American College of Medical Informatics Fellows, 2010 and 2011

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In 2010 and 2011, 28 new fellows were elected to the American College of Medical Informatics, and were inducted into the college at ceremonies held in conjunction with the American Medical Informatics Association annual conferences in Washington, DC, in those years. A brief synopsis of the background and accomplishments of each of the new fellows is provided here, in alphabetical order.

Elske Ammenwerth, DrSc (2011)

Dr 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. She also received a degree in habilitation in medical informatics from the University of Health Sciences, Medical Informatics and Technology in Tirol, Austria. 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 USA 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 (EHR) 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. Her work on technology evaluation, particularly that based on the theory of interaction of task, technology and individuals, has been widely cited. Her election as an international fellow of the college recognizes these contributions that have had an international scope of influence.

Elmer Bernstam, MD, MSE, MS (2010)

Dr Bernstam 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 a National Library of Medicine (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 at Houston as an assistant professor. At the time of his election to the college he was an associate professor at the University of Texas Health Science Center 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 medicine. He also led the writing and publication of a peer-reviewed position paper on behalf of all 24 then funded clinical and translational science award (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.

Aziz Boxwala, MD, PhD (2010)

Dr Boxwala received his MBBS doctoral degree from the University of Bombay, and after an internship matriculated to graduate training in biomedical engineering at the University of North Carolina at 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 later 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 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. 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. His election to the college recognizes these scholarly contributions to the field.

Kenneth Buetow, PhD (2010)

Dr Buetow 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 at the University of Pennsylvania. In 1997 he was named a special assistant to the director and senior 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, as well as serving as 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 US$300 million of public funding in its informatics tools and resources. His election to the college recognizes his expertise and accomplishments in advancing cancer research informatics nationally.

Rebecca Crowley, MD, MSIS (2010)

Dr Crowley received her bachelors degree in biology from Swarthmore, and her MD degree from the University of Pittsburgh. She undertook postgraduate training 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 then 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 applications for caBIG.

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. These academic achievements are recognized by her election to the college.

George Demiris, PhD (2011)

Dr Demiris received his bachelors and masters degrees in medical informatics from the University of Heidelberg in Germany, and a PhD in health informatics from the University of Minnesota, in Minnesota in the year 2000. He joined the faculty of the National School of Public Health in Athens, Greece, then returned to the US to join the faculty of the University of Missouri, where he was director of the health informatics graduate program until 2006, when he moved to the University of Washington, Seattle. At the time of his election to fellowship he had appointments as associate professor of biomedical and
Dr Demner-Fushman has been a major contributor in the application of NLP and information management for enhancing clinical infrastructure and healthcare delivery. She developed an innovative method combining unified medical language system (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 National Institutes of Health 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.

At the time of her election, Dr Demner-Fushman had contributed as an author to 87 peer-reviewed publications, and the creation of a number of novel applications, including InfoBot, a repository for informed decision making (RIDE-M), 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 NLP competitions. Her election to fellowship recognizes these technical and organizational contributions.

Stephen Downs, SM (2010)

Stephen Downs received his bachelors degree in applied physics from Yale, and a masters degree in technology and policy from the Massachusetts Institute of Technology. He joined the US 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 capacity he guided projects that experimented with community-level data sharing for complex diseases such as tuberculosis 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 Foundation, where at the time of his election to the college he was assistant vice president for health. At Robert Wood Johnson, 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 US$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 federal policy and advisory bodies including the Office of the National Coordinator for Health Information Technology Policy Committee Workgroup on Adoption and Certification, the American Health Information Community Consumer Empowerment Workgroup, an expert panel in public health for the Agency for Healthcare Research and Quality, and the NLM 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 focus in public health informatics. His election to the college recognizes this sustained leadership in establishing federal and foundation funding for innovation in biomedical informatics.
Dr Dykes received her bachelor of science in nursing from Fairfield University, a masters in nursing from New York University, and a doctorate in nursing informatics from Columbia University. She joined Partners Healthcare in Boston where at the time of her election she was a senior nurse scientist and research program director, as well as corporate manager for nursing informatics and research, and instructor in medicine at Harvard Medical School.

Dr Dykes was an early innovator in the development of clinical pathways for decision support and subsequently in the integration of clinical pathways into EHR as part of a multifaceted, 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 are used widely to guide content standardization efforts in the USA, Asia and in Europe.

As principal investigator of an interdisciplinary research project funded by the 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 the 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 Management 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.

Patricia C Dykes, DNSc, RN (2011)

Gunther Eysenbach, MD, MPH (2011)

Dr Eysenbach received his MD degree from Albert-Ludwigs-University in Freiburg, Germany, and a masters in public health from Harvard. At the time of election to the college he was a professor in the Department of Health Policy, Management and Evaluation, University of Toronto and senior scientist in the Centre for Global eHealth Innovation at the University Health Network. In addition, he served as director of the Consumer Health, Public Health Informatics & e-publishing Laboratory and was a member of the faculty of the Knowledge Media Design Institute of the University of Toronto, and editor-in-chief and publisher of the Journal of Medical Internet Research.

Dr Eysenbach was first author on a seminal publication in the Journal of the American Medical Association assessing the quality of consumer health information on the internet, and has undertaken a variety of studies of how the lay public uses health information obtained from online sources. He was an early proponent of what has been called ‘infodemiology’ based on the predictive value of Google searches for influenza as a means of syndromic surveillance, which has since been implemented by Google as Flutrends. He has also been a persuasive advocate of open access journals and has published work showing their salutary effect on citation by others. He has been an active contributor to IMIA, the Open Access Scholarly Publishers Association, a consultant to the European Union and a member of peer review groups of the Canadian Institutes for Health Research and the Canadian Cancer Society. His election to the college recognizes these technical and professional service achievements.

Marcelo Fiszman, PhD (2011)

Dr Fiszman 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 USA where he received a PhD in biomedical informatics from the University of Utah. He was a postdoctoral fellow at the NLM, 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 NLP 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 NLP with a program called SemRep, and semantic abstraction for 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. His election to the college recognizes these technical and professional accomplishments.

Dr Guyon is co-inventor of the support vector machine algorithm, and the support vector machine–RFE feature selection algorithm, 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 (>2000 citations) seminal paper on feature selection and has co-authored several books and organized workshops and competitions on feature selection and causal discovery. In the years immediately preceding her election to the college, 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. Her election to fellowship recognizes these sustained technical and professional achievements.

Herman Kalet has led the implementation of the Millennium Global Village Network, an open source information system based on the OpenMRS electronic medical records system that links together clinics of the Millennium Villages Project 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 as it is one of the first attempts to develop a theory of biomedical informatics. His election to fellowship recognizes these sustained contributions to the field.

Dr Kalet received his bachelor's 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 Graduate 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.

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 as it is one of the first attempts to develop a theory of biomedical informatics. His election to fellowship recognizes these sustained contributions to the field.

Dr Kanter received his bachelor's degree in psychobiology from the University of California, Los Angeles, his masters in public health and MD degrees from Harvard, and undertook a visiting scholar appointment and fellowship in medical informatics and health information systems at Cambridge. He spent 12 years with a private medical informatics company where he helped develop the Healthmatics EHR system, in addition to providing medical terminology and consulting services to other electronic medical record companies. He was chief operating officer, president and chief medical officer of Intelligent Medical Objects Incorporated. Dr Kanter returned to academia at Columbia University where at the time of his election to the college he was an assistant professor of clinical biomedical informatics and clinical epidemiology.

Dr Kanter has led the implementation of the Millennium Global Village Network, an open source information system based on the OpenMRS electronic medical records system that links together clinics of the Millennium Villages Project.
in 10 countries in sub-Saharan Africa. This project employs a structured, common data dictionary mapped to reference terminologies that enables interoperability between the different sites and the eventual creation of a multinational, multilingual data warehouse of patient-level data for 500,000 people in rural Africa. These efforts to advance global health informatics and bring the benefits of information technology to the most needy are recognized by his election to the college.

Christoph Lehmann, MD (2010)

Dr Lehmann received this MD degree from Westfälische Wilhelms Universität in Münster, Germany, and undertook postgraduate training in pediatrics at Marshall University. He undertook fellowships in neonatology and medical informatics at Johns Hopkins, and then joined the faculty at Hopkins, where at the time of his election to the college he held associate professor appointments in pediatrics, health sciences informatics, dermatology and nursing. He also served as director for clinical information technology of the Johns Hopkins Children’s Center and the founding director of the Child Health Informatics Center at the American Academy of Pediatrics.

Dr Lehmann’s research efforts have been in the applied clinical informatics area. He has focused on the use of health information technology and improved patient care, safety, and outcomes. He developed, implemented, and evaluated several health information technology tools that have been demonstrated to be effective in reducing provider errors, reducing costs, decreasing unnecessary medication usage, and improving safety. His work on provider order entry and clinical decision support for pediatric chemotherapy, and on the prevention of ordering errors in pediatric parenteral nutrition has been highly cited. Dr Lehmann served as one of the editors of the first textbook on pediatric informatics, and editor-in-chief of the Applied Clinical Informatics journal.

Dr Lehmann’s professional service has included election to the board of directors of the American Medical Informatics Association and the executive committee of the Council on Clinical Information Technology of the American Academy of Pediatrics. He received the ‘best practice award in health-system pharmacy’ in 2006 by the American Society of Health-System Pharmacy for improving medication ordering, dispensing, and administration for continuous infusions in pediatric patients. These scholarly and professional service achievements are recognized by his election to the college.

Yu-Chuan (Jack) Li, MD, PhD (2010)

Dr Li received his MD degree from the University of Taipei in Taiwan, and a PhD in medical informatics from the University of Utah. He returned to his homeland where he became the founding director of the Institute for Biomedical Informatics at National Yang Ming University. He returned to his homeland where he became the founding director of the Institute for Biomedical Informatics at National Yang Ming University. At the time of his election as an international fellow of the college he was professor of biomedical informatics and university vice president at Taipei Medical University.

Dr Li has been a strong proponent and innovator in the creation of interoperable EHR, and his development of a national health information exchange for Taiwan led to his receiving a national health contribution award, which is Taiwan’s highest honor for contributions to the nation’s health. He has also been an advocate for the use of ‘smart cards’ and
patient-specific clinical decision support to improve patient safety.

Dr Li served as president of the Asia Pacific Association for Medical Informatics, and associate editor and manager of the Journal of Computer Methods and Programs in Biomedicine, as well as participating on the editorial board of several other international biomedical informatics journals. His election as an international fellow of the college recognizes these scholarly innovations and professional service that have had an international scope of influence.

Bradley A Malin, PhD (2011)

Dr Malin received his bachelor’s in biological sciences, master’s 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’ American College of Medical Informatics fellow, as he was the first graduate student of Latanya Sweeney, whose 1997 AMIA best paper helped launch the academic informatics subdiscipline of health data privacy. Dr Sweeney was, in turn, a trainee under the mentorship of American College of Medical Informatics fellow Peter Szolovits at the Massachusetts Institute of Technology. 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 grants from the same National Institutes of Health 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 the Health Insurance Portability and Accountability Act (HIPAA) for both business operations and research. He has been a pro-active consultant to the US Department of Health and Human Services on issues of data privacy and its implications for public policy. His election to the college recognizes these contributions to scholarship and public service in a new and important subdiscipline of informatics.

Victor Maojo, MD, PhD (2011)

Dr Maojo received his doctor of medicine degree from the Universidad de Oviedo, and masters and PhD degrees in artificial intelligence from the Universidad Politecnica de Madrid in Spain. He was a postdoctoral fellow in medical informatics at Georgia Tech and a research fellow in the decision systems group at Brigham and Women’s Hospital in the Harvard–Massachusetts Institute of Technology program, later adding a PhD in medicine from the University of Corunya.

He returned to the Politechnic University of Madrid where he has risen through the academic ranks to full professor. He has published more than 170 papers, many of which have had an international scope and influence. He developed the OntoFusion system for the integration of heterogeneous clinical and genomic databases that has been widely adopted by research groups in Europe for clinical trials management. Most recently, he has pioneered research and education in the new field of nanoinformatics, which underpins the emerging science of nanoparticles, nanomachines, and biological systems understood at the level of small groups of atoms. He has been an active contributor to international informatics societies, a consultant to the European Union, and has been a leader for the Build Africa program to promote informatics education in Africa. His election as an international fellow of the college recognizes these achievements that have had an international scope of influence.

Yehoshua Perl, PhD (2011)

Dr Perl received his bachelor’s 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 USA in the early 1980s and climbed the academic ladder to the rank of professor of computer science at the New Jersey Institute of Technology. At the time of his election to the college, Dr Perl had been developing methods for organizing and visualizing complex data structure for more than 30 years, and in the mid-1990s he began applying these to the biomedical domain. He founded the Medical Informatics Laboratory at New Jersey Institute of Technology, which evolved into the Structural Analysis of Ontologies Center, and has undertaken work that has contributed to vocabulary systems maintained within the UMLS and the systematized nomenclature of medicine. 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. These sustained professional achievements are recognized by his election to the college.

Wanda Pratt, PhD (2011)

Dr Pratt received her bachelor’s degree in electrical engineering from the University of Kansas, a master’s 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, Seattle, 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 the University of Washington.

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. HealthWeaver 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. Her election to the college recognizes these scholarly achievements.

Fernan Gonzalez Bernaldo de Quiros, MD, MSc (2011)

Dr Quiros received his MD degree from the University of Buenos Aires and subsequently spent more than 20 years leading health information system projects and training informaticians at Hospital Italiano in Buenos Aires, Argentina. He was one of the leaders in the development of Hospital Italiano’s advanced electronic medical records system called ITALICA, including its use of standardized terminology and interface terminology servers built upon international health vocabulary standards such as systematized nomenclature of medicine and messaging and knowledge representation standards including HL7. He founded Hospital Italiano’s Department of Medical Informatics in 1999, which has been a center for operational systems development, informatics education and research. He has been a proponent of interoperable systems development in South America and has pioneered the use of international web services for clinical decision support that transcend international boundaries. In his role as educator, he facilitated the adoption of the Oregon Health and Science University’s 10×10 AMIA course so that it has now been used to train more than 600 healthcare professionals in Latin America in their own languages and cultures. His election as an international fellow of the college recognizes these scholarly contributions to the advancement of informatics globally.

Marco Ramoni (2010) posthumous award

Dr Ramoni received his bachelor’s 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 UK’s Knowledge Media Institute. He emigrated to the USA where he was a senior visiting fellow at the University of Massachusetts, then joined the faculty at Harvard Medical School where he was an associate professor of pediatrics and medicine at the time of his proposal for election to the college. 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 director of the biomedical informatics training fellowship at the Children’s 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 college posthumously.

Samuel Trent Rosenbloom, MD, MPH (2011)

Dr Rosenbloom received his bachelors degree in the history and literature of religion from Northwestern, and MD and MPH degrees from Vanderbilt University. After completing training in medicine, pediatrics and informatics, he joined the faculty at Vanderbilt and at the time of his election to the college was an associate professor of biomedical informatics, 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 EHR, 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 towards the grand challenge of the ‘self documenting 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. These academic and professional service activities are recognized by his election to the college.

Mark Weiner, MD (2011)

Dr Weiner received his bachelors degree in computer science engineering and his MD degree from the University of Pennsylvania. He undertook postgraduate clinical training in general internal medicine and was an NLM-supported fellow in applied informatics. Upon completion of his fellowship he stayed on at Penn where at the time of election he was an associate professor of medicine, director of information systems integration for research, and senior fellow in the Davis Institute of Health Economics. He also served as co-chief of the biostatistics and informatics core in the Philadelphia Veterans Affairs (VA) Center for Health Equity Research and Promotion.

Dr Weiner has applied his knowledge of clinical database development and its use in clinical research towards a number of health services research endeavors including measuring and improving quality of care, and comparative effectiveness research. This work has been applied within a diverse set of research projects including understanding the impact of emergency department crowding on health outcomes, understanding the many risk factors for antibiotic-resistant infections, exploration of factors contributing to patient non-compliance with medications and procedures, evaluations of factors that contribute to clinical inertia among providers, and detection of important health disparities.

Developing research data repositories has been a central theme of Dr Weiner’s work, and an early innovation of his was the Pennsylvania integrated clinical and administrative research database (PICARD) system, which provided one of the first web interfaces to a research data systems. PICARD is a longitudinal database integrating clinical and administrative data from multiple information systems, including the health system’s ambulatory care EHR, the laboratory results reporting system, and billing. Dr Weiner has been an active contributor to AMIA and the Society of General Internal Medicine, chairing AMIA’s Primary Care Working Group and serving on scientific program committees. For the Society of General Internal Medicine he chaired the Informatics Interest Group and web technology cluster. At the time of election, Dr Weiner had more than 65 publications in the area of applied informatics. His work on the idea of ‘virtual clinical trials’ was presented at the AMIA Symposium in 1998 and predated the era of the CTSA and anticipated many of the scenarios of federated data queries across research data warehouses that are actively being pursued by current CTSA institutions. These sustained achievements are recognized by his election to the college.

Charlene R Weir, PhD

Dr Weir 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 at the time of election was 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 information technology 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 EHR systems that provide adequate cognitive support for sense-making and team coordination. Her election to the college recognizes these achievements in the theory and application of clinical informatics.

Bonnie L Westra, PhD, RN (2011)

Dr Westra received her bachelors in nursing from the College of St. Theresa, in Minnesota, a masters in community health nursing from the University of Colorado, and a PhD in gerontology and chronic illness from the University of Wisconsin–Milwaukee. She joined the faculty of the University of Minnesota and was at the time of election to the college an associate professor in the School of Medicine and the Academic Health Center Institute for Health Informatics.

Since 1991, Dr Westra has been a leader in terminology development. During her doctoral program, she was a research assistant for Dr Harriet Werley and made substantial contributions to the first data abstraction manual for the nursing minimum data set. During her tenure as chair of the American Nurses Association’s Committee on Nursing Practice Information Infrastructure, the national database of nursing quality indicators was established. This national database is now a critical component for measuring and benchmarking patient safety as part of magnet status recognition in hospitals. Dr Westra’s research in predictive modeling and analytics utilizing secondary data is an additional area of noteworthy contribution. Her work has resulted in models that have been successfully and continually applied to improve care coordination, quality, and safety primarily for older adults with multiple chronic health problems. Quality and safety studies conducted by Dr Westra using secondary data from EHR include medication management, incontinence, pressure ulcers and wounds, and factors that contribute to rehospitalization.

The home care client satisfaction instrument, developed and validated by Dr Westra, is widely used in the USA and abroad. Dr Westra is known for her cross-disciplinary collaborative work and her leadership and mentoring abilities. She has mentored over 40 graduate students, serving as chair or primary advisory for their thesis, dissertation or doctor in nursing practice project. She developed a highly successful interprofessional health informatics AMIA 10×10 course. Her election to the college is recognition of a multifaceted body of work and professional achievement.

Fred Wolf, PhD (2011)

Dr Wolf 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 education 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 15 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. These sustained achievements are recognized by his election to the college.

Qing Treitler Zeng, PhD (2011)

Dr Zeng 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 Women’s 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 has made significant and unique contributions to the field of informatics, especially in the areas of consumer health informatics research and NLP 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 vocabulary, which is one of the first consumer-oriented vocabulary sources in the UMLS. Along with colleagues, Dr Zeng developed an open-source and modularized NLP system: the health information text extraction (HITEx) system. HITEx is a suite of open-source NLP tools, which are written in Java and build on the general architecture for text engineering framework. The HITEx system is being further developed at the VA Hospital under the name V3NLP. These academic achievements are recognized by her election to the college.