2026 EPSCoR Summit Community Workshops

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Beyond “Equal Partners”: Designing Sustainable R1–PUI–TCU Research Collaborations

Irfanul Alam, North Dakota State University
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E-CORE RII (#2438102)

EPSCoR initiatives invest significant public funding into cross-institution collaboration among R1 universities, primarily undergraduate institutions (PUIs), and Tribal Colleges and Universities (TCUs). When these partnerships fail, the consequences go beyond missed objectives—time is lost, trust diminishes, and limited resources are squandered. Many of these failures are not due to a lack of goodwill but stem from misaligned incentives, uneven administrative loads, and competing institutional priorities. This 90-minute interactive workshop treats collaboration as a form of research infrastructure design rather than just interpersonal coordination. Participants will engage in a structured activity that examines how cross-institution collaborations can face strain or break down, identifying common points of failure and preventative measures. Using parallel R1–PUI and R1–TCU case scenarios, participants will analyze structural risks related to governance, resource sharing, labor distribution, and sustainability. Moving beyond “equal partner” rhetoric, the session emphasizes designing collaborations that are resilient through clear alignment of roles, expectations, capacity, and purpose across institutions with different constraints. Participants will leave with a practical collaboration design canvas that can be directly applied to proposal development, partnership planning, and evaluation within EPSCoR and similar multi-institution initiatives.

Advancing Climate Resilience through Interdisciplinary Research, Education, and Outreach

Shrinidhi Ambinakudige, Mississippi State University
Brian Williams, Mississippi State University
Boniface Fosu, Mississippi State University
Dean Hardy, University of South Carolina
Sarah Lalk, Mississippi State University
Hattie Spencer, Mississippi Valley State University
Jamie Dyer, Mississippi State University

Focused EPSCoR Collaborations (#2316382)

This session presents the experiences of an interdisciplinary research team examining climate resilience in the Yazoo–Mississippi Delta, a region confronting intensifying climate hazards alongside persistent social and environmental inequities. The project integrates high-resolution hydroclimate modeling, geospatial and statistical analyses of vulnerability, and qualitative methods that foreground community perspectives. By combining quantitative analysis, and evidence from interviews, focus groups, and archival research, the approach captures both patterns of physical exposure and the lived realities of climate impacts. It also emphasizes the role of community engagement through partnerships with local organizations, and citizen science and workforce development initiatives that strengthen climate literacy and resilience capacity. The session reflects on the implementation of this integrated framework, highlighting key insights, as well as its strengths and limitations in advancing climate resilience research and practice.

Optimizing EPSCoR Data Reporting

Denise Blaha, NH EPSCoR
Brittney Van Der Werff, NM EPSCoR
Carole Allen, Nebraska EPSCoR

High-quality EPSCoR reporting benefits jurisdictions and awardees, external project evaluators, and NSF. Currently, EPSCoR jurisdictions approach reporting in different ways, and this lack of standardization makes it more difficult to report on and evaluate project progress consistently.

This session will focus on building consensus among key stakeholders, including jurisdictions, evaluators, and NSF, on which enhancements to the EDOCS reporting system would be most useful for strengthening reporting. Pre-session polling of EPSCoR jurisdictions on their most requested EDOCS enhancements will help guide the discussion. Sponsored by the EPSCoR Communications Group and the EPSCoR PA Council.

The Elite Mindset: Leading High Performing Research Teams

Tristan Clemons, University of Southern Mississippi

E-RISE RII (#2433435, 2414447, 2229274, 2452362)

Grounded in lessons learned from competing internationally in elite sport, coaching championship teams, building ventures, and leading interdisciplinary research groups, this 90 minute workshop distills insights from high performance environments to help participants cultivate strong, effective teams in academia. This combination of perspectives informs a practical, energizing exploration of what it means to be elite and how high performance principles translate directly into academic leadership, team science, and collaborative research environments.

Participants will engage in hands on activities that model elite team behaviors, communication strategies, and decision making processes adapted from sport, coaching, and scientific team management. Through reflection and small group challenges, attendees will analyze their own team dynamics, identify barriers to excellence, and practice approaches for building high trust, high output research groups. Designed for EPSCoR affiliated PIs, faculty, staff, and students, the workshop emphasizes fun, interaction, and actionable skill building. Participants will leave with concrete ideas and strategies to strengthen their teams, elevate their leadership, and enhance their academic and research journeys.

EPSCoR Community Session: Cyberinfrastructure (CI) As a Catalyst for Research Competitiveness and Capacity in EPSCoR projects

Sean Cleveland, University of Hawaii - System

This session aims to highlight Research Cyberinfrastructure (CI) as a foundational activity in EPSCoR projects within jurisdictions. Presenters will share the genesis of successful

jurisdiction-wide CI projects, exploring critical lessons learned and challenges faced, such as navigating staffing shortages and bridging the divide between enterprise IT and research missions. By showcasing developments from Hawaii and Nevada this session offers ideas for sharing CI models community-wide to accelerate overall research competitivenes EPSCoR projects.

Community-Driven Coastal Climate Research and Solutions (3CRS)

Emanuele Di Lorenzo, Brown University
Anabela Maia, Rhode Island College
Austin Becker, University of Rhode Island Dept. of Marine Affairs

Focused EPSCoR Collaborations (#2316271)

Coastal communities across New England face shared challenges in adapting to intensifying extreme weather, yet differ in governance, social context, and planning capacity. The 3CRS project explores how community-driven research brings together natural and social sciences to support real, local resilience goals. In this workshop, we present the development of hyper-local sensor networks measuring flooding, heat, and air quality as one approach to community-driven research. These networks provide not only critical environmental data but also an entry platform for community engagement, enabling place-based dialogue and alignment of research priorities. Sensor data are then integrated into dashboards that combine observations with model outputs, providing a pathway to incorporate more advanced technical research within a framework that remains accessible and relevant to communities. Building on this foundation, AI agent layers further expand access by interfacing with these data streams and community-generated knowledge, reducing barriers to actionable information for diverse stakeholders while integrating quantitative data with place-based, co-produced knowledge. Advancing these data, modeling, and AI capabilities also creates opportunities to train a new generation of students and practitioners, supporting workforce development at the intersection of science, technology, and community engagement.

The Interdisciplinary Program of Advancing Climate Extreme Resilience in Soybean (iPACERS)

Jong Hyun Ham, Louisiana State University Agricultural Center

Focused EPSCoR Collaborations (#2418232)

This session will highlight progress that the EPSCoR-funded iPACERS project has made and share key outcomes. Increasingly, environmental challenges, particularly heat and drought, threaten stable soybean production. This interdisciplinary initiative integrates systems-level investigations from single cell omics to field-scale phenomics to advance understanding of soybean agroecosystems and to develop innovative strategies for improving crop resilience.

Training graduate students and post-doctoral researchers through research programs is a vital component of iPACERS. In addition, the Developing Dynamic Researchers (DDR) program serves as a central educational pathway, engaging primary students and teachers, undergraduate students, and 4 H agents to cultivate the next generation of scientists and strengthen public understanding of food production systems.

During the 60 minute session, PIs and Co PIs from the four participating jurisdictions (Clemson University, LSU Agricultural Center, Mississippi State University, and University of Alabama at Birmingham) will present data driven research outcomes and DDR program impacts, focusing on: (1) major environmental challenges facing soybean production, (2) systems level approaches designed to address critical knowledge gaps and improve crop resilience, and (3) educational initiatives that advance workforce development and community engagement.

Building Pathways in STEM: The Power of Collaboration through the CIRCLES Alliance

Stephanie Higdon, Black Hills State University

Focused EPSCoR Collaborations (#2217344)

This session highlights the work and impact of the CIRCLES Alliance, a six-state initiative committed to partnering with Tribal communities to elevate Indigenous students' interest and participation in STEM disciplines and careers. Participants will learn about the Alliance's development and its vision for creating meaningful, community-centered STEM pathways.

The session focuses on the grant's cooperative framework. Presenters will share how the collaboration across EPSCoR jurisdictions has strengthened program design, expanded reach, and contributed to success. Attendees will explore how sustained engagement with Tribal communities shaped culturally responsive approaches that honor Indigenous ways of knowing while supporting authentic STEM experiences. The session also emphasizes

partnerships with K–12 educators, schools, and local communities, sharing strategies and lessons learned from working with teachers and incorporating student mentors as leaders in community STEM activities.

The Alliance has been supported by the NSF through the Eddie Bernice Johnson INCLUDES initiative and also EPSCoR. The relationships and structures developed through the CIRCLES Alliance are positioned for long-term sustainability. Partnerships with Tribal communities, educational institutions, and EPSCoR-funded programs have created a foundation for continued collaboration and new initiatives.

Sustainability Education 2.0: Training Our Educators

Meghann Jarchow, University of South Dakota

E-CORE RII (#2225845)

Sustainability education arose in the United States as an academic field because of pressing societal need, and hundreds of academic sustainability degree programs have developed to meet that need. Yet, most of the faculty members who have developed and are teaching in these programs were not themselves educated in sustainability. Among sustainability education scholars, there is increasing agreement around the key competencies in sustainability education framework (KCSEF). The KCSEF is topic independent and is grounded in the need to effect change at deep leverage points while also effecting change at shallower leverage points. Through two NSF EPSCoR projects – "RII-BEC: Grounding Science Education in Indigenous Knowledges, Food Systems, and Sustainability" and "E-CORE RII: South Dakota Research Ecosystem Network – STEM Education, Community Engagement, and Broadening Participation" – I have developed sustainability education teacher trainings. The purpose of this 90-minute interactive workshop, which will be designed for participants with a range of knowledge about sustainability, is (1) to familiarize participants with the KCSEF, (2) to provide examples of how participants can use the KCSEF, and (3) to allow participants to explore how they could incorporate sustainability into their teaching. The KCSEF has the potential to help us teach sustainability in ways that are more compelling, impactful, inclusive, and radically hopeful.

Seed Award Programs in Practice: Approaches, Lessons, and Real-World Challenges

Andra Kiscaden, University of New Mexico
Selena Connealy, CIRCLES Alliance
Sarah Burnett Smith, Arkansas Research Alliance
Devan Monette, Landmark College
Amy Moreland, Landmark College

E-CORE RII (#2435071)

Seed award programs are among the most powerful tools E-CORE projects use to build research capacity and connect emerging research institutions to a jurisdiction's broader research ecosystem, but effective design and administration is harder than it looks. How do you structure awards and review processes that are rigorous but accessible to institutions at varying levels of research readiness? What happens when compliance requirements create barriers to programmatic intent, and how do you navigate those challenges across institutional partners and sponsored research offices?

This session brings together program leaders and administrators from 3 EPSCoR E-CORE projects to discuss these questions openly and honestly. Panelists represent RIO-NM at the University of New Mexico, NSF STRIVE at Landmark College in Vermont, and AR-NETWORK at the Arkansas Research Alliance: 3 projects spanning a university-based state office, a liberal arts college consortium, and a nonprofit research alliance. Together they bring a range of approaches, hard-won lessons, and practical frameworks to the table.

The conversation will cover seed program design and structure, competitive review models, compliance and grant management considerations, and lessons learned that translate into actionable best practices. Audience Q&A is a central part of the session. This session is designed for project PIs, co-PIs, administrators, and staff involved in seed award programs at any stage of development.

From Data Silos to Statewide Resilience: Building Kentucky's Environmental Data Ecosystem

Maria Labreveux, Kentucky Science and Engineering Foundation
Ellie Derbyshire, Kentucky Science and Engineering Foundation

E-CORE RII (#2438201)

Severe weather events are increasing in frequency and intensity in Kentucky. Eastern Kentucky alone had 9 out of 10 of the most impacted counties nationwide between 2010-2025. Kentucky also has the highest number of surface streams in the US (90,000 miles), creating a complex system primed for flooding. Supported by the NSF, Kentucky's R&D ecosystem launched a full-scale effort to predict disasters, prevent future losses, and increase education and workforce development in environmental fields. Our E-CORE, CAPTIVATE KY, was launched to fill a critical gap identified by Kentucky's EPSCoR Track-1 project, CLIMBS: the lack of a centralized system for sharing and applying environmental data to support communities. Now serving as that central hub, CAPTIVATE KY aims to establish a culture of data sharing and build an enduring pipeline for statewide environmental resilience. This session provides an inside look at CAPTIVATE KY's first year, highlighting how early stakeholder engagement led to strong post-award participation and how expanding interest led to the creation of "working groups". We will also address project redesign due to tariff-driven cost increases, tackling institutional silos, and building trust for data sharing across sectors. As the first state to be awarded the NSF "trifecta" of a simultaneous Track 1, E-CORE, and E-RISE, Kentucky is in a unique position to develop a repeatable model for jurisdictional coordination and collaboration with new research efforts.

From Polymer Science to Public Health: ASPIRE to an Interdisciplinary EPSCoR Research Hub

Jennifer Lemacks, The University of Southern Mississippi
Zhe Qiang, The University of Southern Mississippi

E-RISE RII (#22-633)

The NSF EPSCoR RII Track-2 project Advancing Social and Environmental Equity through Plastics Research, Education, Innovation, and Inclusion (ASPIRE) was designed to build a regional research hub that bridges materials science, coastal science, and community health. The project emerged from a growing recognition that plastic production, environmental contamination, and human health outcomes are deeply interconnected challenges, with profound impacts for Gulf South communities, requiring interdisciplinary solutions. This workshop provides an inside look at the development of ASPIRE, from the initial concept and team formation to the implementation of an integrated research and workforce development model. Presenters will share lessons learned in aligning diverse disciplines, coordinating multi-institutional collaboration, and embedding human health considerations into environmental health research. The session will highlight key decision

points in proposal development, including how the team structured the research aims, workforce development components, and community engagement strategies required for a competitive EPSCoR Track-2 proposal. Participants will gain practical insights into building large interdisciplinary EPSCoR collaborations, navigating common challenges, and designing projects that connect fundamental science with societal impact.

BioBridge: Building a Community College-to-R1 Research Pathway Through Paid Undergraduate Research

Philip Lister, Central New Mexico Community College
Selena Connealy, CIRCLES Alliance
Heather Simpson, Central New Mexico Community College
Michael Faulhaber, Central New Mexico Community College

E-CORE RII (#2435071)

BioBridge is an undergraduate research experience program developed through the E-CORE RIO-NM project to strengthen research pathways between a large community college, Central New Mexico Community College, and an R1 institution, the University of New Mexico. This session provides an inside look at the genesis, development, and early impacts of BioBridge, a 10-week paid summer research experience that places community college biotechnology students into high-level bioscience research laboratories.
Led by faculty and administrators from Central New Mexico Community College, this workshop will share how the program was designed to address barriers to student transfer, research access, and workforce alignment, particularly those faced by community college students. Presenters will discuss the challenges of cross-institutional collaboration, including recruiting students, identifying and preparing host labs, managing safety and access requirements, and supporting students as emerging researchers rather than “lab helpers.”

Through project storytelling, lessons learned, and early outcome data, participants will gain practical insights into building sustainable research bridges, fostering student belonging, and aligning undergraduate research experiences with broader ecosystem goals. The session will conclude with discussion of scalability, funding strategies, and approaches for sharing program outcomes with institutional leadership and community stakeholders.

Building a Rural STEM Networking RPP in Maine: Lessons from Maine-SMART Core 3

Kate Mahan, Maine Mathematics and Science Alliance
Ruth Kermish, Maine Mathematics and Science Alliance
Emma Carey, Maine Mathematics and Science Alliance

E-CORE RII (#2412132)

The Maine-SMART Core 3 Research-Practice Partnership (RPP) brings together universities, community colleges, and informal science education organizations to advance K–12 STEM education across Maine. This session offers an inside look at the genesis, development, and ongoing work of a multi-institutional RPP convened by the Maine Mathematics and Science Alliance (MMSA) and supported by NSF EPSCoR. Participants will hear how six partner organizations (UMFK, MMSA, GMRI, UMO, USM STEM, and SMCC)came together to identify the shared goals of tracking STEM pathways, supporting teacher professional learning, integrating Indigenous knowledge, and building hands-on research experiences. During the session, presenters will highlight the collaborative process by which RPP members co-created working agreements to guide group engagement, grounded in principles of equity, shared power, and reciprocity. Drawing on meeting proceedings, survey evidence, and participant reflection, this session provides a candid look at what makes RPPs work,and what makes them challenging.

Building a Materials-to-Detectors Digital Twin: Lessons from the Ge-STAR EPSCoR E-RISE Project

Dongming Mei, University of South Dakota

E-RISE RII (#2437416)

Ge-STAR (Germanium Science & Technology Advancement Research) is an NSF EPSCoR E-RISE project building an end-to-end pipeline for high-purity germanium (HPGe) detectors—linking purification and crystal growth, detector fabrication, and application-driven validation in low-background physics and medical imaging. Our central challenge has been turning heterogeneous growth logs, metrology, and detector tests into a closed calibration-to-design loop. In this lightning talk, we share how we built a practical “materials-to-detectors digital twin”: standardizing data capture, coupling physics-based models with AI/ML surrogates, and using the twin to improve detector-grade yield and shorten iteration cycles—along with candid lessons on what slowed us down (data

governance, shared-instrument workflows, model drift, and workforce turnover). Attendees leave with a lightweight, transferable blueprint—minimal data schema, collaboration templates, and a staged roadmap from "logs → predictions → decisions → prototypes"—that strengthens sustainability and broader impact for EPSCoR projects.

Research Development: Essential Infrastructure for Increasing Research Capacity and Competitiveness

Mark Milutinovich, University of New Hampshire
Carly Cummings, University of Idaho
Nathan Meier, University of Nebraska-Lincoln
Carrie Busha, University of Nevada, Reno
Nicole Motzer, Montana State University

E-CORE RII (#2412054)

Research development (RD) has emerged over the last two decades as an evidence-informed practice that strengthens research capacity and competitiveness. Yet within the EPSCoR community, RD is often overlooked as core infrastructure. As teams pursue NSF E-CORE and other capacity-building investments, intentional RD integration represents a critical but underleveraged strategy. This interactive workshop situates RD as strategic infrastructure within jurisdictional research ecosystems. Drawing on national analyses of RD roles and functions, the session demonstrates how RD advances funding intelligence, interdisciplinary team formation, internal investment strategy, limited submission coordination, investigator development, and competitive positioning—capabilities directly aligned with EPSCoR's mission. Two case studies anchor the discussion: 1) how New Hampshire integrated RD approaches to strengthen ecosystem alignment and secure NSF E-CORE funding and 2) how a multi-jurisdictional partnership leverages cooperative RD to enhance investigator success and institutional competitiveness. Through facilitated workshopping, participants will identify a structural bottleneck within their jurisdiction and prototype a targeted RD intervention. Attendees will leave with better understanding and adaptable models of RD as essential infrastructure for advancing EPSCoR's strategic objectives.

Using Smartsheet to Manage Multi-Institution Research Grants

Anthony Moye, New Mexico State University
Mat Martins, New Mexico State University

Focused EPSCoR Collaborations (#2418359)

Multi-institution, externally funded research projects require management systems that support coordination of research activities, reporting, and resource monitoring across distributed teams. This workshop will demonstrate how Smartsheet is used as a centralized project management platform to support the execution of NSF EPSCoR awards at New Mexico State University (NMSU). Drawing on active projects, the session will show how the platform tracks work across research tasks at multiple institutions and collects structured data for NSF reporting. The workshop will also highlight how Smartsheet dashboards provide at-a-glance budget visibility, support burn rate projections, and identify potential financial risks. This workshop reflects current practices for managing active NSF EPSCoR projects at NMSU, including Smartsheet-based work breakdown structures, reporting workflows, and financial dashboards that track budgets across partner institutions. Presenters will discuss how these tools have increased cross-task visibility, supported collaboration, improved data capture and reporting processes, and strengthened oversight of complex research projects. Participants will be able to 1) identify strategies for managing multi-institution research projects using centralized project management tools, 2) understand how structured data collection can streamline research reporting and evaluation, and 3) explore approaches for monitoring grant budgets using dashboards for resource tracking.

Storying Research: Creative Strategies for Science Communication

Taylor Sklenar, Iowa State University

Track 1 (#2242763)

This workshop will explore how creative strategies –rooted in story, style, and listening – can help to make complex science more engaging and accessible to a wide range of audiences. Participants will learn best practices for engaging communities and increasing accessibility of their research and will gain hands-on experience applying narrative, performance, and improvisational techniques to more effectively connect with their audiences.

Building the CORE: What is a Successful Jurisdiction-Wide EPSCoR Office?

Elin Torell, University of Rhode Island
Amy Slocum, Delaware EPSCoR
Michelle Gregoire, NH EPSCoR/UNH
Scott Schnur, Rhode Island EPSCoR (RI-NEST)

E-CORE RII (#2433276)

E-COREs have potential to cultivate sustainable research ecosystems within complex jurisdictions. New to the EPSCoR ecosystem, E-COREs face growth challenges: building jurisdictional networks, creating synergies with pre-existing workforce development initiatives, and connecting participants to industry partnership and tech transfer opportunities. Acknowledging challenges as a chance to reflect, our 90 minute workshop will ask: "What is a successful jurisdiction-wide EPSCoR office?"

This workshop invites the E-CORE community to reflect on the successes of their jurisdiction's E-CORE, explore challenges, and collaboratively brainstorm solutions to leverage activities and address common issues. The session will explore these topics through a mix of short presentations from the Rhode Island, New Hampshire, and Delaware E-CORE programs, as well as open and structured discussion. A follow up survey for attendees and E-CORE staff across jurisdictions will shed light on common barriers and bridges to success. After reviewing survey results, the RI-based E-CORE team will create and collaborate on a white paper on lessons learned. Attending the workshop will allow participants to build community across E-CORE programs, learn about successful strategies for building and sustaining an effective jurisdiction-wide office and, in aggregate, provide experientially grounded data to NSF and support jurisdictions to more effectively develop and implement E-CORE proposals.

Turning Tension into Trust: Empathy in Science Communication

Rhea Waldman, South Dakota Discovery Center

E-CORE II (#2412055)

In an era of misinformation, polarization, and declining public trust in science, the way that science is communicated matters as much as what is communicated. This interactive workshop focuses on empathy for effective science communication, equipping

participants to engage audiences with curiosity, respect, and responsiveness. Participants will explore how to navigate difficult conversations, listen across differences, and communicate in ways that build trust rather than reinforce skepticism or disengagement. Through hands-on activities, attendees will practice reframing technical content into audience-centered messages and creating space for dialogue rather than one-way dissemination. Drawing on real-world scenarios, this session provides practical tools for communicating science in ways that are transparent, relational, and grounded in understanding. Participants will leave better prepared to foster meaningful connections, navigate challenging interactions, and strengthen trust in science across diverse audiences.

Residence and public health in rural communities

Jun Wang, University of Iowa

Focused EPSCoR Collaborations (#2420405)

Rural communities in the United States are disproportionately affected by severe weather, drought, and wildfires. Many EPSCoR states also have a higher proportion of rural areas. This session will discuss ongoing projects and collaborations aimed at addressing the resilience challenges faced by rural communities in EPSCoR states.

Computational Thinking in the SD STEM Ecosystem: Unplugged K-8 Teacher Professional Development

Kim Webber, Black Hills State University
Hannah Caffee, Black Hills State University
Betsy Schamber, Dakota State University

E-CORE RII (#2412055)

In this interactive session, workshop participants will experience a teacher professional development model that focuses on the pillars of computational thinking (CT) through an unplugged, hands-on approach. As computers and computation have become ubiquitous in our society, ensuring K-12 learners are prepared to leverage computing technologies is critical. An important step in student preparation is applying CT skills while solving problems. Yet, many elementary teachers have little experience with computer science and CT. Therefore, the workshop development team focused on unplugged lessons for teachers to introduce and practice computational thinking skills with their students within

their math and science curriculum. This problem-solving approach was integrated within their math and science curriculum.

Our accompanying education research pilot study examines changes to teachers' computational thinking knowledge, self-efficacy, and outcome expectancy beliefs resulting from this introductory CT workshop. The early findings offer insights into professional development strategies that can strengthen teachers' integration of computational thinking in elementary and middle school classrooms.

Come join us to experience how the South Dakota E-CORE project integrates goals among institutions across the state's STEM ecosystem.