



2018 EMERGING RESEARCHERS NATIONAL (ERN) CONFERENCE IN STEM



**February 22–24, 2018
Washington, D.C.**

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



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2018 Emerging Researchers National (ERN) Conference in STEM Program Book

Co-hosted by the
American Association for the Advancement of Science (AAAS)
Education and Human Resources Programs (EHR)

National Science Foundation (NSF)
Division of Human Resources Development (HRD)
Directorate of Education and Human Resources

NSF Directorate for Engineering (ENG)
Office of Emerging Frontiers in Research and Innovation (EFRI)

National Society of Black Physicists (NSBP)



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Overview of the Conference

Emerging Researchers National (ERN) Conference in STEM

The 2018 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM) is hosted by the American Association for the Advancement of Science (AAAS), Education and Human Resources Programs (EHR) and the National Science Foundation (NSF) Division of Human Resource Development (HRD), within the Directorate for Education and Human Resources (EHR). The conference is aimed at college and university undergraduate and graduate students who participate in programs funded by the NSF HRD Unit, including underrepresented minorities and persons with disabilities.

In particular, the conference seeks to highlight the research of undergraduate and graduate students who participate in the NSF Research Experiences for Undergraduates (REUs) Program and the following NSF HRD-funded programs:

- Alliance for Graduate Education and the Professoriate (AGEP);
- Centers of Research Excellence in Science and Technology (CREST);
- Emerging Frontiers in Research and Innovation (EFRI-REM) Scholars;
- EntryPoint;
- Historically Black Colleges and Universities Undergraduate Program (HBCU-UP);
- Louis Stokes Alliances for Minority Participation (LSAMP) and LSAMP Bridges to the Doctorate;

- National Society of Black Physicists (NSBP) Scholars¹;
- Research in Disabilities Education (RDE); and
- Tribal Colleges and Universities Program (TCUP).

The objectives of the conference are to help undergraduate and graduate students to enhance their science communication skills and to better understand how to prepare for science careers in a global workforce. Towards this end, the general format for the 2-1/2 day conference includes:

- Student poster and oral presentations.

Other conference activities include workshops focused on:

- Strategies for applying for and succeeding in graduate programs and finding funding for graduate school;
- Career preparation for the STEM workforce, including employment searches and retention; and
- Understanding STEM careers in a global context and identifying international research and education opportunities for undergraduate and graduate students and faculty.

Exhibitors include representatives from academic, government, business, and the non-profit sector with information about graduate school admissions, fellowships, summer research opportunities, professional development activities, and employment opportunities.

For more information, visit the Web site at <http://www.emerging-researchers.org/>.

¹The National Society of Black Physicists (NSBP) is working with AAAS to increase the number of African American and other underrepresented minority physics students who participate in the ERN conference.

The National Science Foundation (NSF) Division of Human Resource Development (HRD)

prosperity by supporting the broader participation and success of individuals currently underrepresented in STEM and the institutions that serve them.

The **Division of Human Resource Development (HRD)** serves as a focal point for NSF's agency-wide commitment to enhancing the quality and excellence of STEM education and research through broadening participation by historically underrepresented groups – minorities, women, and persons with disabilities. Priority is placed on investments that promise innovation and transformative strategies and that focus on creating and testing models that ensure the full participation of and provide opportunities for the educators, researchers, and institutions dedicated to serving these populations. Programs within HRD have a strong focus on partnerships and collaborations in order to maximize the preparation of a well-trained scientific and instructional workforce for the new millennium.

HRD VISION:

HRD envisions a well-prepared and competitive U.S. workforce of scientists, technologists, engineers, mathematicians, and educators that reflects the diversity of the U.S. population.

HRD MISSION:

HRD's mission is to grow the innovative and competitive U.S. science, technology, engineering and mathematics (STEM) workforce that is vital for sustaining and advancing the Nation's

About

The National Science Foundation (NSF) Directorate for Engineering (ENG) Office of Emerging Frontiers in Research and Innovation (EFRI)

The Office of Emerging Frontiers in Research and Innovation (EFRI) has been established as a result of strategic planning and reorganization of NSF Engineering Directorate (ENG). Motivated by the vision of ENG to be the global leader in advancing the frontiers of fundamental engineering research, EFRI serves a critical role in helping ENG focus on important emerging areas in a timely manner. Each year, EFRI will recommend, prioritize, and fund interdisciplinary initiatives at the emerging frontier of engineering research and education. These investments represent transformative opportunities, potentially leading to: new research areas for NSF, ENG, and other agencies; new industries or capabilities that result in a leadership position for the country; and/or significant progress on a recognized national need or grand challenge.

The EFRI process of selecting, announcing, and funding new frontier areas will function throughout the year, ensuring continual input and feedback from the engineering community on promising future research opportunities. This input comes from such diverse sources as workshops, advisory committees, technical meetings, professional societies, proposals and awards, and NSF committees of visitors.

From this comprehensive input, ENG identifies, evaluates, and prioritizes those frontier topics that best match the EFRI criteria (transformative, addressing a national need or grand challenge, multi- or inter-disciplinary, an area where the community is poised to respond, and clearly demonstrating ENG's leadership role).

The National Society of Black Physicists (NSBP)

Founded in 1977 at Morgan State University, the mission of the National Society of Black Physicists (NSBP) is to promote the professional well-being of African American physicists and physics students within the international scientific community and within society at large.

The organization seeks to develop and support efforts to increase opportunities for African Americans in physics and to increase their numbers and visibility of their scientific work. It also seeks to develop activities and programs that highlight and enhance the benefits of the scientific contributions that African American physicists provide for the international community. The society seeks to raise the general knowledge and appreciation of physics in the African American community.

More information about NSBP is located online at <http://nsbp.org/>.

The American Association for the Advancement of Science (AAAS)

The American Association for the Advancement of Science is an international non-profit organization dedicated to advancing science around the world by serving as an educator, leader, spokesperson and professional association. In addition to organizing membership activities, AAAS publishes the journal *Science*, <http://www.sciencemag.org/>, as well as many scientific newsletters, books and reports, and spearheads programs that raise the bar of understanding for science worldwide.

AAAS was founded in 1848, and includes some 261 affiliated societies and academies of science, serving 10 million individuals. *Science* has the largest paid circulation of any peer-reviewed general science journal in the world, with an estimated total readership of one million. The non-profit AAAS is open to all and fulfills its mission to "advance science and serve society" through initiatives in science policy; international programs; science education; and more. For the latest research news, log onto EurekAlert!, <http://www.eurekalert.org/>, the premier science-news website, a service of AAAS.

Membership and Programs

Open to all, AAAS membership includes a subscription to *Science*.

Four primary program areas fulfill the AAAS mission:

- Science and Policy
- International Activities
- Education and Human Resources
- Project 2061

AAAS Mission

AAAS seeks to "advance science, engineering, and innovation throughout the world for the benefit of all people." To fulfill this mission, the AAAS Board has set these broad goals:

- Enhance communication among scientists, engineers, and the public;
- Promote and defend the integrity of science and its use;
- Strengthen support for the science and technology enterprise;
- Provide a voice for science on societal issues;
- Promote the responsible use of science in public policy;
- Strengthen and diversify the science and technology workforce;
- Foster education in science and technology for everyone;
- Increase public engagement with science and technology; and
- Advance international cooperation in science.

Visit the AAAS website at <http://www.aaas.org/>.

Welcome



Sylvia M. James



William J. Lewis

NATIONAL SCIENCE FOUNDATION

2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

February 22, 2018

Dear Conference Participants:

On behalf of the National Science Foundation (NSF), the Directorate for Education and Human Resources, and the Division of Human Resource Development, we welcome you to the 2018 *Emerging Researchers National Conference in Science, Technology, Engineering and Mathematics (STEM)*. This research conference for undergraduate and graduate students builds on and continues NSF's commitment to broaden participation in STEM fields as a means to foster the research and education capacity of the nation.

Student scholarship encompasses the creation of scientific knowledge, collaboration with other students, researchers, and faculty, and dissemination of research at conferences and in journals. We applaud your enthusiasm to embrace research experiences as part of your ongoing studies.

This conference is designed to provide you with information and resources to become successful with the next steps in your career. We hope that you find the research presentations, plenary session, panels, workshops, and exhibits informative. We trust that you will take advantage of all of the opportunities this conference has to offer. We wish you a productive and meaningful stay in the Nation's capital.

Sincerely,

A handwritten signature in black ink, appearing to read "Sylvia M. James".

Sylvia M. James
Deputy Assistant Director (Acting)
Directorate for Education & Human Resources

A handwritten signature in black ink, appearing to read "Jim Lewis".

Jim Lewis
Assistant Director (Acting)
Directorate for Education & Human Resources



Shirley M. Malcom



Yolanda S. George



Iris R. Wagstaff



Dear ERN Conference Participants:

Welcome to the 2018 *Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM)*. This is the eighth ERN conference hosted by AAAS, the publisher of the *Science* family of journals, and supported by the National Science Foundation (NSF). We welcome this collaboration with NSF and applaud the Foundation's continuing commitment to develop STEM talent from all sectors and groups in our society and to support strategies to reach underserved populations nationwide.

This year we have about 1,100 participants from over 250 institutions, nearly 70% of whom are undergraduate and graduate student researchers supported by the NSF Human Resources Development (HRD) Programs; Research Experiences for Undergraduates (REU); the Directorate for Engineering (ENG), Office of Emerging Frontiers in Research and Innovation (EFRI) Research Experience and Mentoring (REM) Program; and other federal programs, including the National Institutes of Health (NIH), National Aeronautics and Space Administration (NASA), and the United States Department of Agriculture (USDA).

Plenary sessions will focus on the state of STEM research in hurricane-affected areas and lessons learned about recovery: Juan Ramirez-Lugo, University of Puerto Rico-Rio Piedras and President of the AAAS Caribbean Division; Giovanna Guerrero, Ciencia Puerto Rico and Yale University Ciencia; Camille McKayle, University of the Virgin Islands; and Kenneth Boutte Xavier, University of Louisiana. In other plenary sessions, Gregory Triplett, computer and electrical engineer at Virginia Commonwealth, Dana Bolles, mechanical engineer at NASA Ames Research Center and Jedidah Isler, astrophysicist at Vanderbilt University and founder of #STEM Vanguard, will discuss their STEM research and education, career paths and outreach activities.

New conference features include the *HBCU Making & Innovation Showcase* to encourage and support increased participation in STEM-related innovation and entrepreneurship activities by students at HBCUs. Sixteen teams of students from 15 HBCUs will create prototypes using hardware and software to address one of the seventeen sustainable development goals of the United Nations and present their work during the ERN conference to inventors and researchers. Also, visit two new ERN workshops: *Leveraging Your STEM Degree to Innovate Wherever You Land* and *Job Search Strategies: Writing an Interview-Winning CV/Resume*.

We will announce and preview five winning videos from the third ERN *Science in a Minute* student video competition. The EFRI-REM Networking dinner will feature Gilda Barabino, biomedical and chemical engineer and Dean of The Grove School of Engineering at The City College of New York (CCNY). Our continuing workshops will include staff and members of the National Society of Black Physicists, the Association of American Medical Colleges and Institute for Broadening Participation, NSF Division of Graduate Education, Intel, the Southeastern Universities Research Consortium, and Google. And for last minute confidence building, we are once again presenting workshops and coaching on presenting oral and poster presentations.

We thank the exhibitors at this Conference, many of whom are NSF grantees of the NSF Alliances for Graduate Education and the Professoriate (AGEP), Integrative Graduate Education Research Traineeship (IGERT) Programs or NSF INCLUDES. From our evaluations, we know that many ERN attendees have benefited from services and programs provided by the exhibitors.

We appreciate the STEM professionals who serve as role models, mentors and judges of student oral and poster presentations, including alumni of the David and Lucile Packard HBCU Graduate Scholars Program, L'Oréal USA For Women in Science post-doctoral fellowship program, the AAAS Science and Technology Policy Fellows, and the SACNAS Summer Leadership Institute.

We encourage all students to make new contacts, build your science communications skills, and attend the workshops to learn about graduate school and STEM careers. As a professional society, AAAS is *working to advance science, engineering, and innovation throughout the world for the benefit of all people*. We encourage all participants to visit aaas.org to find out about our grants and awards, professional development opportunities, and our *Force for Science* effort. It is our hope that you will build your networks and learn more about workforce opportunities in STEM.

Sincerely,

Shirley M. Malcom, Director, AAAS Education and Human Resources (EHR) Programs
Yolanda S. George, Deputy Director and Program Director, AAAS EHR
Iris R. Wagstaff, Program Director, AAAS EHR

Conference Staff

NSF and AAAS Staff

NSF Directorate of Education and Human Resources (EHR) and Division of Human Resources Development (HRD) Senior Managers

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Sylvia M. James, *Deputy Assistant Director (Acting) EHR*
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Andrea Johnson, *HBCU-UP, HSI and CREST*
Mark H. Leddy, *ECR and AGEP*
Nafeesa Owens, *EASE*
Claudia Rankins, *HBCU-UP, CAREER and CREST*
Victor Santiago, *CREST and HBCU-UP*
Marilyn J. Suiter, *EASE*
Regina Sievert, *TCUP*
Clytrice Watson, *HBCU-UP*

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Kerstin Mukerji, *Program Manager*
Ashley Huderson, *AAAS Science and Technology Policy Fellow*

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Betty Calinger
Tarrick Clayton
Joy Guo
Janaya Thompson

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Marketing
Office of Membership

Pongos Interactive

Chrissy Rey, *Pongos Interactive*
Dawn Smith, *Pongos Interactive*

Colella Digital

Michael Colella, *Colella Digital*

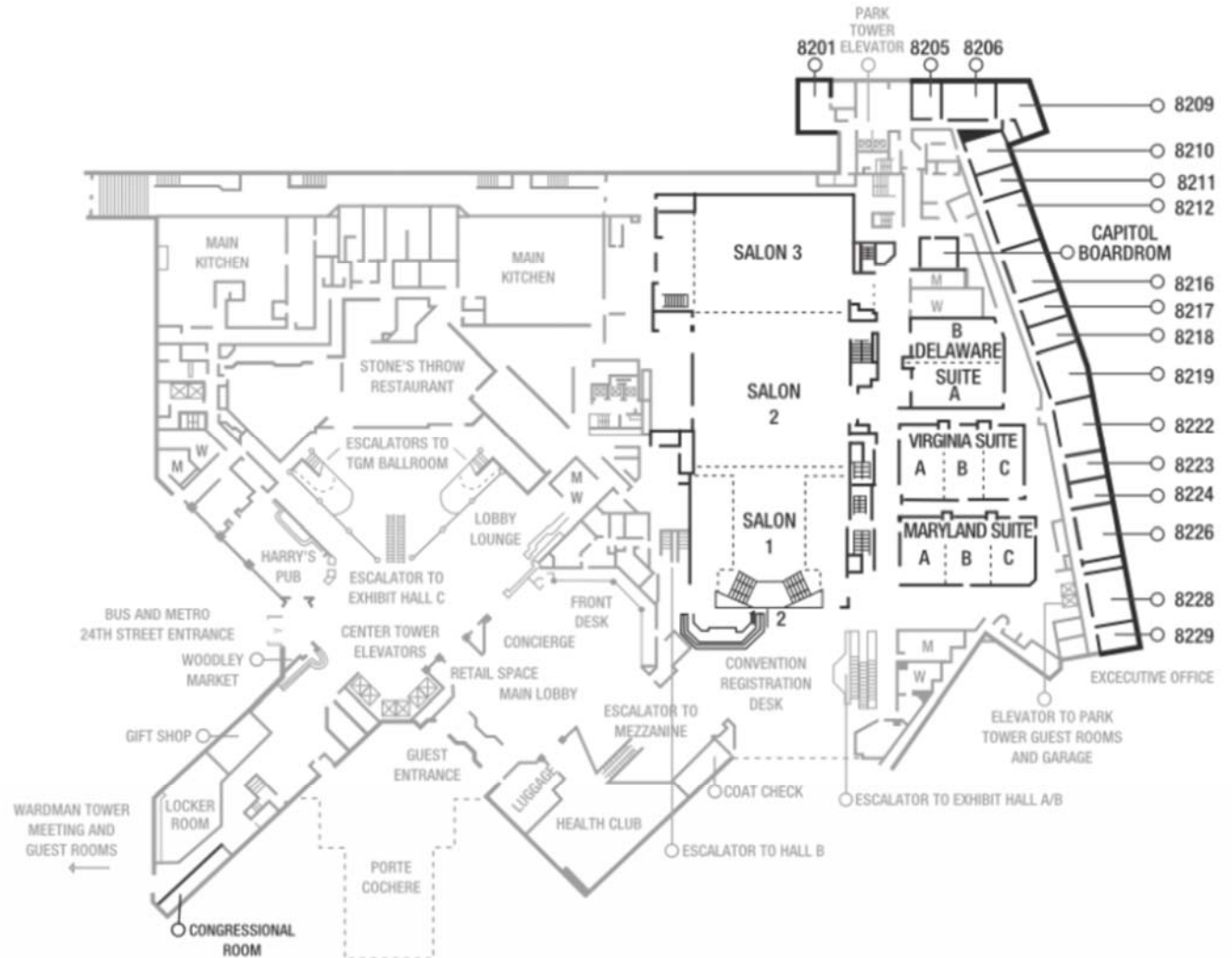
ERN Advisory Board

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Anissa Buckner, *University of Arkansas, Pine Bluff*
Carol Davis, *Tribal Nations Research Group*
Lisa B. Elliot, *National Technical Institute for the Deaf at Rochester Institute of Technology*
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Larry Mattix, *Norfolk State University*
Delia Rosales-Valles, *New Mexico State University*
Carmen K. Sidbury, *The Sidbury Group, LLC*

Chief Poster and Oral Presentation Judge

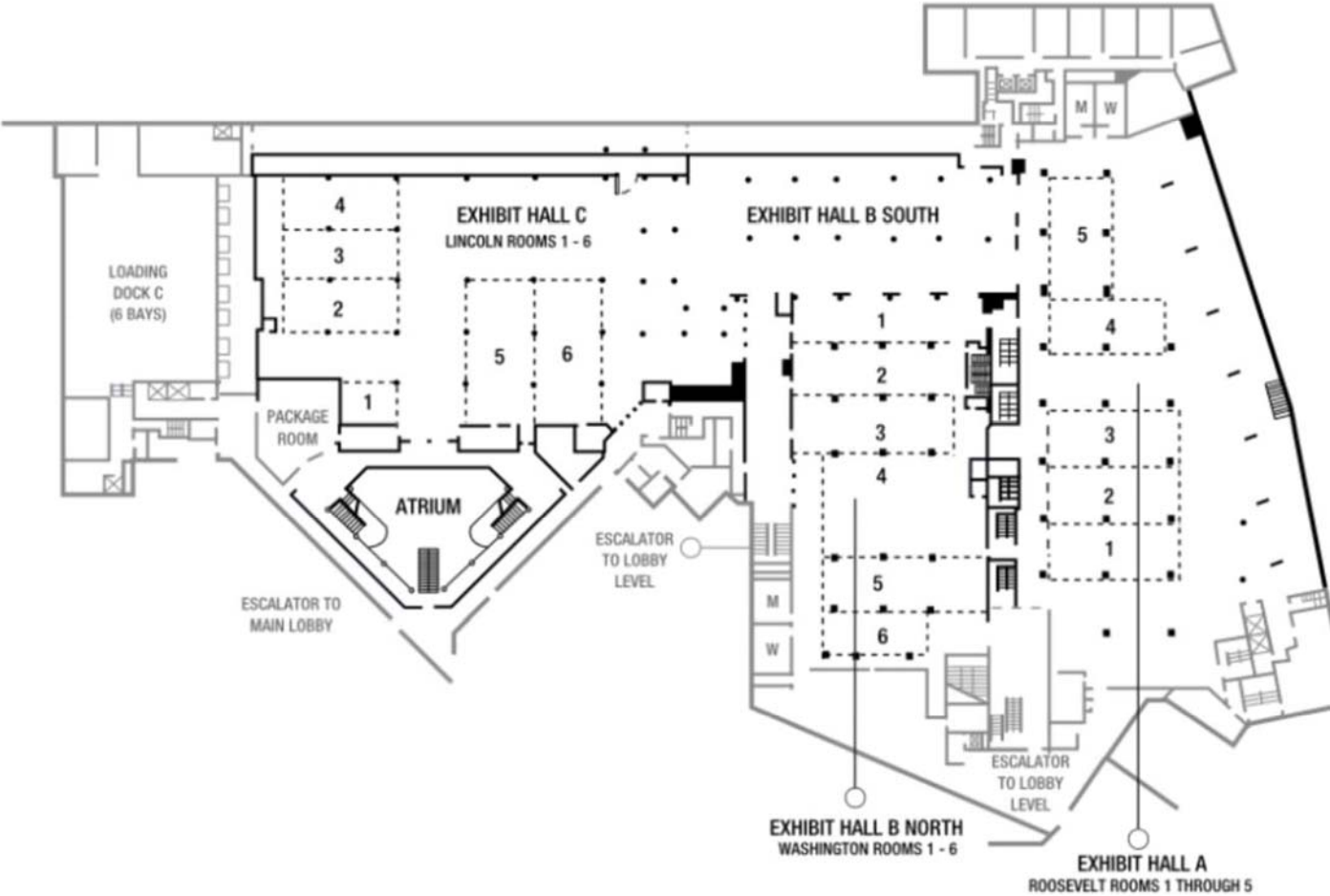
Jonathan Lambright, *Savannah State University*

LOBBY LEVEL



Hotel Floor Plans

EXHIBITION LEVEL



Thursday, February 22, 2018

- 11:00am - 3:00pm **Pre-Conference Packard Scholar Meeting (*Invitation Only*)**
Madison
- 3:00pm - 9:00pm **Conference Registration Opens**
Convention Registration and Lobby
- 1:00pm - 7:00pm **Exhibitor Setup**
Exhibit Hall A
- 5:00pm - 6:00pm **ADA Resource Room Opens**
Maryland A&B
- 5:00pm - 6:00pm **Judge's Orientation**
Maryland A&B
- 5:00pm - 6:00pm **HBCU Making & Innovation Showcase Orientation Session**
Wilson ABC
- 6:00pm - 8:00pm **Opening Plenary Session 1 and Dinner**
Marriott Salon 2&3
- Moderator and AAAS Welcome:**
Shirley M. Malcom, *Director, Education and Human Resources (EHR) Programs, AAAS*
- Welcome Remarks:**
William (Jim) Lewis, *Assistant Director (Acting), Directorate for Education and Human Resources (EHR), NSF*
- Dawn Tilbury**, *Assistant Director, Directorate for Engineering (ENG), NSF*
- Willie Rockward**, *NSBP President Elect, Chair & Associate Professor, Department of Physics and Dual-Degree Engineering, Morehouse College*
- Quincy Brown**, *AAAS Program Director, EHR and Lead, HBCU Making & Innovation Showcase*
- Speaker and Q&A:**
Gregory Triplett, *Associate Dean of Graduate Studies and Research Professor, Department of Electrical and Computer Engineering, Virginia Commonwealth University*

ERN Agenda Review and Announcements:
Iris Wagstaff, *AAAS Program Director, EHR, AAAS*

8:00pm - 10:00pm **Exhibit Hall Opens - Session 1**
Exhibit Hall A

Friday, February 23, 2018

- 7:00am - 3:30pm **Registration**
Convention Registration and Lobby
- 7:00am - 7:45am **Oral Presentations Session 1 (Set-Up)**
(See handout for room assignments.)
- Poster Presentations Session 1 (Set-Up)**
Exhibit Hall A
- 7:30am - 9:45am **Networking Breakfast and Plenary Session 2**
Marriott Salon 2&3
- Plenary Moderator and NSF Welcome:**
Claudia Rankins, *Program Director, NSF, EHR*
- Panel on the State of STEM Research in Hurricane Areas and Lessons Learned**
- Moderator and Opening Remarks:**
Juan Ramirez-Lugo, *President of the AAAS Caribbean Division of Biology, UPR-Rio Piedras*
- Panelists:**
Giovanna Guerrero-Medina, *Executive Director of Ciencia Puerto Rico and Yale University*
- Camille McKayle**, *Provost and Vice President for Academic Affairs, University of Virgin Islands*
- Kenneth Boutte**, *Professor of Biology, Xavier University*
- Q&A**

Agenda

	Announcements	Yolanda Trevino , Assistant Vice President for Diversity, Equity, & Multicultural Affairs, Indiana University
9:45am - 10:00am	Break	
10:00am - 12:15pm	Poster Presentations Session 1 <i>Exhibit Hall A</i>	C. Enlightening Physics Through Diversity <i>Park Tower Room 8206</i>
	Oral Presentations Session 1 <i>(See handout for room assignments.)</i>	National Society of Black Physicists (NSBP) Paul Gueye , NSBP Past-President, Assistant Professor, School of Science, Dept. of Physics, Hampton University Willie Rockward , NSBP President-Elect, Chair & Associate Professor, Dept. of Physics & Dual-Degree Engineering, Morehouse College Maurice Roots , Undergraduate Student, Dept. of Atmospheric & Planetary Science, Hampton University
	These include: Biological Sciences (Graduate Students) <i>Virginia A</i>	D. Biomedical Scientists (PhD) & Physician Scientists (MD-PhD) Training Programs: Preparing and Applying <i>Park Tower Room 8229</i>
	Computer Sciences & Information Mgt. (Graduate Students) <i>Park Tower Room 8216</i>	Association of American Medical Colleges (AAMC) Victoria H. Freedman , Associate Dean for Graduate Programs in Biomedical Sciences, Albert Einstein College of Medicine Achsah D. Keegan , Associate Director, Medical Scientist Training Program, Professor of Medicine, Microbiology, & Immunology, University of Maryland School of Medicine
	Ecology, Environmental, & Earth Sciences (Undergraduate Students) <i>Marriott Balcony B</i>	E. Roadmap to Becoming a Doctor <i>Park Tower Room 8210</i>
	Nanoscience (Graduate Students) <i>Marriott Balcony A</i>	Association of American Medical Colleges (AAMC) Rebecca Rice , Director, Business Operations, AAMC Julie Gilbert , Sr. Education Debt Management Specialist, AAMC
	Nanoscience (Undergraduate Students) <i>Park Tower Room 8228</i>	F. Tips & Coaching for Effective Oral & Poster Presentations <i>Mica/Slate/Granite</i>
	Technology & Engineering (Graduate Students) <i>Virginia B</i>	Irene Hulede , Manager Student Programs, American Society for Microbiology (ASM) Olivia Harriott , Associate Professor, Biology, Fairfield College
	Technology & Engineering (Undergraduate Students) <i>Virginia C</i>	
10:00am - 12:15pm	Concurrent Workshops - Session 1	
	A. NSF Graduate Research Fellowship <i>Maryland C</i>	
	Gisèle Muller-Parker , Program Director, NSF EHR	
	B. Funding Your STEM Education: For Undergraduate & Graduate Students <i>Marriott Salon 1</i>	
	Bernard Batson , Director, Diversity Programs, University of South Florida Sara Hernandez , Associate Dean for Inclusion & Student Engagement, Cornell University	

	<p>Beronda Montgomery, <i>Associate Professor, Biochemistry & Molecular Biology, Michigan State University</i></p> <p>G. Pitching Ideas 101 HBCU Making & Innovation Showcase Faculty & Students ONLY Wilson ABC</p>	<p>Biological Sciences (Undergraduate Students) <i>Mica/Slate/Granite</i></p> <p>Chemistry & Chemical Science (Graduate Students) <i>Park Tower Room 8228</i></p> <p>Ecology, Environmental, & Earth Sciences (Undergraduate Students) <i>Marriott Balcony B</i></p> <p>Mathematics & Statistics (Undergraduate & Graduate Students) <i>Park Tower Room 8216</i></p> <p>Physics (Undergraduate Students) <i>Marriott Balcony A</i></p> <p>Technology & Engineering (Graduate Students) <i>Virginia B</i></p> <p>Technology & Engineering (Undergraduate Students) <i>Virginia C</i></p>
12:15pm - 1:30pm	<p>Plenary Session 3 and Lunch <i>Marriott Salon 2&3</i></p> <p>Moderator: James Stith, <i>Vice President Emeritus, American Institute of Physics (AIP)</i></p> <p>Speaker: Dana Bolles, <i>Payload Logistics Lead, NASA Ames Bioscience Division, NASA Ames Research Center</i></p> <p>Announcements</p>	
1:00pm - 3:00pm	<p>HBCU Making & Innovation Showcase Faculty & Students ONLY</p> <p>A. Funding 101 Students - <i>Wilson AB</i> Faculty - <i>Wilson C</i></p>	<p>Concurrent Workshops Session 2</p> <p>A. Funding Your STEM Education: For Undergraduate and Graduate Students <i>Park Tower Room 8210</i></p> <p>Bernard Batson, <i>Director, Diversity Programs, University of South Florida</i> Sara Hernandez, <i>Associate Dean for Inclusion & Student Engagement, Cornell University</i> Yolanda Trevino, <i>Assistant Vice for Diversity, Equity, & Multicultural Affairs, Indiana University</i></p> <p>B. Pathways to Graduate School for Physics Students <i>Park Tower Room 8206</i></p> <p>National Society of Black Physicists (NSBP) Paul Gueye, <i>NSBP Past-President, Assistant Professor, School of Science, Dept. of Physics, Hampton University</i> Phil Duxbury, <i>Professor, Department of Physics & Astronomy, Michigan State</i> John Finley, <i>Department Head & Professor of Physics, Purdue University</i></p>
3:30pm - 5:00pm	<p>HBCU Making & Innovation Showcase Faculty & Students ONLY</p> <p>B. Time with Inventors and Innovators Students & Faculty <i>Wilson ABC</i></p>	
1:30pm - 4:00pm	<p>Exhibit Hall Opens - Session 2 <i>Exhibit Hall A</i></p>	
1:45pm - 4:00pm	<p>Poster Presentations Session 2 (Set-Up) <i>Exhibit Hall A</i></p> <p>Oral Presentations Session 2 (Set-Up) <i>(See handout for room assignments.)</i></p>	
4:00pm - 6:30pm	<p>Poster Presentations Session 2 <i>Exhibit Hall A</i></p> <p>Oral Presentations Session 2 <i>(See handout for room assignments.)</i></p> <p>These include: Biological Sciences (Graduate Students) <i>Virginia A</i></p>	

Agenda

	<p>C. Tips and Coashing for Effective Oral and Poster Presentations <i>Congressional</i></p> <p>Irene Hulede, <i>Manager Student Programs, American Society for Microbiology (ASM)</i> Olivia Harriott, <i>Associate Professor, Biology, Fairfield College</i> Beronda Montgomery, <i>Associate Professor, Biochemistry & Molecular Biology, Michigan State University</i></p>		<p>Alan Gordon, <i>Senior Director of Data, Analytics, & Operations - National Trust for Historic Preservation</i> Ashley Huderson, <i>Manager, Engineering Education, American Society of Mechanical Engineers</i> Divita Mathur, <i>Postdoctoral Research Fellow, U.S. Naval Research Laboratory</i> Ruth Shuman, <i>Program Director, Division of Industrial Innovation & Partnerships (IIP), NSF ENG</i></p>
4:00pm - 4:15pm	<p>D. Coding Coaching with Google <i>Marriott Salon 2</i></p> <p>E. EFRI-REM Networking Session 1 (Invitation Only) <i>Maryland C</i></p> <p>Welcome: Sohi Rastegar, <i>Senior Advisor & Office Head, Office of Emerging Frontiers & Multidisciplinary Activities (EFMA), Directorate for Engineering (ENG)</i></p>	4:15pm - 6:15pm	<p>F. EFRI-REM Mentor Session 2 Invitation Only <i>Marriott Salon 1</i></p> <p>Tuere Bowles, <i>Associate Professor in the Department of Leadership, Policy, Adult & Higher Education, North Carolina State University</i> Christine Grant, <i>Associate Dean of Faculty Advancement in the College of Engineering, North Carolina State University</i> Andrew Greenberg, <i>Distinguished Faculty Associate in the College of Engineering, University of Wisconsin-Madison</i></p>
4:15pm - 5:00pm	<p>EFRI-REM Mentees Session <i>Maryland C</i></p> <p>1st Seminar Talk</p> <p>Moderator: Kerstin Mukerji, <i>Program Manager, Office of Emerging Frontiers & Multidisciplinary Activities (EFMA), NSF ENG</i></p> <p>Speaker: Jesus Soriano, <i>Program Director, Division of Industrial Innovation & Partnerships (IIP), NSF ENG</i></p>	6:00pm - 6:45pm	<p>EFRI-REM Mentees Session <i>Maryland C</i></p> <p>2nd Seminar Talk</p> <p>Luz Santana, <i>Co-Director, Right Question Institute</i></p>
5:00pm - 6:00pm	<p>Career Panel <i>Maryland C</i></p> <p>Moderator: Brian Gray, <i>AAAS Science & Technology Policy Fellow, Office of Emerging Frontiers & Multidisciplinary Activities (EFMA), NSF ENG</i></p> <p>Panelists: Garie Fordyce, <i>NSF EFRI Program Manager (retired)</i> Bobbie Verdegaal, <i>DC New Teacher of the Year 2017, Washington DC Public Schools</i></p>	<p>6:30pm</p> <p>7:00pm - 9:00pm</p>	<p>Dinner on Your Own</p> <p>Invitation-Only Networking Sessions</p> <p>EFRI-REM Dinner Networking Session <i>Marriott Salon 1</i></p> <p>Moderator: Sohi Rastegar, <i>NSF ENG EFMA/EFRI</i></p> <p>Speaker: Gilda Barabino, <i>Daniel and Frances Berg Professor and Dean of the Grove School of Engineering at the City College of New York (CCNY) and President, American Institute of Medical and Biological Engineering</i></p>

7:00pm - 9:00pm **Graduate Student Career & Students with Disabilities Networking Dinner**
Virginia

National Society of Black Physicists Networking Dinner
Marriot Salon 2

Saturday, February 24, 2018

7:00 am **Breakfast on Your Own**

7:00am - 2:00pm **Registration**
Marriott Foyer

7:30am - 5:30pm **Judge's Room Opens**
Maryland A&B

7:30am - 8:00am **Poster Presentations Sessions 3 and 4 (Set-Up)**
Exhibit Hall A

Oral Presentations Sessions 3 and 4 (Set-Up)
(See handout for room assignments.)

8:00am - 12:30pm **ADA Resource Room Opens**
Maryland A&B

8:00am - 10:30am **Poster Presentations Session 3**
Exhibit Hall A

Oral Presentations Session 3
(See handout for room assignments.)

These include:
Biological Sciences (Graduate Students)
Virginia A

Biological Sciences (Undergraduate Students)
Delaware B

Chemistry & Chemical Sciences (Undergraduate Students)
Delaware A

Ecology, Environmental & Earth Sciences (Graduate Students)
Marriott Balcony B

Physics (Graduate Students)
Marriott Balcony A

Social, Behavioral, & Economic Sciences/Technology & Engineering Education (Graduate Students)
Park Tower Room 8216

Technology & Engineering (Graduate Students)
Virginia B

Tecnology & Engineering (Undergraduate Students)
Virginia C

8:00am - 10:30am **Concurrent Workshop - Session 3**

A. Job Search Strategies: Writing an Interview-Winning CV/Resume
Maryland C

Irene Hulede, Manager Student Programs, American Society for Microbiology (ASM)
Olivia Harriott, Associate Professor, Biology, Fairfield College
Beronda Montgomery, Associate Professor, Biochemistry & Molecular Biology, Michigan State University

B. Students Training in Physics
Park Tower Room 8206

National Society of Black Physicists (NSBP)
Paul Gueye, NSBP Past-President NSBP, Assistant Professor, School of Science, Dept. of Physics, Hampton University
Willie Rockward, NSBP President-Elect, Chair & Associate Professor, Dept. of Physics & Dual-Degree Engineering, Morehouse College
Brad Conrad, Director of the Society of Physics Students & Sigma Pi Sigma, the Physics Honors Society, American Institute of Physics

8:00am - 9:30am **HBCU Making & Innovation Showcase Session (Invitation Only)**
Wilson ABC

Breakfast and Showcase Set-Up (Invitation Only)

9:30am - 10:30am **HBCU Making & Innovation Showcase**
Wilson ABC

9:00am - 12:30pm **Exhibit Hall Opens - Session 3**
Exhibit Hall A

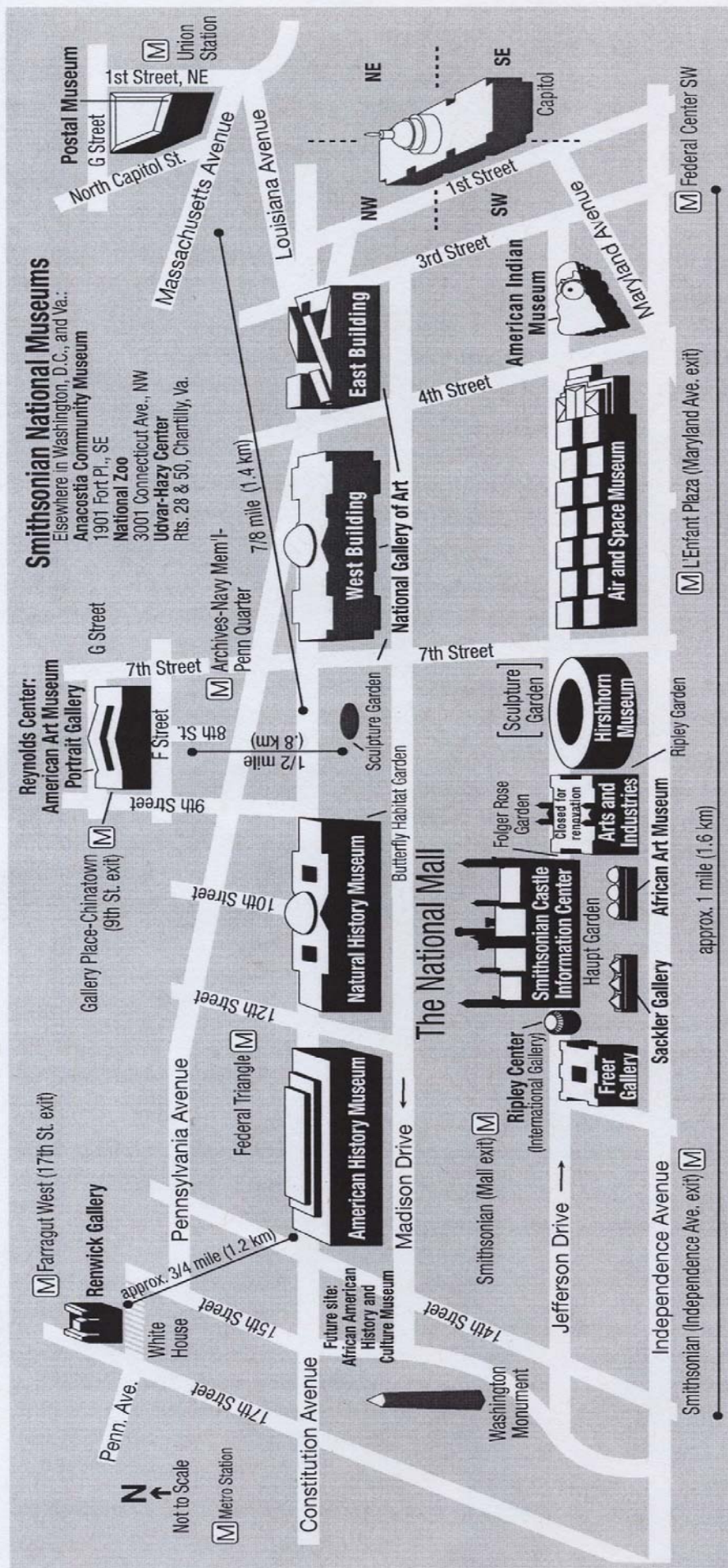
Agenda

11:00am - 12:30pm	<p>Poster Presentations Session 4 <i>Exhibit Hall A</i></p> <p>Oral Presentations Session 4 <i>(See handout for room assignments.)</i></p> <p>These include: Ecology, Environmental & Earth Sciences (Graduate Students) <i>Marriott Balcony B</i></p> <p>Chemistry & Chemical Sciences (Undergraduate Students) <i>Delaware A</i></p> <p>Computer Sciences & Information Mgt. (Undergraduate Students) <i>Virginia A</i></p> <p>Nanoscience (Undergraduate Students) <i>Delaware B</i></p> <p>Physics (Graduate Students) <i>Marriott Balcony A</i></p> <p>Social, Behavioral, & Economic Sciences/Mathematics Education (Undergraduate Students) <i>Park Tower Room 8216</i></p> <p>Technology & Engineering (Graduate Students) <i>Virginia B</i></p>	<p>Victoria H. Freedman, Associate Dean for Graduate Programs in Biomedical Sciences, Albert Einstein College of Medicine</p> <p>Acsah D. Keegan, Associate Director, Medical Scientist Training Program (MSTP), Professor of Medicine & Microbiology & Immunology, University of Maryland School of Medicine</p> <p>C. Computational, Visualization & Data Science: Solutions for World Changing Science <i>(Mica/Slate/Granite)</i></p> <p>Linda Akli, Assistant Director of Training, Education & Outreach, SURA</p> <p>Vetria Byrd, Assistant Professor, Purdue University</p> <p>Michael Smith, Director, Software Academic Program for Perceptual Computing & the Internet of Things</p> <p>D. Job Search Strategies: Writing an Interview Winning CV/Resume <i>Park Tower Room 8212</i></p> <p>Irene Hulede, Manager Student Programs, American Society for Microbiology (ASM)</p> <p>Olivia Harriott, Associate Professor, Biology, Fairfield College</p> <p>Beronda Montgomery, Associate Professor, Biochemistry & Molecular Biology, Michigan State University</p>
11:00am - 12:30pm	<p>Concurrent Workshop - Session 4</p> <p>A. Pathways to National Physics (NSPB Session) <i>Park Tower Room 8206</i></p> <p>Artemis Spyrou, Associate Professor & Associate Director for Education, Experimental Nuclear Physics, Facility for Rare Isotope Beams</p> <p>Lisa Surles-Law, Science Education Administrator, Thomas Jefferson National Accelerator Facility</p> <p>Lyndele VonSchill, Director, Office of Diversity & Inclusion, National Radio-Astronomy Observatory</p> <p>B. Biomedical Scientists (PhD) & Physician Scientists (MD-PhD) Training Programs: Personal Statement and the Interview <i>Park Tower Room 8228</i></p>	<p>E. Innovation in Action Series: Leveraging Your STEM Degree to Innovate Wherever You Land <i>Maryland C</i></p> <p>Ashley Henderson, Manager of Engineering Education, American Society of Mechanical Engineering & Founder & CEO of STEM Innovation Consulting, LLC</p> <p>Tracee Gilbert, President & Founder, System Innovation</p> <p>11:00am - 1:00pm</p> <p>F. EFRI-REM Poster Session <i>Virginia C</i></p> <p>11:00am - 11:30am</p> <p>EFRI-REM Poster Room Setup <i>Virginia C</i></p>

11:30am - 1:00pm	EFRI-REM Poster Judging <i>Virginia C</i> Moderator: Brian Gray , <i>NSF ENG EFMA/EFRI</i>	Speaker and Q&A: Jedidah Isler , <i>NSF Postdoctoral Fellow in Astrophysics at Vanderbilt University & Creator and Host of Vanguard: Conversations with Women of Color in STEM (#VanguardSTEM) and STEM en Route to Change (The SeRCH Foundation, Inc.)</i>
12:30pm	Exhibits Close <i>Exhibit Hall A</i>	
12:30pm	Lunch On Your Own	Recognition of David and Lucile Packard HBCU Scholars: James Stith , <i>Vice President Emeritus, American Institute of Physics (AIP)</i>
12:30pm - 2:30pm	EFRI-REM Lunch (Invitation Only) <i>Virginia A</i> HBCU Making & Innovation Showcase Wrap-up & Lunch (Invitation Only) <i>Wilson ABC</i>	Recognition of the AAAS Policy Fellows, SACNAS Leadership Institute Alumni, and the L'Oreal USA for Women in Science (FWIS) Fellows: Shirley M. Malcom , <i>Director, EHR, AAAS</i>
1:00pm - 1:45pm	SWOT Session for EFRI-REM Mentees (Invitation Only) <i>Virginia C</i> Sohi Rastegar , <i>NSF ENG EMFA/EFRI</i> Kerstin Mukerji , <i>NSF ENG EMFA/EFMA</i> Brian Gray , <i>NSF ENG EFMA/EFRI</i>	Presentation of EFRI-REM Poster Awards: Sohi Rastegar , <i>Director of EFMA/EFRI, NSF</i>
1:00pm - 1:45pm	SWOT Session for EFRI-REM Mentors (Invitation Only) <i>Virginia B</i> Moderators: Sohi Rastegar , <i>NSF ENG EFMA/EFRI</i> Kerstin Mukerji , <i>NSF ENG EFMA/EFRI</i>	Presentation of the HBCU Making & Innovation Showcase Awards: Quincy Brown , <i>Program Director, EHR, AAAS</i>
1:45pm - 3:00pm	EFRI-REM Mentee Interviews <i>Virginia C</i> EFRI-REM Mentor Interviews <i>Virginia B</i>	Presentation of the ERN Video Competition Awards: Tarrick Clayton , <i>Program Associate, EHR, AAAS</i>
12:30pm - 3:30pm	Judges Meeting and Lunch (Determining Awardees) <i>Maryland A&B</i>	Presentation of Oral and Poster Awards: Jonathan Lambright , <i>Professor, Dean of College of Sciences and Technology, Savannah State University</i>
2:00pm - 6:00pm	Free Time for Tours or Special Meetings	Shirley M. Malcom , <i>Director, EHR, AAAS</i> Claudia Rankins , <i>Program Director, HRD, NSF</i>
6:00pm - 9:00pm	Plenary Session 4 and Awards Banquet <i>Marriott Salon 2&3</i> (Doors open at 5:45pm) Moderator: Shirley M. Malcom , <i>Director, EHR, AAAS</i>	Presentation of Conference Incentives: <i>AAAS ERN Conference Staff</i> Networking and Karaoke <i>Marriott Salon 2&3</i>
		9:30pm - 12:00am



Smithsonian



Smithsonian National Museums

Eisewhere in Washington, D.C., and Va.:

Anacostia Community Museum

1901 Fort Pl., SE

National Zoo

3001 Connecticut Ave., NW

Udvar-Hazy Center

Rts. 28 & 50, Chantilly, Va.

Reynolds Center:

American Art Museum

Portrait Gallery

Gallery Place-Chinatown

(9th St. exit)

7th Street

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101st Street

Renwick Gallery

White House

Future site:

African American

History and

Culture Museum

Constitution Avenue

Madison Drive

Smithsonian (Mall exit)

Ripley Center

(International Gallery)

Freer Gallery

Sackler Gallery

African Art Museum

Haupt Garden

Smithsonian Castle

Information Center

Arts and Industries

Hirshhorn Museum

Sculpture Garden

Folger Rose Garden

Butterfly Habitat Garden

Natural History Museum

American History Museum

West Building

East Building

National Gallery of Art

American Indian Museum

Air and Space Museum

Capitol

Union Station

Postal Museum

1st Street, NE

G Street

North Capitol St.

Massachusetts Avenue

Louisiana Avenue

3rd Street

4th Street

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Metro Station

Federal Triangle

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Produced by: Office of Visitor Services
 Smithsonian Information Center (located in the Castle)
 1000 Jefferson Drive, SW, Washington, DC
 202-633-1000 (voice/tape)
 Open daily 8:30 a.m.-5:30 p.m.; closed December 25

Note: Information subject to change without notice.



Gilda A. Barabino, *Daniel and Frances Berg Professor and Dean of The Grove School of Engineering at The City College of New York (CCNY) & President, American Institute for Medical and Biological Engineering*

Gilda A. Barabino is the Daniel and Frances Berg Professor and Dean of The Grove School of Engineering at The City College of New York (CCNY). She holds appointments in the Departments of Biomedical Engineering and Chemical Engineering and the CUNY School of Medicine. Prior to joining CCNY, she served as Associate Chair for Graduate Studies and Professor in the Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory. At Georgia Tech she also served as the inaugural Vice Provost for Academic Diversity. Prior to her appointments at Georgia Tech and Emory, she rose to the rank of Full Professor of Chemical Engineering and served as Vice Provost for Undergraduate Education at Northeastern University. She is a noted investigator in the areas of sickle cell disease, cellular and tissue engineering, and race/ethnicity and gender in science and engineering.

Barabino received her B.S. degree in Chemistry from Xavier University of Louisiana and her Ph.D. in Chemical Engineering from Rice University. She is a Fellow of the American Association for the Advancement of Science, the American Institute of Chemical Engineers, the American Institute for Medical and Biological Engineering (AIMBE) and the Biomedical Engineering Society (BMES). She was awarded an honorary doctorate by Xavier University of Louisiana in 2016. She is the President of AIMBE and a Past-President of BMES.

Barabino is a member of the National Science Foundation's (NSF) Advisory Committee for Engineering and has served on the National Institutes of Health's National Advisory Dental and Craniofacial Research Council. Barabino consults nationally and internationally on STEM education and research, diversity in higher education, policy, workforce development and faculty development. She directs the NSF Minority Faculty Development Workshop and is the founder and Executive Director of the National Institute for Faculty Equity.



Dana Bolles, *Payload Logistics Lead, NASA Ames Bioscience Division, NASA Ames Research Center*

Dana Bolles began her career at NASA's Kennedy Space Center in Florida as a flight systems safety engineer. Her projects included payloads such as the Mars Orbiter and the third assembly flight for the

International Space Station. After almost three years, Bolles spent the next 1-1/2 years at NASA's Goddard Space Flight

Center, Greenbelt, MD, as a fire protection safety engineer. She transferred to NASA Ames in 1999, where she has remained since.

For her first 8 years at Ames, Bolles worked as an environmental compliance specialist. She managed programs that monitored air quality, industrial wastewater discharge, toxic gases, and aboveground storage tanks. She helped NASA Ames carry out its commitment to environmental protection by ensuring compliance with Federal, State, and local environmental regulations and by obtaining the required permits for all equipment and processes that had the potential to pollute the air, water, and/or ground. For the next 2 years, Bolles worked in Strategic Communications. She was in Government Relations her first year, where she acted as a liaison to local elected officials. She ensured they were aware of NASA Ames' activities and coordinated tours for elected officials and their staff members. Her second year was spent in the Speakers Bureau (SB), coordinating NASA speakers for events in any of the 9-1/2 states supported by Ames' SB program. She also assisted with special projects requiring an outreach component.

After her time in Strategic Communications at NASA Ames, Bolles transferred to the Bioscience Division in the Flight Systems Implementation Branch. She worked for the Human Research Program (HRP) for the next 6 years. The HRP conducts research and develops technologies that allow humans to travel safely and productively in the environment of space. In her role with HRP, Bolles assisted with the Program/Project integration efforts and managed a number of tasks including Risk Management, Data Accessibility, and Information Management. In January 2016, Bolles began training in her new role as Payload Logistics Lead. She ensures the logistics run smoothly for all of the life science payloads that are managed within her organization.



Kenneth G. Boutte Sr., *Professor of Biology, Department of Biology, Xavier University*

Kenneth G. Boutte, Sr. is Professor of Biology and the former Dean of Freshman Studies and former Associate Dean of Summer Programs and External Initiatives at Xavier University of Louisiana located in

New Orleans. Boutte received his BS degree *cum laude* in Biology from Xavier University of Louisiana in May of 1976. He earned the Ph.D. in Zoology from the University of California, Berkeley in December 1983. He was the third African American to earn the Ph.D. from Berkeley's Zoology Department and the first in the area of immunoparasitology. His research interests involved the host-parasite interface of *Taenia crassiceps* tapeworms. Later he worked on gene sequences in

Biographies

Trypanosoma (African Sleeping Sickness) that could serve as targets for chemotherapy.

Boutte joined the faculty of the Biology Department at Xavier University in August of 1985. He became an Associate Professor of Biology with tenure in 1991. In 1995, he became the Chairman of the Biology Department, in July of 1997 he became the Associate Dean of the College of Arts and Sciences, in 1998 he attained the rank of Professor of Biology, and in July 2007 he became Dean of Freshman Studies. In 2010 he was on loan from Xavier to the National Science Foundation (NSF) where he served as a Program Officer for the Louis Stokes Alliances for Minority Participation (LSAMP) program and provided oversight to over \$18 million in grant projects. He returned to Xavier in January 2011.

Boutte was a Scholar in Residence at New York University in 1991 and 1992. He has held several appointments, including the New Orleans Mosquito, Termite, and Rodent Control Board, The National Institutes of Health (NIH) BRIDGES Grant Review Panel, the Higher Education Advisory Group for the National Educational Goals panel, the Chancellor's Council for Tulane University's School of Medicine, The NSF Grant Review Panel, and the Board of Directors for St. Augustine High School in New Orleans. He is a 2005 graduate of Harvard University's Management Development Program.

Boutte has dedicated his life to the education of underrepresented minorities, particularly in the sciences. He was the founder and director of the Ernest E. Just Pre-Graduate Scholars Program at Xavier, which was significant in increasing the number of science and mathematics students who entered graduate school. He is involved with Xavier's Pre-Medical Program, which has gained national reputation as a leading producer in the United States of African-American medical students. He was also involved in and contributed to Xavier's Model Institution of Excellence program, a NSF-funded program of \$12.3 million, with a goal of increasing the number of Xavier science, engineering, and mathematics students who enter graduate school. He has served as the PI or Co-PI on several grants. Boutte has personally applied and obtained over \$150,000 in scholarship money for Xavier students, and has secured more than \$4 million in grants for programs involving Xavier students and faculty. He serves as the Grand Marshall for official University functions (University convocations, Baccalaureate, and Commencement).

As Dean of Freshman Studies, Boutte was responsible for the operations of the Office of Academic Enhancement with a mission to improve retention and graduation rates of freshmen and students who are academically at risk. He has spoken on this topic in several venues. As Associate Dean of Summer Programs and External Initiatives, Boutte's duties included serving as coordinator of summer courses and programs, director of University exchange programs, and coordinator of

articulation agreements and partnerships with other institutions.



Quincy Brown, AAAS Program Director, EHR and Lead for HBCU Making & Innovation Showcase

Quincy Brown is a Program Director for STEM Education Research at the American Association for the Advancement of Science (AAAS). Her project portfolio includes the Robert Noyce Teacher

Scholarship Program and investigating innovations in Preservice STEM teacher education, investigating STEM mentoring practices, supporting the AAAS Emerging Researchers National Conference, and investigating making and innovation on HBCU campuses.

She was previously a Senior Policy Advisor in the White House Office of Science and Technology Policy. There, her portfolio included Agricultural Entrepreneurship, STEM Education, and the My Brother's Keeper STEM+Entrepreneurship initiatives. She is a co-founder of NationOfMakers.org and blackcomputeHER.org. She spent two years as an AAAS Science & Technology Policy Fellow at the National Science Foundation in the CISE Directorate. She earned her Ph.D. in Computer Science from Drexel University. She was a recipient of the Computing Community Consortium (CCC) CI Fellows Postdoctoral Research Fellowship award and was a National Science Foundation GK-12 and Bridge to the Doctorate Fellow.

Brown was also a Professor of Computer Science at Bowie State University. Her research interests included Mobile HCI, CS Education, and Broadening Participation in Computing. In 2011 she founded Girls Who Will, a summer program for middle and high school girls. Through her research she sought to identify methods of facilitating human interaction with advanced technologies to support learning. Her projects included exploring the ways in which young children use touch and gesture interactions with mobile devices, first responders' use of mobile devices during emergency evacuations, and modeling inquiry behaviors on mobile devices.



Yolanda S. George, Deputy Director and Program Director, AAAS EHR

Yolanda Scott George is Deputy Director and Program Director, Education and Human Resources Programs, American Association for the Advancement of Science (AAAS). She has served as Director of Development, Association of

Science-Technology Centers (ASTC), Washington, DC; Director,

Professional Development Program, University of California, Berkeley; and as a research biologist at Lawrence Livermore Laboratory involved in cancer research and cell cycle studies using flow cytometer and cell sorters.

George has conducted evaluations, workshops and reviews for the National Institutes of Health and National Science Foundation (NSF), as well as for private foundation and public agencies, including the European Commission. She works with UNIFEM, UNESCO, L'Oreal USA and Paris and non-governmental organizations on gender, science, and technology initiatives related to college and university recruitment and retention and women leadership in STEM.

She serves or has served as principal investigator (PI) or co-PI on several NSF grants, including Vision and Change in Undergraduate Biology Education; National Science Education Digital Library Biological Sciences Pathways; Historically Black Colleges and Universities-Undergraduate Programs; Robert Noyce Teacher Scholarship Program; Transforming Undergraduate Education in STEM (TUES) and Virtual Faculty Workshop; and Women's International Research Collaborations at Minority Serving Institutions. In addition, George is the lead AAAS staff person for the L'Oreal USA Fellowships for Women in Science Program (postdoctoral fellowships) and the David and Lucile Packard Foundation HBCU Graduate Scholars Program (graduate school fellowships).

George serves or has served on a number of boards or committees, including: PBS NewsHour Science Advisory Committee; Burroughs Wellcome Fund, Science Enrichment Program Grants, Advisory Board; The HistoryMakers, ScienceMakers, Advisory Board; and the National Advisory Board of the American Physical Society Physics Bridge Program.

George has authored or co-authored over 50 papers, pamphlets, and hands-on science manuals. She received her B.S. and M.S. from Xavier University of Louisiana and Atlanta University in Georgia, respectively.



Giovanna Guerrero-Medina, *Executive Director of Ciencia Puerto Rico and Yale University*

Giovanna Guerrero-Medina is the Director of the Yale Ciencia Initiative at Yale University. She is also the Executive Director of Ciencia Puerto Rico (www.cienciapr.org/en), an international network of scientists, students and educators committed to promoting scientific outreach, education and careers among Latinos. Through these positions, Guerrero-Medina develops and studies programs that broaden participation in STEM education and careers. Under her leadership, CienciaPR has

become one of the largest networked communities of Hispanic scientists in the world, has secured federal and foundation funding to support diversity in science education and career development, and in 2015 received recognition as a Bright Spot in science education by the White House. Guerrero-Medina serves as principal investigator of the NIH-funded Yale Ciencia Academy, a national program to provide graduate students with opportunities for professional development, outreach, and networking. In the past, she also led "Seeds of Success," an Amgen Foundation-supported program to promote the participation of Latina middle school girls in STEM.

Guerrero-Medina has worked as Head of Science Policy at the Van Andel Research Institute, as Health Science Policy Analyst at the National Institutes of Health, and was a 2005 Christine Mirzayan Science and Technology Policy Fellow at the National Academies. She has a Ph.D. in Molecular and Cell Biology from the University of California, Berkeley where she had a Howard Hughes Pre-Doctoral Fellowship to study the development of neuronal connections and develop genetically encoded sensors of synaptic activity. She received her B.A. in Biology from the University of Puerto Rico, Rio Piedras.



Jedidah Isler, *NSF Postdoctoral Fellow in Astrophysics at Vanderbilt University and Creator and Host of Vanguard: Conversations with Women of Color in STEM (#VanguardSTEM) and STEM en Route to Change (The SeRCH Foundation, Inc.)*

Jedidah Isler is a NSF Postdoctoral Fellow in Astrophysics at Vanderbilt University where she studies hyperactive, supermassive black holes. Her scientific research explores the physics of blazars – supermassive black holes at the centers of galaxies that create particle jets moving at nearly the speed of light.

She is a proud alumna of Norfolk State University's Dozoretz National Institute for Mathematics and Applied Sciences and the Fisk-Vanderbilt Bridge Program. In 2014, she became the first African-American woman to receive her Ph.D. in Astrophysics from Yale University. Her innovative and award-winning research has been supported by fellowships from the NSF, NASA, and the Ford Foundation. She has appeared on numerous radio and television programs including NPR's *All Things Considered*, the Science Channel's *How the Universe Work*, and the 2016 National Geographic feature miniseries *MARS*. A 2015 TED Fellow and a 2017 Senior TED Fellow, more than 2.5 million viewers have watched her TED talks.

Isler is an outspoken advocate of inclusion and empowerment in STEM fields and is the creator and host of *Vanguard: Conversations with Women of Color in STEM (#VanguardSTEM)*.

Biographies

Her non-profit organization, STEM en Route to Change (The SeRCH Foundation, Inc.), is dedicated to using STEM as a pathway for social justice and has developed a variety of initiatives including the *#VanguardSTEM* online platform and web series. Isler has also worked with museums, libraries, planetariums, schools, and universities across the country to inspire the next generation of STEM leaders.

In 2015, she served as a co-organizer of the NSF-funded Inclusive Astronomy conference and later presented the conference's recommendations to the President's Council of Advisors on Science and Technology. Currently, she serves on the American Institute of Physics Taskforce on the Underrepresentation of African Americans in Physics and Astronomy. Her advocacy and research have won her recognition as a Kavli Frontiers of Science Fellow by the National Academy of Science (2015), a National Geographic Emerging Explorer (2016), and one of *The Root Magazine's* 100 Most Influential African Americans (2016). You can connect with Isler via social media @jedidahislerphd.



Sylvia M. James, *Acting Deputy Assistant Director, Directorate for Education and Human Resources (EHR), NSF*

Sylvia M. James is currently the Acting Deputy Assistant Director of the National Science Foundation's (NSF) Directorate for Education and Human Resources (EHR).

The mission of EHR is to "...provide the research foundation to develop a diverse, STEM literate public and workforce ready to advance the frontiers of science and engineering for society." As the Acting Deputy Assistant Director, she oversees aspects of directorate program development, staffing, performance management, and internal and external communications.

Prior to assuming this role in January 2017, she served as the Director of the Division of Human Resource Development (HRD). As Division Director, she managed a \$148 million budget and a talented team of scientific and administrative staff. During her 15 year tenure at NSF, she has served as the Acting Division Director of the HRD Division, Acting Director and Acting Deputy Director of the Division of Research on Learning in Formal and Informal Settings, Lifelong Learning Cluster Coordinator, and Lead Program Director/Program Director for several EHR programs including ISE, ITEST, ATE, ASCEND, and AYS.

James currently serves as the Co-Chair of the Federal Coordination in STEM Broadening Participation Interagency Working Group and was a member of the Burroughs Wellcome Fund, Student Science Enrichment Program Advisory Committee from 2012-2016. She has served as an education consultant for science education radio, youth publications, and museums and

an adjunct science faculty member. James holds a Bachelor of Science degree in Biology from Loyola University, a Master of Science degree from Johns Hopkins University, and a Doctorate in Science Education from Morgan State University, all located in Baltimore, MD.



Jonathan Lambright, *Professor, former Dean of Colleges of Sciences and Technology, Savannah State University*

Jonathan Lambright is Full Professor and former Dean of the Colleges of Sciences and Technology at Savannah State University. He has also served as interim Assistant Vice President of Academic

Affairs and Chair of the Engineering Technology and Mathematics Department at Savannah State.

Lambright received his B.S. in Mechanical Engineering from North Carolina A&T in 1985. After working for 3 years as a Mechanical Engineer at the Department of Defense, he returned to graduate school at North Carolina A&T and received his M.S. in Mechanical Engineering in 1990 with a focus in Computer Aided Design and Manufacturing. He then attended Georgia Institute of Technology's George W. Woodruff School of Mechanical Engineering and received his Ph.D. in 1996.

While at Georgia Tech his studies focused on design methodology and manufacturing automation. During the period between 1992 and 1996, Jonathan worked for the Lockheed Martin Aeronautical Systems Co. in Marietta GA. At Lockheed, he worked on various research and development projects within the Advanced Design department. The research projects at Lockheed consisted of Computer Assisted Manufacturing Tools, Design Tools using Knowledge-Based Systems and Advance Database applications. Between 1996 and 2002, he consulted with Fortune 500 and other companies in areas of Enterprise Applications including Manufacturing Execution Systems and Customer Relation Management Systems.

In 2006, he received the Savannah State University NROTC teacher of the year award and the NSF HBCU-UP Mentor Award. In 2008, he was selected as a Summer Faculty Fellow at NASA Stennis Space Center. During the 2010-11 academic year, Lambright participated in and became a graduate of the University System of Georgia's Executive Leadership Institute. He has taught courses for the Georgia Tech Regional Engineering Program at Savannah State and has been involved in engineering education research targeted at increasing the numbers of minority students majoring and graduating from engineering disciplines.



W. James "Jim" Lewis, *Deputy Assistant Director for the Education and Human Resources Directorate at the National Science Foundation*

W. James "Jim" Lewis is the Aaron Douglas Professor of Mathematics and Director of the Center for Science, Mathematics, and Computer Education at the University of Nebraska-Lincoln (UNL). At UNL, Lewis has served as president of the faculty Senate, president of the AAUP chapter, and chair of the Department of Mathematics (1988-2003). During the time he served as department chair, it won the University-wide Department Teaching Award and an NSF Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. He has received many teaching awards including the University's Outstanding Teaching and Instructional Creativity Award, membership in UNL's Academy of Distinguished Teachers, and the Carnegie Foundation's 2010 Nebraska Professor of the Year.

He is also the recipient of the UNL Chancellor's Commission on the Status of Women Award for his support of opportunities for women in the mathematical sciences and the UNL's Louise Pound-George Howard Distinguished Career Award. In 2015, Lewis was recognized by the Mathematical Association of America's Gung and Hu Award for Distinguished Service and the American Mathematical Society's Award for Impact on the Teaching and Learning of Mathematics.

Lewis has been PI or co-PI for several NSF grants including PI for two NSF Math Science Partnerships, the Math in the Middle Institute Partnership, and NebraskaMATH. He was chair of the committee that produced the CBMS report, *The Mathematical Education of Teachers*, in 2001 and chair of the writing team for the follow-up publication, *The Mathematical Education of Teachers II*, in 2012. He was co-chair of the National Research Council committee that produced *Educating Teachers of Science, Mathematics and Technology: New Practices for the new Millennium*.

He was a member of the AMS Task Force that produced *Towards Excellence: Leading a Doctoral Mathematics Department in the 21st Century* as well as the author of the first four chapters of this book. He was also a member of the NRC Committee that produced *Preparing Teachers: Building Evidence for Sound Policy*. He is a past chair of the Conference Board of the Mathematical Sciences, the Mathematical Association of America's Coordinating Council on Education and the American Mathematical Society's Committee on Education. He received his Ph.D. in mathematics from Louisiana State University. Lewis is currently on leave from UNL and serving as the Deputy Assistant Director for the Education and Human Resources Directorate at the National Science Foundation.



Shirley M. Malcom, *Director, Education and Human Resources Programs, AAAS*

Shirley Malcom is Head of Education and Human Resources Programs at AAAS. She works to improve the quality and increase access to education and careers in STEM fields as well as to enhance public science literacy. Malcom is a trustee of Caltech and a regent of Morgan State University, and a member of the SUNY Research Council. 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, AL, received her Ph.D. 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 17 honorary degrees.

Malcom serves on the boards of the Heinz Endowments, Public Agenda, the National Math-Science Initiative and Digital Promise. 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, serving as co-chair of the Gender Advisory Board of the UN Commission on S&T for Development and Gender InSITE, a global campaign to deploy S&T to help improve the lives and status of girls and women. In 2003, Malcom received the Public Welfare Medal of the National Academy of Sciences, the highest award given by the Academy.



Camille A. McKayle, *Provost and Vice President for Academic Affairs, University of the Virgin Islands*

Camille A. McKayle is Provost and Vice President of Academic Affairs at the University of the Virgin Islands (UVI). Before this, she served as Dean of the College of Science and Mathematics.

McKayle has a deep commitment to quality education. She has served as principal investigator and project director for various grant projects at the university that aimed to strengthen the quality of the preparation in science and mathematics for students at UVI, as well as students in K-12 Virgin Islands schools. The overall goal of those efforts was increasing the number of students that became and remained interested in the science, technology, engineering or mathematics (STEM) disciplines and ultimately choose to enter the STEM workforce. The newest project seeks to identify those leadership qualities that have led to the successes that HBCUs

Biographies

have realized in producing quality STEM graduates throughout the years.

From 2005-2008, McKayle was on loan to the National Science Foundation, where she was the Program Officer for the Historically Black Colleges and Universities Undergraduate Program, in the Directorate for Education and Human Resources. McKayle received her B.S. in Mathematics from Bates College, and M.S. and Ph.D., also in Mathematics, from Lehigh University. Her current research is in the areas of STEM Education and STEM Leadership.



Juan S. Ramirez-Lugo, President of the AAAS Caribbean Division and Department of Biology, UPR – Río Piedras

Juan S. Ramírez-Lugo is an Assistant Professor in the Department of Biology at the University of Puerto Rico, Río Piedras. With a background in molecular biology and biochemistry, Juan currently works on

the development, implementation and assessment of course-based undergraduate research experiences (CUREs) which bring together research themes from marine biology, molecular biology, agroecology and quantitative analyses. These multidisciplinary projects are geared towards broadening the impact of research on the development of a more diverse and inclusive scientific workforce to address pressing scientific challenges. For the past two years, Juan has served as President of the Caribbean Division of the American Association for the Advancement of Science, which promotes science and innovation initiatives that impact society, education in science and technology and international cooperation through scientific efforts. He is also obsessed with fruits.



Claudia Rankins, Program Director, NSF EHR

Claudia Rankins is a Program Officer in the Directorate for Education and Human Resources at the National Science Foundation, where she manages the Historically Black Colleges and Universities (HBCUs) Undergraduate Program and the

Centers for Research Excellence in Science and Technology. Prior to this post, Rankins served at Hampton University for 22 years in many capacities, including endowed university professor, chair of the department of physics, assistant dean for research, and dean of the School of Science.

Her formal education includes military training; certification as translator and interpreter for German, French and English; a B.S. in Mathematics from Christopher Newport University; an M.S. in

Statistics from Old Dominion University; and an M.S. in Physics and a Ph.D. in Physics both from Hampton University. Rankins is an advocate for STEM education and research at HBCUs. Her current research interests center around the history of STEM at these institutions. Her research in theoretical particle physics focused on the development of a model to describe distribution amplitudes and form factors of pseudoscalar mesons. Rankins is the co-founder of the Society of STEM Women of Color, Inc.



Sohi Rastegar, Senior Advisor and Head, Office of Emerging Frontiers and Multidisciplinary Activities and Emerging Frontiers of Research and Innovation Program, NSF Directorate for Engineering

Sohi Rastegar is the Senior Advisor and Office Head of the Emerging Frontiers and Multidisciplinary Activities (EFMA) and Emerging Frontiers Research and Innovation (EFRI) Program in the NSF Directorate for Engineering. He joined NSF in November 2003 following fifteen years of academic and administrative service at Texas A&M University, Virginia Commonwealth University, and the Johns Hopkins University. He has been an Invited Professor at the Swiss Institute of Technology in Lausanne, Switzerland. He earned his B.S. (Highest Honors) and M.S. in Aerospace Engineering, and his Ph.D. in Biomedical Engineering at the University of Texas at Austin. Rastegar has over 150 scientific publications and presentations and has trained 8 PhD and 14 MS students. He is a co-founder of BioTex, Inc., a medical device company in Houston, Texas.

Rastegar is a Fellow of the American Institute for Medical and Biological Engineering and a Fellow of the American Society for Lasers in Medicine and Surgery. He has served as the Chair of Bioengineering Division of ASME, Associate Editor of Annals of Biomedical Engineering, and a member of the Editorial Boards of the Journals of Biomedical Optics and Journal of Diabetes Science and Technology. He is the recipient of numerous scientific and administrative awards and honors, including the Select Young Faculty Award from the Texas Engineering Experiment Station and the NSF Director's Superior Accomplishment Award.



Willie Rockward, NSBP President-Elect, Chair and Associate Professor, Department of Physics and Dual-Degree Engineering, Morehouse College

Willie Rockward is the President-Elect of the National Society of Black Physicists. He received a B.S. degree in Physics, cum laude, from Grambling State University.

While completing a M.S. degree in Physics from State University of New York at Albany, he transferred into the doctoral program in the School of Physics at the Georgia Institute of Technology (Georgia Tech). After completing his doctoral studies at Georgia Tech, he served as a civilian Research Physicist for the Advanced Guidance Division of the U.S. Air Force Research Laboratory located at Eglin Air Force Base, FL.

Currently, Rockward is an Associate Professor of Physics and the Research Director of the Micro/Nano Optics Research and Engineering (MORE) Laboratory at Morehouse College. His current research interests include crossed phase optics, micro/nano optics fabrication, optical quadrature microscopy, extreme ultraviolet lithography, terahertz imaging, nanostructure characterization, and termite behavior.

He is a member of the American Association of Physics Teachers, the Society of Physics Students (National officer), the National Technical Association, the Optical Society of America and the Omega Psi Phi Fraternity. He also serves, voluntarily, as the Director of Science and the Coordinator of Special Projects for the Miller's Preparatory Academy for Boys.



Jesus Soriano, Program Director, Division of Industrial Innovation & Partnerships, NSF ENG

Jesus Soriano joined the NSF in February 2012 as a Program Director for Biomedical and Smart Health Technologies, after 20 years of international experience in executive leadership in the

biopharmaceutical and non-profit sectors, start-up formation and funding, technology commercialization, and academic teaching and research. Prior to NSF, he was the Senior Advisor to the Puerto Rico Trust for Science, Technology and Research, a technology-based development organization. Previously, he held different executive leadership positions in clinical-stage biopharmaceutical companies focused on pain management and central nervous system disorders. Before, he was Senior Director of Business Development at Osiris Therapeutics, Inc.

Previously, he held several executive leadership positions at the global bioresource center ATCC, including Vice President for IP, Licensing and International Business Development, and was Associate Director for R&D Operations and Business Development at Entremed, Inc, a clinical-stage pharmaceutical company developing therapeutics for the treatment of cancer. Soriano began his career as a family doctor in Spain; he then worked at the University of Geneva Medical School, Switzerland initially as Research Scientist and then as Assistant Professor. He initially came to the US as a visiting scientist to the National Cancer Institute (NIH) under an advanced researcher fellowship from the Swiss National Science Foundation. He holds a MBA in

Corporate Finance from the Johns Hopkins Carey Business School; a Ph.D. in Medical Sciences from the University of Geneva, Switzerland; and a M.D. from the University of Alicante, Spain.



James H. Stith, Vice President Emeritus, American Institute of Physics

James H. Stith is former Vice President of the Physics Resources Center for the American Institute of Physics. His doctorate in physics was earned from The Pennsylvania State University, and his Master's and Bachelor's in physics were

received from Virginia State University. A physics education researcher, his primary interests are in program evaluation, and teacher preparation and enhancement. He was formerly Professor of Physics at The Ohio State University and spent 21 years on the faculty of the United States Military Academy at West Point.

Stith has also held the positions of Visiting Associate Professor at the United Air Force Academy, Visiting Scientist at the Lawrence Livermore National Laboratory, Visiting Scientist at the University of Washington, and Associate Engineer at the Radio Cooperation of America. He is a past president of the American Association of Physics Teachers, past president of the National Society of Black Physicists, a Fellow of the American Association for the Advancement of Science, a Fellow of the American Physical Society, a Chartered Fellow of the National Society of Black Physicists, and a member of the Ohio Academy of Science. Additionally, he serves on a number of national and international advisory boards.



Dawn M. Tilbury, Assistant Director, Directorate for Engineering, NSF

Dawn M. Tilbury received the B.S. degree in Electrical Engineering, *summa cum laude*, from the University of Minnesota in 1989, and the M.S. and Ph.D. degrees in Electrical Engineering and Computer Sciences from the University of California,

Berkeley, in 1992 and 1994, respectively. In 1995, she joined the Mechanical Engineering Department at the University of Michigan, Ann Arbor, where she is currently Professor, with a joint appointment as Professor of EECS. Her research interests lie broadly in the area of control systems, including applications to robotics and manufacturing systems. She has published more than 150 articles in refereed journals and conference proceedings. She was elected Fellow of the IEEE in 2008 and Fellow of the ASME in 2012, and is a Life Member of SWE.

Biographies

She won the EDUCOM Medal (jointly with Professor William Messner) for her work on the web-based Control Tutorials for Matlab. An updated version was recently re-issued at <http://ctms.engin.umich.edu>. She is co-author (with Joseph Hellerstein, Yixin Diao, and Sujay Parekh) of the textbook *Feedback Control of Computing Systems*. She received an NSF CAREER award in 1999, and is the 2001 recipient of the Donald P. Eckman Award of the American Automatic Control Council. She is the 2012 recipient of the SWE Distinguished Engineering Educator Award, and the 2014 recipient of the Michael J. Rabins Leadership Award from the ASME Dynamic Systems and Control Division.

Tilbury was a member of the 2004-2005 class of the Defense Science Study Group, and was a member of DARPA's Information Science and Technology Study Group from 2005–2008. She has spent sabbatical leaves at the Institute for Industrial Technologies and Automation in Milan, Italy and the Department of Automatic Control in Lund, Sweden. At the University of Michigan, she has taught courses in dynamic systems modeling, automatic control, robot kinematics and dynamics, and linear systems theory, and has advised more than 20 PhD students.

She was a member of the IEEE Control Systems Society Board of Governors from 2005–2008 and again from 2014–2016, and was a member of the ASME Dynamic Systems and Control Division Executive Committee from 2008–2013 (and was Chair of the Division from 2011–2012). She was Associate Editor of the *IEEE Transactions on Automation Science and Engineering* from 2008–2011, and has been a Senior Editor since 2012. She was Program Chair for the 2012 American Control Conference and General Chair for the 2014 ACC, and is currently the Chair of the Policy Committee for the International Federation of Automatic Control (IFAC).



Gregory E. Triplett, Jr, Associate Dean for Graduate Studies and Research and Professor, Department of Electrical and Computer Engineering, Virginia Commonwealth University

Gregory E. Triplett, Jr. is a Professor and Associate Dean of Graduate Studies and Research at Virginia Commonwealth

University (VCU). He oversees all aspects of graduate engineering programs including curriculum development, student recruitment and matriculation, strategic planning, student funding, graduate research, and online education. He is also responsible for multi-investigator research programs, large grants from agencies and foundations, and training grants and fellowships.

Prior to becoming Associate Dean, Triplett was Director of Undergraduate Studies in Electrical and Computer Engineering and Associate Director in the Honors College at the University of Missouri in Columbia. Triplett has won awards for his research, teaching, and service, and was selected as a Southeastern Conference Administrative Leadership Development Program Fellow. As a researcher, he was selected as an Air Force Office of Scientific Research (AFOSR) Summer Faculty Fellow, funded by AFOSR Young Investigator Program, and has worked on numerous projects from the National Science Foundation, Army, AFOSR, Department of Energy, and tech companies.

At VCU, he directs the Precision Imaging Research Laboratory, which focuses on the development and integration of nanomaterials and their applications in biomedical, energy, and physical science. He currently leads a team of undergraduate and graduate students to capture signal transduction mechanisms in real time, specifically interactions between amino acid functional groups of proteins with donor molecules and protein kinase using photonic technology integration.

His personal commitment to students and teaching has never wavered and earned him numerous awards including the *William T. Kemper Teaching Award* in 2010 at the University of Missouri. He is President of the VCU Sigma Xi Chapter, Lifetime Member of NSBE, and member of many other professional and scientific organizations.

He graduated from Florida Agricultural and Mechanical University, Florida State University, and the Georgia Institute of Technology with a BS, MS, and PhD, respectively, in electrical engineering.



Jermelina Tupas, Acting Division Director of the Division of Human Resource Development, Directorate for Education and Human Resources, NSF

Jermelina Tupas currently serves as the Acting Division Director of the Division of Human Resource Development (HRD), Directorate for Education and Human Resources (EHR) at the National Science Foundation (NSF). She has worked in three different federal agencies first as a Program Director for the Division of Molecular and Cellular Biosciences, Biological Science Directorate at NSF from January 2004-July 2006. She then moved to the National Institute of General Medical Sciences - National Institutes of Health from August 2006 to September 2009 and served as a Program Director in the Division of Minority Opportunities in Research. This was followed by a move to the National Institute of Food and Agriculture at the U.S. Department of Agriculture from October 2009 to August 2012 as Division Director for Community and Education.

She moved back to NSF as HRD's Deputy Division Director in 2012. Her experiences in these various federal positions range from management of student training portfolio, fellowship, and faculty research portfolio to management, administration and leadership. Tupas was a faculty member at the University of Hawaii at Manoa for about 10 years, where she taught graduate courses and carried out her research in hormone signaling and transcription regulation, while managing two undergraduate student research training and student development programs focused on increasing diversity in biomedical sciences. Her work has always focused on broadening participation of underrepresented groups in STEM. Tupas holds a B.S. in Zoology, an M.S. in Microbiology, and a Ph.D. in Molecular Biology.



Iris R. Wagstaff, *AAAS Program Director, EHR, AAAS*

Iris R. Wagstaff is a STEM Program Director in Education and Human Resources Programs at the American Association for the Advancement of Science (AAAS). She is a former 2015-2017 AAAS Science and Technology Policy Fellow at the National

Institute of Justice Office of Investigative and Forensic Sciences where she led an agency-wide strategic diversity and inclusion initiative. She is a native of Goldsboro, NC and has a BS and MS in Chemistry from UNC-Greensboro and NC A&T State Universities respectively.

She has over 20 years of STEM outreach and advocacy developing informal science programs, mentoring, resourcing parents, and working with K-12 science teachers to develop culturally relevant and engaging lessons with real-world applications. She has advocated for students at the K-20 levels and built strategic partnerships between industry, educators, and researchers. She worked as a research chemist at the Rohm and Haas Company (now Dow Chemical) for 15 years where she led project teams.

She obtained a PhD in STEM education research and policy analysis from NC State University in 2014 where she examined factors that predict science self-efficacy, science identity, and STEM career intent in a nationally representative sample of high school students. She is the founder of the SMART Scholars initiative for middle school girls that provide hands-on STEM outreach, role models, and parent resources in NC and the metropolitan Washington, DC area. She is a long-time member of the National Organization of Black Chemists and Chemical Engineers and serves on the National Executive Board.

She is also a long-time member of the American Chemical Society where she serves as Manager and STEM Education Chair of the Chemical Society of Washington. She has received several

acknowledgements for her STEM outreach that include a 2016 nomination for the Presidential Award for Excellence in Science, Math, and Engineering Mentoring (PAESMEM), and the 2017 Women of Color in STEM Promotion of Education Award.



Clytrice Watson, *Program Director, EHR, NSF*

Clytrice Watson is a Program Officer for the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP) in the Directorate for Education and Human Resources at the National Science Foundation (NSF). Prior to joining

NSF, she served as the Interim Dean for the College of Mathematics, Natural Sciences and Technology and is a Professor of Biology at Delaware State University.

Watson received her Bachelor's degree in Biology from Norfolk State University, Master's Degree in Biology from Delaware State University and Ph.D. from the University of Maryland Eastern Shore in Food Science and Technology/Microbiology. As an aspiring leader in the HBCU community, she completed a certificate of Academic Leadership via the NSF-funded Opportunities for Under-Represented Scholars (OURS) graduate certificate program at The Chicago School of Professional Psychology. Her research interest focuses on the retention and academic success of minority students in STEM disciplines.

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104 VIP Suites
Concierge Level

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95,000 sq ft of Renovated Exhibit Space
77 Meeting Rooms

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A modern American bistro that offers tantalizing meals for all taste buds. Open for breakfast, lunch and dinner.

Woodley Market

This gourmet deli offers delicious breakfast items, gourmet take-out sandwiches, meals and also features Illy's – a coffee house featuring specialty coffees, teas and freshly baked goods.

Harry's Pub

With the charm of a favorite local bar this restaurant serves an Old English menu with a modern American twist and a wide variety of beers on tap, making it the perfect place to catch up with friends.

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Ardeo + Bordeo

Great local dining spot and contemporary wine bar, known for its rooftop bar and "who's who" of Washington, DC.

Mintwood Place

An upscale bistro dining spot in Adams Morgan, recently named by Condé Nast as one of the best new restaurants in the world.

Komi

This restaurant is ranked in the top 5 of Washington, DC's best Restaurants for the past three years, located in DuPont Circle.

Restaurant Nora

America's first certified organic restaurant, specializing in DC's finest farm to table cuisine.

Jack Rose Dining Saloon

Ranked as one of DC's "Top 15 Neighborhood Bars" located in Adams Morgan.

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Explore our neighborhood, or jump on the metro right outside our entrance and be downtown in minutes!

National Zoo

Located just minutes from our door, meet the country's newest baby panda, Asian Elephants, baby cheetahs and more!

Rock Creek Park

Explore the trails of Rock Creek Park with nature walks, bike rentals, and horseback riding. There are also boating, kayak and canoe rentals along the Potomac available.

Adams Morgan

Known for its quirky boutiques and global cuisine, this local neighborhood is just a 10 minute walk away.

Dupont Circle

This vibrant community is trendy and timeless with museums, cafes, boutiques and a lively nightlife. Find yourself in the cosmopolitan heart of the city with one quick metro stop away.

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Take advantage of free admission to their 19 museums and galleries, including the National Air & Space Museum, National Museum of Natural History, African American History and Culture Museum and the Hirshhorn Museum and Sculpture Garden.

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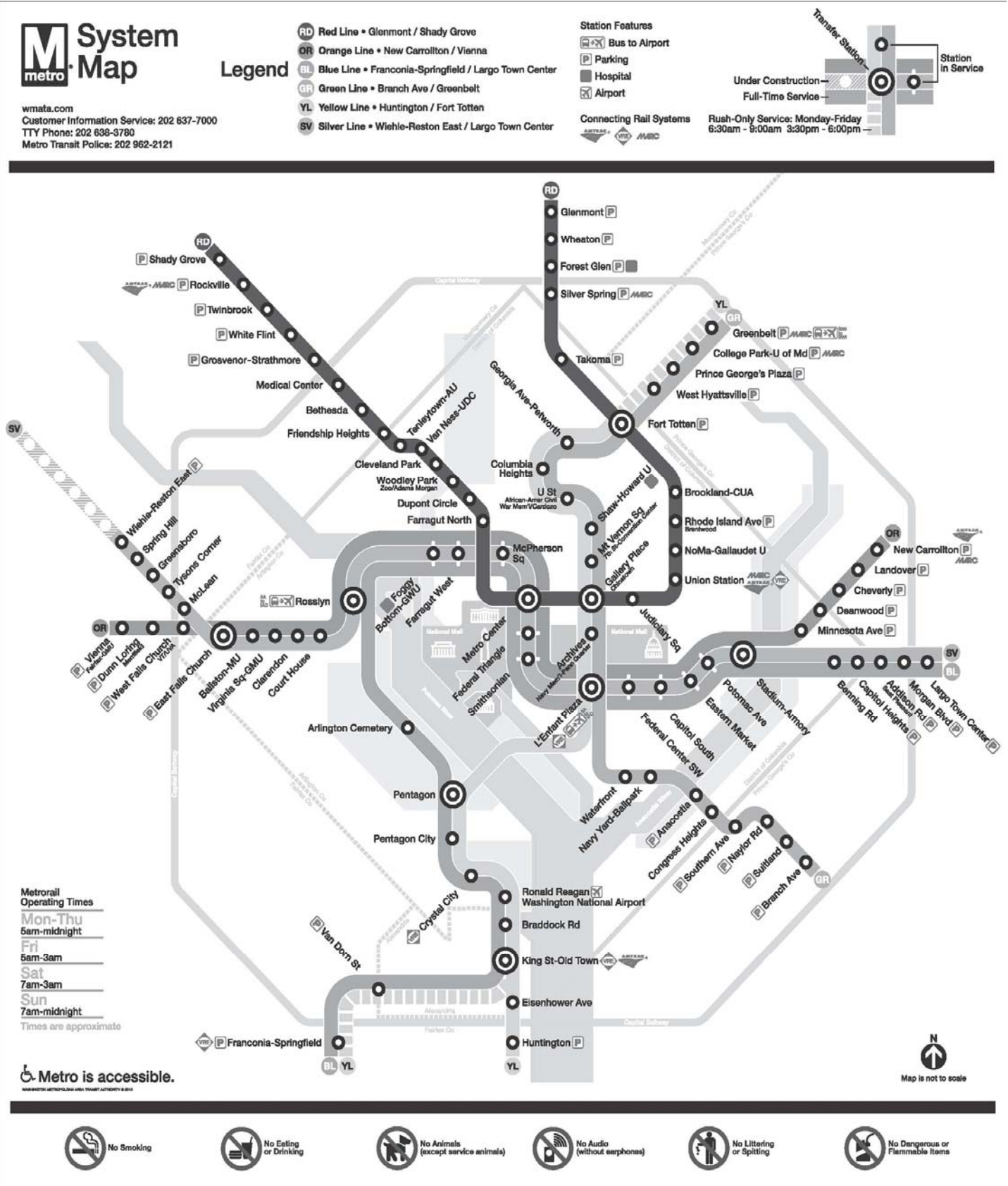
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Victor Wyatt-Prater, *United States Department of Agriculture*

Angeline V. Yang, *University of California San Diego*

Shaik Zainuddin, *Tuskegee University*

Washington, D.C. Subway System Map



Exhibitor Listing

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8	Center for Reproductive Science, Northwestern University	10	University of California, Riverside
16	Cockrell School of Engineering	9	University of California, San Diego
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Table 41

**Albert Einstein College of Medicine
Graduate Division of Biomedical Sciences**

1300 Morris Park Ave
Belfer 203
Bronx, NY 10461

Contact: Victoria Freedman, victo-
ria.freedman@einstein.yu.edu

Programs: PhD, MD/PhD, Postbaccalaureate Research Education Program (PREP), and Summer Undergraduate Research 'Research knows no Boundaries' in the Graduate Division of Biomedical Sciences at the Albert Einstein College of Medicine (Bronx, NY). Established in 1957, Einstein provides an exciting intellectual environment in which students acquire the knowledge and skills necessary to attain the PhD and MD/PhD degrees in the biomedical sciences. Graduate students work with faculty at the forefront of disease-relevant research in these areas: Biochemistry, Bioinformatics, Biophysics, Cancer, Cell and Molecular Biology, Genetics, Immunology Infectious Diseases Neurosciences, Stem Cell Biology, Systems Biology Epidemiology Virology and more! Unique PhD tracks in Clinical Investigation and Translational Science are also offered. A robust Career and Professional Development program, including career exploration and professional skills development, is available to all graduate students. Our PhD alumni are scientists in every career path from basic to applied research in academia, big pharma and biotechnology, as well as science communication, science policy, science education and more. Follow your imagination!

All PhD, MD/PhD, and PREP students receive:

- Full tuition remission
- Annual stipend
- Health insurance
- Subsidized housing

CONTACT US for MORE INFORMATION: www.einstein.yu.edu/phd

Table 6

American Society for Microbiology (ABRCMS)

1752 N Street, NW
Washington, DC 20036

Contact: Irene Hulede, ihulede@asmusa.org

ABRCMS is one of the largest, professional conferences for biomedical science, behavioral science and STEM students, attracting over 4,000 individuals, including 2,400 undergraduate and postbac students, 400 graduate students and 1200 faculty and administrators. Students come from over 350 U.S. colleges and universities. All are pursuing advanced training in the biomedical sciences and STEM, and many have conducted independent research. Attendees represent a very diverse ethnic background-- African American (49%), Hispanic/Latino (25%), Native American

(4%), Asian American (4%) Pacific Islander/Alaska Native (1%), Caucasian (17%). During the four-day conference, over 1,700 students participate in poster and oral presentations in twelve sub disciplines in STEM. The ABRCMS exhibitors program, comprised of over 500 representatives from graduate programs at US colleges and universities, government agencies, foundations, and professional scientific societies share information about graduate school, summer internship/research opportunities, funding sources, and professional networks.

Table 37

Carnegie Mellon University

533 Warner Hall
5000 Forbes Ave
Pittsburgh, PA 15213-3890

Contact: Suzanne Laurich-McIntyre, slaurichmcintyre@cmu.edu

Carnegie Mellon University is a private, global research university with a proud heritage of outstanding graduate and undergraduate education. Our programs are ranked among the top in the country. All of our seven colleges and schools offer Master's and Doctoral degrees and several offer programs at locations around the world. A foundation of our graduate education has been research with a focus on advancing knowledge and finding meaningful solutions to significant problems of society. This real-world, hands-on approach has made Carnegie Mellon home to excellent faculty and students in engineering, computer science, the natural sciences, humanities and social sciences, business administration, public policy and management, and the fine arts. With unique interdisciplinary graduate degrees and over 100 research centers, students learn to combine expertise in diverse fields to create the most exceptional solutions to challenges and to explore evolving areas. Carnegie Mellon University's main campus is located in Pittsburgh, PA, rated one of the most livable cities in the USA. Additionally there are some graduate programs at the campus in Silicon Valley, CA, and degree granting programs in New York City, Washington D.C. and Los Angeles, CA, and international partnerships in Portugal, China, Rwanda and Australia to name a few. Carnegie Mellon University: www.cmu.edu, Guide to Graduate Degrees and Programs: www.cmu.edu/graduate/

Table 8

Center for Reproductive Science, NU | Northwestern University

645 North Michigan Ave
Suite 630-20
Chicago, IL 60611

Contact: Elizabeth Sefton, e-sefton@northwestern.edu

The Center for Reproductive Science (CRS) at Northwestern University leads the way. Reproductive science and medicine through the CRS extends from basic research on cellular and

molecular mechanisms to physiological integration across organ systems to clinical practices that impact fertility and health. Our scientific and medical discoveries are intertwined with significant moral, ethical and political questions. CRS is committed to training the next generation of research, clinical and thought leaders in our field. CRS offers training opportunities for master's, doctoral, and post-doctoral training. Our newest program is the Master of Science in Reproductive Science and Medicine (MS-RSM), and we are accepting applications through May 15!

Table 16

Cockrell School of Engineering | University of Texas at Austin

2501 Speedway, EER 2.608

Stop A9600

Austin, TX 78712

Contact: Reyna Flores, reyna.flores@austin.utexas.edu

The Cockrell School of Engineering at The University of Texas at Austin is a top ranked epicenter of engineering education and knowledge creation and distribution. With nine internationally recognized undergraduate programs and thirteen acclaimed graduate degree programs, the Cockrell School propels research and innovation, develops transformative technologies and cultivates solutions to advance society.

Table 49

Columbia University School of Engineering and Applied Science

500 West 120 Street, MC 4708

New York, NY 10027

Contact: Tiffany Simon, tms26@columbia.edu

Columbia University Fu Foundation School of Engineering and Applied Science offers graduate degrees in applied physics, applied mathematics, biomedical engineering, chemical engineering, civil engineering, construction engineering management, data science, engineering mechanics, computer engineering, computer science, Earth and environmental engineering, electrical engineering, financial engineering, industrial engineering, operations research, management science and engineering, materials science engineering, medical physics, mechanical engineering, metallurgical engineering, mining engineering, and solid-state science engineering. Distance education and MS/MBA programs are also available. A joint master's degree program in Computer Science and Journalism is also available. For more information, please visit: www.engineering.columbia.edu.

Table 22

Georgia Tech Research Institute

430 10th Street

Atlanta, GA 30332-0807

Contact: Brittney Odoi, brittney.odoi@gtri.gatech.edu

The Georgia Tech Research Institute (GTRI) is the nonprofit, applied research division of the Georgia Institute of Technology (Georgia Tech). GTRI's renowned researchers combine science, engineering, economics, policy, and technical expertise to solve complex problems for the U.S. federal government, state and industry. As a non-profit research institute, we are an objective partner who delivers workable solutions and manufacturable products. Our highly specialized laboratories and interdisciplinary research centers allow us to bring the right mix of talent, experience, and creativity to every project.

Table 23

Harvard University

29 Oxford Street

Cambridge, MA 02138

Contact: Kathryn Hollar, hollar@seas.harvard.edu

Mina Gadala, mina@seas.harvard.edu

Visit Table #23 for complete information.

Table 3

Indiana University

1320 E. 10th Street Room E546

Bloomington, IN 47405

Contact: Bianca Evans, biaevans@iu.edu

The University Graduate School is a recognized leader in developing new concepts and best practices for graduate education, which makes Indiana University Bloomington a premier location to earn your graduate degree. The University Graduate School administers degree programs on seven campuses of Indiana University: Bloomington, Fort Wayne, Kokomo, Indianapolis, Northwest at Gary, South Bend, and Southeast at New Albany. At Bloomington there are master's programs in the College of Arts and Sciences and Ph.D. programs and/or Ph.D. minors in the College of Arts and Sciences, the Jacobs School of Music, the Kelley School of Business, the School of Education, the School of Informatics, the Mauer School of Law, the School of Library and Information Science, the School of Optometry, and the School of Public and Environmental Affairs.

Visit <http://graduate.indiana.edu/admissions/apply.shtml> for additional information on applying to Indiana University.

Exhibitor Descriptions

Visit <http://graduate.indiana.edu/admissions/programs.shtml> to browse our master's, doctoral and professional degrees, or graduate certificates.

Table 47

Jetstream | Indiana University

2709 E. 10th Street
Cyberinfrastructure Building
Bloomington, IN 47408

Contact: Jeremy Fischer, jeremy@iu.edu

Brian Beck, bbeck@tacc.utexas.edu

Sanjana Sudarshan, ssudarsh@iu.edu

Jetstream, led by the Indiana University Pervasive Technology Institute (PTI) with the Texas Advanced Computing Center (TACC) as a major partner, adds cloud-based, on-demand computing and data analysis resources to the national cyberinfrastructure. With a focus on ease of use and broad accessibility, Jetstream is designed for those who have not previously used high performance computing and software resources. The system is particularly geared toward 21st-century workforce development at small colleges and universities.

Table 29

Massachusetts Institute of Technology

Massachusetts Ave., Bldg 35-332
Cambridge, MA 02139

Contact: Gloria Anglón, mitgraddiversity@mit.edu

The mission of the Massachusetts Institute of Technology (MIT) is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. We are also driven to bring knowledge to bear on the world's great challenges. MIT offers over 35 graduate programs across five Schools: architecture and planning; engineering; humanities, arts, and social sciences; management; and science. Learn more at <http://gradadmissions.mit.edu/>.

Table 45

Michigan Technological University

4th Floor Administration Building
1400 Townsend Dr.
Houghton, MI 49931

Contact: Ashli Sniegowski, aesniego@mtu.edu

Jacque Smith, Jacque@mtu.edu

Michigan Technological University is committed to delivering a distinctive and rigorous discovery-based learning experience to all students. Its graduate programs span engineering, science, business, and communication disciplines. Graduates from these

programs are actively recruited because of their intellectual abilities and practical skills. Students in all graduate programs gain experience using technological innovation to address issues related to social, environmental, and economic sustainability. The University places a premium on matching the professional and personal interests of prospective graduate students with those of faculty mentors who are experts in their fields. Michigan Tech is large enough to be rich in resources, but small enough to provide a highly personalized graduate education experience.

Table 2

National Renewable Energy Laboratory (NREL)

15013 Denver West Parkway
Golden, CO 80401

Contact: JoAnn Lair, joann.lair@nrel.gov

At NREL, we focus on creative answers to today's energy challenges. From breakthroughs in fundamental science to new clean technologies to integrated energy systems that power our lives, NREL researchers are transforming the way the nation and the world use energy. NREL advances the science and engineering of energy efficiency, sustainable transportation, and renewable power technologies and provides the knowledge to integrate and optimize energy systems.

Table 50 (Shared Table)

National Science Foundation (NSF)

The National Science Foundation (NSF) is the only federal agency whose mission includes support for all fields of fundamental science and engineering, except for medical sciences. Two of its programs focus directly on students. The only program that students apply to directly is the NSF Graduate Research Fellowship Program (GRFP) which recognizes and supports outstanding graduate students who are pursuing research-based master's and doctoral degrees in science, technology, engineering, and mathematics (STEM) or in STEM education. The GRFP provides three years of support for the graduate education of individuals who have demonstrated their potential for significant research achievements in STEM or STEM education. NSF especially encourages women, members of underrepresented minority groups, persons with disabilities, veterans, and undergraduate seniors to apply.

NSF funds a large number of research opportunities for undergraduate students through its research Experiences for Undergraduates (REU) Sites program. An REU Site consists of a group of ten or so undergraduates who work in the research programs of the host institution. Each student is associated with a specific research project, where he/she works closely with the faculty and other researchers. Students are granted stipends and, in many cases, assistance with housing and travel. Undergraduate students supported with NSF funds must be citizens or perma-

nent residents of the United States or its possessions. An REU Site may be at either a US or foreign location. Students must contact the individual sites for information and application materials. NSF does not have application materials and does not select student participants.

Table 50 (Shared Table)

#VanguardSTEM

The SeRCH Foundation, Inc.
Nashville TN 37215

Contact: Lana Hunter, hello@VanguardSTEM.com

#VanguardSTEM began as a live, monthly show featuring a rotating panel of women of color in STEM hosted by Dr. Jedidah Isler. It has evolved into an online platform and community that uses an intersectional social-justice framework to support the persistence of this unique population of STEM practitioners by providing opportunities to be recognized as STEM experts (or experts-in-training), and garnering a sense of belonging that transcends locales. Having aired more than 20 episodes with over 40 women of color in STEM guests, produced weekly features of girls, women and non-binary people in STEM, and published more than 50 original works by women of color in STEM, we know there are many experiences still to be shared. We invite you to join our community of thousands who have found support, advice and inspiration in the stories, struggles and triumphs of women of color who are living at the intersections of identity all while trailblazing on the STEM frontier. Want to join our movement? Stop by our booth; connect on Twitter, Facebook, or Instagram (@VanguardSTEM); send us an email or visit our website at VanguardSTEM.com.

#VanguardSTEM is a signature program of The STEM en Route to Change Foundation, Inc.

Table 7

Norfolk State University

700 Park Avenue
Norfolk, VA 23504

**Contact: Jennifer West, jdwest@nsu.edu
Carl Bonner, cebonner@nsu.edu**

Norfolk State University offers two graduate programs for individuals seeking careers in the interdisciplinary field of materials science for advanced technologies. The Ph.D. in Materials Science and Engineering program prepares students for careers in industry, federal or private research laboratories, and academia. The program transitions students from physical sciences, engineering, and related fields into the discipline of materials science while broadening their professional opportunities. The M.S. in Materials Science program provides students with analytical and technical skills research experience necessary for doctoral programs. Graduates are also prepared for profes-

sional jobs involving materials science and engineering principles.

Table 35

**North Carolina State University
The Graduate School**

Campus Box 7102
Raleigh, NC 27695

Contact: David Shafer, david_shafer@ncsu.edu

With a focus on solving real-world problems through innovative research, NC State's graduate programs are committed to transforming graduate education to prepare our best and brightest students to be true leaders ready to tackle the critical issues that challenge our state, nation, and world. Our goal is to prepare career-ready students with a true competitive edge through a focus on professionally oriented training designed for the real world. In scope and quality, our graduate programs are superb. We offer master's and doctoral programs in a full range of traditional disciplines, as well as a variety of graduate certificate programs and degree programs that can be completed all or partly online. Science, technology, engineering and mathematics are our core strengths. We also offer strong programs in design, education, management, the humanities, and the social sciences. Our location in North Carolina's Research Triangle means the best of industry-government-university partnerships. Our quarter century-old Centennial Campus reflects the university model of the future, where young investigators collaborate with faculty mentors, private companies, and public agencies to solve real-world problems. NC State boasts a talented graduate student body of approximately 8,500 degree-seeking master's and doctoral students who reflect a richness and diversity that energize this community of scholars. They come from all 50 states and from over 100 countries. On average, we confer about 3,000 graduate degrees each year.

Table 28

Northwestern University - The Graduate School

633 Clark Street
Evanston, IL 60208-1113

Contact: Nisan Hubbard, NisanHubbard2012@u.northwestern.edu

The mission of The Graduate School at Northwestern University is to cultivate an environment of academic excellence where graduate students and postdoctoral fellows are enabled to learn, discover, and create knowledge that enlivens an understanding of human endeavors and the world in which we live.

Exhibitor Descriptions

Table 13

NYU Tandon School of Engineering

6 Metrotech Center
Brooklyn, NY 11201

Contact: Leanna Kowallis, lk113@nyu.edu

New York University, the largest private, non-profit academic institution in the U.S., encompasses a vast network of 18 schools, giving students unlimited global access to three NYU portal campuses and 11 global academic centers. Located in New York City's Brooklyn Tech Triangle, NYU Tandon School of Engineering is a major player in New York's ongoing tech renaissance, where students can connect to thousands of creative and leading organizations in this epicenter of business and technology. Graduate programs exist in the fields of mechanical, civil, urban, industrial, electrical, computer, chemical, biomedical and financial engineering along with programs in computer science, management of technology, cybersecurity, and integrated digital media. Our primary focus remains on producing highly prepared and desirable graduates, which has led us to be one of the top ranked schools in the nation with regards to graduate employability, salary potential, and return on investment.

Table 48

Oakland University William Beaumont (OUWB) School of Medicine

586 Pioneer Drive
O'Dowd Hall, Room 216
Rochester, MI 48309-4482

Contact: Robert Granadier, Robert.Granadier@beaumont.edu

Our Mission: The Oakland University William Beaumont (OUWB) School of Medicine is a collaborative, diverse, inclusive, and technologically advanced learning community, dedicated to enabling students to become skillful, ethical, and compassionate physicians, inquisitive scientists who are invested in the scholarship of discovery, and dynamic and effective medical educators.

Our Vision: OUWB School of Medicine will be recognized by its students and faculty members - and by their peers in the global medical community - as a premier educational environment for individuals to become physicians and to study medicine throughout their lives, to transform the practice of medicine through research, and to lead in promoting, maintaining, and restoring health to individuals and communities served by the school and its graduates.

Table 39

Pennsylvania State University

111D Kern Graduate Building
University Park, PA 16801

Contact: Stephanie Danette Preston, sdp163@psu.edu

Penn State's Office of Graduate Educational Equity Programs leads the Graduate School's efforts to foster diversity and to provide a welcoming climate for both prospective and current graduate students from underrepresented groups. The office designs and implements mentoring programs; recruitment programs; professional development and retention programs; and conferences, seminars, workshops, and lectures. The office also leads the Summer Research Opportunities Program at Penn State which is designed to provide research opportunities for highly talented undergraduate students who are interested in attending graduate school.

Table 27

Philadelphia College of Osteopathic Medicine

4170 City Avenue
Philadelphia, PA 19131

Contact: Kari Shotwell, admissions@pcom.edu

For more than a century, Philadelphia College of Osteopathic Medicine (PCOM) has trained highly competent, caring physicians, health practitioners and behavioral scientists that practice a 'whole person' approach, treating people, not just symptoms. PCOM is dedicated to providing high-quality, comprehensive programs distinguished by leading-edge curricula and expert faculty. PCOM offers the doctor of osteopathic medicine degree and graduate programs in biomedical sciences, psychology, physician assistant studies, forensic medicine, organizational leadership, aging and long term care, and public health management. Georgia Campus - PCOM offers a school of pharmacy as well as the doctor of osteopathic medicine degree, a doctorate in physical therapy and master's programs in biomedical sciences and physician assistant studies.

Table 26

Rensselaer Polytechnic Institute

Graduate Admissions
110 8th Street
Troy, NY 12309

Contact: Jarron Decker, deckej3@rpi.edu

Rensselaer Polytechnic Institute is the nation's oldest technological research university. Located in the Capital District of New York State, Rensselaer offers a broad range of graduate programs across six schools: Architecture, Engineering, Science, Lally School of Management, Humanities and Social Sciences, and Information Technology & Web Science. Unique programs

Exhibitor Descriptions

include interdisciplinary degrees in information technology, the MFA and Ph.D. in Electronic Arts, and extensive opportunities in biotechnology, nanotechnology and energy and the environment.

Table 38

Stony Brook University

2401 Computer Science
Stony Brook, NY 11794-4422

Contact: Rosalia Davi, rosalia.davi@stonybrook.edu

Stony Brook University is one of America's most dynamic public universities, a center of academic excellence and an internationally recognized research institution that is changing the world. After less than 60 years of existence, it's ranked among the top 100 universities in the nation. The Center for Inclusive Education (CIE) in the Graduate School is committed to advancing diversity in graduate education, academia, and the scientific workforce. The CIE works to recruit, retain, and graduate underrepresented minority and otherwise disadvantaged scholars, as well as those scholars who advance the mission of increasing diversity of their respective fields. To ensure the success of our scholars, we provide financial assistance, social support, and advocacy. We also promote academic and professional development and a strong sense of community through our signature core activities that include the Research Café series, Topic-Based Lunches, Speaker Series talks, and the Community of Student Mentors program. With over 850 alumni and 200 current scholars, the CIE at Stony Brook University remains dedicated to the mission of enhancing diversity and inclusion of the academic world.

Table 32

Tennessee State University

College of Engineering

3500 John A. Merritt Blvd.
Nashville, TN 37209

Contact: Frances Williams, frwilliams@tnstate.edu

Tennessee State University (TSU) is a comprehensive, urban, land-grant university, founded in 1912. The 450-acre campus is located in Nashville, the state capitol of Tennessee. The TSU College of Engineering offers B.S. degrees in Architectural, Civil, Electrical, and Mechanical Engineering, with several concentrations such as manufacturing, environmental, and computer engineering. The College also awards B.S. degrees in Computer Science and Aeronautical and Industrial Technology. On the graduate level, the College provides the Master of Engineering degree with concentrations in Civil, Electrical, Manufacturing and Mechanical Engineering, the M.S. degree in Computer Science, and M.S. and Ph.D. degrees in Computer and Information Systems Engineering. Recognizing the need for developing graduates with an appreciation for global awareness, solid engi-

neering fundamentals, and professionalism, the TSU College of Engineering develops and promotes an educational experience that produces the 'global engineer' through life or language learning, a FE-based (Fundamentals of Engineering) curriculum for outcome assessment, and critical skills in research, design, problem solving, and communication. The College provides pre-college engineering camps, undergraduate research experiences, as well as scholarships/fellowships for eligible undergraduate and graduate students.

Table 5

Tuskegee University | Tuskegee Materials Science and Engineering

102 Chappie James Center
Tuskegee, AL 36088

Contact: Felicia Jenkins, fjenkins@tuskegee.edu

Tuskegee University (TU) is an independent and state-related institution of higher education. Its programs serve a student body that is coeducational as well as racially, ethnically and religiously diverse. It is the only college or university campus in the nation to be designated a National Historic Site by the U.S. Congress. The Materials Science and Engineering (MSE) Department has graduated the largest number of African-American Ph.D students in the USA. The primary objective of this Ph.D program is to significantly increase the number of African Americans holding Ph.D. degrees in Science and Engineering. Faculty and students in the Materials Science and Engineering department carry out cutting edge research in processing, synthesizing, characterization and modeling of advanced materials that have applications ranging from aerospace, defense, health care, marine, off-shore and pharmacy, among others. TU faculty have led multi-university, multi-year, multi-million dollar grants, such as the Alabama Experimental Program to Stimulate Competitive Research (EPSCoR), Center of Research Excellence in Science and Technology (CREST), and Math and Science Partnership (MSP), all funded by the National Science Foundation. It has also received HBCU-Research Infrastructure in Science and Engineering (HBCU-RISE) grants since 2004. In addition, MSE faculty have received funds from the Air Force Research Laboratory, Army Research Office, Office of Naval Research, NASA, and industry.

Table 33

UChicago Biosciences

University of Chicago

924 E 57th St Suite 104
Chicago, IL 60637

Contact: Vicki Bolf, vbolf@uchicago.edu

UChicago Biosciences offers 18 programs designed to lead to the PhD; the program in Public Health Sciences offers a master's degree for clinical professionals in addition to the PhD. We also offer combined MD/PhD degrees. University of Chicago gradu-

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ate students and postdoctoral trainees in the biosciences break new ground every day. We have a long history of research excellence and notable achievements among our alumni and faculty. At UChicago, you benefit from immersion in one of the world's preeminent research universities, and our community of scholars benefits from you - emerging scientists with bright minds, unbridled enthusiasm, and plenty of fresh ideas. As an international intellectual destination, the University of Chicago draws students, researchers, and faculty to exchange ideas freely, challenging the status quo and one another to push the boundaries of their fields, leading to world-changing discoveries and insights. The University's hallmark emphasis on interdisciplinary research and collaboration, coupled with access to the latest technology and to three major affiliated laboratories, offers a graduate experience in the biosciences unavailable anywhere else.

Table 11
UCLA Graduate Programs in Bioscience

621 Charles E. Young Drive South
Life Science Building, Room 2305
Los Angeles, CA 90095

Contact: Diana Azurdia, dazurdia@mednet.ucla.edu

Graduate Programs in Bioscience is a consortium of 10 Home Areas and their affiliated Ph.D. programs, organized to provide the best possible research training and professional development for graduate students pursuing Ph.D.s in the life and biomedical sciences. Home Areas consist of an interdepartmental group of faculty and students with shared interests in research areas and approaches. Each interdepartmental Home Area is aligned with a Ph.D.-granting program, provides in-depth, cutting-edge training, and offers access to a wide variety of exceptional faculty mentors. Home Areas break down conventional institutional divisions and serve as a nexus for inquiry, training, and discovery in research themes where UCLA faculty members are leaders. Home Areas are designed to unite students and faculty in cohesive groups organized by research focus, while also allowing first-year students to rotate into laboratories outside the Home Area should their interest take them there.

Table 15
University of Alabama at Birmingham

1825 University Blvd, SHEL 121
Birmingham, AL 35294-2182

Contact: Randy Seay, rseay@uab.edu

The University of Alabama at Birmingham (UAB) is a research university and academic medical center that encompasses 109 city blocks and has a student enrollment of more than 24,000. UAB is home to a large graduate school, a world-renowned health care complex, and more than 100 different research centers focusing on such diverse issues as cancer prevention, per-

sonalized medicine, biodefense, and emerging infectious diseases. UAB includes the School of Medicine (MD, MD-PHD, MD-MPH, MD-MBA), School of Public Health (Dual Degree MPH Programs, MPH, MSPH, DrPH, PhD), School of Optometry (Vision Sciences PhD, OD), School of Arts and Sciences (MA, MS, PHD), and Graduate Biomedical Sciences (PHD). We invite you to join more than 4,400 graduate students who are enrolled in UAB's 40 doctoral programs and 51 master's programs. Many of these programs unite different disciplines and cross departmental and school lines, illustrating the strong interdisciplinary character of the university. Become part of our unique and select group of students training to become tomorrow's leaders in science and medicine. Visit us at www.uab.edu/graduate and www.uab.edu/medicine

Table 10
University of California, Riverside

900 University Avenue
Bourns Hall A222
Riverside, CA 92521

Contact: Adrienne Thomas, adrienne@engr.ucr.edu

Bourns College of Engineering is home to cutting-edge, high-risk, profoundly creative research. We're invested in internationally recognized engineering research in hundreds of emerging areas focused on solving the world's greatest challenges. Faculty and their research teams collaborate in multidisciplinary research with colleagues at other colleges, campuses and industry leaders.

Table 9
University of California, San Diego

9500 Gilman Drive, M0003
La Jolla, CA 92093

Contact: Angeline V. Yang, avyang@ucsd.edu

We offer a wide variety of academic and professional fields, and we welcome talented prospective students from across the nation and around the world. UCSD graduates have gone on to assume prominent roles in academia, industry, government, and the arts and media in California and beyond.

Table 21
University of Health Sciences Antigua School of Medicine

District View Office Center Suite 301
Fernandez Juncos 644
San Juan, PR 00907

Contact: Lyzette Roman, romanl@uhsa.edu.ag

The University of Health Sciences Antigua School of Medicine (UHSA) was founded in 1982. UHSA is one of the oldest and fin-

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est medical schools. In the 80s, establishing a world-renowned medical education institution in Antigua Barbuda seemed like an impossible dream, however in May 4, 1982, under the guidance and vision of Dr. Yele Akande and Chief Dr. Harry Akande, the Government of Antigua and Barbuda and its Ministry of Health chartered the University of Health Sciences Antigua. As part of its commitment to the people of Antigua and Barbuda, they sponsored health initiatives. The Dowhill Campus is located in the historical National Park area of English Harbour. It was formerly a NASA tracking station. Today, 35 years later, UHSA has graduated hundred of physicians who are currently practicing in many parts of the world. A free clinic, one of a kind in the Caribbean, was inaugurated to offer free healthcare to people in need. This clinic is operated by medical and nursing students from UHSA. The University of Health Sciences Antigua offers a safe and beautiful setting in which you will be able to reach your goal to become a physician.

Table 24

University of Illinois Graduate College

Diversity, Equity, and Inclusion
110 Coble Hall
801 South Wright Street
Champaign, IL 61820

Contact: Ave Maria Alvarado, amalvara@illinois.edu
Ellen Althaus, ealthaus@illinois.edu

The University of Illinois at Urbana-Champaign offers numerous opportunities to students from U.S. populations historically underrepresented in graduate study. Academic opportunities, application fee waivers, and funding packages are extended to prospective and current graduate students intended to support their pursuit of an advanced degree. Illinois offers graduate degrees in over 270 master's and doctoral degree programs, including those in the social sciences, arts and humanities, biological sciences, natural sciences, physical sciences, behavioral sciences, and engineering. Numerous interdisciplinary and several joint degree programs, such as the MBA/PhD, MD/PhD, and JD/PhD are granted. Assistantships, traineeships, and fellowships, supplemented with a tuition waiver and stipend are offered to students in all disciplines. Our Community of Scholars campus visit program gives students an opportunity to visit the University of Illinois to learn more about the campus and their prospective graduate program during the decision-making phase of their admission to graduate school. The Summer Research Opportunities Program (SROP) and the Summer Pre-Doctoral Institute (SPI) provide participants with an opportunity to conduct research and receive monetary awards and many other benefits. Ask us about our latest opportunity for graduating seniors -ASPIRE!

<http://www.grad.illinois.edu/diversity/aspire>.

Please visit other important websites at: <http://www.grad.illinois.edu/> and <http://www.grad.illinois.edu/diversity>

Table 46

University of Maryland MD-PhD Program

20 Penn Street, HSF 2, Rm. 349
Baltimore, MD 21201

Contact: Jane Bacon, jbacon@som.umaryland.edu

At the University of Maryland School of Medicine, the goal of the Medical Scientist Training Program (MSTP), also known as the MD-PhD Program, is to provide outstanding aspiring medical scientists with broad biomedical training. This experience consists of rigorous research training in the basic sciences, resulting in a Ph.D, complemented by inter-related clinical training that leads to the M.D. degree.

Table 20

University of Michigan – Biomedical Sciences

1135 Catherine Street
2960 Taubman Health Sciences Library
Ann Arbor, MI 48109

Contact: Jim Musgrave, jdmusg@umich.edu
Cherie Dotson, crdotson@umich.edu

The University of Michigan - College of Pharmacy (<https://pharmacy.umich.edu/>) offers Ph.D. degrees in Medicinal Chemistry (drug discovery and design) and Pharmaceutical Sciences (drug transport and delivery). Clinical training in pharmacy is available through the Pharm.D. program. Opportunities for summer research are available through the Interdisciplinary REU Program in the Structure and Function of Proteins. Office of Graduate and Postdoctoral Studies: Dedicated to enhancing the training environment for pre-doctoral and doctoral students at the University of Michigan Medical School, we support the graduate Program in Biomedical Sciences (PIBS), Postbac Research Education Program (PREP), as well as summer research opportunities in the biomedical sciences.

Table 1

University of Michigan – Environment & Sustainability

1520 Dana Building
440 Church Street
Ann Arbor, MI 48109

Contact: Jung Koral, jkoral@umich.edu

Master of Science in Natural Resources and Environment : This professional MS degree program prepares students for leadership positions in Environmental Sustainability. The program's hallmarks are field-based learning, applied professional training,

Exhibitor Descriptions

the use of scientific knowledge in management decisions, and practical, effective approaches to changing behavior. MS Fields of Study - Behavior, Education, and Communication - Conservation Ecology - Environmental Informatics: GIS and Modeling - Environmental Justice - Environmental Policy and Planning - Sustainable Systems Dual Degrees - Engineering - Business - Urban Planning - Law - Public Policy.

Master of Landscape Architecture In the Master of Landscape Architecture: Students learn the ecological principles of sustainable design and how to employ them in all settings.

PhD in Natural Resources and Environment: This program develops the creative abilities of select exceptional students, training them for independent work that contributes to original research and scholarship at the forefront of their chosen fields. Visit us at seas.umich.edu.

Table 25

University of Missouri Grad Life Sciences Programs

149 Bond Life Sciences Center
1201 Rollins St.
Columbia, MO 65211

Contact: Debbie Allen, allendebr@missouri.edu

Experience the Joy of Discovery and Innovation: Graduate Study in the Life Sciences at the University of Missouri. The joy of discovery has propelled the University of Missouri to one of the top-ranked research institutions in the 21st Century. Our Ph.D. programs emphasize interdisciplinary collaboration and innovation. University of Missouri faculty from diverse disciplines come together to develop cures for human diseases, to improve our nation's food supply, to develop new sources of biofuels and to preserve and protect our environment, among many other research areas. Our Ph.D. students use cutting-edge technologies to solve problems. Our facilities include state-of-the-art Research Cores in Animal Modeling; Cell and Immunobiology; DNA; Electron Microscopy; Informatics; Metabolomics; Molecular Cytology; Molecular Interactions; Nuclear Magnetic Resonance; and Proteomics. We are committed to the success of our graduate students, with strong mentorship programs and career-directed resources. We offer a comprehensive support package including stipend, paid tuition, professional development resources, and travel funding. Columbia, Missouri is an excellent, diverse and affordable city with impressive amenities. Learn more: <http://gradstudies.missouri.edu/> Email: grad-lifesci@missouri.edu

Table 36

University of Nebraska Medical Center

985520 Nebraska Medical Center
Omaha, NE 68198

Contact: Sonja Cox, sacox@unmc.edu
Kimberly Rothgeb, krothgeb@unmc.edu

The MD-PhD Scholars Program at the University of Nebraska Medical Center (UNMC) provides an integrated program of training in clinical medicine and biomedical research to prepare scholars for successful careers as physician scientists. UNMC has a dynamic program to train physician scientists and prepare them for a variety of careers. Our Medical School has a systems-based curriculum that integrates normal function, clinical abnormalities, and relevant research. The facilities for learning include a building for meetings and student interaction, and a center for the most advanced simulation and virtual reality training. In combination with the clinical enterprise, Nebraska Medicine, the medical training at UNMC provides a foundation for outstanding clinical care. The MD-PhD program also takes advantage of a biomedical campus that emphasizes innovative approaches to major research questions. A student can choose from 7 interdisciplinary programs in the basic sciences in the College of Medicine and Eppley Cancer Institute, or drug discovery and development programs in the College of Pharmacy, or public health and policy programs in the College of Public Health. Through partnerships with the University of Nebraska-Lincoln, students have also done PhDs in Biomedical Engineering, Psychology, and Imaging. The facilities for research are outstanding, with new buildings designed to facilitate interaction between researchers and clinicians. A critical part of our MD-PhD program is to provide a structure that encompasses, extends, and integrates the clinical and research training. Our scholars support each other and contribute to the growth and development of our program. Through their leadership activities, they also contribute to the UNMC community and to the national community of physician-scholars. We encourage you to take a look at UNMC. We are confident you will be as enthusiastic as we are about the future awaiting you!

Table 34

University of North Texas College of Science

1155 Union Circle #311365
Denton, TX 76201

Contact: Heather Miller, heather.miller@unt.edu

The College of Science at the University of North Texas provides a supportive, inclusive, and collaborative environment for students, faculty, and staff, integrating a contemporary education in science with the pursuit of research at the forefront of the natural and mathematical sciences.

Table 17

University of Notre Dame Graduate School

502 Main Building
Notre Dame, IN 46556

Contact: Nyree McDonald, nmcdonal@nd.edu

The University of Notre Dame is renowned worldwide for academic excellence, and gifted students from around the globe. Join us to be part of our vibrant intellectual community. As a graduate student at Notre Dame, you will benefit from generous financial support that allows you to focus on your degree objectives and from exposure to and participation in innovative, collaborative, and interdisciplinary pursuits. We believe that our voice is best heard through the success of those we train at the highest level to become the academic and professional leaders of tomorrow. To that end, we work in concert with a world-class faculty across a variety of disciplines to mentor and develop our students by engaging them in meaningful research and other professional activities. Notre Dame is committed to fully funding all doctoral-degree seeking students and many master's-degree seeking students. If you would like more information, please feel free to contact the director of graduate studies in your prospective department of interest. If you would like to browse our Web site or apply on-line, visit us at <http://graduateschool.nd.edu>.

Visit our Facebook page: <http://www.facebook.com/notredamegraduateschool>.

Table 42

University of Pennsylvania Perelman School of Medicine

3620 Hamilton Walk
Room 267
Philadelphia, PA 19104

Contact: Arnaldo Diaz, diaza@pennmedicine.upenn.edu

The University of Pennsylvania Perelman School of Medicine is the nation's first, with the Hospital of the University of Pennsylvania being the nation's first built medical school. Biomedical Graduate Studies (BGS) was established in 1985 and serves as the academic home for students pursuing a PhD in the basic biomedical sciences. BGS is composed of more than 600 faculty members and provides training through seven graduate groups - Biochemistry and Molecular Biophysics, Cell and Molecular Biology, Epidemiology and Biostatistics, Genomics and Computational Biology, Immunology, Neuroscience, and Pharmacology. In addition to our graduate programs, BGS is pleased to offer research training for individuals at the undergraduate and post-baccalaureate levels.

Table 18

University of South Florida

College of Engineering
4202 East Fowler Avenue ENB 118
Tampa, FL 33620

Contact: Bernard Batson, bbatson@usf.edu

The University of South Florida (USF) is a high-impact global research university dedicated to student success with an annual budget of \$1.6 billion and over \$450 million in research funding. USF ranked 10th nationally and 13th among universities worldwide for U.S. patents granted in 2014, according to a report released by the National Academy of Inventors (NAI) in 2015. Signature research initiatives are in the areas of Water, Brain & Spinal Cord, Heart, Data Science, Human Security, and Research Translation. Fellowships, assistantships, and professional development opportunities are available for students sponsored by the Alfred P. Sloan Foundation University Center of Exemplary Mentoring (UCEM), McKnight Doctoral Fellowship Program, and USF departments. Summer undergraduate research opportunities are available in Computer Science and Engineering, Biomaterials and Drug Delivery Systems, Advanced Materials and Alternative Energy Systems.

Table 43

University of Southern California

1975 Zonal Ave
KAM 409
Los Angeles, CA 90089-9031

Contact: Joyce Perez, jpperez@med.usc.edu

Programs in Biomedical and Biological Sciences (PIBBS) is the gateway into interdisciplinary Ph.D. programs at Keck Medicine of USC. Our Ph.D. programs are interdepartmental and are focused on broad approaches to modern biomedical research. PIBBS is an umbrella program with distinguished faculty. The PIBBS program offers students breadth and flexibility to best pursue their interests across the wide range of biomedical Ph.D. programs.

Table 44

University of Southern California

1985 Zonal Avenue
PSC 714
Los Angeles, CA 90089

Contact: Rosie Soltero, rsoltero@usc.edu
Liz Aguiniga, laguinig@usc.edu

The Pharmaceutical and Translational Sciences (PHTS) Program brings together - under one umbrella - the School's three laboratory-based PhD programs, allowing a more cohesive interdisci-

Exhibitor Descriptions

plinary experience advancing education and innovative research. This doctoral training program prepares students for careers in academia and advanced scientific research in a broad range of settings. The training encompasses a unique scientific framework from drug discovery, delivery and development to application of genetics and genomics to experimental and clinical translational research. The umbrella structure allows students to attend courses and seminars together, and rotate through laboratories across programs during their first year. This fosters interdisciplinary crosstalk among students and faculty, helping students find the ideal laboratory and faculty mentor as well as the specialized track of study they want to pursue. Upon successful completion of training, students will be conferred the degree of Doctor of Philosophy in one of the following areas of study: Clinical and Experimental Therapeutics Track (CXPT), Molecular Pharmacology and Toxicology Track (MPTX), and Pharmaceutical Sciences Track (PSCI).

Table 4

UT MD Anderson UTHealth GSBS

6767 Bertner Avenue, Mitchell Building
BSRB S3. 8431
Houston, TX 77030

Contact: Marendra Wilson-Pham,
marendra.a.wilson@uth.tmc.edu
Andrew Bean, A.Bean@uth.tmc.edu

The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences is a unique partnership between the University of Texas MD Anderson Cancer Center and the University of Texas Health Science Center at Houston (UTHealth), institutions that are leading the fight against cancer and other major diseases that impact human health and quality of life. The curriculum is designed to provide students with a rigorous exposure to critical thinking strategies, area-specific scientific skills and career development initiatives. The curriculum, together with an emphasis on research training and scientific productivity, is designed to position our students for an outstanding and successful career in the biomedical sciences.

Table 30

UW Molecular and Cellular Biology Program

University of Washington

1959 NE Pacific Street
Box 357275
Seattle, WA 98195-7275

Contact: Maia Low, maialow@uw.edu

Recognizing the need for highly trained scientists conversant across disciplines, the University of Washington and the Fred Hutchinson Cancer Research Center created an interdisciplinary research program, the Molecular and Cellular Biology Graduate

Program (MCB Seattle). For more than 20 years, MCB Seattle has combined the strengths of the Fred Hutch and UW to foster an innovative and flexible graduate training program. Joined by the Institute for Systems Biology (ISB); the Center for Infectious Disease Research (CIDR); the Benaroya Research Institute (BRI); and Seattle Children's Research Institute, MCB Seattle offers a broad range of opportunities for research in all areas of biomedical science.

Table 40

UW Molecular Engineering & Sciences Institute University of Washington

Box 351653
Seattle, WA 98195-1653

Contact: Paul Neubert, pneubert@uw.edu

The interdisciplinary Ph.D. program in Molecular Engineering offers students the opportunity to work with over 100 faculty members from 14 different departments on BioTech and/or CleanTech projects, provides access to the state of the art Molecular Analysis Facility, and also provides paid tuition combined with a highly competitive salary. The MoE PhD provides students the opportunity to: Customize an engineering degree program relevant to your research interests in clean technology or biotechnology; develop a systemic, rational approach to engineering molecular systems that can be applied in fields as diverse as energy, healthcare, or technology; meet nationally and internationally recognized experts in the developing field of molecular engineering; and access state-of-the-art facilities and instrumentation for molecular-scale analysis. Distinguish yourself as an expert in an interdisciplinary and cutting-edge research area, prepared for a leading career in molecular engineering and sciences in industry, at a national lab, or within academia. The University of Washington is ranked No. 11 globally by U.S. News & World Report, and No. 15 globally by the Academic Ranking of World Universities. UW receives more federal research dollars than any other public university in the nation, receiving over \$1.3 billion in total research awards in 2015.

Table 19

Virginia Commonwealth University School of Engineering

601 West Main Street
Suite 331
Richmond, VA 23284

Contact: Gregory Triplett, getriplett@vcu.edu

The VCU School of Engineering, an innovation frontrunner in academics and research, brings real-world education to Central Virginia. Our collaborative and multidisciplinary partnerships prepare undergraduate, master's and doctoral students for leadership. Part of a premier research university, VCU Engineering enhances regional and global prosperity through cutting-edge

development in tissue engineering and drug delivery, biotechnology, cybersecurity, mechanical systems and particle science.

Table 12

Wayne State University Graduate School

5057 Woodward Ave
Suite 6405.3
Detroit, MI 48202

Contact: Farron McIntee, farron@wayne.edu

Wayne State University Graduate School provides leadership in advancing academic excellence in graduate and postdoctoral education and cultivates a supportive environment for research, scholarly activities and other creative endeavors that are integral to the success of a diverse body of master's and doctoral students, postdoctoral scholars, and graduate faculty across programs.

Table 14

Worcester Polytechnic Institute

Office of Graduate Admissions
100 Institute Road
Worcester, MA 01609

Contact: Michael McGrade, mmcgrade@wpi.edu

At Worcester Polytechnic Institute, a collaborative environment encourages multidisciplinary research where students find solutions to real-world problems. Graduate students and faculty work as peers to multiply the impact of their expertise and innovation. Their discoveries in the lab and the classroom have global impact, and the world is better for it. Located in Worcester, Massachusetts, WPI is ranked #1 for "Faculty That Best Combine Research and Teaching" in the 2016 Wall Street Journal/Times Higher Education. Discover WPI - a premier university for graduate studies in science, engineering, and business.

Table 31

XSEDE

The Extreme Science and Engineering Discovery Environment

Contact: Vetria Byrd, vlbyrd@purdue.edu

An NSF-funded project, the Extreme Science and Engineering Discovery Environment (XSEDE) is the most advanced, powerful, and robust collection of integrated digital resources and services in the world. It is a single virtual computing system that scientists can use to interactively share resources, data and expertise. Scientists, engineers, social scientists, and humanities experts around the world - many of them at colleges and universities - use advanced digital resources and services every day. Supercomputers, collections of data, and new tools are

critical to the success of those researchers, who use them to make our lives healthier, safer, and better. XSEDE integrates these resources and services, makes them easier to use, and helps more people use them. XSEDE offers advanced computing resources, training, curriculum development, and student opportunities.

<http://www.emerging-researchers.org>



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