

Division of Behavioral and Social Sciences and Education  
Board on Science Education

**Revisiting the *Barriers and Opportunities* Study: Continued Efforts to  
Improve Pathways to Undergraduate STEM Degrees**

*Hosted by the Roundtable on Systemic Change in Undergraduate STEM Education*

**Participant Biographies**

**Reflections on *Barriers and Opportunities* and  
Current State of Student Experiences Navigating STEM Degrees**



**SYLVIA HURTADO** is a Professor of Education in the School of Education and Information Studies, and directed the Higher Education Research Institute at UCLA for over a decade. She has written extensively on diverse students' college experiences and equity and inclusion in STEM. She directed multimillion-dollar, NIH, and NSF-funded projects to study the long-term effects of undergraduate education and diversification of the scientific workforce. She is completing collaborative evaluations of STEM intervention programs, including research on culturally-aware mentor training for graduate faculty in the biomedical sciences, and on how STEM student-centered interventions result in organizational change. She is a member of the National Academy of Education and is focused on improving environments for the success of diverse college students.



**RAJEEV DAROLIA** is the Chief Economist at the U.S. Department of Education. He is on leave from the University of Kentucky, where he holds the Wendell H. Ford Professorship in Public Policy and is a Professor of Public Policy and Economics. At UK, he has also served as the Associate Dean for Research for the Graduate School, Associate Director of Martin School of Public Policy and Administration, and Associate Director of the UK Center for Poverty Research. His research agenda includes questions about how public policy affects educational decisions and outcomes, and more broadly, economic mobility and financial security.

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**SHIRLEY MALCOM** is Senior Advisor to the CEO and Director of the SEA Change initiative at AAAS. In her career of more than 45 years at the Association she has worked to improve the quality and increase access to education and careers in STEMM as well as to enhance public science literacy. Dr. Malcom is a trustee of Caltech and a regent of Morgan State University. She is a former member of the National Science Board, the policymaking body of the National Science Foundation, and served on President Clinton's Committee of Advisors on Science and Technology. Malcom, a native of Birmingham, Alabama, received her PhD in ecology from The Pennsylvania State University, masters in zoology from UCLA and bachelor's with distinction in zoology from the University of Washington. She holds 18 honorary degrees and is a fellow of the AAAS and the American Academy of Arts and Sciences. Malcom serves on the boards of the Heinz Endowments, Kavli Foundation, Public Agenda and the National Math-Science Initiative. Internationally, she is a leader in efforts to improve access of girls and women to education and careers in science and engineering and to increase use

of S&T to empower women and address problems they face in their daily lives. In 2003, Dr. Malcom received the Public Welfare Medal of the National Academy of Sciences, the highest award given by the Academy.

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**JOSH WYNER** is founder and executive director of the College Excellence Program at the Aspen Institute, where he also serves as a vice president. CEP aims to advance college and university practices, policies, and leadership that significantly improve student outcomes, with a focus on students who are historically underserved in higher education. Josh has spent the past two decades designing and building new organizations that promote talent development and social mobility. He has authored numerous publications about education, including a book, *What Excellent Community Colleges Do: Preparing All Students for Success* (Harvard Education Press, 2014). He has a B.A. from Vassar College, a MPA from Syracuse University, and a J.D. from New York University School of Law.

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**SUSAN RUNDELL SINGER** (Moderator; Roundtable Member) is an experienced national and institutional leader in higher education, uplifting the value of a liberal arts education. She is St. Olaf College's president and was Vice President for Academic Affairs and Provost at Rollins College. Previously, she led the Division of Undergraduate Education at the National Science Foundation (NSF) and was the Laurence McKinley Gould Professor of Biology at Carleton College, where she directed the Perlman Center for Learning and Teaching. Recruited to NSF, she was charged with implementing holistic, evidence-informed approaches to increase the persistence and success of all undergraduates. She led 14 federal agencies in achieving the undergraduate goals of the first Federal STEM Education 5-year Strategic Plan, including producing one million more STEM graduates by 2018. Her work integrates higher

education and science aimed at improving undergraduate education at scale. Her scholarship focuses on partnerships and networks of organizations collaboratively advancing undergraduate STEM education, with an emphasis on diversity, equity, inclusion, and belonging. Equitable and excellent undergraduate education is a signature element of her successes at Carleton, NSF, national organizations, Rollins, and St. Olaf, enhanced by a strong track record with partnerships and fundraising. An American Association for the Advancement of Science (AAAS) Fellow, and Senior Scholar for the Association of American Universities, Susan has received national education awards. She chairs the National Academies of Science, Engineering, and Medicine (NASEM) Board on Science Education. She chaired several NASEM studies, including Discipline-based Education Research. Her Ph.D. is in Biology from Rensselaer Polytechnic Institute.

## Research on Transfer Students and Transfer Models



**BRUK BERHANE** is an assistant professor and undergraduate program director for the School of Universal Computing, Construction & Engineering Education (SUCCEED) at Florida International University. Prior to this role, Dr. Berhane directed engineering recruitment and scholarship programs for the University of Maryland. He oversaw an increase in the admission of students of color and women during his tenure and supported initiatives that reduce the time to degree for transfers from Maryland community colleges. He previously worked at the Johns Hopkins University Applied Physics Laboratory and completed a fellowship with the National Academies, where he researched methods of increasing the number of women in engineering. The broader implications of his research are informed by his comprehensive experiences as a college administrator. His areas of scholarly interest include broadening participation in



engineering through community college pathways and developing more inclusive institutional cultures for post-traditional student learners in engineering. He received his B.S. in electrical engineering from the University of Maryland. He holds an M.S. in engineering management from the George Washington University and a Ph.D. in minority and urban education from the University of Maryland.

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**LOIS MILLER** is a PhD candidate in Economics at the University of Wisconsin-Madison. This fall, she will join the University of South Carolina as an Assistant Professor of Economics. She is broadly interested in the interaction between higher education and inequality, with a focus on understanding what types of policies can promote social mobility for disadvantaged students. Her research applies causal inference methods to large-scale administrative data. Her dissertation focuses on how transferring between colleges affects students' educational and labor market outcomes. Other work includes a policy evaluation of tuition freezes and caps, an analysis of how the effects of graduating from college during a recession vary by college quality, and a study of how the distance from a student's home to the nearest community college affects their enrollment and educational attainment. Her research has been published in *The Economics of Education Review*. Prior to pursuing her PhD at UW-Madison, she earned a bachelor's degree in mathematics from DePauw University.



**DAVIS JENKINS** is a senior research scholar at the Community College Research Center and Research Professor in Education and Social Policy Analysis at Columbia University's Teachers College. He has over 40 years of experience working with colleges, schools, community groups and employers in communities and states across the country to find ways to improve educational and employment outcomes for students from groups that have been poorly served by the U.S. educational system. Together with Thomas Bailey and Shanna Jaggars, he co-authored *Redesigning America's Community Colleges: A Clearer Path to Student Success* (Harvard University Press, 2015), which has helped to catalyze a national "guided pathways" whole-college reform movement. Since then, Jenkins has led research involving over 100 colleges nationally on the implementation of pathways reforms and their effects on student outcomes and college performance. He is currently leading research on rethinking dual credit as an onramp to college and career pathways for underserved students, improving baccalaureate transfer outcomes for students of color (with the Aspen Institute's College Excellence Program) and strategies for achieving more equitable access to and completion of community college programs with high value for employment and transfer (also with Aspen CEP).



**MARK MITSUI** (Moderator; Roundtable Co-Chair) is the President Emeritus of Portland Community College in Portland, Oregon. Before joining PCC, he served as president of North Seattle College in Washington State, Vice President of Student Services at South Seattle College, and Deputy Assistant Secretary for Community Colleges within the Office of Career, Technical, and Adult Education for the U.S. Department of Education. In Washington D.C., he worked to advance President Obama's community college agenda through partnerships with numerous federal agencies and national stakeholders. Mitsui also served on the US Interagency Working Group on Undergraduate STEM, co-chaired by the NSF and DOE, participated in a 2016 NASEM Panel on Online Education, and engaged in undergraduate metabolic research in exercise physiology and cardiac rehabilitation. He holds a Bachelor's degree in Physical Education from Western Washington University and a Master's of Education in Educational Leadership and Policy Studies from the University of Washington.

## Changes to FAFSA and their Implications for Pathways to Undergraduate STEM Degrees



**LIZ LAPOLT CLARK** is Vice President for Policy and Research at NACUBO and a member of the NACUBO executive leadership group. She has been widely quoted in the press and is a sought-after speaker on how Washington politics and federal policies impact higher education. Liz got her start on Capitol Hill opening Cornell University's first Washington, DC-based federal relations office. Also in her career, she has led federal affairs for the State University of New York (SUNY) System and for Oregon State University. At NACUBO, she heads the team responsible for analysis of federal regulatory and legislative actions, research, and data analytics.



**Justin Monk** is Director of Student and Institutional Aid Policy at the National Association of Independent Colleges and Universities (NAICU), and their lead policy expert on Title IV federal student assistance programs and the institutional aid programs found in Titles III and V of the Higher Education Act (HEA). He also is responsible for developing association policy positions on student and institutional aid, in conjunction with the association's member college, university, and association presidents. Previously, Justin was the director of government affairs for the KIPP Foundation, where he was the key advocate advancing the foundation's policy, legislative, and regulatory priorities. Prior to KIPP, he served as Student Veterans of America's director of policy, during which time he led efforts to increase protections for and improve outcomes of student veterans in higher education. Justin is currently a graduate student at George Mason University, and has



degrees from Wake Forest University and Appalachian State University.

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**JOSEPH MONTGOMERY** has been an industry leader in the college admissions and enrollment management space for over 20 years. He has experience with admission work at HBCUs and Private Selective Colleges throughout the United States' southeastern region. Before rejoining North Carolina A&T State University as the Associate Vice Provost for Enrollment Management, he spent 3-years as Vice President of Enrollment Management and Student Success at Tuskegee University and 6-years at the College Board as Director of Higher Education Services, advising chief enrollment officers at universities throughout the south on matters relating to admissions, financial aid, registration, and student success indicators. Beyond serving as the Associate Vice Provost for Enrollment Management at North Carolina A&T State University, he serves on the Partnership for Educational Advancement Advisory Board, which focuses on strengthening mission-focused colleges and universities primarily serving low-income, first-generation and minority students. He serves on the Board of Directors for the National Association of College Admissions Counseling. He serves on the Ciaflo Advisory Board, designed to create pathways for international students to access colleges and universities in the U.S. Lastly, he was selected to serve on the National Association of College Admissions Counseling Committee – Commission on Redesigning the College Admission and Financial Aid Through a Racial Equity Lens. This committee examined the college entrance pipeline, postsecondary financial aid requirements, and the role of racial equity in postsecondary enrollment.



**SUSAN RUNDELL SINGER** (Moderator; Roundtable Member) is President of St. Olaf College. She previously served as Vice President for Academic Affairs and Provost at Rollins College.