

Transforming Trajectories for Women of Color in Tech: Dissemination and Outreach

Committee

Evelynn M. Hammonds

Co-Chair

Evelynn M. Hammonds is the Barbara Gutmann Rosenkrantz Professor of the History of Science and of African and African American Studies at Harvard University. She previously served as Harvard's first senior vice provost for faculty development and diversity from 2005-2008. Professor Hammonds is the author of *Childhood's Deadly Scourge: The Campaign to Control Diphtheria in New York City, 1880-1930* (Johns Hopkins University Press, 1999). She co-edited with Barbara Laslett, Sally G. Kohlstedt, and Helen Longino *Gender and Scientific Authority* (University of Chicago Press, 1996). She has published articles on the history of disease, race and science, African American feminism, African American women and the epidemic of HIV/AIDS, and analyses of gender and race in science and medicine. She is also the author of the article "Gendering the Epidemic: Feminism and the Epidemic of HIV/AIDS in the United States, 1981-1999" which appears in *Science, Medicine, and Technology in the 20th Century: What Difference Has Feminism Made?* (2000).

Professor Hammonds's current work focuses on the intersection of scientific, medical, and socio-political concepts of race in the United States. She is completing a history of biological, medical, and anthropological uses of racial concepts entitled, *The Logic of Difference: A History of Race in Science and Medicine in the United States, 1850-1990*. She is also completing the MIT Reader on Race and Gender in Science co-edited with Rebecca Herzig and Abigail Bass. Professor Hammonds was named a Sigma Xi Distinguished Lecturer (2003-2005) by Sigma Xi, the Scientific Research Society. She has been a visiting scholar at the Max Planck Institute for the History of Science in Berlin and a Fellow in the School of Social Science at the Institute for Advanced Study in Princeton. In July 2005, Professor Hammonds was named Senior Vice Provost for Faculty Development and Diversity at Harvard University, and in March 2008, Professor Hammonds was named Dean of Harvard College.

Professor Hammonds earned a Ph.D. here in the Department of History of Science, an S.M. in physics from the Massachusetts Institute of Technology, a B.E.E. in electrical engineering from the Georgia Institute of Technology, and a B.S. in physics from Spelman College. She taught at the Massachusetts Institute of Technology before coming to Harvard. While at MIT she was the founding director of the MIT Center for the Study of Diversity in Science, Technology, and medicine. Professor Hammonds has been a Visiting Professor at UCLA and Hampshire College.

Valerie Taylor

Co-Chair

Valerie Taylor is the Director of the Mathematics and Computer Science Division. She received her Ph.D. in electrical engineering and computer science from the University of California, Berkeley, in 1991. She then joined the faculty in the Electrical Engineering and Computer Science Department at Northwestern University, where she was a member of the faculty for 11 years. In 2003, she joined Texas A&M, where she served as head of the computer science and engineering department and senior associate dean of academic affairs in the College of Engineering and a Regents Professor and the Royce E. Wisenbaker Professor in the Department of Computer Science. Her research is in the area of performance analysis and modeling of parallel, scientific applications. Currently, she is focused on the areas of performance analysis, power analysis and resiliency. Dr. Taylor is the Executive Director of the Center for Minorities and People with Disabilities in IT (CMD-IT). The organization seeks to develop the participation of minorities and people with disabilities in the IT workforce in the United States.

Sandra Begay

Member

Sandra K. Begay is a Principal Member of the Technical Staff at Sandia National Laboratories and is a former Regent (Trustee) for the University of New Mexico. Sandra leads Sandia's technical efforts to assist Native American tribes with their renewable energy developments. Sandra received a Bachelor of Science - Civil Engineering degree from the University of New Mexico.

She worked at Lawrence Livermore National Laboratories before she earned a Master of Science - Structural Engineering degree from Stanford University. Sandra is recognized in a book profiling women engineers, "Changing Our World: True Stories of Women Engineers." Begay-Campbell is included in the chapter "Women in Power", which describes her effort to provide electricity through solar panels and other alternative energy solutions to hundreds of remote tribal members on the Navajo Reservation.

Honored with awards for her work, Sandra is a recent recipient of the American Indian Science and Engineering Society's Life-time Achievement Award; the University of New Mexico's 2007 Zia Alumnus Award; the 2005 UNM School of Engineering Distinguished Alumnus Award and she received the Stanford University 2000 Multicultural Alumni of the Year Award. She was also selected as a recipient of the Governor's Award for Outstanding Women from the New Mexico Commission on the Status of Women.

Jamika D. Burge

Member

Jamika D. Burge is a Senior Manager at Capital One, where she oversees research curriculum development and internal/external outreach. At Capital One, she ideates and creates innovative user research curricula that empower designers, developers, and engineers to apply design thinking and human-centered design principles into their daily work, and beyond. She also engages with internal and external organizations in computing and design outreach activities. Prior to joining Capital One, Jamika served non-profit and government organizations, including as a consultant to the Defense Advanced Research Projects Agency (DARPA) in the Information Innovation Office (I2O). She provided technical and management consult for innovative DARPA programs which were funded at over \$70 million. Her research interests lie in human-computer interaction (HCI), specifically in the design of technologies that support a range of communication and interaction needs. She is active in computer science education and STEM preparedness efforts, providing expertise for a host of funded programs funded by the National Science Foundation (NSF) and the Computing Research Association (CRA), particularly those seeking to broaden participation in computer science. She also provides insight and research into the layers of intersectionality that affect black women and girls in computer science. Jamika holds a Ph.D. in computer science, with a focus on human-computer interaction (HCI) from Virginia Polytechnic Institute and State University, where she was an IBM Research Fellow.

Dr. Burge is also Founder and Principal of Design & Technology Concepts (DTC), LLC, where she focuses on computer science design and education research. To date, DTC has consulted for Google, the National Center for Women in Information Technology (NCWIT), and the American Association of College & Universities (AAC&U), among other organizations. Her career has also included positions across academic (Spelman College and Howard University), non-profit (Smarter Balanced at UCLA), and industry (IBM Research) sectors.

Ann Q. Gates

Member

ANN QUIROZ GATES is Senior Vice Provost of Faculty Affairs at the University of Texas at El Paso, where she holds the AT&T Distinguished Professorship. She also served as the Chair of the Computer Science Department and Associate VP of Research and Sponsored Projects. Gates is the Executive Director of the Computing Alliance of Hispanic-Serving Institutions, one of NSF's National INCLUDES Alliances a nationally recognized network focused on the recruitment, retention, and advancement of Hispanics in computing. She directs the NSF-funded CyberSHARE Center of Excellence that advances interdisciplinary education and research. Gates serves on the Association of Public and Land-grant Universities Advisory Committee on Faculty Affairs and the NSF Committee on Equal Opportunities in Science and Engineering. She was a founding member of the NSF Advisory Committee for Cyberinfrastructure, served on the Board of Governors of IEEE-Computer Society, and was a member of the Naval Research Advisory Committee. Gates received the 2021 Alfredo G. de los Santos Jr. Distinguished Leadership Award, 2015 Great Minds in STEM's Education award, CRA's 2015 A. Nico Habermann Award, 2010 Anita Borg Institute Social Impact Award, and 2009 Richard A. Tapia Achievement Award for Scientific Scholarship, Civic Science, and Diversifying Computing.

Edward D. Lazowska

Member

Edward D. Lazowska (NAE) is a Professor, and the Bill & Melinda Gates Chair emeritus, in the Paul G. Allen School of Computer Science & Engineering at the University of Washington.

Lazowska's research and teaching concern the design, implementation, and analysis of computing and communication systems, and, more recently, the techniques and technologies of data-intensive discovery. He also has been active on public policy issues, ranging from STEM education to Federal strategies for research and innovation. From 2008-17 he served as the Founding Director of the University of Washington eScience Institute, where he continues as a Senior Data Science Fellow.

Lazowska is a Councillor of the National Academy of Engineering and a Fellow of the American Academy of Arts & Sciences. He serves as a board member or technical advisor for a number of high-tech companies, venture firms, and technology-oriented civic organizations. A long-time advocate for increasing participation in the field, he serves on the Executive Advisory Council of the National Center for Women & Information Technology and on the National Academies Committee on Women in Science, Engineering, and Medicine; he served on the study committee that authored the Academies' 2018 report on the impacts of sexual harassment in academia.

Maria Ong

Member

Maria (Mia) Ong is a Senior Research Scientist at TERC, a research and development organization dedicated to STEM education that is based in Cambridge, Massachusetts. Prior to working at TERC, Dr. Ong served on faculty at Swarthmore College, Wellesley College, and Harvard University Graduate School of Education. For nearly three decades, she has researched the experiences of women of color and members of other marginalized groups in computer science, engineering, physics, and general STEM higher education and professions, with emphases on qualitative studies and literature synthesis projects. She has led or co-led numerous projects funded by the U.S. Department of Education, the National Institutes for Health, and the National Science Foundation (NSF). She holds over 40 solo- or co-authored publications on equity and inclusion topics, including career-life balance, caregiving, counterspaces, and changing cultural norms in STEM. Dr. Ong has served on several national committees and task forces, including the NSF Committee on Equal Opportunities in Science and Engineering (2008–14), the Social Science Advisory Board of the National Center for Women & Information Technology (2008–2022; Chair 2017–2018), the American Institute of Physics National Task Force to Eliminate African American Underrepresentation in Physics & Astronomy (TEAM-UP, 2017–2020), and the National Academies Committee to Address the Underrepresentation of Women of Color in Tech (2019–2022). She is a co-recipient of a Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (1998) and a co-recipient of the Excellence in Physics Education Award from the American Physical Society (2022). Dr. Ong holds a PhD in Social and Cultural Studies in Education from the University of California at Berkeley.

Fay Cobb Payton

Member

Fay Cobb Payton is Professor Emeritus of Information Technology/Analytics and University Faculty Scholar at North Carolina State University. She earned the Full Professorship with tenure prior to her Emeritus status. She recently completed a rotation as a Program Director at the National Science Foundation (NSF) where she initiated the CISE Minority Serving Institution Research Expansion Program and worked on several initiatives, such as INCLUDES, Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science and others. Dr. Payton's research focuses on AI bias and data quality/curation which impacts health equity and disparities, talent management, and tech innovation along with ecosystems shaping lived experiences. She completed the American Council on Education (ACE) Fellow program and was elected to Sigma Xi. Dr. Payton has a B.S. in Accounting with a minor in Mathematics from Clark Atlanta University, and a B.S. in Industrial and Systems Engineering from Georgia Institute of Technology. She has an MBA from Clark Atlanta University and her Ph.D. in information & decision systems from Case Western Reserve University.

Rati Thanawala

Member

Rati Thanawala came to Yale from India in 1972, she became one of the first women of color in the world to earn a Ph.D. in computer science. In her 39-year career in high tech industry, she has consistently broken new ground, the last 17 as Vice President at Bell Labs. She held executive positions at AT&T, Lucent, Alcatel-Lucent, and Nokia, including product management, business management, and software development.

For her encore career, one of social impact, Dr. Thanawala was selected for the Harvard 2018 Advanced Leadership Fellows Program. She is the Founder of the Leadership Academy for Women of Color in Tech and has created a curriculum for women of color who want to pursue careers in the tech industry. Pivotal Ventures, a Melinda Gates company funded the program pilot through the Women of Color in Computing Research Collaborative. The program's goal is to create a cadre of Women of Color middle managers in tech firms, at twice the current speed. The Leadership Academy incorporates 19 Actionable Levers and 100 Stories from "wise" Women of Color who have succeeded and is offered nationally via Zoom, and in close partnership with faculty from the University of Massachusetts and the Harvard Kennedy School.

Throughout her career, Dr. Thanawala has been an active mentor and sponsor to many women and minorities. She has a PhD in Computer Science from Yale. She is a Leader in Practice at the Harvard Kennedy School, and is driving the creation of evidence-based solutions to the challenges of advancing women of color in tech.

Ashley Bear

Staff Officer

Ashley Bear, Ph.D. serves as the Director of the Committee on Women in Science, Engineering, and Medicine of the National Academies. In this capacity, Dr. Bear oversees a portfolio of projects dealing with critical issues relating to advancing gender equity in these fields. In her time at the Academies, Dr. Bear has led committees of experts and a dynamic staff team in carrying out consensus studies, workshop series, and national outreach efforts with the goal of providing a range of stakeholders with advice and guidance on how to support the improved recruitment, retention, and advancement of women in science, engineering, and medicine. Before coming to the Academies, Dr. Bear worked for the National Science Foundation's (NSF) Division of Biological Infrastructure in the Directorate for Biological Sciences, where she managed a portfolio of mid-scale investments in scientific infrastructure and led analyses of the impact of NSF funding on the career trajectories of postdoctoral researchers. Dr. Bear also previously worked as a Science Policy Officer for the State Department's Office of the Science and Technology Adviser to the Secretary of State, where she worked to promote science diplomacy and track emerging scientific trends with implications for foreign policy, managed programs to increase the scientific capacity of State Department, and acted as the liaison to the Bureau of Western Hemisphere Affairs and the Bureau of East Asian and Pacific Affairs. Dr. Bear holds a Sc.B. in Neuroscience from Brown University and a Ph.D. in Ecology and Evolutionary Biology from Yale University.