Engaging Black Men and Black Women in the Breadth of Engineering: A Workshop

Committee

Gilda A. Barabino

Co-Chair

Gilda A. Barabino, NAE, NAM, is President of Olin College of Engineering and Professor of Biomedical and Chemical 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. 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. Dr. Barabino is Past President and Board Chair of the American Association for the Advancement of Science (AAAS), the world's largest multidisciplinary scientific society. She is a Fellow of AAAS, the American Institute of Chemical Engineers, the American Institute for Medical and Biological Engineering and the Biomedical Engineering Society. She is an elected member of the American Academy of Arts and Sciences, the National Academy of Engineering and the National Academy of Medicine She serves on the National Academies Roundtable on Black Men and Black Women in Science, Engineering and Medicine; Health and Medicine Division Committee; and Committee on Women in Science, Engineering and Medicine, which she chairs. Recently, she co-chaired the groundbreaking NASEM report on Advancing Antiracism, Diversity, Equity and Inclusion in STEM Organizations. She received her PhD in Chemical Engineering from Rice University and BS in Chemistry from Xavier University of Louisiana.

Sohi Rastegar

Co-Chair

Dr. Sohi Rastegar is Senior Advisor and the Head of the Office of Emerging Frontiers and Multidisciplinary Activities (EFMA) at the U.S. National Science Foundation (NSF) Directorate for Engineering. He joined NSF in November 2003 following academic and administrative service at Texas A&M University, Virginia Commonwealth University, and the Johns Hopkins University. He has been an Invited Professor at the Swiss Institute of Technology in Lausanne (EPFL), Switzerland. He earned his B.S. (Highest Honors) and M.S. in Aerospace Engineering, and his Ph.D. in Biomedical Engineering at the University of Texas at Austin. Dr. Rastegar has over 150 scientific publications and presentations and has trained 8 Ph.D. and 14 M.S. students. He was a co-founder of BioTex, Inc., a medical device company in Houston, Texas. He is a Fellow of the American Institute for Medical and Biological Engineering (AIMBE), a Fellow of the American Society for Lasers in Medicine and Surgery (ASLMS), has served as the Chair of the Bioengineering Division of ASME, Associate Editor of Annals of Biomedical Engineering, a member of the Editorial Boards of the Journals of Biomedical Optics and Journal of Diabetes Science and Technology. Dr. Rastegar is the recipient of awards and honors including the Select Young Faculty Award from the Texas Engineering Experiment Station, and Director’s Distinguished Service Award–the highest internal award–from the National Science Foundation.

Arthur L. Edge, III

Member

As a Global Supply & Strategy Director at AstraZeneca (AZ), Arthur works to place life-changing products into the hands of patients who need them. With accountability for end-to-end clinical and commercial supply, his focus is on increasing access to existing medicines and improving how fast next generation medicines become available.

Prior to AZ, Arthur developed a broad array of experiences supporting advancements in medicine and technology. While at GlaxoSmithKline (GSK), he built robust manufacturing processes to ensure patients never ran out of the first drug developed specifically for lupus. At Emergent BioSolutions, he created new vaccines and therapies to help the US Government quickly respond to Zika and Ebola outbreaks. And in search of renewable energy sources, he designed biofuels from algae at DSM.

When not pushing biotech solutions, Arthur actively searches for opportunities to build science-based ventures and to grow the STEM talent pipeline. He’s led workforce development and big data initiatives with the National Institute for Innovation in Manufacturing of Biopharmaceuticals (NIIMBL). Locally, in Maryland, he serves as President of the Manufacturing, Engineering, & Technology advisory board for Montgomery County Public Schools. Nationally, he serves as the National Professional Chair Emeritus for the National Society of Black Engineers (NSBE). Arthur holds a Bachelor of Chemical Engineering (University of Michigan) and Master of Chemical and Biomolecular Engineering (Johns Hopkins University).

Latonia M. Harris

Member

Latonia Harris, Ph.D. is Senior Director of Product Quality Management (PQM) for BioTherapeutics at Janssen Pharmaceutical Companies of Johnson and Johnsons. Dr. Harris previously served as a CMC Leader within Janssen R&D Portfolio Management group where she was the strategic leader of a multidisciplinary team focused on developing processes for and gaining regulatory approval of several large molecule oncology therapies.

For over 3 decades, Dr. Harris has been committed to supporting outreach in STEM education at all levels: K-12, university, and business. She has mentored dozens of individuals who aspire to careers in science, engineering or medicine.

Dr. Harris is a member of the NAE where she currently serves as Chair of the Peer Committee for Bioengineering. She is also a member of NAE Bio/Pharma President’s Business Advisory Committee (PBAC).

Latonia Harris holds a Ph.D. in Chemical Engineering (Northwestern University) and a BSE in Chemical Engineering (University of Michigan - Ann Arbor).

James Holly, Jr.

Member

Dr. James Holly, Jr. is an Assistant Professor of Mechanical Engineering and core faculty member within the Engineering Education Research program at the University of Michigan. He earned a bachelor’s degree from Tuskegee University and a master’s degree from Michigan State University, both in Mechanical Engineering. He earned his doctorate in Engineering Education from Purdue University. His research paradigm is shaped by his experiences growing up in a Black church within a Black city and later studying engineering at Tuskegee University, a Black institution, three spaces where Blackness is both normal and esteemed. As such, he sees his teaching, research, and service as promoting pro-Blackness—affirming the humanity and epistemic authority of Black people—in engineering education. His scholarship focuses on the ways disciplinary knowledge (i.e., mechanical engineering) reinforces racialized power, the role of culture and cognition in teaching and learning, and preparing pre-college engineering educators to identify and counteract racial inequity. He directs the Afro-Epistemic Academics, a research group whose focus is to esteem the heritage knowledge of Black engineering students, faculty, and researchers, along with nourishing their self-knowledge; also, to support non-Black scholars committed to accomplishing racial justice in engineering.

Walter Curtis Lee, Jr.

Member

Dr. Walter C. Lee is an Associate Professor in the Department of Engineering Education at Virginia Tech and the Director for Research in the Center for the Enhancement of Engineering Diversity (or CEED). He also serves as an Associate Editor for the Journal of Women and Minorities in Science and Engineering (JWM) and the Journal of Engineering Education (JEE). His research is broadly focused on diversity and educational equity—particularly as it relates to students from groups that are historically underrepresented or marginalized in engineering—and earned him a National Science Foundation CAREER Award focused on examining the strengths and deficiencies within university support structures and processes from the perspective of marginalized students. Lee received his Ph.D. in engineering education from Virginia Tech; his M.S. in industrial & systems engineering from Virginia Tech; and his B.S. in industrial engineering from Clemson University.

Yolanda A. Rankin

Member

Dr. Yolanda A. Rankin is currently an AssociateProfessor in the School of Information at Florida State University. A recipient of the NSF Early Career Award, Dr. Rankin’s research interests include applying Black feminist epistemologies as critical frameworks for designing technology with marginalized or underserved populations and developing strategies for broadening participation in K-16 computing education. In addition, she is a McKnight Fellow and a Woodrow Wilson Fellow, having published more than 40 peer-reviewed publications, including journal articles, conference papers, and book chapters in reputable conferences and journals. Prior to academia, she accumulated more than fifteen years of industry experience while employed at IBM Research Lab – Almaden in San Jose, CA and Lucent Technologies Bell Labs in Naperville, IL. Dr. Rankin completed her Ph.D. in Computer Science at Northwestern University, her M.A. in Computer Science at Kent State University, and her B.S. in Mathematics at Tougaloo College, a historically Black college in Jackson, Mississippi.