

Board on Mathematical Sciences and Analytics

Committee

Brent Appleby

Member

Dr. Brent Appleby is the Principal Director Science and Technology at Draper Laboratory. He is also currently a Member of the Air Force Scientific Advisory Board. Prior to these roles, he was the Acting Director of Materials and Devices, Systems Engineering, and the Director of Algorithms and Software at Draper. Dr. Appleby has also been on assignment to DARPA where he was the Deputy Director of the Strategic Technology Office. He has been a Lecturer in the Aero/Astro Engineering Department at MIT. Dr. Appleby received his B.S. in Mech Eng, M.S. and Ph.D. degrees in Aero/Astro Eng. all from MIT.

Hélène Barcelo

Member

Hélène Barcelo is the Deputy Director of the Mathematical Sciences Research Institute (MSRI), a position she has held since July 1, 2008. As deputy director, she is in charge of overseeing all scientific activities at the Institute. A native of Québec, Canada, Hélène Barcelo received her Ph.D. in mathematics in 1988 at the University of California, San Diego. After a three-year postdoctoral position at the University of Michigan, Ann Arbor, she moved to Arizona State University -Tempe campus (ASU). She is a professor emerita of mathematics at ASU and a visiting scholar at the University of California, Berkeley. She has held visiting positions at numerous universities and research institutes around the world. Professor Barcelo's research interests lie in algebraic combinatorics; more specifically, combinatorial representation theory and homotopy theories in relation to subspace arrangements. For many years Professor Barcelo was the editor-in-chief of the Journal of Combinatorial Theory, Series A, and she is currently a member of its advisory board. She has also served on numerous Committees of the American Mathematical Society (AMS) and has recently been elected an AMS Fellow.

Bonnie Berger

Member

Bonnie Berger is the Simons Professor of Mathematics at MIT, holds a joint appointment in Electrical Engineering and Computer Science, and serves as head of Computation and Biology group at MIT's Computer Science and AI Lab. Her recent work focuses on designing algorithms to gain biological insights from advances in automated data collection and the subsequent large data sets drawn from them. She works on a diverse set of problems, including Compressive Genomics, Network Inference, Structural Bioinformatics, Genomic Privacy, and Medical Genomics. Additionally, she collaborates closely with biologists in order to design experiments to maximally leverage the power of computation for biological explorations.

Russel E. Caflisch

Member

Russel E. Caflisch is director of the Courant Institute at New York University (NYU) and a professor in the Mathematics Department. He received his bachelor's degree from Michigan State University, and he earned a master's degree and Ph.D. in mathematics from the Courant Institute of Mathematical Sciences at NYU. Professor Caflisch's expertise includes topics in the field of applied mathematics, including partial differential equations, fluid dynamics, plasma physics, materials science, Monte Carlo methods, and computational finance. He was named a fellow of SIAM in 2009, the American Academy of Arts and Sciences in 2012, and the American Mathematical Society in 2013. He was elected a member of the National Academy of Sciences in April 2019.

A. Robert Calderbank

Member

Robert Calderbank is Director of the Information Initiative at Duke University, where he is Professor of Electrical Engineering, Computer Science and Mathematics. He joined Duke in 2010, completed a 3 year term as Dean of Natural Sciences in August 2013, and also served as Interim Director of the Duke Initiative in Innovation and Entrepreneurship in 2012. Before joining Duke he was Professor of Electrical Engineering and Mathematics at Princeton University where he also directed the Program in Applied and Computational Mathematics. Before joining Princeton University Dr. Calderbank was Vice President for Research at AT&T. As Vice President for Research he managed AT&T intellectual property, and he was responsible for licensing revenue. AT&T Labs was the first of a new type of research lab where masses of data generated by network services became a giant sandbox in which fundamental discoveries in information science became a source of commercial advantage. Dr. Calderbank is an IEEE Fellow and an AT&T Fellow, and he was elected to the National Academy of Engineering in 2005. He received the 2013 IEEE Hamming Medal for contributions to coding theory and communications and the 2015 Shannon Award.

Duane Cooper

Member

Duane Cooper is an associate professor in the Department of Mathematics at Morehouse College. Dr. Cooper's research interests are in the mathematics of voting and representation, with particular interests in election procedures that allow for fair representation. In addition, he has experience and continued interest in mathematics student and teacher development. His scholarship has been published in the Journal of Mathematics Teacher Education, Notices of the American Mathematical Society, and Public Choice, to name a few.

Sara Y. Del Valle

Member

Sara Del Valle is the Chief Scientist for the Associate Laboratory Director for Global Security at Los Alamos National Laboratory (LANL). With over 20 years of experience, Dr. Del Valle has pioneered the development of mathematical, statistical, and computational models for infectious disease spread, as well as the integration of data analytics to address national security challenges. Her research focuses on leveraging heterogeneous data streams to enhance disease forecasting, developing large-scale agent-based models, and integrating human behavioral dynamics into predictive algorithms. Dr. Del Valle's contributions have earned her multiple accolades, including the DOE Secretary of Energy Appreciation Award, the Global Security Medal from LANL, and two R&D 100 Awards. She has served on multiple NASEM standing committees focused on biotechnology capabilities for national security and sits on the scientific advisory board for arXiv. Dr. Del Valle is also a LANL Fellow, recognized for her leadership and significant impact in strengthening global health response and preparedness.

Jordan Ellenberg

Member

Jordan Ellenberg is the John D. MacArthur Professor of Mathematics at the University of Wisconsin-Madison. He is a specialist in number theory and arithmetic geometry, and is also a popularizer of mathematics who has written two best-selling books. He is a Fellow of the American Mathematical Society. He holds a B.A. from Harvard and graduate degrees from Johns Hopkins and Harvard.

Ronald D. Fricker, Jr.

Member

Ronald D. Fricker Jr. is a Professor of Statistics and the Associate Dean for Faculty Affairs and Administration in the Virginia Tech College of Science. He is the former Head of the Virginia Tech Department of Statistics. Prior to joining Virginia Tech, he was a faculty member in the Operations Research Department of the Naval Postgraduate School and, prior to that, a Senior Statistician at the RAND Corporation and the Associate Director of the RAND National Security Research Division (NSRD). Dr. Fricker's research is focused on studying the performance of various statistical methods for use in disease surveillance and statistical process control methodologies more generally. His previous work has included warfare modeling, surveying via the Internet, logistics performance evaluation, environmental issues and analyses, and quality control. Particular past efforts include evaluating new recruiting strategies for the United States military, evaluating personnel recruiting and retention of U.S. Army Special Forces, researching Federal support to state and local organizations for domestic terrorism preparedness, and investigating the use of pesticides by U.S. forces during the Gulf War. Dr. Fricker holds a Ph.D. and an M.A. in Statistics from Yale University, an M.S. in Operations Research from The George Washington University, and a bachelor's degree from the United States Naval Academy. Upon graduation from the Naval Academy, he served as a surface warfare officer in the United States Navy.

Skip Garibaldi

Member

Skip Garibaldi is director of the IDA Center for Communications Research in La Jolla, California. He was previously associate director of the Institute for Pure and Applied Mathematics at UCLA, where he was responsible for half of the scientific activities of the Institute and Winship Distinguished Research Professor of Mathematics at Emory University. His research interests span from exceptional groups to the lottery. In the latter subject, he worked with other mathematicians and investigative reporters to leverage publicly available lottery data to expose criminal schemes involving the lottery. Dr. Garibaldi has previously served as a member of the US Air Force Scientific Advisory Board and DARPA's Defense Science Study Group. He received his PhD in mathematics from University of California, San Diego, and bachelor's degrees in computer science and in mathematics from Purdue University. He is a Fellow of the American Mathematical Society and he has received the Lester R. Ford Award from the Mathematical Association of America.

Mark L. Green

Member

Mark L. Green is the Distinguished Research Professor in the Department of Mathematics at the University of California at Los Angeles. He received his B.S. from the Massachusetts Institute of Technology and his M.A. and Ph.D. from Princeton University. After teaching at the University of California at Berkeley and MIT, he came to UCLA as an assistant professor in 1975. He was a founding co-director and later Director of the NSF-funded Institute for Pure and Applied Mathematics. Dr. Green's research has taken him into different areas of mathematics: several complex variables, differential geometry, commutative algebra, Hodge theory, and algebraic geometry. He received an Alfred P. Sloan fellowship, was an invited speaker at the International Congress of Mathematicians in Berlin in 1998 and gave the Chern Medal plenary laudation at the International Conference of Mathematicians in Seoul in 2014, and is a Fellow of the American Academy of Arts & Sciences, of the American Association for the Advancement of Science and of the American Mathematical Society. Prof. Green served as vice-chair of the high-profile BMSA study on The Mathematical Sciences in 2025, and served on the International Advisory Panel for the Canadian Long Range Planning Study for Mathematics. He was part of the US Delegation to the General Assembly of the International Mathematical Union in Bangalore in 2010 and Chair of the Committee of Visitors for the Division of Mathematical Sciences at NSF in 2013. He has served on the scientific boards of the Institute for Pure and Applied Mathematics, the Centre de Recherches Mathematiques and the Banff International Research Station, and was a Trustee of the American Mathematical Society. He served on the Mathematical Advisory Panel for the exhibition "Man Ray: Human Equations" at the Phillips Collection in Washington, DC. He serves on the Board of Governors of the group Transforming Postsecondary Education in Math and the Advisory Committee of the Association for Women in Mathematics.

Lior Horesh

Member

Lior Horesh is Senior Manager and a Principal Research Scientist at IBM Thomas J. Watson Research Center, where he leads the Mathematics and Theoretical Computer Science group. He previously served as Adjunct Associate Professor at Columbia University, teaching graduate courses in advanced machine learning and quantum computing.

His research centers on the mathematics of AI and the foundations of scientific discovery, seeking to transform the discovery cycle itself by enabling derivation of natural laws and mathematical knowledge beyond the reach of either human or machine alone. His work draws upon formal methods and machine-verifiable reasoning, algebraic structures spanning tensor algebra, algebraic geometry, and differential algebra, as well as inverse problems, optimal experimental design, optimization, and quantum computing.

Dr. Horesh is a SIAM Fellow and an IBM Master Inventor, holding over 100 patents and over 100 publications across mathematics, AI, and quantum computing, including multiple papers in Nature journals. He serves on the Scientific Advisory Board of ICERM, the Executive Board of DIMACS, and the Advisory Board of the Cambridge Centre for Data-Driven Discovery, and co-chaired the SIAM Conference on Mathematics of Data Science. He received his Ph.D. from University College London in 2006.

Julie Simmons Ivy

Member

Julie Simmons Ivy is a professor in the Edward P. Fitts Department of Industrial and Systems Engineering and Fitts Faculty Fellow in Health Systems Engineering. She previously spent several years on the faculty of the Stephen M. Ross School of Business at the University of Michigan. She received her B.S. and Ph.D. in Industrial and Operations Engineering at the University of Michigan. She also received her M.S. in Industrial and Systems Engineering with a focus on Operations Research at Georgia Tech. She is a President of the Health Systems Engineering Alliance (HSEA) Board of Directors. She is an active member of the Institute of Operations Research and Management Science (INFORMS), Dr. Ivy served as the 2007 Chair (President) of the INFORMS Health Applications Society and the 2012 - 13 President for the INFORMS Minority Issues Forum. Her research interests are mathematical modeling of stochastic dynamic systems with an emphasis on statistics and decision analysis as applied to health care, public health, and humanitarian logistics. This research has made an impact on how researchers and practitioners address complex societal issues, such as health disparities, public health preparedness, hunger relief, student performance, and personalized medical decision-making and has been funded by CDC, NSF, Clinton Health Access Initiative, and the UNC Cancer Center.

Lydia E. Kavraki

Member

Lydia E. Kavraki is the Noah Harding Professor of Computer Science, professor of Bioengineering, professor of Electrical and Computer Engineering, and professor of Mechanical Engineering as well as the Director of the Ken Kennedy Institute at Rice University. Prof. Kavraki's research interests span robotics, AI, and biomedicine. In robotics and AI, she is interested in enabling robots to work with people and in support of people. Her research develops the underlying methodologies for achieving this goal: algorithms for motion planning for high-dimensional systems with kinematic and dynamic constraints, integrated frameworks for reasoning under sensing and control uncertainty, novel methods for learning and for using experiences, and ways to instruct robots at a high level and collaborate with them. Her research blends her extensive interdisciplinary background in computer science, artificial intelligence, machine learning, bioengineering and biomedical sciences promoting the convergence of these disciplines.

Tamara G. Kolda

Member

Tamara Kolda is an independent mathematical consultant under the auspices of her company MathSci.ai based in California. She is also a Distinguished Visiting Professor in the Department of Industrial Engineering & Management Science at Northwestern University in Evanston, Illinois. From 1999-2021, she was a researcher at Sandia National Laboratories in Livermore, California. She specializes in mathematical algorithms and computation methods for tensor decompositions, tensor eigenvalues, graph algorithms, randomized algorithms, machine learning, network science, numerical optimization, and distributed and parallel computing. Dr. Kolda is currently serving as the founding editor-in-chief for the SIAM Journal on Mathematics of Data Science (SIMODS).

Petros Koumoutsakos

Member

Petros Koumoutsakos holds the Chair for Computational Science at ETH Zurich and serves as Fellow of the Collegium Helveticum. In 2021 he will join the faculty of Harvard University as the Gordon McKay Professor for Computing in Science and Engineering. He studied Naval Architecture (Diploma-NTU of Athens, M.Eng.-U. of Michigan), Aeronautics and Applied Mathematics (PhD-Caltech). He has conducted post-doctoral studies at the Center for Parallel Computing at Caltech and at the Center for Turbulent Research at Stanford University and NASA Ames. Petros is elected Fellow of the American Society of Mechanical Engineers (ASME), the American Physical Society (APS), the Society of Industrial and Applied Mathematics (SIAM) and the Collegium Helveticum. He has held visiting fellow positions at Caltech, the University of Tokyo, MIT, the Radcliffe Institute of Advanced Study at Harvard University and he is Distinguished Affiliated Professor at TU Munich. He is recipient of the Advanced Investigator Award by the European Research Council and the ACM Gordon Bell prize in Supercomputing. He is elected Foreign Member to the US National Academy of Engineering (NAE). His research interests are on the fundamentals and applications of computing and artificial intelligence to understand, predict and optimize fluid flows in engineering, nanotechnology, and medicine.

Rachel Kuske

Member

Rachel Kuske is a professor of mathematics at the Georgia Institute of Technology, where she is also department chair. Most recently her research is in new areas of interest in stochastic dynamics, including stochastic analysis in delayed or non-smooth systems, noise-driven order in complex systems, and analysis of stochastic transitions or "tipping points" in the diverse fields of optics, biology, mechanics, and climate systems. Before joining Georgia Tech, Professor Kuske was at the University of British Columbia (UBC) for 15 years, where she was elected SIAM Fellow in 2015, and received a number of other awards including a Canada Research Chair (2002-2012) and the Canadian Mathematical Society's Krieger-Nelson prize (2011). At UBC she also held positions as department head (2007-2011) and as the senior advisor to the provost on women faculty (2011-2015). In 2016 she held a Simons Fellowship at the Newton Institute in Cambridge.

Yann A. LeCun

Member

Yann LeCun is VP & Chief AI Scientist at Facebook and Silver Professor at NYU affiliated with the Courant Institute of Mathematical Sciences & the Center for Data Science. He was the founding Director of Facebook AI Research and of the NYU Center for Data Science. He received an Engineering Diploma from ESIEE (Paris) and a PhD from Sorbonne Université. After a postdoc in Toronto he joined AT&T Bell Labs in 1988, and AT&T Labs in 1996 as Head of Image Processing Research. He joined NYU as a professor in 2003 and Facebook in 2013. His interests include AI machine learning, computer perception, robotics and computational neuroscience. He is the recipient of the 2018 ACM Turing Award (with Geoffrey Hinton and Yoshua Bengio) for "conceptual and engineering breakthroughs that have made deep neural networks a critical component of computing", a member of the National Academy of Sciences, the National Academy of Engineering and a Chevalier de la Légion d'Honneur.

David Manderscheid

Member

David Manderscheid is a professor of mathematics at the University of Tennessee. He previously served as director of the Division of Mathematical Sciences at the National Science Foundation. He has also served as provost at the University of Tennessee, executive dean of the College of Arts and Sciences at Ohio State University, dean of the College of Arts and Sciences at the University of Nebraska, and chair of the Department of Mathematics at the University of Iowa. He studies representation theory and its applications to number theory and has held visiting positions at the Institute for Advanced Study and the Mathematical Sciences Research Institute (SL-Math). His specific research interests include the representations of p -adic groups, theta-correspondences, and the Langlands Program. He has received support for his work from the National Science Foundation, the National Security Agency, and the Department of Education. He currently serves on the NASEM Modernizing Mathematics Education for Grades 9-14 Consensus Study Committee. He is a fellow of the American Association for the Advancement of Science and an inaugural fellow of the American Mathematical Society. Professor Manderscheid earned his B.S. degree from Michigan State University and his Ph.D. degree from Yale University.

Jill C. Pipher

Member

Jill Pipher is vice president for research at Brown University and Elisha Benjamin Andrews Professor of Mathematics. In 2018, she became president-elect of the American Mathematical Society. She was the founding director of the Institute for Computational and Experimental Research in Mathematics (ICERM), a National Science Foundation mathematics institute, from 2010 to 2016. Pipher obtained her B.A. in mathematics from UCLA in 1979 and her Ph.D. in mathematics from UCLA in 1985. She was a Dickson Instructor and assistant professor at the University of Chicago before joining the faculty of Brown as associate professor in 1989. Pipher's research areas include harmonic analysis, partial differential equations, and lattice-based cryptography. She has frequently lectured for both specialist and general audiences at venues in the U.S. and abroad. In 2014, she was an invited speaker at the International Congress of Mathematicians. She has published many papers in her areas of expertise and has co-authored an undergraduate cryptography textbook. She jointly holds four patents related to the NTRU encryption algorithm. She was a co-founder of Ntru Cryptosystems, Inc., now part of Security Innovation, Inc. Pipher's professional honors include an NSF postdoctoral fellowship, an NSF Presidential Young Investigator Award, and an Alfred P. Sloan Foundation fellowship. She is an inaugural fellow of the American Mathematical Society, served as president of the Association for Women in Mathematics from 2011 to 2013, and was a National Women's History Month 2013 honoree. In 2015, she was elected to the American Academy of Arts and Sciences.

Yoram Singer

Member

Yoram Singer is a professor of Computer Science at Princeton University. He obtained his BSc and MSc from the Technion and PhD from the Hebrew University. He was a member of the technical staff at AT&T Research 1995-1999, an associate professor of Computer Science at the Hebrew University 1999-2007, and a Principal Scientist at Google 2005-2019. At Google he implemented and launched Google's Domain Spam classifier used for all search queries 2004- 2017, co-founded the Sibyl system which served YouTube multiple prediction tasks 2008-2018, and founded the Principles Of Effective Machine-learning group as well as Google'sAILab at Princeton. He co-chaired COLT'04 and NIPS'04. He is a fellow of AAAI. His work on error correcting output code for machine learning received the Test of Time Award. With his former PhD students he received several best paper awards. Prior to pursuing a PhD he served at unit 8200 of IDF and retired from service at the rank of a captain. He was a member of a 12 people team from the unit which received Israel Security Award given by the President of Israel.

Aarti Singh

Member

Aarti Singh is Professor of Machine Learning at Carnegie Mellon University and Director of NSF AI Institute of Societal Decision Making. Her research focuses on interactive algorithms that can guide learning and decision-making, with applications to enabling social and scientific discoveries. Her work is recognized by an NSF Career Award, a US Air Force Young Investigator Award, A. Nico Habermann Faculty Chair Award, Harold A. Peterson Best Dissertation Award, and multiple paper awards. She has served on the National Academy of Sciences (NAS) committee on Applied and Theoretical Statistics, NAS Board on Mathematical Sciences and Analytics, World Economic Forum expert network, lead expert on multiple NAS and ONR/NIST study committees, General and Program Chair for the International Conference on Machine Learning (ICML) 2015 & 2020, Program Chair for Artificial Intelligence and Statistics (AISTATS) 2017 conference, and Action Editor for IEEE Transactions on Information Theory and Journal of Machine Learning Research. She received her Ph.D. degree in Electrical and Computer Engineering from the University of Wisconsin-Madison in 2008 and was a Postdoctoral Research Associate at the Program in Applied and Computational Mathematics at Princeton University from 2008-2009, before joining CMU.

Karen E. Smith

Member

Karen Smith is the William Fulton Distinguished University Professor at the University of Michigan and Chair of the Mathematics Department. She is a leading researcher in algebraic geometry known for her work in the singularities of algebraic varieties using methods from prime characteristic commutative algebra. Smith is a winner of the Ruth Lyttle Satter Prize in Mathematics (2011), a fellow of the American Math Society, and a member of the National Academy of Sciences. She earned her AB from Princeton University in 1987 and PhD from the University of Michigan in 1993, both in mathematics.

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 of 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.

Judy Walker

Member

Judy Walker is Associate Vice Chancellor for Faculty and Academic Affairs at the University of Nebraska-Lincoln and Aaron Douglas Professor of Mathematics. Walker obtained her B.S. in mathematics (with honors) from the University of Michigan in 1990, her M.S. in mathematics from the University of Illinois at Urbana-Champaign in 1992, and her Ph.D. in mathematics, also from the University of Illinois at Urbana-Champaign, in 1996. She joined the faculty of Nebraska as assistant professor in 1996. Walker's research is in algebraic coding theory, including algebraic geometry codes, codes over rings, and graph-based codes. She has given numerous lectures on her work around the country and internationally, including serving as the Mathematical Association of America's George Pólya Lecturer for 2009-2011. Her short book "Codes and Curves", published by the American Mathematical Society and based on a lecture series she gave for the Institute for Advanced Study's Women and Math program, has become a popular text for students and researchers new to the field of algebraic geometry codes. She is a co-founder of the Nebraska Conference for Undergraduate Women in Mathematics, an annual conference funded by the National Science Foundation and the National Security Agency. Walker served on the Board of Trustees for the Mathematical Sciences Research Institute from 2014 through 2020 and began her second elected five-year term on the Board of Trustees of the American Mathematical Society in 2023. Among Walker's professional honors are the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching from the Mathematical Association of America, the Louise Hay Award for Contributions to Mathematics Education from the Association for Women in Mathematics, and the Outstanding Alumni Achievement Award from the Department of Mathematics at the University of Illinois at Urbana-Champaign. She is an inaugural fellow of the American Mathematical Society and was elected a Fellow of the Association for Women in Mathematics in 2019 and of the American Association for the Advancement of Science in 2022.

Karen E. Willcox

Member

Karen Willcox is Director of the Institute for Computational Engineering and Sciences (ICES) and a Professor of Aerospace Engineering and Engineering Mechanics at the University of Texas at Austin. Prior to joining ICES in 2018, she spent 17 years as a professor at the Massachusetts Institute of Technology, where she served as the founding Co-Director of the MIT Center for Computational Engineering and the Associate Head of the MIT Department of Aeronautics and Astronautics. Prior to joining the MIT faculty, she worked at Boeing Phantom Works with the Blended-Wing-Body aircraft design group. Her research at MIT has produced scalable computational methods for design of next-generation engineered systems, with a particular focus on model reduction as a way to learn principled approximations from data and on multi-fidelity formulations to leverage multiple sources of uncertain information. She is also active in educational innovation, developing scalable network models that enable data-driven decisions in education. She is the recipient of a SIAM SIGEST paper award, two AIAA best paper awards, and several awards for both leadership and teaching. In 2017 she was appointed Member of the New Zealand Order of Merit (MNZM). She has served in leadership positions within AIAA and SIAM, including leadership roles in the SIAM Activity Group on Computational Science and Engineering and the AIAA Multidisciplinary Design Optimization Technical Committee. She is a Fellow of SIAM and Associate Fellow of AIAA.

Michelle Schwalbe

Staff Officer

Michelle Schwalbe is the Director of the Board on Mathematical Sciences and Analytics (BMSA) and Director of the National Materials and Manufacturing Board at the National Academies of Sciences, Engineering, and Medicine. She joined the National Academies in 2010 as a Christine Mirzayan Science and Technology Policy Fellow working in BMSA and then worked as an Associate Review Officer with the Report Review Committee (RRC). Following her stint with the RRC she returned to BMSA as an Associate Program Officer, then as a Program Officer, and then as a Senior Program Officer. She directed the Committee on Theoretical and Applied Statistics (CATS) from 2011-2017. Michelle has been involved in a variety of activities focused on the mathematical sciences, machine learning, data science, reproducibility of scientific results, advanced manufacturing, and supply chains. She previously held positions at Oak Ridge National Laboratory and Lawrence Livermore National Laboratory. Her interests lie broadly in mathematics, statistics, engineering, and their many applications. Michelle has a Ph.D. in Mechanical Engineering and an M.S. in Engineering Science and Applied Mathematics from Northwestern University, and a B.S. in Applied Mathematics specializing in Computing from the University of California, Los Angeles.