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## **CONTACT US:**











#STEMUSConf2023 | #HBCUSTEMUS www.stemuscenter.org

Funding for this conference was made possible by [in part] Grant Number HRD-2025221 and Grant Number HRD-2010676 from the National Science Foundation. The views expressed in written conference material or publications and by speakers and moderators do not necessarily reflect the official policies of the National Science Foundation, nor does mention of trade names, commercial practices, or organizations imply endorsement by the United States Government.

# **WELCOME!**



## **Dr. Derrick Bryan**

Welcome to the 2023 HBCU STEM Undergraduate Success Center Conference and Graduate Professional Fair. This conference is an opportunity for all STEM colleagues to share their insights into teaching innovation and pedagogy and develop connections across the STEM disciplines.

It is my desire that you engage in the exchange of ideas and current work centered on integrating STEM education research and practice. This year we will be Focusing on Excellence in STEM Student Success at HBCUs. The spirit of our conferences has always been one of community, collaboration, and collegiality, we value diversity and welcome contributions from all aspects of the STEM community. In support of this, national and local experts have been invited by the conference committee to provide thought- provoking ideas, latest research findings, best practices, and strategies for addressing challenges.

Over the course of the event, you will be immersed in cutting-edge STEM research, professional development sessions, motivational keynote speakers, and the Graduate Professional Fair. I hope that you find this conference a valuable experience. Please take in every minute of these two packed and exciting days of our annual conference. May our time shared be a source of enrichment for all!

2023 HBCU STEM US Conference | General Sessions

## **SPELMAN COLLEGE**

Manley College Center Annex 350 Spelman Ln SW, Atlanta, GA 30314

## Thursday, September 7, 2023

04:00 p.m. - Registration - Manley College Center Annex 06:30 p.m.

05:30 p.m.-08:00 p.m. **Opening and General Session I** *Keynote Speaker* 



**Kojo Mensa- Wilmot, PhD**Dean of the College of Science and Mathematics

Kennesaw State University

Professor of Biology

Professor Kojo Mensa-Wilmot is one of the world's experts on molecular, cell, and chemical biology of Trypanosoma brucei, a single cell eukaryote that causes human African trypanosomiasis (sleeping sickness) and, in cattle, nagana. Dr. Mensa-Wilmot is past-Dean of the College of Science and Mathematics at Kennesaw State University. Prior to that appointment he was Head of the Department of Cellular Biology at the University of Georgia where he was academic leader of a Chemical Biology Group. Dr. Mensa-Wilmot serves on the Governor's Rare Diseases Advisory Council for the state of Georgia. He has served on the Board of Scientific Counselors for the National Institute of Child Health and Development (NICHD) at the National Institutes of Health and was a charter member of the Drug Discovery and Resistance Study Section of the National Institute of Allergy and Infectious Diseases. Dr. Mensa-Wilmot received a BSc (HONS) from the University of Ghana and holds a PhD from The Johns Hopkins University School of Public Health, where he worked on DNA replication with Professor Roger McMacken. Dr. Mensa-Wilmot was a Rockefeller Foundation postdoctoral fellow at Johns Hopkins School of Medicine in the laboratory of Professor Paul T. Englund.

**Workshops and Graduate Professional Fair** 



#### **MOREHOUSE COLLEGE**

Shirley A. Massey Executive Conference Center 830 Westview Drive, SW

## Friday, September 8, 2023

08:00 a.m. -04:00 p.m. Registration - Shirley A. Massey Center Lobby

09:00 a.m.-09:45 a.m. General Session II- BOA Auditorium

Infusion of Inquiry-based and Culturally Responsive Science Teaching for STEM Education



Ethell Vereen, Jr, PhD

Assistant Professor of Biology Morehouse College

09:45 a.m. -10:30 a.m. **General Session III -** BOA Auditorium Speaker



Mark A. Melton, PhD

Professor of Biology Saint Augustine's University

10:35 a.m. -11:20 a.m. **General Session IV -** BOA Auditorium

Director

The Interplay between STEM and Data Science in Higher Education



Talitha Washington, PhD

AUC Data Science Initiative

11:30 a.m. -12:00 p.m. **Lunch Buffet -** Shirley A. Massey Center Lobby

2023 HBCU STEM US Conference | General Sessions



#### **MOREHOUSE COLLEGE**

Shirley A. Massey Executive Conference Center 830 Westview Drive, SW

## Friday, September 8, 2023

12:00 p.m. -01:30 p.m.

## **General Session V -** Conference Room A/B/D/E

Special Lecturer



#### Margaret Beale Spencer, PhD

Charles F. Grey Distinguished Service Professor Emeritus The University of Chicago

01:45 p.m. -02:45 p.m.

## **Concurrent Session I**

- Conference Room C
  - The Mentoring Relationship According to Madea
- Conference Room F
- Focusing on Excellence in STEM Student Success at HBCUs
- Bank of America Auditorium
  - Transitioning to the PhD & the Use of Academic Pipeline Programs

02:55 p.m. -03:55 p.m.

## **Concurrent Session II**

- Conference Room C
  - Student DJs? ThinkLive! is Remixing How Students Learn Math and Science.
- Conference Room F
- Focusing on Excellence in STEM Student Success at HBCUs
- Bank of America Auditorium
  - GRAD SCHOOL OR NOT? Choosing, Applying, and Getting into The Grad School Perfect for You



**Workshops and Graduate Professional Fair** 



## **MOREHOUSE COLLEGE**

Martin Luther King Chapel 830 Westview Drive, SW

## Friday, September 8, 2023

04:30 p.m. - Reception & Graduate Professional Fair

**06:30 p.m.** African Hall of Fame & MLK Chapel Lobby

## Saturday, September 9, 2023



## MOREHOUSE COLLEGE

Shirley A. Massey Executive Conference Center 830 Westview Drive, SW

09:00 a.m. - Registration - Shirley A. Massey Center Lobby

10:00 a.m.

General Session VI- BOA Auditorium

10:00 a.m.-11:00 a.m.



Talitha Williams, PhD

Associate Professor of Mathematics and Mathematics Clinic Director Harvey Mudd College

11:00 a.m. -

**General Session VII & Closing -**

**BOA** Auditorium

# **MEET OUR TEAM**

## Derrick M. Bryan, Ph.D.

**Executive Director.** 

STEM Undergraduate Success (STEM-US) Research Center **Director,** Frederick Douglass Academic Success Center (FDASC Associate Professor of Sociology

**Faculty Development Fellow** A.D.I.S.A Fellow

**MOREHOUSE COLLEGE** 

Lawrence S. Blumer, **Professor** of Biology Chair of Biology **MOREHOUSE COLLEGE** 

Danielle D. Dickens, Ph.D. Assistant Professor of Psychology **SPELMAN COLLEGE** 



Lycurgus L. Muldrow, Ph.D. Retired, Inaugural **Executive Director HBCU STEM-US Center** 

Curtis D. Byrd, Ed.D. CEO & CO-Founder

Academic Pipeline Project

#### Briana Goolsby, M.Ed.

Program Manager **HBCU STEM Undergraduate** Success (STEM-US) Research Center

**MOREHOUSE COLLEGE** 

# MEET OUR TEAM

**Dante Jackson**Program Coordinator **SPELMAN COLLEGE** 

Rihana S. Mason, Ph.D.

Academic Pipeline Project Research Scientist

GEORGIA STATE UNIVERSITY

Alicia P. Thomas, M.S.

Technology Director HBCU STEM-US Center

**MOREHOUSE COLLEGE** 

Cheryl P. Talley, Ph.D.

Associate Professor of Neuroscience

**VIRGINIA STATE UNIVERSITY** 



Shondrieka N. Lamb, M.S.
Associate Director
HBCU STEM-US Center
MOREHOUSE COLLEGE

Mark A. Melton, Ph.D.

Dean of the School of Sciences, Mathematics and Public Health ST. AUGUSTINE'S UNIVERSITY

Adrian Neely, Ph.D.
Research Associate

**MOREHOUSE COLLEGE** 

FOCUSING ON EXCELLENCE IN STEM STUDENT SUCCESS AT HBCUS | #HBCUSTEMUS



# OUR CENTER



## **CENTER INFORMATION**

The STEM Undergraduate Success Research Center, a collaboration between Morehouse College, Spelman College, and Virginia State University, seeks to conduct a systematic and comprehensive investigation to illuminate the offerings of the diverse HBCU academic cultures, and how the associated principles impact student success. It is known that HBCUs graduate African American students majoring in STEM at higher rates than other institutions, as well as having a higher rate of STEM graduates going on to receive PhDs.

Research efforts will particularly investigate how and why HBCUs are so successful in supporting the nation's broadening participation efforts in STEM, as well as what systems or programs exist at HBCUs to facilitate this success. STEM US researchers will conduct several initial projects, including a case study of 25 HBCUs, and studies on the scientific literacy necessary for success in STEM. The research will be accomplished, in part, by using a psychological approach to examine the experiences of STEM students that are developmentally linked and culturally sensitive

#### **RESEARCH:**

The center strives to take a comprehensive approach to research, which will include:

- A strategy integrating research, education, knowledge transfer and outreach to understand and disseminate, at local, state and national levels, the contributions, impact, and positive legacy of HBCUs in broadening participation;
- A common theoretical framework that exposes individual and systematic vulnerabilities while developing the
  institutional supports necessary to promote success and retention of students; and
- Research to support the development of evidence-based interventions that will inform mainstream education reform.

## **NSF FUNDING:**

Funding for this Center was made possible, in part, through grant award HRD-2010676 from the National Science Foundation. Through this funding, the STEM Undergraduate Success Research Center looks to becoming a hub of information on student success at HBCU, while sharing the stories of broadening participation at HBCUs by HBCUs.

"Investing the institutional capacity of HBCUs and developing diverse STEM talent is part of NSF's longstanding commitment to broaden participation of groups traditionally underrepresented in STEM," said former NSF Program Director Claudia Rankins, who managed the HBCU program. "The knowledge generated by this Center will detail what practices make HBCUs successful in educating Black students in STEM, and the Center will place HBCUs at the forefront of STEM education reform."







Morehouse College has been producing extraordinary leaders, visionaries and pillars of the community. Since our humble beginnings in a church basement in 1867, we've established a legacy of excellence that continues to strengthen with each passing year. Famous graduates like Martin Luther King Jr. and Spike Lee are joined by five Rhodes scholars as well as congressmen, business titans, college presidents, and many more who proudly represent the Morehouse ideals. Our 66-acre campus southwest of downtown Atlanta is home to more than 2,200 students preparing to make their mark on the world.



## Spelman College®

A Choice to Change the World



Founded in 1881 as the Atlanta Baptist Female Seminary, we became Spelman College in 1924. Now a global leader in the education of women of African descent, Spelman is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), and we are proud members of the Atlanta University Center Consortium. Today our student body comprises more than 2,100 students from 43 states and 10 foreign countries. Spelman empowers women to engage the many cultures of the world and inspires a commitment to positive social change through service. We are dedicated to academic excellence in the liberal arts and sciences and the intellectual, creative, ethical and leadership development of our students.





Virginia State University, an HBCU founded in 1882, is one of Virginia's two land-grant institutions and is located 20 minutes south of Richmond in the village of Ettrick. With a current student population of approximately 4,000, the University sits atop a rolling landscape overlooking the Appomattox River with expansive views of Petersburg. Our 231-acre campus boasts 11 residence halls, 18 academic buildings and a 412-acre agriculture research facility. Virginia State University, a public, comprehensive 1890 Land Grant institution and historically black college/university, is committed to the preparation of a diverse population of men and women through the advancement of academic programs and services that integrate instruction, research, extension, and outreach.

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# **GENERAL SESSION**SEPTEMBER 8, 2023

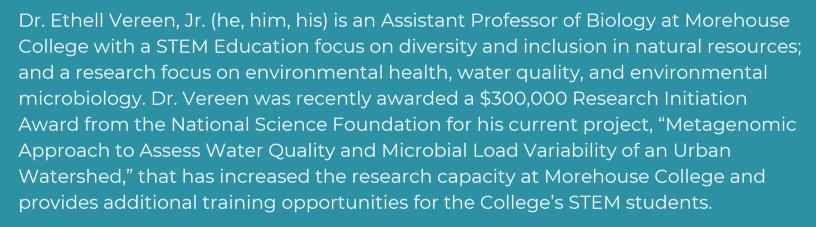
General Session II - BOA Auditorium 9:00 a.m. - 9:45 a.m.

Dr. Ethell Vereen (he, him)

Infusion of Inquiry-based and Culturally Responsive Science Teaching for STEM Education

Description:

Science classrooms, especially at the undergraduate level, strive to mimic the broader practices of the scientific community and therefore have tremendous potential to perpetuate the exclusion of certain groups of people. They also have, however, the potential to be a catalyst for equitable participation in science. Utilizing pedagogies of empowerment such as culturally responsive science teaching (CRST) in undergraduate classrooms can mitigate the gatekeeping phenomenon seen in science. Additionally, many studies suggest that hands-on research activities enhance students' interest in pursuing a research career. In this talk, we discuss a model for the implementation of authentic laboratory research in the undergraduate teaching laboratory using a culturally responsive approach to engage students.



He currently serves on several boards and foundations including the board for the Environmental Leadership Program, NSF NEON Technical Working Group, and his exemplary contributions in the areas of undergraduate education, student learning and campus life have also been noted as he was awarded the 2019 Vulcan Teaching Excellence Award, and recently recognized as one of 1000 Inspiring Black Scientists in America. Dr. Vereen also is engaged in transformative experiential scientific discovery in Virtual Reality (VR) for curriculum development and innovation in teaching. He was one of the lead instructors in the first cohort of teachers at Morehouse College to integrate VR into his courses. By utilizing this technology, he has created activities and experiences that are transforming the way students learn, and the way he teaches.



# **GENERAL SESSION**SEPTEMBER 8, 2023

General Session III - BOA Auditorium 09:45 a.m. - 10:30 a.m.

Dr. Mark Melton

Professor of Biology
Saint Augustine's University

Dr. Mark A. Melton is a professor of biology and previously served as Interim Provost and dean for the School of Sciences, Mathematics and Public Health at Saint Augustine's University in Raleigh, North Carolina. In these roles, he has gained valuable insights regarding the landscape, culture and demands of management at the college and university level. He has served in several administrative capacities including Department Chair of Biological & Physical Sciences, Honors Program Director, and as Program Director for the NIH-MARC U\*STAR Program, a federally funded student research training program. His leadership includes advancing the educational and research capacity at the school. He strives to be a positive 'Change Agent' as the university continues to forge ahead in its efforts to produce some of the best and brightest scholars. He was recently promoted in 2014 from associate professor to professor.

Dr. Melton received his B.A. degree in biology from the University of North Carolina at Chapel Hill, the M.S. degree in developmental biology from North Carolina A&T State University and the Ph.D. in developmental neurophysiology from the University of Maryland at College Park. He also conducted postdoctoral research in molecular genetics at the University of North Carolina at Chapel Hill's School of Medicine. Dr. Melton is a member of the American Evaluators Association, Society for Neuroscience, Genetics Society of America, the American Association for the Advancement of Science, Sigma Xi and Beta Kappa Chi.

## GENERAL SESSION

**SEPTEMBER 8, 2023** 

General Session IV - BOA Auditorium
10:35 a.m. - 11:20 a.m.

# The Interplay between STEM and Data Science in Higher Education

Dr. Talitha Washington

Abstract:

While data science is in high demand both in research and in the workplace, what is needed to prepare students for a data-driven STEM workforce remains unclear. Even though data science is becoming essential in all STEM programs, how data science interplays with undergraduate and graduate STEM programs remains unclear. This session will provide insights into how data science contributes to STEM academic programs and how to build and leverage transdisciplinary and industry partners to enhance the student experience.

Dr. Talitha M. Washington is an Associate Professor of Mathematics at Howard University in Washington, DC, and is currently on detail as a Program Officer at the National Science Foundation. Prior to coming to Howard, she was an Assistant Professor of Mathematics at the University of Evansville (2005-2011), an Assistant Professor of Mathematics at The College of New Rochelle (2003-2005), and a VIGRE Research Associate at Duke University (2001-2003). Dr. Washington holds a 2001 Ph.D. in mathematics from the University of Connecticut with specialization in applied mathematics. Dr. Washington enjoys her work at Howard University, in the same mathematics department Elbert Cox once led.

As a program officer at the National Science Foundation, she is responsible for shaping the nation's science and engineering enterprise and ensuring that underrepresented groups and diverse institutions across all geographic regions are included in the scientific enterprise of the nation. In her spare time, she serves on a number of boards and shares motivational speeches on diversity and mathematics to a wide range of audiences. She balances stress by maintaining a rigorous exercise regimen with fitness guru Cathe Friedrich, that includes kickboxing, step aerobics, strength training, and yoga. During the warm seasons, you may even find her running down the Rock Creek Park trails in Washington, DC.

## **GENERAL SESSION**

## **SEPTEMBER 8, 2023**

General Session V - Conference Room A/B/D/E 12:00 p.m. - 01:30 p.m.

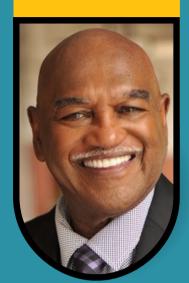


## **Dr. Margaret Beale Spencer**

Charles F. Grey Distinguished Service
Professor Emeritus
The University of Chicago

Margaret Beale Spencer, PhD is the Charles F Grey Distinguished Service Professor, Emeritus in the Department of Comparative Human Development and the College as well as the Marshall Field IV Professor of Urban Education, Emeritus at the University of Chicago. A developmental psychologist, she is also an alumna of the Committee on Human Development at the University of Chicago. Before returning to Chicago, she was the endowed Board of Overseers Professor and Director of the Interdisciplinary Studies of Human Development (ISHD) Program and faculty member in the Graduate School of Education at the University of Pennsylvania (Psychology in Education Division). Additionally, she was Director of the University of Pennsylvania's Center for Health Achievement Neighborhood Growth and Ethnic Studies (CHANGES), and also guided as its inaugural director, the W. E. B. Du Bois Collective Research Institute. Guiding the noted efforts and continuing to frame her scholarship, Spencer's Phenomenological Variant of Ecological Systems Theory (P-VEST) provides an identity-focused cultural ecological perspective which frames her gender, race, culture and context acknowledging program of human development research. Recognizing the universality of human vulnerability, the theory addresses resiliency, identity, and competence formation processes for diverse humans situated both in the United States and abroad.

Having authored over 140 scholarly publications, edited several volumes, and provided Congressional Testimony in the nation's Capital, Margaret Beale Spencer was recently elected into the American Academy of Arts and Sciences (2019). She is a recipient of the 2018 LifeTime Achievement Award from the American Psychological Association, the Division 7 (Developmental Science) 2018 Urie Bronfenbrenner Award for Distinguished Contributions to Developmental Science, and the Society for Research in Child Development (SRCD) Award for Distinguished Contributions to Cultural and Ecological Research. Margaret Beale Spencer's scholarship has been generated from dozens of grants awarded by Foundations and Federal funding submissions as well as featured in ABC and CNN programming broadcasted internationally.



## CONCURRENT SESSION I SEPTEMBER 8, 2023

Conference Room C 1:45 p.m. - 2:45 p.m.

# The Mentoring Relationship According to Madea Dr. Robert Belle Jr.

Robert (Bob) Belle is currently the Senior Consultant for the Southern Regional Education Board (SREB). In October 2002 he joined SREB as the Director for the SREB Alliance for Graduate Education and the Professoriate (AGEP) Doctoral Scholars Program that was funded by the National Science Foundation. Prior to joining SREB Bob served as the Director of The Office of Federal TRIO Programs, a Senior Executive position for the U.S. Department of Education in Washington, DC. Bob was the Director of the Office of Federal TRIO Programs for the U.S. Department of Education, TRIO provides educational supportive services for low income, 1st generation prospective college students and student with disabilities. He also served as the Acting Deputy Assistant Secretary for Higher Education Programs in the Department of Education. Bob is proud of his leadership in advocating the necessity for TRIO Programs to infuse the use of technology as an integral part of their instruction and program administration plans. He documented the "digital divide" issue and the need to enhance the technology capacity for all TRIO programs. As a result of his efforts, over \$17 million was awarded for technology enhancement to five of the six TRIO service programs during his tenure in TRIO. His career has encompassed many aspects and levels of education - all dedicated to promoting access to higher education for individuals from underrepresented groups. He has teaching experiences at the elementary, secondary, and collegiate levels. He has served as an administrator of an Upward Bound Project, an Education Center for Adults, an Office of Minority Affairs, an office of statewide Affirmative Action Programs, and Student Affairs. He has worked with state and federal government officials who enacted legislation pertaining to equal access and diversity initiatives in higher education.

His educational background includes a B.S. in Elementary Education from Glassboro State Teachers College, now Rowan University, in Glassboro New Jersey, a master's degree in Pupil Personnel Services from Seton Hall University in South Orange, New Jersey and a doctorate in Counseling Education from Lehigh University in Bethlehem, Pennsylvania. Bob has received numerous awards and recognitions because of his dedicated service as a teacher, counselor, coach, administrator, and faculty throughout his long and distinguish and diverse career. He has advised, counseled, and mentored scores of students, and he continues to work on behalf of those students who traditionally have been underserved or denied access to higher educational opportunity. He remains committed to making a difference. He has three adult children and two adult grandchildren.

## CONCURRENT SESSION I SEPTEMBER 8, 2023

1:45 p.m. - 2:45 p.m. 2:55 p.m. - 3:55 p.m.



## **Conference Room F**

Focusing on Excellence in STEM Student Success at HBCUs

Dr. Monique Earl-Lewis

#### Objectives:

- Explore ways to build social-emotional learning into STEM teaching
- · Assessment of student goals for STEM
- Examine how we learn, how we teach, and how we can do both better. Keep pace with the ever-changing student population and with new trends in higher education,
- · Highlight innovative in the approach to STEM education.

Monique Earl-Lewis is the Founding Director of the Faculty Development. Teaching and Advising Center at Morehouse College and teaches interdisciplinary courses in Africana Studies, the Freshmen Year Experience and Psychology.

She received her PhD in Organizational Psychology from the California School of Professional Psychology; a masters of science in Counseling and Behavioral Studies from the University of South Alabama; and a bachelors in Speech Communication from Auburn University. Her applied research and practice focus on learning organizations, integrated techno-cultural-pedagogical practice to advance social justice and equity through active communities of learning and authentic participation engagement.



## CONCURRENT SESSION I SEPTEMBER 8, 2023

Bank of America Auditorium 1:45 p.m. - 2:45 p.m.

Transitioning to the PhD & the Use of Academic Pipeline Programs

## Dr. Curtis Byrd

Dr. Curtis Byrd has over 25 years of experience in faculty and student diversity and inclusion programming. He is the CEO and Co-Founder of the Academic Pipeline Project, LLC and serves as a research consultant for the NSF Funded. HBCU STEM Undergraduate Success Center housed at Morehouse College. Most recently, Dr. Byrd served as the Special Advisor to the Provost on Diversity, Equity, and Inclusion, coordinating DEI efforts for academic affairs, focusing on faculty diversity at Georgia State University. Prior to this he served as the Assistant Dean of Graduate Studies at Clark Atlanta University. In the 2000s he served as Director of the McNair Scholars Program at the University of Florida and Georgia State University and, served as the Director of Minority Graduate Recruitment and Retention at the University of Georgia.

Dr. Byrd is the co-author of the Lever Press publication (May 2021) titled Academic Pipeline Programs-Diversifying Pathways from the Bachelors to the Professoriate. Dr. Byrd earned both his B.S. in Psychology and M.Ed. in Higher Education at Iowa State University. In 2016 he graduated with his Doctorate in Education (Ed.D.) in Adult Leadership Education from the University of Georgia.



# CONCURRENT SESSION II SEPTEMBER 8, 2023

<u>Conference Room C</u> 2:55 p.m. - 3:55 p.m. Student DJs? ThinkLive! is Remixing How Students Learn Math and Science.

#### Charles A. Spencer, MBA

Experienced strategy and business development entrepreneur with industry expertise in digital media, entertainment, and mobile platforms. Awarded a National Science Foundation (NSF) Small Business Innovation Research (SBIR) Phase II grant to conduct research and development (R&D) work on STEM focused music hardware. The intent of the technology is to provide much needed educational support for youths' STEM learning through STEAM (i.e., science, technology, engineering, "the arts" and math); that is, the supportive strategy is school/community-based programming as scaffolded by the arts.



## Dr. Tirzah Spencer

Biobehavioral health professional trained in community and family health, the application of social and behavioral sciences to public health, health education, and maternal and child health policies and programs. More than eight years of experience working with health and social service providers, community leaders, youth advocates, researchers, and decision-makers to build sustainable, culturally-informed public health programs, policies, and systems through advocacy, capacity building, research, and empowerment initiatives.

Specialties: • Under-served and ethnically diverse urban populations

- · Developmental, cultural, and gender specific approaches
- · Health promotion, chronic disease prevention and risk reduction

## **CONCURRENT SESSION II**

## **SEPTEMBER 8, 2023**

2:55 p.m. - 3:55 p.m.



## **Bank of America Auditorium**

#### Dr. Amanda Marie James

## GRAD SCHOOL OR NOT? Choosing, Applying, and Getting into The Grad School Perfect for You

#### Description:

Starting with the big question, "Is graduate school right for me?" to the more particular question of, "Should I accept this specific university offer?", this workshop will provide you with an overview of the "Process". This workshop will highlight key components of determining a good program/discipline for you, then explore the application preparation timeline, specific elements of the applications, such as personal statements and letters of recommendation, and then what should be considered when making a final decision upon acceptance. If you are considering graduate school this workshop will be a great starter; be ready to discuss with your peers your thoughts around applying and going to grad school!

Amanda Marie James, PhD received her BS in Biochemistry from Spelman College in Atlanta, GA. and her PhD in Clinical Pharmacology from the University of Alabama at Birmingham. She has been both formally and informally trained in diversity and inclusion work. As a mentor, a course facilitator, and a diversity outreach advocate and coordinator, Dr. James is dedicated to organizing networks of diverse scholars by discipline, socioeconomic class, and ethnic and racial background and has initiated campus-wide conversations about how an effective and supportive community is essential for their success. Currently, Dr. James serves as the inaugural Chief Diversity Officer and Associate Dean for Diversity, Inclusion, and Community Engagement at the Laney Graduate School at Emory University. She is charged with creating and strengthening an inclusive, respectful, and intellectually challenging environment for all doctoral and academic master's scholars. Dr. James also maintains an academic and research presence. Her traditional scientific training is in clinical technology (pharmacological and application-based) and biomedical engineering, with specific training and expertise in the detection of clinical samples and method development. Her current research interests focus on the frequency/abundance of coronary atherosclerotic isomiRs, (isoforms of microRNA) and their correlation to clinically relevant outcomes based on race and co-morbidities of coronary atherosclerosis.

The skills she learned as a translational scientist have been applicable to her role as an administrator. Her familiarity with the journey has helped facilitate the acclimation of diverse scholars and their navigation of a large university and global city. Dr. James also works with big data sets both in her laboratory work and her role as LGS CDO and has honed the analytical skills needed to analyze clinical outcomes and educational progress. Coupled with these experiences, Dr. James has also been both the recipient of and facilitator of many diversity and inclusion workshops, seminars, and programs.

Taking responsibility for inclusive outreach and ensuring environments where all can do their best work is essential to achieving the educational benefits of diversity. Education is transformative, and to quote, Marian Wright Edelman, "Education is for improving the lives of others and for leaving your community and the world better than you found it."

## **GENERAL SESSION**

# SEPTEMBER 9, 2023 10:00 a.m. - 11:00 a.m.



## General Session VI- BOA Auditorium

## Dr. Talitha Williams

Associate Professor of Mathematics and Mathematics Clinic Director Harvey Mudd College

Renowned for her popular TED Talk, "Own Your Body's Data", Dr. Talithia Williams takes sophisticated numerical concepts and makes them understandable to a wide audience. She demystifies the mathematical process in amusing and insightful ways, using statistics as a way of seeing the world in a new light and transforming our future through the bold new possibilities inherent in the STEM fields.

Dr. Williams develops statistical models which emphasize the spatial and temporal structure of data and has partnered with the World Health Organization in developing a cataract model used to predict the cataract surgical rate for countries in Africa. Through her research and work in the community at large, she is helping change the collective mindset regarding STEM in general and math in particular - rebranding the field of mathematics as anything but dry, technical or maledominated but instead a logical, productive career path that is crucial to the future of the country. She is active in her faith community and serves with her husband as a Christian marriage mentor couple, all while being the mom of three amazing boys.

## **GENERAL INFORMATION**



#### CONFERENCE INFORMATION

Welcome to the fourth 2023 HBCU STEM Undergraduate Success Research Center.

#### **DISCLAIMER NOTICE**

Please be aware that by entering the conference areas, you consent to your voice, name, and/or likeness being used without compensation, in films and tapes in any an all HBCU STEM Undergraduate Success Research Center, its agents, successors, assigns, and licenses from any ability whatsoever of any nature.

#### **SPONSOR**

This activity is sponsored by the HBCU STEM Undergraduate Research Center.

#### **FUNDING**

Funding for this conference was made possible [in part] by Grant Number HRD-2025221 and Grant Number HRD-2010676 from the National Science Foundation. The views expressed in written conference material or publications and by speakers and moderators do not necessarily reflect the official policies of the National Science Foundation, nor does mention of trade names, commercial practices, or organizations imply endorsement by the United States Government



#### **ORGANIZER**

The HBCU STEM Undergraduate Success Research Center

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Please share your experience at the conference using the following hashtags and platforms:

- #HBCUSTEMUS
- #STEMUSConf2023

## **CONTACT US:**







www.stemuscenter.org