

Emerging Areas of Science, Engineering, and Medicine for the Courts: Identifying Chapters for a Fourth Edition of The Reference Manual on Scientific Evidence - A Workshop

Committee

Thomas D. Albright

Co-Chair

Thomas D. Albright is Professor and Conrad T. Prebys Chair at the Salk Institute for Biological Studies, where he joined the faculty in 1986. He is also Director of the Salk Institute Center for the Neurobiology of Vision and Adjunct Professor of Psychology and Neurosciences at the University of California, San Diego. Albright is an authority on the neural basis of visual perception, memory and visually guided behavior. His laboratory seeks to understand how visual perception is affected by attention, behavioral goals, and memories of previous experiences. An important goal of this work is the development of therapies for blindness and perceptual impairments resulting from disease, trauma or developmental disorders of the brain. A second aim of Dr. Albright's work is to use our growing knowledge of brain, perception and memory to inform design in architecture and the arts, to leverage societal decisions and public policy, and to advise on matters of law and justice. Albright received a Ph.D. in psychology and neuroscience from Princeton University. He is a member of the U.S. National Academy of Sciences, a fellow of the American Academy of Arts and Sciences, a fellow of the American Association for the Advancement of Science, and an associate of the Neuroscience Research Program. He is past-president of the Academy of Neuroscience for Architecture, a former member of the National Academy of Sciences Committee on Science, Technology, and Law, and a former member of the U.S. National Commission on Forensic Science. Albright is currently a member of the Human Factors Resource Committee of the NIST Organization of Scientific Area Committees for Forensic Science. Albright served as co-chair of the National Academy of Sciences Committee on Scientific Approaches to Eyewitness Identification, which produced the 2014 report *Identifying the Culprit: Assessing Eyewitness Identification*.

Kathleen McDonald O'Malley

Co-Chair

Judge Kathleen McDonald O'Malley was appointed to the U.S. Court of Appeals for the Federal Circuit by President Obama in 2010. Prior to her elevation to the Federal Circuit, Judge O'Malley was appointed to the U. S. District Court for the Northern District of Ohio by President Clinton in 1994. Prior to her appointment to the bench, Judge O'Malley served as First Assistant Attorney General, Chief of Staff, and Chief Counsel to the Attorney General for the State of Ohio. Judge O'Malley was also in private practice with Jones Day and Porter, Wright, Morris & Arthur. Judge O'Malley began her legal career as a law clerk to the Hon. Nathaniel R. Jones, U.S. Court of Appeals for the Sixth Circuit.

Judge O'Malley has been an active speaker and educator, having delivered over 50 speeches and lectures, taught a number of law school courses, published articles, and been active in Inns of Court and bar functions. Judge O'Malley has received numerous awards during her 25 years on the bench. For her contributions to intellectual property alone, Judge O'Malley has been awarded the Sedona Conference Lifetime Achievement Award, the New Jersey Intellectual Property Law Association Jefferson Medal, the New York Intellectual Property Law Association Outstanding Public Service Award and was named to Globe Business Media Group's IP Hall of Fame. Recently, an IP Inn of Court in Cleveland, Ohio bearing her name has been chartered by the American Inns of Court.

Steven M. Bellovin

Member

Steven M. Bellovin (NAE) is the Percy K. and Vida L.W. Hudson Professor of Computer Science at Columbia University, a member of the Cybersecurity and Privacy Center of the university's Data Science Institute, and an affiliate faculty member at the Columbia Law School. He performs research on security and privacy and on related public policy issues. Dr. Bellovin received a B.A. from Columbia University and an M.S. and a Ph.D. in computer science from the University of North Carolina at Chapel Hill. He has served as the chief technologist of the Federal Trade Commission and as a technology scholar at the Privacy and Civil Liberties Oversight Board. He has been a member of the U.S. Department of Homeland Security's Science and Technology Advisory Committee and the Technical Guidelines Development Committee of the Election Assistance Commission. He is a member of the National Academy of Engineering and has previously served on the Computer Science and Telecommunications Board of the National Academies of Sciences, Engineering, and Medicine.

Karen Kafadar

Member

Karen Kafadar is Commonwealth Professor & Chair of Statistics at University of Virginia. She received her B.S. in Math and M.S. in Statistics from Stanford, and her Ph.D. in Statistics from Princeton University under John Tukey. She previously held positions at National Institute of Standards & Technology's Statistical Engineering Division (NIST-SED), Hewlett Packard's RF/Microwave Division, National Cancer Institute, and University of Colorado-Denver. Her research focuses on robust methods, exploratory data analysis, and statistical methods for problems in the physical, chemical, biological, and engineering sciences, as well as methodology for randomized cancer screening trials. She received ASQ's William G. Hunter Award in 2002 and ASA's Outstanding Statistical Applications Award (1995), is past Editor of JASA Reviews and Technometrics, and currently Editor-in-Chief for The Annals for Applied Statistics. She has served on several National Academy of Sciences' Committees, including those that led to the reports Strengthening Forensic Science in the United States: A Path Forward (2009), Evaluating Testing, Costs, and Benefits of Advanced Spectroscopic Portals (2011), Review of the Scientific Approaches Used During the FBI's Investigation of the Anthrax Letters (2011), and Identifying the Culprit: Assessing Eyewitness Identification (2014). She is a Co-Investigator of the NIST-funded Center of Excellence (Center for Statistical Applications in Forensic Science), is a Fellow of ASA, AAAS, and ISI, has authored numerous publications and advised many students, and was 2019 ASA President.

Andrew Maynard

Member

Andrew Maynard is Associate Dean in the College of Global Futures and a professor in the School for the Future of Innovation in Society at Arizona State University. He is also director of the ASU Risk Innovation Lab which focuses on novel approaches to risk, together with responsible and ethical innovation, in the context of technology innovations and changing social norms and expectations. His research focuses on responsible development and use of emerging technologies, including nanotechnology and synthetic biology, and science communication and public engagement on these issues. He is widely published, and has testified before the U.S. Congress on several occasions regarding nanotechnology policy and research needs related to nanotechnology risk. Dr. Maynard is a regular contributor to a special column of the journal Nature Nanotechnology and is on the editorial board of the Journal of Responsible Innovation. Dr. Maynard works closely with and through conventional and new media to connect with audiences around the world on technology innovation and the science of risk. He received a B.Sc. in physics from the University of Birmingham (U.K.) and a Ph.D. in aerosol physics from the University of Cambridge (U.K.).

Venkatachalam Ramaswamy

Member

Dr. Venkatachalam Ramaswamy is the director of NOAA's Geophysical Fluid Dynamics Laboratory (GFDL). He is also a lecturer with the rank of professor in the Atmospheric and Oceanic Sciences Program and the Princeton Environmental Institute at Princeton University. His primary interests include numerical modeling of the global climate system, advancing the understanding of atmospheric physics and chemistry and related processes in climate, and investigating the climatic variations and changes due to natural and human-influenced factors. At GFDL he directs one of the world's major weather and climate research and modeling centers with the mission to develop and apply advanced numerical models for understanding global and regional climate, and conduct research on predictability/ predictions and projections of climate including extremes. Prior to becoming the director of GFDL, he held the senior scientist position. His honors include: fellow, American Meteorological Society (AMS), American Association for the Advancement of Science, and American Geophysical Union (AGU); AMS Houghton Award and Walter Orr Roberts Lecture; AGU Jule Charney Lecture; WMO Norbert-Gerbier International Award for best scientific paper (3-time recipient); Presidential Rank for Meritorious Senior Professional, and Presidential Distinguished Rank for Senior Executive; Partnership for Public Service Samuel J. Heyman award finalist (Career Achievement category); Bert Bolin Lecture (Stockholm University); Ogura Lecture (University of Illinois); Distinguished Lecture (Lawrence Berkeley Laboratory; KAUST, Saudi Arabia); Joseph Priestley Lecture (Chemical Heritage Foundation); and member of the IPCC team that was a co-recipient of the 2007 Nobel Peace Prize. Dr. Ramaswamy earned his Ph. D. in atmospheric sciences from the State University of New York at Albany. He has previously served on the Academies Panel on Informing Effective Decisions and Actions Related to Climate Change as well as the Panel on Aerosol Radiative Forcing and Climate Change.

Thomas Schroeder

Member

Thomas Schroeder is the chief judge for the United States District Court for the Middle District of North Carolina. He joined the court in 2008 after being nominated by former President George W. Bush. Schroeder became chief judge in 2017. He graduated from Kansas University with his B.S. in 1981, and later received his J.D. from Notre Dame Law School in 1984.

David S. Tatel

Member

Judge David S. Tatel was appointed to the United States Court of Appeals for the District of Columbia Circuit in October 1994. Judge Tatel earned his undergraduate degree from the University of Michigan and his J.D. from the University of Chicago. Among other things, he has served as Director of the National Lawyers' Committee for Civil Rights Under Law and Director of the Office for Civil Rights of the U.S. Department of Health, Education and Welfare during the Carter Administration. Returning to private practice in 1979, Judge Tatel joined Hogan & Hartson, where he founded and headed the firm's education practice until his appointment by President Clinton to the D.C. Circuit. Judge Tatel currently co-chairs the National Academy of Sciences' Committee on Science, Technology and Law and serves on the board of Associated Universities, Inc. Judge Tatel is a member of the American Philosophical Society and the American Academy of Arts and Sciences.

Steven R. Kendall

Staff Officer