Committee on Applied and Theoretical Statistics

Committee

Elizabeth A. Stuart

Co-Chair

Elizabeth A. Stuart, Ph.D. is Associate Dean for Education and Professor in the Department of Mental Health at the Johns Hopkins Bloomberg School of Public Health, with joint appointments in the Department of Biostatistics and the Department of Health Policy and Management. She received her Ph.D. in statistics in 2004 from Harvard University and is a fellow of the American Statistical Association (ASA). Dr. Stuart has extensive experience in methods for estimating causal effects and dealing with the complications of missing data in experimental and non-experimental studies, particularly as applied to mental health, public policy, and education. Her primary research interests include designs for estimating causal effects in non-experimental settings (such as propensity scores), and methods to assess and enhance the generalizability of randomized trials to target populations. She has received research funding for her work from the National Science Foundation, the Institute of Education Sciences, the National Institutes of Health, and the WT Grant Foundation and has served on advisory panels for the National Academy of Sciences, the US Department of Education, and the Patient Centered Outcomes Research Institute. She serves on the board of the Society for Research on Educational Effectiveness. She has received the Gertrude Cox Award for applied statistics, Harvard University’s Myrto Lefkopoulou Award for excellence in Biostatistics, and the inaugural Marshall Joffe epidemiologic methods award from the Society for Epidemiologic Research.

Lance A. Waller

Co-Chair

Lance A. Waller, Ph.D. is a professor in the Department of Biostatistics and Bioinformatics, Rollins School of Public Health, Emory University. He is a member of the National Academy of Science Board on Mathematical Sciences and Analytics and has served on National Academies Committees on Applied and Theoretical Statistics, Cancer Near Nuclear Facilities, Geographic Assessments of Exposures to Agent Orange, and Standoff Explosive Technologies. His research involves the development of statistical methods for geographic data including applications in environmental justice, epidemiology, disease surveillance, spatial cluster detection, conservation biology, and disease ecology. His research appears in biostatistical, statistical, environmental health, and ecology journals and in the textbook Applied Spatial Statistics for Public Health Data (2004, Wiley). Dr. Waller currently leads planning for the Data Science Initiative in Emory University’s Woodruff Health Sciences Center.

Fredrick D. Bowman

Member

A renowned expert in the statistical analysis of brain imaging data, F. DuBois Bowman is dean of the University of Michigan School of Public Health. Dr. Bowman’s work mines massive data sets and has important implications for mental and neurological disorders such as Parkinson’s disease, Alzheimer’s disease, depression, schizophrenia, and substance addiction. His research has helped reveal brain patterns that reflect disruption from psychiatric diseases, detect biomarkers for neurological diseases, and determine more individualized therapeutic treatments. Dr. Bowman received a Bachelor of Science degree in mathematics from Morehouse College, a Master of Science degree in Biostatistics from the University of Michigan, and a Ph.D. in Biostatistics from the University of North Carolina at Chapel Hill.

Wei Chen

Member

Dr. Wei Chen is the Wilson-Cook Chair Professor in Engineering Design at Northwestern University and a faculty in Department of Mechanical Engineering. As the director of the Integrated DEsign Automation Laboratory (IDEAL), her current research involves issues such as simulation-based design under uncertainty; model validation and uncertainty quantification; data science in design and advanced manufacturing; stochastic multiscale analysis and materials design; design of metamaterials; multidisciplinary design optimization; consumer choice modeling and decision-based design. She is the co-founder and director of the interdisciplinary doctoral cluster in Predictive Science and Engineering Design (PS&ED), and serves as the co-director for the Design Cluster affiliated with the Segal Design Institute at Northwestern. Dr. Chen received her Ph.D. in mechanical engineering from the Georgia Institute of Technology in 1995 and her B.S. from Shanghai Jiao Tong University (China) in 1988. She was an elected member of National Academy of Engineering (2019), a fellow of American Society of Mechanical Engineers (ASME) (2009) and an associate fellow of American Institute of Aeronautics and Astronautics (AIAA) (2003).

Omar Ghattas

Member

Dr. Omar Ghattas is a Professor of Geological Sciences and Mechanical Engineering at The University of Texas at Austin. He is also the Director of the Center for Computational Geosciences and Optimization in the Oden Institute for Computational Engineering and Sciences and holds the John A. and Katherine G. Jackson Chair in Computational Geosciences. He is a member of the faculty in the Computational Science, Engineering, and Mathematics (CSEM) interdisciplinary PhD program in the Oden Institute, and holds courtesy appointments in Computer Science and Biomedical Engineering. Before moving to UT
Austin in 2005, he spent 16 years on the faculty of Carnegie Mellon University. He holds BSE (civil and environmental engineering) and MS and PhD (computational mechanics) degrees from Duke University. With collaborators, he received the ACM Gordon Bell Prize in 2003 (for Special Achievement) and again in 2015 (for Scalability), and was a finalist for the 2008, 2010, and 2012 Bell Prizes. He received the 2019 SIAM Computational Science & Engineering Best Paper Prize, and the 2019 SIAM Geosciences Career Prize. He is a Fellow of the Society for Industrial and Applied Mathematics (SIAM).

Ofer Harel

Member

Ofer Harel, Ph.D., is the Dean of the College of Liberal Arts and Sciences and a professor in the Department of Statistics at the University of Connecticut. He previously served as an Interim Dean and Associate Dean for Research and Graduate Affairs. Dr. Harel’s expertise lies in missing data techniques, Bayesian methods, and statistical consulting, developed during his Ph.D. at The Pennsylvania State University and postdoctoral training at the University of Washington. He has secured funding from agencies such as the NIH, NSF, USDA, VA, US Census, IES, PCORI, and FDA, supporting his research in fields like Alzheimer’s, diabetes, cancer, and health disparities. Dr. Harel is a Fellow of American Statistical Association, Elected Member of International Statistical Institute, The Connecticut Academy of Arts and Science, and The Connecticut Academy of Science and Engineering.

Scott H. Holan

Member

Dr. Scott H. Holan is a Professor of Statistics and Department Chair at the University of Missouri and serves as a Senior Research Fellow in the Research and Methodology Directorate at the U.S. Census Bureau. His research expertise includes developing statistical and machine learning methodology for dependent data (spatial, spatio-temporal, functional, and multivariate, among others), Bayesian methods, environmental and ecological statistics, official statistics, and survey methodology. He is an elected Fellow of the American Statistical Association (2014), an Elected Member of the International Statistical Institute (2017), and an elected Fellow of the Institute of Mathematical Statistics (2021). Prof. Holan was a previous co-awardee of the Statistical Partnerships Among Academe, Industry, and Government (SPAIG) Award (2017). Prof. Holan has an M.S. in mathematics from University of Illinois at Chicago (1999) and a Ph.D. in Statistics from Texas A&M University (2004).

Rebecca A. Hubbard

Member

Dr. Hubbard is a Professor of Biostatistics in the Department of Biostatistics, Epidemiology & Informatics at the University Of Pennsylvania Perelman School Of Medicine where her research focuses on statistical methods to improve the validity of research conducted using electronic health records and medical claims data. She contributes statistical leadership to many areas of medical research including cancer epidemiology, aging and dementia, and pharmacoepidemiology. She has been principal investigator for several grants funded by the National Institutes of Health and the Patient-Centered Outcomes Research Institute. She is an elected fellow of the American Statistical Association (ASA) and a member of the ASA Board of Directors. Dr. Hubbard earned her B.S. in ecology and evolution from the University of Pittsburgh (1999), M.Sc. in epidemiology at the University of Edinburgh (2001), and M.Sc. in applied statistics at Oxford University (2002). She completed her Ph.D. in biostatistics at the University of Washington in 2007.

Kristin Lauter

Member

Kristin Lauter is the Director of West Coast Research Science for Meta AI Research (FAIR). She was the President of the Association for Women in Mathematics from 2015-2017. Her mathematical research focuses on the interface between machine learning and cryptography, with a focus on cloud security and health and genomic privacy. She is particularly known for her work on homomorphic encryption, elliptic curve cryptography, and post-quantum cryptography. Dr. Lauter was a researcher at Microsoft Research in Redmond, Washington, from 1999–2021 and Partner Research Manager of the Cryptography and Privacy Group from 2008–2021; her group developed Microsoft SEAL, an open source library for homomorphic encryption. In 2018 she also co-founded and led the Urban Innovation Initiative at Microsoft Research, with projects on Clean Air for All, and AI for Cities. Lauter is an elected fellow of the American Mathematical Society (AMS), the Association for Women in Mathematics (AWM), the Society of Industrial and Applied Mathematics (SIAM) and the American Association for the Advancement of Science (AAAS), and an elected Honorary Member of the Royal Spanish Mathematical Society (RSME). Lauter received her B.A., M.S., and Ph.D. degrees in Mathematics from the University of Chicago, in 1990, 1991, and 1996. She was a Hildebrandt Research Assistant Professor of Mathematics at the University of Michigan (1996-1999). She has published more than 100 papers and holds more than 50 patents.

Earl Lawrence

Member

Earl Lawrence is a Senior Scientist in the Statistical Sciences group at Los Alamos National Laboratory. He currently leads a large effort to develop artificial intelligence capability for the Lab. Prior to that, he was the Group Leader for the Statistical Sciences group and served as the Machine Learning Project leader for the Advanced Simulation and Computing Program at LANL. Earl's area of expertise is in the use of statistics to analyze large-scale simulation data, particularly for uncertainty quantification. Areas of application include cosmology, space physics, Martian geology, power grids, and national security. Earl is a Fellow of the American Statistical Association. He received his PhD in Statistics from the University of Michigan in 2005.

Miguel Marino

Member

Miguel Marino, PhD is an Associate Professor of Biostatistics in the Department of Family Medicine at Oregon Health & Science University in Portland, Oregon. He is director of the OHSU Family Medicine Biostatistics core and co-director of the Primary Care Latino Equity Research (PRIMER) center. His research focus is on development and implementation of statistical methodology to address complexities associated with the use of electronic health records (EHRs) to study health equity and changes in health policy among low-income disadvantaged populations seeking care in primary care clinics. Dr. Marino is statistical editor for JAMA Health Forum, co-chair of the NIH Community Engagement Alliance (CEAL) Needs Assessment & Evaluation Workgroup and on the National Advisory Committee on Racial, Ethnic and Other Populations for the Census Bureau. In 2020, Dr. Marino was selected as a NAM Emerging Leaders in Health and Medicine Scholar. In 2022, Dr. Marino was elected as a member to the National Academy of Medicine. He holds a Ph.D. in biostatistics from Harvard University, a MS in biostatistics and a BS in mathematics from UCLA.

Bhramar Mukherjee

Member

Bhramar Mukherjee is John D. Kalbfleisch Collegiate Professor and Chair, Department of Biostatistics; Professor, Department of Epidemiology, Professor, Global Public Health, University of Michigan (UM) School of Public Health; Research Professor and Core Faculty Member, Michigan Institute of Data Science (MIDAS), University of Michigan. She also serves as the Associate Director for Quantitative Data Sciences, University of Michigan Rogel Cancer Center. She is the Associate Workgroup Director for Cohort Development for U-M Precision Health, an institution-wide presidential initiative. Her research interests include statistical methods for analysis of electronic health records, studies of gene-environment interaction, Bayesian methods, shrinkage estimation, analysis of multiple pollutants. Collaborative areas are mainly in cancer, cardiovascular diseases, reproductive health, exposure science and environmental epidemiology. She has co-authored more than 280 publications in statistics, biostatistics, medicine and public health and is serving as PI on NSF and NIH funded methodology grants. She is the founding director of the University of Michigan’s summer institute on Big Data. Bhramar is a fellow of the American Statistical Association and the American Association for the Advancement of Science. She is the recipient of many awards for her scholarship, service and teaching at the University of Michigan and beyond. Bhramar and her team have been modeling the SARS-CoV-2 virus trajectory in India for the last one year which has been covered by major media outlets like Reuters, BBC, NPR, NYT, WSJ, Der Spiegel, Australian National Radio and the Times of India.

Kimberly F. Sellers

Member

Dr. Kimberly F. Sellers is Professor and Head of the Statistics Department at NC State University in Raleigh, NC; and a Principal Researcher with the Center for Statistical Research and Methodology Division of the U.S. Census Bureau. She has primary research interests and expertise that center on statistical methods for discrete and count data that contain data dispersion with methodological interests in distribution theory, regression analysis, multivariate analysis, stochastic processes, and time series analysis. An expert regarding the Conway-Maxwell-Poisson distribution and associated statistical methods, she has authored or co-authored numerous publications and six statistics computing packages from grant-funded research. Prof. Sellers recently authored the book, The Conway-Maxwell-Poisson Distribution (Cambridge University Press, 2023), which is the first comprehensive reference on the distribution and the flexible statistical methods derived using it to analyze dispersed count data. Prior to joining NC State, she was a Professor of Mathematics and Statistics, specializing in Statistics at Georgetown University; and previously an Assistant Professor of Biostatistics and Senior Scholar at the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania, and a Visiting Assistant Professor of Statistics at Carnegie Mellon University. Sellers became an Elected Member of the International Statistical Institute in 2018, a Fellow of the American Statistical Association in 2021, and a 2023 Fellow in the Association for Women in Mathematics. She completed her BS and MA degrees in Mathematics at the University of Maryland College Park, and obtained her PhD in Mathematical Statistics at The George Washington University.

Piyushimita Thakuriah

Member

Piyushimita “Vonu” Thakuriah is a Distinguished Professor in Rutgers University, New Brunswick, New Jersey. Her primary research interests are in the data science and policy aspects of transportation, urban informatics, smart cities, and social and economic cyberinfrastructure. Her interdisciplinary methodological work and engagement with government agencies and private industry aim to reduce social and economic disparities while also increasing sustainability, data justice, and data science for the public good. Her research has been funded by the National Science Foundation, UK Research and Innovation, European Commission, US Department of Transportation, and number of other national, state, and local organizations. She has given keynotes and plenaries in leading data science and transportation venues globally. She has served as a member of the Advisory Board of the UK Office of National Statistics Data Science Campus, as well as the European Commission/Eurostat’s New Techniques and Technologies for Statistics Committee. She recently chaired the Canada Foundation for Innovation’s International Expert Committee on smart cities. She was previously the Dean of the Rutgers University’s Bloustein School of Planning and Public Policy, after serving as the Ch2M Endowed Chair Professor of Transport in the University of Glasgow, UK, and as the founding director of the Urban Big Data Centre, a multi-institutional UK-wide data infrastructure for cities research and innovation funded by the UK Research and Innovation. She graduated from the University of Illinois at Chicago with a PhD in Public Policy Analysis and a master’s in Urban Planning and Policy. She was a European Commission Marie Curie Fellow and her postdoctoral fellowship was supported by NSF’s Division of Mathematical Sciences at the National Institute of Statistical Sciences.

Brani Vidakovic

Member

Brani Vidakovic is H. O. Hartley Chair and Department Head in Statistics Department at Texas A&M University. He graduated at Statistics Department at Purdue University with an Award for Excellence in Research and Teaching (Burr award, 1992), and joined Duke University where he became a tenured Associate Professor. He joined the School od Industrial and Systems Engineering at Georgia Institute of Technology in Fall of 2000 where he was promoted to the rank of Professor. Vidakovic spent two years at the National Science Foundation as a Rotating Program Director for Statistics, and after the service for NSF, joined Texas A&M University. Vidakovic's research falls in the areas of Bayesian Statistics, Multiscale Methodology and Wavelets, Biostatistics, and Applied Statistical Methodology. He is an author or co-author of numerous journal articles and several books. He was an Editor-in-Chief of the Second Edition of Wiley's Encyclopedia of Statistical Sciences, and an Associate Editor for several leading statistical journals. Vidakovic is a Fellow of American Statistical Association and Elected Member of International Statistical Institute.

Yazhen Wang

Member

Dr. Yazhen Wang is Professor of Statistics at the University of Wisconsin-Madison. He obtained his Ph.D in Statistics from University of California at Berkeley in 1992. He is fellows of ASA and IMS. He served as the department chair during 2015-2018 and 2021-present, NSF program director during 2007-2009, and various committees of ASA, IMS and ICSA. He served as co-editors of Statistica Sinica and Statistics and Its Interface, and associate editors of Annals of Statistics, Annals of Applied Statistics, Journal of the American Statistical Association, Journal of Business & Economic Statistics, Statistica Sinica, and the Econometrics Journal. His research areas include financial econometrics, machine learning, quantum computation, high dimensional statistical inference, nonparametric curve estimation, wavelets and multiscale methods, change points, long-memory processes, and order restricted inference.

Rebecca Willett

Member

Rebecca Willett is a Professor of Statistics and Computer Science and the Director of AI in the Data Science Institute at the University of Chicago, and she holds a courtesy appointment at the Toyota Technological Institute at Chicago. Her research is focused on machine learning foundations, scientific machine learning, and signal processing. Willett received the inaugural Data Science Career Prize from the Society of Industrial and Applied Mathematics in 2024, was named a Fellow of the Society of Industrial and Applied Mathematics in 2021, and was named a Fellow of the IEEE in 2022. She is the Deputy Director for Research at the NSF-Simons Foundation National Institute for Theory and Mathematics in Biology, Deputy Director for Research at the NSF-Simons Institute for AI in the Sky (SkAI), and a member of the NSF Institute for the Foundations of Data Science Executive Committee. She is the Faculty Director of the Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship. She helps direct the Air Force Research Lab University Center of Excellence on Machine Learning. She received the National Science Foundation CAREER Award in 2007, was a DARPA Computer Science Study Group member, and received an Air Force Office of Scientific Research Young Investigator Program award in 2010. She completed her PhD in Electrical and Computer Engineering at Rice University in 2005. She was an Assistant and then tenured Associate Professor of Electrical and Computer Engineering at Duke University from 2005 to 2013. She was an Associate Professor of Electrical and Computer Engineering, Harvey D. Spangler Faculty Scholar, and Fellow of the Wisconsin Institutes for Discovery at the University of Wisconsin-Madison from 2013 to 2018.

Brittany Segundo

Staff Officer

Brittany Segundo is the Director of the Committee on Applied and Theoretical Statistics and a program officer with the Board on Mathematical Sciences and Analytics (BMSA) and the Board on Infrastructure and the Constructed Environment (BICE) at the National Academies of Sciences, Engineering, and Medicine. She was a Christine Mirzayan Science and Technology Policy Fellow working with BMSA in 2020 and then joined the National Academies full-time as a Program Officer in 2022. Brittany’s graduate research explored mathematical models that support wildfire response and mitigation. Prior to attending graduate school at Texas A&M University, she worked as a management consultant in the biomedical device industry. She received a B.S. in Industrial and Systems Engineering from North Carolina State University.