

Panel on Assessment of Selected Divisions of the National Institute of Standards and Technology (NIST) Information Technology Laboratory

Committee

Philip M. Neches

Chair

PHILIP M. NECHES, NAE, is a venture partner at Entrepreneurs Roundtable Accelerator in New York City. He is also an independent consultant working with early-stage companies in the information technology and communications service industries on their technical, market, and business strategies as an advisor, board member, and investor. A world-renowned authority on databases, he was the founder and chief scientist of Teradata Corporation, he pioneered the application of parallel processing to commercial applications. Dr. Neches was elected to the National Academy of Engineering in recognition of this work. He began his career at Transaction Technology Inc., a subsidiary of Citigroup. He led analysis of consumer banking networks, including the first large-scale deployment of automated teller machines (ATMs) in the United States. After Teradata, as senior vice president and chief scientist for NCR Corporation, he led both the repositioning of NCR's computer product family and the product plan for a merger with AT&T. Dr. Neches served as vice president and chief technical officer of Multimedia Products and Services Group at AT&T Corporation. He has served on the board of directors of ExpandBeyond, Inc. and International Rectifier, and on the advisory boards of EarthLink, Tacoda Systems, Luxtera, and the Technology Group of Merrill Lynch. Other prior directorships include MCC, Semitech, Dayton Public Radio, DemoGraFx, MediaMap, PeopleLink, and VendQuest. He serves on the Caltech Board of Trustees and sits on its executive committee. He is also a Trustee of the New Jersey Symphony Orchestra. Dr. Neches holds B.S., M.S., and Ph.D. degrees in computer science from Caltech.

Ruzena K. Bajcsy

Member

RUZENA K. BAJCSY, NAE/NAM, received the Master's and Ph.D. degrees in electrical engineering from Slovak Technical University, Bratislava, Slovak Republic, in 1957 and 1967, respectively, and the Ph.D. in computer science from Stanford University, Stanford, CA, in 1972. She is a Professor of Electrical Engineering and Computer Sciences and NEC chair holder at the University of California, Berkeley, and Director Emeritus of the Center for Information Technology Research in the Interest of Science (CITRIS). Prior to joining Berkeley, she was a professor of the Computer Science and information department at the University of Pennsylvania, PA. There she founded the GRASP (General Robotics and Active Perception) laboratory in 1979 which is flourishing now. In 1999, she was appointed to be headed the Computer and Information Science and Engineering Directorate at the National Science Foundation (NSF). In 2001, after she finished her stay at NSF, she retired from University of Pennsylvania and joined the faculty at University of California, Berkeley. Dr. Bajcsy is a member of the National Academy of Engineering (NAE) and the National Academy of Medicine (NAM) as well as a fellow of the Association for Computing Machinery (ACM), a fellow of IEEE and the American Association for Artificial Intelligence. Her election to the NAE/NAM was predicated on the invention of Computer registration of an anatomy atlas to CAT images of the human brain (1978-79) using theory of elasticity to account for local deformations. This principle led to many applications and improvements in Brain analysis, pursued by her student Jim Gee in 1990s until now. At UC Berkeley, in collaboration with UC San Francisco she pursued assessment of mechanical properties of musculoskeletal system of human bodies. This work led to implementation of various prosthetic wearable devices. In 2001, she received the ACM/Association for the Advancement of Artificial Intelligence Allen Newell Award. Since 2008, she has been a member of the American Academy of Arts and Sciences. She is the recipient of the Benjamin Franklin Medal for Computer and Cognitive Sciences (2009) and the IEEE Robotics and Automation Award (2013) for her contributions in the field of robotics and automation. She received the 2016 NAE Simon Ramo Founders Award for her life achievements. Dr. Bajcsy's son, Dr. Peter Bajcsy, is employed by NIST as a researcher in the Software and Systems Division's Information Systems Group within the Information Technology Laboratory.

Suzanne Bakken

Member

SUZANNE BAKKEN, NAM, Ph.D., RN, FAAN, FACMI, FIAHSI, is the Alumni Professor of Nursing and Professor of Biomedical Informatics at Columbia University. Her program of research has focused on the intersection of informatics and health equity for more than 30 years and has been funded by AHRQ, NCI, NIMH, NINR, and NLM. Dr. Bakken's program of research has resulted in more than 300 peer-reviewed papers. At Columbia Nursing, she leads the NINR-funded Precision in Symptom Self-Management (PriSSM) Center and Reducing Health Disparities Through Informatics (RHeaDI) Pre- and Post-doctoral Training Program. She is a fellow of the American Academy of Nursing, American College of Medical Informatics, International Academy of Health Sciences Informatics, and a member of the National Academy of Medicine. Dr. Bakken has received multiple awards for her research including the Pathfinder Award from the Friends of the National Institute of Nursing Research, the Nursing Informatics Award from the Friends of the National Library of Medicine, the Sigma Theta Tau International Nurse Researchers Hall of Fame, and the Virginia K. Saba Award from the American Medical Informatics Association. Most recently, she was the first nurse recipient of the Francois Gremy Award from the International Medical Informatics Association. Dr. Bakken currently serves as editor-in-chief of the Journal of the American Medical Informatics Association and as a member of the Board of Regents of the National Library of Medicine. Dr. Bakken has served on multiple consensus committees, most recently a committee focused on returning of biomarker results to research participants. As the NAM Nurse Scholar-in-Residence, she helped staff "Communities in Action: Pathway to Health Equity". She is also a member of the Health Literacy Roundtable.

Peter A. Beling

Member

PETER A. BELING is a professor in the Grado Department of Industrial and Systems Engineering and associate director of the Intelligent Systems Laboratory in the Hume Center for National Security and Technology at Virginia Polytechnic Institute and State University (Virginia Tech). Dr. Beling's research interests lie at the intersections of systems engineering and artificial intelligence (AI) and include AI adoption, reinforcement learning, transfer learning, and digital engineering. His research has found application in a variety of domains, including mission engineering, cyber resilience of cyber-physical systems, prognostics and health management, and smart manufacturing. Prior to joining Virginia Tech in 2021, he was a professor of systems engineering at the University of Virginia (UVA) and directed the UVA site of the Center for Visual and Decision Informatics, a National Science Foundation Industry/University Cooperative Research Center, and the Adaptive Decision Systems Laboratory. Additionally, he serves on the Research Council of the Systems Engineering Research Center (SERC), a University Affiliated Research Center for the Department of Defense. Dr. Beling has served as editor and reviewer for many academic journals and regularly serves as a panel member for the National Academies and the National Science Foundation. Dr. Beling received his Ph.D. in operations research from the University of California at Berkeley.

James O. Berger

Member

JAMES O. BERGER, NAS, is the Arts and Sciences Distinguished Professor Emeritus of Statistics at Duke University. His current research interests include Bayesian model uncertainty and uncertainty quantification for complex computer models. Dr. Berger was president of the Institute of Mathematical Statistics from 1995-1996 and of the International Society for Bayesian Analysis during 2004. He was the founding director of the Statistical and Applied Mathematical Sciences Institute, serving from 2002-2010. Dr. Berger was elected as a foreign member of the Spanish Real Academia de Ciencias in 2002, elected to the U.S. National Academy of Sciences in 2003, was awarded an honorary doctor of science degree from Purdue University in 2004, and became an honorary professor at East China Normal University in 2011.

Duane Blackburn

Member

DUANE BLACKBURN serves as Deputy Director of MITRE's Center for Data-Driven Policy, which brings objective, evidence-based, nonpartisan insights to government policymaking. Before joining MITRE, he served as an assistant director of the White House Office of Science and Technology Policy and coordinated S&T policy for homeland security, law enforcement, and identity matters. He led the development and implementation of government-wide S&T strategies on a variety of subjects and influenced the conceptualization and oversight of national strategies, policies, regulatory oversight, and federal systems throughout the formative stages of the nation's homeland security enterprise. He has also served as a R&D program manager in the FBI, National Institute of Justice, and DoD Counterdrug Technology Development. Mr. Blackburn holds bachelor's and master's degrees in electrical engineering from Virginia Polytechnic Institute and State University (Virginia Tech). He serves on the advisory boards for the Bradley Department of Electrical and Computer Engineering at Virginia Tech and the U.S. Government Accountability Office's Science, Technology Assessment, and Analytics (STAA) Team.

Phillip Colella

Member

PHILLIP COLELLA, NAS, is senior mathematician and group leader for the Applied Numerical Algorithms Group in the Computing Sciences Directorate at the E. O. Lawrence Berkeley National Laboratory. He is a leader in the development of mathematical methods and computer science tools for science and engineering. His research has been in the area of high-resolution and adaptive methods for partial differential equations. He has also applied numerical methods in a variety of scientific and engineering fields, including shock dynamics, low-mach number and incompressible flows, combustion, porous media flows, and astrophysical flows. Dr. Colella received his A.B., M.A., and Ph.D. from the University of California, Berkeley, all in applied mathematics.

Dorin Comaniciu

Member

DORIN COMANICIU, NAM, serves as Senior Vice President for Artificial Intelligence and Digital Innovation at Siemens Healthineers. His scientific contributions to computational imaging and machine intelligence have translated to multiple clinical products focused on improving the quality of care, specifically in the fields of diagnostic imaging, image-guided therapy, and precision medicine. Dr. Comaniciu is a member of the National Academy of Medicine and a Top Innovator of Siemens. He is a fellow of the IEEE, ACM, MICCAI Society, and AIMBE. He is recipient of multiple honors, including an honorary doctorate and the IEEE Longuet-Higgins Prize for fundamental contributions to computer vision. Dr. Comaniciu is listed on Wikipedia's list of prolific inventors with 300 granted U.S. patents on healthcare technology. He has co-authored 350 peer-reviewed publications, which have received 51,000 citations, with an h-index of 80. He is an advocate for technological innovation that saves and enhances lives, addressing critical issues in global health.

James Darnell

Member

JAMES DARNELL is Chief Operating Officer of Blackbourne Holding Corporation and a 21-year veteran of the United States Secret Service, having served in protective and investigative assignments in Las Vegas, NV, Washington, DC, and Tulsa, OK. Mr. Darnell holds the position of Assistant to the Special Agent in Charge and was assigned to the National Computer Forensics Institute where he administered the Service's digital evidence research activities and ran a digital evidence laboratory. Mr. Darnell began his career with the Secret Service in 1999 and served as a special agent in the Las Vegas Field Office where he conducted criminal investigations, worked protective assignments, and received extensive training in the field of computer forensics. In 2005, he transferred to the Criminal Investigative Division in Washington, DC, where he served as the Service's program manager for computer forensics. Mr. Darnell is the current vice chair of the Scientific Working Group on Digital Evidence (SWGDE) and former chair of both SWGDE and the NIST Organization of Scientific Area Committees (OSAC) for Forensic Science Digital Evidence Subcommittee. He provides presentations at the annual American Academy conference, periodically instructs at the National Computer Forensics Institute (NCFI) and for the agencies of the Treasury Computer Forensics Training Program (TCFTP), is a member of the ASTM E30 Committee, and is an adjunct professor at Oklahoma State University. Mr. Darnell is a native of Las Vegas, NV. He received his bachelor of science degree from the University of Nevada in Las Vegas.

Mark E. Dean

Member

MARK E. DEAN, NAE, has 34 years of industry experience as a design engineer, researcher, manager, and executive in computer technology R&D at IBM, including being an IBM Fellow, VP, and CTO. He also has six years of academic experience as a professor, researcher, and interim Dean of the Tickle College of Engineering at the University of Tennessee, and two years as a consultant in advanced technology development and commercialization. Dr. Dean presently has 44 patents and is a member of the Inventors Hall of Fame. He also has numerous awards recognizing his career contributions to the computer technology industry including Black Engineer of the Year, NAE member, IEEE Fellow, and member of the National Academy of Inventors.

Don E. Detmer

Member

DON EUGENE DETMER, NAM, is Professor of Medical Education, Vice-President for Health Sciences Emeritus, and University Professor Emeritus at the University of Virginia. He has held past professorships at Cambridge University, the University of Utah, and the University of Wisconsin-Madison. Dr. Detmer served as the Vice President for Health Sciences at the Universities of Virginia and Utah and was an active vascular surgeon for thirty years. He was President and CEO of the American Medical Informatics Association from 2004 to 2009 and Medical Director of Health Policy for the American College of Surgeons from 2011-2013. He has received the Walsh McDermott Award from the National Academy of Medicine (then IOM) and the Morris Collen Medal from the American College of Medical Informatics as well as being named a ACMI Distinguished Fellow. He is past chair of the Board of Regents of the National Library of Medicine, the National Committee for Vital and Health Statistics, the Board of Health Care Services of the IOM, and Blue Ridge Academic Health Group which he founded. He chaired the Computer-based Patient Record Report of the U.S. Institute of Medicine in 1991 and was on the IOM Committee that authored the "To Err is Human" and "Crossing the Quality Chasm" Reports. He was deeply engaged in early days of the national health information infrastructures of the U.S., England, and Hong Kong and helped improve policy for direct electronic communications of health records with patients in the U.S. and Europe. According to Google Scholar, his publications have been cited around 10,000 times. He is a Fellow of a number of professional organizations including the AAAS, the American Colleges of Medical Informatics, Surgery, Sports Medicine, and Sigma Xi, plus holding honorary Fellowships in the American Academy of Nursing and the American Academy of Physician Assistants. Dr. Detmer is a graduate of the Kansas University School of Medicine and had post-graduate training at Johns Hopkins, the National Institutes of Health, Duke Medical Center and Harvard Business School. His Master of Arts degree is from Cambridge University where he was the Gillings Professor of Health Care Management at its business school from 1999-2004. Recently, he served as Vice-President of the North American Truffle Growers Association. Currently, he is on the boards of the Corporation for National Research Initiatives, the International Academy of Health Sciences Informatics, and the American College of Medical Informatics. He lives on his working farm in Brown's Cove outside Charlottesville.

Juan E. Gilbert

Member

JUAN E. GILBERT received his M.S. and Ph.D. degrees in computer science from the University of Cincinnati in 1995 and 2000, respectively. He also received his B.S. in Systems Analysis from Miami University in Ohio in 1991. Dr. Gilbert is currently the Andrew Banks Family Preeminence Endowed Professor and Chair of the Computer and Information Science and Engineering Department at the University of Florida where he leads the Human Experience Research Lab. He has research projects in election security/usability/accessibility, advanced learning technologies, usability and accessibility, Human-Centered AI/machine learning and Ethnocomputing (Culturally Relevant Computing). He is an ACM Fellow, a fellow of the American Association of the Advancement of Science and a fellow of the National Academy of Inventors. In 2012, Dr. Gilbert received the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring from President Barack Obama. He also received the American Association for the Advancement of Science (AAAS) 2014 Mentor Award. He received the 2021 ACM SIGCHI Social Impact Award. Dr. Gilbert received the 2018 Computer Research Association's A. Nico Habermann Award. Dr. Gilbert has served on three National Academies consensus committees, "The Role of Authentic STEM Learning Experiences in Developing Interest and Competencies for Technology and Computing", "The Science of Effective Mentoring in Science, Technology, Engineering, Medicine, and Mathematics (STEMM)" and "The Future of Voting: Accessible, Reliable, Verifiable Technology".

Gerard J. Holzmann

Member

GERARD J. HOLZMANN, NAE, has expertise in software reliability and safety, code analysis, formal verification, software tools, and logic model checking. He is currently founder and consultant at Nimble Research. He was formerly Fellow at NASA/JPL (2003-2017), and before that, Director of Computing Principles Research, Bell Laboratories (1983-2003). He is a member of the National Academy of Engineering (elected 2005). He has received the ACM Software Systems Award (2001), the NASA Software of the Year Award (2013) and is an ACM Fellow (2012), etc. He was software Lead on the NHTSA/NASA investigation of unintended acceleration in Toyota vehicles (2010-2011). He holds eight U.S. patents, and has written four technical monographs and approximately 80 technical papers. He has given approximately 120 invited talks at conferences, universities, and companies, and has served on approximately 130 program committees. He was associate editor for IEEE Software. He served on the review board of HRL Laboratories (2018), and the review panel of the NIST/IT Lab (2015), and was an invited expert at the U.S. Nuclear Regulatory Committee hearing in Washington, DC in 2011. He holds a Doctor h.c. from Twente University, The Netherlands (2006).

Peter M. Kogge

Member

PETER M. KOGGE is the Ted H. McCourtney Professor of Computer Science and Engineering at the University of Notre Dame, a retired IBM Fellow, and a founder of Emu Solutions, Inc. He is a fellow of both the IEEE and AAAS. His research interests are in massively parallel computing paradigms, processing in memory, and the relationship between massive non-numeric applications, emerging technology, and computer architectures. He holds over 40 patents and is author of two books, including the first text on pipelining. His Ph.D. thesis led to the Kogge-Stone adder used in many microprocessors. Other projects included EXECUBE - the world's first multi-core processor and first processor on a DRAM chip, the IBM 3838 Array processor which was for a time the fastest floating point machine marketed by IBM, and the IOP - the world's second multi-threaded parallel processor which flew on every Space Shuttle. In 2008, he led DARPA's Exascale technology study group, which resulted in a widely referenced report on technologies and architectures for exascale computing. His startup, Emu Solutions, has demonstrated the first scalable system that utilizes mobile threads to attack large-scale big data and big graph problems. Dr. Kogge has received the Daniel Slotnick best paper award (1994), the IEEE Seymour Cray award for high performance computer engineering (2012), the IEEE Charles Babbage award for contributions to the evolution of massively parallel processing architectures (2014), the IEEE Computer Pioneer award (2015) (highest award from IEEE Computer Society), and the Gauss best paper award for high performance computers (International Supercomputing Conference 2015). Dr. Kogge holds a Ph.D. in electrical engineering from Stanford University (1973); an M.S in systems and engineering sciences from Syracuse University (1970), and a B.S. in electrical engineering from the University of Notre Dame (1968).

Ming C. Lin

Member

MING C. LIN is Distinguished University Professor of Computer Science, Dr. Barry Mersky and Capital One Endowed Professors, and Former Elizabeth Iribe Chair of Computer Science in the Departments of Computer Science (CS) and Electrical and Computer Engineering (ECE), and the University of Maryland Institute for Advanced Computer Studies (UMIACS) of the University of Maryland (UMD) at College Park. Before joining UMD, Lin was John R. and Louise S. Parker Distinguished Professor at University of North Carolina (UNC) - Chapel Hill, where she was a faculty for 20 years. Dr. Lin's research interests include AI/robotics, computer graphics/VR/VIS/HCI, data analytics, scientific computing, modeling and simulation, with applications to healthcare, traffic analytics, design and prototyping; she has (co-) authored more than 300 refereed scientific publications and five books in these areas. She has received several honors and awards, including the NSF Young Faculty Career Award, UNC Hettleman Award for Scholarly Achievements, Beverly W. Long Distinguished Term Professor, IEEE VGTC VR Technical Achievement Award, Washington Academy of Sciences Distinguished Career Award, and several best paper awards. She is a fellow of ACM, IEEE, and Eurographics, and ACM SIGGRAPH Academy.

She is a member of CRA-WP Board of Directors, former chair of IEEE Computer Society (CS) Computer Pioneer Awards Committee and of IEEE CS Fellows Committee, and founding chair of ACM SIGGRAPH Outstanding Doctoral Dissertation Award Committee. She is an editor-in-chief emerita of IEEE Transactions on Visualization and Computer Graphics, a former IEEE CS Board of Governors member and a former chair of the IEEE CS Transactions Operations Committee. She has served on the Steering/Executive Committees of many international conferences, NSF Board of Visitors, several other technical advisory boards for the government agencies, universities, industry, and the international scientific research community. She has consulted for Amazon, Intel, and Microsoft; she was also the co-founder of Impulsonic, Inc. which was acquired by Val and its audio technology, Phonon, has been incorporated into SteamAudio for use by VR and other real-time applications.

Christopher Manning

Member

CHRISTOPHER MANNING is the inaugural Thomas M. Siebel Professor in Machine Learning in the Departments of Linguistics and Computer Science at Stanford University, director of the Stanford Artificial Intelligence Laboratory (SAIL), and an associate director of the Stanford Human-Centered Artificial Intelligence Institute (HAI). His research goal is computers that can intelligently process, understand, and generate human language material. Dr. Manning is a leader in applying Deep Learning to Natural Language Processing, with well-known research on the GloVe model of word vectors, question answering, tree-recursive neural networks, machine reasoning, neural network dependency parsing, neural machine translation, sentiment analysis, and deep language understanding. He also focuses on computational linguistic approaches to parsing, natural language inference and multilingual language processing, including being a principal developer of Stanford Dependencies and Universal Dependencies. Dr. Manning has coauthored leading textbooks on statistical approaches to Natural Language Processing (NLP) (Manning and Schütze 1999) and information retrieval (Manning, Raghavan, and Schütze, 2008), as well as linguistic monographs on ergativity and complex predicates. He is an ACM Fellow, a AAAI Fellow, and an ACL Fellow, and a past president of the ACL (2015). His research has won ACL, Coling, EMNLP, and CHI Best Paper Awards. He has a B.A. (Hons) from The Australian National University and a Ph.D. from Stanford in 1994, and he held faculty positions at Carnegie Mellon University and the University of Sydney before returning to Stanford. He is the founder of the Stanford NLP group (@stanfordnlp) and manages development of the Stanford CoreNLP software.

Mari Ostendorf

Member

MARI OSTENDORF, NAE, is a Professor of Electrical and Computer Engineering and Endowed Professor of System Design Methodologies at the University of Washington, also serving as Associate Vice Provost for Research. Her research focus is on machine learning for speech and language processing, particularly in conversational contexts. She received B.S., M.S. and Ph.D. degrees in Electrical Engineering (1980, 1981, 1985, respectively) from Stanford University. Dr. Ostendorf's research area is known for having technology evaluation competitions, and many of the competitions associated with government-funded research programs were run by NIST. As such, she is familiar with some of the work of the NIST Information Technology Laboratory, particularly the Information Access Division. She also has extensive experience in serving on institute and center review panels in the U.S. and internationally.

J. Marc Overhage

Member

J. MARC OVERHAGE, NAM, is the Chief Health Information Officer for Anthem, Inc and previously served as the Chief Medical Informatics Officer for Cerner and Siemens Health Services. He is an internationally recognized expert in health information modeling, standards, and interoperability as well as clinical decision support, health services research, and implementation science. He is a fellow of the National Academy of Medicine, a master of the American College of Physicians, a member of the American College of Medical Informatics, and a fellow of the International Academy of Health Science Informatic. Dr. Overhage was awarded the Donald A.B. Lindbergh Award for Innovation from the American Medical Informatics Association in 2018. He served on a previous National Academies review panel for NIST as well as participating in a variety of National Academies panels, reports, and workshops.

Stephanie A. Schuckers

Member

STEPHANIE A. SCHUCKERS is the Paynter-Krigman Endowed Professor in Engineering Science in the Department of Electrical and Computer Engineering at Clarkson University, and serves as the Director of the Center of Identification Technology Research (CITeR), a National Science Foundation Industry/University Cooperative Research Center. She received her doctoral degree in electrical engineering from The University of Michigan. Dr. Schuckers' research focuses on processing and interpreting signals which arise from the human body. Signals include the electrocardiogram and biometric signals like fingerprints and iris. Methods involve classic signal processing, statistical techniques, pattern recognition, algorithm development and evaluation, data mining, and image processing. Analysis is focused on data collected from cadaver, human, and animal studies. Her work is funded from various sources, including National Science Foundation, Department of Homeland Security, and private industry, among others. She has started her own business, testified for Congress, and has over 40 journal publications as well as over 60 other academic publications.

Peter Tu

Member

PETER TU is GE Research's Chief Scientist for Artificial Intelligence. Dr Tu's primary interest is the field of computer vision. More recently, he has investigated a number of third wave AI topics including the grounding problem and emergent cooperation. In 1995, Dr. Tu received his doctorate in computer vision from Oxford University. Dr Tu has over 75 peer reviewed publications and 50 patents. In 2015, Dr. Tu participated in a National Academies panel review of NIST research.

Stephen B. Vardeman

Member

STEPHEN B. VARDEMAN is University Professor, Emeritus of Statistics and Industrial Engineering at Iowa State University, where he has served as major advisor or co-major advisor for 32 Ph.D. graduates and 53 M.S. graduates. His professional interests and expertise include statistical machine learning, engineering and natural science applications of statistics, statistics and metrology, directional data analysis, process monitoring and control, reliability, industrial applications of statistics, statistical education, and the development of new statistical theory and methods. He holds degrees in statistics (Ph.D. 1975 from Michigan State University) and mathematics (M.S. and B.S., 1973 and 1971, from Iowa State University). He is a fellow of the American Statistical Association, an elected member of the International Statistical Institute, served on the ASA Board of Directors 2001-2003, was ISU LAS Kingland Data Analytics Faculty Fellow 2017 through 2019, and was editor of Technometrics from 1993 through 1995. He has authored or co-authored five textbooks including the winner of the 1994 ASEE Meriam-Wiley Distinguished Author Award for an outstanding new engineering textbook, co-edited Statistical Methods for Physical Science, Volume 28 in the Academic Press Methods of Experimental Physics series, and has published nearly 80 authored or co-authored refereed papers. He served on the National Academies Panel on Information Technology in 2009, 2011, and 2015 and on the ASA Task Force on Statistical Significance and Reproducibility 2020-2021.

Alyson G. Wilson

Member

ALYSON G. WILSON is the Associate Vice Chancellor for National Security and Special Research Initiatives at North Carolina (NC) State University. She is also a professor in the Department of Statistics and Principal Investigator for the Laboratory for Analytic Sciences. Her research interests include statistical reliability, Bayesian methods, and the application of statistics to problems in defense and national security. Prior to joining NC State, Dr. Wilson was a research staff member at the IDA Science and Technology Policy Institute (2011-2013); an associate professor in the Department of Statistics at Iowa State University (2008-2011); a technical staff member in the Statistical Sciences Group at Los Alamos National Laboratory (1999-2008); and a senior statistician and operations research analyst with Cowboy Programming Resources (1995-1999). Dr. Wilson has served on several committees for the National Academies, including most recently the Committee on Improving Defense Acquisition Workforce Capability in Data Use, the Committee on Risk Analysis for Nuclear War and Nuclear Terror, and the Committee on Applied and Theoretical Statistics. Dr. Wilson is a fellow of the American Statistical Association and the American Association for the Advancement of Science. She received her Ph.D. in statistics from Duke University, her M.S. in statistics from Carnegie-Mellon University, and her B.A. in mathematical sciences from Rice University.

Wing H. Wong

Member

WING HUNG WONG, NAS, obtained his Ph.D. in statistics from the University of Wisconsin at Madison in 1980. He has held teaching positions at the University of Chicago, The Chinese University of Hong Kong, UCLA and Harvard University. In 2004, he joined the faculty of Stanford University, where he is currently Professor of Statistics, Professor of Biomedical Data Science, and holder of the Stephen R. Pierce Family Goldman Sachs Professorship in Science and Human Health. His research interests include 1) mathematical statistics, where he studied the large sample properties of sieve maximum likelihood estimates in general spaces; 2) Bayesian statistics, where he developed sampling-based algorithms for Bayesian computational inference; and 3) computational biology, where he developed tools for the analysis of microarrays and sequencing data, and applied them to study gene regulatory systems. Dr. Wong was the winner of the COPSS Presidents' Award in 1993. He was elected to the National Academy of Sciences in 2009. He served on the editorial board of PNAS from 2009-2015. He had participated in the writing of a NRC report Mathematics and 21st Century Biology, published by the National Academies Press (2005).

Mary Ellen Zurko

Member

MARY ELLEN ZURKO is a technical staff member at MIT Lincoln Laboratory. Ms. Zurko has experience in cybersecurity architectures, cybersecurity analysis, product development and prototyping, and applied research. She holds over 20 patents. She defined the field of User-Centered Security in 1996. She was security architect doing DevSecOps of one of IBM's earliest clouds. Her previous research includes authorization policies, high assurance virtual machine monitors, the web, and PKI. She was a founding member of the National Academies' Forum on Cyber Resilience and serves as a Distinguished Expert for NSA's Best Scientific Cybersecurity Research Paper competition. Ms. Zurko received S.B and S.M. degrees in computer science from MIT.