory, University of California and the Massachusetts Institute of Technology. In 1961 in his dissertation at the Massachusetts Institute of Technology with Marvin Minsky, Slagle developed the first expert system, SAINT (Symbolic Automatic INTegrator), which is a heuristic program that solves symbolic integration problems in freshman calculus.

SKIBA J. DIANE

Diane Skiba, PhD, FACMI, ANEF, FAAN, is Professor; Option Coordinator, Health Care Informatics; Project Director, I-Collaboratory: Partnerships for Learning. Skiba is currently funded by a Health Resources & Services Administration (HRSA) Division of Nursing Advanced Nurse Education training grant to prepare nurses in the field of Informatics. This grant supports online master's degree and post-master's programs targeting educators and funds the I-Collaboratory, an innovative online community to support informatics learners. Skiba was recently appointed to the National Advisory Council on Nurse Education and Practice (NACNEP). NACNEP advises the Secretary of the U.S. Department of Health and Human Services and the U.S. Congress on policy issues related to the Title VIII programs administered by the HRSA Bureau of Health Professions Division of Nursing, including nurse workforce supply, education, and practice improvement.Skiba writes a column on Emerging Technologies for the National League for

Nursing's Nursing Educational Perspectives journal. Skiba and her colleagues, Drs. Helen Connors (University of Kansas), Diane Billings and Pamela Jeffries (Indiana University), and Mary Anne Rizzolo (NLN) were recently awarded one of the HRSA funded Faculty Development: Integrating Technology into Nursing Education and Practice Initiative grants. This five-year grant is designed to prepare faculty to learn about informatics, telehealth, simulations, and other emerging educational technologies. Skiba is an honorary member of Sigma Theta Tau and the American Academy of Nursing. In 2005, she was awarded the National League for Nursing Excellence in Teaching Award.

SKINNER CELETTE

Celette Skinner was named as Chief of the Division of Behavioral & Communication Sciences in the Department of Clinical Sciences, and Associate Director of Population Research & Cancer Control for the Simmons Cancer Center in the spring of 2007. This appointment followed her tenure as Associate Director for

Population Research and Interim Director of Duke Comprehensive Cancer Center's Research Program in Cancer Prevention, Detection & Control. Dr. Skinner received her MA in Communications Research from the Wheaton Graduate School and PhD in Health Behavior from the University of North Carolina School of Public Health. Prior to her move to UT Southwestern, Dr. Skinner was a member of the Siteman Cancer Center of Washington University in St. Louis (1993-1998) and the Indiana University Simons Cancer Center (1991-1993). Dr. Skinner's research interest focuses on communications interventions to promote health behavior change, especially using computer-tailored interventions (CTIs). She was a member of the National Cancer Institute's first Working Group on CTIs in 1994 and is Co-chair of the NCI's newly established Research Group for Disseminating CTIs for integration into public health and clinical practice. Her extramural service has included membership on the National Comprehensive Cancer Network Breast Cancer Screening Panel, the North Carolina Advisory Committee on Cancer Control, and charter membership on the NIH's Community-Level Health Promotion Study Section. She is an author of the upcoming second edition of the textbook, Tailoring Health Messages: Customizing Communication with Computer Technology.

SKRØVSETH OLAV STEIN

Stein Olav Skrovseth is Senior Researcher. Norwegian Centre for Integrated Care and Telemedicine University Hospital of North Norway, Norway. Stein Olav Skrøvseth has a PhD in theoretical physics from the Norwegian University of Science and Technology in Trondheim, Norway. After being a postdoctoral researcher at the University of Sydney, Australia he joined the Norwegian Centre for Integrated Care and Telemedicine at the University Hospital of North Norway in 2009. Here he has contributed to several project working on data analysis, statistics, machine learning and medical image analysis. In 2013-2014 he was a visiting researcher at IBM Thomas J Watson Research Center in New York.

SLACK V. WARNER
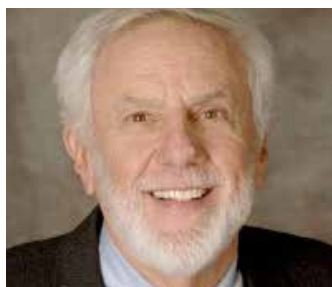
Warner V. Slack, MD, FACMI works at Harward Medical School. Dr. Warner Slack received his bachelor's degree from Princeton University, his medical degree from Columbia University's College of Physicians and Surgeons, and his medical internship and residency training in neurology at the University of Wisconsin. Over the past 40 years he has focused his research on the use of computers to improve communication in the field of medicine and to empower both patients and doctors for better health care. From 1989 through 1998, he was Editor in Chief of the journal MD Computing. He is Professor of Medicine at Harvard Medical School, a member of the Division of Clinical Informatics, Department of Medicine, and Department of Psychiatry at Beth Israel Deaconess Medical Center, and, with Howard L. Bleich, MD, co-president of the Center for Clinical Computing in Boston. Prof Slack was Division co-Founder Dr. Warner Slack was given the Medical Alumni Resident Citation Award at the 2012 Wisconsin School of Medicine and Public Health Alumni Awards ceremony. The award, presented to Dr.

Slack in Madison, Wi, honors an individual who has achieved distinction in the practice of medicine, in academic activities and in research accomplishment. Division Faculty member Dr. Warner Slack wrote an editorial on Patient-computer Dialogue. The editorial was recently published in the proceedings of the Mayo Clinic. Division Faculty member Dr. Warner Slack was highlighted in the book The Decision Tree by Thomas Goetz of Wired.com fame. Dr. Slack's accomplishments in promoting the importance of Patient-Centric medicine and his ground breaking work in proving the effectiveness and importance of the open exchange of information with the patient are the focus of the book's final chapter. He is the 2001 recipient of the Morris F. Collen Award of Excellence from the American College of Medical Informatics.

SMILGA MARTINS

Martin Smilga is Director of e-health and International Cooperation. National Health Service, Republic of Latvia. Martins Smilga has an experience in ICT sector more than 10 years. Already from year 2006, he is

working with large and complicated e-government Information technology projects, their supervision and implementation. From year 2012, he is involved in eHealth projects in Latvia. His experience is complemented with a Master degree in Management of Information Technologies and different cross border activities and workshops.

SMITH BARRY

Barry Smith (1952-), PhD, FACMI, is an academic working especially in the fields of ontology and biomedical informatics. From 1970 to 1973 Smith studied Mathematics and Philosophy at the University of Oxford. He obtained his PhD from the University of Manchester in 1976 for a dissertation on the ontology of reference in Husserl and Frege. From 1976 to 1994 he held appointments in Sheffield (1976–1979), Manchester (1979-1989) and Liechtenstein (at the International Academy of Philosophy, 1989-1994), and in 1994 he moved to the University at Buffalo (New York, USA), where he is currently Julian Park Distinguished Professor of Philosophy and Adjunct Professor of Biomedical Informatics, Computer Science

and Engineering, and Neurology. He is also Research Scientist in the New York State Center of Excellence in Bioinformatics and Life Sciences. From 2002 to 2006 Smith served as founding Director of the Institute for Formal Ontology and Medical Information Science (IFOMIS) in Leipzig, Germany. The Institute moved to Saarbrücken in 2004. Smith is the author of some 500 scientific publications, including 15 authored or edited books. He is also editor of The Monist: An International Quarterly Journal of General Philosophical Inquiry. Smith's primary research focus is ontology and its applications, especially in biomedical informatics where he has worked on a variety of projects relating to biomedical terminologies and electronic health records. He is leader of the Basic Formal Ontology (BFO) project, a Coordinating Editor of the OBO Foundry and a member of the Scientific Advisory Board of the Gene Ontology Consortium, and the Ontology for Biomedical Investigations (OBI) Working Group. In addition he has contributed to the Infectious Disease Ontology, the Protein Ontology, the Information Artifact Ontology, and a variety of other ontology resources especially in the biomedical field. More recently he has worked on a variety of ontology-related initiatives in the military field. In 2008-2010 he served as technical lead on a project sponsored by the US Army Net-Centric Data Strategy Center of Excellence (ANCDS CoE) to create the Universal

Core Semantic Layer (UCore-SL). Since 2010 he was worked on a series of initiatives sponsored by the US Army Intelligence and Information Warfare Directorate (I2WD) to create a framework for semantic enhancement of intelligence data in the Cloud. Since 2014 he is collaborator on initiatives of the US Air Force Research Laboratory on planning, mission assurance, and lifecycle management. In this connection he is working on a project to create a Joint Doctrine Ontology. Smith has also collaborated with Hernando de Soto, Director of the Institute for Liberty and Democracy in Lima, Peru, on the ontology of property rights and social development. He also collaborates with the United Nations Environment Programme on the role of ontologies in ingregation of environmental data. Smith has received over $12 million in funding for his research in ontology, deriving primarily from the National Institutes of Health, the US, Swiss and Austrian National Science Foundations, the Humboldt Foundation, the Volkswagen Foundation, the European Union, and the US Department of Defense. In 2005 Smith founded the National Center for Ontological Research (NCOR), under the auspices of which he initiated in 2006 the Ontology for the Intelligence Community, now STIDS annual conference series. Smith was also responsible for initiating the International Conference on Biomedical Ontology. In 1992 Smith co-authored a letter to The Times concerning Jacques Derri-

da receiving an honorary degree from Cambridge University, in which he and his co-authors argued that Derrida did not deserve this recognition. In 2002 Smith received the Wolfgang Paul Award of the Alexander von Humboldt Foundation. In 2010 he received the first Paolo Bozzi Prize for Ontology from the University of Turin.In 2014 he was elected Fellow of the American College of Medical Informatics (ACMI).

SMITH PETER

Peter Smith is Emeritus Professor of Computing. He joined the University as an undergraduate student in 1975 and received his Doctorate in 1981. Since then he has held several teaching, research and management positions at the University, including Dean, and Chair of the University Research Degrees Committee. He has published over 250 papers, and supervised and examined over 100 doctoral candidates at Universities in the UK, Europe and Hong Kong. Peter is a Fellow of the British Computer Society and the Higher Education Academy. He has published extensively on a range of subjects including computing, management, and doctoral

studies, particularly in relation to Professional Doctorates.

SMITH W. JACK

Jack Willard Smith, Jr., MD, PhD, FACMI, is Professor and was Associate Director of Clinical Chemistry in the Department of Pathology in the College of Medicine at Ohio State University. His primary research interests are in the areas of knowledge-based systems for clinical decision support. intelligent tutoring systems in medicine, cognitive simulation. and knowledge representation. Application of these interests to pathology has resulted in the PATHEX (PATHology Expert) system for the interpretation of laboratory tests and morphologic descriptions of tissue. Several knowledge bases have been created for PATHEX.

SONNENBERG A. FRANK

Frank Sonnenberg, MD, FACP, FACMI, is Professor of Medicine at the Robert Wood Johnson Medical School of the University of Medicine and Dentistry of New Jersey (UMDNJ) and Clinical Associate Professor of Health Informatics at UMDNJ's School of Health Related Professions. He is Medical Director of Clinical Information Systems of the Robert Wood Johnson University Medical Group, the faculty practice of the Robert Wood Johnson Medical School and Director of Health Informatics at UMDNJ. Dr. Sonnenberg received his BS in Biochemistry with Highest Honors from the State University of New York at Stony Brook and his MD from UCLA. He did a residency in Internal Medicine at UCLA and fellowship in Clinical Decision Making and Medical Applications of Computer Science at the New England Medical Center. Dr. Sonnenberg's research has focused on applications of decision modeling to health care including cost-effectiveness analysis. He has been one of the principal developers of Decision Maker, one of the earliest, and still widely used, microcomputer-based decision analysis programs and U-Maker, a microcomputer-based utility assessment program. Dr. Sonnenberg's current research focuses on user-friendly interfaces to decision models and computer-based implementation of clinical guidelines including HGML, the Hypertext Guideline Markup Language, an XML-based markup approach to clinical guideline encoding. Dr. Sonnenberg is currently Editor-in-chief of the journal Medical Decision Making. He has served on the editorial board of the Journal of the American Medical Informatics Association. He is a previous recipient of first prize in the Lee Lusted Student Prize Competition of the Society for Medical Decision Making and has received FIRST and RCDA Awards from the National Library of Medicine.

SOLHEIM G. BJARTE

Bjarte Gees Solheim (1941-) was born in Galati, Romania. Arrived in Norway, 1947. He is Doctor of Medicine, University Bergen, Norway (1965). Doctor of Philosophy, University Oslo

(1972). Master of Health Administration, University Oslo (1997). Bjarte was/is Research fellow Norwegian Defense Institute (1967). Research fellow section immunology Institute Experimental Medical Research University Oslo (1968-1971). Chief resident Institute Transplantation Immunology Rikshospitalet, The National Hospital, Oslo (1972-1978), chief physician blood bank and immunohematol. Laboratory (1979-1987). Also he served as Medical director Red Cross and National Hospital Blood Center (1988-1995). Chief physician unit for advanced transfusion medicine Institute of Immunology, Rikshospitalet, The National Hospital, since 1996. Professor transfusion medicine department group for laboratory medicine University Oslo, The National Hospital, since 1991. Member expert committee on quality assurance in transfusion medicine The Council of Europe, since 1995. Chairman Norwegian reference committee for standardization in medical informatics The Norwegian General Standardizing Body, since 1996. Head Norwegian delegate International Standardization Organization, TC215, since 1998. Member Norwegian Board Transfusion Medicine, 1996-1999. Head Electronic Data Processing board The National Hospital, Oslo, 1980-1982. Bjarte is Principal lecturer immunohematology at High School for biomedical Engineers, National Hospital, since 1973. Principal lecturer in transfusion medicine at Faculty of Medicine, University Oslo,

since 1988. Technical auditor of European Communities preparatory Advanced Informatics in Medicine Program, 1990. Member steering group Nordic research program Systems Development Environments and Profession Oriented Languages, 1982-1989, also, member of Nordic development program Nordic Advanced Informatics in Medicine, 1991-1996. He served as IMIA Board member.

SOTOCA RAFAEL

Rafael Sotoca, MD. MPH. GP, is Primary Care Doctor and Manager of the Chronic Area. Manises Hospital, Spain. He graduated medicine at the University of Valladolid. He is Specialist in Family Medicine and Master in Public Health. A career divided between humanitarian action, project management and clinical activity. Experiences with "Doctors without Borders" and "Doctors of the World" in several conflict contexts, with management of ICT projects for the regional Health Government of Valencia and Interoperability advisor for the Spanish Ministry of Health. Temporary stage at the strategy unit of DG SANCO (EC).

SPARENBERG LUIZ FALCÃO ADOLFO

Adolfo L. F. Sparenberg, MD, graduated from the Medical School of the Federal University of Pelotas/Brazil in 1985. He is a cardiologist and MSc in Biomedical Engineering. Also, a former president of the Medical Association of Sao Lourenço do Sul (SOMESUL) RS/Brazil, an ISfTeH associated member. Since its foundation in 1999, SOMESUL has been a leading medical institution in the field of eHealth projects implementation including telecardiology, teleradiology and telepsychiatry. Adolfo is the coordinator of the eHealth Center of the "Instituto de Cardiologia" of the State of Rio Grande do Sul (RS), Brazil. Starting its activities in 2007, the eHealth Center of the Instituto de Cardiologia RS, is in charge of providing a 24/7- telecardiology service to remote towns. Established through a partnership with the State Government, the program offers: immediate ECG analysis, videoconferencing and telephone based specialized second opinion for critical cases and a qualifying program, composed of both presence mode and multi-seat web-confer-

encing training sessions. Since 2008, Adolfo Sparenberg is one of the Coordinators of the ISfTeH Students Working Group. As part of strategy, the ISfTeH Students Working Group organizes a series of multi-seat web conferencing sessions, traditionally held during some of the ISfTeH officially supported meetings. In January 2011, Adolfo Sparenberg was elected as a Board Member of the International Society for Telemedicine and eHealth (ISfTeH), for the period 2011-2013. As part of the work he developed in the position of board member of the ISfTeH, activities towards the establishment of a partnership between the ISfTeH and the IFMSA (International Federation of Medical Students Association). Through this cooperation about 1.2 million students from medical schools over a hundred countries, now, have access to the activities offered by the ISfTeH, on a free of charge basis. It should also be mentioned the performance of activities in conjunction with other ISfTeH Working Groups, highlighting the organization of webconferencing sessions in conjunction with the Telenursing Working Group and, more recently, activities developed in cooperation with the Free Software Working Group.

SPEEDIE M. STUART
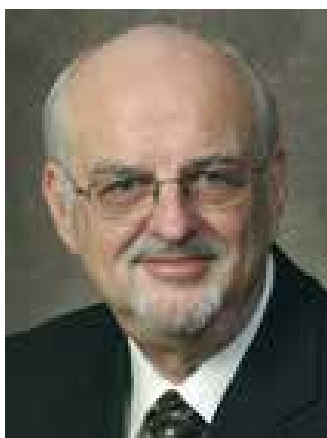
Stuart M. Speedie, PhD, FACMI, received his Bachelors degree in Computer Science, Masters in Educational Research, and PhD in Educational Research, Statistics and Measurement from Purdue. He joined the faculty of the School of Pharmacy at the University of Maryland where he rose through the ranks to become Professor of Pharmacy Practice and Science. In 1996, he became Professor of Laboratory Medicine and Pathology in the Division of Health Computer Sciences of the School of Medicine at the University of Minnesota. He also serves as Director of Graduate Studies for the Health Informatics Program at the University of Minnesota and helped to create a new Institute for Health Informatics (IHI) there. Since 2006, he has also been an Adjunct Professor at the new Arizona State University Department of Biomedical Informatics. Dr. Speedie was one of the first informaticians to demonstrate the applicability of rule-based systems to the process of detect-ing prescribing errors in drug therapy as performed by pharmacists. His early work in this area presaged the development of rule-based systems for drug usage review in pharmacies that has been applied in some state Medicaid systems to improve the quality and reduce the number of medication errors. He was an early developer of methods for assessing the cost-effectiveness of telemedicine, and worked with his students to develop a Telemedicine Perceptions Questionnaire that is widely used to measure patient perceptions of the benefits, threats, and usability of home telehealth applications. More recently he has turned his research interests to modeling the process of clinical research, and developed the primary care research object model (PCROM), which is a computable information model for practice-based primary care research. Dr. Speedie's career has focused on careful observation and measurement, and teaching. He has also demonstrated sustained dedication to graduate student education and mentoring.

SPEISER P. AMBROSIUS

Ambrosius Paul Speiser (1922-2003) was a Swiss engineer and scientist. He led the development of the first Swiss computers. Speiser studied electrotechnology at Eidgenössischen Technischen Hochschule (ETH), where in 1948 he earned his diploma in communications engineering. In 1949, Eduard Stiefel sent Heinz Rutishauser and Speiser to study in Harvard under Howard H. Aiken and in Princeton under John von Neumann; Rutishauser and Speiser became acquainted with the Harvard Mark III and the IAS machine. In 1950, the Institut für angewandte Mathematik (Institute for Applied Mathematics, founded in 1948) of ETH could acquire the Zuse Z4, but there were no other commercially available electronic computers which were suitable for scientific applications. This led the Swiss to the idea of developing their own computer. Under Speiser's technical direction between 1950 and 1955, Switzerland's first electronic calculating machine, ERMETH, originated. Speiser earned his doctorate and habilitation during the development of ERMETH, but began an industrial career when he joined IBM in 1955. From 1956 to 1966 he was the director of IBM Zurich Research Laboratory in Rüschlikon. In 1966 he left IBM to become the director of research for Brown, Boveri & Cie in order to develop the company's research center in Dättwil. In 1962 ETH made Speiser a full professor. In 1986 ETH honored him with an honorary doctorate for his pioneering work at the frontier of informatics. The Schweizerische Akademie der Technischen Wissenschaften chose Speiser on 1987 as president of its Executive Committee and upon his resignation in 1993 made him an honorary member. Speiser was also a member of the Schweizerischen Schulrats, member of the board of trustees of the Schweizerischer Nationalfonds, and from 1983 to 1988 president of Vororts (now Economiesuisse).

SPIROSKI MIRKO

Mirko Spiroski is founder and Director of the Institute of Immunobiology and Human Genetics and professor at the Faculty of Medicine, Ss Cyril and Methodius University in Skopje, Republic of Macedonia. He graduated at the Skopje Faculty of Medicine (1972), where he later obtained his MSc (1978), and PhD (1989) degrees. He introduced several subjects in the curricula at the Faculties of Medicine (Immunology and Human genetics), Natural Sciences (Immunochemistry with basic immunology, Biochemistry-3, Immunogenetics), Physical Education (Genetics in sport), and in the Master of Sciences postgraduate program in Public Health (Public health genetics). His research interest is immunology, but he has also published in the fields of molecular anthropology and human genetics. Dr Mirko Spiroski was founder of the first Macedonian Journal of Informatics (InForma) as well as first creator of Bulletin Board System (InForma BBS) in the Republic of Macedonia. He was the first president of the Macedonian Association of Medical Informatics, established in 1989. Dr Mirko Spiroski is the founder and Editor-in-Chief of the Macedonian Journal of Medical Sciences, later renamed into Open Access Macedonian Journal of Medical Sciences. He was Secretary general and Deputy Editor-in-Chief of the journal Godishen zbornik na Medicinski Fakultet Skopje, and Editor-in-Chief of the Macedonian Journal of Medicine.

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SSEKITTO FRANCIS

Francis Ssekitto works at Department of Records Management, East African School of Library and Information Science at Makerere University, Uganda. He graduated at University of Pretoria. He worked as Assistant Lecturer at Makerere University (November 2013 till present) at Makerere University. Before that he was Consulting, Lecturing and researching. One man think tank Acting University Librarian at Kabale University (January 2008 – July 2008) and Training Officer of Competitive Choices Ltd. (August 2005 – October 2006).

STAEMMLER MARTIN

Martin Staemmler studying Electrical engineering at RWTH Aachen Mr. Staemmler worked as research. Assistant at the Hospital of the RWTH Aachen in the field of imaging and image processing. As a project manager at the Fraunhofer Institute for Biomedical Engineering (IBMT), St. Ingbert he was responsible for projects with a focus on tele-medicine, MR imaging and recon-struction,. After graduating from the University of Saarbrücken (1993) served as group leader at the IBMT priorities medical image data management, health information systems and home care. After his professorship at the University of Applied Sciences Stralsund (1997), he was involved in the establishment of the Bachelor program "medicine computer science and biomedical engineering" as well as the Master's program "medicine computer science". Parallel to teaching, he applied successfully for projects in the field of telematics and designed a nationwide teleradiology platform. Mr. Staemmler is scientific. Advisory Board of the KH-IT, deputy head of the AG Telemedicine GMDS, the board of assessors HL7 user group in Germany eV and a member of BVMI and ASTM.

STARNES LEN

Len Starnes is a digital health-care consultant providing strategic support to the pharma-ceutical and medical technology industries, doctors' social networks, and medical societies. He has over 18 years' experience of directing digital strategies within the pharma industry, notably with Bayer Healthcare and Schering. His recent areas of focus include hybrid physical/virtual medical society conferences, multichannel marketing, and the evolving global influence of doctors' social networks. Len speaks regularly at digital conferences in the USA, Europe and Asia Pacific region and holds degrees in business adminis-tration, solid-state physics, and physics from Boston University, Manchester University and University College London, respectively.

STARREN B. JUSTIN

Justin Starren, MD, PhD, FACMI, recently joined Northwestern University as Director of the Northwestern University Biomedical Research Center (NUBIC), at the Feinberg School of Medicine. He is also Chief of the newly-formed Division of Biomedical Informatics in the Department of Preventive Medicine, and remains an Adjunct Associate Professor of Clinical Biomedical Informatics at Columbia University. From 2006 to 2010 Dr. Starren was the first director of the Biomedical Informatics Research Center at Marshfield Clinic. At Marshfield he grew the informatics research activity four-fold, and founded the Interactive Clinical Design

Institute. He also designed the informatics infrastructure for the Wisconsin Genomics Initiative. Dr. Starren began his informatics career at Columbia University, starting as the first doctoral student in biomedical informatics and becoming an Associate Professor of Clinical Biomedical Informatics. At Columbia, he directed the technology components of the IDEATel project, an 8-year, $60 million project, to evaluate the role of home telehealth in the management of Medicare patients with diabetes. Dr. Starren has been active in AMIA nearly all of his professional life, starting in 1993 as a Session Chair in the Fall Symposium. Some in AMIA have referred him as the "money guy", because he joined the Finance Committee in 1996, becoming Finance Committee Chair in 1998 and AMIA Treasurer from 2004-2007. In those positions he guided AMIA in the development of a reserve fund, creation of a strategic investment policy, selection an external auditor and in dealing with Sarbanes-Oxley. He has also served on various AMIA taskforces, most recently the Clinical Research Informatics Taskforce, which resulted in the new Clinical Research Informatics Summit meeting. In 2009 he was elected to the AMIA Board of Directors. He has received many awards including being named one of the Top 10 IT Innovators by Healthcare Informatics Magazine. He earned a bachelor's degree in biology from Washington University, St. Louis; a combined medical degree and master's degree in immunogenetics from Washington University School of Medicine and PhD in Medical informatics at Columbia University. He is a Fellow of the ACMI and has served on the Wisconsin eHealth Care Quality and Patient Safety Board.

STATES J. DAVID

David States, MD, PhD, FACMI, is a systems biologist and leader who helped to established the discipline of bioinformatics. He received his MD and PhD from Harvard University and clinical training in internal medicine at the University of California, San Diego and the National Institutes of Health in Bethesda, Maryland. He is board certified in internal medicine and is a Fellow of the American College of Medical Informatics. Dr. States has been a leader in establishing bioinformatics as a field including work on molecular modeling, genome mapping and sequencing and proteomics. His contributions include establishing the structured nature of protein folding intermediates, the widely used molecular dynamics program CHARMM, and the development of advanced multidimensional NMR methods one of the most highly cited papers in the field of NMR. Dr. States has been involved in the Human Genome Project from its inception and helped to establish the NIH National Center for Biotechnology Information (NCBI). He developed BLASTX with Warren Gish and XNU with Jean Michel Claverie, both tools that led to citation classic papers and remain widely used today. He served as Director of Informatics and later PI of the Washington University Center for Genetics in Medicine assembling the physical map of the human X chromosome. With David Botstein, he demonstrated the feasibility of EST sequencing, and his work on enhanced lane tracking algorithms doubled the throughput of the Washington University Genome Sequencing Center and greatly accelerated progress on expressed sequence tags (EST) sequencing. Current work in the States lab focuses on the systems biology of the tumor microenvironment using state-of-the-art mass spectrometry, proteomics and bioinformatics strategies applied to mouse models for ovarian cancers. Dr. States is a member of the founding Board of Directors of the International Society for Computational Biology (ISCB) and served as Treasurer of the Society from 1997 to 2000. He organized the annual meeting of the Society in 1996 and 2005 and remains an active member of the Public Policy and Conferences Committees. Dr. States established graduate training programs in Bioinformatics at Washington University in St.

Louis and at the University of Michigan. He was successful as PI in obtaining new T32 training grants at both schools, and both training programs have been ranked in the top 10 nationally. He formulated and established the National Center for Integrative Biomedical Informatics at the University of Michigan. Dr. States has served on scientific advisory boards for the St. Jude Hartwell Center, Protein Information Resource (PIR) and Gene Ontology (GO), and Wistar Institute. He has been a member numerous NIH study sections and chair of the National Library of Medicine Biomedical Libraries and Information Resources Committee (BLIRC).

STEAD W. WILLIAM

William W. Stead, MD, FACMI is professor at Duke University School of Medicine. Dr. William Stead is Associate Vice Chancellor for Health Affairs and Chief Strategy Officer at Vanderbilt University Medical Center (VUMC). He leads strategy development for VUMC as it seeks to provide extraordinary clinical care, train leaders in healthcare and make discoveries of fundamental importance to humanity. He facilitates structured decision making to achieve strategic goals, curation of methods to drive transformation, and concept development to nurture system innovation. Dr. Stead received his BA, MD, and residency training in Internal Medicine and Nephrology from Duke University. He remained on Duke's faculty in Nephrology as the physician in the physician-engineer partnership that developed The Medical Record (TMR), one of the first practical electronic medical record systems. He also helped Duke build one of the first Patient-centered hospital information systems (IBM's PCS/ADS). He came to VUMC in 1991 and holds appointments as the McKesson Foundation Professor of Biomedical Informatics and Professor of Medicine. For two decades, he guided development of the Department of Biomedical Informatics (informatics research and education); Eskind Biomedical Library (knowledge management); Center for Better Health (accelerating change) and operational units providing information technology infrastructure to support education, research and health care programs through-out the Medical Center. He aligned organizational structure and informatics architecture to bring cutting-edge research in natural language processing, data mining, data privacy and complex process visualization into clinical practice. The resulting enterprise-wide electronic health record, clinical communication/decision support tools and population-scale research resources support his current focus on system-based care and research leading toward personalized medicine and population health management. Dr. Stead is a Founding Fellow of both the American College of Medical Informatics and the American Institute for Engineering in Biology and Medicine. He is also the founding Editor-in-Chief of the Journal of the American Medical Informatics Association. His awards include the Collen Award for Excellence in Medical Informatics and the Lindberg Award for Innovation in Informatics. Most recently, the American Medical Informatics Association named the Award for Thought Leadership in Informatics in his honor. He served as President of the American College of Medical Informatics, Chairman of the Board of Regents of the National Library of Medicine, Presidential appointee to the Commission on Systemic Interoperability, and as Chair of the National Research Council Committee on Engaging the Computer Science Research Community in Health Care Informatics. He is a member of the Council of the Institute of Medicine, the Division Committee on Engineering and Physical Sciences of the National Research Council and the National Committee for Vital and Health Statistics. In addition to his academic and advisory responsibilities, Dr. Stead is a Director of HealthStream. Currently he works at Vanderbilt University Medical Center.

STEFANELLI MARIO

Mario Stefanelli graduated cum laude in Electrical Engineering in 1969 at the University of Pavia, Italy. He soon became Full Professor of Automatic Control and later of Bioengineering, Medical Informatics and Artificial Intelligence in Medicine. His great passion for bioengineering made him a founding member of the Master's Degree and PhD Program in Bioengineering at the University of Pavia. In the same University, he directed the Department of Computer Engineering and Systems Science, where he established the Laboratory for Biomedical Informatics. From 2005 to 2009, he was Vice-Rector for the organizational models and the information systems; eventually, he promoted the creation of a joint degree course, collecting engineers, biologists and physicians, pursuing his belief on the multicultural nature of Bioengineering and Biomedical Informatics. Prof. Stefanelli has been one of the most influential researchers in Medical informatics. He was one of the founders of the European Society for Artificial Intelligence in Medicine, which started its activity in Pavia in 1985 with its first European meeting. He

strictly collaborated with IMIA. After having been member of MEDINFO SPCs, his influential role within IMIA has led him to be appointed as SPC chair of MEDINFO 2004 together with Casimir Kulikowski. He always fostered IMIA activities and worked with IMIA affiliated societies, including AMIA and EFMI. He has been the first Italian to be elected Fellow of the American College of Medical Informatics. He coordinated several research projects funded by the European Commission and actively collaborated with many medical informatics laboratories in the world. He has been a member of the editorial board of prestigious international journals, comprising the Journal of Biomedical Informatics, the International Journal of Medical Informatics, Artificial Intelligence in Medicine, and Methods of Information in Medicine. A brief synthesis of his scientific career starts in the '70s, when he gave important contributions to the mathematical modeling of erythropoiesis, usingboth quantitative methods and qualitative simulation methods, with applications to the diagnosis of anaemia. After a visit to the Casimir Kulikowski's labs at the Rutgers University, Mario Stefanelli opened a Medical Informatics Labs at the University of Pavia, which soon became a leading laboratory worldwide. First, the expert systems Anemia and Neoanemia were developed and tested, then the GAMES (General Architecture for Medical Expert Systems) European project gave

rise to a new epistemological model of medical reasoning, including diagnosis, therapy planning and monitoring. The Medical Informatics Labs started to broaden their interests, including intelligent agents, probabilistic reasoning, temporal reasoning, telemedicine. In the last part of his scientific career, Prof. Stefanelli has devoted noteworthy efforts to the design of methods and tools able to support the entire process of patients' care. For this reason, he first studied the role of electronic medical records empowered by clinical guidelines, and second the impact of workflow systems in health care. In this context he coined the term "careflow" to denote all activities related to patient's care, which can be conveniently optimized by means of information- based solutions. He finally proposed to extend the careflow concept to manage continuity of care through the idea of "service flows".

STEIN CLAUDIA

Claudia Stein is Director for the Division of Information, Evidence, Research and Innovation. World Health Organization (WHO) Regional Office for Eu-

rope in Copenhagen, Denmark. Dr. Stein is a German trained public health physician and epidemiologist with the World Health Organization (WHO), which she has been serving since 1998. She qualified from Essen University Medical School in Germany in 1989. Her area of post-graduate training include a residency in Internal Medicine, a Master's degree in Public Health from the London School of Hygiene and Tropical Medicine, a PhD in Epidemiology from the University of Southampton, UK, and a residency in Public Health Medicine with Specialist Certification at the Faculty of Public Health of the Royal College of Physicians, London, UK. Prior to her career at WHO she worked for several years as public health physician and epidemiologist at country level in Europe, as well as for several years in India and China, the latter two under the auspices of the Medical Research Council, MRC.

STEINDEL J. STEVEN

Steven J. Steindel, PhD, FACMI, received his bachelor's and PhD degrees in Chemistry from the Georgia Institute of Technolo-

gy. He then served as a clinical chemist for the US Army Medical Laboratory at Fort McPherson, Georgia, and for Piedmont Hospital in Atlanta. He founded and worked at several software development companies in Atlanta whose systems are widely used in administrative computing. In 1993 he joined the Centers for Disease Control and Prevention (CDC), where he rose through the ranks to become Director of Data Standards and Vocabulary at the National Center for Public Health Informatics. He has staffed the National Committee on Vital and Health Statistics (NCVHS) under an appointment by CDC, and has participated in the NCVHS Standards and Security Subcommittee that has issued many letters and reports related to HIPAA Policy and implementation. He also was a major participant in the federal government's Consolidated Health Informatics project, and led six CHI domain workgroups, including Domain Selection, Messaging, Laboratory Results, Units, Anatomy and Physiology, and Chemicals. As an expert in the area of standards and vocabularies, he is a member of the SNOMED editorial board and worked to create the no-cost US distribution license for SNOMED.

STOCKMAN SINCLAIR

Sinclair Stockman is Executive Director, Digitial Northern Ireland 2020. Sinclair has an extensive career in telecommunications and software engineering and has played a leading role in a number of ground breaking initiatives throughout the years. His early career encompassed early work on digital communications platforms, such as the world beating Keyboard Business trading platform., development of very early web based applications and the development of software engineering management and quality processes and tools which led to the development of the first ISO certified environment for software development worldwide. He has been responsible for the creation of highly successful research programmes at BT's research laboratories, and moved on to create two world leading software engineering centres in Ipswich and Glasgow, which were responsible for the early work on intelligent networks and distributed object orientated systems platforms. He then took on the responsibility for BT's major systems programmes,

including the Customer Services System, for which he was awarded the Martlesham Medal, in recognition of his contribution to significant technology progress to telecommunications. Currently Sinclair works as an independent executive and transformation advisor, working with a number of innovative web service based companies, providing executive advice, is an Executive Director Digital Northern Ireland 2020, visiting Professor University of Ulster and also working on a number of innovative projects with global NGO's in developing countries. In addition he is working on large scale regional and industry sector transformations underpinned by digital technology, areas include Connected Health, Media, next generation Data Centres, Regional Economic Growth and Social Inclusion. Serves on several management and advisory boards.

STOICU-TIVADAR LACRAMIOARA

Lacramioara Stoicu-Tivadar, PhD, graduated in engineering, computer and automation. Presently she is professor at University Politehnica Timişoara; President of the Romanian Society of

Medical Informatics since 2010; Secretary of the Board of the European Federation of Medical Informatics 2011-2014 and EFMI Vice president since august 2014. She is chair of the working group EFMI-Healthcare Informatics for Interregional Cooperation, founding member of HL7 Romania, member of the IEEE Professional Communication Society and IEEE Communications Society. She manages the curriculum and the activities for Master of Information Systems in Healthcare at Faculty of Automation and Computers Timisoara since 2009 and teaches the courses of e-Health Applications and Human-computer interfaces for healthcare information systems. She is PhD advisor in Computer and Information Technology with a focus on healthcare developments. Her continuous and sustained research in ICT applied in medicine is present in over 100 publications and books, and participation in prestigious events of the field. She is SPC member and reviewer for national and international conferences and journals. She participated in numerous projects with e-Health topics: interoperability, AAL, e-learning. Her current focus is on application of ICT tools in medical education based on cloud computing and web services.

STOLTENBERG CAMILLA

Camilla Stoltenberg, MD, PhD, earned her PhD in epidemiology. She serves as Deputy Director General at the Norwegian Institute of Public Health with responsibility for strategic development of health registries. She serves as deputy chair for Biobank Norway (2010-2015). Her research is in perinatal and genetic epidemiology, studying causes of birth defects, stillbirth and infant death, consanguinity, health in immigrant populations, and social inequality in health. She is also principal investigator of Biobanks for Health in Norway (Biohealth), which comprises health data and blood samples from nearly 500,000 individuals. She is currently involved in a number of scientific research and strategic projects and committees nationally and internationally, most of them involving birth cohorts, registries and large population based biobanks.

STORMO D. GARY

Gary D. Stormo, PhD, FACMI, is Professor in the Department of Genetics at Washington University School of Medicine, where he is also the Director of the Graduate Program in Computational Biology. He received his BS degree in biology from Caltech and MA and PhD degrees in molecular, cellular and developmental biology from the University of Colorado. He remained at the University of Colorado for postdoctoral research and was then hired as an Assistant Professor. He attained the rank of Professor before moving to his current position at Washington University in 1999. Dr. Stormo's research includes both experimental and computational studies. The experimental work is focused primarily on DNA–protein interactions and their role in regulating gene expression. His computational research also involves analysis of DNA–protein intearctions, including the development of pattern recognition algorithms for discovering DNA sites required for gene regulation. He has also developed methods for predicting RNA structure and identifying RNA motifs involved in protein interactions. Another area of computational research has been new methods for predicting protein coding genes in genomic DNA sequences. Dr. Stormo was Executive Editor of Bioinformatics from 1994 to 1999. He is currently on the editorial board for Bioinformatics and Nucleic Acids Research. He is on the board of directors of the International Society for Computational Biology and serves as Chair of the Publications Committee.

STRODS ANDREJS

Andrejs Strods is Founder and CEO. Blue Bridge Technologies. Andrejs Strods is an experienced technology entrepreneur. Launched and led a number of IT companies in the markets from emerging to mature. Founded and is currently leading an international Health IT company with focus on payment cycle for health insurance. The company is operating in a number of European markets and the USA and has attracted several rounds of venture capital investment. As an educator Andrejs is leading an innovative entrepreneurship course at the Stockholm School of Economics in Riga.

STUNTZ LAURANCE

Laurance Stuntz is the Director of the Massachusetts eHealth Institute, the Commonwealth's entity for health care innovation, technology, and competitiveness and is responsible for advancing the dissemination of health information technology throughout Massachusetts, including the deployment of electronic health records systems in all health care provider settings and connecting them through the statewide health information exchange, the Mass HIway. At the eHealth Institute, Mr. Stuntz is driving forward the Commonwealth's initiatives to digitize healthcare data across the state, get that data moving between providers, and find new uses for the data to improve the overall quality of the health care delivered in the state. He is particularly interested in ensuring that patients have access to their data and become an active and engaged participant in managing their health. Prior to joining the eHealth Institute, Mr. Stuntz worked for private industry and has over 20 years of experience in healthcare information technology product development, systems integra-

tion and management consulting. Much of this work was focused on collaboration and exchange of information among all types of healthcare organizations. He was the Senior Vice President responsible for product development for NaviNet and was a Partner at Computer Sciences Corporation (CSC) with responsibility for CSC's Collaborative Communities solution area. He has led, worked on and contributed to some of the most significant health information exchange efforts in the United States, including the New England Healthcare Exchange Network (NEHEN), MA-SHARE ePrescribing and Clinical Exchanges, and the CAQH Committee on Operating Rules for Information Exchange (CORE) project.

SUGIMOTO CASSIDY
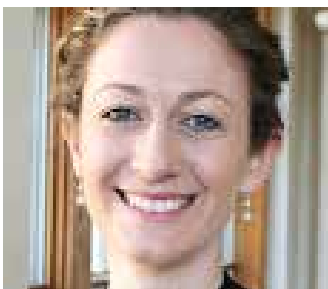
Cassidy Sugimoto, MSc, PhD, researches within the domain of scholarly communication and scientometrics, examining the formal and informal ways in which knowledge producers consume and disseminate scholarship. She has co-edited two volumes and has published 50 journal articles on this topic. Her work has been presented at

numerous conferences and has received research funding from the National Science Foundation, Institute for Museum and Library Services, and the Sloan Foundation, among other agencies. Sugimoto is actively involved in teaching and service and has been rewarded in these areas with an Indiana University Trustees Teaching award (2014) and a national service award from the Association for Information Science and Technology (2009). Sugimoto has an undergraduate degree in music performance, an MS. in library science, and a PhD. in information and library science from the University of North Carolina at Chapel Hill.

SUERMONDT JAAP

Jaap Suermondt, PhD, FACMI, received his Bachelor's in Mathematical and Computational Science, and Master's and PhD degrees in Medical Information Sciences, all from Stanford. He was hired by Hewlett-Packard (HP) Laboratories in Palo Alto and has advanced through the ranks there; he is currently Director of HP's Business Optimization Lab. Dr Suermondt's

research career has focused on sound analytic approaches to real-world decision problems. He was an early contributor in several areas, including Bayesian networks, integrated clinician-focused workstations, data mining (particularly automated categorization, text mining, and quantification) and distributed computing. He originally joined HP to join a research team focused on clinical workstation development. He has engaged in many technical areas at HP both as a researcher and later as a manager and lab director, but he has maintained an ongoing interest in biomedical applications and the role of the technology industry in our field. Most of our fellows have a long list of publications; Jaap has both research publications and 25 patents in informatics and computing. Dr Suermondt has made significant organizational and scholarly contributions to AMIA. He has served as chair of the Working Group steering committee, as well as Chair of Membership committee, member of the scientific program committee for five Fall Symposia, and Chair of the 2008 Annual Symposium Scientific Program Committee. As an executive and research director at a mainstream technology company with a very broad, worldwide partner base, Dr Suermondt influenced the technology sector to represent the perspective and needs of medical informatics.

SVACINA STEPAN

Stepan Svacina (1952-), MUDr, PhD,. born. in Prague. He studied Charles University Faculty of Medicine (Faculty of General Medicine) (1972-1978, 1978-1981), mathematical informatics at Faculty of Mathematics (1985-1987). Since 1978 he was assistant professor. in Department of biocybernetics of the Department of Physiology, since 1981 physician in the 3rd internal department. He earned PhD in 1987, MDD in 2001. He earned associate professor in. 1992 and full professor in 2002 and MBA in 2001. He was Vice-dean of 1st Medical faculty of Charles University in Prague (1993-1999), later a dean of 1st Medical faculty of Charles University (1999-2005) and chief of 3rd Medical department (for Endocrinology and metabolism) since 2001. Prof Svacina was Chief of Czech medical society (since 2015) and founder and first chairman of Czech society of medical informatics and medical libraries. Together with professor Jana Zvarova he founded PhD studies in Biomedical informatics and guaranteed also the process of nominating associate professors and professors in Medical informatics. In medicine fields he published a lot of scientific papers, especially in diabetology, obesitology and nutrition. In medical informatics he was engaged in mathematical modeling (e.g. neuron cell, neuron networks, glycation of protein and haemoglobin, weight changes), risk calculations, consultation systems (e.g. adaptive expert system for insulin dosing), information systems in nutrition and diabetes. He published 40 books and 700 articles, partly also from medical informatics e.g. books Medicine and Internet, Medical informatics (together with P. Kasal), Biomedical informatics (together with Jana Zvarova).

SVANSON B. DAVID

David B. Swanson received his PhD in educational psychology from the University of Minnesota in 1978. He is currently an assistant director of the American Board of Internal Medicine in Philadelphia. His research interests are in the psychology of clinical decision making, the measurement of clinical competence, and computer applications in medical education.

SVARTOUT R. WILLIAM

William R. Swartout received his PhD in computer science from MIT in 1981. He is currently a member of the research staff of the Information Sciences Institute of the University of Southern California. His research interest is the development of techniques that will allow programs to explain their reasoning, making them more understandable to both their users and their im plementers..

SWEENEY A. LATANYA

Latanya A. Sweeney, PhD, FACMI, received her bachelor's degree in computer science from Harvard, and master's and PhD degrees in computer science from Massachusetts Institute of Technology. As a graduate student she won awards at the American Medical Informatics Association in 1996 and 1997 for her work on text de-identification, and was influential in crafting the data de-identification provisions of the Health Insurance Portability and Accountability Act Privacy Rule. She is the founding director of the Laboratory for International Data Privacy at Carnegie Mellon, where she is an associate professor of computer science, technology, and policy. She has developed numerous algorithms for data de-identification and re-identification. In addition to her scholarly publications, Dr. Sweeney's ground-breaking research in data privacy has been featured in Consumer Reports, Newsweek, Newsday, Business Week, and The Wall Street Journal, as well as on the television news magazine 20/20. Her vision and analytic approach to this emerging field have created a well-deserved international reputation.

SWEETE DON

Don Sweete is Executive Regional Director, Atlantic, Canada Health Infoway and Executive Director, Business Development Services, Canada Health Infoway. Mr. Sweete has some two decades of experience in the Canadian health care sector in senior management, including serving in the Nova Scotia Department of Health as Executive Director of Corporate Services. In the private sector, he held senior executive positions in the Canadian health care areas of several IT services, software and solutions providers. In all over 11 years with Infoway, Don has been responsible for all public and private sector relations within the Atlantic region. He has also become involved in developing the business services for the Standards Collaborative. In addition to his Infoway roles, in 2011 Don became engaged with the International Health Terminology Standards Development Organization (IHTSDO). He is an active member on multiple committees including the Management Board and the Implementation and Innovation Committee.

SYMONDS IAN

Ian Symonds, Waikanae, received the Insignia of a Member of the New Zealand Order of Merit for services to the community. He was a member and former chairman of the Scots College Board of Governors and is a member of the Scots College Foundation. He has also been on the Queen Margaret College's Board of Governors and was a representative on the Independent Schools Council. He was a New Zealand representative on the International Medical Informatics Association Executive for 30 years. He has also been active in his services as a Justice of the Peace. Mr Symonds has been the president of the Wellington Justices of the Peace Association and more recently, he has acted as a visiting justice to prisons and held the position of relief coroner.

SZATLUNARY BALAZS

Balazs Szathmary, PhD, is responsible for Oracle's healthcare strategy in Europe, Middle East and Africa (EMEA). He studied Biology and Computer Sciences and holds a PhD in Health Economics. Before joining Oracle in 2004 he worked with different IT and consulting companies including The Boston Consulting Group. With his team he is working with 200 sales people in EMEA, who are servicing the healthcare industry. He covers strategy, operations, training, marketing, public relations, partner management, product development, demand generation and deal support. He represents his company at different international bodies (COCIR, HIMSS, BIAC, EABC, Continua, etc.). He published a book on Disease and Case management and contributed to a number of healthcare and IT publications. He is quite engaged in the Big Data discussion – he presented about the value of Big Data in Health Sciences at a number of conferences and was involved in a number of publications related to this topic.

SZOLOVITS PETER

Peter Szolovits, PhD, FACMI, is Professor of Computer Science and Engineering in the MIT Department of Electrical Engineering and Computer Science (EECS) and an Associate faculty member in the MIT Institute of Medical Engineering and Science (IMES) and its Harvard/MIT Health Sciences and Technology (HST) program. He is also head of the Clinical Decision-Making Group within the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL). His research centers on the application of AI methods to problems of medical decision making, natural language processing to extract meaningful data from clinical narratives to support translational medicine, and the design of information systems for health care institutions and patients. He has worked on problems of diagnosis, therapy planning, execution and monitoring for various medical conditions, computational aspects of genetic counseling, controlled sharing of health information, and privacy and confidentiality issues in medical record systems. His interests in AI: include knowledge representation, qualitative reasoning, and probabilistic inference. His interests in medical computing include: Web-based heterogeneous medical record systems, life-long personal health information systems, and design of cryptographic schemes for health identifiers. He teaches classes in artificial intelligence, programming languages, medical computing, medical decision making, knowledge-based systems and probabilistic inference. Prof. Szolovits has served on journal editorial boards and as program chairman and on the program committees of national conferences. He has been a founder of and consultant for several companies that apply AI to problems of commercial interest. He received his bachelor's degree in physics and his PhD in information science, both from Caltech. Prof. Szolovits was elected to the Institute of Medicine of the National Academies and is a Fellow of the American Association for Artificial Intelligence, the American College of Medical Informatics and the American Institute for Medical and Biological Engineering. He recently served as a member of the National Research Council's Computer Science and Telecommunications Board and is a member of the National Library of Medicine's Biomedical Library and Informatics Review Committee. He is the 2013 recipient of the Morris F. Collen Award of Excellence from the American College of Medical Informatics.

SZÓCSKA MIKLOS

Miklos Szocska is Director at Health Services Management Training Centre. Semmelweis University, Hungary. Dr Szocska graduated at the Semmelweis University of Medicine in 1989. He is director of the Health Services Management Training Centre . His research covers health management and policy including migration of health professionals, social network studies, eHealth and big data. He holds a Master of Public Administration degree from John F. Kennedy School of Government at Harvard University and a PhD from the Semmelweis University in the field of change management. Between 2010-2014 he served as Minister of State for Health of Hungary when he introduced an evidence based consultative health policy.

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TAKEDA HIROSHI

Hiroshi Takeda is a Professor Emeritus at Osaka University, Japan, and is also a Dean and a Professor at the Graduate School of Health Care Sciences, Jikei Institute. The Jikei Institute is Japan's first and only master course for patient safety management. Dr. Takeda has worked in medical informatics as a CMIO and as a professor of Medical Informatics (1998-2010) at Osaka University Hospital, where his team has developed a totally paperless hospital information system in 2010. He has also worked in patient safety as the Director of Healthcare Quality Management of the University Hospital (2001-2008) and the President of Healthcare Quality Management Association of Japanese National University Hospitals (2002-2008). His career in IMIA is a SPC co-chair of MEDINFO 2001, a Vice President (2004-2010) and IMIA Liaison to IFIP (2007-).

TALMON L. JAN

Jan L. Talmon, PhD, FACMI, is associate professor and head of the Department of Medical Informatics at Maastricht University in the Netherlands. His interests and creativity in medical informatics have spanned a wide range of topics. He developed EKG signal analysis programs as part of his PhD independent study, created novel approaches to machine learning for automated knowledge discovery, built computerized clinical decision support systems using knowledge bases built from expert opinion, and has led sustained work in the area of technology evaluation of IT in health care settings. He is an editor of the International Journal of Medical Informatics and in that capacity raised the standards of publication by requiring structured abstracts and tables summarizing research findings. For a total of more than 33 years of contributions to the field that have had international impact, he is recognized by election as an international associate of the ACMI.

TAMAYO-SARVER JOSHUA

Joshua Tamayo-Sarver, MD, PhD, FACEP is CMIO at CEP organizational data strategy, evaluating the effects of programs and practices, and leveraging data to provide the information needed for CEP to provide the highest quality and most efficient patient care. Dr. Tamayo-Sarver joined CEP America in 2008 as a Fellow in Administration and Data. In addition to being the Director of Business Intelligence, he works as a staff physician in the Emergency Department at Good Samaritan Hospital in San Jose, California, where he is the past Department Vice-Chair and Director of Quality Improvement. He holds a bachelor's degree with honors in biochemistry from Harvard University, a medical degree from Case Western Reserve University, and a certificate in medical informatics from Oregon Health Sciences University. Dr. Tamayo-Sarver completed his PhD at Case Western Reserve University in Epidemiology and Biostatistics, where his dissertation was the development and publication of a novel model describing how physicians make clinical decisions in practice. He completed his residency in emergency medicine at Harbor-University of California, Los Angeles. He also spent a year working as an EMT and health educator in El Salvador. He is board certified in Emergency Medicine and Clinical Informatics. He is also an

entrepreneur and is a cofounder of a start-up that has combined his understanding of information technology, physician decision-making, and clinical practice experience to create a patent-pending novel approach to electronic physician workflow products that improve documentation and decision-making.

TANAKA HIROSHI

Hiroshi Tanaka was Director, Center for Information Medicine and Professor, Department of Systems Biology, School of Biomedical Sciences. Also, he was Professor, Department of Bioinformatics, Medical Research Institutes, Tokyo Medical and Dental University. Professor Hiroshi Tanaka was President of Japan Association of Medical Informatics (JAMI)

TANAKA RICHARD

Richard Tanaka was CEO and Board Chair of four computer-related corporations in the fields of broad-band communications, high-resolution optical lithography, software services and Internet-driven company management. He served as IFIP President from 1974 to 1977. He was Chief Executive Officer and Board Chairman of four computer-related corporations.

TAN ANDY

Andy Tan has many years of working experience as a Nursing and Medical Informatics, The years of experience and exposure the varies implementation of Clinical Physician Ordering Entry Close Loop Medication System and integrated Electronic Medical Record equipped Andy with capability of ensuring meaningful use of

data at the point of entry. When he embarked on JurongHealth journey in building the Pathways, he received the capability to monitor their compliance and usage through steps, based on time frame or patient condition, which organize orders and clinical documentation and, in some cases, reduce the length of stay for patients with common medical problems and procedures. With this allows his workgroup was in possibilty for better use the Electronic Medical Record in the west region of Singapore.

TAN PETER

Peter Tan works at Ministry of Health Holdings, Singapore. He has 18 years of experience in IT in public and private sector in a variety of roles, ranging from Education, Internet, B2B e-Commerce, e-Government, and now Healthcare. Peter was a founding staff member in MOHH Information Systems Division, which has rapidly expanded from a team of 7 including the CIO in March 2008, to its current strength exceeding 100. Peter's role has evolved from Strategy Development to Enterprise Architecture (EA), starting in 2009 with the federated EA for realising the

National EHR. He has since extended the architecture to cover areas such as National Health Identification, Community & Integrated Care and Personal Health Management. His current focus is two-prong: continual refresh of the EA to support the evolving National Health Informatics Strategy, and establishment of EA Governance across the Healthcare ecosystem to support MOHH's role as national coordinator of Healthcare IT. Prior to this, Peter was Assistant Director (eHealth) at the Ministry of Health, responsible for national e-health strategy and implementation. He implemented the EMR Exchange system in 2004, the first live system that facilitated the realtime transmission of medical records on-demand across the public sector healthcare providers. Before that, Peter was part of the pioneering core team that established the first government Service-Wide Technical Architecture in 2002.

TAPAN ERIK
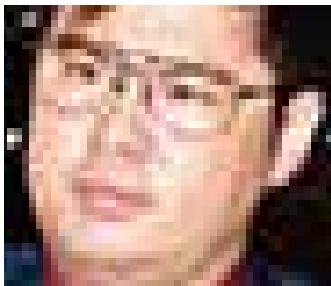
Erik Tapan is representative of Indonesian Health Informatics Association (INAH) in IMIA. He worked at DKI Jakarta, Indonesia within the Medical Informat-

ics field, especially interested in website and social media and Anti aging and Esthetic Medicine. He is E-business Consultant of RS Awal Bros Hospital Group in Jakarta (April 2013 till present). Also, he works as director of Klinik L'Melia from February 2012 til Present. Before that he worked as participant at Komnas Lansia (2012 – 2013), as Senior Corporate Communication Manager, PT Kalbe Farma (June 2010 – January 2012) for Greater Jakarta Area, Indonesia. Erik Tapan is interesting in developing Strategic Corporate Communication: External & Internal Communication, Developing and Manage Corporate Website and other social media (Blog, Twitter, Foursquare, LinkedIn, Facebook & Youtube, etc). Also, he worked as Senior Medical Information Manager at PT Kalbe Farma (January 2007 – May 2010) and Chairman of CDK (Cermin Dunia Kedokteran) Magazine from July 2001 till May 2010 at Greater Jakarta Area, Indonesia.

TARA MAHMOOD

Mahmood Tara, PhD, is the director and assistant professor at the Department of Medical informatics, Mashhad University of Medical Sciences (MUMS). He is

a physician and the first Iranian graduate of health informatics, who has received his PhD in Health informatics from the University of Victoria, BC, Canada. He has been involved in research, teaching and the provision of health information services in health/medical informatics area since 1993, serving in a wide range of positions in Iran and Canada. He was the co-founder and editor of the Journal of Computer in Medicine (MUMS), a team member of the national initiatives toward "the personal health record for all Canadian citizens" (e-Health group of the National Research Council (NRC) of Canada), the founder and director of the Biomedical Informatics Department (MUMS), and the Chair of the National Committee of Health Information and Medical Informatics, the Iranian Ministry of Health. He was part the author team for the prominent international books of "Ubiquitous Health and Medical Informatics, 2010" and "the Encyclopedia of Health Information Science and Technology, 2014". Dr. Tara's research interests are data visualization, health information tailoring, and infomediation.

TARCZY-HORNOCH PETER

Peter Tarczy-Hornoch, MD, FAC-MI graduated of Stanford University in 1985. Dr. Tarczy-Hornoch majored in biology but had already developed an interest in medical informatics. He maintained his interest and involvement during his years at Stanford Medical School and, after a pediatric residency at the University of Minnesota, moved to the University of Washington (UW), where he remains to this day. His neonatology fellowship from 1992 to 1995 did not prevent him from continuing to pursue his interest in Medical informatics, and by 1995, he was playing the role of Clinical Informatics Lead on the University of Washington IAIMS grant. After joining the faculty in 1995, he assumed increasing responsibility for the nascent informatics program at UW, serving as Chair of the Curriculum Committee, Director of the Genetics Informatics Group, and currently as Program Director of their NLM Training Program in Biomedical and Health Informatics. Nationally, he served as Chair of the AMIA Genomics Working Group and helped found the IMIA Informat-

ics in Genomic Medicine Working Group that he cochairs. As an undergraduate, Dr. Tarczy-Hornoch had formed his own software company (Sigma Medical Software, which specialized in software for biomedical instrumentation and decision support) and served as a key programmer on the Pathfinder project, a collaborative project that was later commercialized as Intellipath. Subsequently, after completing his house staff training, he pressed to create MINDscape, a Webbased EMR integrating access to knowledge sources and diverse clinical systems. Emerging as a prominent scientist working at the intersection of bioinformatics and clinical informatics Dr. Tarczy-Hornoch has received numerous grants for work at this interface including his work on the GeneTests genetic testing resource and the BioMediator (formerly Gene-Seek) biomedical data integration system. Dr. Tarczy-Hornoch has led the development of the UW Division of Biomedical and Health Informatics since 2001. Under his leadership, the UW informatics faculty has grown significantly, a PhD program has been approved, the program has received permanent funding from the UW, and the NLM has funded a UWinformatics training grant. Unquestionably, the stature of biomedical and health informatics at UW has grown significantly as a result of Dr. Tarczy-Hornoch's inspired leadership. He has the ability to express a vision and convey it

persuasively to both researchers and clinicians.

TARNOV KYLLE

Connected Health Cluster Manager. Tallinn Science Park Tehnopol. Kylle Tarnov is boosting business and collaboration in health technologies. She is leading Estonian Connected Health Ecosystem and launching Accelerace Life, a Baltic-Nordic acceleration program for health tech startups. She is facilitating entry to new markets for technology based companies (including born globals) and has got a significant international network to support it, including European Connected Health Alliance. Kylle has been leading the business development unit at Tallinn Science Park Tehnopol since 2006.

TCHUITCHEU GHISLAIN KOUEMATCHOUA
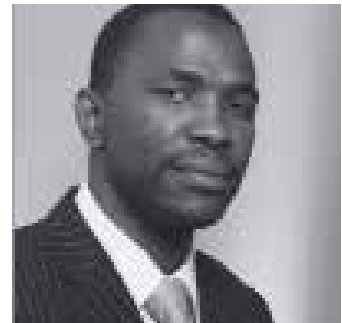
Department of Medical Informatics at the Georg-August-University GöttingenGhislain Kouematchoua Tchuitcheu is born in 1976 and he is a research associate in the Department

of Medical Informatics at the Georg-August-University Göttingen. 2000-2004 Studies (BSc) in Applied Computer Science with the fields of study: Medical Informatics and Scientific Computing at the Georg-August-University Göttingen. 2004-2006 Studies (MSc) in Applied Computer Science at the Georg-August-Universität Göttingen. Since 2006 research associate and deputy head of teaching coordination and curriculum development at the Department of Medical Informatics at the Georg-August-University Göttingen. Since 2007 Member of the Board of Directors of Health Informatics in Africa (HELINA) as "Vice President for IMIA" and the International Medical Informatics Association (IMIA) as "Vice President for HELINA".

TOUSSI MASSOUD

IMS Health ,FranceMassoud Toussi is Pharmacoepidemiology and drug safety lead for North Europe and Africa in IMS Health. He brings his knowledge and experience in medical, methodological and operational aspects of clinical and epidemiological research to guarantee the quality of interventional, observational and database studies. Massoud is medical doctor (M.D) with a Master of science MSc in medical informatics and health technology as well as a Doctor of Philosophy (PhD) in medical data analysis. He also holds a master of business administration (MBA) . He is a frequent lecturer in different professional conferences and is an active member of the International Society of Pharmacoepidemiology (ISPE), European Network of centers of Pharmacoepidemiology and Pharmacovigilance (ENCePP) and European Public Health Association (EUPHA). His domains of interest are pharmacoepidemiology, drug safety and the measurement of benefit-risk balance of drugs and health technologies. He has experience in most therapeutic domains with special interest in diabetes and psychiatry.

TEICH M. JONATHAN

Jonathan M. Teich, MD, PhD, FACMI, was the director of the Center for Applied Medical Information Systems Research at Brigham and Women's Hospital (BWH) and corporate director of clinical systems research and development for Partners Healthcare Systems, the parent corporation of Brigham and Women's and Massachusetts General Hospital. He is also an attending physician in the BWH Department of Emergency Medicine. He received a BS in Biochemistry and Engineering from Caltech, his MD at Harvard Medical School, and a PhD in Electrical Engineering and Computer Science at MIT. He completed a residency in internal medicine and a fellowship in emergency medicine at BWH. Since joining the Information Systems department at BWH, Dr. Teich's efforts have included the development of the computerized ambulatory record, the Handbook clinical reference system, provider order entry with extensive decision support, automated patient coverage list and sign-out systems, emergency medicine care improvement, and the BWH clinical event-processing engine. His research centers on the design and impact of user-friendly systems that guide providers toward optimal care patterns, lower resource utilization, better clinical communication, and reduced adverse events. Dr. Teich is a member of the American Medical Informatics Association (AMIA) Publications Committee, the AMIA Clinical Computing Working Group, and the program committee for the 1997 AMIA Fall Symposium.

TEIGLAND ROBIN

Robin Teigland is Professor of Business Administration at the Stockholm School of Economics (SSE), with a specialization in Strategic Information Systems Management. From 2011 to 2015 she was the Director of the PhD Program in Business Administration at SSE. Her present research includes projects within FinTech, e.g., p2p financing, cryptocurrencies, blockchain; the Sharing Economy; a study of Stockholm[1]s [3]Unicorn Factory[2]; and the diffusion of 3D printing in consumer retail. Robin is a frequent speaker, having spoken for companies such as Google, H&M, and Microsoft and for a number of European government ministries, and she is one of the Global Top 50 Business Professors on Twitter (@robinteigland).

TENENBAUM D. JESSICA

Jessica D. Tenenbaum, PhD, FACMI, is Assistant Professor, Department of Biostatistics and Bioinformatics, Division of Translational Informatics, Duke University School of Medicine. She graduated AB in Biology at Harward University in 1996. In 2007 she earned PhD in Biomedical Informatics at Stanford University. She is Chair of the Genomics and Translational Bioinformatics Working Group, and she is on the Board of directors. A few years ago she started organizing Women in Informatics Networking Events (WINE) at the spring and fall meetings. She has also been involved in a few other ad hoc committees along the way. Especially, she was interesting about the problem solving - how a massive amount of data and no longer can biologists and researchers just do experiments, look at the results and how received information after data procesing could be stored by computers, and managed the data to perform the analysis, and generally to help identify the new knowledge. She also interesting in managing of electronic health records opened up a whole realm of both interface problems to solve and data use opportunities and works to help build the infrastructure to manage these large data sets and process those data into information, and information into knowledge. For Jessica Medical Informatics has been the perfect combination of passion for biology, and making people's health better. It also utilizes her love of computer science, programming, and thinking about data and algorithms, and getting to write code. Informatics innovation and translation are where she tried to contribute.

TER HAAR ROMENY M. BART
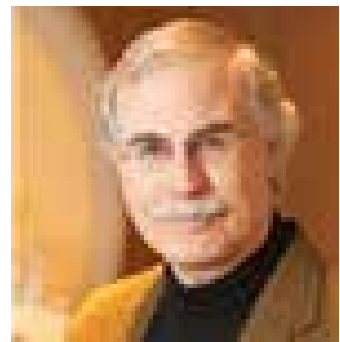
Bart M. ter Haar Romeny received the MSc degree in Applied Physics from Delft University of Technology in 1978, PhD from Utrecht University in 1983 in biophysics. He became principal physicist of the Utrecht University Hospital Radiology Department. He was co-founder and associate professor at the Image Sciences Institute (ISI) of Utrecht University (1989-2001).

From 2001, ter Haar Romeny holds the chair of Biomedical Image Analysis at the Department of Biomedical Engineering of Eindhoven University of Technology in the Netherlands, and since 2011 is appointed distinguished professor at Northeastern University, Shenyang, China. He closely collaborates with Philips Healthcare and Philips Research, other industries and (national and international) hospitals and research groups. Currently he is project leader of the Sino-Dutch RetinaCheck project, a large screening project for early detection of diabetic retinopathy in Liaoning, China. He authored an interactive tutorial book on multi-scale computer vision techniques, edited a book on non-linear diffusion theory in computer vision and is involved in (resp. initiated) a number of international collaborations on these subjects. He is author/co-author of over 200 refereed journal and conference papers, 12 books and book chapters, and holds 2 patents. He supervised 29 PhD students, of which 4 graduated cum laude, and over 140 Master students. He is senior member of IEEE, associate member of the Chinese Brainnetome consortium, visiting professor at the Chinese Academy of Sciences in Beijing, member of the Governing Board of IAPR, Fellow of EAMBES, and chairman of the Dutch Society for Pattern Recognition and Image Processing. Currently he works at Eindhoven University of Technology (TU/e) Netherlands.

THOMAN MICHELE

Michele Thoman MBA, RN serves as the System Chief Nursing Officer for NCH, Naples Community Healthcare System, a 715 bed two hospital system and also serves as the Administrator of the NCH North Naples Hospital. She joined the NCH team in August of 2009. Prior to NCH, Ms. Thoman comes to Naples from Cleveland, Ohio where she has served in progressive nursing leadership positions including Chief Nursing Officer at Lakewood Hospital, a Cleveland Clinic hospital and Nurse Manager at the Cleveland Clinic. Ms. Thoman received her diploma in nursing from St. Thomas Hospital School of Nursing, Akron, OH (1990), her Bachelor of Science nursing degree from The University of Akron, Akron, OH (2000), and her Master of Business Administration, Healthcare Executive from Baldwin Wallace College, Berea, OH (2002). She is a Johnson & Johnson/Wharton Nurse Executive Fellow, completed in 2011. Ms. Thoman's clinical background is in critical care nursing, specializing in cardiac care. Administratively, Ms. Thoman is highly effective in operations management and

implementation of strong shared governance models leading to excellence in patient care delivery.

THUN SYLVIA

Sylvia Thun, MD, PhD, is vice chair of HL7 Germany and DIN Medical Informatics. She has been involved in epSOS and is an expert of IHE, HL7, CEN TC 251 and ISO TC 215. She worked at the National Release Center for terminologies in Health Care DIMDI and is an expert of ICD-10, Snomed CT and LOINC. At University of Applied Science she is teaching e.g. telemedicine, semantic interoperability, diagnostics and medical documentation. She leads several scientific projects concerning semantic interoperability (e.g. HORIZON 2020 AS-SESS CT).

TIERNEY WILLIAM

William Tierney is a general internist, Associate Professor

of Medicine at the Indiana University School of Medicine, and a research scientist at the Regenstrief Institute. He received an undergraduate degree in biological sciences at Indiana University where he also received his MD degree in 1976. He served as intern and resident at the Indiana University Medical Center in Indianapolis and was Chief Resident in Medicine at Wishard Memorial Hospital, Indiana's only tax-supported public teaching hospital. In 1980, he joined Dr. Clem McDonald in the Regenstrief Institute's Computer Science Research Section, for which he currently serves as Associate Director. His research focuses on the implementation and assessment of health information systems in Wishard Hospital. Specifically, he helped implement one of the first outpatient computer-based physician order-entry programs and showed that one could lower the costs of outpatient diagnostic testing by providing prior test results, probabilities of abnormal results, and costs of tests. He is currently assisting Dr. McDonald in developing and implementing this CPOE system on the inpatient medicine service of Wishard Hospital and designing and conducting a randomized, controlled trial of its effects on inpatient ordering, length of stay, costs of care, and errors. He has also performed clinical epidemiologic studies of clinical data stored in the Regenstrief Medical Record System, mainly to identify risk factors for abnormal test results. He also uses these data to identify patients in primary care who are eligible for studies. In addition to his research, Dr. Tierney practices general internal medicine in inpatient, emergency room, and outpatient primary care venues. He was also the Director of Medical Manpower for the 1987 Pan American Games in Indianapolis, for which he also served as Sports Medicine Officer for Track and Field. He was been elected to Fellowship in the American College of Physicians in 1987. He is the 2011 recipient of the Morris F. Collen Award of Excellence from the American College of Medical Informatics.

TIMMERS PAUL

Paul Timmers is Director of the Digital Society, Trust & Security Directorate in the European Commission Communications Networks, Content and Technologies Directorate General (DG CONNECT) dealing with policy and R&I in ICT and health, ageing, public services, smart cities and cyber-security. Previously he headed the ICT for Inclusion and the eGovernment units. He was also member of the Cabinet of European Commissioner for Enterprise and Information Society. Before joining the European Commission, he was a manager in product marketing and software development in a large IT company. He also co-founded a software start-up. He holds a PhD in theoretical physics from the University of Nijmegen, the Netherlands and a MBA from Warwick Business School, UK. He has widely published in the field of technology and policy, including a book on electronic commerce strategies and business models. He was a visiting professor and lecturer at several universities and business schools across the world including an EU Research Fellow at the University of North Carolina in USA.

TIWARI ASHUTOSH

Ashutosh Tiwari is Chairman and Managing Director of Tekidag AB (Techtoday innovations); Associate Professor and Group Leader, Smart Materials and Biodevices at the world premier Biosensors and Bioelectronics Centre, IFM-Linköping University; Editor-in-Chief, Advanced Materials Letters and Advanced Materials Reviews; Secretary General, International Association of Advanced Materials; a materials chemist and docent in the Applied Physics with the specialisation of Bio-

sensors and Bioelectronics from Linköping University, Sweden. Dr. Tiwari has several honorary and visiting positions worldwide including visiting professor at the National Institute for Materials Science, Japan; University of Jinan, University of Jiangsu, China; and DCR University of Science and Technology, Academic Chairman of Dr. G. P. Law College , and Founder Director, Vinoba Bhave Research Institute, India. Just after completed his PhD, he joined as young scientist at National Physical Laboratory, India and later moved to University of Wisconsin, USA for post-doctoral research. He obtained various prestigious fellowships including Marie Curie, The European Commission; JSPS (regular and bridge fellow), Japan; SI, Sweden; and from INSA, CSIR & DST, India. His research focus is on the design and advanced applications of cutting edge stimuli-responsive materials for smart biodevices. He is actively involved in the undergraduate, post graduate and PhD teaching in the field of intelligent materials, nanomaterials and atom-thick materials for biomedical, biosensing and bioenergy devices. Dr. Tiwari is recipient of prestigious 'The Nano Award', 'Innovation in Materials Science Award' and 'Advanced Materials Medal' for his notable contributions to smart materials and biomedical nanotechnology. He has more than 100 peer-reviewed primary research publications in the field of materials science and nanotechnology with h-index of 30. He has edited/authored over

25 books on advanced materials and technology for esteemed publishers in USA. He is the editor of the Advanced Materials book series that is published by Scrivener Publishing and co-published with John Wiley & Sons ; and a founder member and co-chair of Advanced Materials World Congress , European Advanced Materials Congress, Smart materials and surfaces , European Graphene Forum and World Technology Forum famous international events of materials science and technology and also bilateral events such as Sweden-Japan Nano, Indo-Swedish Advanced Materials Forum, etc. Prof. Tiwari was invited for plenary, keynote and invited lectures in the more than 20 countries.

TOGA W. ARTHUR

Arthur W. Toga, PhD, FACMI, is a Professor of Neurology at UCLA, founder and Director of the Laboratory of Neuro Imaging, Co-Director of the UCLA Brain Mapping Center, and the founding editor of the journal

NeuroImage. Dr. Toga received his MS degree and PhD in neuroscience from St. Louis University and did a postdoctoral fellowship at Washington University in the Department of Neurology. He has formal training in neuroscience and great of depth of knowledge and expertise in computer science and informatics. Dr. Toga has a career-long funding and publication record in the analysis, registration, and modeling of structural and functional images obtained from many species, including humans. He has developed unique mathematical techniques for global and local warping of images and visualization of composite brain image sets. Dr. Toga's laboratory coordinates neuroimage analysis activities throughout the UCLA campus and with collaborators around the world. All his activities continue to focus on the relationship between brain structure and function, primarily emphasizing structure utilizing three-dimensional atlasing and analyses of morphometric variability in populations and individuals, both in health and disease, including children and aged populations. The work that he has pioneered continues to focus on the creation, testing, and validation of mathematical strategies for computational neuroanatomy and the development of algorithmic approaches resulting in the characterization and measurement of anatomy. Dr. Toga's interests in visualization and data immersion stem from research in mapping, deformation correction, graphics, and

database. He serves on several relevant national and international boards and commissions including the United States–European Community MegaScience Forum and is a U.S. representative for the Office of Economic and Cooperative Development Committee on Neuroinformatics. He has worked with industry and entertainment leaders including Silicon Graphics Inc., IBM, Paramount Pictures, MGM, and Digital Light and Magic. He is the recipient of many awards and recently received the SPIE image-processing "cum laude" award, the Di Chiro Award for Outstanding Scientific Researcher, and a Smithsonian Award for Innovation in 1999.

TOLOMICZENKO GEORGE

PhD, Assistant Professor of Clinical Neurology, University of Southern California USA. Experience as a clinician, researcher, teacher and administrator informs the multifaceted role he has with HTE@USC. After earning an undergraduate degree at Caltech, he left LA, for graduate study in the Boston area where he earned a doctorate in clinical psychology at Boston

University and a master's in public health at Harvard. As both a scientist and clinician working at medical institutions, his focus shifted to public health and policy issues involving homelessness and mental illness. He is now returning to LA from Toronto where he worked on technology-enabled approaches to healthcare management. In Canada his work building research capacity was broadened to include directorships in technology-based regional economic development, medical research funding and non-profit organizations. He has always been devoted to creating and funding programs and partnerships enabling research, knowledge translation and chronic disease management. He has done this through energizing interactions with students, faculty, staff and clinical personnel in a variety of settings. He is thrilled to be part of HTE@USC's leadership team re-designing medical and graduate engineering education to train front-line innovators. They will make sure that HTE@USC graduates will be leaders among interdisciplinary thinkers and inventors in healthcare.

TOLXDORFF THOMAS

Thomas Tolxdorff, MSc, PhD, is a full professor of medical informatics at the Free University of Berlin since 1992 and managing director of the Institute of Medical Informatics of the Charité - Universitätsmedizin Berlin. He studied informatics at the Technical University (RWTH) at Aachen, where he obtained his MSc with a thesis on numerical mathematics of partial differential equations in 1979 and his doctoral degree on tissue characterizing image processing in magnetic resonance imaging in 1985 (summa cum laude). He completed his post-doctoral thesis on knowledge-based image analysis in the diagnostics of bone tumors at the Faculty of Medicine of the RWTH Aachen and received his authorisation to teach (venia legendi) Medical Informatics and Biostatistics in 1989. Thomas Tolxdorff was a research fellow at the University of California at Irvine (UCI) in 1989 and 1991. In his university career he served as Associate Dean of Finances in the Faculty of Medicine of the Free University of Berlin and Charité - Universitätsmedizin Berlin, Chairman of the IT Advisory Committee to the Board of Directors, and

Member of the Academic Senate of the Free University of Berlin. Thomas Tolxdorff is a member of the Deutsche Forschungsmeinschaft (German Research Foundation) and has served as an elected reviewer for medical informatics for many years. He also was a member of the Committee for IT-Infrastructure (KfR) of the German Research Foundation. His research interests range from medical image processing, esp. experimental magnetic resonance imaging, magnetic resonance elastography, model-based radiotherapy planning to virtual reality techniques in medicine including 3-D reconstruction techniques and intraoperative navigation. More recently, his focus in research has been extended to information systems in health care (hospital information systems) and clinical data management, as well as Big Data, knowledge modeling with ontologies and GRID computing in medicine. Amongst his international projects are cooperations with the University of California, Irvine, the Nikei University, Tokyo, and the Mayo Clinic, Rochester. Thomas Tolxdorff serves as an adviser for the BMBF (Bundesministerium für Bildung und Forschung/ Federal Ministry of Education and Research) working on future calls on medical informatics. Besides publishing a considerable amount of peer-reviewed papers, he raised a wide range of extramural fundings, including the recently acquired project "Berlin Research Platform Health" with

a total budget of more than 1.5 million Euro.

TOUNSI MOHAMMED

Mohammed Tounsi received his PhD in Computer Science specialization in artificial intelligence from University of Nantes (Ecole de Mines de Nantes), France in 2002. He is the chairman of computer science department and associate professor at the Department of Computer Science, Prince Sultan University, in Riyadh, KSA. His current research interest includes constraint programming, machine learning, data mining, meta-heuristics, bioinformatics and intelligent systems. Previously, Dr. Tounsi received his Master of Science from Paris 9, Dauphine University, Paris, France. Dr. Tounsi published several journal publications is different international journals. He is currently the editor-in-chief of Applied Data Mining journal an editorial member of various journals in the field of computing.

TOYODA KEN

 Managing Director and Secretary General, Clinical Research Support Center Kyushu (CReS Kyushu) Special Researcher of Kyushu University HospitalMr. Ken Toyoda established Clinical Research Support Center Kyushu (CReS Kyushu) in 2004. CReS Kyushu is a non-profit organization and sponsored by 10 presidents of University Hospitals in Kyushu. Currently, CReS Kyushu leads over 90 Clinical Trials in Japan.Mr. Ken Toyoda is the expert in the standardization of Healthcare Informatics. He is Head of Japanese Delegation for ISO/TC215 (Health Informatics Standardization) from 2004 and Co-Convenor of ISO/TC215 JWG10 (Traditional Chinese Medicine). Also, he is Director and Secretary General of HL7 Japan and Registered Expert of PMDA (Pharmaceuticals and Medical Devices Agency). He was a Project Leader of SS-MIX (Standardized Structured Medical record Information eXchange) Development Project from 2004 to 2006 and now he is Vice President of SS-MIX Promotion Consortium. Mr. Toyoda was Professor of

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Medical Informatics and Hospital Management at the International University of Health and Welfare (Tokyo, Japan) from 1998 to 2001. From his academic background, he is Director for Japan Association for Medical Informatics (JAMI) and Japanese Representative for IMIA (International Medical Informatics Association). Also, he is Japanese Representative for the China-Japan- Korea Medical Informatics Joint Symposium since 1996 and Special Researcher of Kyushu University Hospital. Mr. Toyoda was Industry Services Executive for Healthcare Industry in Asia Pacific at IBM Global Services from 1997 to 1998 and General Manager for Healthcare Industry in IBM Japan from1992 to 1996. In that role, he developed the first hospital's EMR system in Japan at 1994.

TRIPATHI MICKY

Micky Tripathi is the founding President and CEO of the Massachusetts eHealth Collaborative. His activities range from policy guidance at the federal level, to collaborative strategic planning at the state and community lev-

els, to implementation of health IT systems at the frontline of healthcare delivery. Prior to leading MAeHC, Micky worked with U.S. and international clients as a Manager at the Boston Consulting Group, a leading strategy and management consulting firm. While at BCG, he served as the founding president and CEO of the Indiana Health Information Exchange, where he led the design and launch of one of the largest and most successful statewide laboratory results-delivery businesses in the country. Micky serves on a number of boards and steering committees, including the Information Exchange Workgroup of the HIT Policy Committee, the eHealth Initiative, and the New England Health Exchange Network (NE-HEN). Micky holds a Doctorate of Philosophy in Political Science from the Massachusetts Institute of Technology, a Masters in Public Policy from Harvard University John F. Kennedy School of Government, and a Bachelors in Political Science from Vassar College.

TROSETH MICHELLE

Michelle Troseth has over 25 years of experience in co-de-

signing and implementing evidence-based practice and technology infrastructures to support patient-centered care and interprofessional integration at the point of care across hundreds of healthcare settings. Michelle is the Co-Chair of the HIMSS TIGER Interprofessional Committee (Technology Informatics Guiding Education Reform), Co-Chair of the American Academy of Nursing's Informatics & Technology Expert Panel and President-Elect of the National Academies of Practice. She is the recent recipient of the 2014 HIMSS Nursing Informatics Leadership Award.

TSIMPOGIOU FILIPPOS

Filippos Tsimpoglou is the Director General of the National Library of Greece. He studied Economics at Athens University of Economics and Business and received his PhD in Library and Information Science at the Ionian University, Greece. He was from 1999 till 2014 Library Director and ex officio member of the Senate of the University of Cyprus in Nicosia. He was Head of the Departments "Libraries

Development" and "Databases and Information Market" at the National Hellenic Documentation Centre. The University of Cyprus Library received the EFQM 3 star accreditation (2009). From 2003 to 2008 he was Coordinator of the project "Development of the Union Catalogue of the Hellenic Academic Libraries", creation of a database with 3.000.000 merged bibliographic records originated from 60 institutions, 5 Library software programmes, 2 MARC formats, 4 character sets. He developed the National Network of Scientific and Technological Libraries, single interlibrary loan network in Greece and Cyprus. He designed and supervised the digitisation project of the National Dissertations Archive 12.000 PhD theses, totally 2.000.000 digital pages. He was the originator of the Proposal of ARGOS project (ARchaeological Greek Online System). He is member of: The Working Groups for the Infrastructure / the Evaluation Committee of Private Universities in Cyprus (2006-). The Board of the Cyprus Library (2008-); The Scientific Committee of the biannual conferences of UNICA on Scholarly Communication (2003-2014); "Information, Telecommunication, e-Business" in the frame of the project "Technological Foresight. Greece 2015-2021" and The "Technical Committee for the Standardisation in Documentation /Information/ Librarianship of the Hellenic Organization for Standardization" ELOT/TC22. (1988-1995). His book "Libraries cooperation. A systems approach" was published in 2008.

TU W. SAMSON

Samson W. Tu, MS, FACMI, undergraduated in mathematics from Harvard College. He moved to Stanford University, where he obtained a master's degree in computer engineering in 1985. During his graduate training, he discovered the research programs of the Section on Medical Informatics and formed a relationship that led not only to his graduate research project, but also to a collaboration and commitment to medical informatics that continue to this day. Mr. Tu is now a senior research scientist with the Stanford group who has rightfully earned an international reputation for his innovative research, his expertise, and his ability to contribute to collaborative projects. Mr. Tu has been the principal modeler of guidelines and protocols in a host of projects to develop decision-support systems at Stanford and elsewhere. His decomposition of a clinical practice guideline into models of processes, decisions, actions, domain concepts, and patient data has influenced numerous other guideline-modeling efforts. Mr. Tu, together with collaborators at the University of Newcastle, formulated the idea of a Virtual Medical Record that presents a simplified, standard view of clinical data from the perspective of decision-support systems. His modeling work forms the basis for much of HL7's technical committee on clinical decision support and its work to standardize a component-based shared guideline model. Mr. Tu pioneered the representation of clinical guideline and protocols in terms of entities in a formal ontology. He is the principal developer of the EON guideline model and a major contributor to both the PRODIGY guideline model in the United Kingdom and to the Guideline Interchange Format (GLIF) guideline model proposed by the InterMed Collaboratory. Equally impressive has been Samson Tu's commitment to the training of graduate students and to effective collaboration with other scientists, both at Stanford and around the world. He is a bright and effective colleague, an innovative and productive scientist, and a knowledgeable contributor to international collaborations.

TUMINARO KIM

Kim Tuminaro is US Department of State/Washington HQ. Ms. Tuminaro manages all aspects of the U.S. government's engagement with the European Union in the Transatlantic Economic Council, implementing a wide range of policies and programs in the economic sphere, including health IT. She also serves as

State Department coordinator for the U.S.-EU Trade and Investment Partnership. She has held a variety of economic advisory positions in her 28-year career at the State Department covering trade, investment policy, and international debt policy. She holds a MBA, and a BA in International Relations from the George Washington University in Washington, DC.

TUN LIN ZIN

Zin Lin Tun started out his IT career as an Analyst Programmer in implementing a CRM system for Humanitarian Crisis Hub in 2013, currently known as Diaspora Action in Melbourne. This was part of the industrial programme from Monash University where he did his Bachelor Degree in Information Technology and Systems. He came back to Singapore in 2014 after graduating from Monash University in Melbourne. Zin started working for Integrated Health Information Systems in 2014 where he was allocated to Juronghealth Services as the main analyst to implement Antimicrobial Stewardship Program (ASP) Initiative, using Juronghealth's new EMR system. At Jurongheath Services,

Zin was tasked in using the functionalities of the Juronghealth EMR to drive IT aspects of the initiative, directing workflows and to reduce the clinician's workload. He works closely with an Infectious Disease physician and a group of ASP pharmacists in implementing and improving the initiative. Zin also presents his work regularly for national and overseas ASP experts. He always believed that one day his work will help to change the lives of providers and patients.

TURCHIN ALEXANDER

Alexander Turchin, MD, MS, FACMI, is Associate Physician at Brigham and Women Hospital and Associate Professor of Medicine at Harvard Medical School. He graduated John Hopkins University School of Medicine in 1999 and earned MS at Massachusetts Institute of Technology in 2005. His research investigates factors influencing quality of care and outcomes in chronic endocrine diseases, including diabetes mellitus, hyperlipidemia and hypertension using data in electronic medical records. Diabetes, hyperlipidemia and hy-

pertension are common diseases that carry significant morbidity and mortality. However, quality of care of many patients with these conditions remains suboptimal and a large number of patients do not reach treatment targets in glucose, blood pressure and lipid control. Provider- and patient-based factors influencing quality of care in chronic diseases are poorly understood. Electronic medical records provide a rich but largely untapped source of information about patient care. In particular, the electronic medical record system at Partners HealthCare contains records of 4 million patients including hundreds of thousands of patients with diabetes, hyperlipidemia and hypertension and presents an unparalleled opportunity to investigate the epidemiology of quality of care of diabetic patients. Dr. Turchin's is currently investigating 1) Clinical inertia in treatment of hypertension, hyperglycemia, hyperlipidemia and obesity in patients with diabetes, 2) Effect of lifestyle counseling in routine care settings, 3) Safety of electronic prescribing and 4) Adverse reactions to medications used to treat chronic illness. He is author and co-author of a numerous scientific articles published in peer reviewed journals.

TURNER ANNE

Anne Turner, MD, MPH, MLIS, FACMI, is the Principal Investigator for the National Institutes of Health TransPHorm Machine Translation for Health project. She is also Principal Investigator for the SOARING project. This research investigates health department translation processes and the potential of machine translation to improve the costs and efficiency of creating translated materials for limited English proficiency groups. She teaches Public Health and Informatics and has served as the lead for the health communications and informatics tracks for the Summer Institute for Public Health Practice. Areas of Expertise; Public health workforce information workflow; Public health digital libraries and Natural language processing to access public health gray literature. Anne is also Associate Professor in the Schools of Public Health and Medicine at the University of Washington. She received her Masters of Public Health in Medical Informatics and Masters of Library and Information Sciences from the University of Washington, and her MD from Brown University.

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UDAYASANKARAN JAI GANESH

Jai Ganesh Udayasankaran, MSc, MBA, is a consultant and technical expert on telemedicine and eHealth. He is the vice-chair of the International Medical Informatics Association (IMIA) working group on Health and Medical Informatics Education. He was a research partner in Pan Asian Collaborative for Evidence-based eHealth Adoption and Application (PANACeA), an eHealth research capacity building network supported by the International Development Research Center (IDRC), Canada. As part of PANACeA research team, he had worked on multi-country eHealth projects exploring evidence on the role of telehealth applications during disasters, online method for diagnosis of difficult tuberculosis cases and economic evaluation framework of computerization in hospitals. He has coordinated implementation of several successful eHealth projects including web-based Hospital Information Systems (HIS), Picture Archiving and Communication Systems (PACS), telemedicine, tele-education, patient registration and chronic disease management portal for the secondary, tertiary and mobile outreach health facilities run by a public charitable trust in India. He is the program coordinator for Sri Sathya Sai Telehealth Network, which has provided more than 10,000 post-operative follow-up care consultations totally free of charge to cardiac and neuro surgery patients from two of the States in India. He is a member of the Working Council of Asia eHealth Information Network (AeHIN) and the Executive Committee of Indian Association for Medical Informatics (IAMI).

UESAWA YOSHIHIRO

Yoshihiro Uesawa is an Associate Professor at Meiji Pharmaceutical University, Tokyo, Japan. Dr. Uesawa received his BS from Meiji Pharmaceutical University, Japan. M.S and Ph.D degree from the Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan. His major areas of research are related to computational toxicology, pharmaceutical interactions between medications and

foods, analyses of quantitative structure-activity relationships (QSAR), machine learning, and data mining. In January of 2015, he became one of the winners in the 'Tox21 DATA Challenge 2014', organized by NIH, USA. Dr. Uesawa's research interests include Computational toxicology, QSAR analysis, and Data mining, Drug metabolism especially in glucuronidation and P450 related reactions, Drug-food interactions

USTUN BEDIRHAN

Bedirhan Üstün has worked in WHO since 1990, first in Mental Health, then in Evidence Cluster as an international health officer and formed multiple international networks on Classification and Assessment of Health and Disability; Mental Health Epidemiology, and Primary Care applications of classification and training programs. He has conducted large scale epidemiological surveys such as the Psychological Problems in General Health Care (1990-1998); World Mental Health Surveys (1998- 2006) and World Health Surveys (1999-2003). Currently he is responsible for the WHO's Family of International Classifications (ICD, ICF and other health classifications); devel-

opment of standardized health terminologies; and compilation of health information standards. Dr. Üstün is the author and co-author of more than 150 articles, several books on psychiatry, primary care, classifications and health assessment.. He has been awarded as a Distinguished Fellow from American Psychiatric Association; Honorary Fellow from Royal College of Psychiatrists from UK; National Scientific Council Fellowship from Turkey.

V

VABRET ASTRID

 MD, PhD, Director of the Laboratoire de Vorologie, Profesor of Medecine, Universite de Caen, Basse-NormandieAstrid Vabret, MD, PhD is Head of the Laboratory of Virology at the University Hospital, and Professor of Virology, at the University of Caen, Basse-Normandie. Specialist of respiratory viruses and coranaviruses, Professor Vabret has published work in a wide range of viral studies including the treatment of chronic viral infections (hepatitis B and C,

HIV). She is especially interested in the transmission of viruses across species barriers and conducts multidisciplinary research in both human and animal medicine. An active member of the ANRS (Agence Nationale de Recherche pour le SIDA-AIDS), Professor Vabret is also actively engaged in international collaborations with the Pasteur Institute of Shanghai, the RESPARI network of Asia-Pacific region, the Pasteur Institute of Dakar in Senegal, and the Gluck Equine Research Center at the University of Kentucky. Highly sensitive to the need for informing the general public about virology, she is the author of Man and Virus, a Sustainable Relationship. Professor Vabret is a founding member of the VOVA Board of Directors in France and holds that the study of oral tradition can serve to open up diverse means and media for diffusing scientific information about viral diseases to populations that do not have access to specialized written documentation.

VALLINA MANUEL

Manuel Vallina is Associate CIO. Healthcare Service Castilla y León, Spain. He is graduate in

Business Administration and Economy, holds a Master degree in Information System Management and a Master degree in Health Administration for the Spanish National Healthcare School. Vallina has more than 24 years of experience as CIO in different hospitals in Spain, including Hospital Universitario Rio Hortega in Valladolid, Hospital Universitario La Paz and Hospital General Universitario Gregorio Marañon in Madrid. He also worked as private strategy advisor in the eHealth field. Today he acts as Associate CIO for SACYL (Castilla y Leon).

VAN BEURDEN MARIEKE

Marieke van Beurden is Program Manager Cooperative Slimmer Leven 2020, Netherlands. Ms. Marieke has earned her MSc degree in Public Administration, followed by a postgraduate study in Journalism. Since 2006 she has been working as a consultant and project manager for several public and private organizations in change projects in which issues related to ICT, technology and collaboration were designed, implemented and managed. For

her postgraduate master's programme in Public Information Management she did research on spreading innovations in networks and how to build new networks of exploitation between multidisciplinary stakeholders in the health sector..

VAN BEMMEL H. JAN

Jan H. van Bemmel (1938-) was Professor and Chairman of Medical Informatics at the Faculty of Medicine and Health Sciences of Erasmus University, Rotterdam. He was head of the Department of Biosignal Processing at the Institute of Medical Physics TNO in Utrecht from 1963-1973, and Professor of Medical Informatics of the Faculty of Medicine at the Free University of Amsterdam from 1973 until he assumed his position in 1987. Bemmel had/has esteemed influence on the field of Medical informatics and commitment to AMIA's mission. Professor van Bemmel's work has led to new knowledge in the areas of computer-assisted electrocardiography, computer-based patient records, pattern recognition and decision-support methodologies. He has been instrumental in the development of Medical Informatics as a discipline. He is the former

Editor-in-Chief of Methods of Information in Medicine and the International Medical Informatics Association's (IMIA) Yearbooks of Medical Informatics. He was a member of the editorial boards of Computer Methods and Programs in Biomedicine and Medical Informatics. He has been involved in all aspects of the MEDINFO scientific program for almost three decades. Dr. van Bemmel is former Chairman of the Board of Directors of the Dutch Society for Medical Informatics, and a past president of IMIA. Dr. van Bemmel is a member of the Royal Netherlands Academy of Arts and Sciences and a former member of the Dutch Health Council. He is a Foreign Associate Member of the Institute of Medicine. Dr. van Bemmel received his master's degree in physics and mathematics from the Technical University in Delft and his post-doctoral degree in physics and mathematics from the University of Nymegen.

VAN DE GRAAF PIETER

Pieter van de Graaf is eHealth Clinical Strategy Lead. Scottish Government. Pieter leads the

clinical strategy team in the eHealth Division of the Scottish Government with responsibility for developing and implementing aspects of the Scottish eHealth Strategy in close cooperation with NHS Scotland. Born and raised in the Netherlands, he graduated at MSc level from Wageningen University in 1994. He then moved to the UK and gained a PhD in Biology from the University of Derby in 1999 after which he held several research positions. He has been with the Scottish Government in science and technology related functions since 2003.

VAN DEN BROEK L. EGON

Egon L. van den Broek received a MSc in Artificial Intelligence (AI) (2001), a PhD in Social Sciences (2005), and a second PhD in Electrical Engineering, Mathematics, and Computer Science (2011). Currently, he is assistant professor and research director of the Center for Research on data-driven User eXperience (CRUX) at the Utrecht University, founding partner at Infor-

mation eXperience (IX) BV, and consultant (e.g., for TNO, Philips, and the United Nations). His interests are on pattern recognition, interaction technology, and affective computing. Egon is Editor-in-Chief of Open Computer Sc ience, Area Editor of Pattern Recognition Letters, Section Editor of Journal of Theoretical and Applied Computer Science (JTACS), and Associate Editor of Behaviour & Information Technology. Further, Egon serves as external expert for various agencies (e.g., European Commission, IWT, and ANR), in conference program committees, on boards of advice, and on several journal editorial boards. He frequently serves as invited/keynote speaker, conference chair, and has received several awards (e.g., recently, the Journal of the Association for Information Science and Technology 2015 best paper award). Egon has published 160+ scientific articles and holds several patents.

VAN DER LEI JOHAN

Johan van der Lei studied medicine in the Free University of Amsterdam. He received his PhD cum laude in 1991 from the Erasmus University Rotterdam on a thesis dealing with the

architecture of clinical decision support systems. That same year, his thesis was awarded with the Erasmus Research prize. In 1992 he became a Assistant Professor Medical Informatics, Department of Medical Informatics, Faculty of Medicine and Health Sciences, Erasmus University, Rotterdam. In 2000 he became Professor of Medical Informatics and Chairman of the Department of Medical Informatics in the Erasmus University in Rotterdam. Research of Johan van der Lei has been concentrated on the development, evaluation, use, and impact of computer-based patient records. The computer-based patient record allows, in principle, patient data to be used for different purposes, e.g., patient care, management, or research. In practice, however, the introduction of computer-based patient records in the consultation room of physician has proven a significant hurdle. His initial research focussed on understanding the requirements for successful introduction of information technology in medical practice. Once computer-based patient records are in use, new research issues that are related to the use of the data can be addressed. His research has increasingly focussed on observational databases and the integration of computer-based decision support with computer-based patient records. Research in observational has resulted in the project known as Integrated Primary Care Information, IPCI, an observational database and communication

network that allows researchers to follow individual patients longitudinally. At this moment, IPCI contains data of approximately 1.000.000 patients. The distinguishing characteristic of IPCI is, besides the emphasis on privacy, the notion that medical data recorded for routine care will always be incomplete when used for other purposes such as research. As a result, IPCI not just an observational database, but a communication network that allows researchers to contact both physicians and patients when a study requires additional information. Research into the area of decision support has resulted in a number of decision support systems (HyperCritic, AsthmaCritic, BloodLink, CholGate, Sunrise). The objective in constructing these decision support systems is to study and compare different methods by which information can de delivered to practicing physicians. In recent years, he has started to apply the methodology of randomized clinical trials to the evaluation of decision support systems. Teaching responsibilities involve (a) training practicing physicians in using computer-based patient records, (b) teaching medical students in the area of medical informatics, (c) advising medical and computer-science students in their MSc and PhD studies. Johan van der Lei is author of well over 100 papers, many which appeared in peer-reviewed international journals.

VAN EGMOND JAN

Jan van Egmond is among Belgians early contributors to development of Medical Informatics. He was a member of IFIP-WG4, pleaded successfully for the creation in 1974 of the Belgian Society for Medical Informatics (the MIM) of which he became the first Secretary. He was a founding member of EFMI in Copenhagen, at the Regional Office for Europe of the World Health Organization in September 1976. Born in a Dutch family, he was appointed as the Head of the new Department "Medische Informatica" at the State University of Ghent in Belgium, in the early seventies and a few years later as Medical Director of the University Teaching Hospital of Antwerp. He died in his early forties in Boston, USA, during a postgraduate course at Harvard University. The MIM has created an Award in Health Informatics to crown the work of a young Fellow in this field, in memory of him, the Jan van Egmond Award.

VAN HARMELEN FRANK

Frank van Harmelen is professor in Knowledge Representation and Reasoning at the VU University Amsterdam. He is one of the co-designers of the W3C ontology representation language OWL, and was involved in the design of Sesame, one of the most widely used RDF repositories world wide. He is co-author of the Semantic Web Primer, the first textbook on Semantic Web technologies, now translated into 5 languages. He was scientific director of the Large Knowledge Collider (LarKC), which aimed to build a platform for very large scale distributed reasoning. Besides research into the fundamental questions such as inconsistency, scalability, heterogeneity, and dynamicity, he is also involved in a wide variety of applications of semantic technologies, among others in medicine, the pharmaceutical industry, scientific publishing and e-science. His work on the Sesame triplestore received the 10 year impact award of the International Semantic Web Conference, and he was elected

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member of the European Academy of Science in 2014.

VAN KRANENBURG ROB

Rob van Kranenburg is co-founder of bricolabs and the founder of Council. Together with Christian Nold he published Situated Technologies Pamphlets 8: The Internet of People for a Post-Oil World. He currently works as Community Manager at the EU Project Sociotal. He is consultant to IoT China, Shanghai 2014. He Chairs AC8–Societal Impact and Responsibility in the Context of IoT Applications of the IERC, The European Research Cluster on the Internet of Things. Rob is Startupbootcamp Mentor IoT & Big Data. Rob wrote The Internet of Things. A critique of ambient technology and the all-seeing network of RFID, Network Notebooks 02, Institute of Network Cultures.

VAN TERHEYDEN NICK

Nick van Terheyden, MD, is Chief Medical Officer, Dell Healthcare and Life Sciences. Dr. Nick van Terheyden brings a distinctive blend of medical practitioner and business strategist, both national and international, to the realm of healthcare technology. A graduate of the Royal Free Hospital School of Medicine, University of London, Dr. van Terheyden is a pioneering creator in the evolution of healthcare technology. After several years as a medical practitioner in London and Australia, he joined an international who's who in healthcare, academia and business, in the development of the first electronic medical record in the early 1990's and later, as a business leader in one of the first speech recognition Internet companies. He is currently Chief Medical Officer for Dell's Healthcare & Life Sciences (HCLS) business where he is responsible for providing strategic insight to help Dell advance its support of healthcare organizations, medical professionals and patients through information enabled healthcare. He is a member of the HIMSS mHealth Committee where he pays attention not just to processes and systems, but to people. His ability to speak in terms people can actually understand makes him a sought out speaker on the practical and futuristic use of healthcare technology and how it can cost effectively improve patient care. In addition to writing and lecturing on futuristic trends in healthcare technology, his advice and counsel is sought by hospitals, physicians and other allied healthcare professionals all of whom are trying to figure out how to integrate and use technology to make the healthcare system work from the perspectives of quality and financial success.

VASSILACOPOULOS GEORGE

George Vassilacopoulos received his PhD from the University of London. He is currently Professor in the Department of Digital Systems; Director of the "Health Informatics laboratory"; Director of the Post-graduate Program "Digital Systems and Services" and Director of the International Certificate Program in "Health Informatics" at the University of Piraeus, Greece, where he served as Chairman of the Department of Digital Systems for over ten years, and served the university administration as Vice Rector of Academic Affairs. He is currently Deputy President of the University of Piraeus Council. He has worked in both the private and public sectors in various administrative and advisory capacities. He has served as Health Informatics advisor to the Greek Ministry of Health, as a member of the board of several large Greek hospitals, as advisor of informatics to the National Emergency Medical Service of Greece and as member

of various informatics committees in the public and private sectors. He has participated in several national and EU-funded research and development projects, mainly in the area of health informatics. He has authored many publications in peer-reviewed international journals, has written four books and several book chapters and has taken part either as a contributor or committee member in numerous conferences and workshops. He has also served as editor or associate editor for several published conference proceedings and books. His research interests include electronic patient records, healthcare workflow systems, service-oriented healthcare systems and healthcare systems security. He is a Fellow of the British Computer Society.

VEIL D. KLAUS

Klaus D. Veil is Professor at the School of Computing, Engineering and Mathematics at the University of Western Sydney, Australia. With 30 years professional experience and significant contributions, Klaus Veil is internationally recognized as an expert educator in Health Informatics, Health Information Technology, Healthcare Systems Interoperability and e-Health Standards Development. For the last 15 years, Klaus has extensively worked and traveled in the US and Europe as the President of the Australasian College of Health Informatics, Chairman of HL7 Australia, Board Member of HL7 USA, Co-Chair of multiple Standards Australia "Health Informatics" and HL7 International Technical Committees. As a result, Klaus has access to a global network of Health Informatics educators, researchers, policy-makers and implementers. Klaus also has excellent working relationships with local Health Informatics policy makers and industry through his significant involvement in major Australian e-Health organizations and projects including the National E-Health Transition Authority, Standards Australia, NSW Health-e-link, DHS Victoria, HealthConnect and "HealthOnline" Australian National Health Information Standards Plan as well as most of the major private healthcare organizations in Australasia. As Adjunct Associate Professor at the School of Computing, Engineering and Mathematics at the University of Western Sydney Klaus has made valuable contributions to both the School and UWS: Instigated the holding of the 1st UWS eHealth Summer School (5 days) in conjunction with the International HL7 Standards Meeting Jan. 2011 in Sydney (~350 attendees) and Contributed the eHealth content to UWS's successful bid for the $30m Werrington Park grant. Klaus is an accomplished teacher in Health Informatics; apart from his contributions to the University of Western Sydney he has taught at Sydney University and LaTrobe University, Melbourne, as well as to industry and governments in the USA, the UK, Singapore, China, Malaysia, Germany and Bulgaria. He is certified by HL7 International for HL7 V2.7, V2.6, V2.5 and V2.4. Since having been granted a German Patent in physiological data monitoring in 1978, Klaus has had a keen interest in health informatics research, which includes 13 years in industry R&D. Klaus has received a number of awards, including the Standards Australia "Outstanding Committee Award" and is an HL7 International "Volunteer of the Year"; he is the only HL7 Fellow ("FHL7") in the southern hemisphere.

VELOSO MARIO

Mario Veloso, MD, PhD, graduated from School of Medicine University of Lisbon in 1972. He is a Consultant of Neurology with extensive clinical experience and management, including the preparation, negotiation and coordination of international projects. He coordinates a neurological unit at a Univer-

sity Central Hospital. He has teaching experience pre and post-graduate training and consulting activities for computer companies/telecommunications, health authorities and pharmaceutical industry. Experience in clinical trials and the development of clinical guidelines and protocols. Thorough knowledge and substantial experience in research and development in the field of Information Technology applied to Health. He has been awarded Descartes Prize 1994 - Institute of Informatics - "An Integrated Hospital Information System" He has been president of Medical Informatics Portuguese Association during 1992 - 1997 (5 years). In 1985 he finished the specialty of Neurology at the Hospital Egas Moniz and performed the examination "the Medical Association" in the same year. In addition to his medical training: 2011-2012 - Program of Development in Management and Leadership - Catholic Lisbon, School of Business & Economics.

VELOSO M. MANUELA

Manuela M. Veloso is the Herbert A. Simon University Professor in the Computer Science Department at Carnegie Mellon University, with courtesy appointments in the Robotics Institute, Machine Learning, Electrical and Computer Engineering, and Mechanical Engineering Departments. She researches in Artificial Intelligence and Robotics. She founded and directs the CORAL research laboratory, for the study of autonomous agents that Collaborate, Observe, Reason, Act, and Learn, www.cs.cmu.edu/~coral. Professor Veloso is IEEE Fellow, AAAS Fellow, AAAI Fellow, and the past President of AAAI and RoboCup. She was the program Chair of IJCAI'07. She received the 2009 ACM/SIGART Autonomous Agents Research Award for her contributions to agents in uncertain and dynamic environments, including distributed robot localization and world modeling, strategy selection in multiagent systems in the presence of adversaries, and robot learning from demonstration. Professor Veloso and her students have worked with a variety of autonomous robots, including mobile service robots and soccer robots.

VENOT ALAIN
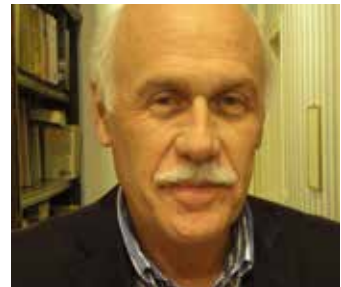
Alain Venot, MD, PhD, is Professor of Medical Informatics and Biostatistics at Paris 13 University and Head of the Public Health Department of the University Hospitals of Seine St Denis (Assistance Publique, Hôpiatux de Paris). He is also co-director of the INSERM 1142 LIMICS (Laboratory of Medical Informatics and Knowledge Engineering in e-Health) linked to Paris 13 and Paris 6 universities. He received an MD from Cochin Faculty of Medicine (1974) with a specialty in Nuclear Medicine and later in Public Health. He received a PhD in Biomathematics in 1982 for work on mathematical modeling applied to functional exploration in medicine (INSERM U194) and a PhD in Computer Sciences in 1986 for work on the automated comparison of medical images applied to several imaging techniques (scintigraphy, digitized angiography, photography), both from Pierre et Marie Curie University in Paris. Afterwards, he focused his research on the domain of medical decision systems. He directed several works in the field of drug knowledge representation (indications, contraindications, regimens, pharmacokinetics, pharmacody-

namics) and drug prescription systems. He was professor of Medical Informatics at René Descartes University from 1986 to 2002. He founded and directed a first research laboratory the EA 2494 "Pratiques et Sciences de l'information en Medecine". In 2002, he became Professor of Medical Informatics and Biostatistics at Paris 13 University where he founded and directed the research laboratory LIM&BIO EA 3969 (Laboratoire d'Informatique Médicale et Bioinformatique). until end 2013. This lab merged with another INSERM team directed by Marie-Christine Jaulent and became the LIMICS in January 2014, one of the main Medical informatics research laboratory in Europe. Alain Venot is author or coauthor of more than 130 original publications. He initiated, coordinated or participated to several European and national multipartner research projects (e.g. IRHIS, OPADE, ISAR, L3IM) and is at the origin with JB Lamy and C Duclos of the iconic language VCM used now by various medical software editors. He was one of the main founders in 1991 of a master in medical informatics organized on a national basis which contributed to train until now more than 350 students in France . In 2014 he directed the writing of a book (500 pages) "Medical Informatics, e-Health : Fundamentals and Applications" edited by Springer Verlag with two editions in French and in English.

VERDONSCHOT NICO

Professor Nico Verdonschot is professor at the Biomechanical Engineering department at Twente University and at the Orthopaedics department of the Radboudumc. Prof Verdonschot is trained as a mechanical engineer and work at the Orthopaedic Research Laboratory for the last 27 years. He was coordinator of two European Consortia focusing on orthopedic-biomechanics problems. One such European project is TLEMsafe in which patient-specific models were generated of patients requiring severe surgery to their musculoskeletal system (tumor surgery or hip revision surgery). Furthermore, he is past-president of the Europeon Orthopaedic Research Society, past-president of the International Society for Technology in Arthroplasty and co-author of over 220 peer-reviewed publications. Recently his research is focusing on generation of patient-specific computer models using CT, MRI and ultrasound scanning. With these models he wants to reproduce the musculoskeletal system of humans in the computer and predict functional outcome after surgery.

VILLARIN ALBERT

Albert Villarin, MD, FACEP, is Associate CIO, Director, Quality Analytics, Clinical Information Systems, Staten Island Univ Hospital-NSLIJ Healthcare System. Al Villarin has 28 years of physician leadership and

clinical informatics experience. He currently drives clinical workflow excellence at Staten Island University Hospital as CMIO and AssocCIO, achieving MU1 (2013), MU2 this year and a 2014 ""Most Wired Hospital"" status from Healthcare IT news. He is chairman of the Unified Communications Committee for NSLIJ and the IS Steering, Physicians Advisory, Workflow Analytics, and is the Director of the Division of Quality Analytics for SIUH. Dr. Villarin has been CMIO for two large academic multi-hospital medical centers in Philadelphia and New York. Currently enrolled in Northwestern University, Masters in Medical Informatics program, Dr. Villarin brings his years of clinical evidenced-based workflow analytics, RTLS, CDS backgrounds and forward thinking methodologies to support our clients. He has presented in many major national meetings including HIMSS, ACEP, AAPL, and webinars plus regularly participating in online and published position pieces for medical informatics.

VISSER FLORIAN

Florian Visser is Project Manager. Stichting RijnmondNet / Zorgportaal Rijnmond, Netherlands. Florian Visser is an experienced project manager in defining and setting up innovative solutions in the healthcare. He has lead different implementations related to technology in this sector. Florian is successful in different upscaling initiatives based on open platforms. He is also known for his result driven approach within innovative projects, is a coordinating member of C2 action group and holds 2 master degree's; one in psychology and one in economy.

VITOLA IEVA

Ieva Vitola is Head of eHealth Division. Pauls Stradins Clinical University Hospital, Latvia.

Since finishing her studies in Telemedicine and e-health in University of Tromso in 2007, Ieva Vitola has been working in Pauls Stradins clinical University hospital with implementation of information systems in the hospital. From 2007 -2009 as a member of e-health working group in Ministry of Health, she was involved in planning initial stages of development of national ehealth systems. As an ehealth specialist she has been involved in international e-health and telemedicine related projects in Pauls Stradins clinical university hospital.

VREELAND AMY

Amy Vreeland, Co-Founder and Senior Vice President, Strategic Accounts lifeImage, USA. Amy, a lifeIMAGE co-founder, manages key strategic relationships and is responsible for developing best practices that help our clients experience maximize value through utilization of the network Amy brings 25 years of healthcare informatics experience. Prior to lifeIMAGE Amy, was an early employee of AMICAS, where she was Vice President of Client Services. She led teams responsible for all

AMICAS installation, support, and training and helped the company to receive the industry's prestigious 'Best in KLAS' distinction three consecutive years. She has been an early member of three successful healthcare information technology startups and was an early employee at MEDITECH, a global leader in the health care information systems industry.

VUKASINOVIC RAJKO

Rajko Vukasinovic (1929-), MD, PhD, was born in the village of Potkraj, Zupci, Montenegro. He graduated at the Faculty of Medicine of the Belgrade University in 1956. At the same time promoted to the rank of lieutenant of the medical service in the Yugoslav Navy. In December 1956 he was assigned to the Military Hospital in Split where he had a medical internship that in February 1958 he got appointed as Chief of the Medical Corps 346 Naval Airborne Brigade in Kumbor in the Bay of Kotor. He obtained specialization in Internal medicine and was carried out at the Military Hospital in Split and in the Military Medical Academy in Belgrade. After specialization

he was appointed as chief of the Internal department in the Military Hospital Meljine where he stayed until the summer of 1973, when he was transferred to the Military Hospital in Nis where, from 1977 to 1984, also served as Chief of the Internal Medicine Department. At Faculty of medicine of University of Nis, Serbia, in 1978 he earned his PhD. He was elected as Assistant professor in the Department of Internal medicine at Military Medical Academy in Belgrade (VMA), and as Associate professor in the same department in 1985. He was the first teacher of Medical informatics in Serbia for the course " Information Systems in Healthcare" in 1988. After training at the Military Medical Academy, at Gastroenterology clinic in Ljubljana and the Center for Gastrointestinal Endoscopy in hospital Eduard Heriot in Lyon, France he has become a subspecialist of gastroenterology. An underwater training in the center of the Navy in Pula and the Center for Underwater Medicine of the Royal Navy of Great Britain in Gosport in 1963, has received special education from underwater medicine. In recent years, the professional career of his education directed towards Medical informatics and creating of Hospital Information Systems (HIS), while staying at multiple centers in the US, Netherlands, Italy and Austria. Professor Vukasinovic was founder of Society for Medical informatics of Serbia as a part of Medical Assembly of Serbia and member of Yugoslav Association

of Medical Informatics (YAMI). He was president of the First YAMI Congres of Medical informatics organized in Belgrade in the year 1990.

W

WAGNER GUSTAV

Gustav Wagner is German scientist who developed the first professional organization for informatics in 1949. European countries began creating university departments and programs specializing in the subject. It was not until the 1960s, however, that the French coined the term medical informatics to formally define the field of health care informatics. Dr. Gustav Wagner was an editor from 1959 of a journal for medical documentation, and then a founder and for a quarter of a century the editor of the influential journal "Methods of Information in Medicine" (beginning in 1962 - originally in German, but from 1969, in English.) "Methods" was designated as the first official journal of IMIA, and publication continues to this day. Dr. Wagner's work on patient record organization was pioneering and foundational for the field of computer-based documentation in medicine

WAGNER M. MICHAEL

Michael M. Wagner, MD, PhD, FACMI, after completing his education (BS in biology, SUNYat Stony Brook; MD, NYU School of Medicine) he practiced internal medicine from 1979 to 1988 at Baltimore City Hospital, Bellevue Hospital, and with the Hawaii Permanente Medical Group. He then moved to Pittsburgh where he received additional formal training in artificial intelligence (PhD, Intelligent Systems, University of Pittsburgh) as a postdoctoral fellow at the Section for Biomedical Informatics under Randolph Miller and Gregory Cooper. He also practiced geriatric medicine until 2002. He joined the PITT faculty in 1994 and has been an associate professor of medicine and of intelligent systems since 2001. His research has focused on building information systems for clinicians and epidemiologists including the Benedum Electronic Medical Record (1991), CLEM (1996), a notification system (1997), the RODS system (1999), and the National

Retail Data Monitor (2002). The RODS system is open-source software that is being used for public health surveillance in six states, five large cities, and one country (Taiwan). The National Retail Data Monitor collects and analyzes over-the-counter health care products for the purpose of public health surveillance, collecting daily sales data from more than 50% of the stores nationally that sell such products and making the data and analyses available in nearly real time to authorized public health users. His RODS Laboratory for realtime public health surveillance is well known and attracted a visit by President Bush in the post-9/11 era. Dr. Wagner has published in the areas of medical expert systems, data quality, and extensively in the area of real-time detection of disease outbreaks.

WALD S. JONATHAN
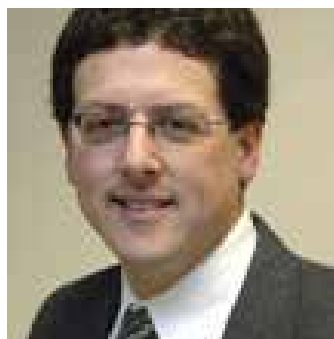
Jonathan S. Wald, MD, MPH, PhD, FACMI, received his bachelor's degree in psychology and biology from Dartmouth, his MD from Brown, and an MPH from Harvard. He undertook a Fellowship in Clinical Com-

puting in the Harvard graduate training program, while working as a developer of the electronic medical record (EMR) system at Beth Israel. In that capacity he pioneered the innovation of the monitored note, which notifies the author of an EMR entry when it has been accessed by others. He moved to Cerner Corporation and spent four years as a physician executive, managing director of EMRs, and finally Director of Engineering and Clinical Architect. He returned to Partners and in his position as Associate Director, Clinical Informatics Research and Development has responsibility for the Partners Patient Gateway, a secure portal used by hundreds of physicians and thousands of patients.

WALLHOUSE ROGER

Roger Wallhouse has a career spanning over 30 years in Healthcare Informatics of which the first twenty years were as a senior executive in the International operation of Shared Medical Systems Corporation (now Siemens Medical Systems), one of the largest suppliers of EPR/EHR systems in the US and Europe. During this time he was responsible for many EPR/

EHR implementations in the UK, Ireland, the Netherlands, Germany, Spain, Scandinavia, South Africa and the Middle East. In 1999 he established his own consulting practice Health Systems Solutions Ltd providing strategic business services to the healthcare ICT industry and has worked closely with many of the leading EHR, Community and Medical Imaging companies both on a national and global basis. Roger is also a non-executive director/chairman of several separate UK and Irish healthcare IT businesses with interests in clinical decision support, Telehealth, health data management and scheduling. In addition, he is a strong advocate of accreditation and quality labelling for healthcare software and devices which has involved a long standing working relationship with EuroRec and taking an active interest in EHR standards. Roger is a co-founder of Prorec UK and a director of IHE UK Ltd.

WALTERS F. RICHARD
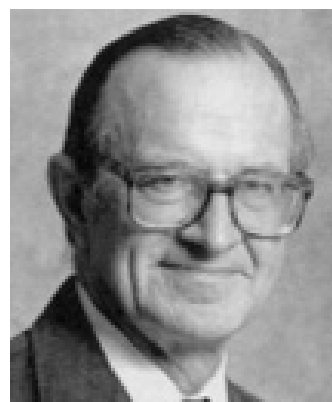
Richard F. Walters, PhD, FACMI, was a Professor at the University

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of California, Davis (UCD), which he joined in 1967. His appointments are in Medical Informatics (which he founded and which is in the School of Medicine at UCD), and in Computer Science (in the College of Engineering, where he serves as its Chair). He has been active in Medical Informatics since 1970, working with the programming language MUMPS (an acronym for Massachusetts General Hospital Utility MultiProgramming System), serves as head of the US MUMPS Users group, and helped found the MUMPS Users Group International, which is active in the United States, Europe, and Japan. He has been active in promoting electronic medical records.

WANG JUN

Jun Wang is a Professor and the Director of the Computational Intelligence Laboratory in the Department of Mechanical and Automation Engineering at the Chinese University of Hong Kong. Prior to this position, he held various academic positions at Dalian University of Technology, Case Western Reserve University, and University of North Dakota. He also held various short-term visiting positions at USAF Armstrong Laboratory (1995), RIKEN Brain Science Institute (2001), Universite Catholique de Louvain (2001), Chinese Academy of Sciences (2002), Huazhong University of Science and Technology (2006-2007), and Shanghai Jiao Tong University (2008-2011) as a Changjiang Chair Professor. Since 2011, he is a National Thousand-Talent Chair Professor at Dalian University of Technology on a part-time basis. He received a B.S. degree in electrical engineering and an M.S. degree in systems engineering from Dalian University of Technology, Dalian, China. He received his Ph.D. degree in systems engineering from Case Western Reserve University, Cleveland, Ohio, USA. His current research interests include neural networks and their applications. He published over 170 journal papers, 15 book chapters, 11 edited books, and numerous conference papers in these areas. He is the Editor-in-Chief of the IEEE Transactions on Cybernetics since 2014 and a member of the editorial board of Neural Networks since 2012. He also served as an Associate Editor of the IEEE Transactions on Neural Networks (1999-2009), IEEE Transactions on Cybernetics and its predecessor (2003-2013), and IEEE Transactions on Systems, Man, and Cybernetics–Part C (2002-2005), as a member of the editorial advisory board of International Journal of Neural Systems (2006-2013), as a guest editor of special issues of European Journal of Operational Research (1996), International Journal of Neural Systems (2007), Neurocomputing (2008, 2014), and International Journal of Fuzzy Systems (2010, 2011). He was an organizer of several international conferences such as the General Chair of the 13th International Conference on Neural Information Processing (2006) and the 2008 IEEE World Congress on Computational Intelligence, and a Program Chair of the IEEE International Conference on Systems, Man, and Cybernetics (2012). He has been an IEEE Computational Intelligence Society Distinguished Lecturer (2010-2012, 2014-2016). In addition, he served as President of Asia Pacific Neural Network Assembly (APNNA) in 2006 and many organizations such as IEEE Fellow Committee (2011-2012); IEEE Computational Intelligence Society Awards Committee (2008, 2012, 2014), IEEE Systems, Man, and Cybernetics Society Board of Directors (2013-2015), He is an IEEE Fellow, IAPR Fellow, and a recipient of an IEEE Transactions on Neural Networks Outstanding Paper Award and APNNA Outstanding Achievement Award in 2011, Natural Science Awards from Shanghai Municipal Government (2009) and Ministry of Education of China (2011), and Neural Networks Pioneer Award from IEEE Computational Intelligence Society (2014), among others.

WARNER R. HOMER

Homer Richards Warner, PhD, (1922-2012) was an American cardiologist who was an early proponent of Medical informatics. He joined the United States Navy during World War II and was trained as a pilot but never saw combat. Warner received his BS in 1946 from the University of Utah. He received his MD, also from the University of Utah, in 1949. By 1953 he had worked at Parkland Hospital in Dallas, Texas and at the Mayo Clinic in Rochester, Minnesota and had earned a PhD. in physiology from the University of Minnesota. He has pioneered many aspects of computer applications to medicine. He is author of the book "Computer-Assisted Medical Decision-Making", published in 1979, he served as CIO for the University's Health Sciences Center, as president of the American College of Medical Informatics (where an award has been created in his honor), and was actively involved with the National Institutes of Health. He was first chair of the Department of Medical Informatics. University of Utah was the first medical school in the U.S. to formally organize a degree in medical informatics. Dr. Homer was emeritus chair of the University of Utah's Department of Medical Informatics. He was also a senior member of the Institute of Medicine of the National Academy of Sciences and president of the American College of Medical Informatics. For over 25 years, Dr. Warner served almost continuously on research review groups for the National Institutes of Health, the National Center for Health Services Research and the National Library of Medicine. Beginning in the mid-1950s, Dr. Warner began his work using computers for decision support in cardiology at Intermountain Healthcare LDS Hospital in Salt Lake City. His ground-breaking work set the stage for the growth of the new field of academic study called medical informatics. In the 1970s, Dr. Warner and his Intermountain colleagues created one of the nation's first versions of an electronic medical record. Designed to assist clinicians in decision-making, Intermountain's now famous HELP system has been operational for nearly 40 years. In 1964, Warner and his associates formally taught computer applications to medicine at the University of Utah in the Department of Biophysics and Bioengineering within the School of Engineering. In 1972, the department was split in two and Warner directed one of the splits: the Department of Medical Biophysics and Computing in the School of Medicine. The department is internationally recognized for its contributions to computer applications in clinical care, medical education and research. The department has produced the largest group of medical informatics professionals educated at any institution in the United States. Warner served as director of the cardiovascular laboratory at LDS Hospital from 1954 to 1970 and was honored as Physician of the Year in 1985. In 1988, he was elected to senior membership in the Institute of Medicine of the National Academy of Sciences. He is the 1994 recipient of the Morris F. Collen Award of Excellence from the American College of Medical Informatics. Thanks to the hard work and vision of Dr. Homer Warner and his colleagues, Intermountain has an outstanding legacy on which to build all of its future information systems. In USA today exists Homer R. Warner award. The award was created by the Object Management Group (OMG), self described as "an international, open membership, not-for-profit computer industry consortium". It includes a $1000 prize, and is presented each year at the American Medical Informatics Association (AMIA). It is named for Warner. It is awarded for the paper that best describes approaches to improving computerized information acquisition, knowledge data acquisition and management, and experimental results documenting the value of these approaches.

WARREN J. JUDITH

Judith J. Warren, PhD, RN, BC, FAAN, FACMI recently retired from the University Kansas School of Nursing where she was the Christine A. Hartley Centennial Professor of Nursing, Director of the Graduate Program of Health Informatics, and Assistant Director of the Frontiers Heartland Institute of Clinical and Translational Research's Center for Biomedical Informatics. She developed, in partnership with Cerner Corporation, the Simulated E-hEalth Delivery System (SEEDS), adapting electronic health record software, to teach students how to analyze data from virtual patient case studies, simulations, and clinical experiences while developing informatics competencies. She is a member of the National Quality Forum's (NQF) Health Information Technology Advisory Committee and consults with NDNQI on moving their nursing quality indicators to the new format of eMeasures required by NQF for endorsement. She serves on the Content Committee and the Nursing Special Interest Group of the International Health Terminology Standards Development Organization (IHTSDO) which develops SNOMED CT. She is a member of the Quality and Safety Education for Nurses (QSEN) faculty. She is a former member of the National Committee on Vital and Health Statistics (NCVHS), co-chair of its Standards Subcommittee, and member of the Executive Subcommittee and Quality Subcommittee. Dr. Warren is the past co-chair of HL7's Patient Care Technical Committee. Dr. Warren is a Fellow in both the American Academy of Nursing and the American College of Medical Informatics. She has taught, published, and conducted research in nursing informatics since 1988.

WASCHULZIK THOMAS

Thomas Waschulzik studied Computer science at Technical University of Munich Germany, Besides Theoretical Medicine. He was Branch Manager at Carl Zeiss Imaging Solutions. He is Experienced in the field of management of system development projects with a focus on software topics. Areas of interest are development processes, Software Architecture, Image processing and analysis, Mechanical Engineering, Optics and electronics. His special management experience includes management of a subsidiary in consolidated, Start up, Restructuring, Relocation.

WASMUTH JAMES

James Wasmuth obtained his BSc in Biochemistry at Imperial College London and then moved to the University of York to complete an MRes degree in Bioinformatics. He undertook PhD studies at the University of Edinburgh, where he worked in parasite genomics. Dr. Wasmuth moved to Toronto to carry a postdoctoral fellowship at the Hospital for Sick Children for four years.

WEBER ALBERT

Dr Albert WEBER, a Swiss-born statistician, has played a key-role in the foundation of EFMI (European Federation for Medical Informatics) in 1976 in Copenhagen during a meeting held in WHO-EUR office. Albert Weber, as a member of WHO-EUROPE staff, played a key-role in the

definition of Europe for EFMI countries membership, that corresponded in 1975 to WHO European Region: it included "Eastern countries" as well as Israël. Furthermore, he attended MIE Conferences and Council meetings of EFMI where his advices were highly appreciated. EFMI accepted to follow WHO-EUR concepts that he promoted for the development of Health Informatics in Europe.

WEBER H. JENS

Jens H. Weber is a Professor of Software Engineering in the Faculty of Engineering, at the University of Victoria, British Columbia, Canada. He has an Adjunct Faculty appointment in the University's School of Health Information Science and is an Adjunct Professor at the University of British Columbia, Faculty of Medicine, Department of Family Practice. He is licensed as a practicing Professional Engineer (P.Eng.) in the province of British Columbia, Canada. Dr. Weber received his Ph.D. degree (summa cum laude) in Computer Science from the University of Paderborn, Germany (1999) and an MSc degree in Software

Engineering from the University of Dortmund, Germany (1994). He received the Ernst-Denert Award for Software Engineering in 2000. Dr. Weber has been an Industrial Research Fellow of the BC Innovation Council (formerly Advanced Systems Institute) since 2001. In 2005, he was appointed a Visiting Associate Professor in the Department of Family Practice at the University of British Columbia, Vancouver. He is a Fellow if the IBM Centre of Advanced Studies, a senior member of the IEEE Computer Society, a senior member of the Association for Computing Machinery (ACM) and a member of the American Medical Informatics Association (AMIA). Dr. Weber's research interests include security and privacy, data & knowledge engineering, quality assurance, certification and reengineering of software, with specific focus in biomedical applications and health information systems.

WEBER PATRICK

Patrick Weber graduated from Webster University Geneva in 1993 with the Masters in Health Care Management. He did his postgraduate in Nursing school University Hospital Lausanne.

At the moment he is representative of European Federation for Medical Informatics (EFMI) at International Medical Informatics Association (IMIA). His specialties are nursing informatics and medical informatics. He was vice president for IMIA, European Federation for Medical Informatics (EFMI), he was representing European Federation for Medical Informatics (EFMI) at International Medical Informatics Association IMIA, he also was president of the organizing committee, NI2016 association International Conference June 25 to 29 2016 at CICG Geneva, then Director, Nice Computing SA (2012-2014), Swiss representative IMIA NI (1993- 014); President European Federation for Medical Informatics (September 2012-September 2014); Vice president communications IMIA NI (2009- 2012).

WEINER ELIZABETH
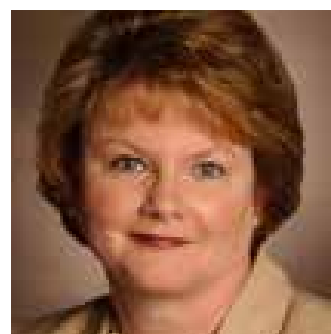
Elizabeth (Betsy) Weiner, RN-BC, PhD, FAAN, FACMI, received her Bachelor of Science in Nursing from the University of Kentucky, a Masters of Science in Nursing from the University of Cincinnati, and a PhD in Higher Edu-

cation, Social & Philosophical Studies, from the University of Kentucky. She joined the faculty of the University of Cincinnati College of Nursing and Health, and advanced through the academic ranks to full professor there. In 2000 she moved to Vanderbilt, where she was the Centennial Independence Professor of Nursing, Professor of Biomedical Informatics and Senior Associate Dean for Informatics in the School of Nursing. Dr Weiner has devoted her career to the development and evaluation of educational technologies for nursing. In the late 1980s, she received one of the initial IBM grants for innovative education. She and her collaborators created an award-winning informatics-based labor and delivery simulation. This program has changed the way that nursing students prepare for their clinical obstetrics experience; the videodisc has been employed in the curricula of 98% of the nursing schools in the country. At the University of Cincinnati she was Director of Academic Computing, and there developed an online course management software system called 'Classware' that preceded today's 'Blackboard' software. In recent years her work in educational technologies has been focused on emergency preparedness and response, and in this domain she and her colleagues received the 2007 Sigma Theta Tau Computer-based Professional Education Technology Award, signifying that the software they developed was the best in the nursing com-

munity worldwide for 2005–2007. Dr Weiner has worked with the Botswana Minister of Health and the University of Botswana to determine and meet educational needs for nurses as they expand their infrastructure to build a much needed private hospital. She has served as a WHO consultant to nurses in Jordan in the area of online learning in emergency preparedness.

WEINER MARK

Mark Weiner, MD, FACP, FACMI, has been appointed Assistant Dean of Informatics for Temple University School of Medicine, Professor of Clinical Sciences in the School of Medicine's Department of Clinical Sciences, and Chief Medical Information Officer (CMIO) for Temple University Health System (TUHS), effective January 1, 2014. In his role as Assistant Dean, Dr. Weiner will develop the infrastructure to facilitate access by Temple clinical investigators to large data sets available from regional and national clinical databases. In his role as CMIO, Dr. Weiner will work closely with TUHS administrative and clinical leadership on strategic planning, policy development and design and implementation of vital health information applications used in clinical settings throughout the Health System. He will be a key member of the leadership team overseeing implementation of the Epic inpatient Electronic Medical Record and clinical applications. In this role, Dr. Weiner will lead efforts to promote

clinical stakeholder engagement throughout the implementation to help Temple Health become a meaningful user of this technology and achieve measurable value in the form of improved services, enhanced clinical quality and more effective and efficient operations. Dr. Weiner comes to Temple from AstraZeneca Pharmaceuticals in Wilmington, DE, where he served as Senior Director of Research and Development Informatics. Board-certified in Internal Medicine, Mark has been an Associate Professor of Medicine in the Division of General Internal Medicine at the Perelman School of Medicine at the University of Pennsylvania, and an attending physician at the Hospital of the University of Pennsylvania. He also served as a Senior Fellow in the Leonard Davis Institute of Health Economics. In addition to Dr. Weiner's clinical experience, he brings to Temple considerable expertise in informatics, with past faculty and leadership appointments as the Director of Information Systems Integration for Research in the Office of Human Research of the University of Pennsylvania School of Medicine, the co-Chief of the Biostatistics and Informatics Core of the VA Center for Health Equity Research and Promotion and the co-Director of the Philadelphia VA Informatics Fellowship program. Dr. Weiner earned his MD from the Perelman School of Medicine at the University of Pennsylvania, and his BSE in Computer Science Engineering from the University of Pennsylvania's School of En-

gineering and Applied Science. He holds memberships in several professional and scientific national societies, including the American College of Physicians, the American Medical Informatics Association and the Society of General Internal Medicine.

WEINER MICHAEL

Michael S. Weiner is a graduate of the U.S. Naval Academy and attended medical school at the Philadelphia College of Osteopathic Medicine. He is a board certified Internal Medicine physician, an adjunct Professor at George Washington University in Health IT, holds a masters degree in Management and a masters degree in Information Systems Technology from George Washington University and is a Certified Professional in Healthcare Information and Management (CPHIMS), Dr Weiner has been certified as a Chief Information Officer (CIO) by the General Services Administration. Dr. Weiner is currently serving as the Director of Clinical Informatics and Chief Medical Information Officer for US Department of Defense and Veterans Administration Interagency Program Office. Prior to assuming his current position, Capt Weiner's experience

includes serving as the Deputy Program Manager (DPM) and Chief Medical Officer (CMO) for the Defense Health Information Management System (DHIMS), the Director of Information Technology Plans and Policy, the Director of IT Governance and Enterprise Architecture for the Chief Information Officer of Navy Medicine at the Bureau of Medicine and Surgery (BUMED). As a plank owner of the Navy Expeditionary Combat Command (NECC), CAPT Weiner served as the Senior Medical Officer to more than 200 medical departments supporting 40,000 sailors worldwide in support of ongoing military operations. In addition to leveraging IT capabilities within the healthcare arena to include voice recognition with the Navy Theater Electronic Medical Record and digitalizing healthcare records for contingency operations worldwide, his team also created and globally deployed "blow out injury" kits that provide Service Members immediate care during deployment at the point of injury. His team's medical work was praised by the House Appropriations Committee and has become the standard for many international forces. As the Director of Ambulatory Care at Yokosuka Naval Hospital in Japan, Capt Weiner brought significant business process transformation to Japan's busiest outpatient healthcare setting, resulting in unprecedented patient and clinician satisfaction. He is an active member of the American College of Physicians, the American

Osteopathic Association and the American Telemedicine Association, and is the military representative to the Philadelphia College of Osteopathic Medicine Alumni Board, as well as the DoD representative for Health and Human Services' Office of the National Coordinator, Health Information IT Policy Committee. He has received numerous awards and medals.

WEIR R. CHARLENE

Charlene R. Weir, PhD, FACMI, received her bachelors degree in Psychology and Bachelors in Nursing from the University of Utah, a Masters in Adult Health from the University of Texas, and a PhD in Social Psychology also from the University of Utah. She joined the faculty at Utah and is now an associate professor of Biomedical Informatics with a concurrent appointment at the Salt Lake City VA Medical Center. A major focus of her research has been the understanding of factors important to effective implementation of computerized provider order entry systems, particularly in the VA setting. This work ranges from qualitative studies that identify

perceived factors associated with success, to building predictive models of organizational and IT variables that quantitatively discriminate successful from non-successful adoption. Her research has also addressed the quality of electronic documentation and the extent to which copy and paste tools might be associated with documentation errors. Her background in Social Cognitive Psychology contributed to success in identifying factors associated with designing electronic health records systems that provide adequate cognitive support for sense-making and team coordination.

WEISS M. SHOLOM

Sholom M. Weiss received his PhD in computer science from Rutgers University in 1974. He is currently an associate research professor of computer science at Rutgers University and senior investigator in the medical modeling and decision-making group of the Rutgers Research Resource on Computers in Biomedicine. His current research interests include the development of generalized approaches to designing expert systems and the application of these systems to real-world problems in medicine and other.

WENG CHUNHUA
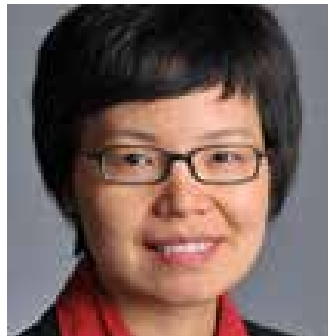
Chunhua Weng, PhD, FACMI, is an Associate Professor of Biomedical Informatics at Columbia University, where she has been a faculty member since 2007. Before arriving at Columbia, she obtained an undergraduate degree in computer science from Nankai University, China, a master's degree in Information and Computer Science from the University of California at Irvine, and a PhD in Biomedical and Health Informatics from the University of Washington at Seattle. Dr. Weng's research is focused on Clinical Research Informatics. By combining a broad range of methods for information retrieval, knowledge engineering, machine learning, and human factor studies, Dr. Weng's lab has contributed in-depth understandings of challenges for reusing EHR data to develop patient representations, novel techniques for developing patient representations from text, automated and semi-automated methods for populating these representations using text, and system designs to apply these representations to improve human workflow and information quality for clinical research processes. The impact of her work lies in both patient representations and methods, which are generalizable beyond clinical research. The National Library of Medicine, the Human Genome Research Institute, FDA, and the Patient-Centered Outcomes Research Institute have supported Dr. Weng's research. Also, Dr. Weng has received several signature awards from Columbia University, including an Irving Fellowship (2007–2010), a two-phase Collaborative and Multidisciplinary Pilot Research Award (CaMPR) (2008–2010), a Columbia University Diversity Research Fellowship (2009), and an Irving Scholarship (2010–2013). Dr. Weng was a finalist in the 2010 Microsoft Faculty Fellowship Award. Dr. Weng is also a member on the editorial boards for the Journal of Biomedical Informatics and has been a member on the scientific program committees for several annual informatics meetings.

WIESENTHAL ANDY

Andrew M. Wiesenthal, MD, SM has been with Deloitte since May 2010. From April 2000 until joining Deloitte, he was Associate Executive Director of the

Permanente Federation. There, his work was in the arenas of development and deployment of automated medical records, decision support, and other clinical systems for all of Kaiser Permanente. Most notably, he was the national physician leader for the Kaiser Permanente Health-Connect (electronic health record) project from its inception through its successful conclusion in 2010. From 1983 until April 2000, Dr. Wiesenthal served as a pediatrician and pediatric infectious diseases consultant with the Colorado Permanente Medical Group (CPMG). He also led CPMG's quality management program and served as Associate Medical Director for Medical Management, with responsibility for quality management, utilization management, regulatory compliance, risk management, credentialing and physician performance, and informatics. Since joining Deloitte, he has been a leader on numerous clinical information system projects, as well as health care delivery system strategy and improvement projects. He is a widely recognized health information technology leader. Dr. Wiesenthal graduated from Yale University with a BA degree with honors in Latin American Studies in 1971 and received his MD in 1975 from the State University of New York, Downstate Medical Center in Brooklyn. He completed his pediatric residency at the University of Colorado in 1978, and then he served as an Epidemic Intelligence Service Officer with the Centers for Disease Control

from 1978-1980 before returning to the University of Colorado for a pediatric infectious disease fellowship, which was completed in 1983. He is board certified in both general pediatrics and pediatric infectious diseases. In 2004, Dr. Wiesenthal earned an MS in Health Care Management from the Harvard School of Public Health.

WERLEY HELEN HARRIET

Harriet Helen Werley, PhD, RN, FAAN, FACMI, became the first nurse informatician even before the field had been named. In the late 1950s, as the first officially designated nurse researcher at the Walter Reed Army Institute of Research, Werley participated in conferences initiated by IBM to identify data processing needs in health care and the potential for computer applications. She brought to those conferences her understanding of nursing's need for data to study and improve clinical practice and health care delivery. In 1960, working with the American Nurses' Association Committee on Nursing Research and Studies to identify priorities for nursing research, she argued for a section in the report concerned with communication and decision making in nursing.As clinical informatics began to take hold in the 1970s, Werley foresaw the opportunity to reuse clinical data for research and management. Then on the faculty of the University of Illinois College of Nursing, in

1977 Werley collaborated with Margaret Grier to convene an invitational working conference of "individuals knowledgeable about and interested in identifying and computerizing data bases relevant to nursing care." As an expert on the potential uses of nursing data, Werley was the first nurse to serve on the Health Care Technology study section of the National Center for Health Services Research. During the same period, Werley became the founding editor, with Joyce Fitzpatrick, of Research in Nursing and Health. By 1985, Werley was a distinguished professor at the University of Wisconsin–Milwaukee. Impatient with the failure of most nurses to grasp the importance of standardized clinical data that could be aggregated and analyzed, Werley, in collaboration with Norma Lang, led efforts to establish a Nursing Minimum Data Set that would include, among other elements, nursing diagnoses, nursing interventions, nursing outcomes, and nursing intensity.Throughout the 1980s Werley was on the leadership committee of the nursing special interest group at SCAMC, the forerunner of the Nursing Informatics Working Group of AMIA. She also helped to establish the Council on Computer Applications in Nursing at the American Nurses Association. Werley became a Charter Fellow of the American Academy of Nursing in 1973. The American College of Medical Informatics elected her to fellowship in 1991. In 1994, the American Academy of Nursing designated Harriet

H. Werley a Living Legend, a status accorded only to those of the highest professional accomplishment. With advancing age, even Werley's energy began to flag, and she confided to colleagues that the 1995 AMIA Fall Symposium would probably be her last. Determined that the founder of nursing informatics would not retire from the field unremarked, the Nursing Informatics Working Group organized special recognition for Werley at the 1996 Fall Symposium and arranged for her to attend. The Werley Award for the paper that made the greatest contribution to nursing informatics was given for the first time, to Rita Zielstorff. Werley was honored at a luncheon and also received a President's Award at the 1996 Symposium. Werley's contributions to nursing research and to nursing informatics helped to shape those endeavors in the 20th Century. Those who knew her, however, will remember her at least as much for her generosity and her wit. The "first nurse" in many contexts.

WEST T. RICHARD

Richard T. West, MLS, FACMI, was IAIMS Program Officer and Acting Chief of International Programs at the National Library of Medicine. He received his BS degree in Psychology from American University and his MLS from the College of Library and Information Science at the University of Maryland. Mr. West came to the National Library of Medicine in 1970, where he served as program officer and Chief of the Office of Program Planning and Evaluation before taking responsibility for launching the Integrated Academic Information Management Systems (IAIMS) initiative. He steered the program from its early focus upon developing a new role for the library as a central node in the academic information network into a major force that nurtured development of integrated advanced information management systems to underpin integrated health delivery systems and new paradigms in research and education. In the process, he facilitated change efforts at biomedical institutions across the country, and he men-

tored investigators and administrators. Mr. West received the National Institutes of Health's (NIH) Merit Award and served as a member of the NIH Grants Associate Board.

WESTBROOK JOHANNA

Johanna Westbrook is Director of the Center for Health Systems and Safety Research (CHSSR), Australian Institute of Health Innovation (AIHI), Faculty of Medicine, University of New South Wales. Her research expertise centers on the design and execution of complex multi-method evaluations in the health sector with a particular focus on the effective use of information and communication technologies. The CHSSR is the largest health informatics evaluation research team in Australia and the team's work is highly competitive with international groups. Research areas have included the first and largest population study (n=55,000) of clinicians' use of online evidence and its integration into, and impact on, work practices and decision-making. This work showed that clinicians actively seek online evidence to support clinical care which was much disputed until this work.

Professor Westbrook has led research on measuring the impact of computerized pathology ordering systems on organizational efficiency and communication processes. Recent research includes major observational studies of health professionals' work and communication patterns (including interruptions and multi-tasking), and identification of contextual work factors which may disrupt effective and safe work. A product of this has been the design and testing of highly innovative work observational methods and electronic data collection tools. A further area of research expertise is medication safety. This body of work has included studies of the role of interruptions in increasing the risk of medication errors and the effectiveness of electronic medication management systems to reduce prescribing and medication administration errors in hospitals. Recent studies have also been conducted on the use of information technology in the aged care sector. Professor Westbrook has an extensive publication record which includes over 200 refereed publications. She has attracted in excess of \$26M in research funding and won several awards for her research.

WESTBROOKE LUCY

 Telehealth Programme ManagerLucy Westbrooke, telehealth programme manager for the Auckland DHB, has been involved in a project doing that for the nurses working for the Auckland Regional Public Health service. Amongst the work carried out by the public health nurses is monitoring patient adherence to medication treatments for notified diseases like tuberculosis. In some cases this monitoring involves 'directly observed therapy' (DOT) to ensure, for example, a full course of antibiotics is taken to prevent the risk of relapse or an increase in drug-resistant tuberculosis. So rather than sending public health nurses by car to battle Auckland's traffic – serving a region spread from Waiuku in the south to Wellsford in the north – the service looked to technology for an alternative way of delivering 'face-to-face' monitoring.Westbrooke says the first platform for remote monitoring was video telephones, but technology was moving rapidly

so after an early evaluation it quickly moved on to using a video app for electronic face-to-face DOTs or teleDOTs as they are now known. At first the app was used purely on computers and laptops but then it downsized so mobile devices as smartphones and tablets could produce the good quality images needed to ensure a patient was taking their medication. They addressed the digital divide – clients without their own computer and broadband connection or a mobile device with plenty of data – by supplying them with iPads and 3G cards.Finding the right app was not as straightforward as downloading Skype or FaceTime to a device because of the need to ensure a secure private connection for clients and patient data was not stored offshore. So they are using a New Zealand-hosted video conference provider rather than one using cloud storage. Westbrooke says the DHB is now talking to the community long-term conditions directorate about using similar telehealth technology to support other services including hospice and community palliative care and linking its mental health sites. She says video calls also have great potential for supporting people doing home dialysis as you can help someone having problems by saying 'just look to your right and you will see the button you need to push'.

WESTERINK JOYCE

Joyce Westerink (1960-) was originally trained as a physicist and afterwards expanded her horizon towards human-technology. She is affiliated with Philips Research (NL), where her research focuses on psychological topics in a technological context, such as visual perception & image quality, human factors & user interfaces, and more recently psychophysiology in the context of emotions, wellbeing and affective computing. She currently holds a chair on Wellbeing and Psychophysiology in Human-Technology Interaction at Eindhoven University of Technology. Written output of her work can be found in some 40 articles in books and international journals, and some15 US patents and patent applications.Currently she works at Philips Research and Eindhoven University of Technology (TU/e) Netherlands

WESTRA BONNIE

Bonnie Westra, PhD, RN, FAAN, FACMI, Associate Professor and Director, Center for Nursing Informatics, at the University of Minnesota School of Nursing. Dr. Westra is also a member of the Institute for Health Informatics and works to improve the exchange and use of electronic health data. Her interest is the importance of including nursing data in big data science. The Center for Nursing Informatics's goal is to lead the discovery, application, and cutting edge thinking for nursing and health informatics scholarship to improve the health of individuals and communities. Nurses and the field of nursing make major contributions to health care, as a profession, to do a better job of making nursing data more useful for research purposes. Through the Nursing Knowledge Big Data Science initiative, Bonnie seeks opportunities to standardize and integrate the information nurses gather in electronic health records (EHRs) and other health information technologies. This data is the source of insights and evidence used to prevent, diagnose, treat and evaluate health conditions.

The addition of rich contextual data about patients and nursing care will help to develop actionable predictive models that can increase the confidence of nursing leaders' decisions to improve patient outcomes and safety and control costs. The key element is having nurses involved in health information policy so that nursing data is included in clinical data warehouses for analytics and research. When thinking about big data, most people consider the volume, or amount of data. But also it is need to think about its velocity, or the rate at which data accumulates. Variety is another hallmark of big data. In health care, that can include structured or semi-structured nursing documentation, data from monitoring devices and imaging studies, scheduling and human resource data, and patient-generated data. Big data science has been defined by the National Consortium for Data Science as the systematic study of the organization and use of digital data to accelerate discovery, improve critical decision-making processes and enable a data-driven economy. It encompasses the principled acquisition, curation, exploration, manipulation and interpretation of big data sets.

WETTER THOMAS

Thomas Weter (1953-) is Professor and Deputy Director of Department of Medical Informatics at University of Heidelberg, Germany.. He has got his post-doctoral degree in Informatics of University of Kaiserslautern: Formal foundations of the KADS knowledge engineering methodology (1976-1984) at Aachen Technical University, Department of Medical Biometry and Informatics, Department of Physiology. He is member of AMIA, GMDS (German Association for Medical Biometry, Informatics and Epidemiology), GI (German Informatics Association), Representative of Heidelberg University at IMIA, Program Committee Member of the Colloquium 'Scientific Foundations of Medicine' (Wissenschaftlichkeit in der Medizin) of the School of Medicine of Heidelberg University. His research interests include: Medical expert systems, Software quality Integrating guidelines into clinical practice, Knowledge based quality assurance, Case based reasoning, Speech recognition, Prevention and consumer health, Clinical partners in neonatology, endocrinology, clinical pharmacology, general practice.

WHATLING JUSTIN

Justin Whatling is Vice President Population Health, Cerner, UK. Dr Justin Whatling leads Cerner's European Advisory Practice responsible for performance improvement and population health management. He is Health Chair at BCS, The Chartered Institute for IT; visiting professor at University College London in the Centre for Health Informatics and Multiprofessional Education (CHIME); non-executive director of the BMJ Publishing Group; and steering group member of Health and Care Infrastructure Research and Innovation Council (HaCIRIC).

WHITE JON

Jon White, MD, Deputy National Coordinator, is a family physician who has dedicated his career to improving health and health care quality through the use and sharing of electronic health information. Dr. White has been working in partnership with the Office of the National Coordinator for Health Information Technology (ONC) since 2004. ONC is at the forefront of the nation's efforts to adopt and meaningfully use health information technology, and achieve health information technology interoperability, as a foundational element of better health for everyone in America. Before his service at ONC, Dr. White was Director of the Division of Health IT at the Agency for Healthcare Research and Quality (AHRQ), where he continues to provide consultation on select initiatives. In his role at AHRQ, Dr. White directed hundreds of projects in 48 States, including research, demonstration and implementation projects on a wide variety of health IT applications and issues. Dr. White has deep experience working with federal government partners (including the Centers for Medicare and Medicaid Services and the Department of Veterans Affairs), as well as key health care professional, patient, policy, and health IT stakeholder groups to implement major health care initiatives. Dr. White trained in family medicine at the University of Virginia and Lancaster General Hospital in Pennsylvania. He is a recipient of the national AAFP Award for Excellence in Graduate Education.

WIGTON S. ROBERT
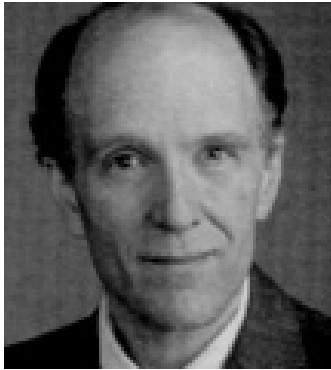
Robert S. Wigton, MD, FACMI, is Professor of Medicine at the University of Nebraska Medical Center and is Associate Dean for Academic Affairs and Graduate Medical Education. For the past 6 years he has directed a yearly national symposium on computers in medical education at the University of Nebraska. He is founder and coordinator of the joint computer users group of the Society of General Internal Medicine and the Society for Medical Decision Making. He has performed several studies comparing online bibliographic searching systems and has written and conducted workshops and seminars on that topic. He has also played a key role in clinical projects that use COSTAR in preventive ambulatory care.

WHITEHOUSE DIANE

Diane Whitehouse has eight years applied practical experience high-level European policy development, including eHealth interoperability. In her earlier career, Diane worked in the domains of action research, civic and human rights, publishing, and academia. As a social scientist, her work focused on the social, organizational, and ethical aspects of information and communications technologies (ICT) and, most recently, ICT for health. She has co-written and co-edited 5 books and some 50 articles. Her early academic research related to ICT introduction into the UK university sector, and an investigation of organizational change in professional settings. Her work in association with the International Federation for Information Processing (IFIP) has been recognized twice: an outstanding services award (1997); and a silver core award (2007). Diane is an eHealth expert with the European Health Telematics Association (EHTEL). She is currently involved with the Momentum and Engaged thematic networks. She has contributed toEHTEL Connect's series of peer review and study visits to e.g. Denmark and Fin-

land. More generally, Diane leads the International Federation for Information Processing's work on ICT and Society by chairing its technical committee 9 and its working group 9.2 on social accountability and computing.

WHITLINGER DAVE

Dave Whitlinger is Executive Director, New York eHealth Collaborative, NYC. As Executive Director, Dave has overall responsibility for the New York eHealth Collaborative, a non-profit organization promoting health information technology that ensures fast, secure, accurate access to patient data across New York State. Previously, Dave served as the Director of Healthcare Device Standards and Interoperability for the Intel Corporation in its Digital Health Group, responsible for healthcare device interoperability strategies and standards development. He led a cross-industry consortium, the Continua Health Alliance, focused on the establishment of an ecosystem of interoperable, personal telehealth systems. He also served on the Bluetooth SIG Board of Directors for several years. Dave is the author of five research journal articles, four of

which focused on breast cancer DNA analysis.

WICHERT REINER

Reiner Wichert is head of the Fraunhofer Alliance AAL and coordinating 11 Fraunhofer Institutes in this area. He is an active member of Action Group C2 of EIP-AHA. He was the co-ordinator of the large scale pilot project ReAAL which will enable the Roll-out for the open service platform universAAL with 7000 users in real life. Additionally he is Vice Chairman of IEC System Committee Active Assisted Living (SyC AAL). Wichert is editor of 18 books and associate editor / advisory board member of different journals (CiE, JAISE, IJACI, JoRIE) and was organizer of more than 30 conferences.

WIEDERHOLD GIOVANNI

Giovanni "Gio" Corrado Melchiore Wiederhold, PhD, (1936-) is an Italian-born computer scientist who spent most of his career at Stanford University. His research focuses on the design of large-scale database management systems, the protection of their content, often using knowledge-based techniques. After his formal retirement (2001) he focused on valuation methods for intellectual property and intellectual capital. He worked on computations of short-range missile trajectories at NATO's Air Defense Technical Center (SADTC) in Wassenaar near The Hague in 1958. From 1958 to 1961 he worked at IBM's service bureau. Project at IBM included developing numerical methods for computing the power (specific impulse) of solid rocket fuel combustion in 1959, and inserting alphabetic I/O capability into FORTRAN compilers to allow output of chemical equations in 1960. In 1962 at the University of California, Berkeley he developed an incremental compiling technology, with a flexibility close to interpreted code, while running at high speed. He also

took course work at UC Berkeley. In 1965 he developed similar techniques for the Stanford University Medical School. The next year he worked on real-time data-acquisition control and data analysis using coupled computers for clinical research, and in 1970 transposed storage for databases for very-high speed on-line analytical processing, also at the medical school. From 1973 through 1976 he did graduate work at the University of California, San Francisco, with his PhD thesis titled "A Methodology for the Design of Medical Database Systems". An extensive study of computerized ambulatory health care systems, appeared as an appendix to his dissertation. In 1976 Wiederhold joined the faculty of Stanford University. He integrated knowledge base technology exploiting artificial intelligence concepts to provide intelligent and efficient access to databases which he called KBMS. He authored a text book on quantitative aspects of database management systems, first published by McGraw-Hill in 1977, and expanded version in 2001. He also published a book on file organization for databases in 1987. From 1991 through 1994 Wiederhold served as a program manager at the Defense Advanced Research Projects Agency (DARPA). He initiated the DARPA Intelligent Integration of Information program. A visible component is the Digital Library effort, which was delegated to National Science Foundation; the research has opened up new Internet application fields, and

funded projects such as Google His articles on the data semantic interoperability are at the origin of the modern service-oriented architecture and the success of XML. He was named a fellow of the American College of Medical Informatics in 1984, a fellow of the Institute of Electrical and Electronics Engineers in 1991, and fellow of the Association for Computing Machinery (ACM) in 1995. Wiederhold's career included: Rapid presentation of database information for personal computing at VisiCorp (1982). Model-based transformation of relational database information into object-oriented representations (1986). The architectural concepts leading to mediators (1990). The development of a very-high-level Megaprogramming language for software composition in 1992. A means to protect outgoing private information in practical databases used for collaboration in 1995. Means to integrate projections into the future into information systems - SimQL in 1996. An approach to scalable semantic interoperation via an ontology algebra in 1998. A method to value software intangibles based on balancing initial and maintenance efforts to allocate income in 2005. He authored and coauthored more than 400 published papers and reports on computing and medicine and served as the associate editor or editor-in-chief of ACM's Transactions on Database Systems (TODS) from 1982 to 1992. Major books were Database Design, McGraw-Hill, 1977 and 1982 and Valuing Intellectual Capital, Springer 2013.

WIGERTZ B. OVE

Ove B. Wigertz, DSc, DmedSc, FACMI, is professor emeritus and former chairman of the Department. of Medical Informatics at both the Health Science Faculty and the Engineering School Faculty at Linköping University, Sweden. He was elected Fellow (Foreign Associate) to the American College of Medical Informatics (ACMI) in 1997. He received a Master of Electrical Engineering degree in 1960 and a Doctor of Science degree in Automatic Control (incl. computer simulation) in 1963 from the Royal Institute of Technology, Stockholm. He also received a Doctor of Medical Science degree in Physiology (Work Physiology) in 1971 from Karolinska Institutet, Stockholm. Dr. Wigertz has held positions as teacher, research associate and associate professor at the Royal Institute of Technology, Stockholm, and at Karolinska Institutet, Stockholm, until his move to Linköping University in January. 1973 to set up one of the first Departments of Medical Informatics in Europe. Other commissions have been as Chairman of the Swedish Association of Academic Professors (1991-1994), Chairman of the Department. of Biomedical Engineering, Linköping University, Linköping (1993-1996), Chairman of the Swedish Society of Biomedical Physics and Engineering. (1975-1977) and Chairman of the Swedish Society of Medical Informatics (1978-1981). He has served as a member of the Editorial Boards of "Methods of Information in Medicine", "Computers and Biomedical Research" and "Technology and Health Care". He has been Co-editor of the Proceedings of MEDINFO 83 in Amsterdam in August 1983, and Organizing Committee Chairman of the Conference "Computers in Cardiology 1985" at Linköping University. He was Visiting Professor at Tokyo University in 1985 and at the University of Utah in 1986-1987. During the stay in University of Utah he participated actively in the early discussions to create the Arden Syntax for Computerbased Medical Decision Making. Dr. Wigertz has done considerable basic and applied research in Biomedical Engineering and Instrumentation, Cardiovascular and Work Physiology and in several Medical Informatics fields including Knowledge Based Representation, Knowledge Based Systems and Controlled Vocabularies. He is author and co-author of 235 publications. In 1967 Dr. Wigertz received the annual Erna Ebeling Fund Prize from the Swedish Society of Medical Sciences for achievement in the design and development of instruments

and systems for physiological research.

WILCOX ADAM

Adam Wilcox, PhD, is the Director of Medical Informatics at Intermountain Healthcare. He has spent over 15 years in clinical informatics and clinical research informatics, much of that in supporting comparative effectiveness and patient-centered outcomes research. At Intermountain, he leads efforts in applying health information technology to quality improvement processes, supports health IT applications to primary care, and leads Intermountain's clinical decision support efforts. He also directs Intermountain's analytic health repository, where he leads the development of a more research-accessible database extracted from electronic health records. Prior to his return to Intermountain, he was an associate professor in the Department of Biomedical Informatics at Columbia University, where he was the initial principal investigator for the Washington Heights/Inwood Informatics Infrastructure for Comparative Effectiveness Research (WICER) project. He

also directed the clinical data warehouse, the clinical data repository and legacy electronic health record, a local health information exchange, and the informatics support for the Herbert Irving Comprehensive Cancer Center. He has broad experience in both applied and research informatics, and was the creator and director of the Research Methods in Informatics course at Columbia University. In 2015, Dr. Wilcox was appointed a member of the PCORI Methodology Committee. He is an elected fellow of the American College of Medical Informatics, is a senior editor for eGEMs, and serves on the Clinical Informatics Subcommittee for the American Board of Preventive Medicine, which administers the board examination for the clinical informatics subspecialty. He has authored over 100 book chapters, peer-reviewed articles and abstracts, and has presented at conferences and institutions across the country.

WILBUR W. JOHN
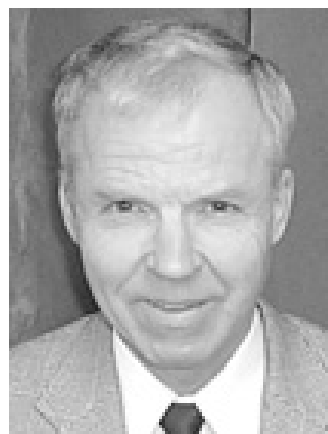
John W. Wilbur, MD, PhD, FACMI, is a Senior Scientist in the Computational Biology Branch of the National Center for Biotechnology Information. He is a principal investigator leading a research group in the study and development of statistical text processing algorithms. He obtained a PhD in pure mathematics from the University of California at Davis and an MD from Loma Linda University. He completed residency training in internal medicine at UCD-Sacramento and a fellowship in computational biology at the National Institute National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health. He is board certified in internal medicine. While both were fellows at the Mathematical Research Branch of NIADDK, Dr. Wilbur and Dr. Lipman developed the first rapid search technique for discovering similarities between DNA sequences and sequence homologies between proteins. On completion of his fellowship,

Dr. Wilbur practiced medicine for five years, during which time he developed software to produce discharge instructions for patients. Shortly after the founding of NCBI, he joined NCBI as a research scientist. While at NCBI, Dr. Wilbur has developed the algorithm that produces PubMed related documents and the algorithm that in PubMed allows fuzzy phrase matching. Most recently, he is the author of algorithms for phrase identification in natural language text that are used in NCBI's electronic textbook project and allow for easy reference from medline documents to related textbook material. Dr. Wilbur attended the University of California at Davis on a University Fellowship and is a full member of Sigma Xi. He received the President's Award and the Student Investigator of the Year Award from Loma Linda University. He is a member of Alpha Omega Alpha. He is also the author of more than 50 papers in pure and applied mathematics.

WILLEMS JOS

Jos L. Willems (1939-1994) is a professor of Medical Informatics, University of Leuven in

Belgium. Jos Willems, accepted the position of IMIA President Elect at MEDINFO '86 and served through MEDINFO '92 in Geneva, Switzerland. Leaving his office of president, Willems recalled the social activities of the Board with great pleasure and credited IMIA with broadening his professional horizons "as a result of the many international contacts in different continents." He has published more than 50 articles for many worldy renounced publications..

WILLIAMS S. MARC

Marc S. Williams, MD, FACMI, graduated medicine at University of Wisconsin-Madison in 1981. He is Director of Genomic Medicine Institute in Danville, PA. His research focus is in: Genetics, Genomics, Health Information Technology, Health Services, Comparative Effectiveness; and expertise in: Application of genetics/genomics in clinical care, Use of information technology for point-of-care education nd clinical decision support, dissemination and Implementation Science, Quality Improvement, Economics of health care deliv-

ery. His research interests are: to study the impact of implementing genetics; genomics and family history in routine clinical care. Successful implementation requires the application of many disparate elements including technology assessment, modeling and decision analysis, the science of behavioral change, quality improvement, knowledge management, informatics, health care economics and patient-centered outcomes all of which are components of the emerging discipline of implementation science. He is also very interested in defining the value proposition of new genomic technologies with value being simplistically represented as outcomes/cost. His research to date has examined the impact of family history on provider experience; the role of informatics to provide point-of-care, "just-in-time" education resources and passive decision support to clinicians regarding genetic topics; impact of tumor-based screening for Lynch syndrome (including extensive modeling to optimize the efficiency of the program); use of query tools to obtain information on genetic conditions from electronic data warehouses; and application of the tools of quality improvement to facilitate implementation of evidence-based best practices in genetics and genomics. He is now beginning to explore how it could be get information from patients about their preferences including an assessment of the patient's location on the State of Change continuum and use

those preferences to reconcile priorities regarding preventive and therapeutic interventions with the patient's provider to see if that will improve satisfaction for both and increase compliance with recommendations leading to measurable improvement in outcomes and improved value.

WILSON PETRA

Petra Wilson is CEO. International Diabetes Federation, Belgium. As CEO of IDF, Petra oversees the implication of the IDF Strategic Plan to represent the interests of the growing number of People with Diabetes and those at risk. Prior to this, Petra was Director of the european Healthcare and Life Sciences Team in Cisco´s Consulting Services, Deputy Director of the European Health Management Association (EHMA) and has worked for the european Commission in ist eHealth Directorate. with a Ph.D. in public health law from Oxford University, she has published widely on the legal aspects of using Information technologies in healthcare.

WINGERT FRIEDRICH

Friedrich Wingert (1939-1988) was an internationally renowned-scientist in the field of medical computer science and bio-mathematics. From 1959 to 1969 he studied mathematics and medicine at the University Frankfurt/Main (now Goethe University Frankfurt) and Technische Hochschule Darmstadt (now Technical University Darmstadt), promoted 1969 and from 1969 to 1970 scientific collaborator at the German Computing Center in Darmstadt. From 1971 scientist at the Department of Medical Informatics, Hannover Medical School with habilitation for biomathematics and medical informatics. From 1971 to 1973 he was senior assistant at the Department of Medical Informatics, Hannover Medical School, in 1973 Visiting Associate, Division of Computer Research and Technology, National Institutes of Health, Bethesda, Md. From 1973 he is full professor for Medical informatics and documentation and director of the Institute for Medical Informatics and Biomathematics at the Münster University (Westfälische Wilhelms-Universität in Münster). Friedrich Wingert adapted the "Systematic Nomenclature of Medicine" (SNOMED) for the German-speaking countries and developed them further. He has focused particularly on basic theories and algorithms of medical linguistics and decisively influenced the methods for computer-aided analysis of medical plan texts. The Friedrich-Wing-

ert Foundation annually awards a prize for outstanding linguistic and semantic approaches for the optimization of medical care in Germany. Friedrich He had written first Medical informatics book: Friedrich Wingert: Medizinische Informatik, B. G. Teubner Verlag, Stuttgart 1979, 272p.- "a book about problems and methods in medical informatics for physicians, students of medicine and informatics and other people who are interesting for processing data in medicine".

WIN-JONES EMYR

Emyr Wyn-Jones, MB, ChB, DM, FRCP, is Consultant Physician, Medical Director, Deputy Chief Executive. Dr. Emyr qualified MB ChB from Liverpool University Medical School in 1973. He went on to obtain his MRCP (UK) in 1978, DM (Nottingham) in 1987, and FRCP (London) in 1992. His current appointment is as Consultant General Physician with a special interest in Diabetes and Endocrinology to the Doncaster and Bassetlaw Hospitals NHS Foundation Trust. He maintains an active clinical practice in diabetes, with consultant responsibility for the diabetic clinic at the Montagu Hospital, Mexborough, South Yorkshire. He is a member of the Doncaster and Bassetlaw Diabetes NSF Implementation team and also a member of both the Doncaster and the Bassetlaw Diabetes Service Advisory Groups. Dr. Jones was District Clinical Tutor for Doncaster and secretary of the Doncaster Postgraduate Medical Federation. He

led for the Trust in the successful negotiations with the University of Sheffield which led to the Trust being recognised as an Associate Teaching Hospital of the Sheffield School of Medical and Biomedical Studies. In September 1998, after eight years as Clinical Director of the Medical Directorate, Dr. Jones was appointed Medical Director of the Doncaster Royal and Montagu Hospital NHS Trust, becoming a full Executive Member of the Trust Board. In April 2001, following the completion of the trust merger process, Dr Jones was appointed Medical Director of the new Doncaster and Bassetlaw Hospitals NHS Trust. In 2004, after achieving "3 stars" each year for three consecutive years in the Government's performance rating system, the Trust became one of the first acute trusts to be awarded Foundation Trust status. He is responsible for producing regular Clinical Governance reports for the Trust Board of Directors and edits the Trust's Clinical Governance Bulletin. He is Caldicott Guardian, with executive responsibility for patient records and confidentiality of patient identifiable information and is chair of the Information Governance group. Dr. Jones is chair of the Doncaster and Bassetlaw Cancer Locality Forum and a member of the Cancer Management Team of the Trust, responsible for overseeing the work of the Doncaster-Bassetlaw Cancer Unit. In 2005, Dr. Jones was elected, after a ballot of all Caldicott Guardians of acute trusts in the United Kingdom to become a founding member

of the UK Council of Caldicott Guardians which is supported by the NHS "Connecting for Health" programme. He has been a member of the BAMM Clinical Cardiology Network Group and the BAMM Cancer Network Group. Dr. Jones was BAMM representative on the Department of Health's working group "Tariff Scope and Structure" looking at implementation of the policy on Payment by Results. He also represented BAMM on the National Leadership Network for Health and Social Care's "Local Hospitals Project" (which resulted in publication of "Strengthening Local Services: the future of the acute hospital"). Dr Jones has recently been a member of the Department of Health's working party on "Tackling Concerns Locally"- looking at the implementation of the new arrangements for regulation of the medical and other clinical professions. Dr Emyr also served as vice-chair and chir the British Association of Medical Managers BAMM (2008-2010). Jones was Consultant Physician for twenty four years at Doncaster Royal Infirmary and the Montagu Hospital in South Yorkshire. For twelve years, he was also Medical Director and Deputy Chief Executive of the Doncaster and Bassetlaw Hospitals NHS Foundation Trust. He was Caldicott Guardian for the Trust, responsible for ensuring the confidentiality and security of patient identifiable information. He chaired the Trust's Information Governance Committee, which produced the annual report for the Board on

performance against Information Governance Toolkit standards. He was elected Chair of the UK Council of Caldicott Guardians in 2008–a post he held until March 2010. Since April 2010, following retirement from Doncaster, Dr. Jones has been Clinical Lead for National Implementation of Summary Care Records in England, currently working for the Health and Social Care Information Centre.

WINTER ALFRED

Alfred Winter (1959-) is a professor for Medical informatics at the Institute of Medical Informatics, Statistics, and Epidemilogy of the University of Leipzig, Germany. He studied informatics at the Technical University in Aachen, Germany, and received his PhD and a license for lecturing (German "Habilitation") for medical informatics from the Faculty of Theoretical Medicine at the University of Heidelberg. His research focuses on methods and modeling tools for the management of Hospital information systems. He teaches information management in hospitals in a medical informatics course at Leipzig University. He is active in co-ordinated strategic information management at Leipzig University Hospital

and Leipzig University Medical Faculty. He is member of the board of the German Association of Medical Informatics, Biometry and Epidemiology (GMDS) and EFMI Board member (from 2014 he served as EFMI Secretary) of the European Federation for Medical Informatics.

WISE B. PATRICIA

Patricia B. Wise is Vice President of HIMSS, a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology. At HIMSS, Wise is responsible for directing initiatives that drive the quality, efficiency, effectiveness and safety of patient care through various tools and resources. Specifically, she oversees committees and task forces including Ambulatory Information Systems, Enterprise Information Systems, Personal Health Record Information Systems, Financial Information Systems, Patient Safety and Quality Outcomes, Health Information Exchange, Electronic Health Record Association and the Davies Award Program. Wise works closely with

the HIMSS Physician Community and Plug In! She joined HIMSS in 2002 as the Director of HIMSS EHR Initiatives and member of the HIMSS Industry Affairs Department and was promoted to her current position in 2005.

WITKAMP LEONARD

Leonard Witkamp is a former dermatologist and director KSYOS TeleMedical Centre, a health institution in The Netherlands. KSYOS' mission is to maintain accessibility of the healthcare system by efficiency increase. KSYOS develops, investigates and implements Tele-Medicine services that increase efficiency of healthcare. KSYOS has performed over 230.000 Tele-Consultations with over 3.500 general practitioners.

WONG POR CHUN

Chun Por Wong is the Chairman of the Clinical Informatics Program Executive Group of the

Hong Kong Hospital Authority. He is also the Past President of the Asia Pacific Association for Medical Informatics (APAMI) and currently Chairman of the Hong Kong Society of Medical Informatics, which he founded in 1985. He has been active in the International Medical Informatics Association since 1989. He is also a member of the Editorial Board of the International Journal of Medical Informatics and the Asia Pacific electronic Journal of Health Informatics. He is one of the co-founders of the eHealth Consortium in Hong Kong.

WOOLMAN PAUL

Paul Woolman (1957-) is a health informatics consultant and is the UK representative on the International Medical Informatics Association. He is currently working as manager of the Information Services department in NHS Forth Valley and with Edinburgh University working on a new Masters program in Global eHealth. Previously he worked in Scottish Government, the NHS and academia. He is a fellow of the BCS, The Chartered Institute for IT. Paul is on the board of several companies. He is an expert in interoperability and informatics

standards. He has been elected by the BCS Health Community to represent BCS as the UK's IMIA representative. Formerly he was an Enterprise Architect for the Scottish Government eHealth Directorate specialising in information and interoperability aspects of healthcare IT. He is also a course leader in a Masters in Health Informatics and Honorary Senior Lecturer at Edinburgh University working on a new Masters in Global eHealth. He is an active reviewer and evaluator for EU wide research projects for the European Commission. He has advised other countries on Health Informatics policies and speaks at international conferences. Back home in Scotland he organizes 'Health Informatics Scotland' a successful annual conference run by BCS Health Scotland. He chaired and is on the board of the UK Faculty of Health Informatics. Before being an NHS manager Paul had a research and development career as a clinical scientist and medical engineer leading several European wide research projects. Paul has over 60 publications and conference presentations from more than twenty five years experience. For twenty years he has been involved in developing international standards in health informatics within ISO, CEN and HL7 standards bodies involving extensive international collaborations. Paul has a PhD in medical imaging, is a Chartered Engineer and IT Professional. He is a Fellow of BCS and formerly Chair of the Health Scotland group and

was actively involved in the BCS Health Executive at that time.

WOOTTON RICHARD

Richard Wootton is professor and the director of research at the Centre for Online Health (COH), University of Queensland, Australia. The COH is exploring the role of new technologies in medicine, with a view to obtaining quantitative evidence of cost-effectiveness in health care delivery, training and education. Professor Wootton is running a research trial of a novel telepaediatric service, which is being delivered to various hospitals in Queensland - preliminary results are most encouraging and demonstrate substantial patient travel savings for the health care provider. The work is funded by a commonwealth grant of over $1M. In 2002, Professor Wootton organized a conference on a novel theme, Successes and Failures in Telehealth. This has since become an annual event. He is a regular invited speaker at telemedicine conferences around the world. He was a Visiting Scholar at the Health Telematics Unit at the University of Calgary in 2002. Professor Wootton has published about 160 articles in peer-reviewed journals, of which over 60 relate to telemedicine and telehealth. He established a series of textbooks on telemedicine, published by Royal Society of Medicine Press, of which the latest Telepsychiatry and e-Mental Health (eds. Wootton, Yellowlees & McLaren) was published in January 2003.

Professor Wootton is the Editor of the Journal of Telemedicine and Telecare, an international peer-reviewed journal. He was the founder chairman of the UK's academic Telemedicine and e-Health Section of the Royal Society of Medicine and was the government's representative to the G8 telemedicine project.

WOLF FRED

Fred Wolf, PhD, FACMI, received his bachelors degree in Political Science from the University of Wisconsin, a Masters in Education and a PhD in Educational Psychology and Evaluation and Measurement from Kent State University. He began his academic career as a clinical assistant professor in Pediatrics and research associate in the Division of Research and Evaluation in Medical Education at Ohio State University. He then joined the Department of Postgraduate Medicine and Health Professions Education at the University of Michigan, rising to full Professor there. After fifteen years in Michigan he moved to the University of Washington as professor and chair of the Department of Medical Education

and Biomedical Informatics, and adjunct professor in the Departments of Health Services and Epidemiology. Dr. Wolf's research bridges informatics and medical education, including clinical reasoning, decision making, and judgment under uncertainty. He has also made important contributions in understanding the dissemination and evaluation of new technology such as decision support systems, and in the area of evidence-based medicine, systematic reviews and meta-analysis of educational and healthcare interventions, including comparative effectiveness research and training. At the time of his election he had published more than 150 papers, participated in a variety of journal editorial boards, and mentored 15 MS/PhD/postdoctoral students. Dr. Wolf authored a widely used textbook on Meta-analysis, and led several meta-analyses and Cochrane systematic reviews that have been are highly cited, including reviews on medical continuing education programs and asthma self-management.

WOLFSON OURI

Ouri Wolfson is a Professor at The University of Illinois, Chi-

cago. He received his BA degree in mathematics, and his PhD degree in computer science from Courant Institute of Mathematical Sciences, New York University. He is currently the Richard and Loan Hill Professor of Computer Science at the University of Illinois at Chicago, and an Affiliate Professor in the Department of Computer Science at the University of Illinois at Urbana Champaign. He is the founder of Mobitrac, a high-tech startup that was acquired by Fluensee Co. in 2006; and the founder and president of Pirouette Software Inc. which specializes in mobile data management. He served as a consultant to Argonne National Laboratory, US Army Research Laboratories, DARPA, and NASA. Before joining the University of Illinois he has been on the computer science faculty at the Technion and Columbia University, and a Member of Technical Staff at Bell Laboratories. Dr. Wolfson's main research interests are in database systems, distributed systems, and mobile/pervasive computing.

WRIGHT ADAM

Adam Wright, BS, PhD, FACMI, is an Associate Professor of Medicine at Harvard Mediscal School and a Senior Scientist in the Division of General Medicine at Brigham and Women's Hospital. He earned BS in Mathematical and Computational Sciences in 2004 and PhD at Oregon Health and Sciences University in 2007. Wright's research interests include electronic

health records, clinical decision support and data mining. He is principal investigator of several NIH-funded studies focused on making electronic health records smarter, safer and more usable. In addition to research, Adam directs the introductory biomedical informatics courses at Harvard and teaches clinical epidemiology and healthcare policy to medical students. Adam has a PhD in Medical Informatics from from Oregon Health and Science University, and a BS in Mathematical and Computational Sciences from Stanford University.

WRIGHT GRAHAM
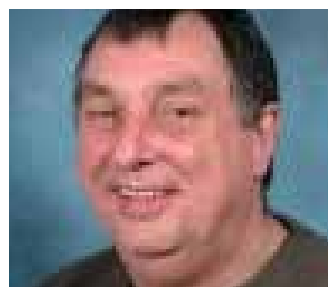
Graham Wright is Professor and former Director at CHIRAD. He graduated Nursing in 1974 at Whiston Hospital Nurse training School of University of London. MPhil he became in 1987 at The Manchester Metropolitan University and MBA in 1992 at University of Central Lancashire. From June 2009 till April 2014 he was Research professor at the Faculty of Health Sciences of Walter Sisulu University. Currently he is researcher of CHIRAD from May 2014 to present. He was director of CHIRAD from 2000 to 2011. As

UK representative in IMIA he was active as chair of Open Source Working Group from 2006 till 2010. He was chair of HIF of British Computer Society from July 2007 till October 2009 and MSc Program director of University of Winchester from 2001 till 2009 for MSc Health Informatics Program. From 2004 to 2009 he participated as General Practitioner educator in NHS Severn Deanery, and also as Postgraduated Clinical GP Tutor. Prof Graham was director of Education and Professional Training School of European Institute of Health and Medical Sciences from 1996 till 2000. He managed undergraduate education, professional training, led academic subject group of management and informatics. He was Honorary Fellow at Health Service Management Unit during period 1982 – 1998 in the field: Health Informatics education and research, lead on Nursing Informatics. Prof Graham worked as Senior Managing Consultant in Grenhalgh Company Limited from 1990 – 1996 where Managed training division. He is author of: "Capacitating Technicians to Use Problem Based Learning as a Preferred Teaching Methodology" published by Walter Sisulu University, He was included in Projects: "Time Motion Study Tool (October 2013) - Time motion study tool for studying workload by nurses in rural clinics". The tool mainly focused on activities nurses do while providing primary health care in rural communities and "Master Patient Index Application for Rural Clinic" (October 2013). Design and implementation of master patient index software application used during the WSU Health Informatics Team's project on usage of tablets by nurses in rural clinics. Application was developed using the Java EE technologies, Twitter bootstrap for styling, MySQL for backend, HTML5 for web forms. Application was optimised to run on both mobile and desktop browsers.

WRIGLEY MARTIN

Martin Wrigley is European General Manager. Application Developers Alliance, Belgium. Martin Wrigley has more than 25 years of experience in telecoms and IT and a wide background of development, solutions architecture and delivery, Martin lead the app developer services area for mobile operator, Orange, between 2004 and 2012. He has since been actively involved with IT integrators, developers and European institutions, and is also Executive Director of AQuA,–the App Quality Alliance.

WURMAN PETE

Pete Wurman is currently CTO of Kiva Systems, the Boston-based company that pioneered the use of mobile robotics in warehouses and distribution facilities. Pete joined Kiva in 2004 as a technical co-founder with Raff D'Andrea to help founder Mick Mountz bring his vision to life. By the time it was acquired by Amazon in 2012, Kiva had delivered several warehouse systems to fortune 500 retailers with as many as 1,000 robots in a building. Prior to joining Kiva, Pete was an Associate Professor of Computer Science at North Carolina State University in Raleigh, where he was co-director of the E-commerce Program. Pete's teaching focus was e-commerce systems, and his research focused on electronic auctions (especially combinatorial auctions), multi-agent systems, and resource allocation. Pete earned his PhD in Computer Science from the University of Michigan in 1999, and his BS in Mechanical Engineering from M.I.T. in 1987.

WU YING

Ying Wu is the Dean and Professor at School of Nursing, Capital Medical University in Beijing China. She served as the President for Asia Pacific Association for Medical Informatics (APAMI) for the term of 2012 to 2014. She assumes leadership role for 24 research and academic associations, as well as government affiliated academic organizations in China, including Chinese Nursing Association (CAN), China Medical Informatics Association (CMIA), etc. She is currently the official representative to IMIA for CMIA and held board positions (Vice-President) within CMIA. She is a licensed registered nurse both in China and the US, has over 30 years of clinical, educational and research experiences in the area of critical and cardiovascular care. She published over 100 research papers in many national and SCI indexed international journals or book chapters, and has shared study results with CV nursing colleagues in conferences such as AHA, ESC, and WCC etc. With collaborative efforts, Ying Wu and her team members have gotten 28 grants with over 9.6 million (RMB) funding, including grants from the China National Science Foundation (CNSF). Her current research interests related to medical informatics include nursing informatics, application of mobile health in cardiovascular disease management, and community based care models through the use of information communication technology.

WYATT JEREMY

Jeremy Wyatt trained in medicine in Oxford and London Universities, obtaining his MRCP in 1983. He later carried out his doctoral and post doc training at London University (National Heart & Lung Institute) and Stanford. Dr. Wyatt was appointed Leadership Chair in eHealth Research at the University of Leeds (UK) in 2012 to set up a new program of research and training in digital healthcare. He is a Clinical Adviser on new information & communication technologies to the Royal College of Physicians in London and a member of the WHO mHealth Technical Advisory Group. Dr. Jeremy Wyatt set up the Institute for Digital Healthcare in Warwick University in 2010, the Dundee Health Informatics & eHealth Research Centre 2005-10 and the NICE R&D program 2003-5. He is visiting professor in several European universities and served as Academic Adviser on knowledge management to the National Health Service. He was involved in the McMaster meeting in June 1992, which established the global Cochrane Collaboration.

YAMAMOTO RYUICHI

Ryuichi Yamamoto (1952-), MD, PhD, was born in Osaka, Japan. He studied Medical College at Osaka. His doctorial study was applying PKI with elliptic curve cryptography in healthcare information exchange. He is the president and director of Medical Information System Developing Center (MEDIS-DC) of Japan and project associate professor of postgraduate school of Medicine of the University of Tokyo. He is a physician, pathologist and researcher in medical informatics, especially in information security and privacy, and is the chief editor of security guidelines of Health information systems of Japanese Government. He is also member of some Japanese Cabinet committees and health informatics official adviser of Japanese Ministry of Health, Labor and Welfare. He was the president of Japan Association of Medical Informatics (JAMI) 2007 - 2010.

X

XU HUA

Hua Xu, PhD, FACMI, is a professor at UTHealth School of Biomedical Informatics. He directs the Center for Computational Biomedicine at UTHealth. Hua earned BS in Biochemistry at Nanjing University, Nanjing, P.R.China in 1998; MS in Computer Science at New Jersey Institute of Technology in 2001; Mphil in Biomedical Informatics at Columbia University in 2007; and PhD in Biomedical Informatics at Columbia University in 2008.Dr. Xu's primary research interests include biomedical natural language processing (NLP) and healthcare data mining. He was the Chair of American Medical Informatics Association (AMIA) NLP Working Group in 2013-2014. He has published over 100 peer-reviewed papers and has been principal investigator for a number of grants, including multiple R01s from NIH. In 2014, Dr. Xu was elected as a Fellow to the American College of Medical Informatics. Her areas of expertise are: a) Natural language processing methods: named entity recognition (NER); abbreviation detection and disambiguation; syntactic/semantic parsing; active learning; and temporal information/relation extraction and modeling, b) Natural language processing systems: Medication information extraction - MedEx and Development of comprehensive clinical NLP systems; and c) Natural language processing and data mining applications: EMR-based epidemiological studies of cancers; Informatics approaches to pharmacogenomics; Adverse drug event detection (pharmacovigilance) from EHRs and Literature mining of genes and environmental factors. He is the author of many publications on biomedical NLP and text mining, and his research on medication extraction received the Homer Warner Award from the American Medical Informatics Association in 2009. His team participated in the i2b2 NLP challenges and ranked 2nd in consecutive years (2009 and 2010). Dr. Xu has been principal investigator on a number of grants, including R01s from National Library of Medicine (NLM) and National Cancer Institute (NCI). Research Projects: Open source clinical NLP systems; Clinical abbreviation recognition and disambiguation; Grammar Induction and Statistical Parsing of clincal text; EMR-based epidemiological studies of cancers; Informatics approaches to Pharmacogenomics - extracting and modeling drug exposure from EHR data; Drug-ADE detection (pharmacovigilance) from EHR; Literature mining of genes and environmental factors.

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YAMAMOTO S. WILLIAM

William Shigeru Yamamoto (1924-2009) was born in Cleveland, Ohio. Graduated School of medicine at University of Pensilvania in 1945, and received B.A. (Chemistry) at Park College (MO) and Master of Science (Hon.) at University of Pennsylvania in 1949. Worked in US Army as medical officer stationed in Europe (1950 – 1955). Faculty appointments: He was Professor of physiology at University of Pennsylvania (1955- 1971); Visiting professor at UCLA (1970-1971) and Professor of Computer Medicine at George Washington University (1971-1998). He was chair of Department for Computer Medicine (1971-1989) and retired from George Washington University (GWU) in 1998. Highlights Entire family forcibly interned outside Los Angeles under executive order 9066 in 1942 – "reprieve" through Park College work study program. Pioneering biocomputing research for 45 years: Models of mammalian respiratory control systems (Yamamoto and Brobeck, 1965); Studies of

semantics of verbs and database representations of physiological models; Model of anatomy and function of nervous system of C. elegans (Achacoso and Yamamoto, 1991). Gifted teacher of physiology and medicine, biomathematics, biomedical engineering, statistics, and computation. Early promoter of computer training for medical students and use of clinical and academic administrative systems. He was Director of Robert Wood Johnson Clinical Scholars Program at GWU - demanding but generous and thoughtful student mentor. Highlights: Co-organizer and keynote speaker at 1st SCAMC meeting in 1977. Founding Fellow of ACMI 1984. Past President of SCAMC, Inc. 1985-1987. Frequent advisor at national level: NIH DRR Biotechnology Resources Review Committee - NAS National Neural Circuitry Database Task Force - NIH consensus study panel on "The Head and Heart of Chaos: nonlinear dynamics in biological systems". He was member of editorial boards: IEEE Transactions on Biomedical Engineering and Computers in Biomedical Research; Annual Review of Biophysics and Bioengineering Enormous breadth of knowledge, humble, unswayed by possible financial gain. Together with Joshua Lederberg, in the fourties of the 20th century, very early showed interest in automatic calculation. They were pioneers of Medical informatics. His femous book is "Physiological controls and regulations", written with his colleague from School of medicine of University

of Pennsylvania, USA, John Raymond Brobeck (1914-2009), in the year 1965. Subjects of the book are: Cybernetics, Physiology and Biological control systems. William S. Yamamoto worked, also, with Thomas E. Piemme at Department of Computer Medicine at the George Washington University Medical center in Washington.

YASNOFF A. WILLIAM

William A. Yasnoff, MD, PhD, FACMI, is Medical Director, AMA/Net, the American Medical Association's nationwide online information service for physicians (Chicago). He is a graduate of both Northwestern University's Honors Program in Medical Education and its MD-PhD program, receiving his BS in Medical Sciences (1974), MD (1975), and PhD in computer science (1980). During a senior medical school elective at Harvard's Laboratory for Computer Science at Massachusetts General Hospital, he wrote the information flow documentation for the COSTAR ambulatory medical record system. While a graduate student, he developed and implemented a technique for reprocessing of CT

scans to direct stereotactic brain biopsies that was rapidly adopted in routine patient care and approved for reimbursement. The first of his three dissertation-related publications describing his development and validation of a quantitative error measure for assessing the accuracy of computer algorithms for identifying objects within images ("Error Measures for Scene Segmentation" Pattern Recognition 9:217-231, 1977) was the Honorable Mention Winner of the Fourth Annual Pattern Recognition Society Award in 1977. That same year, he co-authored an invited paper ("Computer Techniques for Cell Analysis in Hematology") at the very first SCAMC meeting. In 1980, he also completed his internship in internal medicine at Rush-Presbyterian St. Luke's Medical Center (Chicago). From 1980-82, he served as an Assistant Professor in the Department of Medical Computer Science at the University of Texas Health Science Center at Dallas (UTHSCD). From 1982-3, he was Assistant Professor, Department of Radiology, and Computer Science Advisor, Medical Computing Resources Center, UTHSCD. In that role, he developed and implemented an institutional system for consultation, review, and approval of all computer purchases in response to a state legislative mandate. The system was highly praised by both the President of the medical center and the head of the state-level group responsible for supervising compliance, and the guidelines developed were used

as a model for other Texas state agencies. From 1983-5, he was Assistant Professor and Director, Cardiology Image Processing, in the Cardiology Division of the Department of Medicine at Medical College of Ohio (Toledo), where he continued his pattern recognition and image analysis research and supervised the use of image analysis methods in routine patient care. In 1985, he returned to Chicago as Vice President of Research, Cell Analysis Systems, where he developed and implemented the first PC-based image analysis system to quantitate DNA content of individual cells on slides (used to evaluate cells from tumors to assess patient prognosis). In 1986, he started his own company, Morphometrix, that developed software for quantitating cerebral blood flow in Ceretec brain SPECT images as well as other image analysis applications for organizations such as NASA. He also reviewed and evaluated high-tech business investment opportunities in the medical and life sciences as a key advisor to Columbine Venture Partners (Englewood, CO). In 1987, he joined AMA/Net where he developed the marketing plan that expanded this electronic information network for physicians from 4,000 to 40,000 subscribers in sixty days. He redesigned AMA/Net's literature searching, electronic mail, bulletin board, and drug interactions services, and commercialized the first nationally available expert system to assist physicians in therapeutic decision-making (Hypertension

Advisor, developed by Perry Miller, MD, PhD, at Yale University). He is also the author of a regular monthly column on "Computers and Medicine" for American Medical News.

YU-CHUAN (JACK) LI

Yu-Chuan (Jack) Li, MD, PhD, has been a pioneer of Medical Informatics research in Asia. He served as a Vice President of Taipei Medical University (TMU) (2009-2011) and currently, he has been the Dean of College of Medical science and Technology since 2011 and a professor of Graduate Institute of Biomedical Informatics since 1998. He obtain his MD from TMU in 1991 and his PhD in Medical Informatics from University of Utah in 1994. Due to his achievement in establishing EHR exchange models among hospitals and his dedication to IT applications in patient safety and care, he was awarded as one of the Ten Outstanding Young Persons of the Year in 2001. He has been Principle Investigator of many national and international projects in the domain of Electronic Health Record, Patient Safety Informatics and Medical e-learning. He is also author of 130 scientific papers and 3 col-

lege-level textbooks. He became an elective fellow of American College of Medical Informatics (FACMI), (2010), Australian College of Health Informatics (FACHI), (2010) and also the President of Asia Pacific Association for Medical Informatics (APAMI) from 2006 to 2009. Currently, he is the Editor-in-Chief of two internationally renowned journals - Computer Methods and Programs in Biomedicine and International Journal for Quality in Health Care. His main areas of expertise are: Medical Decision Support Systems, Patient Safety Information Systems, and Medical Big Data Analytics.

YÁCUBSOHN VALERIO

Valerio Yacubsohn (1933-) born in Argentina. He achieved MSc in Public Health at Faculty of Medicine, University of Buenos Aires. Also, he earned MSc in Systems Engineering at Faculty of Engineering, University of Buenos Aires. Presently he is Professor and Director of the Degree Course "Information Systems in Medicine" at the School of Public Health, Faculty of Medicine, University of Buenos Aires. Also, he is Consultant in Medical/

Health and Hospital Informatics for several international organizations (PAHO/OPS, World Bank, Inter-American Development Bank). He was very active in IMIA since 1982. He is Founder of IMIA-LAC, the IMIA Regional Federation of Health Informatics for Latin America and the Caribbean in 1983. Professor Valerio was Argentine Representative of IMIA (1982-1996), IMIA Vice-President (1989-1992) (representing IMIA-LAC). Member of several IMIA Working Groups, principally WG10 "Health/Hospital Information Systems", since 1986. Invited member of several WG10 Working Conferences (Nijmegen, 1988; Göttingen, 1991; Durham, 1994; Le Franschhoek, 2010). He is IMIA Honorary Fellow since 1996. Chair of IMIA Financial Review Committee, years 2011-2012-2013 Vice-Chair of the IMIA History Working Group (2015).

Z

ZAI ADRIAN

Adrian Zai, MD, is the Clinical Director of Population Informatics at the Massachusetts General Hospital's Laboratory of Computer Science. He is the lead designer and innovator of Top-Care, an information technology platform designed uniquely for population health management with core components that support team-based care and patient-centered management. In 2012, Partners Healthcare selected TopCare as their enterprise Population Health Management solution. In collaboration with

SRG-Technology, TopCare has been deployed at the Massachusetts General Hospital and Brigham and Women's Hospital.

ZAIM AMJAD

Amjad Zaim is a leader in the world of Analytics with over 20 years of experience in research, design and delivery of practical analytics businesses, governments and health organizations. Dr. Amjad currently heads Cognitro Analytics, a New York-based Analytics Firm where he and his team enable originations to grow, compete and profit from data. He also leads a USAID-funded national health information management project aimed at transforming the healthcare sector in Palestine. He has developed and managed key strategic projects in e-health and e-business for governments and commercial clients in the UAE, Egypt, and Palestine. He has written over 100 technical, scientific and business articles, is a frequently-invited guest speaker at conferences worldwide and has been on the chairing, organizing and review committees of several international IEEE conferences. Dr. Amjad holds two Master Degrees in both Electrical and Biomedical

Engineering from Wright State University in Dayton, Ohio, and a PhD in Biomedical Engineering from the University of Toledo.

ZEMANEK HEINZ

Heinz Zemanek (1920-2014) was an Austrian computer pioneer who developed the first complete transistorised computer on the European continent in 1955. Zemanek graduated from secondary school in Vienna in 1937. He started to study at the University of Vienna, but in 1940 he was drafted into the Wehrmacht, where he served in a "communication unit", and also as a teacher in an Intelligence Service School. Returning to studying radar technology he earned his degree in 1944 with the help of University of Stuttgart professor Richard Feldtkeller. Zemanek designed and built the "May Breeze", the first computer on mainland Europe to run purely on transistors instead of vacuum tubes, with the help of a group of students he enlisted at the Vienna University of Technology (TUV). The computer was named Mailüfterl - German for "May breeze" - in reference to Whirlwind, a computer developed at MIT between 1945 and 1951. Mailüfterl contained 3,000

transistors, 5,000 diodes, 1,000 assembly platelets, 100,000 solder joints, 15,000 resistors, 5,000 capacitors and 20,000 meters switching wire. After the war Zemanek worked as an assistant at the University and earned his PhD in 1951 about timesharing methods in multiplex telegraphy. In 1952 he completed the URR1 (Universal Relais Rechner 1 i.e. Universal Relay Computer 1). The IBM Laboratory Vienna, also known as the Vienna Lab, was founded in 1961 as a Department of the IBM Laboratory in Böblingen, Germany, with professor Zemanek as its first manager. Zemanek remained with the Vienna Lab until 1976, when he was appointed an IBM Fellow. He was crucial in the creation of the formal definition of the programming language PL/I. The definition language used was VDL (Vienna Definition Language), a direct predecessor of VDM Specification Language (VDM-SL). For several years, Zemanek had been a lecturer at the Vienna University of Technology, where a lecture hall was named in his honor. Professor Zemanek was instrumental in creating TC4 on Medical Informatics in 1967, and during his Presidency of the International Federation for Information Processing (IFIP), he was responsible for the 1974 Congress in Stockholm, which included TC4 to IMIA. Professor Zemanek was, also, founding president of the Austrian Computer Society, as well as a member of the Austrian Academy of Sciences and a recipient of the Medal of Honour for services to the Republic of Austria.

ZENG TREITLER QING

Qing Treitler Zeng, PhD, FACMI, received her Bachelors in Engineering from Beijing Polytechnic University, a Masters in Computer Science from the University of Hawaii, and Masters and PhD degrees in Medical Informatics from Columbia. She joined the Decision Systems Group at Brigham and Womens Hospital as a research scientist with an Instructor appointment at Harvard, and rose through the ranks at Harvard to Associate Professor. In 2009 she was recruited to the University of Utah were she was at the time of election an Associate Professor of Biomedical Informatics. Dr. Zeng's has made significant and unique contributions to the field of informatics, especially in the areas of consumer health informatics research and natural language processing software development. She has applied novel computational approaches to the improvement of health communication (such as using context to predict term difficulty and automatically enhancing patient-specific instructions with pictures). Dr. Zeng led the development of the Open-Access and Collaborative (OAC) vocabulary, which is one of the first consumer-oriented vocabulary sources in the Unified Medical Language System. Along with colleagues, Dr. Zeng developed an open-source and modularized natural language processing system: the Health Information Text Extraction (HITEx) System. HITEx is a suite of open-source natural language processing (NLP) tools, which are written in Java and build on the General Architecture for Text Engineering (GATE) framework. The HITEx system is being further developed at the Veteran Affairs Hospital under the name V3NLP.

ZHANG JIAJIE

Jiajie Zhang, PhD, MS, FACMI, graduated the University of Science & Technology of China in 1986. He moved to the United States to study cognitive science with Professor Don Norman at the University of California in San Diego. He completed his PhD in 1992 and then moved to Ohio State University, where he joined

the faculty in the Department of Psychology. It was here that Jiajie met Dr. Jack Smith and developed an interest in biomedical applications of the theories and methods that he brought with him from cognitive science. When Dr. Smith moved to the University of Texas in Houston in 1998, Dr. Zhang moved with him and has become a key member of the School of Health Information Science there. He has developed four graduate courses that integrate cognitive science and medical informatics, and he now serves as Associate Dean for Research in that school. Dr. Zhang has done extensive and influential research at the intersection of medical informatics and cognitive science. He has pioneered work on distributed biomedical knowledge representations and their effects on decision making, problem solving, and human–computer interaction. The work has been applied to the design of efficient information displays in many domains, including EMR displays and medical devices. He has also adapted theories from cognitive science to develop a cognitive taxonomy of medical errors. This taxonomy is intended to help generate intervention strategies for each type of error. He has also pioneered the medical application of a methodology called Human-Centered Distributed Information Design, intended to provide systematic principles, guidelines, and procedures for the design of human-centered computing systems such as EMRs and computerized physi-cian order entry. Dr. Zhang is a major player in human-centered computing in health information systems, a leading researcher in cognitive explanations of medical errors, and a productive scholar who brings together medical informatics and cognitive science.

ZHENGYI WU

Wu Zhengyi, MD, MPA, B.DSc., is the Associated Professor and Vice President of Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine. Graduated in 1997 from School of Stomatology, Shanghai Second Medical University, Dr. Wu became a surgeon at the Department of Oral and Maxillofacial Surgery, Shanghai Ninth People's Hospital. In 2004, he joined the Hospital Executive Office, playing an active role in the implementation of Hospital Information System (HIS). From 2008 to 2012, Dr. Wu took the leadership in deploying a number of Clinical Information Systems (CIS) across the hospital, including CPOE, EMR, Nursing Information System, etc. In July 2013, he was promoted as the Vice President (VP) in charge of IT, performance measurement and general administration. He led the planning and implementation of the Enterprise Data Warehouse (EDW) at the hospital with the technical support from Microsoft Consulting Services. Dedicated to hospital management for 13 years, Dr. Wu committed himself in public health policy and hospital management research, and has published more than 20 papers on these topics. From 2013 to 2015, he took short-term training courses on hospital management at the University of Cambridge, University of Columbia and Erasmus University Rotterdam.

ZHONG YANG

Yang Zhong is Professor and Vice Dean, School of Life Sciences, Fudan University. Prof Yang Zhong was member of International Association of Medical Informatics during 2006 to 2010. He is author and co-author a lot of scientific and professional papers published in international indexed journals.

ZILGALVIS PETERIS

Peteris Zilgalvis is Head of Unit eHealth and WellBeing. European Commission, Directorate-General Communications Networks, Content and Technologies (DG CONNECT) Belgium. He was the Visiting EU Fellow at St. Antony's College, University of Oxford for 2013-14, where he is also an Associate of the Political Economy of Financial Markets Programme and is a Senior Common Room Member 2014-17. From 2005 until 2010, he was Head of the Governance and Ethics Unit, Directorate Science, Economy and Society at DG Research, European Commission. From 1997 to 2005, he was Deputy Head of the Bioethics Department of the Council of Europe, in its Directorate General of Legal Affairs, and Co-Secretary of the Intergovernmental Steering Committee on Bioethics (CDBI). In addition, he has held various positions in the Latvian civil service (Ministry of Foreign Affairs, Ministry of Environment). He was Senior Environmental Law Advisor to the World Bank/ Russian Federation Environmental Management Project and was Regional Environmental Specialist for the Baltic Countries at the World Bank. Peteris Zilgalvis studied political science (cum laude) at the University of California, Los Angeles. At the Law Centre of the University of Southern California he obtained his JD (Doctor of Jurisprudence) and received the Darling Foundation academic scholarship. He completed the High Potentials Leadership Program at Harvard Business School. He is a member of the California State Bar. He has published over 30 publications on innovation law and policy, European and environmental law, economy and finance, and bioethics in English, Latvian, and French.

ZIMMERMANN GOTTFRIED

Gottfried Zimmermann is Professor of Mobile User Interaction. Stuttgart Media University, Germany. His teaching and research focuses on human-computer interaction, in particular on usability and accessibility aspects. He leads the Responsive Media Experience Research Group where he heads national and international research projects working on personalized and adaptive user interfaces. He is an ACM Senior Member, and author of numerous publications and standards, including ISO/IEC 24752, the Universal Remote Console framework.

ZIMMERMAN L. JOHN
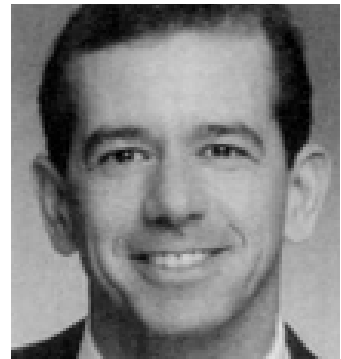
John L. Zimmerman, DDS, FACMI, is Director of Academic Computing and Health lnformatics at the University of Maryland at Baltimore. Dr. Zimmerman has promoted dental informatics nationally and internationally through the production of articles, books, and an audio tape on computers in dentistry. He was on the Board of the American Association of Medical lnformatics and is active in AMIA, the International Medical lnformatics Association, and the American Association of Dental Schools.

ZVÁROVÁ JANA

Jana Zvárová (1943- 2017) was born in Prague, Czechoslovakia. After graduating mathematics in 1965 at the Faculty of Mathe-

matics and Physics, Charles University in Prague she has been working with several faculties of Charles University in Prague (Faculty of Paediatrics, Faculty of Mathematics and Physics and First faculty of Medicine). She completed external doctoral studies under the supervision of Prof. Dr. Albert Perez, member of IFIP. He brought her attention to the field of medical informatics and opened the contacts with founders of IMIA. Jana Zvárová founded the medical informatics section of the Czech Society of biomedical engineering and medical informatics in 1978. The same year, she received PhD scientific degree at Charles University in Prague. She passed the habilitation for Doc. (Associated Professor) at Charles University in 1991 and she was nominated by the president of the Czech Republic Vaclav Havel as Prof. (Full Professor) at Charles University in Prague in 1999. She reached the highest Czech scientific degree DrSc. (Doctor of Sciences) in 1999 at the Academy of Sciences of the Czech Republic. She has delivered presentations and published internationally since 1969 on medical informatics and statistics issues. She systematically sought to apply new theoretical knowledge in biomedicine, particularly in relation to epidemiology and public health and their subsequent transfer to the educational process. Since 1994 she has been chairing the European Center of Medical Informatics, Statistics and Epidemiology of Charles University and Academy of Sciences CR (EuroMISE Center) and in the period 2006-2011 was the director of the Center of Biomedical Informatics. She is the representative of the Czech Republic in the International Medical Informatics Association (IMIA) and European Federation for Medical Informatics (EFMI). She has significant professional participation in national and international initiatives in biomedical informatics and statistics, especially in the field of research, higher education and continuing education using new information technology. She has been a member of the editorial boards of national and international journals. She has served as the expert in the field for the EC and Czech governmental institutions. The results of her research activities are contained in 10 monographs and more than 300 articles in peer-reviewed journals. The total number of citations of her work is more than 600 and she is the main author of three patents directed to biomedicine. She initiated the development of PhD studies in Biomedical Informatics under the school of Postgraduate doctoral studies of biomedicine of Charles University and Academy of Sciences of the Czech Republic and she is chairing the board of Biomedical Informatics. Within the European projects she opened new lines of research and education concerning electronic health record, knowledge representation in clinical guidelines, decision support systems and methods for evaluation of knowledge in the Czech Republic. In the last five years she published chapters in books with IGI Global, USA and added more volumes to the series of books published by Charles University printing house in the edition Biomedical Informatics (6 volumes) and Biomedical Statistics (4 volumes). In addition to extensive publishing activities Jana Zvárová delivered a number of invited lectures at national and international conferences and universities, worked in scientific boards of several universities, national and international societies and editorial boards of professional journals. She served in the program committees of many national and international conferences and conducted fairly extensive peer review and peer review activities, including expert services for the European Commission. She is the member of the working group on electronic healthcare of the Czech Medical Society J.E. Purkyne. She organized several IMIA and EFMI international conferences and workshops in Prague. She initiated the foundation of the EuroMISE Mentor Association (www.euromise.net) focused on the international cooperation in mentoring activities.

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ABOUT THE BOOK "BIOGRAPHICAL LEXICON OF MEDICAL INFORMATICS"

...It is now more than twenty years since when Izet Masic, at that time already well known in EFMI/IMIA circles, entered the world of medical informatics (MI) publishing by starting in 1993 his journal "*Acta Informatica Medica*" (Acta Inform Med), in which he continuously serves up to now as its editor-in-chief. After Acta Inform Med has been accepted 2011 for archiving in PubMed Central, now its articles are cited in prestigious online databases, including PubMed, Scopus and EMBASE, crediting the continuous and successful efforts of its editor-in chief to raise the journal´s quality. Last year, at the MIE 2014 Istanbul, Masic presented a new evidence of his inexhaustible editing energy, by gathering a respectable group of to-day´s renowned medical informaticians as authors, including himself, to edit with the help of George Mihalas as co-editor the nowadays well-accepted book under the title "*Contributions to the History of Medical Informatics*". Knowing that any new scientific field (and MI is one of such fields) starts to develop by the work of its pioneers, Masic devoted a remarkable part of this book to the biographies of such persons, presented in the chapter authored by him under the title "*The Most Influential Scientists in the Development of Medical Informatics*", collecting 38 biographies in total. It is important to emphasise, that in the conclusion of his text Masic, aware that new scientific forces unremittingly continue to expand the initial achievements of the pioneers, Masic wrote: "Let this text, which in the nature of such compendia is necessarily incomplete, be the beginning of a future *Biographical Lexicon of Medical Informatics*, for which international collaboration is welcomed." And now – the result of his hard work appears in the public. In an amazingly short time we have the first edition of Masic´s "Biographical Lexicon of Medical Informatics" – a huge work containing now over 400 biographies of MI scientists from the whole world. It is worth mentioning, that the acceptance of Masic´s endeavour in the MI community is very positive, thus showing that his ideas are an important contribution to the development of MI as a rather young field in the history of biomedical sciences. Consequently, as one of the reviewers

of this publication I am glad to recommend it to the reader. I am also suggesting anyone who would like to add some improvements and additions to the text, as well as to recommend inclusion of some missing biographies, to do so as the author Izet Masic announced new editions to appear before future MIE and MEDINFO conferences...

Gjuro Dezelic,
Zagreb, Croatia

...It gives me great pleasure to commend to our colleagues and friends your out-standing effort in putting together this magnificent document that details the lives and accomplishments of so many of our colleagues and friends around the world. The time and effort that you have put into producing the *Biographical Lexicon of Medical Informatics* will be a historic and encyclopedic document for our field for years to come. This monumental effort of 296 pages giving us a visual joy to see our friends pictured, as well as your telling a brief summary of each informaticians accomplishments is indeed a labor of love, which you yourself have undertaken for the past few years. Many of us have the highest respect for you as a professor of Medical Informatics and indeed someone who has done so much for Bosnia and Herzegovina. Many of us have enjoyed your company and admired your boundless energy at professional meetings for many years. I will never forget your devotion to IMIA when you came to Dresden Germany for an IMIA meeting in the middle of the war years in your country driving all night in the dark with no headlights, risking your life to be with your colleagues and to share professional experiences of your colleagues (you are an IMIA hero). Thank you for all you have done and for your devotion to our field. I am sure that the MIE conference in Madrid will pay homage to this magnificent effort on your behalf to share your Lexicon with all our colleagues. HEARTY CONGRATULATIONS...

Marion Ball,
Baltimore/Boston, USA

...It now seems a long time since we received a letter from Prof François Grémy inviting the British Computer Society's Medical Specialist Group to participate in an international committee "to talk about medical informatics". Technical Commit-tee 4 of the International Federation for Information Processing was born in 1969, flourished and eventually IFIP/TC4 became the International Medical Informatics Association. It has been a long journey and your lexicon describes so many of our friends with whom we have worked on that journey–as well as listing so many who are taking that journey into the future. As one small example of that future, I have today opened an e-mail from the President of the Royal College of Physicians of London advising doctors on the use of Medical Apps to help them to protect their

patients. Congratulations on the extraordinary effort that you have put into your lexicon. Yout book is epic...

Barry Barber,
Malvern/London, UK

...Thank you very much for sending me the final version of the *Biographical Lexicon of Medical Informatics.* The result of your work is impressive! No one before you had the courage to carry out such a heavy workload to assemble a list of pioneers in the new field of Medical Informatics all over the world, to contact them, to add many names to the first version, to edit each biography, to take into account re-marks and keep each description both short and significant. The medical profession as well as all other actors belonging to the community of health informatics (chem-ists, economists, lawyers, statisticians, hospital managers, nurses,...) owe you very much for your splendid initiative. Your book can be considered as a cornerstone for references, useful not only for history but also for the future of Medical Informat-ics. I am sure that you will enjoy the feed-back that will be generated by your work. CONGRATULATIONS...

Francis Roger France,
Brussels, Belgium

...Not just a "Who-is-who in ...". Over the past some 50 years, Medical Informatics has grown to a self-standing science, where computer applications to benefit patients, physicians, and other healthcare professionals are focused. Still, the community is small, but very personal. The Lexicon compiles unique CV's of key contributors to the field, all reflecting this personality of Medical Informatics. By far, it is more than just a database of names and degrees: reading the CV's gives a comprehensive understanding of Medical Informatics in all its facet's, and you'll certainly feel in-spired to join the community contributing your visions for a better future – world-wide...

Thomas M. Deserno (né Lehmann),
Aachen, Germany

...You are an extremely hard worker. Nobody has dared to undertake the writing of a lexicon. You did. I admire you...

Jan van Bemmel,
Roterdam, The Netherlands

... I wish to thank you very much indeed for all you have done with the Lexicon for medical informatics community. You really did the incredible work and reached the great objective. Everybody has to take into account your achievements...

Jana Zvarova,
 Prague, Czech Republic

...Creating Bibliographical Lexicon you once more demonstrated imagination and effort to remind the present generation and point future generations to the long journey of creating medical informatics as a profession and the people who were involved. Lexicon reminds us also to those who are no longer among us, the people who pave the paths of medical informatics. Thanks to them, the medical informatics today found its place both in educating new generations of health professionals as well as practice of medicine and health care. Recommendations for training in medical informatics for medical informatics specialists and users of medical information technologies and the Code of Ethics for Medical Informatics are significant works of these people and a beacon in a sea of medical informatics. Bibliographic Lexicon represents your great and valuable work. You've earned the admiration and gratitude of all of us. You showed the younger generation, to those that are yet to come, in which ways to go and how to work in medical informatics profession, science and education...

Josipa Kern,
Zagreb, Croatia

...This is an immense undertaking that I am hoping is not an April Fools' joke. I can't imagine how you will get anything like sufficient input prior to your deadline. It's a nice compendium of many people in the field. It seems like it is nicely done...

Dominic H. Covvey,
 Waterloo, ON, Canada

...Congratulations for your excellent initiative and your hard work compiling this new book...

 John Mantas,
 Athens, Greece

...Very impressive publication. People are very impressed with your work...

 Andrew Balas,
 Augusta, GA, USA

...I wish you all the best, a great health for all your great work, a lot of energy and support...

Christian Lovis,
Geneva, Switzerland

...Many thanks for your work with the interesting collection of most of the persons who has worked and are working within our field...

Ragnar Nordberg,
Molndal, Sweden

...This is really an interesting idea that includes people worldwide. I like your initiative, and thank you for sharing...

Vimla L. Patel,
New York, USA

...Thank you very much for inserting the new version of my CV in the lexicon and thank you for the tremensdous work, you have done...

Günther Gell,
Graz, Austria

...Your work is amazing, incredible. A lot of people I know, and a lot of people I don't know. It is a non-ending Biographical Lexicon...

Valerio Yacubsohn,
Buenos Aires, Argentina

...I would like to express my thanks and full appreciation for this brilliant initiative "Biographical Lexicon of Medical Informatics". It is my pleasure to be included in the book...

Bakheet Aldosari,
Riyadh, Kingdom of Saudi Arabia

... As president of the Health informatics Society of Ireland, I wish to congratulate you on this important and outstanding collection...

Gerard J. Lyons,
Galway, Irleand

...Glad to know about your work on "Biographical Lexicon of Medical Informatics".
I got your email from one of my friends and colleagues from eHealth circles (Dr. Alvin Marcelo). I really appreciate your effort in compiling the bio of Medical/Health informaticians...

Jai Ganesh Udayasankaran,
Andra Pradesh, India

...Thank you so much for an incredible job! Who else could have done this work...

Bernd Blobel,
Regensburg, Germany

...Congratulations with your work. I always have the idea that you live twice as much in the time period in which I live once. You did a wonderful job...

Arie Hasman,
Amsterdam, The Netherlands

...Thank you for the incredible job, and your persistence. We look forward to see the book, and also to learn how this information cane a resource for the other efforts to collect our history...

Anne Moen,
Oslo, Norway

...Congratulation for finalising this hard work. Well done, Izet, as usual. This will be a very usefull book for all the MI community...

Etienne De Clercq,
Brussels, Belgium

...Congratulations, it is, indeed, a very good job...

George I. Mihalas,
Timisoara, Romania

...Congratulations for the new born Izet. Enjoy the result of your hard work...

Lacramioara Stoicu-Tivadar
Timisoara, Romania