

NSF National EPSCoR Conference Columbia South Carolina October 27-30, 2019

Science and Partnerships Across Disciplinary Boundaries

Note: Presentation slides should become available at the NSF 2019 EPSCoR Conference Website, see: <https://nsfepscor2019.org/>

The 26th NSF biennial EPSCoR Conference was held in Columbia, the capital city of South Carolina. The 2019 NSF EPSCoR National Conference main venue, the Columbia Metropolitan Convention Center (CMCC), was centrally located downtown, within easy walking distance from several hotels and countless amenities like the historic University of South Carolina Horseshoe, the South Carolina Statehouse with its lovely park-like grounds, the bustling Vista and Main Street entertainment districts, both of which are packed with restaurants, galleries, shops and much more.

SCIENCE AND PARTNERSHIPS ACROSS DISCIPLINARY BOUNDARIES

Today's problems require a transdisciplinary approach that draws on diverse fields of knowledge to generate innovative solutions. To enhance transdisciplinary convergence among NSF EPSCoR jurisdictions, we will examine the barriers and share best practices for building partnerships across disciplinary boundaries.

				
Investment Promoting transdisciplinary research and education through NSF EPSCoR investments	Public-Private Partnerships Promoting public-private partnerships to enhance economic competitiveness	STEM Partnerships Broadening participation in STEM through partnerships	Big Data Big data from a transdisciplinary perspective: Crossing boundaries	Transdisciplinary Research Evaluating transdisciplinary research and conveying its importance to a broader audience

Conference Venues

Most conference events were held at the Columbia Metropolitan Convention Center. The welcome reception was hosted at the Columbia Museum of Art and the closing reception was held at the USC Pastides Alumni Center.

- Columbia Metropolitan Convention Center
1101 Lincoln Street, Columbia, SC 29201
- Columbia Museum of Art
1515 Main Street, Columbia, SC 29201
- University of South Carolina Pastides Alumni Center
900 Senate Street, Columbia, SC 29201

MISSION

EPSCoR enhances research competitiveness of targeted jurisdictions (states, territories, commonwealth) by strengthening STEM capacity and capability.

VISION

EPSCoR envisions its jurisdictions as recognized contributors to the national and global STEM research enterprise.

GOALS

- Catalyze research capability across and among jurisdictions;
- Establish STEM professional development pathways;
- Broaden participation of diverse groups/institutions in STEM;
- Effect engagement in STEM at national and global levels;
- Impact jurisdictional economic development.

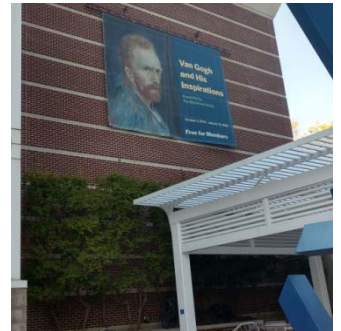
Sunday, October 27, 2019

Welcome Reception and Dinner

Columbia Museum of Art, 1515 Main Street



A nice opening reception was held at the Museum, which featured local cuisine offered at various serving stations, and special access to the Van Gogh exhibit as well as the main gallery, which included wonderful exhibits of original art dating back many centuries. A magnificent Chihuly blown glass sculpture formed the backdrop for the welcome by Conference Host, Dr. Prakash Nagarkatti, Vice President for Research, University of South Carolina, who introduced the NSF EPSCoR Section Head, Loretta Moore, and the opening day Plenary Speaker, Kelvin Droegemeier, the Director, White House Office of Science and Technology Policy (OSTP), and Presidential



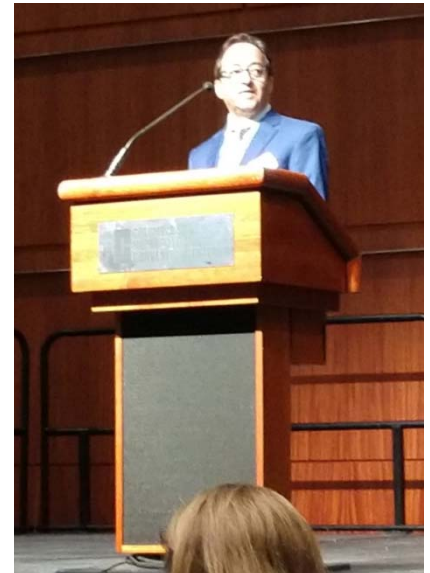
Science Advisor. Dr. Nagarkatti thanked his staff and all of those who had been involved in the planning and execution of the conference for the past year, and told humorous stories about making the decision to host the Conference and the ensuing efforts necessary to make it a success.

Monday, October 28, 2019 – Columbia Metropolitan Convention Center (CMCC)

Welcome Address



Prakash Nagarkatti, Vice President for Research, University of South Carolina. Dr. Nagarkatti once again welcomed all of the attendees. He indicated they had over 400 attendees



representing all of the 28 EPSCoR Jurisdictions.

The theme of the conference was ***Science and Partnerships Across Disciplinary Boundaries***, and many of the presentations over the next two days would be focused on partnerships, transdisciplinary research, big data and STEM initiatives.

See: <https://nsfepscor2019.org/> for more detailed information on the Conference

Bob Caslen, President, University of South Carolina welcomed the participants. He is a retired Army General, and graduate of West Point. He joined the University in September.

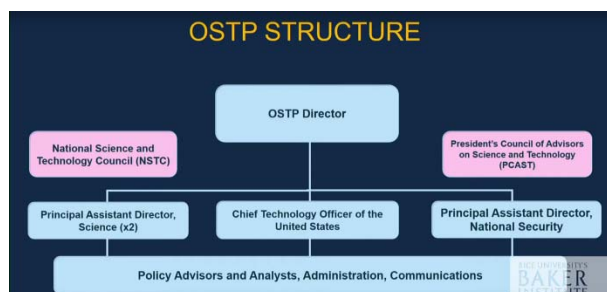
Loretta Moore, NSF EPSCoR Section Head also welcomed the attendees, indicated twenty-eight Jurisdictions were represented and thanked all of those who had been involved in the planning for the event, including the NSF Staff. Dr. Moore made herself available throughout the Conference workshops and events to answer questions.

26th EPSCoR Conference Plenary Address

Kelvin Droegemeier, Director, White House Office of Science and Technology Policy (OSTP) and Science Advisor to the President of the United States (see <https://www.aip.org/fyi/2019/interview-ostp-director-kelvin-droegemeier>).¹



Dr. Droegemeier was the former Vice President for research at the University of Oklahoma, and responsible for their EPSCoR program, so he brings knowledge and a phenomenal senior level connection for that community directly to the White House. He previously served two, six-year terms on the National Science Board (NSB) and also served as the Oklahoma Cabinet Secretary of Science and Technology.



Dr. Droegemeier provided an intense and very fast-paced presentation on the status of Science and Technology from the OSTP perspective.² The title of his presentation was “**A New Bold Era of American Science and Technology: What We Can Learn and Leverage from EPSCoR**”. His talk included a wide range of OSTP activities, including:

- The establishment of the Joint Committee on the Research Environment (JCORE) which has four subcommittees and is working with various stakeholders, including Congress, the National Academies, private companies, non-profits and professional associations to help define the future of science and research and development.³ The four



¹ Dr. Droegemeier gave a very similar talk entitled “A Bold New Era of American Science and Technology”, with even more details on OSTP initiatives at Rice University on November 12th, see:

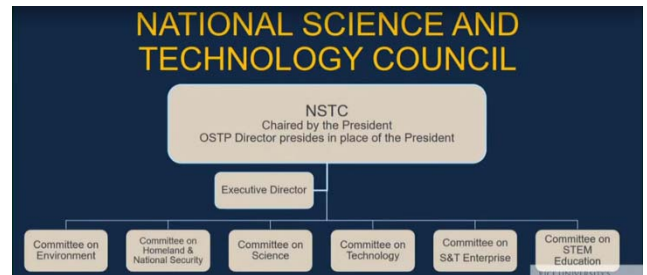
https://www.youtube.com/watch?v=lpHYwNN3_DQ&utm_medium=email&utm_source=FYI

² Current topical reports, policy statements, strategic documents and budgets that he described in his presentation can be found at: <https://www.whitehouse.gov/ostp/documents-and-reports/>. There is also a recent very informative and comprehensive review of the history and current activities of the OSTP provided by the Congressional Research Service (CRS), R43935, *Office of Science and Technology Policy (OSTP): History and Overview*, October 8, 2019. See <https://crsreports.congress.gov/product/pdf/R/R43935>

³ See <https://www.whitehouse.gov/wp-content/uploads/2019/07/Update-from-the-NSTC-Joint-Committee-on-Research-Environments-July-2019.pdf> and also the September 2019 letter to the U.S. Research Community on research security – see <https://www.whitehouse.gov/wp-content/uploads/2019/09/OSTP-letter-to-the-US-research-community-september-2019.pdf>

Sub Committees are:

- The Subcommittee on Research Security
- The Subcommittee on Safe and Inclusive Research Environments
- The Subcommittee on Reducing Administrative Burdens
- The Subcommittee on Rigor and Integrity in Research
- He spoke to the big picture of how R&D is funded in the U.S., and how important it will be to establish partnerships and alignment among the various major contributors:
 - \$400B from Private Industry
 - \$20B from Academia
 - \$22B from Non-Profits
 - \$150B from Government
- He stated the OSTP mission, which is to ensure that America is the world leader in science and technology by unleashing discovery and innovation, building the workforce of the future, and advancing America’s values at home and abroad.
- The R&D priority areas for OSTP are
 - American Security, including advanced military capabilities, critical infrastructure resilience, semiconductors and critical minerals
 - Industries of the Future including artificial intelligence (AI), quantum information science, 5G connectivity, and advanced manufacturing.
 - Energy and Environmental Leadership, including American energy resources, ocean science and technology and Earth system predictability.
 - Health and Bioeconomic Innovation, including biomedicine, bioeconomy, and Veteran health and wellness.
 - American Space Exploration and Commercialization including in-space resource utilization, manufacturing and assembly, fuel storage and management, and advanced space-related power and propulsion capabilities.
- A discussion of the role of the National Science and Technology Council (NSTC – see <https://www.whitehouse.gov/ostp/nstc/> for more information about this element of OSTP).



26th EPSCoR Conference Keynote Address: Engineering Matter on Demand: Solving Grand Challenges through Convergent Research

Sharon Glotzer, Department Chair of Chemical Engineering, University of Michigan. Sharon’s amazing talk looked into the future of “materials on demand” and research that is going on about how some materials can self-assemble. The title of her talk “Engineering Matter on Demand – Solving Grand Challenges through Convergent Research” provided many exciting examples of current research, and she drew an analogy to Star Trek IV which portrayed creation of transparent aluminum. Copies of her presentation should be forthcoming.

Lightning Talks: This new topical feature was well received and provided the attendees with fast-paced summaries of the RII Track-1 and RII Track-2 activities in a series of three-minute/one-slide talk summarizing Enrico Pontelli provided a great presentation for New Mexico’s SMART Grid RII.



See: <https://nsfepscor2019.org/presentations/>

<i>Title</i>	<i>First Name</i>	<i>Last Name</i>	<i>Institution</i>
Silica Supported Molecular Palladium Catalyst for Selective Hydrodeoxygenation of Aromatic Compounds	Marco	Caricato	University of Kansas
Kentucky Advanced Manufacturing Partnership for Enhanced Robotics and Structures	Rodney	Andrews	University of Kentucky
EPSCoR RII Track 1 Mississippi Center for Emergent Molecular Optoelectronics (CEMOs)	Sarah	Morgan	University of Southern Mississippi
Nebraska EPSCoR RII Track 1 Center for Root and Rhizobiome Innovation	Matthew T.	Andrews	University of Nebraska – Lincoln
The New Mexico SMART Grid Center: Sustainable, Modular, Adaptive, Resilient, and Transactive	Enrico	Pontelli	New Mexico State University
RII Track 1: Center for the Advancement of Wearable Technologies (CAWT)	Arturo	Hernandez-Maldonado	University of Puerto Rico
Materials Assembly and Design Excellence in South Carolina (MADE IN SC)	Hanno	zur Loye	University of South Carolina
Fire and Ice: Navigating Variability in Boreal Wildfire Regimes and Subarctic Coastal Ecosystems	Pips	Veazey	University of Alaska – Fairbanks
The Guam Ecosystems Collaboratorium	Terry	Donaldson	University of Guam Marine Laboratory
Social Ecological System Modeling of Harmful Algal Blooms in the Lake Champlain Basin, Vermont	Arne	Bomblies	University of Vermont

Note: details are only provided on the parallel Breakout Sessions that I attended.

Breakout Sessions:

- Best practices for collaborations among institutions within EPSCoR states and cross-jurisdictional partnerships
 - **Jerzy Leszczynski**, Professor of Chemistry and President’s Distinguished Fellow, Jackson State University
 - **Kristin Bowman-James**, University of Kansas Distinguished Professor and Kansas EPSCoR State Director

This presentation discussed some lessons learned for developing collaborations both within and across Jurisdictional boundaries. They also spoke about reaching students early (even in High School) and providing shadowing opportunities for them as they become engaged in the EPSCoR initiatives.
- Evaluating transdisciplinary research practice and quality
 - **Caroline Szymeczek**, President of Integrated Learning Innovations, In c.
- Student Session: Best practices for building a professional Network
 - **Laurie Bragg**, Project Administrator and Program and Outreach Manager, Maine EPSCoR

Lightning Talks: A second round of Lightning Talks provided information on the remaining Jurisdictions in attendance.

<i>Title</i>	<i>First Name</i>	<i>Last Name</i>	<i>Institution</i>
Genes to Environment: Modeling, Mechanisms, and Mapping (GEM3)	Andrew	Kliskey	University of Idaho
Building Field-based Ecophysiological Genome-to-Phenome Prediction for Wheat	Stephen	Welch	Kansas State University
RII Track-2 FEC: Emergent Polymer Sensing Technologies for Gulf Coast Water Quality Monitoring	Jason	Azoulay	University of Southern Mississippi
Integrating molecular, engineering, social and ecosystem science to meet regional challenges for clean water	Raymond	Callaway	University of Montana
New Hampshire Center for Multiscale Modeling and Manufacturing of Biomaterials (NH BioMade)	Brad	Kinsey	University of New Hampshire
RII Track-1: Rhode Island Consortium for Coastal Ecology, Assessment, Innovation, and Modeling	Geoffrey	Bothun	University of Rhode Island
South Dakota RII T1 Quantitative Biolmaging collaborations reveal cell membrane and tissue dynamics	Sen	Subramanian	South Dakota State University
Linking microbial life to ecosystem services across Wyoming's dynamic landscape	Linda	van Diepen	University of Wyoming
Connecting the Plasma Universe to Plasma Technology in AL: The Science of Low-Temperature Plasma	Patrick	Hambloch	University of Alabama – Huntsville
Water in the Changing Coastal Environment of Delaware	Kent	Messer	University of Delaware
How Firm is that Conviction? Stability and Change in Oklahoman's Beliefs about Climate Change	Hank	Jenkins-Smith	Univeristy of Oklahoma
RII Track-2: Genome to fitness: An analysis of the stress response in Peromyscus	Elena	Farmaki	Univeristy of South Carolina

Poster Session: RII Track-2 and RII Track-4 recipients, students and postdocs. This was the first of two Student Poser Sessions. NM EPSCoR Student, Ada Ramoko from NMSU is shown here.

Panel Discussion: Broadening participation of women and underrepresented minorities in STEM.

James E. Clark, President, South Carolina State University

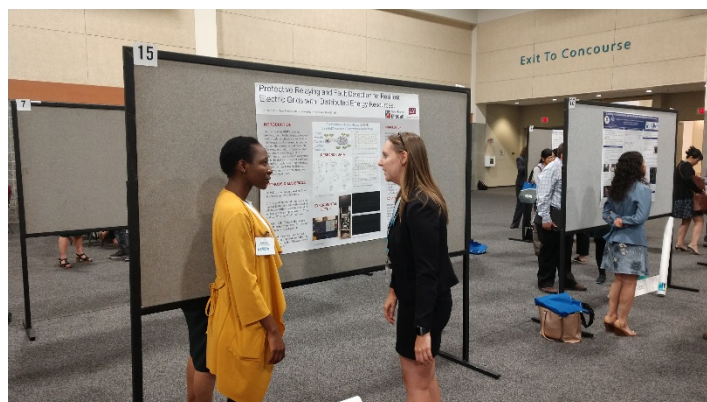
Sonia Bartolomei-Suárez, Professor of Industrial Engineering, University of Puerto Rico at Mayagüez College of Engineering

Overtoun Jenda, Assistant Provost for Special Projects and Initiatives and Professor of Mathematics, Auburn University

Camille McKayle, Provost and Vice President of Academic Affairs, University of the Virgin Islands

Tarissa Spoonhunter, American Indian Studies Professor, Central Wyoming College

Columbia Ballroom,



Breakout Sessions:

- Best practices for improving underrepresented minority student persistence in STEM
 - **Christine Grant**, Associate Dean of Faculty Advancement and Professor of Chemical Engineering, North Carolina State University College of Engineering
- Importance of mentoring to increase diversity in STEM
 - **Rafael Luna**, Associate Dean and Director of Gateway Program for Scholars in STEM, Boston College.
- How to write winning grant proposals
 - **Gisele Muller-Parker**, NSF Graduate Research Fellowship Program Director (retired).

Note: During these afternoon sessions, a special meeting of the representatives from the State Steering (Advisory) Committees was called, which I attended instead.

Afternoon – Special State Committee meeting. A special session was scheduled for the afternoon, calling all of the State Committee members together to talk about a proposed 2020 Workshop (in between National NSF EPSCoR conferences) for State Committee representatives to get together and discuss their issues, approaches to oversight and management of their Jurisdiction’s research efforts and related organizational concepts. See Attachment 1 for the proposed Workshop. Kevin Gardner, Vice Provost for Research at the University of New Hampshire, was the “host” for the discussion. The meeting primarily involved introductions around the room, with individuals speaking a little about their organizational structure and lessons learned. As was apparent from an effort that I engaged in with the State Committees of our Track II effort back in 2011⁴, every Jurisdiction has evolved differently, and has a different set of “drivers” that impact their research endeavors. Some of the more interesting discussion items included:

- A discussion on term limits for the Committee Chair and members (a few have those)
- The role of the Program Director in the Committee activities (Bill is an Ex-Officio member of the Committee). One Jurisdiction does not allow the PD to attend their meetings (this was met with a bit of incredulity).
- The organization structure – some tied directly into State Government, others to Universities and others independent organizations.

Tuesday, October 29, 2019**Breakout Sessions:**

- Communicating EPSCoR research to a wider audience
 - **Erika Check Hayden**, Director of the Science Communication program at UC Santa Cruz.
- Public-private partnerships leading to economic competitiveness
 - **Tony Boccanfuso**, President of the University Industry Demonstration Partnership

University Industry Demonstration Partnership (UIDP) see <https://uidp.org/>. This is a membership organization with over 100 members (both university and industry) started back in the Spring at AAAS. From their website:

⁴ In 2011 I created a large matrix that included information on the three members of the Track II that New Mexico was involved in, New Mexico, Las Vegas, and Idaho. Topical areas researched included Reporting Structure; State Committee membership and organizational role; Congressional and State Government related information; and Track I RII status and issues. I led a small group discussion that year at the Coeur d’Alene NSF EPSCoR meeting on the subject, but there never was a sufficient enthusiasm from the other State Committees to take the initiative any further. I subsequently provided a copy of that dated matrix to Kevin as a data point. If anyone would like a copy, send me an email.

“UIDP is a recognized leader in addressing issues impacting academic-corporate collaboration, providing a unique forum for our member representatives to find better ways to partner.

We are a project-oriented organization, which means our member representatives identify issues impacting university-industry (U-I) relations. Together, we find practical solutions to shared challenges impeding success, irrespective of who we are or where we work.

Organizational decision makers with varying job functions and titles actively participate in UIDP programs to maximize their investment in existing and future U-I collaborations.”




UNM is a member of this organization.

Also see UIDP’s Researcher’s Guidebook:

<https://uidp.org/publication/researcher-guidebook-and-quick-guide/>

Tony held a discussion on which Quadrant people are or want to work in.

The result is three distinct classes of research:

		Considerations of use?	
		No	Yes
Quest for fundamental understanding?	Yes	 Pure basic research	 Use-inspired basic research
	No	–	 Pure applied research

1. Pure basic research, exemplified by the work of [Niels Bohr](#), early 20th century atomic physicist.
2. Pure applied research, exemplified by the work of [Thomas Edison](#), inventor.
3. Use-inspired basic research, described here as "Pasteur's Quadrant".

- Public-private partnerships in driving innovation
 - **Dirk Brown**, McNair Institute for Entrepreneurism and Free Enterprise Clinical Assistant Professor of Management, University of South Carolina, Panel Chair – described organization structure at University and how they have created an environment for creating partnerships. See https://www.sc.edu/uofsc/posts/2017/05/dirk-brown-to-direct-new-uofsc-entrepreneur-institute.php#.XbhGIL5_M2w and https://www.sc.edu/about/offices_and_divisions/provost/academicpriorities/undergradstudies/mcnairinstitute.php
 - **Chris Lawson**, Executive Director of Alabama EPSCoR and Director of the Alabama Graduate Research Scholars Program, University of Alabama at Birmingham. See www.alepscor.org.
 - **Tom Chilton**, Director Technology Development, Arkansas Economic Development Commission

- **Deb Hamernik**, Associate Dean of Agricultural Research Division and Professor of Reproductive Physiology, University of Nebraska-Lincoln. Story about how the Nebraska State Legislature donated 200 Acres (former Fair grounds) and \$25M to build Innovation campus (see <https://innovate.unl.edu/>). .

This panel provided examples of efforts by EPSCoR Jurisdictions to create innovative and economic development initiatives to leverage their research capacities and build mutually beneficial relationships with the private sector.

- Communicating science online and through social media platforms
 - **Tony Moran**, Alaska EPSCoR Communications Manager.
 - **Kaitlyn Park**, Manager, University of South Carolina Social Media Insights Lab.
 - **Sid Salter**, Chief Communications Officer, Mississippi State University.
 - **Antony Williams**, Chemist, National Center for Computational Toxicology, U.S. EPA.
- Best practices for intellectual property development, commercialization, and faculty/student Startups
 - **Douglas Maughan**, Office Head of the NSF Convergence Accelerator. Doug briefly described the new office and the awards being made – see <https://www.nsf.gov/od/oia/convergence-accelerator/index.jsp>
 - **Ian McClure**, Executive Director of the Office of Technology Commercialization, University of Kentucky
See <https://www.research.uky.edu/office-technology-commercialization>

Worksheet handed out – ranking the metrics that might be used in order of importance:

- Invention Disclosures
- Patents Filed
- Patents Issued
- Licenses & Options Executed
- Startups created
- License Revenues
- # of SBIR/STTRs awarded
- Industry Partnerships/Engagement
- Patent Legal Fees Reimbursed
- Jobs Created
- Start-up Follow-on Funding
- Start-up Executive Teams Recruited/Matched

Also, see <http://c3.kyinnovation.com/> . It costs about \$10K to file for a patent.

- How to write a competitive Partnerships for Innovation, SBIR or SBTT application
 - **Jesus Soriano Molla**, Program Director of the NSF Foundation’s Partnerships for Innovation.
- Effective practices in community engagement
 - **Emily Vercoe**, Wyoming EPSCoR Education, Outreach, and Diversity Coordinator.
 - John Kaup, Education and Outreach (K-12) Director, South Carolina EPSCoR.
 - **Selena Connealy**, Education and Outreach Manager, NM EPSCoR.
 - **Kim Wingo**, Director of Education, Outreach and Recruiting & Student Programs, University of Southern Mississippi.
 - **Yolanda Williams-Bay**, Delaware EPSCoR Education Program Manager.
 - **Barb Bruno**, Hawaii EPSCoR Education Director.

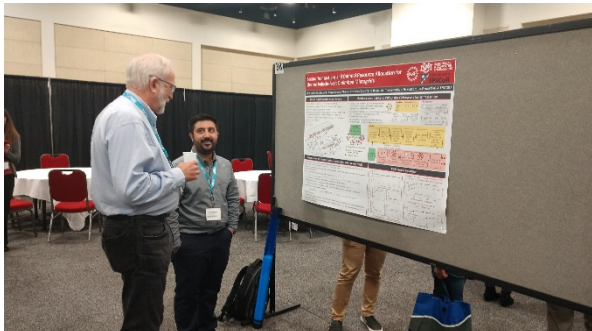
- Publishing in high impact journal
 - Phillipa Benson, Managing Editor, Science Advances Magazine.

Lunch

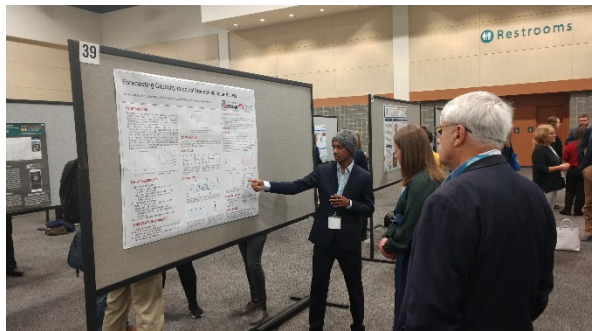
Some of the EPSCoR team!



Poster Session: RII Track-2 and RII Track-4 recipients, students and postdocs. Another amazing array of scientific research being accomplished under the EPSCoR program!



Graduate student Dimitrios Sikeridis from UNM



Graduate student Md Parvez Mollah from UNM

Crossing boundaries with big data

Bill Michener, New Mexico EPSCoR Director and Professor and Director of e-Science Initiatives, University of New Mexico College of University Libraries & Learning Sciences

Bill presented an overview of the topic “Big Data”, sharing his experience and lessons learned from both EPSCoR and the DataOne projects.



Breakout Sessions

- Challenges of big data storage, transfer and management
 - **Jill Gemmill**, Professor of Electrical and Computer Engineering, Clemson University
 - **Gwen Jacobs**, Hawai'i EPSCoR Program Director and Director of Cyberinfrastructure, University of Hawai'i System
- Transdisciplinary approaches of convergence in big data analytics
 - **Xiaoming Hou**, A Russel Chandler III Professor of Industrial Systems and Engineering at the George Institute of Technology.
 - **Brent Ewers**, Professor of Botany at the University of Wyoming.
- Careers within and outside academia
 - **Karina Liles**, Claflin University.
 - **Katrina Harmon**, Organogenesis
 - **Lester Morales**, NASA Kennedy Space Center Academic Engagement Officer.

Conference Evaluation: The Evolution of the field of Program Evaluation (50 years in 20 minutes) and what this means for EPSCoR. Glenn Page, Sustainamatrix, presented some history and current perspectives on evaluation and opened a survey page for participants.

Closing Reception and Dinner

Pastides Alumni Center at the University of South Carolina, 900 Senate Street

A closing dinner with barbecue was provided for attendees at the Alumni Center. Awards and acknowledgements were made to all of those who supported the activities.



Wednesday, October 30, 2019

The Program Directors and other staff from the Jurisdictions attended a meeting with NSF personnel. One of the subjects discussed was the new guidelines that will be issued to resolve problems associated with the eligibility and “graduation” of EPSCoR Jurisdictions. See Attachment 2 for information provided during that session.

Attachment 1 – Proposed Topical Areas for NSF EPSCoR State Committee Workshop

Engaging State Governance Committees

Advancing statewide research, broadening participation and economic development goals

Introduction

New Hampshire, Montana and South Dakota propose to host the *Engaging State Governance Committees* Workshop. NSF EPSCoR requires that the "steering committee, working closely with diverse jurisdictional leaders in academia, government, and the private sector, is expected to work towards identifying R&D improvement strategies that will advance the development of nationally competitive capabilities in jurisdictional S&T priority areas." Committees engagement with academic leaders from the higher education system is important to best target EPSCoR funding to the state's most important research priorities and opportunities. But how this is done is as varied as the 27 EPSCoR jurisdictions. At the 2018 Project Director's meeting, a panel on Governance concluded that some jurisdictions had steering committees that were active, engaged, and making a tremendous difference in the state, while other steering committees lacked direction and added little value to the jurisdiction's programs and impacts. Limited involvement from state committees can hamper the development of Track-1 proposals, not leverage federal dollars to the greatest benefit across the state, and not achieve the potential impact of the program. Given the opportunities afforded by the steering committee's actions to a jurisdiction's EPSCoR investments and strategy for R&D advancement, it is clear that sharing and fostering best practices and information to improve steering committee structure and function would benefit EPSCoR jurisdictions nationally.

The workshop will address these questions:

- What can EPSCoR jurisdictions learn from one another to advance a more constructive, strategic, and effective approach to statewide steering committee engagement?
- How can federal EPSCoR investments be strategically selected and leveraged most effectively to create positive change (in research infrastructure and competitiveness, in broadening participation, and in economic development outcomes) in a jurisdiction?

Participants: The workshop would include NSF EPSCoR Project Directors, Associate Directors, Project Administrators and Steering Committee members to discuss how to effectively engage Steering Committees in development of the state research infrastructure, competitiveness and technology based economic development.

Community Interest: The Fall 2018 PD meeting session on "Governance" resulted in an expression of EPSCoR community support for a workshop on this topic. This interest was based on a growing realization that jurisdictions are sharing jurisdictional/EPSCoR governance in ad hoc ways, and there is much to learn from each other on how to improve shared governance and achieve better state-based outcomes for EPSCoR programs.

Planning Committee: PDs, Education/Outreach leads, Project Administrators and state committee members from EPSCoR jurisdictions would participate in planning along with the cognizant NSF EPSCoR project director(s).

Workshop Plan: Prior to the workshop data on state governance organizations, a survey will be conducted to gather information from all jurisdictions on engagement in EPSCoR

activities, and perceptions. The results would be shared with workshop participants and structured discussions would be conducted to discuss how weaknesses may be addressed and opportunities to improve state outcomes may be improved.

Workshop outcomes: A report will be produced that will 1) detail successful examples of integration of EPSCoR programs into the jurisdiction's governmental leadership, broad educational community engagement and economic development via steering committees and their governance. Best practices will be identified in a document that can be shared with a jurisdiction's government, academic and education leaders for initiatives to improve the structure, function and governance of the steering committee.

Timeline: Workshop in Fall 2020. Report published in Spring 2021.

Attachment 2 – NSF Jurisdiction Eligibility

Redefined NSF EPSCoR Eligibility Methodology

EPSCoR has re-examined its eligibility methodology and is implementing changes to ensure that it is simple, transparent, fair, and stable. These changes incorporate stakeholder feedback and are supported by robust data analyses. The new eligibility table utilizing the improved methodology will be published in January 2020 and will apply to the FY 2021 EPSCoR competitions. The FY 2020 Eligibility Table will be the same as FY 2019.

All questions and concerns regarding the new eligibility methodology should be sent to nsfepscor@nsf.gov.

Comparison of Current and Proposed Eligibility

	Current	New Eligibility	Rationale
Methodology	Definitive eligibility cutoff line	Hysteresis: eligibility cutoff maintained, but adds time-limited buffer that maintains eligibility above the eligibility cutoff line	A hysteresis approach will help to eliminate year-to-year eligibility fluctuation and provide a buffer for those jurisdictions on an upward funding trajectory.
Eligibility	Equal to or less than 0.75% of NSF research support	Equal to or less than 0.75% of NSF research support <i>and</i> up to 5 years if within 0.76% - 0.79%* *All percentages rounded to the nearest hundredth of a percent.	Maintaining eligibility for jurisdictions that improve their research competitiveness by exceeding the 0.75% eligibility cutoff helps to ensure that they maintain their momentum. Requiring them to fall back below the 0.75% eligibility cutoff should they meet or exceed 0.80% of NSF total funding helps to maintain overall stability for the eligibility pool. Eligibility applies to all funding mechanisms.
Data Source	NSF Research Support Funding Only	NSF Total Award Funding (includes R&RA, EHR, and MREFC)	EPSCoR's mission is to increase jurisdictional competitiveness. By including all NSF award funding in the eligibility calculation, EPSCoR is better able to gauge NSF funding competitiveness for all jurisdictions across the nation.
Time Frame	Prior 3 Years	Prior 5 Years	Extending the calculation range helps to further stabilize eligibility.
Exclusions	Ship Operations, Arctic Support, and Antarctic Support	EPSCoR RII and Workshops/Conferences <i>and</i> NSF Funding to Other Federal Agencies	Removing EPSCoR funding from the eligibility calculation helps to stabilize eligibility by removing EPSCoR interventions so that all jurisdictions are judged by their current competitiveness. NSF funding to other federal agencies is also excluded since this funding is primarily logistics/operations related rather than R&D and is not solely of benefit to the jurisdictions themselves. These exclusions are in alignment with EPSCoR's fundamental goal to build capacity for eligible jurisdictions to be competitive for NSF funding outside of the EPSCoR program.
Effective Date	Upon annual publication on the EPSCoR website	October 1, each fiscal year	Shifting the effective date of the eligibility table eliminates confusion about who can apply for specific RII competitions and allows for jurisdictions to better plan for proposal submission.