

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

**Workshop on Advancing Systemic Change in Undergraduate STEM  
Education**

*Speaker Bios*

**ANN E. AUSTIN (Roundtable Co-chair)** is a professor of higher, adult, and lifelong education at Michigan State University, recently on leave for almost two years to serve as a program director in the Division of Undergraduate Education at the National Science Foundation (NSF) in Washington, D.C. On October 1, 2016, she returned to Michigan State University, where she has been on the faculty since 1991. She has held the Mildred Erickson Chair in Higher, Adult, and Lifelong Education at Michigan State for two terms. She is currently serving as associate dean for Research in the College of Education and Assistant Provost for Faculty Development--Career Paths. Her research concerns organizational change in higher education, faculty careers and professional development, teaching and learning in higher education, the academic workplace, doctoral education, and reform in science, engineering, and mathematics (STEM) education. She is a fellow of the American Educational Research Association (AERA), and she has been a council member for AERA. She is a past-president of the Association for the Study of Higher Education (ASHE), and she was a Fulbright Fellow in South Africa (1998). She has also served for more than a decade as the Co-PI and Co-Leader of the Center for the Integration of Research, Teaching, and Learning (CIRTL), funded by the National Science Foundation, and has been the principal investigator of an NSF-funded grant to study organizational change strategies used in NSF ADVANCE grants to create more inclusive academic environments and support the success of women scholars in STEM fields. Currently, she is the principal investigator of two NSF projects, one to study the use of organizational networks to foster change in STEM undergraduate education and one to study how new developments in teaching evaluation encourage change in the culture around teaching within universities. She earned a B.A in history from Bates College, an M.S. in higher/post-secondary education from Syracuse University, a M.A. in American culture from the University of Michigan, and a Ph.D. in higher education from the University of Michigan.

**MARK B. ROSENBERG (Roundtable Co-chair)** is the fifth president of Florida International University (FIU), where he oversees an expansion of FIU's investments into STEM education, including partnerships with local schools, community colleges, and community organizations to ensure that the FIU entering student body is STEM capable. A political scientist specializing in Latin America, he is the first FIU faculty member to ascend to the university's presidency. From 2005 to 2008, he served as chancellor for the board of governors of the State University System (SUS) of Florida. As chancellor, he led the system's strategic development and financial planning and policy initiatives, working closely with Governor Charlie Crist and the legislature to secure support for SUS priorities. Prior to becoming chancellor, he served as provost and executive vice president for academic affairs at FIU. He has written or co-edited seven books and numerous scholarly articles in leading journals including the *Latin American Research Review* and the *Hispanic American Historical Review*. He is a member of the Council on Foreign Relations, has testified before Congress numerous times regarding U.S.-Latin American relations and has served as a consultant to the U.S. Department of State and the U.S. Agency for International Development. He is also the Chair of the Coalition of Urban Serving Universities. He has served as a member of the National Academies of Sciences, Engineering, and Medicine study on Barriers and Opportunities in Completing Two- and Four- Year STEM Degrees, and as Chair on Developing Indicators in Undergraduate STEM Education. He received a B.A. in

political science from Miami University, an M.A. and a Ph.D. in political science from the University of Pittsburgh.

**GITA BANGERA** is the founding Dean of the RISE Learning Institute, as well as Adjunct Faculty at Washington State University having recently completed a stint as both Interim Vice President of Instruction and Acting Co-President of Bellevue College. She served on the National Academy of Sciences and National Research Council committee for organizing the *Convocation on Integrating Discovery-Based Research Into the Undergraduate Curriculum* and is a PULSE Leadership fellow (Partnership for Undergraduate Life Science Education). She is also the principle investigator of the (>\$1M) NSF funded ComGen: The Community College Genomics Research Initiative that is bringing hands on research experience into the classroom at 21 institutions of higher education in Washington State. Her work was featured in *Science* and she presented the lessons learned from this project at the UN. Across all of these projects, the common thread is her belief that getting students involved in research and other high impact practices in their regular courses can not only transform teaching and learning but also make higher education more equitable. Dr. Bangera is also an inventor with Intellectual Ventures with more than 90 patents and was a Senior Scientist at Combimatrix Corporation. She conducted post-doctoral research at the Kobenhavn Universiteit, University of Washington Medical School and at Harvard University Medical School. Dr. Bangera has earned her Ph.D. in Microbiology from Washington State University and an M.S. in Biology from Carnegie Mellon University. She also has an M.Sc. and a B.Sc. in Microbiology from the University of Bombay.

**ANDREA BEACH (Roundtable Member)** is a professor of higher education leadership and co-founder and co-director of the Center for Research on Instructional Change in Postsecondary Education at Western Michigan University. Her research centers on organizational change in higher education, support of innovation in teaching and learning, faculty learning communities, and faculty development as a change lever. She has been PI and co-PI on NSF-funded grants that have produced several articles on instructional change strategies. She is a co-author of *Creating the Future of Faculty Development: Learning from the Past, Understanding the Present*, and is currently lead author on a 10-year follow-up to that work, *Faculty Development in the Age of Evidence*. She is most recently director of a \$3.2 million project funded by the U.S. Department of Education's First in the World program to undertake, document and measure outcomes of institutional transformation aimed at improving the persistence and academic success of students from low-income families and disadvantaged backgrounds. Dr. Beach is a 2018-2019 ACE Fellow and holds a B.A., M.A., and Ph.D all from Michigan State University.

**KAMAU BOBB (Roundtable Member)** is a national authority in STEM education in the United States. He is the founding Senior Director of the Constellations Center for Equity in Computing at Georgia Tech. He brings to his current position a wealth of experience as a former Program Officer at the National Science Foundation (NSF). At NSF, he was responsible for \$30 million annually of investments targeted on improving computing and STEM education. He has worked with members of the Office and Science and Technology Policy in the Obama Administration to set the U.S. national strategy for STEM education at both post-secondary and secondary school levels. He was selected as a member of President Obama's My Brother's Keeper STEM + Entrepreneurship Taskforce to help U.S. cities craft strategies to engage young men and boys of color in the STEM landscape. Dr. Bobb brings to STEM education a fierce commitment to equity as an indicator of justice. Dr. Bobb holds a Ph.D. in Science and Technology Policy from Georgia Tech and M.S. and B.S. degrees in Mechanical Engineering from the University of California, Berkeley.

**JOHN CAVANAUGH** is President and CEO of the Consortium of Universities of the Washington Metropolitan Area. Previously, he served as Chancellor of the Pennsylvania State System of Higher Education and as president of the University of West Florida. John is a leader in higher education policy and innovation, as well as for innovative uses of technology. He has led statutory and regulatory reform of higher education, and is a national leader on quality assurance and accreditation. His disciplinary expertise is in gerontology and neuroscience. He was a postdoctoral fellow at the University of Minnesota and an American Council on Education Fellow. He received the American Council on Education Council of Fellows Mentor of the Year Award in 2012, and the Pensacola Area Commitment to Excellence Community Leader of the Year Award in 2008. He was also awarded a Doctor of Humane Letters (honoris causa) from Drexel University. He is a Fellow of the American Psychological Association, a Charter Fellow of the Association for Psychological Science, and a Fellow of the Gerontological Society of America. John served as vice chair of the Board of Trustees for the Council for Adult and Experiential Learning (CAEL), on the leadership team for the Washington, DC Region Global Cities Initiative, and is the current Chair of the Board of Trustees for Marygrove College (Detroit). He is past-president of the Middle States Association of Colleges and Schools Board of Trustees, and has served as a Commissioner of the Middle States Commission on Higher Education, a Commissioner of the Southern Association of Colleges and Schools Commission on Colleges. He has served as member of the Board of Directors of the American Association of State Colleges and Universities, as treasurer of the State Higher Education Executive Officers, and as secretary-treasurer of the National Association of System Heads. He is the coauthor of three series of textbooks: *Adult Development and Aging* (with Fredda Blanchard-Fields), *Human Development: A Life-Span View* (with Robert V. Kail, ), and *Essentials of Human Development* (with Robert V. Kail), the co-editor of the three volume series *Aging in America* (with Dr. Christine Cavanaugh), and has authored or co-authored over 85 articles and chapters on aging, higher education policy, and leadership issues. John earned his B.A. in psychology with high honors from the University of Delaware, and his M.A and Ph.D. in psychology from the University of Notre Dame.

**MICA ESTRADA (Roundtable Member)** is an Associate Professor at the University of California San Francisco's School of Nursing in the Department of Social and Behavioral Sciences and the Institute for Health and Aging. Her research program focuses on social influence, including the study of identity, values, kindness, well-being, and integrative education. Currently she is engaged in several longitudinal studies, which involve implementing and assessing interventions aimed to increase student persistence in Science, Technology, Engineering and Mathematics (STEM) careers (funded by NIH, NSF, and HHMI). She is also currently co-PI and Director of a National Science Foundation Climate Change Education Partnership grant that provides educational tools and learning opportunities to San Diego regional leaders and residents regarding the changing climate. A common characteristic of Dr. Estrada's work is designing and empirically testing interventions that can change individual behavior, social norms, and community consciousness. Further, Dr. Estrada's work focuses on ethnic populations that are historically underrepresented in higher education, most vulnerable to the impacts of climate change, and have the potential to provide diverse and creative solutions to the pressing challenges of our day. She received the Leadership Institute Graduate Award from the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) in 2013 and the Adolphus Toliver Award for Outstanding Research in 2016. She has previously served as a member of the study on Strengthening Research Experiences for Undergraduate STEM Students at the National Academies of Sciences, Engineering, and Medicine. Dr.

Estrada earned her B.A. in Psychology from the University of California, Berkeley and her Ph.D. in Social Psychology from Harvard University.

**RUFUS GLASPER** is President and CEO of the League for Innovation in the Community College, an international nonprofit organization with a mission to cultivate innovation in the community college environment in a continuing effort to advance the community college field and make a positive difference for students and communities. Dr. Glasper, Chancellor Emeritus of the Maricopa Community Colleges, served as Chancellor from 2003 through February 2016, and previously held district leadership positions for two decades. Nationally, Dr. Glasper serves as an advisory board member for the Center for Community College Student Engagement, The University of Texas at Austin; Community College Research Center, Teachers College, Columbia University; National American University, Roueche Graduate Center; Educational Testing Service and National Community College Advisory Council. Dr. Glasper previously served on the Air University Board of Visitors, the intellectual and leadership center of the Air Force that provides dynamic comprehensive education to prepare graduates to develop, employ, command, research, and champion air, space, and cyberspace power at all levels. He served as a member of the American Council on Education Commission on Higher Education Attainment and the Homeland Security Academic Advisory Council, and as trustee for the Higher Learning Commission and the American Council on Education. He served on the board for the League for Innovation from 2003-2016. Dr. Glasper is an active community member, serving on the boards of the Arizona Community Foundation, Southwest College of Naturopathic Medicine and Health Sciences, and Sandra Day O'Connor Institute. He is also an emeritus member of Greater Phoenix Leadership. Dr. Glasper earned a bachelor's degree in business administration from Luther College, Decorah, Iowa, and a master's and advanced degrees in school business administration from Northern Illinois University. He received a Doctor of Philosophy in higher education finance from the University of Arizona.

**RYAN KELSEY** is Chief Advisor to the President and CEO at Achieving the Dream, Inc. In this role, Ryan works to continue strengthening ATD's internal capacity as an organization and its outreach to its network of colleges through strategic planning, the design of new products and services, and the scaling of key initiatives across the network. Ryan comes to ATD from the Leona M. and Harry B. Helmsley Charitable Trust where he developed and managed a \$45 million portfolio of grants focused on U.S. higher education, STEM learning, K-12 teacher preparation, and educational technology. As part of his work with grants, Ryan convened and supported experts on effective educational practices aimed at systemic improvement and formed networks of colleges and universities committed to campus-wide transformation, often with regional workforce and foundation partners. He was also a frequent speaker at national meetings on the importance of increasing the size and diversity of the STEM workforce. In addition to his focus on systemic change, his grants recognized the value of using external evaluations to increase project outcomes and help build the knowledge base in targeted areas. Of specific note, many of these investments supported work at America's community colleges, including important ATD work with colleges in integrated planning and advising, labor market alignment, and improving adjunct faculty engagement. Before he joined the Helmsley Charitable Trust, Ryan spent more than a decade at the Columbia University Center for New Media Teaching and Learning, serving as Director of Projects and Associate Director of Education & Research. In those roles, he co-led the Center's strategic planning and new programs. He also led the Center's research and evaluation efforts, advising staff on evaluation methods and leading workshops for university faculty. He taught graduate courses in educational technology and instructional design at Teachers College, Columbia University, and at New York University as well as introductory undergraduate

science at Columbia. Ryan earned an Ed.D. and M.A. in Communication and Education from Teachers College, Columbia University, and a B.S. in Biology from Santa Clara University.

**ADRIANNA KEZAR** is a professor of higher education at the University of Southern California and co-director of the Pullias Center for Higher Education. A national expert on change, governance and leadership in higher education, Kezar is regularly quoted in the media, including The New York Times, Wall Street Journal, USA Today, The Atlantic, Boston Globe, Washington Post, PBS, and NPR (national and local stations), among others. At the Pullias Center, Kezar directs the Delphi Project on the Changing Faculty and Student Success, and is an international expert on the changing faculty. She also regularly consults for campuses and national organizations related to her work on non-tenure track faculty, STEM reform, change, collaboration, leadership development, and change. Kezar holds a Ph.D. and M.A. in higher education administration from the University of Michigan and a B.A. from the University of California, Los Angeles.

**JOHN MICHAEL LEE** is currently serves as the Vice Chancellor for University Advancement and Executive Director of the Foundation at Elizabeth City State University (ECSU). In this role, he provides leadership over all aspects of the university's fundraising programs and development initiatives. Prior to joining ECSU, John served as Special Assistant to the President at Florida Agricultural and Mechanical University. As the Special Assistant to the President, he worked on fundraising, strategic planning and enrollment management. Dr. Lee also worked as the Assistant Vice president for alumni Affairs and University Advancement at FAMU, and oversaw the development of the relationship between the University and its estimated 70,000 alumni. He has more than a decade of leadership experience in fundraising, educational advocacy, outreach, and engagement. John also previously served as the Vice President for the Office of Access and Success at the Association for Public & Land-grant-Universities and as a policy director for The College Board Advocacy and Policy Center where he developed solutions for college access and preparation, college affordability, financial aid, college admission, retention, and graduation. Dr. Lee is an accomplished researcher and scholar. He has published several peer-reviewed journal articles, policy reports, a book, numerous articles, and paper presentations at various conferences on topics ranging from diverse student populations to student access and success. He is a member of several professional associations including the Council for Advancement and Support of Higher Education (CASE), Association of Fundraising Professionals (AFP), American Educational Research Association (AERA), and the Association for the Study of Higher Education (ASHE). He also serves on the West Virginia University Diversity Visiting Committee, Board of Regents-University System of Georgia-Hispanic-Latino Executive Leadership Committee, and the American Dental Education Association Minority Affairs Advisory Committee. Dr. Lee earned his Ph.D. in higher education administration from the Steinhardt School of Culture Education and Human Development at New York University, an MPA with a concentration in economic development from the Andrew Young School of Policy Studies at Georgia State University, and a bachelor of science in computer engineering from the FAMU-FSU College of Engineering at Florida A&M University.

**JAIME LESTER** is Professor of Higher Education at George Mason University. She has received numerous awards for her research and teaching to include the Barbara Townsend Emerging Scholar Award from the Council for the Study of Community Colleges in 2009 and the Mason Excellence in Teaching Award in 2013. She was also the Mason state council rising star nominee in 2011. Dr. Lester is the Editor of *Community College Review* and serves on the Editorial Board of *Journal of Diversity in Higher Education* and *NASPA Journal About Women in Higher Education*. The overarching goal of her research

program is to examine organizational change and leadership in higher education. This focus has led to examinations of non-positional leadership and tactics to promote local and institutional change and the role of individual identity in creating equitable workplaces in colleges and universities. Her more recent research on learning analytics and pedagogy in computer science is funded by the National Science Foundation (#1444789) and Google. The aim of this research is to create and promote new data-driven evidence to promote changes in pedagogy, instructional practice, and leadership decision-making. Dr. Lester has over 50 peer-reviewed journal articles and other academic publications. Her work appears in the *Community College Review*, *Journal of Higher Education*, *Research in Higher Education*, *Community College Journal of Research and Practice*, *Liberal Education*, *Feminist Formations* (formerly NMSA Journal), and *NEA: Thought & Action*. She also has five books on gendered perspectives in community colleges, family-friendly policies in higher education, ways to restructure higher education to promote collaboration, non-positional leadership, and workplace bullying. Her work is widely quoted in media outlets such as National Public Radio, New York Times, and the Chronicle of Higher Education. She holds a Ph.D. and M.Ed. in higher education from the Rossier School of Education at the University of Southern California. Dr. Lester also holds a dual B.A. from the University of Michigan in English and Women's studies.

**LINDSEY MALCOM-PIQUEUX** is senior institutional research analyst at the California Institute of Technology (Caltech). In this role, she is responsible for collecting, analyzing, and interpreting data about Caltech and its activities to inform institutional planning and decision making. Prior to her current position, she was the Associate Director for Research and Policy at the Center for Urban Education in the Rossier School of Education at the University of Southern California. Over the course of her career, Dr. Malcom-Piqueux's work has centered on racial and gender equity in STEM fields. Following this interest, she has conducted research in several areas including the relationship between financial aid and STEM outcomes, the role of four-year minority serving institutions and community colleges in creating educational equity in STEM, and gender equity in STEM among minority populations. She received a B.S. in planetary science from the Massachusetts Institute of Technology, an M.S. in planetary science from the California Institute of Technology and a Ph.D. in urban education with an emphasis on higher education from the University of Southern California.

**CATHRYN A. MANDUCA** is director of the Science Education Resource Center at Carleton College where she is involved in a variety of projects that support improvements in undergraduate education and geoscience education. Her work includes organizing workshops and other activities for faculty and educators of all types, developing web resources that link teaching resources, pedagogy and discussion, and researching learning by geoscientists, faculty and students. Topics of focus include bringing research results on teaching and learning into broader use in the geosciences, understanding geoscience expertise, and building strong geoscience departments. She is the executive director of the National Association of Geoscience Teachers (NAGT) and serves on the AGU Outreach Committee, the Education Committee of the American Institute of Physics, the National Numeracy Network Board of Directors, and the advisory board for Gifted and Talented Education programs in my local school district. She is also the executive director of the National Association of Geoscience Teachers. She holds a B.A. and an M.A. in geology from Williams College and an M.S. and Ph.D. in geology from the California Institute of Technology.

**VINCENT P. MANNO** is Provost and Dean of Faculty, as well as Professor of Engineering, at the Olin College of Engineering in Needham, MA. His fields of interest are engineering education, power generation, electronics thermal energy management and manufacturing processes. He has authored or co-

authored over numerous journal articles, conference proceeding papers, book chapters and technical reports and is a frequent keynote speaker. Prior to joining Olin, Dr. Manno was Associate Provost and Professor of Mechanical Engineering at Tufts University. While at Tufts, he held other leadership positions including Department Chair, Associate Dean of Engineering for Graduate Studies and Dean of Engineering ad interim. He has worked in the private sector, served as a U.S. Navy Senior Summer Faculty Fellow and holds a US patent. He is a Fellow of the American Society of Mechanical Engineers (ASME) and the recipient of SAE's Ralph R. Teetor Educational Award, the Harvey Rosten Award for Excellence in the Thermal Analysis of Electronic Equipment, the ASME Curriculum Innovation Award, Tufts Engineering Teacher of the Year, and the Seymour Simches Award for Distinguished Teaching and Advising. He has served on the advisory boards of Ashesi University (Ghana), the University of Delaware College of Engineering and the Tufts University Center for Engineering Education Outreach. He received a B.S. from Columbia University and M.S. and Sc.D. degrees from M.I.T.

**CHRISTINE ORTIZ** is the (tenured and chaired) Morris Cohen Professor of Materials Science and Engineering at the Massachusetts Institute of Technology. Ortiz is also the founder of a new nonprofit organization, Station1, that is building a foundation for the university of the future — a scalable model of higher education based on inclusion and equity, learning through frontier project-based inquiry and research, and the integration of science and technology with societal perspective and impact. Ortiz served as the Dean for Graduate Education at MIT between 2010 and 2016, supporting approximately 7,000 graduate students from 100+ countries. With over 25 years of experience in higher education, Dr. Ortiz has led cross-institutional initiatives in global education, technology-enabled learning, new methods of learning assessment, fostering diversity and inclusion and postsecondary financial models. Ortiz has served on over 50 MIT departmental and Institute committees and working groups. As a Professor of Materials Science and Engineering at MIT, Ortiz is a distinguished scientist and engineer with over 175 scholarly publications, has supervised the research projects of more than 80 students from 10 different academic disciplines, and received 30 national and international honors, including the Presidential Early Career Award in Science and Engineering which was awarded to her at the White House by President George W. Bush. She is the founder and faculty director of the MIT International Science and Technologies Initiatives – Israel program which has given approximately 600 students global internship opportunities. Ortiz serves on numerous boards, including as a regional accreditation commissioner for the Commission on Institutions of Higher Education, New England Association of Schools and Colleges. Ortiz obtained her B.S. from Rensselaer Polytechnic Institute and her M.S. and Ph.D. from Cornell University, all in the field of Materials Science and Engineering.

**JEFFREY OSBORN** is Dean of the School of Science at The College of New Jersey. Dr. Osborn is an administrator-teacher-scholar, working in biological, interdisciplinary, and higher education areas. His primary scientific focus addresses questions about plant evolutionary biology, studying both fossil and living plants and considering evolutionary questions about pollen development, character evolution, and pollination biology in seed plants. His higher education foci include the teacher-scholar role of faculty, faculty workload models, and the integration of high-impact educational practices into the curriculum. His teaching has covered a range of areas, including biology, botany, and interdisciplinary courses such as Understanding Biology through Art. He employs an array of pedagogical methods, directly incorporates authentic research into his courses, and has contributed to major curricular reform efforts at his own institutions and at the national level. Dr. Osborn has led a number of institutional and multi-institutional programs to support the institutionalization of undergraduate research, scholarship, and creative activity –

or URSCA – as well as the advancement of undergraduates and faculty who have been traditionally underrepresented in STEM and higher education. Through these efforts, Dr. Osborn has worked with over 400 colleges and universities across the U.S. Dr. Osborn is a Past-President of the Council on Undergraduate Research (CUR), a national organization of over 13,000 individual and 700 institutional members representing all disciplines and over 900 colleges and universities of all types. He has served as a principal investigator on CUR's National Science Foundation-funded national projects providing comprehensive support for faculty, institutions, state systems and consortia, as an Associate Editor for the *American Journal of Botany*, and as a member of the External Advisory Board of the State of Oklahoma's National Institutes of Health–IDeA Network of Biomedical Research Excellence Program (NIH–INBRE). Osborn has served as Program Director and member of the Executive Board of the Botanical Society of America, as well as on the Peer Review Committees for the Council for International Exchange of Scholars–Fulbright Senior Scholar Program and for the American Association for the Advancement of Science (AAAS)–Research Competitiveness Program. Dr. Osborn has received numerous awards including the CUR Fellows Award (CUR's highest award for recognizing national leadership and accomplishment in undergraduate research), the Centennial Award from the Botanical Society of America, the Antarctica Service Medal of the United States of America from the National Science Foundation, and Truman State University's (Missouri) highest award for recognizing outstanding faculty members. He holds B.S. and M.S. degrees from Texas State University–San Marcos and a Ph.D. from Ohio State University.

**FRANCESCA PURCELL** is the Program Director of Education and the Development of Knowledge at the American Academy of Arts and Sciences. Prior to this role, she was Director of the Commission on the Future of Undergraduate Education and Program Officer in Education Policy at American Academy of Arts & Sciences. In these roles, she directed a three-year project entitled The Future of Undergraduate Education to examine the state of post-secondary education in the U.S. Before joining the staff at the American Academy of Arts and Sciences, she served as the Provost/Chief Academic Officer at Massachusetts Bay Community College where she provided overall academic leadership and strategic direction to advance the mission of the institution focused on student access and success, expanded partnerships, and financial strength. Additionally, Dr. Purcell was the Associate Commissioner for Academic and P-16 Policy for the Massachusetts Department of Higher Education and was awarded the Commonwealth Citation for Outstanding Performance by Governor Deval Patrick in recognition of her contributions to public higher education. Dr. Purcell has held positions at Amherst College, Dean College, Roxbury Community College, and Tufts University and she has taught graduate-level higher education administration courses at Boston College and Suffolk University. Dr. Purcell has also consulted for the Tertiary Education Division of the World Bank and authored or co-authored works on international women's colleges and universities, women's studies, and state policy and student transfer. After earning her bachelor's degree from Amherst College in Political Science and Women's & Gender Studies, Dr. Purcell received her M.S. from Northeastern University in College Student Development and Counseling and her Ph.D. from Boston College in Higher Education Administration.

**PABLO SACASA** is the Interim Dean of the School of Science at Miami-Dade College (MDC) and chair of the department of chemistry, physics, and earth sciences. He oversees full-time faculty, adjunct professors, grant personnel and staff. Dr. Sacasa manages multiple STEM grants: One grant in particular A STEP up for the life sciences: Strengthening a research university/minority-serving community college partnership. With this NSF award, MDC in collaboration with University of Florida (UF), have developed a bridge program where students receiving their AA degree from MDC progress to their BS degree at UF.

The program is designed to overcome many of the barriers that often reduce broadening participation in STEM by students who often lack the resources or interest in relocating to geographic locations where STEM educational opportunities are better developed. A native of Nicaragua, Sacasa earned a bachelor's degree in chemistry, and both a master's degree and Ph.D. in organic chemistry, all from Florida International University (FIU).

**MARILYNE STAINS** is an associate professor of chemistry at the University of Nebraska-Lincoln, where her research group focuses on closing the gap between research and practice in chemical and science education at the postsecondary level. Specifically her group is interested in: developing new methods to characterize instructional practices in STEM college classrooms, exploring how faculty and teaching assistants think about their teaching, identifying individual, departmental, and institutional factors that influence instructors' instructional decisions, and characterizing the impact of different types of pedagogical professional development programs. Stains received her B.S. from the Université des Sciences de Luminy, France, her M.S., from Université Paul Sabatier, France, and her Ph.D. from the University of Arizona. She conducted postdoctoral research at the University of Massachusetts, Boston.

**IVORY TOLDSON** is the president and CEO of the Quality Education for Minorities (QEM) Network, professor of counseling psychology at Howard University and editor-in-chief of *The Journal of Negro Education*. Previously, Dr. Toldson was appointed by President Barack Obama to devise national strategies to sustain and expand federal support to HBCUs as the executive director of the White House Initiative on Historically Black Colleges and Universities (WHIHBCUs). He also served as senior research analyst for the Congressional Black Caucus Foundation, where he worked effectively with members and their staff to organize national and district level forums on educational equity and access. Dr. Toldson spent 3.5 years at Southern University and A&M College (SU), in Baton Rouge, LA, and has taught at Howard University in Washington, DC for more than a decade. At SU, Dr. Toldson was named young researcher of the year after successfully competing for the prestigious W.E.B. DuBois Fellowship from the U.S. Department of Justice. Dr. Toldson has published 4 books, and more than 65 scholarly publications including articles in peer-refereed journals, book chapters, and policy reports. Dr. Toldson became the Editor-in-Chief of *The Journal of Negro Education* (established 1932) in 2008, where he led an effort to modernize *The Journal*, moving it to an online platform for peer reviews and subscriptions, while keeping it independently owned and run by Howard University. After completing coursework for a Ph.D. in Counseling Psychology at Temple University, Dr. Toldson became a correctional and forensic psychology resident at the United States Penitentiary. There, he completed his dissertation on Black Men in the Criminal Justice System. He also served as the clinical director of the Manhood Training Village. He has received formal training in applied statistics from the University of Michigan, and held visiting research and teacher appointments at Emory, Drexel, and Morehouse School of Medicine. Since graduate school, Dr. Toldson has had a career-long affiliation with HBCUs and takes pride in his ability to promote HBCU scholarship and in being an example of professional talent cultivated at HBCUs. He holds an honorary doctorate from Florida Memorial University.

**URI TREISMAN** is University Distinguished Teaching Professor, professor of mathematics, and professor of public affairs at The University of Texas at Austin. He is the founder and executive director of the University's Charles A. Dana Center for Mathematics and Science Education. Dr. Treisman is active in the leadership of organizations working to improve American mathematics education. He is a founding member of Transforming Post-Secondary Education in Mathematics ([tpsemath.org](http://tpsemath.org)) and serves as the

representative of the American Mathematical Society to the American Association for the Advancement of Science (Education, Section Q). He launched the Dana Center Mathematics Pathways ([dcmathpathways.org](http://dcmathpathways.org)), an initiative to modernize entry-level college mathematics programs through working with states and colleges. He created the Urban Mathematics Leadership Network, which supports statewide mathematics leadership teams in America's largest urban school districts. Dr. Treisman has served as a Distinguished Senior Fellow at the Education Commission of the States since 2013. He also serves as chairman of the Strong Start to Finish Campaign, a joint initiative of the Bill & Melinda Gates Foundation, the Kresge Foundation, and the Great Lakes Higher Education Guaranty Corporation that works nationally to ensure all students get a strong start in their first year of college and finish with the skills they need to thrive. For his work on promoting minority student high achievement in mathematics he received a MacArthur Fellowship (1992-97). His research and professional interests span mathematics and science education, education policy, and social psychology. Dr. Treisman earned a B.S. in Mathematics from the University of California at Los Angeles and an interdisciplinary Ph.D. from the University of California at Berkeley, where he studied both mathematics and education.