THE MATHEMATICS
OF OPPORTUNITY

Advancing by Degrees

March 7-9, 2023

INTRODUCTION

Strong quantitative reasoning skills are essential to navigating today's data-rich society and advancing in a 21st-century career. Whether a student dreams of becoming a scientist, an electrician, a teacher, or a historian, math learning will be central to their success.

Yet math policies, practices, and perceptions often turn students off math and create roadblocks to higher education. And access to math learning opportunities and resources is highly inequitable, with Black, Indigenous, Latinx, and other marginalized students facing the greatest barriers to math success.

Together we can change policy to ensure that math education is a gateway to opportunity—not a gatekeeper.

Just Equations' fifth annual Mathematics of Opportunity conference, March 7-9, 2023, is a free, virtual event that will continue conversations about how education systems leaders, policymakers, and advocates can advance math education that uplifts and empowers students, resulting in deeper math learning and more equitable access to opportunities.

Through a series of plenary sessions and interactive discussions, subject-area experts and leading thinkers on the intersection of mathematics and education opportunity will explore such topics as:

- The role of math in college admissions and access.
- Cultivating positive student math identities.
- Supporting diverse learners on the pathway to STEM.
- Data science as a tool for social justice.

Join policymakers, advocates, educators, and researchers from around the country to consider how math education can be a force for equity and engagement.

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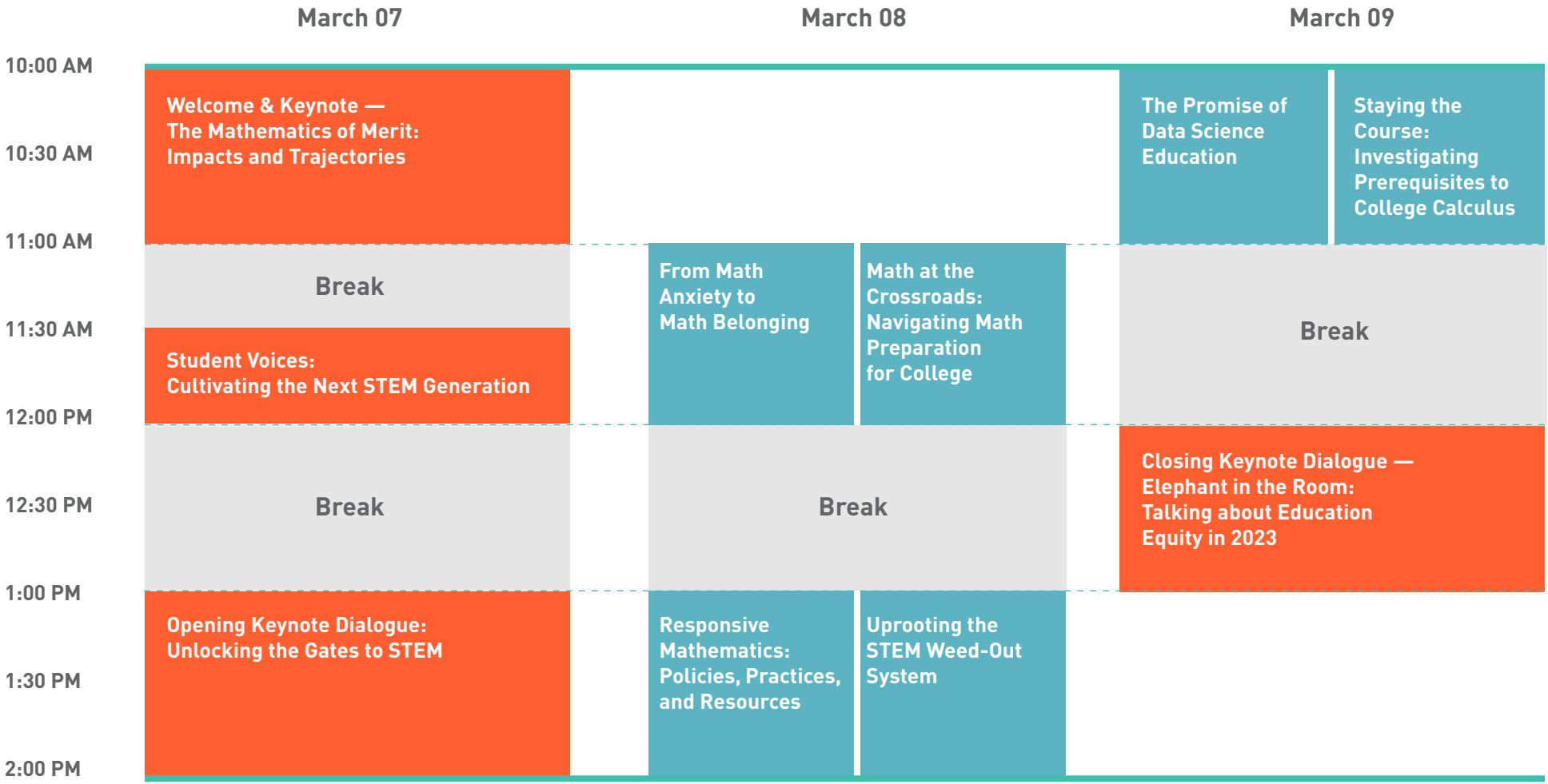
SCHEDULE

All times are Pacific



Sessions

SESSIONS

Tuesday, March 07

10:00 AM PT

Welcome & Keynote — The Mathematics of Merit: Impacts and Trajectories

Mathematical reasoning is essential to thrive in the contemporary world, whether professionally, personally, or civically. Using math as an arbitrary gatekeeper can actually interfere with the goal of expanding math learning. An overemphasis on high school calculus as an admissions screen is unfair to students whose schools don't offer the course—plus, it deters students from pursuing other rigorous math options that may better match their interests. Just Equations executive director Pamela Burdman kicks off the conference and welcomes Akil Bello, a leading voice on college admissions, to explore how policies can better align with educational equity and deeper learning.

Speakers

Akil Bello
Senior Director of Advocacy + Advancement, *FairTest*

Pamela Burdman
Executive Director, *Just Equations*

Co-Sponsor

The Campaign for College Opportunity

SESSIONS

Tuesday, March 07

11:30 AM PT

Student Voices:
Cultivating the Next STEM Generation

Preparing students to succeed in a technology-driven, data-rich world starts with cultivating a positive orientation toward math early on. Designing inclusive math learning environments in which all students feel they belong and can succeed in STEM is a big piece of the puzzle. Roberto Rubalcaba—a leader in culturally engaging math instruction, will dialogue with college students about how their math experiences have shaped their STEM identities.

Moderator

Roberto Rubalcaba
Associate Professor of Mathematics,
San Diego City College

Speakers

Ifrah Aden
Undergraduate Student,
San Diego State University

Shekinah Collins
Undergraduate Student,
Prairie View A&M University

Co-Sponsors

The Education Trust–West

Center for Family Math

SESSIONS

Tuesday, March 07

Opening Keynote Dialogue: Unlocking the Gates to STEM

All individuals need quantitative reasoning skills—to succeed in college, career, and life. And all students, regardless of race or gender, deserve a chance to develop the math skills needed for STEM majors and careers. Leading math and STEM professionals discuss the historical policies and practices that have contributed to inequitable access to STEM fields and how to ensure that high school and college math education can serve as an on-ramp for more students, particularly those who have historically been excluded from STEM.

Co-Sponsor

The University of Texas at Austin
Charles A. Dana Center

1:00 PM PT

Moderator

Dave Kung
Director of Policy,
Charles A. Dana Center, UT-Austin

Speakers

Laura Castillo-Page
Chief Diversity and Inclusion Officer,
The National Academies of Sciences, Engineering, and Medicine (NASEM)

Jennifer Stimpson
Chief Programs Officer,
T.D. Jakes Foundation

Suzanne L. Weekes
Executive Director,
Society for Industrial and Applied Mathematics (SIAM)

SESSIONS

Wednesday, March 08

From Math Anxiety to Math Belonging

Math anxiety is prevalent among K–12 and even college students in the United States. This session examines what we know about math anxieties, how it can interfere with learning, and how it may intersect with racial and gender biases. Researchers and practitioners will consider the role of home and classroom environments in triggering or mitigating students' anxiety and how instruction can be designed in ways that foster not just math learning but, ultimately, mathematical well-being.

Co-Sponsors

OPPORTUNITY INSTITUTE

40 YEARS PACE

11:00 AM PT

Moderator

Francis Edward Su
Benediktsson-Karwa Professor of Mathematics,
Harvey Mudd College

Speakers

Colleen Ganley
Associate Professor of Psychology,
Florida State University

Gerardo Ramirez
Associate Professor of Educational Psychology,
Ball State University

Tesha Sengupta-Irving
Associate Professor of
Learning Sciences & STEM Education,
School of Education, UC-Berkeley

Aris Winger
Assistant Professor of Mathematics,
Georgia Gwinnett College

SESSIONS

Wednesday, March 08

Math at the Crossroads: Navigating Math Preparation for College

Students' high school math records are linked to their college opportunities in multiple ways. Colleges tend to emphasize math courses on students' transcripts in their admissions decisions. Plus, high school students who are aware of colleges' preferences are likely to pursue more advanced math courses. For the most selective colleges, calculus is often expected, even for students who are not pursuing STEM fields. Given students' widely disparate access not just to advanced math courses, but also to counseling, the equity implications of colleges' admissions practices are concerning. In this session, college-access experts discuss recent research on how college admissions policies and high school counseling practices affect students' math course–taking decisions, and how those decisions, in turn, influence students' college opportunities.

Co-Sponsors

SoCal CAN

NACAC National Association for College Admission Counseling

11:00 AM PT

Moderator

Elisha Smith Arrillaga
Associate Professor,
Department of Education Leadership and Policy, College of Education, UT-Austin

Speakers

David Hawkins
Chief Education and Policy Officer,
National Association for College Admission Counseling (NACAC)

Audrey Malagon
Chair,
Council on Teaching and Learning, Mathematical Association of America

Marcos Montes
Program Manager & Higher Education Policy Consultant,
Let's Go To College California

SESSIONS

Wednesday, March 08

Responsive Mathematics: Policies, Practices, and Resources

Ensuring that school is engaging and relevant to students has long been recognized as a feature of good teaching. However, this strategy has not always permeated the math classroom. Culturally responsive math instruction and curriculum increase interest and enjoyment in math classrooms. Contextualizing math in a way that is real for students engages them more authentically with the content. In this session, math educators and researchers will share examples of how culturally relevant content and instructional practices can strengthen students' math identities and learning.

Co-Sponsors

TODOS: Mathematics for ALL
Excellence and Equity in Mathematics

Banjamin Banneker Association

1:00 PM PT

Moderator

Diana Ceja
Communications Director,
TODOS: Mathematics for ALL

Speakers

Shelly M. Jones
President,
Benjamin Banneker Association

Ashley Kearney
Systems Integration Manager,
Becoming, Office of School Improvement and Supports of D.C. Public Schools

Josephine Louie
Researcher,
Education Development Center

SESSIONS

Wednesday, March 08

Uprooting the STEM Weed-Out System

Discussions about disparate success patterns in STEM courses (including mathematics, a gatekeeper to most STEM fields) often focus on student characteristics rather than institutional responsibility for student learning. Research has shown that pervasive assumptions and biases about individual ability can reinforce existing inequities. This session examines research on the culture of STEM and how institutions can shift their focus from attempting to "fix" students to redesigning STEM programs.

Co-Sponsors

1:00 PM PT

Moderator

Luis A. Leyva
Assistant Professor of Mathematics Education,
Vanderbilt University

Speakers

Anne-Barrie Hunter
Senior Research Associate and Co-Director of Ethnography & Evaluation Research,
University of Colorado Boulder

Nathan W. Klingbeil
Professor of Mechanical & Materials Engineering,
Wright State University

Chad Topaz
Professor of Complex Systems,
Williams College

Zakiya S. Wilson-Kennedy
Associate Dean for Diversity & Inclusion,
College of Science, Louisiana State University

SESSIONS

Thursday, March 09

The Promise of Data Science Education

An increasing number of K–12 school districts and state education departments across the country are adding data science to their math offerings. Data acumen is central to understanding trends and making decisions related to everything from public health and business to sports and civic participation. It also strengthens critical-thinking and problem-solving skills as students examine the source, purpose, and meaning of data around them. A panel of leading voices will examine how to design high-quality data science education with students at the center.

Co-Sponsors DataScience4everyone LINKED LEARNING ALLIANCE

10:00 AM PT

Moderator

Ji Yun Son
Professor of Psychology,
CSU-Los Angeles

Speakers

Tamara Clegg
Program Director & Associate Professor of Technology & Information Design,
University of Maryland

Rob Gould
Professor of Statistics & Department Vice-Chair,
UCLA

Gloria Washington
Associate Professor of Electrical Engineering & Computer Science,
Howard University

SESSIONS

Thursday, March 09

Staying the Course: Investigating Prerequisites to College Calculus

Disparate outcomes in college calculus courses are often attributed to varied levels of preparation among students pursuing STEM majors. But students who start their college math journeys in calculus prerequisites—even college-level trigonometry and precalculus—face longer routes to calculus and lower odds of success. Requirements for STEM students to enroll in calculus vary widely by campus. In this session, practitioners discuss recent research on calculus prerequisites and the challenges of designing effective and equitable approaches.

Co-Sponsors

CLP Career Ladders Project

COMPLETE COLLEGE AMERICA

10:00 AM PT

Moderators

Pamela Burdman
Executive Director,
Just Equations

Marcelo Almora Rios
Research Fellow,
Just Equations

Speakers

Eric Hsu
Mathematics Department Chair,
San Francisco State University

Ricardo Moena
Professor & Director of Entry Level Mathematics,
University of Cincinnati

Myra Snell
Co-Founder,
California Acceleration Project

Katherine Stevenson
Professor of Mathematics,
CSU-Northridge

SESSIONS

Thursday, March 09

Closing Keynote Dialogue — Elephant in the Room: Talking about Education Equity in 2023

Ensuring that all children have the opportunity to thrive educationally is a fundamental promise of democracy. Yet that promise is far from reality at American schools and colleges, with the notion of education equity misunderstood and even maligned in some quarters. Redesigning instruction to advance math opportunity, though central to improving educational outcomes, is challenging in this environment. Education and equity thinkers discuss how leaders around the country can traverse this minefield, grounding public conversations in shared values and nurturing the democratic purpose of our education systems.

Co-Sponsors

The Education Trust

NAACP

12:00 PM PT

Moderator

Eloy Ortiz Oakley
President & CEO,
College Futures Foundation

Speakers

John B. King Jr.
Chancellor,
SUNY

Alex Marrero
Superintendent,
Denver Public Schools

OiYan Poon
Visiting Professor &
Co-Principal Investigator,
College Admissions Futures Co-Laborative at University of Maryland

Portia Reddick White
Vice President of Policy and Legislative Affairs,
NAACP

Speakers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SPEAKERS

Ifrah Aden
Undergraduate Student,
San Diego State University

Ifrah Aden was born and raised in San Diego, California, and is a graduate of Crawford High School in the San Diego Unified School District. She is currently an undergraduate student at San Diego State University, where she is majoring in gerontology and statistics. She developed a deep love of caring for older adults at a young age and has three practicing gerontologists in her family. Aden studies statistics to enhance her gerontology major—plus, who doesn't love math? Aden currently works with older adults who have mental health challenges and she truly loves her job.

Elisha Smith Arrillaga
Associate Professor,
Department of Education Leadership and Policy, College of Education, UT-Austin

Elisha Smith Arrillaga is fiercely committed to increasing education and workforce opportunities for students of color. Throughout her more than 20 years of leadership in for-profit, nonprofit and philanthropic organizations, she has worked to center students in moving practice and policy change at both the state and national level. Most recently, she led work to change K–12 and postsecondary math education policy in more than 35 states while serving as the managing director of the Charles A. Dana Center, a national center on STEM equity at the University of Texas at Austin. She also led several statewide research and advocacy initiatives as the executive director of The Education Trust—West. She has taught at both the K–12 and postsecondary levels and has also worked for and partnered with many organizations, including the Careers Ladders Project, the William and Flora Hewlett Foundation, Mathematica Policy Research, and College Bound. She has authored dozens of publications and is often interviewed by media outlets. Smith Arrillaga holds a Bachelor of Arts in mathematics from Smith College, a Master of Science in survey methodology from the University of Maryland at College Park, and a doctorate from the Princeton School of Public and International Affairs. She is currently on the faculty of the College of Education at UT-Austin.

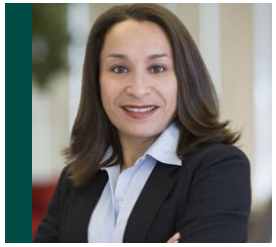
Akil Bello
Senior Director of Advocacy and Advancement,
FairTest

Akil Bello is an educator, speaker, entrepreneur, and testing expert. Bello has worked at every level of the supplemental education industry, advising universities, launching multiple companies, developing dozens of admissions and test preparation programs, training hundreds of instructors, and helping thousands of students achieve success. Bello was a founding partner and CEO for Bell Curves, a test preparation company that focuses on helping public schools, nonprofit organizations, and community-based organizations understand admission systems and policies and develop affordable solutions for their students. After leaving his position as director of equity and access for an international test preparation corporation, Bello worked as a consultant, providing institutions with a deeper understanding of how to successfully support underserved students. Bello holds a bachelor's degree from a university in Brooklyn, New York, and is currently the senior director of advocacy and advancement at FairTest, working to end misuse and overuse of standardized tests.

SPEAKERS

Pamela Burdman
Executive Director,
Just Equations

Pamela Burdman, founder of Just Equations, is an expert on college access, readiness, and success. A thought leader on the role of mathematics in education equity, she works at the intersection of research, policy, and practice to synthesize knowledge from the field and advance strategies that support student success. Burdman's reports and articles on math opportunity issues helped lay the groundwork for new policies designed to improve equitable college opportunity in California. She has also been a featured speaker, convener, and advisor to educators, policymakers, foundations, and think tanks. Burdman's experience in journalism, including covering issues such as the University of California's reversal of affirmative action as a San Francisco Chronicle reporter, informed her commitment to education equity. As a program officer for the William and Flora Hewlett Foundation, she devised and implemented strategies for strengthening college readiness and success, which led to several California initiatives that continue today. She earned a bachelor's degree from Princeton University and master's degrees in business and Asian studies from the University of California at Berkeley.



Laura Castillo-Page
Chief Diversity and Inclusion Officer,
The National Academies of Sciences, Engineering, and Medicine (NASEM)

Laura Castillo-Page is the chief diversity and inclusion officer at the National Academies of Sciences, Engineering, and Medicine (NASEM). In this role, she leads the development and implementation of an organizationwide diversity, equity, and inclusion strategy and set of programs. Prior to joining NASEM, Castillo-Page served as the senior director for diversity, equity, and inclusion at the Association of American Medical Colleges (AAMC), where she led a portfolio of work to advance learning and workplace environments focused on achieving an inclusive culture. Additionally, she led the development of the AAMC's action plan on inclusion to equip medical schools, teaching hospitals, and health systems to become more inclusive, equitable organizations. Castillo-Page has also worked at the American Institutes for Research and served on the faculty at the George Washington University. She holds a doctorate and Master of Science in educational administration and policy studies as well a Master of Arts in political science from the University at Albany, SUNY, and holds a Bachelor of Arts in political science and Latin American studies from Fordham University.

Diana Ceja
Communications Director,
TODOS: Mathematics for ALL

Diana Ceja is a mathematics educator with more than 24 years of experience in the field. She is the administrator for the Riverside County Office of Education Instructional Services. She served as president of TODOS: Mathematics for ALL, an equity-based international professional organization affiliated with the National Council of Teachers of Mathematics (NCTM). The mission of TODOS is to advocate for equity and high-quality mathematics education for all students—and, in particular, for Latina and Latino children. Ceja is a former classroom teacher, bilingual resource teacher, instructional coach, intervention specialist, school-site administrator, and county administrator, and has represented mathematics educators on the board of the California Mathematics Council. She believes in servant leadership and strives to learn and act in ways that produce a more just and caring world.

SPEAKERS

Tamara Clegg
Program Director &
Associate Professor
of Technology &
Information Design,
University of Maryland

Tamara "Tammy" Clegg is an associate professor in the College of Information Studies with a joint appointment in the College of Education at the University of Maryland. She received her doctorate in computer science at Georgia Tech in 2010 and her Bachelor of Science in computer science from North Carolina State University in 2002. From 2010 to 2012, Clegg was a postdoctoral fellow at the University of Maryland with the Computing Innovations Fellows program. Her work focuses on developing technology and learning experiences to support life-relevant learning environments in which children and communities engage in science in the context of achieving goals relevant to their lives. Clegg uses participatory design to create these new technologies.

Shekinah Collins
Undergraduate Student,
Prairie View A&M University

Shekinah Collins is a graduate of Judge Barefoot Sanders Law Magnet high school in the Dallas Independent School District and is currently a third-year computer science major at Prairie View A&M University in Texas. Her interest in computer science began after her parents enrolled her in summer programs that focused on teaching young students about coding. Collins knew computer science was something she wanted to pursue while in high school as she developed a love of learning programming languages and designing webpages. Collins is also passionate about fashion and hopes to utilize her degree to work at the intersection of the fashion industry and software development.

Colleen Ganley
Associate Professor
of Psychology,
Florida State University

Colleen Ganley is an assistant professor of developmental psychology and is in the Florida Center for Research in STEM in the Learning Systems Institute at Florida State University. Her research focuses on the social, cognitive, and attitudinal factors related to math learning with a specific interest in gender and income-level differences. Her work investigates factors such as teacher biases, teacher and student math anxieties/attitudes, stereotype threat, working memory, and spatial skills as potential malleable factors that may be related to mathematics achievement. She is especially interested in learning in areas of mathematics that require spatial thinking, such as geometry and measurement. She also explores factors related to gender differences in students' math- and science-related career choices.

SPEAKERS

Rob Gould
Professor of Statistics & Department Vice-Chair,
UCLA

Rob Gould is currently the vice chair of the Department of Statistics and director of the Center for the Teaching of Statistics at UCLA. He got his Bachelor of Science in applied mathematics at Harvey Mudd College. After receiving his doctorate in mathematics from the University of California, San Diego, Gould was an adjunct assistant professor at UCLA's Department of Mathematics until the Statistics Department was created four years later. He is a fellow of the American Statistical Association, and serves on the ASA DataFest Planning Committee. He is also the faculty advisor of the California Math Project.

David Hawkins
Chief Education and Policy Officer,
National Association for College Admission Counseling (NACAC)

David Hawkins is the chief education and policy officer for the National Association for College Admission Counseling (NACAC), based in Arlington, Virginia. NACAC is a nonprofit membership association that represents more than 25,000 high school counselors and college admission officers throughout the United States and around the world. NACAC is devoted to making the transition between high school and postsecondary education equitable, transparent, and fair. Hawkins holds a Bachelor of Arts and Master of Arts in government from the College of William & Mary in Virginia. From 1995 to 1998, he conducted research for the Democratic Congressional Campaign Committee in Washington, D.C. From 1998 to 2000, he served under President Bill Clinton and Secretary Andrew Cuomo as a congressional affairs specialist in the U.S. Department of Housing and Urban Development. Hawkins joined NACAC as director of government relations in March 2000 and during his 22 years with the association has assumed responsibility for leading NACAC's advocacy, research, education and training, and diversity, equity, and inclusion initiatives.

Eric Hsu
Mathematics Department Chair,
San Francisco State University

Eric Hsu is a professor and chair of mathematics at San Francisco State University, and director of the Center for Science and Mathematics Education. He has led numerous STEM education projects, including two NSF grants to broaden participation in computer science. He was a co–principal investigator on the Western Regional Noyce Alliance; a co–principal investigator on two NSF Noyce grants; and a campus principal investigator on three regional partnerships with community colleges. Additionally, he has led four California Math Science Partnerships and received an NSF CAREER Award in 2003 for his work on college math teaching. He was a co–principal investigator on Revitalizing Algebra, an NSF Math Science Partnership with local school districts. He was also a co-leader of PRIME and PRIME2 with SF Unified focusing on math in grades 4–5, TCAAP with San Rafael City Schools (SRCS) focusing on lesson study for grades 5–8, and ITEAMS with SRCS working with grades 3–8 STEM teachers. He was a case study team leader for a large-scale national study of calculus teaching with the Mathematical Association of America. He received a bachelor's degree in mathematics at Harvard, a doctorate in mathematics from UC Berkeley studying operator algebras with Dan-Virgil Voiculescu, and was a postdoctoral scholar at UT-Austin with Uri Treisman.

SPEAKERS

Anne-Barrie Hunter
Senior Research Associate and Co-Director of Ethnography & Evaluation Research,
University of Colorado Boulder

Anne-Barrie Hunter, CAPS INCLUDES Grant co–principal investigator, is a program manager for the Center for STEM Learning and the co-director and a research associate with Ethnography & Evaluation Research at the University of Colorado Boulder. For more than 25 years, she has sought to improve college science education by conducting qualitative research and evaluation of STEM initiatives. Her 1997 work on the research study by Elaine Seymour and Nancy M. Hewitt produced *Talking About Leaving: Why Undergraduates Leave the Sciences* and has led, after 20 years of follow-up research, to her 2019 project *Talking About Leaving Revisited*, which explores contemporary factors affecting students' decisions to stay in or switch from STEM majors.

Shelly M. Jones
President,
Benjamin Banneker Association

Shelly M. Jones is a professor of mathematics education at Central Connecticut State University. She teaches undergraduate mathematics content and methods courses for pre-service teachers, as well as graduate-level mathematics content, curriculum, and STEM courses for in-service teachers. Before joining the CCSU faculty, Jones was a middle school mathematics teacher and a K–12 mathematics administrator. She provides mathematics professional development nationally and internationally. She has been an educator for 30 years and serves her community by working with various professional and community organizations. You can see her CCSU TEDx talk on YouTube, where she talks about culturally relevant mathematics. She is a contributing author for the book *The Brilliance of Black Children in Mathematics: Beyond the Numbers and Toward New Discourse*, author of *Women Who Count: Honoring African American Women Mathematicians*, and co-author of *Engaging in Culturally Relevant Math Tasks: Fostering Hope in the Elementary Classroom*.

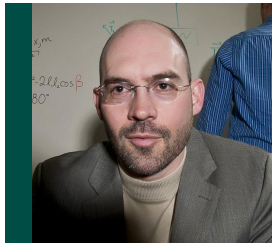
Ashley Kearney
Systems Integration Manager,
Becoming, Office of School Improvement and Supports of D.C. Public Schools

Ashley Kearney is an award-winning secondary mathematics educator and community organizer in Washington, D.C. As a first-generation college student, Kearney believes all students deserve a quality education, in the power of empowered educators, and in the importance of mathematics education in intergenerational mobility, improving our understanding of ourselves and the world, and the safety and success of our nation. Her former role as ambassador with Carnegie Academy for Science Education's STEM Teacher Leader Cadre in the DC STEM Network provided her with the opportunity to support the creation of STEM ecosystems of supports for students, and expose teachers and students to STEM-related careers and scholarship opportunities. She has served as a state representative for Praxis Subject Assessment–Mathematics and Partnership for Assessment of Readiness for College and Careers. Kearney has recently helped to spearhead the process of reinstatement of the DC Council of Teachers of Mathematics, of which she currently serves as president, resulting in the establishment of a state-level math advisory council. She is a recipient of the Presidential Award for Excellence in Mathematics Teaching, was named 2020 D.C. Public Schools Teacher of the Year, and currently serves as a local education council executive board member.

SPEAKERS

John B. King Jr.
Chancellor,
SUNY

John B. King Jr. is the 15th chancellor of the State University of New York (SUNY), the largest comprehensive system of public higher education in the United States. Prior to his appointment as chancellor, King served as president of The Education Trust, a national civil rights nonprofit that seeks to identify and close opportunity and achievement gaps for students from preschool through college. King also served in President Barack Obama's Cabinet as the 10th U.S. secretary of education. Upon tapping him to lead the U.S. Department of Education, Obama called King "an exceptionally talented educator," citing his commitment to "preparing every child for success," and his lifelong dedication to public education as a teacher, principal, and leader of schools and school systems. While serving in the Cabinet, King worked to simplify the financial assistance process, oversaw federal investments in evidence-based strategies to increase college completion rates, and advocated for the president's America's College Promise proposal, which called for creating a federal-state partnership to make attendance at community colleges free and investing in scaled wrap-around services to support every student on their path to academic success.



Nathan W. Klingbeil
Professor of Mechanical & Materials Engineering,
Wright State University

Nathan W. Klingbeil is a professor in the Department of Mechanical & Materials Engineering at Wright State University in Dayton, Ohio. He served as dean of the College of Engineering and Computer Science from 2013 to 2018. Prior to his appointment as dean, he served as senior associate dean from 2012 to 2013, as associate dean for academic affairs from 2010 to 2012, as director of student retention and success from 2007 to 2009, and held the university title of Robert J. Kegerreis Distinguished Professor of Teaching from 2005 to 2008. As the lead investigator for Wright State's NSF-funded National Model for Engineering Mathematics Education, he has worked directly with dozens of collaborating institutions across the country to help increase student retention and success in engineering and other STEM disciplines.

Dave Kung
Director of Policy,
Charles A. Dana Center, UT-Austin

Dave Kung leads the policy work at the Charles A. Dana Center, which includes in-depth policy analysis and the development of tools, briefs, and guidance to help implement modern math pathways equitably at scale. His portfolio includes state-level equitable implementation work, especially concentrating on the transition years from high school into higher education. As a mathematician with deep experience across mathematics organizations, Kung serves as a liaison to partner professional organizations. He also directs the Mathematical Association of America's Project NExT, a professional development program for new faculty in the mathematical sciences.

SPEAKERS

Luis A. Leyva
Assistant Professor of Mathematics Education,
Vanderbilt University

Luis A. Leyva is an assistant professor of mathematics education at Vanderbilt University's Peabody College of Education and Human Development, and director of the Power, Resistance & Identity in STEM Education (PRISM) Research Lab. His research examines how racism, patriarchy, and other intersecting systems of power shape historically marginalized student populations' experiences of oppression and agency in undergraduate mathematics and STEM higher education broadly. Leyva's scholarship informs STEM educational practices that disrupt oppressive ideologies and structures. His research appears in top-tier journals, including the American Educational Research Journal, The Journal of Higher Education, and Journal for Research in Mathematics Education. He has received awards and fellowships from the American Educational Research Association, National Academy of Education/Spencer Foundation, and Bill & Melinda Gates Foundation.

Josephine Louie
Researcher,
Education Development Center

Josephine Louie specializes in providing new insights into education policy, STEM education, technology integration, and social science. Drawing on her expertise in quantitative and qualitative research methodologies, she is the principal investigator of multiple projects funded by the National Science Foundation. Louie leads the Understanding Weather Extremes with Big Data and Strengthening Data Literacy Across the Curriculum projects. She has published findings on using screencasting to support STEM learning, researcher-practitioner partnerships, gender gaps in assessment outcomes, math practices to support struggling learners, and regression discontinuity design. Previously, she was a research associate for the Metro Boston Equity Initiative at the Civil Rights Project at Harvard University, senior data analyst for the Harvard Immigration Project, and research analyst at Harvard University's Joint Center for Housing Studies. Louie received a Bachelor of Arts in social studies from Harvard College, a Master of City Planning from the Massachusetts Institute of Technology, and a master's degree and doctorate in education from the Harvard Graduate School of Education.

Audrey Malagon
Chair,
Council on Teaching and Learning, Mathematical Association of America

Audrey Malagon is a professor and chair of the Department of Mathematics at Virginia Wesleyan University. She is a nationally recognized expert and grant recipient for curricular innovation and pedagogy. Malagon currently chairs the Council on Teaching and Learning for the Mathematical Association of America, which consists of 10 committees that advise on MAA policy and recommend guidelines in areas related to undergraduate curriculum and teaching. These areas include the transition from high school to college mathematics, undergraduate curriculum and pedagogy, assessment and placement, and coordination of mathematics with partner disciplines and with teacher education.

SPEAKERS

Alex Marrero
Superintendent,
Denver Public Schools

Alex Marrero leads with a vision of supporting students the way educators supported him growing up and into his career. As the child of a Cuban refugee and an immigrant from the Dominican Republic, Marrero prides himself on representing many of the Latinx students in the communities he has served as a school leader and in district leadership positions. Marrero joined Denver Public Schools as superintendent in July 2021. Prior to that, he joined the City School District of New Rochelle in New York in January 2020 as the assistant superintendent of curriculum and instruction. In September of that year, he became the first Latinx head of the city's school system, serving as acting and then interim superintendent. Prior to that, as assistant superintendent at East Ramapo Central School District in New York, Marrero supported schools into Good Standing and increased graduation rates. In October 2022, Marrero was elected to serve as president-elect for the Association of Latino Administrators and Superintendents. He had previously served as treasurer for that organization.

Ricardo Moena
Professor & Director of Entry Level Mathematics,
University of Cincinnati

Ricardo Moena is a professor of mathematics at the University of Cincinnati, Ohio, where he also serves as director of entry level mathematics. At the Ohio Department of Higher Education, Moena is currently the chair of the Transfer Module Mathematics, Statistics, and Logic Committee and of the Ohio mathematics subgroup, which is focused on revision and redesign of the Ohio Transfer Module. The subgroup is a component of the Ohio Mathematics Initiative, which launched in 2015. It is formed by faculty from two-year, four-year, and research-1 public institutions of higher education with the mission of determining learning outcomes and research-based pedagogies to increase success and retention rates of all groups of students in the entry-level pathways. For 10 years prior, Moena was chair of the Math & Applied Sciences Department of the former University College of the University of Cincinnati, the two-year, open-access unit of the university. Moena received his doctorate in mathematics in 1990 at the University of Cincinnati after receiving a Master of Science in mathematics at the University of Concepción in Chile.

Marcos Montes
Program Manager & Higher Education Policy Consultant,
Let's Go To College California

Marcos Montes manages Southern California College Access Network's policy agenda, Changemakers student advocacy fellowship, and Let's Go To College California. He graduated in 2018 from Cal State LA with a Bachelor of Arts in political science and a minor in law and society. A product of college success programs, he is the first in his family to graduate from a university. He brings expertise regarding student engagement and advocacy. He served two years as an executive member of Cal State LA's student government and one year as vice president of legislative affairs for the Cal State Student Association (CSSA). During his time as a student, he was very passionate about improving college affordability, increasing civic engagement, and supporting undocumented students. He received numerous awards, including the 2017 CSSA Student Advocate of the Year and a state resolution from California Assembly Speaker Anthony Rendon in May 2018. Montes has years of legislative experience, student advocacy, and a passion for institutional change.

SPEAKERS

Eloy Ortiz Oakley
President & CEO,
College Futures Foundation

Eloy Ortiz Oakley is a leading voice on improving equity in higher education and for positioning institutions for global shifts in the workforce and the future of learning. Oakley is president and CEO of College Futures Foundation, a philanthropic and advocacy organization focused on improving college attainment for Californians of all backgrounds. Previously, Oakley served as chancellor of California Community Colleges, where his work included the establishment of the California College Promise, the design and implementation of the Vision for Success, the elimination of standardized testing, the reform of remedial education, and the adoption of a student-centered funding formula. Oakley has also served on the University of California Board of Regents and as a senior advisor to U.S. Secretary of Education Miguel Cardona.

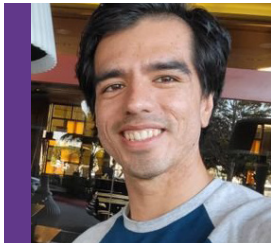
OiYan Poon
Visiting Professor
& Co-Director,
College Futures Co-Laborative at University of Maryland

OiYan Poon is a visiting faculty member at the College of Education at the University of Maryland, College Park, and a program officer with the Spencer Foundation. At the Spencer Foundation, Poon provides mentorship and oversees all of the foundation's grant programs. She also serves as the program lead for the NAEd/Spencer Dissertation and Postdoctoral Fellowship programs and the Large Grant Program. Poon's research agenda brings together organizational theories and race and ethnic studies to study selective admissions processes, affirmative action policies, and the racial politics of Asian Americans and education. In her research, she has utilized a range of methods and approaches, including critical discourse analysis, narrative inquiry, constructivist grounded theory, community-based participatory research methods, and geographic information system spatial analysis. As a public scholar, she is a lead co-author of amicus briefs submitted on behalf of social scientists supporting race-conscious admissions in SFFA v. Harvard. She is also an associate professor affiliate in the School of Education at Colorado State University.

Gerardo Ramirez
Associate Professor of
Educational Psychology,
Ball State University

Gerardo Ramirez is an assistant professor of educational psychology at Ball State University, where he teaches both undergraduate teacher education courses and advanced classes in the university's doctoral and master's programs. His primary areas of research include emotion and math achievement. For instance, Ramirez is interested in understanding how students' academic struggles, personal narratives, and sense-making processes shape math learning.

SPEAKERS



Marcelo Almora Rios
Research Fellow,
Just Equations

Marcelo Almora Rios is a graduate student and course instructor at the University of Montana in the Department of Mathematics. He has supported students in mathematics in many roles, including as a math specialist for SKIES Learn, a Los Angeles–based educational technology startup focused on improving student success in introductory algebra courses in L.A. public schools. His research interests lie at the intersection of mathematics education, psychology, and philosophy. His dissertation research explores the concept of what he affectionately calls mathematical well-being, a construct related to one's measure of subjective well-being regarding one's own mathematical practice and associated, school-related effects. Rios received his Bachelor of Science in mathematics from Harvey Mudd College. He is a first-generation, Peruvian-born American college student and recipient of the 2020 Latinos in Technology scholarship. He is a strong advocate of poetry and mathematics learning, and enjoys the challenge of baking for others. He was the 2022 Summer Research Fellow for Just Equations.

Roberto Rubalcaba
Associate Professor
of Mathematics,
San Diego City College

Roberto Rubalcaba is an associate math professor at San Diego City College. He was born in Lemon Grove in California, on the same street where Lemon Grove Elementary planned a separate school for all of its Latino students. He stopped going to Morse High School in San Diego in the 10th grade because of gang violence, pursued a GED at Centre City Adult School, then built up from his ninth-grade math education when he majored in mathematics at City College. He graduated and transferred to San Diego State University, earning a Bachelor of Arts in mathematics, and attended graduate school at Auburn University, earning a master's degree and doctorate in discrete mathematics. He gets students at San Diego City College excited about math through hip-hop, art, sushi, and dance.

Tesha Sengupta-Irving
Associate Professor of
Learning Sciences &
STEM Education,
College of Education,
UC-Berkeley

Tesha Sengupta-Irving focuses her research on the sociocultural, disciplinary, and political dimensions of children's learning and identity work. Broadly, her research asks a deceptively simple question: What, in addition to mathematics, do children learn when they learn mathematics? Her work advances design principles and pedagogical approaches that promote racially minoritized children's fluency in disciplinary ideas and practices, while also safeguarding their sense of joy, agency, and collectivity. Through a mix of prolonged ethnographic study, teaching experiments, and microanalyses of children's interactions, her work generates new knowledge for disciplinary teaching and learning that centers on who racially minoritized youth are and are becoming. She holds a Bachelor of Science in electrical engineering from the University of Illinois at Urbana-Champaign, and a doctorate in curriculum and teacher education from Stanford University.

SPEAKERS

Myra Snell
Co-Founder,
California Acceleration Project

Myra Snell is a professor of mathematics at Los Medanos College and co-founder of the California Acceleration Project (CAP), a faculty-led professional development network. CAP supports California's community colleges to implement reforms that substantially increase equitable student completion of lower division math and English requirements for university transfer. Along with CAP co-founder Katie Hern, Snell was named one of the "16 Most Innovative People in Higher Education" by the Washington Monthly. In 2015, she was one of four finalists for the national Faculty Innovation Award from the American Association of Community Colleges. She holds a master's degree in pure mathematics from the University of California, Berkeley.

Ji Yun Son
Professor of Psychology,
CSU-Los Angeles

Ji Yun Son is a professor of psychology and director of the Learning Lab at California State University, Los Angeles. Along with James W. Stigler of UCLA, she co-authored the interactive textbook *Statistics and Data Science: A Modeling Approach*, which is available for preview at CourseKata.org and used by more than 50 institutions of higher education and high schools. She has a doctorate in cognitive science and psychology from Indiana University Bloomington. She uses and develops new technologies to innovate teaching, learning, and educational research to improve student outcomes, particularly for marginalized students. In the lab and classroom, she focuses on basic cognitive and perceptual processes that can foster rich and transferable learning. Her work examines methods of applying psychological insights at scale to issues such as mathematics education and student success. Through directing tailored interventions at Cal State LA, she has helped develop and validate materials to help students achieve higher and persist longer. The central idea behind her work is that learning changes the way we see the world. Her adventures in research and life can be followed on Twitter at @cogscimom.

Katherine Stevenson
Professor of Mathematics,
CSU-Northridge

Katherine Stevenson is a professor of mathematics at California State University, Northridge (CSUN), where she has taught since 2001. She earned her Bachelor of Science from Mount Holyoke College in 1989 and her doctorate from the University of Pennsylvania in 1994. Her research interests focus on algebraic geometry, particularly inverse Galois problems for curves. She has 25 years of experience teaching mathematics and received the CSUN outstanding teaching award in 2008. From 2009 to 2018, she was the director of the CSUN Developmental Mathematics Program, which served 3,000 entering freshmen each year with an annual budget of more than $1 million. During that time, the program transformed from a frustrating, one-size-fits-all, non–credit-bearing sequence of courses into several different pathways to general education mathematics. Each pathway is now credit-bearing and relevant to students' majors, interests, and careers. Stevenson has served on the organizing committee of two Mathematical Sciences Research Institute (MSRI) Critical Issues in Mathematics Education conferences and also serves on the MSRI Educational Advisory Committee. She is chair of the American Mathematical Society's Committee on Education and serves on its Scientific Policy Committee.

SPEAKERS

Jennifer Stimpson
Chief Programs Officer,
T.D. Jakes Foundation

Jennifer Stimpson is a content expert who consults with community, civic, and federal organizations, including the National Science Foundation, Department of Justice, and Girl Scouts of Northeast Texas, to design educational programs that expand STEAM education opportunities for all students. She is the founder of JSTEMP Science and has produced science-themed camps for students for 20 years. In 2020, Stimpson was a fellow with the U.S. Congress as an Albert Einstein Distinguished Educator, helping craft STEM education legislation, co-authoring the first women and girls in STEM resolution, and launching "The HBCU Podcast" to honor the voices and experiences of Black people in the federal government. She is a recent graduate of the Education Policy Fellows Program, representing the state of Texas, where she worked with state education policy leaders to increase the number of STEM teachers of color. Stimpson is an American Association for the Advancement of Science (AAAS)/IF THEN science ambassador, selected to inspire the next generation of female scientists, and is featured as one of 125 women scientists presented as a collection of life-size statues in the Smithsonian Museum in Washington, D.C.

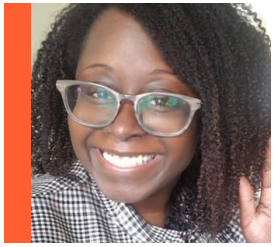
Francis Edward Su
Benediktsson-Karwa
Professor of Mathematics,
Harvey Mudd College

Francis Edward Su is the Benediktsson-Karwa Professor of Mathematics at Harvey Mudd College and a former president of the Mathematical Association of America (MMA). He received his doctorate from Harvard University. His research is in geometric combinatorics and applications to the social sciences, and he has co-authored numerous papers with undergraduates. He also has a passion for teaching and popularizing mathematics. The MMA awarded him the 2013 Haimo Award for distinguished teaching and the 2018 Halmos-Ford Award for his writing. His work has been featured in Quanta Magazine, Wired, and The New York Times. His book *Mathematics for Human Flourishing* (Yale University Press, 2020) won the 2021 Euler Book Prize. It is an inclusive vision of what math is, who it's for, and why anyone should learn it.

Chad Topaz
Professor of
Complex Systems,
Williams College

Chad Topaz (he/him) is co-founder and executive director of research at the Institute for the Quantitative Study of Inclusion, Diversity, and Equity, and professor of complex systems at Williams College. Topaz is an interdisciplinary data scientist and applied mathematician who uses quantitative tools to mitigate social injustice in the court system, the arts, higher education, the environment, and other spheres. His work has been covered in The Atlantic, The Guardian, Inside Higher Ed, People, Science, Smithsonian Magazine, and more, and his honors include a Kavli Frontiers fellowship from the National Academy of Sciences, a New Directions research professorship from the Institute for Mathematics and its Applications, the Outstanding Paper Award of the Society for Industrial and Applied Mathematics, the Rossmann Excellence in Teaching Award from Macalester College, and the Sorgenfrey Distinguished Teaching Award from UCLA.

SPEAKERS



Gloria Washington
Associate Professor of Electrical Engineering & Computer Science,
Howard University

Gloria Washington is an empathetic technology researcher who focuses on the intersection of human-centered computing, affective computing, and biometrics. Her research seeks to give voices to the underserved and marginalized by asking questions such as: How can technology impact positive human emotions while reducing systematic racism and barriers to equity? And how can technology build lasting social impact through requiring persons to feel empathy — not just look away? Washington is currently an associate professor of computer science at Howard University in Washington, D.C. She runs the Affective Biometrics Lab with her bright students. Check out the projects she does with her students within ABL, and take a listen to her National Geographic interview on AI bias.

Suzanne L. Weekes
Executive Director,
Society for Industrial and Applied Mathematics (SIAM)

Suzanne L. Weekes holds a Bachelor of Science in mathematics from Indiana University, a doctorate in mathematics and scientific computing from the University of Michigan, and did her postdoctoral work at Texas A&M University. As executive director of the Society for Industrial and Applied Mathematics (SIAM), she is responsible for administration of the affairs of SIAM and providing leadership, management, and strategy to the society. Her research focuses on numerical methods for differential equations, including applications to spatio-temporal composites, cancer growth, and porous media flow. She has been involved in various initiatives connecting the academic mathematics community to mathematics and statistics work done in business, industry, and government. Weekes co-directs the national PIC Math (Preparation for Industrial Careers in Mathematical Sciences) Program, and she is a founding director of the MSRI-UP (Mathematical Sciences Research Institute Undergraduate Program). She is on the TPSE Math (Transforming Post-Secondary Education in Mathematics) Board of Governors.

Portia Reddick White
Vice President of Policy and Legislative Affairs,
NAACP

Portia Reddick White has been a warrior for more than 20 years in the movement helping to motivate, encourage, educate, and influence policymakers. She has implemented bold strategies to eradicate the uneven playing field for people of color and led legislative and advocacy outreach campaigns for the AARP, Transport Workers Union of America, the flight attendants of Southwest Airlines, and the National Education Association. White served as deputy director of public engagement during the 2016 Democratic National Convention. As senior advisor to the late Sen. Harry Reid, White managed a policy portfolio including labor, intergovernmental affairs, faith, and civil rights, bringing policy and people together. She earned a Bachelor of Arts and Master of Education from Oral Roberts University and a Juris Doctorate from the University of Baltimore. White boasts numerous accomplishments and was designated Labor Leader of the Year by the National Black Caucus of State Legislators. She serves as a board member on the Committee to Protect California Kids and is an active member of Chief, a network focused on connecting and supporting women executive leaders.

SPEAKERS

Zakiya S. Wilson-Kennedy
Associate Dean for Diversity & Inclusion,
College of Science,
Louisiana State University

Zakiya S. Wilson-Kennedy is the Ron and Dr. Mary Neal Distinguished Associate Professor of Chemistry Education and the associate dean for diversity and inclusion within the College of Science at Louisiana State University (LSU). Her research investigates the persistence of individuals from all backgrounds in STEM higher education and careers, focusing on faculty and student recruitment, retention, and success. Through these efforts, she employs mentoring models that integrate the theories of identity development, empowerment, social cognitive career theory, and community cultural wealth to create and test development structures that cultivate self-efficacy and agency, particularly for groups historically underrepresented in STEM. She received her bachelor's degree in chemistry from Jackson State University and her doctorate in inorganic chemistry from LSU.

Aris Winger
Assistant Professor of Mathematics,
Georgia Gwinnett College

Aris Winger is an assistant professor of mathematics at Georgia Gwinnett College. His recent areas of interest include finding equity in the mathematics classroom and culturally relevant pedagogy. He is a graduate of Howard University, earning a Bachelor of Science in mathematics, and Carnegie Mellon University, earning a Master of Science and a doctorate in mathematical sciences.

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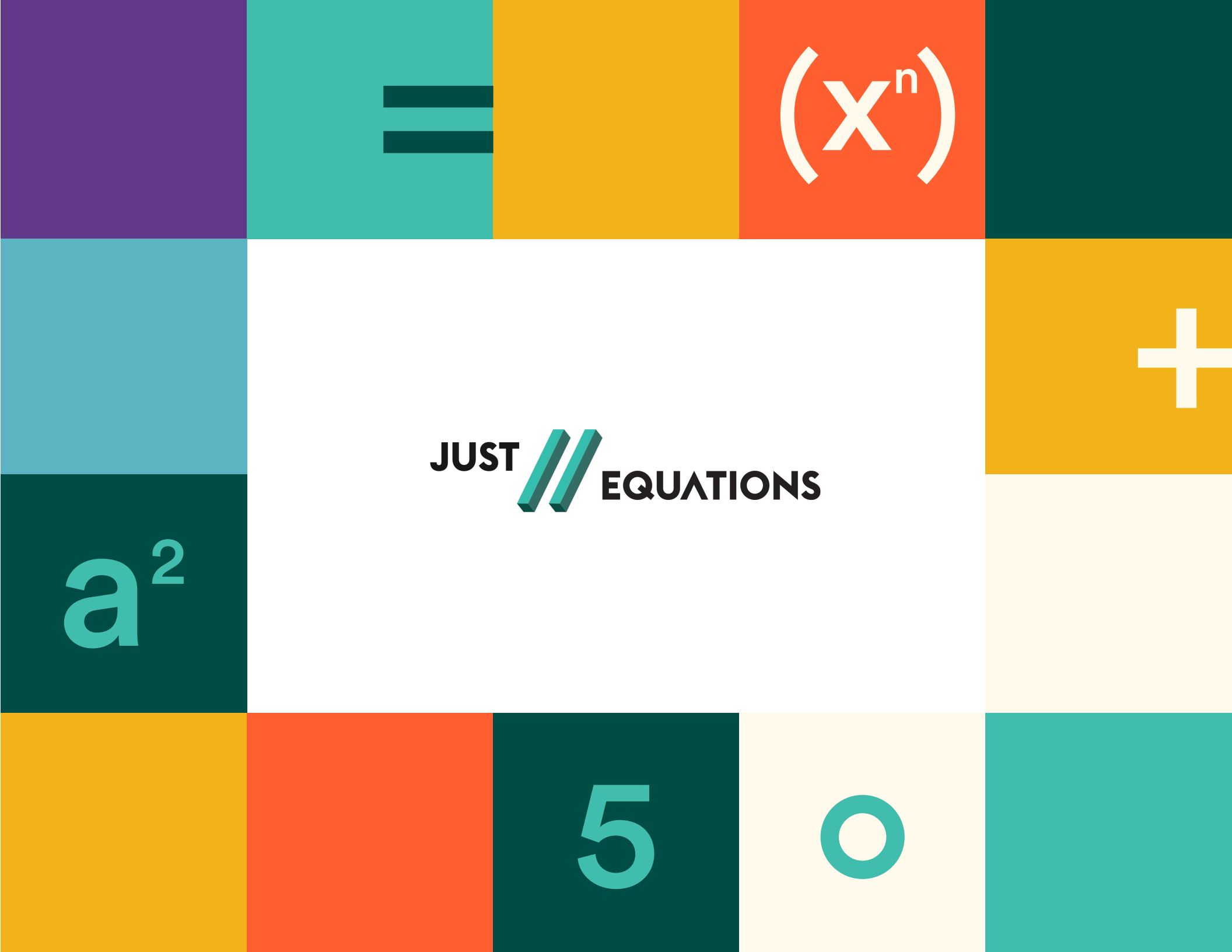
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