2017 Capital PKAL Regional Network Meeting

Leadership and Collaboration Across Boundaries

Morgan State University, Baltimore, Maryland
April 14, 2017

SUMMARY AGENDA

8:30-9:00 am  REGISTRATION, BREAKFAST & NETWORKING  
Second Floor

9:00-9:15 am  WELCOME  
David Wilson, President, Morgan State University  
Hongtao Yu, Dean of School of Computer, Mathematics, and Natural Sciences  
Cleo Hughes-Darden, Chairperson of Department of Biology

Student Center Ballroom B

9:15-9:20 am  INTRODUCTION OF SPEAKER  
David Wilson, President, Morgan State University

9:20-10:00 am  KEYNOTE ADDRESS  
Leadership and Collaboration Across Boundaries  
Tuajuanda Jordan, President, St. Mary's College of Maryland

Student Center Room 210A

10:15-11:15 am  CONCURRENT SESSIONS I  
A. Development and Assessment of a Six-Week, Authentic,  
Group Research Experience for Community College Students  
Laura E. Ott, William R. LaCourse,  
Kathleen Stolle-McAllister, and Philip Farabaugh  
University of Maryland, Baltimore County

Student Center Room 210B

B. Deconstructing Silos: Working With What You Have  
Mary Owens-Southall, Wanda McCoy,  
Delores Smith, and Monsumi Chattang  
Coppin State University

C. Integrating Climate Neutrality and Sustainability into the  
Stevenson University Residential Curriculum  
Kimberly Pause Tucker, Joseph Matamoski, and Bonnie Boyle McGabee  
Stevenson University

Student Center Room 212A

D. A Computational Approach to Molecular Biology Instruction  
Ahlam Tannouri and James Wachira  
Morgan State University

Student Center Room 212B

11:15-11:30 am  BREAK & POSTERS  
Student Center Ballroom C
11:30-12:30 pm  CONCURRENT SESSIONS II  
A. Implementing a Broad Set of Effective, Collaborative Learning Techniques  
Joshua Grossman  
St. Mary’s College of Maryland  

B. Empowering Entrepreneurial Mindsets Through “Pathways to Innovation” Initiative at Loyola University Maryland  
Bahram Rouhani, Robert Pond, Randall S. Jones, Suzanne Keilson, and William Friebele  
Loyola University Maryland  

C. Interdisciplinary Education and Research in STEM Education  
Stephen Providence  
Coppin State University  

D. Collaborative and Hands-on Approaches to Teaching Programming to STEM Majors  
Birol Ozturk  
Morgan State University  

12:30-1:45 pm  LUNCH, NETWORKING, AND POSTERS  

1:45-2:45 pm  CONCURRENT SESSIONS III  
A. The ASCEND Summer Research Institute at Morgan State University: A Course Based Model for Student-Centered, Interdisciplinary, Entrepreneurial Research Training in Health Sciences  
Christine F. Hohmann and Avis Jackson  
Morgan State University  

B. Bridge Building: A Partnership between the JMU Chemistry Department and Outreach and Engagement  
Iona Black and Tomika Ferguson  
James Madison University  

C. Revising Student Evaluations of Teaching  
Lorraine Valdez Pierce and Alexandria Zylstra  
George Mason University  

D. Journeys Through the Gallery and the Microscope: Teaching Visual Literacy through Transdisciplinary Collaboration  
Joe Lucchesi and Elizabeth Leininger  
St. Mary’s College of Maryland  

2:45-3:15 pm  HOW TO GET INVOLVED WITH CAPITAL PKAL REGIONAL NETWORK  
Cleo Hughes-Darden, Chairperson of Biology, Morgan State University; and Capital PKAL Steering Committee  

3:15-3:30 pm  CLOSING AND FINAL REMARKS  
Kelly M. Mack, Vice President for Undergraduate STEM Education; and Executive Director, Project Kaleidoscope Association of American Colleges and Universities
Dr. Tuajuanda Jordan has served as St. Mary’s College of Maryland’s (SMCM) seventh president since July 2014. During her tenure, the Board of Trustees approved *A Time for Rebirth*, a new three-year strategic plan that builds on the College’s charter as Maryland’s only public honors college and the first of its kind in the nation. Under her leadership, the College added a new environmental studies major, added bachelor of science degrees in six majors for spring 2017, and achieved accreditation of the biochemistry program from the American Society for Biochemistry and Molecular Biology—the first public institution in Maryland to hold such an honor. Among other achievements: the opening of African/African Diaspora House and Eco-House student living learning centers, the addition of men’s and women’s varsity rowing teams, and the establishment of five major campus workgroups centering around initiatives for campus inclusion, diversity and equity.

Dr. Jordan gained national prominence in the realm of science education with the creation of the Howard Hughes Medical Institute’s Science Education Alliance program and the launch of its first initiative, the SEA Phage program, which engaged novice undergraduates in research in genomics and bioinformatics. She has been widely recognized for her contributions to higher education and the larger community. In addition to serving on numerous national panels, she was named as one of Purdue University’s Distinguished Women Scholars (2015-16) and as an Influential Marylander by the Daily Record (2015). She received the Torchbearer Award (2014) from the National Coalition of Black Women, Baltimore Metropolitan Chapter and was inducted (2015) into the Zeta Chapter of Phi Beta Kappa, the nation’s oldest academic honor society.
RESOURCES

Concurrent Session Descriptions................................................................. 5
Poster Descriptions.................................................................................. 11
Participant List........................................................................................... 16
Acknowledgements..................................................................................... 20
Notes Page................................................................................................. 21
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session I - A

*Development and Assessment of a Six-Week, Authentic, Group Research Experience for Community College Students*

Laura E. Ott, William R. LaCourse, Kathleen Stolle-McAllister, and Philip Farabaugh
University of Maryland Baltimore County

Pre-transfer community college students often have difficulty obtaining authentic research experiences, putting them at risk of not persisting in the STEM field. To increase their preparedness and competitiveness, we developed a six-week summer internship for pre-transfer community college students that is supported by the NIH-funded STEM BUILD at UMBC Initiative. The internship involves students from five community colleges participating in a group research experience at the University of Maryland, Baltimore County (UMBC). Participants are nominated for the internship by community college representatives, are financially compensated, participate in various enrichment activities, and work on mentored, real-life scientific projects that benefit the mentor’s research program. This short, group internship has resulted in significant gains in students’ science identity and research self-efficacy. Further, this internship has provided UMBC an opportunity to explore mechanisms to expand the capacity of authentic research experiences for all students through the creation of a short-term group research model.

Concurrent Session I - B

*Deconstructing Silos: Working With What You Have*

Mary Owens-Southall, Wanda McCoy, Delores Smith, and Mousumi Chattaraj, Coppin State University

Institutions of higher learning are challenged by the need to impart relevance and innovation in the core or general education curriculum. Students and faculty attitudes often reflect disinterest, why this course, and just let me finish, all of which appears to be daunting and prohibitive to core course transformation and evaluation. The value of developing a well-rounded scholar with alignment to the goals of higher education and beyond appears lost in the cycle. While many ideas abound to transform and enhance delivery of core curriculum, faculty may be reluctant to lead such efforts. Transformative changes must be sustainable and support student learning outcomes. Integrated project based learning in the core or general education courses addresses these issues. Students become actively engaged during integrated project based learning and learn to apply knowledge across the disciplines. A model will be discussed demonstrating redesign of core education curricula and how to lead course transformation.
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session I - C

*Integrating Climate Neutrality and Sustainability into the Stevenson University Residential Curriculum*

Kimberly Pause Tucker, Joseph Matanoski, and Bonnie Boyle McGahee, Stevenson University

To expand partnerships across the institution, the Stevenson University (SU) Office of Residence Life, Center for Environmental Stewardship, and faculty members have been collaborating to integrate climate neutrality and environmental sustainability education into co-curricular programming in SU Residence Halls. This presentation will discuss how Stevenson University's Office of Residence Life, Center for Environmental Stewardship, and faculty members are collaborating to engage students, promote personal and intellectual growth, and develop a strong sense of community all while having students understand and reflect upon their role as global citizens and environmental stewards. Participants will leave the session with an overview of residential curricula, sample programming, and other tools to inspire cross-campus collaborations.

Concurrent Session I - D

*A Computational Approach to Molecular Biology Instruction*

Ahlam Tannouri and James Wachira, Morgan State University

Biology is becoming a computationally intensive discipline that relies on large datasets. However, like many basic science disciplines, the requisite mathematics courses are rarely taught to biology majors in contextually relevant settings or using discipline-specific examples. This leads to poor transferability of quantitative skills to biology courses or work environments. To address this problem, we designed a one-semester molecular biology course that integrates quantitative skills within biology content. This hands-on course is co-taught by the departments of biology and mathematics in a computer lab. Students are introduced to data analysis and summarization concepts using MATLAB, which is a widely used technical computing software package. The enabling mathematical principles are discussed with relevant examples from molecular biology. The students analyze experimental data obtained from the National Center for Biotechnology Information's (NCBI's) Databases. This approach is more relevant to most work environments where problems are solved by multi-disciplinary teams working collaboratively.
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session II - A
Implementing a Broad Set of Effective, Collaborative Learning Techniques
Joshua Grossman, St. Mary's College of Maryland

The Department of Physics at St. Mary’s College of Maryland has developed a culture that embraces experimentation, collaboration, and adoption of evidence-based best practices. The department was recently featured for its use of best practices in Phys21: Preparing Physics Students for 21st Century Careers, a joint report of the American Physical Society and the American Association of Physics Teachers. The department’s broad set of best practices includes a variety of collaborative learning techniques, such as Peer Instruction, group problem solving, participation feedback and engineered group formation, peer critiques, an Emerging Scholars Program, undergraduate Teaching Assistants, student-student research mentoring, and collaborative research.

The workshop will begin with a case study of techniques implemented in the Department of Physics at St. Mary’s College of Maryland. Next, participants will engage in two rounds of small-group, breakout discussion – first sharing techniques and sources to learn about them, and then focusing on implementation.

Concurrent Session II - B
Empowering Entrepreneurial Mindsets through “Pathways to Innovation” Initiative at Loyola University Maryland
Bahram Roshani, Robert Pond, Randall S. Jones, Suzanne Keilson, and William Friebele, Loyola University Maryland; and Mary A Smith, North Carolina A&T State University

Loyola University Maryland is a Pathways to Innovation institution, which is an NSF supported program from Epicenter at Stanford University in collaboration with VentureWell, a private nonprofit. The program provides training in strategic change management as well as a supportive peer network. This initiative at Loyola is the result of an initial collaborative effort among the Engineering, Computer Science and Physics departments. It is expanding, garnering support from the Schools of Business, Education, and Arts and Sciences, and the university library. The approach for enhancing the interest, role, and profile for STEM undergraduate learning is through encouraging a creative, innovative, and entrepreneurial mindset. This is accomplished through course offerings, both for majors and open to all students, as well as extra-curricular activities. The agile approach of “strategic doing” and details of the implementation of our framework will be presented.
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session II - C

*Interdisciplinary Education and Research in STEM Education*

*Stephen Providence, Coppin State University*

There are various modalities leading towards conducting undergraduate STEM education and research. Infrastructure is foundational and undergirds interdisciplinary education. A working curricula with collaboration across several disciplines is required and finally commitment by educators and researchers from participating disciplines. Administrative support makes possible and practical this form of STEM education.

Concurrent Session II - D

*Collaborative and Hands-on Approaches to Teaching Programming to STEM Majors*

*Birol Ozturk, Morgan State University*

A senior level physics course at Morgan State University on laboratory use of computers was completely redesigned to include lectures and hands-on projects. As the field of computation rapidly evolves, the course content was entirely changed to include state-of-the-art approaches to data collection such as Arduino, Raspberry PI, LabVIEW, Python, and MATLAB. Students are introduced to new programming and electronics skills through these different modules. Students are required to work in groups on the hands-on projects and groups are encouraged to exchange information. The instructor acts as the facilitator in this information exchange by starting communication between groups. The instructor also sets high expectations and motivates students to attain the learning outcomes. Students also gain essential expertise for becoming entrepreneurs as some of these hardware and software are commonly used in the maker world.
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session III - A
The ASCEND Summer Research Institute at Morgan State University: A Course Based Model for Student-Centered, Interdisciplinary, Entrepreneurial Research Training in Health Sciences
Christine F. Hohmann and Avis Jackson, Morgan State University

This presentation will focus on a novel, course based, entrepreneurial research training approach we have developed at MSU, as part of our NIH BUILD Diversity Consortium grant. Dr. C. Hohmann will describe the framework that led to the development of our training approach, focused on lower division undergraduates recruited from STEM and Social/Behavioral sciences disciplines. Further, she will present an overview of the conception of the interdisciplinary learning objectives and course modules developed over the course of the past two years. Dr. A. Jackson will describe the evaluation strategies that have been applied to assess training outcomes and present our current data. The presentation will conclude with a panel discussion, including an interdisciplinary team of SRI instructors. We propose, that our approach has general application as an effective catalyst to engage lower division undergraduates in research and foster their retention in the major.

Concurrent Session III - B
Bridge Building: A Partnership between the JMU Chemistry Department and Outreach and Engagement
Iona Black and Tomika Ferguson, James Madison University

James Madison University’s Chemistry Department and Outreach & Engagement office have sustained a collaboration for three year in three areas: community engagement, undergraduate student engagement, and online learning. Our partnership has focused on a regional science quiz bowl for middle school students, facilitating the building of community with transfer chemistry and biology majors, and piloting an online, dual-enrollment course. This partnership has reached more than six counties in our region by capitalizing on departmental needs/goals, faculty interest and experience. This presentation will: (a) describe the evolution of this organic partnership; (b) share best practices and challenges faced by collaborations across academic and non-academic departments at a large, public university; and (c) facilitate brainstorming and planning activities amongst attendees on how to create or enhance campus partnerships at their own universities.
CONCURRENT SESSION DESCRIPTIONS

Concurrent Session III - C
Revising Student Evaluations of Teaching
Lorraine Valdez Pierce and Alexandria Zylstra, George Mason University

Student Evaluations of Teaching – do they actually measure teacher effectiveness? For the past three years, the Effective Teaching Committee, charged with revising faculty evaluation procedures at a large university, has engaged in a systematic review of the literature and of how Student Evaluations of Teaching (SETs) are currently used in efforts to develop and validate a new form that is research-based and actually measures teaching effectiveness. The committee solicited feedback from deans, program directors, chairs of faculty evaluation/promotion and tenure committees, faculty, and students. An online survey was developed and administered to stakeholders asking them to rate the importance of categories of effective teaching. The data is currently being collected and analyzed and will guide the committee’s decisions regarding items to include on the revised form. The focus of this presentation will be on the process used to identify features of teaching effectiveness and to obtain feedback from interested stakeholders.

Concurrent Session III - D
Journeys Through the Gallery and the Microscope: Teaching Visual Literacy through Transdisciplinary Collaboration
Joe Lucchesi and Elizabeth Leininger, St. Mary's College of Maryland; and German Mora, Goucher College

Our session will explore the opportunity for collaborations between art history and biology in the teaching and learning of visual literacy. Visual literacy is an important competency for any discipline, but approaches to teaching visual literacy are often “silenced” within departments. We will describe the motivation for our recent collaborations between art history and biology/neuroscience in the teaching and learning of visual and spatial literacy, and the recent trajectory of our collaborations, including application of visual literacy pedagogy to biology and neuroscience settings. Throughout the session, we will model exercises used to teach visual and spatial literacy across multiple disciplines. We will present our assessment strategy of activities and curricular materials to date, and end by brainstorming how best practices in assessment of visual literacy can be applied across disciplines.
POSTER SESSION DESCRIPTIONS

Baltimore Environmental Exchange: Professional Development and Network for Capacity Building in Climate Science Education
Kimberly Pause Tucker, Stevenson University; Bernadette Roche and Elizabeth E Dahl, Loyola University Maryland; and German Mora, Goucher College

The pace at which society must respond to the climate crisis requires a pooling of resources and strong partnerships among institutions that might ordinarily be somewhat disconnected. Through partnership, professional development, and networking, the Baltimore Environmental Exchange (BEE) Network aims to build local capacity around climate change education and co-curricular programming. In an effort to dismantle silos between and within institutions, all faculty and staff from colleges who are part of the Baltimore Collegetown Network are welcome to join the BEE. We recognize that many disciplines can contribute to climate change and sustainability education. Additionally, we recognize that learning happens both in and out of a classroom.

Breaking Silos and Building Partnerships through Entrepreneurial Training in S.T.E.M.
Jocelyn Turner-Musa, Cleo Hughes-Darden, Acquanette Pinchback and Sherita Henry, Morgan State University

Increasing the participation of underrepresented populations in biomedical and behavioral sciences is vital to ensuring a high-quality supply of biomedical scientists in the United States. To address this, a student-centered entrepreneurial development training model (ASCEND) was developed to increase diversity in biomedical and social sciences research careers. The program was funded through the NIH BUILD initiative and uses an interdisciplinary team-based science approach. Recognizing that it takes an “institution to BUILD a scholar”, the program includes multiple university departments and internal as well as external programs to complement student training and student-driven interdisciplinary research. This includes “breaking silos and building partnerships” with the university’s Writing Center, Office of Residence Life, Academic Enrichment Center, and Center for Career Development. An overview of the ASCEND student training program and preliminary outcomes from the first cohort of scholar participants will be presented.
Building a Multidisciplinary Network for Preparing Students for the Bioscience Workforce

David B. Rivers and Christopher Thompson, Loyola University Maryland; Michael Tanrea, Sinai Hospital in Baltimore; and Rommel Miranda, Towson University

The Mid-Atlantic Biology Research and Career (MABRC) network is a community of scientists, educators and business professionals working to improve progression of college graduates into life science careers in academia, government, and the private sector. The network is developing a forum for bridging the divide between undergraduate biology education and student preparation for the Bioscience workforce. Network members aim to develop a framework for authentic research experiences that can serve as a model in a variety of contexts. Critical assessment will be used to identify gaps in undergraduate biology curricula in fostering these skills, and a career conference will be used to inform high school and undergraduate students of the appropriate skills needed. This strategy will facilitate connections with high school programs, and allow direct contribution to the workforce by participating students, the latter being especially important for women and minority students to serve as peers and STEM role models.

Improving Student Learning in Underserved Minority Students using a Critical Thinking Model

Linda Johnson, University of Maryland Eastern Shore

The University of Maryland Eastern Shore implemented an HBCU-UP Targeted Infusion Project as an intervention to address poor student performance in introductory STEM courses. Presented here are outcomes from our work with Principles of Biology I, a course that serves as a gateway for Biology majors and those in the health sciences programs such as pharmacy or exercise sciences. Through course redesign and training in critical thinking skills (CT) and pedagogy for CT instruction, faculty revised and restructured the course in preparation for the implementation phase of the project. The redesigned course also contrasted with the existing structure in that it was concept based with content modules that reflected three fundamental and powerful concepts in biology. Using ten final exam questions that spanned Bloom’s taxonomy, the intervention group significantly outperformed the control overall. The impact was more striking in Bloom’s levels for students who scored in the mid- to high-ranges.
POSTER SESSION DESCRIPTIONS

Infusing Computational Science and Cultural Competency into Biochemistry for Majors and Biochemistry for Non-Majors
Pumtiwitt McCarthy and Richard Williams, Morgan State University

Biochemistry is an interdisciplinary field describing the chemical basis of living systems. One theme that students have extreme interest in but difficulty grasping is the central dogma. This concept explains how DNA is transcribed into RNA and translated into protein. In order to give students real world examples of how changes at the DNA level can exact change at the protein level, two modules were incorporated (1 per course) that use computational science to explore the molecular basis of disease. Students used freely available online gene and protein databases from the National Institutes of Health, online bioinformatics software from EXPASY, and protein visualization software. The specific diseases, cystic fibrosis and sickle cell anemia, affect certain racial groups disproportionately and discussion of this increased student’s cultural competency. We will describe the development and implementation of these modules.

Project support from Morgan's Teaching to Increase Diversity and Equity in STEM (MTIDES).

Integrating Instructional Design in the Classroom: Collaboration between IT and Honors Psychology
Katherine Cameron and Dionne Curbeam, Coppin State University

During a spring Honors Psychology course, students and IT staff collaborated on integrating use of technology in designing instructional tool for learning course material, as well as supporting community engagement activities. IT staff visited the classroom regularly to provide technical support. Usually IT supports faculty to bring teaching tools into the classroom. This approach broke down silos and created an IT-faculty-student design team.
POSTER SESSION DESCRIPTIONS

*Integrating Interdisciplinary Infusions in Biology Courses*
*Laurie F. Castlake, Lafayette College*

The Course Infusion Program was proposed as part of our 2012 proposal to the Howard Hughes Medical Institute. The infusions were intended to make the biology curriculum more interdisciplinary. Over the past four years, members of the Biology Department worked with members of other departments and programs to “infuse” biology courses with interdisciplinary modules from disciplines such as anthropology, economics, engineering, computer science, art, and government and law. Infused biology courses include General Biology, Neurobiology, Microbiology, Human Physiology, Anatomy of Vision, and Plant Form, Function, and Adaptation. We anticipated that students’ interdisciplinary problem solving skills would be strengthened through the completion of courses with infusion modules. To date, over 1000 students have enrolled in these “infused” courses.

*STEMovation: Collaborations between STEM and Business Programs to Foster Student Entrepreneurship*
*Kathryn B. Walters-Conte, American University*

Graduates of STEM programs are poised to enter the workforce in the areas of medicine, academia, government or industry. However, prior exit interviews found that if students were not willing to enter medicine or academia, they felt ill prepared to pursue employment in industry. After first making "cultural" changes within the departments, the STEM programs at American University have begun working collaboratively with the Kogod School of Business, encouraging students to think of science in the broader sense of applied technology; spurning several commercial ventures through the business incubator. This has resulted in better graduate satisfaction, increased job placement upon graduation and greater retention in the science majors.
The Morgan Teaching to Increase Diversity and Equity in STEM (MTIDES) Project
Cleo Hughes Darden, Roni Ellington, Birol Ozturk and Asamoah Nkwanta, Morgan State University; and Linda Akil, Southeastern Universities Research Association

The Morgan Teaching to Increase Diversity and Equity in STEM (MTIDES) project aims to infuse computer science tools into the STEM curricula for the purpose of enhancing the interest, competencies, retention, and recruitment of STEM graduates. The STEM curricula are under revision to create a cohesive program of courses covering introductory computer programming, big data, applications of software packages and algorithms in the data sciences, and mathematical modeling with computation and data analysis. A Computational Data Science Certificate will be awarded to students who successfully complete the revised STEM curricula. The goals of this project are: 1) infuse computer and information science tools into basic science courses in chemistry, biology, physics, and mathematics for the purpose of graduating a workforce skilled in data science, 2) empower Morgan faculty through carefully designed professional development workshops, and 3) provide computational data science certificate program that appeals to Morgan STEM and non-STEM majors.

Will Your Science Teachers Be Black?
Meg Bentley, American University

American University is in the midst of a general education reform that includes the creation of freshman seminar-type courses called "Complex Problems". Over the next 7 months, I will design a course that addresses the complex problem of under representation in STEM fields. My hope is that this course will provide incoming freshman with knowledge about the STEM professional pipelines and where the leaks are. Here I present my initial course design and welcome input from diverse, vested and experienced colleagues.
### PARTICIPANT LIST

<table>
<thead>
<tr>
<th>AMERICAN UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meg Bentley</td>
<td><a href="mailto:megbentley@gmail.com">megbentley@gmail.com</a></td>
</tr>
<tr>
<td>Kathryn Walters Conte</td>
<td><a href="mailto:kwalt@american.edu">kwalt@american.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASSOCIATION OF AMERICAN COLLEGES &amp; UNIVERSITIES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly Mack</td>
<td><a href="mailto:mack@aacu.org">mack@aacu.org</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOWIE STATE UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethia Jackson</td>
<td><a href="mailto:ljackson@bowiestate.edu">ljackson@bowiestate.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLEMSON UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Justine Chasmar</td>
<td><a href="mailto:jchasma@clemson.edu">jchasma@clemson.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COPPIN STATE UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine Cameron</td>
<td><a href="mailto:kcameron@coppin.edu">kcameron@coppin.edu</a></td>
</tr>
<tr>
<td>Mousumi Chattaraj</td>
<td><a href="mailto:mehattaraj@coppin.edu">mehattaraj@coppin.edu</a></td>
</tr>
<tr>
<td>Wanda McCoy</td>
<td><a href="mailto:wmccoy@coppin.edu">wmccoy@coppin.edu</a></td>
</tr>
<tr>
<td>Mary Owens-Southall</td>
<td><a href="mailto:mouenst@coppin.edu">mouenst@coppin.edu</a></td>
</tr>
<tr>
<td>Stephen Providence</td>
<td><a href="mailto:sprovidence@coppin.edu">sprovidence@coppin.edu</a></td>
</tr>
<tr>
<td>Delores Smith</td>
<td><a href="mailto:dsmith1@coppin.edu">dsmith1@coppin.edu</a></td>
</tr>
<tr>
<td>Keith Williamson</td>
<td><a href="mailto:kwilliamson@coppin.edu">kwilliamson@coppin.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DELAWARE STATE UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthea Aikins</td>
<td><a href="mailto:aaikins@desu.edu">aaikins@desu.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GEORGE MASON UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorraine Pierce</td>
<td><a href="mailto:LPIERCE@gmu.edu">LPIERCE@gmu.edu</a></td>
</tr>
<tr>
<td>Alexandria Zylstra</td>
<td><a href="mailto:azylstr2@gmu.edu">azylstr2@gmu.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GEORGETOWN UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngeun Choi</td>
<td><a href="mailto:ye709@georgetown.edu">ye709@georgetown.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GOUCHER COLLEGE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruquia Ahmed-Schofield</td>
<td><a href="mailto:ruquia.ahmedschofield@goucher.edu">ruquia.ahmedschofield@goucher.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAMPTON UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chutima Boonthum</td>
<td><a href="mailto:chutima.boonthum@hamptonu.edu">chutima.boonthum@hamptonu.edu</a></td>
</tr>
<tr>
<td>Moayed Daneshyari</td>
<td><a href="mailto:moayed.daneshyari@hamptonu.edu">moayed.daneshyari@hamptonu.edu</a></td>
</tr>
<tr>
<td>Simone Heyliger</td>
<td><a href="mailto:simone.heyliger@hamptonu.edu">simone.heyliger@hamptonu.edu</a></td>
</tr>
<tr>
<td>Jean Muhammad</td>
<td><a href="mailto:jeana.muhammad@hamptonu.edu">jeana.muhammad@hamptonu.edu</a></td>
</tr>
<tr>
<td>Marilyn Saulsbury</td>
<td><a href="mailto:marilyn.saulsbury@hamptonu.edu">marilyn.saulsbury@hamptonu.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JAMES MADISON UNIVERSITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iona Black</td>
<td><a href="mailto:blackin@jmu.edu">blackin@jmu.edu</a></td>
</tr>
<tr>
<td>Tomika Ferguson</td>
<td><a href="mailto:fergu2tl@jmu.edu">fergu2tl@jmu.edu</a></td>
</tr>
</tbody>
</table>
PARTICIPANT LIST

MONTGOMERY COLLEGE

- Alla Webb
  alla.webb@montgomerycollege.edu

- Carolyn Schick
  Carolyn.Schick@montgomerycollege.edu

LOYOLA UNIVERSITY MARYLAND

- Lisa Brown
  lisa.brown@loyola.edu

- Frank Denaro
  frank.denaro@loyola.edu

- Herald Douglas
  hearld.douglas@loyola.edu

- Roni Ellington
  roni.ellington@loyola.edu

- Stella Hargett
  stella.hargett@loyola.edu

- Sherita Henry
  sherita.henry@loyola.edu

- Christine Hohmann
  christine.hohmann@loyola.edu

- Cleo Hughes Darden
  cleo.hughesdarden@loyola.edu

- Avis Jackson
  avis.jackson@loyola.edu

- Robert Javonillo
  robert.javonillo@loyola.edu

- Niangoran Koissi
  niangoran.koissi@loyola.edu

- Kemi Ladeji-Osias
  jumoke.ladeji-osias@loyola.edu

- Pumtiwitt McCarthy
  pumtiwitt.mccarthy@loyola.edu

- Asamoah Nkwanta
  asamoah.nkwanta@loyola.edu

MORANGE STATE UNIVERSITY

- Carol Fleming
  fleminca@jmu.edu

- Barbara Franklin
  franklb@jmu.edu

- Sarah MacDonald
  macdonsk@jmu.edu

LAFAYETTE COLLEGE

- Laurie Castlake
  castlake@lafayette.edu

LOYOLA UNIVERSITY MARYLAND

- Theresa Cancila
  tecancila@loyola.edu

- Kim Derrickson
  kderrickson@loyola.edu

- Billy Friebele
  bfrieberle@gmail.com

- Randall Jones
  RSJ@Loyola.edu

- Suzanne Keilson
  skkeilson@loyola.edu

- Robert Pond
  rpond@loyola.edu

- David Rivers
  drivers@loyola.edu

- Bahram Roughani
  broughani@loyola.edu

- Dipa Sarkar-Dey
  dsarkardey@loyola.edu

- Christopher Thompson
  cthompson2@loyola.edu

- Amy Wolfson
  awolfson@loyola.edu

MCDANIEL COLLEGE

- Katie Staab
  kistaab@mcdaniel.edu

MORGAN STATE UNIVERSITY

- Lisa Brown
  lisa.brown@morgan.edu

- Frank Denaro
  frank.denaro@morgan.edu

- Herald Douglas
  hearld.douglas@morgan.edu

- Roni Ellington
  roni.ellington@morgan.edu

- Stella Hargett
  stella.hargett@morgan.edu

- Sherita Henry
  sherita.henry@morgan.edu

- Christine Hohmann
  christine.hohmann@morgan.edu

- Cleo Hughes Darden
  cleo.hughesdarden@morgan.edu

- Avis Jackson
  avis.jackson@morgan.edu

- Robert Javonillo
  robert.javonillo@morgan.edu

- Niangoran Koissi
  niangoran.koissi@morgan.edu

- Kemi Ladeji-Osias
  jumoke.ladeji-osias@morgan.edu

- Pumtiwitt McCarthy
  pumtiwitt.mccarthy@morgan.edu

- Asamoah Nkwanta
  asamoah.nkwanta@morgan.edu
## PARTICIPANT LIST

**STEVENSON UNIVERSITY**

- Bonnie Boyle McGahee  
  bmcahee@stevenson.edu
- Thaieren Dade  
  tdade@stevenson.edu
- Rivka Glaser  
  rglaser@stevenson.edu
- Michelle Ivey  
  mivey@stevenson.edu
- Wendy Kimber  
  wkimber@stevenson.edu
- Joseph Matanoski  
  jmatanoski@stevenson.edu
- Sara Narayan  
  snarayan@stevenson.edu
- Ellen Roskes  
  eroskes@stevenson.edu
- Carol Schmidhauser  
  cschmidhauser@stevenson.edu
- Kerry Spencer  
  kspencer4@stevenson.edu
- Kimberly Tucker  
  kptucker@stevenson.edu
- Sarah Walsh  
  swalsh4@stevenson.edu

**SAINT MARY'S COLLEGE OF MARYLAND**

- Joshua Grossman  
  jmgrossman@smcm.edu
- Tuajuanda Jordan  
  president@smcm.edu
- Elizabeth Leininger  
  elesininger@smcm.edu
- Joe Lucchesi  
  jelucchesi@smcm.edu
- Carol Schmidhauser  
  cschmidhauser@stevenson.edu

**TRINITY WASHINGTON UNIVERSITY**

- Tierra Guy  
  gayt@trinitydc.edu
- Patrice Moss  
  pmoss@trinitydc.edu

**SINAI HOSPITAL OF BALTIMORE**

- Michael Tangrea  
  mtangrea@lifebridgehealth.org

**SOUTHEASTERN UNIVERSITIES RESEARCH ASSOCIATION**

- Linda Akli  
  akli@sura.org

**UNIVERSITY OF MARYLAND**

- Marcia Shofner  
  mshofner@umd.edu
PARTICIPANT LIST

UNIVERSITY OF MARYLAND
BALTIMORE COUNTY

Philip Farabaugh
farabaug@umbc.edu

William LaCourse
lacourse@umbc.edu

Laura Ott
leott@umbc.edu

Kathleen Stolle-McAllister
kstolle@umbc.edu

UNIVERSITY OF MARYLAND EASTERN SHORE

Tracy Bell
tdbell@umes.edu

Maurice Crawford
mkcrawford@umes.edu

Linda Johnson
lrjohnson@umes.edu

UNIVERSITY OF THE DISTRICT OF COLUMBIA

Lily Liang
lliang@udc.edu

Wagdy Mamoud
wmamoud@udc.edu

Xueging Song
xsong@udc.edu

Gebretebsae Tzadu
gtzadu@udc.edu
ACKNOWLEDGEMENTS

The 2017 Capital PKAL Regional Network Conference was made possible with the support of Morgan State University, the School of Computer, Mathematics and Natural Sciences, the Department of Biology, funding from the National Science Foundation, and the efforts of the Capital PKAL Regional Network Steering Committee members:

Dr. Cleo Hughes Darden, Chairperson and Associate Professor of Biology, Morgan State University (Committee Chair/Event Host)
Dr. Lisa Brown, Associate Professor of Biology and Associate Chairperson, Morgan State University
Dr. Meredith Durmowicz, Dean, School of Sciences, Stevenson University
Dr. Christine Hohmann, Professor of Biology, Morgan State University
Dr. Lethia Jackson, Professor of Computer Science, Bowie State University
Dr. Jumoke Ladeji-Osias, Associate Professor of Engineering, Morgan State University
Dr. Lily Liang, Professor of Computer Science, University of the District of Columbia
Dr. Wanda McCoy, Assistant Professor, Coppin State University
Dr. Asamoah Nkwanta, Professor of Mathematics, Morgan State University
Dr. Bahram Roughani, Associate Dean of Natural and Applied Sciences, Loyola University Maryland
Dr. Alla Webb, Professor of Computer Science, & Information Systems, Montgomery College

Additionally, special thanks to the speakers, moderators and the Project Kaleidoscope Office staff at the Association of American Colleges & Universities for their continued support.
NOTES

♦️
NOTES