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Summit on Diversity, Equity, Inclusion, and Anti-Racism in 21st Century STEMM Organizations
June 29-30, 2021 | Virtual Event

Speaker Biographies

June 29, 2021: The systemic and structural nature of racism and bias

Welcoming Remarks

John L. Anderson is president of the National Academy of Engineering since July 1, 2019. He was born in Wilmington, DE, and received his undergraduate degree from the University of Delaware in 1967 and PhD degree from the University of Illinois at Urbana-Champaign in 1971, both in chemical engineering. He was most recently Distinguished Professor of Chemical Engineering and president (2007–2015) of the Illinois Institute of Technology (IIT). Before that he was provost and executive vice president at Case Western Reserve University (2004–2007), following 28 years at Carnegie Mellon University, including 8 years as dean of the College of Engineering and 11 years as head of the Chemical Engineering Department. He began his professional career as an assistant professor of chemical engineering at Cornell University (1971–1976). Dr. Anderson was elected to the NAE in 1992 for contributions to the understanding of colloidal hydro-dynamics and membrane transport phenomena and was elected an NAE councillor in 2015. His service also includes numerous National Academies activities, such as the Committee on Determining Basic Research Needs to Interrupt the Improvised Explosive Device Delivery Chain (chair); Committee on Review of Existing and Potential Standoff Explosives Detection Techniques (chair); Organizing Committee for the National Security and Homeland Defense Workshop (cochair); Board on Chemical Sciences and Technology (cochair); and Ford Foundation Minority Postdoctoral Review Panel on Physical Sciences, Mathematics, and Engineering. In addition to his NAE membership, Dr. Anderson is a fellow of the American Academy of Arts and Sciences and the American Association for the Advancement of Science. He was appointed to the National Science Board in 2014 for a six-year term. He received the Acrivos Professional Progress Award from the American Institute of Chemical Engineers (AIChE) and an award from the Pittsburgh Section of AIChE for “Outstanding Professional Accomplishments in the Field of Academics,” and he is listed on the Alumni Wall of Fame at the University of Delaware. In 2012, he received the National Engineering Award from the American Association of Engineering Societies. He has held visiting professorships at the Massachusetts Institute of Technology (fellow of the John Simon Guggenheim Foundation), University of Melbourne (Australia), and Landbouwwuniversiteit Wageningen (the Netherlands). He has presented guest lectures at universities throughout the United States and is the author of numerous journal articles and book chapters.

Victor J. Dzau is the President of the National Academy of Medicine (NAM), formerly the Institute of Medicine (IOM). In addition, he serves as Vice Chair of the National Research Council. Dr. Dzau is

Chancellor Emeritus and James B. Duke Professor of Medicine at Duke University and the past President and CEO of the Duke University Health System. Previously, Dr. Dzau was the Hershey Professor of Theory and Practice of Medicine and Chairman of Medicine at Harvard Medical School's Brigham and Women's Hospital, as well as Chairman of the Department of Medicine at Stanford University. He is an internationally acclaimed leader and scientist whose work has improved health care in the United States and globally. His seminal work in cardiovascular medicine and genetics laid the foundation for the development of the class of lifesaving drugs known as ACE inhibitors, used globally to treat hypertension and heart failure. Dr. Dzau pioneered gene therapy for vascular disease and was the first to introduce DNA decoy molecules to block transcriptions in humans in vivo. His pioneering research in cardiac regeneration led to the Paracrine Hypothesis of stem cell action and his recent strategy of direct cardiac reprogramming using microRNA. He maintains an active NIH-funded research laboratory.

Marcia McNutt is a geophysicist and president of the National Academy of Sciences. From 2013 to 2016, she served as editor-in-chief of the Science family of journals. Prior to joining Science, she was director of the U.S. Geological Survey (USGS) from 2009 to 2013. During her tenure, the USGS responded to a number of major disasters, including earthquakes in Haiti, Chile, and Japan, and the Deepwater Horizon oil spill. McNutt led a team of government scientists and engineers at BP headquarters in Houston who helped contain the oil and cap the well. She directed the flow rate technical group that estimated the rate of oil discharge during the spill's active phase. For her contributions, she was awarded the U.S. Coast Guard's Meritorious Service Medal. Before joining the USGS, McNutt served as president and chief executive officer of the Monterey Bay Aquarium Research Institute (MBARI), in Moss Landing, California. During her time at MBARI, the institution became a leader in developing biological and chemical sensors for remote ocean deployment, installed the first deep-sea cabled observatory in U.S. waters, and advanced the integration of artificial intelligence into autonomous underwater vehicles for complex undersea missions. McNutt began her academic career at the Massachusetts Institute of Technology (MIT), where she was the E.A. Griswold Professor of Geophysics and directed the Joint Program in Oceanography/Applied Ocean Science & Engineering, jointly offered by MIT and the Woods Hole Oceanographic Institution. Her research area is the dynamics of the upper mantle and lithosphere on geologic time scales, work that has taken her to distant continents and oceans for field observations. She is a veteran of more than a dozen deep-sea expeditions, on most of which she was chief or co-chief scientist. McNutt received a BA in physics from Colorado College and her PhD in Earth sciences at the Scripps Institution of Oceanography. Her honors include membership in the American Philosophical Society and the American Academy of Arts and Sciences. She holds honorary doctoral degrees from the Colorado College, the University of Minnesota, Monmouth University, and the Colorado School of Mines. In 1988, she was awarded the American Geophysical Union's Macelwane Medal for research accomplishments by a young scientist, and she received the Maurice Ewing Medal in 2007 for her contributions to deep-sea exploration. McNutt served as president of the American Geophysical Union (AGU) from 2000 to 2002. She was chair of the Board of Governors for Joint Oceanographic Institutions, responsible for operating the International Ocean Discovery Program's vessel JOIDES Resolution and associated research programs. She is a fellow

of AGU, the Geological Society of America, American Association for the Advancement of Science, and International Association of Geodesy.

Session I: Establishing the historical context for racism in the U.S.

Moderator

Roderic I. Pettigrew serves as Chief Executive Officer (CEO) of Engineering Health (EnHealth) and executive dean for Engineering Medicine (EnMed) at Texas A&M University, in partnership with Houston Methodist Hospital. Dr. Pettigrew also holds the endowed Robert A. Welch Chair in Medicine. EnHealth is the nation's first comprehensive educational program to fully integrate engineering into all health-related disciplines. EnMed is the nation's first four-year, fully-integrated engineering and medical education curriculum leading to both a MD and master's degree in engineering in 4 years. An internationally recognized leader in biomedical imaging and bioengineering, Dr. Pettigrew served for 15 years as the founding director for the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at National Institutes of Health (NIH). Prior to his appointment at the NIH, he joined Emory University School of Medicine as professor of radiology and medicine (cardiology) and Georgia Institute of Technology as professor of bioengineering. Dr. Pettigrew is known for pioneering work in four-dimensional imaging of the cardiovascular system using magnetic resonance imaging (MRI). He has been elected to membership in the National Academy of Medicine, the National Academy of Engineering, the National Academy of Inventors, the American Academy of Arts and Sciences, and the National Academy of Sciences, India. Awards include gold medals from the Academy of Radiology Research and the RSNA, the Arthur M. Bueche Award from the NAE and the Vannevar Bush Award from the National Science Board. He is a graduate of Morehouse College as a Merrill Scholar (B.S. in Physics), Massachusetts Institute of Technology (MIT) as a Whitaker HST fellow (Ph.D. in radiation physics), the Leonard M. Miller School of Medicine at the University of Miami (M.D.), and completed residency training at UC San Diego.

Panelists

Cheryl Crazy Bull, Wacinyanpi Win (They Depend on Her), Sicangu Lakota, is President and CEO of the American Indian College Fund, a position she has held since 2012. A lifelong educator and community activist, Cheryl is an advocate for self-determination focused on Native voice, philosophy, and traditions as the heart of the people's work in building prosperity for current and future generations. Cheryl's experience includes serving Sinte Gleska University as a faculty member, department chair, Dean of Academic Affairs and Vice-President of Administration, St. Francis Indian School as Chief Educational Officer and 10 years as President of Northwest Indian College. She recently was elected to serve on the Board of the Brookings Institution, a nonprofit public policy organization. She also serves on the board of IllumiNative, an organization that focuses on a widespread accurate narrative about Indigenous people, Native Ways Federation, a national association of Native non-profits, the Boys and Girls Club of America, and the State Higher Education Executive Officers Organization (SHEEO) Equity Advisory Committee. Cheryl is a frequent public speaker and presenter about indigenous education and issues with a focus on indigenous higher education equity and place-based education. She was

awarded an honorary cultural degree from Sinte Gleska University, an honorary doctorate from Seattle University, and other awards for her leadership as a Native educator and Native woman. In 2015 Cheryl was named by Indian Country Today magazine as one of the 50 most influential people in Indian Country. In 2017 she was one of two American Indian women leaders honored by National Indian Women's "Supporting Each Other" group. The Native American Finance Officers Association honored her with a Lifetime Achievement Award in October 2019. In March of 2020, CBS paid tribute to Cheryl, along with six other women, as an example of what it means to challenge and overcome stereotypes and biases in their industries as part of a series of CBS CARES public service announcements in primetime on the CBS Television Network. In July 2020 she received Working Mother Media's Legacy Award during its Multicultural Women's Conference.

Samuel R. Lucas is professor of sociology at the University of California-Berkeley. He co-authored *Inequality by Design: Cracking the Bell Curve Myth*, which received a Gustavus Meyers Award, and has authored three other books, including *Tracking Inequality: Stratification and Mobility in American High Schools*, which received the Willard Waller award as the best book in the sociology of education. His work has appeared in multiple journals, including *Social Forces*, *Sociology of Education*, *Sociological Methodology*, *American Journal of Sociology*, and others, and he has served on two National Academy of Sciences panels, which produced *Minority Students in Special and Gifted Education* and *Measuring Racial Discrimination*. He currently serves on the National Academy of Sciences panel on "A Vision and Roadmap for Education Statistics in 2030 and Beyond." He received his BA in religion from Haverford College, and his MS and Ph.D. in sociology at the University of Wisconsin-Madison as a National Science Foundation Minority Graduate Fellow and Ford Foundation Dissertation Fellow, specializing in sociology of education, social stratification, research methods, and statistics.

Jennifer A. Richeson [she/her] is the Philip R. Allen Professor of Psychology at Yale University and Director of the Social Perception and Communication Lab. She received a Bachelor of Science in psychology from Brown University, and both an MA and PhD in social psychology from Harvard University. Prior to joining the Yale faculty in 2016, she was the John D. & Catherine T. MacArthur Professor of Psychology at Northwestern University, where she was also a Faculty Fellow at the Institute for Policy Research. Through her research & teaching, Professor Richeson seeks to identify ways to create cohesive environments that are also culturally diverse. Outside of lab, professor Richeson enjoys most word & card games and attempting new Fitness challenges, but would almost always rather be at the beach.

Keith Andrew Wailoo is Henry Putnam University Professor of History and Public Affairs at Princeton University where he teaches in the Department of History and the School of Public and International Affairs. He is former Chair of the Department of History, the former Vice Dean of the School of Public and International Affairs, and current President (2020-2022) of the American Association for the History of Medicine. Wailoo is an award-winning author on drugs and drug policy; race, science, and health; and genetics and society; and he is known also for insightful public writing and media commentaries on history of medicine, pandemics and society, and medical affairs in the U.S. His books include, *Pushing Cool: Big Tobacco, Racial Marketing, and the Untold Story of the Menthol Cigarette* (University of Chicago Press, 2021); *Pain: A Political History* (Johns Hopkins University Press, 2014);

How Cancer Crossed the Color Line (Oxford University Press, 2011); The Troubled Dream of Genetic Medicine (Johns Hopkins University Press, 2006); Dying in the City of the Blues: Sickle Cell Anemia and the Politics of Race and Health (University of North Carolina Press, 2001); and Drawing Blood: Technology and Disease Identity in Twentieth Century America (Johns Hopkins University Press, 1997). Wailoo's co-edited volumes include Medicare and Medicaid at 50: America's Entitlement Programs in the Age of Affordable Care (Oxford University Press, 2015); Genetics and the Unsettled Past: The Collision of DNA, Race, and History (Rutgers University Press, 2012); Katrina's Imprint: Race and Vulnerability in America (Rutgers University Press, 2010); Three Shots at Prevention: The HPV Vaccine and the Politics of Medicine's Simple Solutions (Johns Hopkins University Press, 2010). He has also lecture widely and published on medical history and health affairs in the Lancet, the New York Times, The New England Journal of Medicine, The Daily Beast, American Prospect, Perspectives in Biology and Medicine, the Bulletin for the History of Medicine, the Journal for the History and Philosophy of the Life Sciences, and the Journal of Health Politics, Policy, and Law. The recipient of numerous honors, in 2007 Wailoo was elected to the National Academy of Medicine. In 2021, he was elected to the American Academy of Arts and Sciences. In 2021, Wailoo received the Dan David Prize for his "influential body of historical scholarship focused on race, science, and health equity; on the social implications of medical innovation; and on the politics of disease." Before joining the Princeton faculty, Wailoo taught at the University of North Carolina at Chapel Hill in the Department of Social Medicine (School of Medicine) and in History, and at Rutgers University in History and in the Institute for Health, Health Care Policy, and Aging Research. At Rutgers, he was Martin Luther King Jr. Professor of History and founding director of the Center for Race and Ethnicity. Wailoo graduated from Yale University with a Bachelors degree in Chemical Engineering, and worked as a science writer for several years, before earning a Ph.D. from the University of Pennsylvania in the History and Sociology of Science.

Thematic Address: The Importance of Diversity

Joan Y. Reede is the Dean for Diversity and Community Partnership and Professor of Medicine at Harvard Medical School (HMS). Dr. Reede also holds appointments as Professor in the Department of Social and Behavioral Sciences at the Harvard T.H. Chan School of Public Health, and is an Assistant in Health Policy at Massachusetts General Hospital. Dr. Reede is responsible for the development and management of a comprehensive program that provides leadership, guidance, and support to promote the increased recruitment, retention, and advancement of underrepresented minority, women, LGBT, and faculty with disabilities at HMS. This charge includes oversight of all diversity activities at HMS as they relate to faculty, trainees, students, and staff. Dr. Reede also serves as the director of the Minority Faculty Development Program; program director of the Faculty Diversity Program of the Harvard Catalyst/The Harvard Clinical and Translational Science Center, and chair of the HMS Task Force on Diversity and Inclusion. Dr. Reede has served on a number of boards and committees including the Secretary's Advisory Committee to the Director of the National Institutes of Health; the Sullivan Commission on Diversity in the Healthcare Workforce; the National Children's Study Advisory Committee of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, and the Advisory Committee to the Deputy Director for Intramural Research of the National Institutes

of Health. Some of her past affiliations include the Steering Committee and Task Force for the Annual Biomedical Research Conference for Minority Students (ABRCMS); past co-chair of the Bias Review Committee of the Advisory Committee to the NIH Director's Working Group on Diversity; the Association of American Medical Colleges Careers in Medicine Committee (AAMC); past chair of the AAMC Group on Diversity and Inclusion (GDI). Dr. Reede served on the editorial board of the American Journal of Public Health, and she was the guest editor for the AAMC 2012 special issue, "Diversity and Inclusion in Academic Medicine" of Academic Medicine. She is a past chair of the National Academy of Medicine's Interest Group 08 on Health of Populations/Health Disparities. In 2018, Dr. Reede was appointed to the National Advisory Council on Minority Health and Health Disparities (NACMHD). Dr. Reede is an authority in the area of workforce development and diversity. Her colleagues and mentees have recognized her with a number of awards that include the Herbert W. Nickens Award from AAMC and the Society of General Medicine in 2005; election to the National Academy of Medicine in 2009; the 2011 Diversity Award from the Association of University Professors; and in 2012 she was the recipient of an Elizabeth Hurlock Beckman Trust Award. In 2013 she received an Exemplar STEM Award from the Urban Education Institute at North Carolina A & T University in Greensboro, North Carolina, and in 2015, she was the Distinguished Woman Scientist and Scholar ADVANCE Lecturer at the University of Maryland School of Public Health. Dr. Reede was recognized by her medical school classmates as a recipient of The Mount Sinai Alumni Association and Icahn School of Medicine 2015 Jacobi Medallion for extraordinary leaders in health care, and in 2017 she was nominated by her peers, and received a Harvard T. H. Chan School of Public Health Alumni Award.

Session II: Institutional practices and patterns of behavior

Moderator

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

Panelists

Modupe Akinola is an Associate Professor of Management and Director of the Sanford C. Bernstein and Co. Center for Leadership and Ethics at Columbia Business School. Professor Akinola examines how organizational environments—with the pressures of deadlines and multitasking—can lead to stress, and how this stress can spill over to affect performance. She studies why some people thrive under stress while others buckle, looking at how we react psychologically and physiologically to stressful situations and how these responses can affect outcomes like negotiations and creativity. She also studies workforce diversity, including the biases that affect the recruitment and retention of women and people of color in organizations. She has written on these topics in numerous academic journals, including Proceedings of the National Academy of Sciences, the Journal of Personality and Social Psychology, Psychological Science, Organizational Behavior and Human Decision Processes, and Academy of Management Journal. Her research has been covered in various media outlets, including The New York Times, NPR, The Wall Street Journal, The Financial Times, and The Economist. Professor Akinola received her B.A., M.B.A., M.A. in Social Psychology, and Ph.D. in Organizational Behavior from Harvard University. Prior to pursuing a career in academia, Professor Akinola worked in professional services at Bain & Company and Merrill Lynch.

Sapna Cheryan is a professor of psychology at the University of Washington. Her research investigates the role of cultural stereotypes in causing and perpetuating racial and gender disparities in U.S. society. She has published numerous articles on these topics in journals such as Psychological Bulletin, Journal of Personality and Social Psychology, and Psychological Review. In 2014, the White House announced a high school computer science classroom design prize based on her research. Her work has been cited widely in media outlets, including in The New York Times, NPR, and Washington Post. Dr. Cheryan currently serves on the Social Science Advisory Board of the National Center of Women in Information Technology. In 2009, Dr. Cheryan received the National Science Foundation CAREER Award. In 2012-2013, she was a visiting scholar at the Russell Sage Foundation in New York City, and in 2016-2017, was a Lenore Annenberg and Wallis Annenberg Fellow in Communication at the Center for Advanced Study in the Behavioral Sciences at Stanford University. Dr. Cheryan received a B.A. in American studies and psychology from Northwestern University and a Ph.D. in psychology from Stanford University.

Marc A. Nivet has served as the Executive Vice President for Institutional Advancement at UT Southwestern Medical Center since September 2016. A nationally renowned thought leader and highly regarded change agent, Dr. Nivet leads an extensive team which works to elevate awareness, improve engagement, and build relationships to advance the academic medical center's mission. He has spent over 25 years in academic medicine, developing creative program initiatives and innovative approaches in support of research, medical education, and patient care. Prior to his role at UT Southwestern, Dr. Nivet was Chief Diversity Officer for the Association of American Medical Colleges, consulting with medical schools and teaching hospitals on community engagement, diversity, and health equity. He also served as the COO and Treasurer for the Josiah Macy Jr. Foundation, which aligns workforce training with the dynamic needs of patients. Dr. Nivet earned his Doctorate in Higher Education Management from the University of Pennsylvania and his Master of Business Administration

degree with a focus on health care management from George Washington University's School of Business. Dr. Nivet is a Fellow of the New York Academy of Medicine, and a former President of the National Association of Medical Minority Educators. He currently serves the academic medicine community on a variety of boards and commissions.

Julie Posselt is Associate Professor of Higher Education and incoming Associate Dean of the Graduate School at the University of Southern California. Posselt's scholarship examines organizational behavior affecting access to and equity in in graduate & professional education, especially in STEM disciplines. She is PI and Director of the California Consortium for Inclusive Doctoral Education, and Co-PI and Director of the Research Hub for the NSF-INCLUDES Alliance: Inclusive Graduate Education Network. In addition to publishing 45 peer reviewed papers and book chapters, she is author of two books: *Equity in Science: Representation, Culture, and the Dynamics of Change in Graduate Education* (Stanford University Press, 2020) and *Inside Graduate Admissions: Merit, Diversity, and Faculty Gatekeeping* (Harvard University Press, 2016). She received the early career awards for the American Educational Research Association in 2018 and the Association for the Study of Higher Education in 2017. She completed her PhD at the University of Michigan and held a postdoctoral fellowship with the National Academy of Education/ Spencer Foundation.

Session III: Individual practices and patterns of behavior

Moderator

Kecia M. Thomas is an expert in the psychology of workplace diversity. She currently serves as the Dean of the University of Alabama at Birmingham's College of Arts and Sciences. Her scholarship and institutional engagements focus on the issues of strategic diversity recruitment, supporting diversity in STEM workplaces, and understanding the career experiences of high potential women of color. She is the author of over 60 peer-reviewed articles and book chapters as well as the first I/O diversity textbook *Diversity Dynamics in the Workplace* (Thomson Wadsworth). She also served as editor of six volumes, including *Diversity Resistance in the Workplace* vol. 1 & 2 (Taylor-Francis/Routledge) and *Diversity Ideologies in Organizations* (Routledge). She is an elected-Fellow of the American Psychological Association, the Society for the Psychological Study of Culture, Ethnicity and Race, and the Society of I/O Psychology. She is also a past recipient of the Janet Chusmir Award for Distinguished Service from the Academy of Management. She currently serves on the national change team for the NSF-funded *Aspire*, the national alliance for inclusive and diverse STEM faculty. Dr. Thomas earned a B.A. in psychology and Spanish from Bucknell University and her M.S. and Ph.D. in I/O Psychology from the Pennsylvania State University. She is also a graduate of the HERS Management Institute at Wellesley College, the SEC Academic Leadership Development Program, and the University System of Georgia Executive Leadership Institute.

Panelists

Mahzarin Banaji studies thinking and feeling as they unfold in social context, with a focus on mental systems that operate in implicit or unconscious mode. She studies social attitudes and beliefs in adults and children, especially those that have roots in group membership. She explores the implications of her work for questions of individual responsibility and social justice in democratic societies. Her current research interests focus on the origins of social cognition and applications of implicit cognition to improve individual decisions and organizational policies. Mahzarin Banaji taught at Yale from 1986-2002 where she was Ruben Post Halleck Professor of Psychology. Since 2002 she has been Richard Clarke Cabot Professor of Social Ethics in the Department of Psychology at Harvard University while also serving as the first Carol K. Pforzheimer Professor at the Radcliffe Institute for Advanced Study, and as the George A. and Helen Dunham Cowan Chair in Human Dynamics at the Santa Fe Institute. Banaji was elected fellow of the Society for Experimental Psychologists, Society for Experimental Social Psychology, the American Academy of Arts and Sciences, named Herbert A. Simon Fellow of the American Academy of Political and Social Science and named William James Fellow for a lifetime of significant intellectual contributions to the basic science of psychology by the Association of Psychology Science, an organization of which she also served as President. She also received the Carol and Ed Diener Award for Outstanding Contributions to Social Psychology. Banaji published *Blindspot: Hidden Biases of Good People*, with Anthony Greenwald in 2013. Research Interests: Implicit social cognition; social development; attitudes & preferences; beliefs & stereotypes; inter group relations; judgment & decision making; person perception; research methods.

H. Richard Milner IV (also known as Rich) is Cornelius Vanderbilt Distinguished Professor of Education and Professor of Education in the Department of Teaching and Learning at Peabody College of Vanderbilt University. His research, teaching and policy interests concern urban education, teacher education, African American literature, and the social context of education. Professor Milner's research examines practices and policies that support teacher effectiveness in urban schools. Professor Milner is President-Elect of the American Educational Research Association, the largest educational research organization in the world. He is an elected member of the National Academy of Education and a Fellow of the American Educational Research Association. Professor Milner's work has appeared in numerous journals, and he has published seven books. His most recent are: *Start where you are but don't stay there: Understanding diversity, opportunity gaps, and teaching in today's classrooms* (Harvard Education Press, 2010 and 2020, Second Edition), *Rac(e)ing to class: Confronting poverty and race in schools and classrooms* (Harvard Education Press, 2015) and *These kids are out of control: Why we must reimagine classroom management for equity* (Corwin Press, 2018).

Ivuoma Onyeador is an Assistant Professor of Management and Organizations. Her research examines how dominant and non-dominant group members reason about group-based discrimination and disparities. Through her research program, she aims to increase people's understanding of and willingness to address inequality. Professor Onyeador's research has been published in leading journals such as *Psychological Science* and *Personality and Social Psychology Bulletin*. Her work has also been featured in popular press outlets, including *The New York Times* and *The Atlantic*. Professor Onyeador earned her B.S. in Psychology, with distinction, from Yale University, her Ph.D. in Social Psychology at UCLA, and was awarded a postdoctoral fellowship from the National Science Foundation.

Victoria C. Plaut is a social psychologist and the Claire Sanders Clements Dean's Professor of Law at the UC Berkeley School of Law (affiliated faculty Psychology). She previously served as Associate Dean for Equity and Inclusion and is incoming chair of Berkeley's academic personnel committee. Dr. Plaut's research on psychological processes related to diversity, culture, and inclusion aims to address the challenges and opportunities of working, living, and learning in diverse environments with a focus on the implications for the design of institutions. Her recent projects include resistance to inclusion policies, processes of diversity perception and belonging, and participation of underrepresented groups in workplace and educational settings, such as faculty hiring in STEM fields. Dr. Plaut's research has been published in her field's top journals and she co-edited a book, *Diversity Ideologies in Organizations*. Her 2010 *Psychological Inquiry* target article, "Diversity Science: Why and how difference makes a difference," has been recognized as setting the current agenda for psychological research on diversity and inclusion. Her research has been supported by the National Science Foundation, the National Institutes of Health, the Spencer Foundation, and private organizations. She obtained her Ph.D. in Psychology from Stanford and an M.Sc. in Social Psychology from the London School of Economics.

Keynote Session

Congresswoman Eddie Bernice Johnson is serving her 15th term representing the 30th Congressional District of Texas. Congresswoman Johnson is the first African-American and woman to chair the House Committee on Science, Space, and Technology and is the Dean of the Texas Congressional delegation in addition to serving as Dean of the Texas, New Mexico and Arizona Democratic Congressional Delegation. Congresswoman Johnson is the highest-ranking Texan on the House Transportation and Infrastructure Committee and the first nurse to be elected to the U.S. Congress. Congresswoman Johnson began her career as the first female African-American Chief Psychiatric Nurse at the V.A. Hospital in Dallas. In 1972, she became the first nurse ever elected to the Texas State House and achieved that same distinction upon her election to the Texas Senate in 1986. From 2011 to 2018, she served as the Science, Space and Technology Committee's first African-American and first female Ranking Member. Congresswoman Johnson has a reputation as a stateswoman who works with both parties to get things done – a reputation earned during her more than 40 years in public office. Congresswoman Johnson is widely recognized as one of the most effective legislators in Congress, credited with authoring and co-authoring more than 177 bills that were passed by the House and Senate and signed into law by the president. She has a long-standing reputation for providing excellent constituent services to the people who elected her. She is the founder of the Diversity & Innovation Caucus, the founder and co-chair of the Congressional Homelessness Caucus, co-chair of the Congressional Lupus Caucus, and co-chair of the Congressional Caucus of Bosnia. Congresswoman Johnson had the honor to serve as Chair of the Congressional Black Caucus during the 107th Congress. Her acclaimed initiative, A World of Women for World Peace, has gained national and international recognition.

Overview Remarks of Day I

Keith R. Yamamoto is University of California, San Francisco (UCSF) vice chancellor for science policy and strategy, director of precision medicine for UCSF, and professor of cellular and molecular pharmacology at UCSF. He is a leading researcher investigating transcriptional regulation by nuclear receptors, which mediate the actions of essential hormones and cellular signals; he uses mechanistic and systems approaches to pursue these problems in pure molecules, cells and whole organisms. He has led or served on numerous national committees focused on public and scientific policy, public understanding and support of biological research, and science education; he Co-Chairs the Roundtable on Aligning Incentives for Open Science. As previous Chair of the NAS Board on Life Sciences, he created the study committee that produced “Toward Precision Medicine: Building a Knowledge Network for Biomedical Research and a New Taxonomy of Disease,” the report that enunciated the precision medicine concept, and he has helped to lead efforts in the White House, in Congress, in Sacramento and at UCSF to implement it. He has chaired or served on many committees that oversee training and the biomedical workforce, research funding, and the process of peer review and the policies that govern it at the National Institutes of Health. He is a member of the advisory board for Lawrence Berkeley National Laboratory and the board of directors of Research!America. He was elected to the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences, and the American Academy of Microbiology, and is a fellow of the American Association for the Advancement of Science. He has a B.S. in biochemistry and biophysics from Iowa State University, and a Ph.D. of biochemical sciences from Princeton University.

June 30, 2021: How can we move the system?

Session I: The importance of diversity explored

Moderator

Marielena DeSanctis serves as the President of Community College of Denver. Marie joined Community College of Denver in January 2021, and she brings almost six years of experience as an engineer; and over 22 years as a leader in education. Previously, she served as Provost & Senior Vice-President, Academic Affairs and Student Services of Broward College. At Broward College, she led the work of all the Campus Presidents, the Vice-Provost of Student Services, the Vice-Provost of Academic Affairs, the Executive Director of International Education, and the Associate Vice-President of the Center for Teaching and Learning Excellence. She has also served as a committee member and leader of several professional organizations including her election to the position of State President of the Florida Association of School Administrators; Chair of the statewide Council of Student Affairs; a member of the National Academies of Sciences, Engineering and Medicine Board on Higher Education and the Workforce; and a Board Member of the National Community College’s Hispanic Council. Marie earned a B.S. in Mechanical Engineering from Georgia Institute of Technology; a M.S. in Math Education from Nova Southeastern University; and a Ph.D. in Educational Leadership from Florida

Atlantic University. She is a member of the 2019 class of the Aspen Presidential Fellowship for Community College Excellence, a graduate of Leadership Florida Class XXXV, received the College Board Inspiration Award, was a Broward County Principal of the Year finalist, received a Center for Digital Education K-12 Best of the Web Award, and a 2016 Hispanic Woman of Distinction among other honors.

Panelists

Latonia Harris began her career with Johnson & Johnson over 16 years ago and is currently a Scientific Director in the Janssen R&D Portfolio Management group where she serves as a CMC Leader. In this role, she is responsible for providing strategic leadership to a multidisciplinary team focused on developing and gaining regulatory approval of large molecules oncology therapies. In her previous role within the Pharmaceutical Development and Manufacturing Sciences API-LM group, she led teams responsible for Darzalex® global drug substance process development, technology transfer, API process validation, and authoring of API-related sections of regulatory filings. As API-LM Scientific Integrator for Daratumumab (Darzalex®), Latonia led the CMC Drug Substance subteam responsible, in part, for the successful BLA filing for this breakthrough oncology product. Darzalex® gained FDA approval for its initial indication for treating multiply myeloma in November 2015. A second-generation product, Darzalex Faspro®, gained FDA approval in May 2020. Latonia previously served as Scientific Integrator for multiple monoclonal antibodies and was the API-LM upstream platform lead. She was also instrumental in the startup and operation of the Large Molecule Development Pilot Plant, and she developed the HALA cell culture media. Prior to joining Johnson & Johnson, Latonia worked at Schering-Plough in Union, NJ as a Scientist in their upstream development group. Latonia currently serves on the Northwestern University Master's in Biotechnology Program Industrial Advisory Board, the Rutgers Industrial Advisory Board for NSF Research Experience for Undergraduates, and the Good Grief Board of Directors. Latonia is also a member of the National Academy of Engineering. Latonia holds a Ph.D. in Chemical Engineering from Northwestern University and a Bachelor's of Science in Chemical Engineering from the University of Michigan – Ann Arbor. She is the proud mother of 14-year-old twin girls. During her personal time, Latonia enjoys reading, music, and exploring the world with her twins.

Donald G. James is a husband, parent, brother, friend and mentor who enjoys reading, traveling and using his experiences to inspire the next generation. Donald developed an early interest in aviation and international affairs due to his frequent travels with his parents to Africa, Southeast Asia, and Europe. In grade school he learned about the planned supersonic transport (SST) and the new jumbo jet, the 747. The idea that you could fly faster than the speed of sound or in an airplane as gigantic as the 747 captivated him. Both Donald and his brother Dennis wanted to pursue aviation careers. Dennis is now a Captain with American Airlines. The experience of living in developing countries and a desire to solve problems of destitution inspired Donald to pursue International Relations and Economic Development academically, though he never lost his interest in aerospace. While considering employment options after graduate school, Donald applied to and was accepted into the Presidential Management Intern program. He was recruited and hired by NASA, beginning at NASA's Goddard Space Flight Center in 1982. He returned to California, transferring to NASA's Ames Research Center in 1984. Donald decided to make a career at NASA after the tragic Challenger accident in 1986. The loss of teacher Christa

McAuliffe and her six fellow crew members, and the tremendous outpouring for the nation's first educator astronaut persuaded Donald that NASA was one agency that could inspire students to be explorers. Donald loves being around smart people doing cool science, building better and faster planes, and designing spacecraft to explore low earth orbit and the cosmos. For Donald, working at the Agency that led America and the world to human exploration of the moon is an honor and a privilege. Career highlights include: serving as Ames' Education Director from 1999 to 2006; co-leading Ames' first open house attracting a record-breaking quarter of a million visitors in one day (1997); serving as project manager for NASA's successful bid to host the International Space University's 2009 Space Studies Program; being accepted to the Senior Executive Service. Of all the amazing experiences Donald had, he counts one as the most gratifying: a young graduate student told Donald after a talk he gave that she was inspired to go into engineering when Donald visited her 7th grade class a decade earlier. In August of 2014, NASA Administrator Charlie Bolden selected Donald to serve as the Agency's Associate Administrator for Education. Donald retired after 35 years—all with NASA—on March 31, 2017. Donald holds a BA in International Relations from the University of Southern California in Los Angeles. He received a graduate Fellowship from the National Science Foundation and completed an MA in International Economic Development from the American University in Washington, D.C. Donald also studied economics at Cambridge University, England in 1975 and attended Harvard's Senior Executive Fellows program in 2004. Donald enjoys speaking to groups, especially young people interested in aerospace careers and about the themes in his new book. Donald's book (in collaboration with his brother Dennis) *Manners Will Take You Where Brains and Money Won't: Wisdom from Momma and 35 years at NASA* is available.

Eliseo J. Pérez-Stable is Director of the National Institutes on Health's National Institute on Minority Health and Health Disparities (NIMHD), which seeks to advance the science of minority health and health disparities research through research, training, research capacity development, public education, and information dissemination. Dr. Pérez-Stable practiced general internal medicine for 37 years at the University of California, San Francisco (UCSF) before moving to NIH in September 2015. He was professor of medicine at UCSF and chief of the Division of General Internal Medicine for 17 years. His research interests include improving the health of racial and ethnic minorities and underserved populations, advancing patient-centered care, improving cross-cultural communication skills among clinicians, and promoting diversity in the biomedical research workforce. For more than 30 years, Dr. Pérez-Stable led research on Latino smoking cessation and tobacco control policy in the United States and Latin America, addressing clinical and prevention issues in cancer screening, and mentoring over 70 minority investigators. He has published over 300 peer-reviewed articles and was elected to the National Academy of Medicine in 2001. He earned his B.A. in chemistry from the University of Miami and his M.D. from the University of Miami School of Medicine. He completed his primary care internal medicine residency and research fellowship at UCSF.

David Yeager is the Associate Professor of Developmental Psychology at the University of Texas at Austin. He received my PhD in Developmental and Psychological Science from the Stanford University School of Education in 2011. Prior to beginning his career as a researcher, he was a middle school teacher in Tulsa, Oklahoma. He also hold an MEd in Secondary English and a BA in the Program of

Liberal Studies from the University of Notre Dame, as well as an MA in Psychology from Stanford University. He is interested in understanding the processes shaping adolescent development, especially how social cognitive factors interact with structural and physiological factors to create positive or negative trajectories for youth. He is also interested in learning how to influence these psychological processes, so as to improve developmental and educational outcomes for youth.

Cross-Academies' Panel on Efforts at the National Academies

Moderator

Laura Castillo-Page is chief diversity and inclusion officer at the National Academies of Sciences, Engineering, and Medicine where she leads the development of an overall diversity, equity, and inclusion (DEI) strategy and set of programs for the entire organization. Prior to coming to the Academies, Castillo-Page most recently served as senior director for equity, diversity, and inclusion at the Association of American Medical Colleges (AAMC). Castillo-Page holds a Ph.D. and M.S. in educational administration and policy studies as well as an M.A. in political science from the University at Albany, SUNY, and holds a B.A. in political science and Latin American studies from Fordham University.

Panelists

Cato T. Laurencin is the University Professor and Albert and Wilda Van Dusen Distinguished Endowed Professor of Orthopaedic Surgery, Professor of Chemical Engineering, Professor of Materials Science and Engineering and Professor of Biomedical Engineering at UConn. He received his B.S.E in chemical engineering from Princeton University, his M.D., magna cum laude from the Harvard Medical School, and his Ph.D. in biochemical engineering/biotechnology from the Massachusetts Institute of Technology. In science, Dr. Laurencin received the Philip Hauge Abelson Prize from the AAAS given 'for signal contributions to the advancement of science in the United States'. In technology and inventorship, Laurencin is a laureate of the National Medal of Technology and Innovation, America's highest honor for technological achievement, awarded by President Barack Obama at the White House. Regarding the National Academies, Dr. Laurencin is the first surgeon in history elected to all four national academies: the National Academy of Medicine, the National Academy of Engineering, the National Academy of Sciences, and the National Academy of Inventors (Fellow). He is the first person in history to receive the oldest/highest award of the National Academy of Medicine (the Walsh McDermott Medal) and the oldest/highest award of the National Academy of Engineering (the Simon Ramo Founder's Award). Dr. Laurencin is the Chair of the National Academies Roundtable on Black Men and Black Women in Science Engineering and Medicine.

Darryll J. Pines (NAE) became University of Maryland president in July 2020 and serves as the Glenn L. Martin Professor of Aerospace Engineering. He arrived on campus in 1995 as an assistant professor, then served as chair of the Department of Aerospace Engineering from 2006–09 and for the following

11 years as dean and Nariman Farvardin Professor of Aerospace Engineering at the A. James Clark School of Engineering. As dean, Pines revamped teaching in fundamental undergraduate courses; encouraged participation in national and international student competitions; emphasized sustainability engineering and service learning; and expanded innovation and entrepreneurship activities. Pines made diversity a hallmark of his tenure, increasing the number of faculty and students from underrepresented populations. With his leadership team, he secured a historic \$219.5 million investment from the A. James & Alice B. Clark Foundation in 2017 to fund need-based scholarships campus wide, as well as graduate fellowships, faculty positions, infrastructure and other initiatives. A member of the National Academy of Engineering, Pines focuses his research on structural dynamics, smart sensors and adaptive, morphing and biologically inspired structures as well as the guidance, navigation and control of aerospace vehicles. He is a fellow of the American Institute of Aeronautics and Astronautics, American Society of Mechanical Engineers and Institute of Physics; chairs the Engineering Advisory Committee for NSF's Engineering Directorate; and sits on the Board of Trustees for Underwriters Laboratory not-for-profit arm. Pines received a B.S. in mechanical engineering from the University of California, Berkeley, and M.S. and Ph.D. in mechanical engineering from the Massachusetts Institute of Technology.

Gregory H. Symmes is chief program officer for the National Academies. Previously he was the executive director of the Academies' Division on Earth and Life Studies, where he was responsible for the overall intellectual, strategic, managerial, and financial leadership of the division. Symmes joined the Academies in 1995 as a scientific reports officer for the Commission on Geosciences, Environment, and Resources, and served as the commission's assistant executive director and later as associate executive director. He was named the associate executive director of the Division on Earth and Life Studies when it was established in 2001 and rose to the position of deputy executive director in 2004. While holding these positions, he directed studies on a variety of science policy issues, including climate change science, mining on federal lands, radioactive waste management, and scientific peer review. Symmes also directed the Roundtable on Science and Technology for Sustainability and served as a senior adviser for the 2010 InterAcademy Council Review of the Intergovernmental Panel on Climate Change. He received the Academies' Individual Award for Distinguished Service in 2002. Before joining the Academies, Symmes served as a research assistant professor and postdoctoral associate in the Department of Earth and Space Sciences at the State University of New York at Stony Brook. He graduated with a B.A. summa cum laude in geology from Amherst College and received his Ph.D. in geology from the Johns Hopkins University.

Antonia M. Villarruel is the Margaret Bond Simon Dean of Nursing at the University of Pennsylvania School of Nursing and Director of the School's WHO Collaborating Center for Nursing and Midwifery Leadership. As a bilingual and bicultural nurse researcher, Dr. Villarruel has extensive research and practice experience with diverse Latino and Mexican populations and communities, health promotion and health disparities research and practice. She incorporates a community-based participatory approach to her research. Specifically, her research focuses on the development and testing of interventions to reduce sexual risk behaviors among Mexican and Latino youth. She has been the PI and Co-PI of seven randomized clinical trials concerned with reducing sexual and other risk behaviors.

As part of this program of research, she developed an efficacious program to reduce sexual risk behavior among Latino youth – entitled *Cúdate!*. This program is disseminated nationally by the CDC. In addition to her research, Dr. Villarruel has assumed leadership in many national and local organizations. Dr. Villarruel currently Chairs the National Academy of Medicine (NAM) and Robert Wood Johnson Foundation (RWJF) Health Policy Fellowship Program, co-Chairs the Strategic Advisory Committee of the AARP/RWJ Center for Health Policy Future of Nursing Campaign for Action and is the former chair of the National Academy of Sciences Roundtable on the Promotion of Health Equity. She has received numerous honors and awards including International Nurse Researcher Hall of Fame from Sigma Theta Tau International, membership in the American Board of Internal Medicine, selection as a Fellow in the American Academy of Nursing, the Global Philadelphia Association’s Gloy Award for Educational Leadership and is an elected member of the National Academy of Medicine and the College of Physicians of Philadelphia. Dr. Villarruel earned her BSN from Nazareth College, an MSN from the University of Pennsylvania, and her Ph.D. in nursing from Wayne State University.

Session II: Popular efforts, their limitations, and what they miss

Moderator

Susan T. Fiske is Eugene Higgins Professor, Psychology and Public Affairs, Princeton University. She investigates social cognition, especially cognitive stereotypes and emotional prejudices, at cultural, interpersonal, and neural levels. Author of over 400 articles and chapters, she is most known for theories and research on how people think about each other: the continuum model of impression formation, the power-as-control theory, the ambivalent sexism theory, and the stereotype content model (SCM). She testified for President Clinton's Race Initiative and appeared in a Supreme Court decision on gender discrimination, also cited in support of LGBTQ+ rights. Currently an editor of the *Annual Review of Psychology*, *Proceedings of the National Academy of Sciences (PNAS)*, and *Policy Insights from the Behavioral and Brain Sciences*, she has written *Social Cognition: From Brains to Culture*, winner of the 2020 BBVA Frontiers of Science Award, and *Envy Up and Scorn Down: How Status Divides Us*, supported by a Guggenheim. She has been elected to the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences. She was 2014-15 President of the Federation of Associations in Behavioral and Brain Sciences and 2002-03 President of the Association for Psychological Science. She received both her B.A. in social relations and her Ph.D. in social psychology from Harvard University; with honorary doctorates from Université Catholique de Louvain-la-Neuve, Belgium; Universiteit Leiden, Netherlands; Universität Basel, Switzerland; Universidad de Granada. She chaired the Board on Behavioral, Cognitive, and Sensory Sciences from 2015-2020 and served on several consensus reports (measuring discrimination, scientific workforce, aging workforce, human subjects).

Camille Z. Charles is Walter H. and Leonore C. Annenberg Professor in the Social Sciences in the Departments of Sociology and Africana Studies, and in the Graduate School of Education at the University of Pennsylvania. Professor Charles earned her Ph.D. in at the University of California, Los

Angeles, where she was a project manager for the 1992-1994 Multi-City Study of Urban Inequality. Her research interests are in the areas of racial inequality, racial identity, racial attitudes, intergroup relations, residential segregation, and higher education. She is author of *Won't You Be My Neighbor: Race, Class and Residence in Los Angeles*, which explores explanations for persisting residential segregation by race, and co-author of *The Source of the River: The Social Origins of Freshmen at America's Selective Colleges and Universities* and *Taming the River: Negotiating the Academic, Financial, and Social Currents in Selective Colleges and Universities*, each based research from The National Longitudinal Survey of Freshmen (NLSF), an effort to understand racial differences in the experience of elite higher education in the United States. She is co-author of "Sociology, Segregation, and the Fair Housing Act." Also, along with her co-authors, she has recently completed a new book-length manuscript, tentatively titled, *Divergent Currents: The Diverse Origins of the New Black Elite*, also based on data from the NLSF.

Frank Dobbin is Henry Ford II Professor of the Social Sciences at Harvard. He holds a B.A. from Oberlin College and a Ph.D. from Stanford University. His *Inventing Equal Opportunity* (Princeton University Press, 2009), which won the Distinguished Scholarly Book Award from the American Sociological Association, charts how corporations have responded to anti-discrimination law since the 1960s. With Alexandra Kalev, he is developing an evidence-based approach to diversity management, using administrative data and panel surveys to explore how hiring, promotion, diversity, work-life and harassment policies have shaped both corporate management and university faculty over 30 years. Dobbin has held fellowships from the Guggenheim Foundation, the Russell Sage Foundation, the Center for Advanced Study in the Behavioral Sciences, and the Safra Center for Ethics.

Ebony Omotola McGee is a professor of diversity and STEM education at Vanderbilt University's Peabody College. She investigates what it means to be racially marginalized while minoritized in the context of learning and achieving in STEM higher education and in the STEM professions. In particular, she studies the racialized experiences and racial stereotypes that adversely affect the education and career trajectories of underrepresented groups of color. This involves exploring the social, material, and health costs of academic achievement and problematizing traditional forms of success in higher education, with an unapologetic focus on Black folk in these places and spaces. As a recipient of a National Science Foundation (NSF) CAREER grant, she investigates how marginalization undercuts success in STEM through psychological stress, interrupted STEM career trajectories, impostor phenomenon, and other debilitating race-related trauma for Asian, Black, Indigenous, and Latinx doctoral students. With funding from seven NSF grants, she cofounded the Explorations in Diversifying Engineering Faculty Initiative or EDEFI (pronounced "edify"). She also co-founded the Institute in Critical Quantitative and Mixed Methodologies Training for Underrepresented Scholars (ICQCM), which aims to be a go-to resource for the development of quantitative and mixed-methods skillsets that challenge simplistic quantifications of race and marginalization. ICQCM receives support from the NSF, The Spencer Foundation, and the W. T. Grant Foundation. Her first solo-authored book is entitled *Black, Brown, Bruised: How Racialized STEM Education Stifles Innovation*: <https://www.hepg.org/hep-home/books/black,-brown,-bruised#>. Her research has been featured in prominent media outlets, including *The Atlantic*, *Diverse Issues in Higher Education*, *Nature Human Behaviour* and *Cancer*, *The Chronicle of Higher Education*, *Higher Education Today*, NPR's *Codeswitch*, *The Hechinger Report*,

Christian Science Monitor, Huffington Post, US News & World Report, Inside Higher Education, Tennessean, Washington Monthly, and The UK Voice Online. She is an electrical engineer and earned her Ph.D. in mathematics education from the University of Illinois at Chicago. She is a recipient of a Spencer Postdoctoral Fellowship at the University of Chicago, and NSF Postdoctoral Fellowship at Northwestern University.

Reynold Verret is the sixth president and second lay leader of Xavier University of Louisiana, the only Catholic HBCU in the nation. Dr. Verret was unanimously elected as President of Xavier by the Board of Trustees in 2015. As President of Xavier, Dr. Verret leads efforts to build enrollment, enhance the quality and diversity of academic programs, develop the faculty, promote interdisciplinary efforts, create partnerships, and honor Xavier's founding legacy to contribute to a more just and humane society. Under Dr. Verret's leadership, Xavier has formed several partnerships and broadened academic programs focused on Public Health, including utilizing new avenues of funding to implement new programs and expand existing ones. Dr. Verret previously served as provost at Savannah State and Wilkes Universities and as dean of the Misher College of Arts and Sciences at the University of the Sciences in Philadelphia. In addition, he served as faculty in Chemistry at Tulane University and at Clark Atlanta University, where he chaired the Department of Chemistry. During his tenure at Tulane and Clark Atlanta, he simultaneously held adjunct appointments in Immunology at the Tulane and Morehouse Schools of Medicine. He has published numerous scientific reports and articles on his scientific work. During the COVID-19 pandemic, Dr. Verret chose to participate in the COVID-19 vaccine trials as a trusted figure in the local Black and African American community. With his background as a biochemist, immunologist, and social justice advocate, Dr. Verret was invited to multiple panels, interviews, and other events to speak about his experiences as a trial participant. He utilized his experience to reassure anxious and underrepresented groups about the science and ethical standards of modern medicine while thoroughly acknowledging past medical mistreatment of people of color. Dr. Verret served on the National Institutes of Health, the Board of the Pennsylvania Humanities Council, and the Georgia Coastal Indicators Coalition. He has dedicated effort to increase students from underrepresented groups pursuing degrees in STEM disciplines. Dr. Verret's family immigrated to the U.S. in 1963 from Haiti. He graduated from Columbia University and earned his doctorate from MIT. He engaged as a postdoctoral scholar at the Howard Hughes Institute for Immunology at Yale and the Center for Cancer Research at MIT.

Session III: Promising programs, practices, characteristics, and components for systemic change

Moderator

Darryl Monteau is the SACNAS Native Initiatives Manager. She is an enrolled member of the Kiowa Tribe of Oklahoma and also Apache and Comanche descent. Monteau has worked in higher education for most of her professional career at colleges/universities (public and tribal colleges) in many areas that include academic affairs, student services, nonprofit organizations, and grant-funded initiatives. Prior to coming to SACNAS she worked for the American Indian Higher Education Consortium (AiHEC)

as a program coordinator for the Aseto'ne Network Project (NIH program) which was aimed at engaging tribal college students in biomedical and health research. She enjoys working with students, especially students of color, in navigating college and sharing information and opportunities to enhance their academic experience. Monteau is proud to be a part of SACNAS and appreciates the vision of the organization, "achieving true diversity in STEM". She has a B.A. in American Indian Studies from Haskell Indian Nations University and M.A. and Ed.D. degrees in Higher Education Administration from the University of Kansas (KU).

Panelists

Twyla Baker is an enrolled citizen of the Three Affiliated Tribes of North Dakota. Born and raised on the Fort Berthold Indian Reservation, Twyla left home for several years and built a life away from the reservation, though she maintained strong ties to her home community. Viewing life through an Indigenous lens, her world view informs nearly everything she does professionally and personally, and she is raising her children to know, see, and carry on their Tribal life ways as they were taught to her by her parents. Given her strong grounding in her culture and identity, and the social capital that brings, Twyla is particularly suited to carrying out her work within her community. She has spent a lifetime establishing her credibility among her Tribal people and with external constituencies.

Nilanjana (Buju) Dasgupta is a Professor of Psychology and the inaugural Director of the Institute of Diversity Sciences at the University of Massachusetts, Amherst. She received her Bachelor's Degree in psychology and neuroscience from Smith College and her PhD in social psychology from Yale University. She is a leader in research on implicit bias. Her work emphasizes the plasticity of implicit bias—identifying the ways in which changes in social situations produce corresponding changes in people's implicit attitudes, beliefs, and behavior. Whereas past work had assumed that implicit bias is learned early in life and difficult to change, Dasgupta's research uncovered immense plasticity in people's self-concept, attitudes, and behavior in response to small changes in local culture without individuals' attention. Her research has been funded by multiple grants from the National Science Foundation, National Institutes of Health, and the American Psychological Foundation, and is frequently featured in popular news media including the New York Times, The Atlantic, International Herald Tribune, London Times, National Public Radio, Wired, Slate, PBS News Hour, ABC News, Boston Globe, Scientific American Mind, and many other outlets. Buju Dasgupta is well-known for her unique ability to integrate the science of implicit bias with complex social problems in the real world, moving seamlessly between research in the laboratory and naturally existing real world settings. Her passion is to design local cultures that weaken the impact of implicit bias on people's beliefs and behavior and free members of marginalized groups from the constraint of stereotypes, allowing them to thrive. In recognition of her successful application of science to social justice, she received the Application of Personality and Social Psychology Award from the Society for Personality & Social Psychology, and the Hidden Bias Research Prize from the Kapor Center for Social Impact. Closer to home at the University of Massachusetts Amherst, Dasgupta received the Chancellor's Award for Outstanding Accomplishments in Research and Creative Activity, and the Distinguished Academic Outreach Award in Research. As an indication of her leadership in science, Dasgupta received a rare CAREER grant from

the National Science Foundation, awarded to a small number of early career scientists who are rising stars. She also served two terms on the advisory committee of the National Science Foundation's Directorate of Social, Behavioral, and Economic Sciences. Buju Dasgupta currently serves on the steering council of Mind and Life Institute, as a research advisor to the Perception Institute, and as an advisor for the Equal Justice Society.

Nicole M. Joseph is an associate professor with tenure of mathematics and science education in the department of Teaching and Learning at Vanderbilt University. She is also the Director of the Joseph Mathematics Education Research Lab (JMEL) which trains and mentors undergraduate and graduate students in Black Feminist and Intersectionality epistemological orientations producing theoretical and methodological practices that challenge hegemonic notions of objectivity to emphasize humanizing, empowering, and transformative research. Dr. Joseph's research explores two lines of inquiry, (a) Black women and girls, their identity development, and their experiences in mathematics and (b) gendered anti-blackness, whiteness, white supremacy and how these systems of oppression shape Black girls' and women's underrepresentation and retention in mathematics across the pipeline. Her scholarship has been published in top-tiered journals such as *Educational Researcher*, *Review of Educational Research*, *Teachers College Record*, *Harvard Education Review*, and the *Journal of Negro Education*. Dr. Joseph's research perspective was also featured in *Essence Magazine* (February 2018). Her activist work includes founding the Tennessee March for Black Women in STEM, an event held every fall that seeks to bring together the Tennessee community to raise awareness about issues Black women and girls face in STEM learning, education, and industry.

Claude M. Steele is an American social psychologist and a Professor of Psychology at Stanford University. He is best known for his work on stereotype threat and its application to minority student academic performance. His earlier work dealt with research on the self (e.g., self-image, self-affirmation) as well as the role of self-regulation in addictive behaviors. In 2010, he released his book, *Whistling Vivaldi and Other Clues to How Stereotypes Affect Us*, summarizing years of research on stereotype threat and the underperformance of minority students in higher education. He holds B.A. in Psychology from Hiram College, an M.A. in Social Psychology from Ohio State University, and a Ph.D. in Social Psychology and Statistical Psychology from Ohio State University. He is elected to the American Academy of Arts and Sciences, the National Academy of Sciences, the National Science Board, the National Academy of Education, and the American Philosophical Society. He currently serves on the board of the John D. and Catherine T. MacArthur Foundation, the board of Scripps College, and the SFJazz board. He is just retired by term limit from the Russell Sage Foundation Board of Directors, after being Chair for ten years. Professor Steele is a Fellow for both the American Institutes for Research and the American Academy of Political and Social Science, and serves on the Advisory Council of the MIT Media Lab. He has served in several major academic leadership positions as the Executive Vice Chancellor and Provost at UC Berkeley, the I. James Quillen Dean for the School of Education at Stanford University, and as the 21st Provost of Columbia University. Past roles also include serving as the President of the Society for Personality and Social Psychology, as the President of the Western Psychological Association, and as a member of the Board of Directors of the American Psychological

Society. Professor Steele holds Honorary Doctorates from Yale University, Northwestern University, University of Chicago, University of Michigan, DePaul University and Claremont Graduate University. In 2020 he received the Legacy Award from the Society for Personality and Social Psychology (SPSP). The SPSP Legacy honors luminary figures whose seminal career contributions have shaped the field.

Reflection and Next Steps with Leaders in Science and Society

Moderator

Gilda A. Barabino is President of Olin College of Engineering. She previously served as Daniel and Frances Berg Professor and Dean at The City College of New York's (CCNY) Grove School of Engineering. Prior to joining CCNY, she was Associate Chair for Graduate Studies and Professor in the Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory. At Georgia Tech she also served as the inaugural Vice Provost for Academic Diversity. Prior to Georgia Tech and Emory, she rose to the rank of Professor of Chemical Engineering and was Vice Provost for Undergraduate Education at Northeastern University. She is a noted investigator in the areas of sickle cell disease, cellular and tissue engineering, and the role of race/ethnicity and gender in science and engineering. She is a member of the National Academy of Engineering, and the National Academy of Medicine, and the American Academy of Arts and Sciences. She is president-elect of the American Association for the Advancement of Science (AAAS), and is a Fellow of AAAS, the American Institute of Chemical Engineers (AIChE), the American Institute for Medical and Biological Engineering (AIMBE) and the Biomedical Engineering Society (BMES). She is Past-President of BMES and Past-President of AIMBE. She has received an honorary degree from Xavier University of Louisiana, the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring, AIChE's Award for Service to Society, and AIMBE's Pierre Galetti Award. Dr. Barabino serves on the Scientific Advisory Board of the Chan Zuckerberg Biohub, the National Science Foundation's (NSF) Advisory Committee for Engineering, the congressionally mandated Committee on Equal Opportunities in Science and Engineering, the AAAS Committee on Science, Engineering and Public Policy, and the National Academies Committee on Women in Science, Engineering, and Medicine which she chairs. She consults nationally and internationally on STEM education and research, diversity in higher education, policy, faculty and workforce development. She received a B.S. in chemistry from Xavier University of Louisiana and a Ph.D. in chemical engineering from Rice University.

Panelists

Marie A. Bernard is the National Institutes of Health (NIH) Chief Officer for Scientific Workforce Diversity (COSWD). As COSWD, she leads NIH's efforts to assure optimal scientific creativity and innovation, both intramurally and extramurally, through a diverse scientific workforce. Dr. Bernard also co-leads NIH's newly announced UNITE initiative to end structural racism. Prior to being selected as the COSWD in May 2021, she was deputy director of the National Institute on Aging (NIA). As NIA's senior geriatrician, she served as the principal advisor to the NIA director. She also led a broad range of

activities, including co-chairing two Department of Health and Human Services Healthy People 2020/2030 objectives – 1) Older Adults, and 2) Dementias, including Alzheimer’s disease. She co-leads the NIH-wide Inclusion Governance Committee that ensures appropriate inclusion of individuals in clinical studies, including by sex/gender, race/ethnicity, and inclusion of children and older adults. She also co-chairs the Women of Color Committee of the NIH-wide Working Group on Women in Biomedical Careers. Her national leadership in geriatrics research, teaching, and clinical practice has been recognized by the Clark Tibbits award from the Academy for Gerontology in Higher Education (2013), and the Donald P Kent award from the Gerontological Society of America (2014). Her work within NIH has been recognized with NIH Director’s awards (2018 and 2019), including the NIH Director’s award for Equity, Diversity, and Inclusion in 2020. Until October 2008 she was the endowed professor and founding chairman of the Donald W. Reynolds Department of Geriatric Medicine at the University of Oklahoma, College of Medicine, and Associate Chief of Staff for Geriatrics and Extended Care at the Oklahoma City Veterans Affairs Medical Center. She has held numerous national leadership roles, including chair of the Department of Veterans Affairs National Research Advisory Committee, chair of the Clinical Medicine (now Health Sciences) Section of the Gerontological Society of America, board member of the American Geriatrics Society, president of the Association for Gerontology in Higher Education, and president of the Association of Directors of Geriatric Academic Programs. She has lectured and published widely in her area of research, nutrition and function in older adults, with particular focus on underrepresented minority populations.

Ellen Ochoa was the Director of NASA’s Johnson Space Center in Houston, TX from 2013 until her retirement in May 2018. She became the first Latina to go to space when she flew on a nine-day mission aboard the shuttle Discovery in 1993. She has flown in space four times, logging nearly 1,000 hours. She currently serves on several boards including as Chair of the National Science Board. Prior to her astronaut career, Dr. Ochoa was a research engineer and holds three patents for optical systems. She received a B.S. in Physics from San Diego State University, and both an M.S. and Ph.D. in Electrical Engineering from Stanford University. She is a member of the National Academy of Engineering and is a Fellow of the American Association for the Advancement of Science (AAAS), the American Institute of Aeronautics and Astronautics (AIAA), the National Academy of Inventors (NAI), and the Optical Society of America (OSA). She is honored to have six schools named for her and has been inducted into the Astronaut Hall of Fame, the California Hall of Fame, and the International Air & Space Hall of Fame.

Shirley M. Tilghman was elected Princeton University’s 19th president on May 5, 2001 after serving on the Princeton faculty for 15 years. Upon the completion of her term in June of 2013, she returned to the faculty. During her scientific career as a mammalian developmental geneticist, she studied the way in which genes are organized in the genome and regulated during early development, and was one of the founding members of the National Advisory Council of the Human Genome Project for the National Institutes of Health. Dr. Tilghman is an Officer of the Order of Canada, the recipient of a Lifetime Achievement Award from the Society for Developmental Biology, the Genetics Society of America Medal, and the L’Oreal-UNESCO Award for Women in Science. She is a member of the American Philosophical Society, the National Academy of Sciences, the National Academy of Medicine and The

Royal Society of London. She serves as a trustee of Amherst College, the Institute for Advanced Study, the American Academy of Arts and Sciences, and the Simons Foundation. She serves on the Science Advisory Board of the Chan Zuckerberg Initiative, is a director of The Broad Institute of MIT and Harvard, and is a Fellow of the Corporation of Harvard College.