

Build Your STEM Education Research Network at AERA 2025

Use these tips to grow your professional network and turn AERA into a smaller conference tailored to your interests. The following booklet focuses on applying these tips for scholars with interests in STEM education or National Science Foundation (NSF) funding opportunities.

Before the conference



1. Set a goal for how many new connections to make (consider starting with 3–5 people).
2. Use this booklet to identify 2–3 presenters whose work you admire.
3. Email those presenters before AERA expressing your excitement and interest in talking with them.
4. Follow the booklet's tinyurl.com links to add sessions to a personalized agenda on your AERA online account.
5. Print your personalized agenda with dates, times, and locations.
6. Join 2 or more [Special Interest Groups](#) (SIGs) relevant to you.

During the conference



1. Ask thoughtful questions directly tied to the presentations you attend.
2. Get free food and drinks at receptions, which are a unique feature of AERA.
3. Many receptions have open invites.
4. Attend SIG receptions and business meetings (they want new members).
5. Mingle with people you do not know:
 - Ask about their research or grants.
 - Ask which receptions they're attending.
 - Ask if those receptions are open.
6. Exchange contact information. Record how you met and something memorable that you discussed.

After the conference



1. Connect with new contacts on social media, if applicable.
2. Email new contacts within 3 days of AERA, noting how you met and what interests you share.
3. Make a spreadsheet of contact information for people you might ask to partner on a grant proposal. Record when and how you met.
4. Where relevant, invite contacts to partner on grant proposals as collaborators or advisory board members.
5. If appropriate after a positive exchange, ask if they would read a proposal draft or recommend key citations.



NSF EDU Core Research at AERA 2025

NSF-Supported Sessions Included in This Booklet

The following AERA 2025 sessions on STEM education research include presentations and discussion forums representing projects funded by the NSF EDU Core Research (ECR) program, including its [ECR:Core](#) and [ECR Building Capacity in STEM Education \(ECR:BCSER\)](#) solicitations.

Use this booklet to:

- **Understand the diversity of what ECR funds.** Use the sessions to generate proposal ideas that might excite you and align with the scope of the ECR:Core or ECR:BCSER solicitations.
 - *Tip.* Click the award numbers in the following pages to open the ECRhub.org projects search page with the award abstract, project type, and other details.
- **Turn AERA into a smaller conference.** Find colleagues or potential collaborators with similar STEM education interests by introducing yourself to presenters, sharing ideas in discussion forums, and networking at relevant receptions.

Have STEM education interests not reflected in the included sessions? Beyond faculty in schools of education who may commonly attend AERA, the ECR:Core and ECR:BCSER solicitations also funds researchers in the social sciences, data science, discipline-based education research (DBER), and other interdisciplinary fields who study STEM education and workforce development topics. The ECR:BCSER program also includes a dedicated track for researchers new to STEM education research.

About the NSF ECR:Core and ECR:BCSER Solicitations

The ECR:Core program funds curiosity-driven and use-inspired fundamental research on STEM learning and learning environments, broadening participation in STEM, and STEM workforce development. The ECR:BCSER solicitation funds projects that build individuals' capacity to conduct such research.

ECR is distinct from other NSF STEM Education (EDU) programs based on its focus on fundamental research that generates knowledge and understanding with the potential for broad relevance. The implications for improving STEM education practice may be indirect and long-term rather than direct

and immediate. In contrast, other [NSF EDU programs](#) such as [Discovery Research PreK-12 \(DRK-12\)](#) or [Improving Undergraduate STEM Education \(IUSE\)](#) focus more on applied research projects that develop, test, implement, and scale educational interventions.

The next proposal deadlines for ECR programs are the following:

- [CAREER*](#): July 23, 2025
- [ECR:Core](#): October 2, 2025
- [ECR:BCSER](#): February 27, 2026
- [Mid-Career Advancement \(MCA\)*](#): March 2, 2026

*The ECR program accepts CAREER and MCA proposals, which are NSF-wide funding mechanisms (see above links for more details). ECR also accepts conference, EAGER, and RAPID proposals, which can be submitted at any time ([see here](#)).

About the ECR Hub

The [ECR Hub](#) aims to (a) expand the influence and reach of existing ECR investments and (b) build career development opportunities for conducting ECR-supported research, especially for scholars and institutions underrepresented in the current ECR portfolio. The American Institutes for Research (AIR) leads the ECR Hub in close partnership with scholars from Georgia State University, Morgan State University, and Northwestern University. The ECR Hub is an intellectual partner to NSF but does not officially represent NSF's views.

Connect with the ECR Hub

For other ECR Hub activities, follow us on [Blue Sky](#) or [LinkedIn](#) or subscribe to [our mailing list](#).

Join our mailing list!



ECR Hub
EDU Core Research

Stay in the know about all things ECR by signing up for our mailing list.

[Subscribe](#)



Other NSF EDU resource centers

The ECR Hub complements the resource centers for more applied NSF programs such as those for [AISL](#), [ATE](#), [DRK-12](#), [HSI](#), [IGE](#), [INCLUDES](#), [ITEST](#), [IUSE](#), [RETTL](#), and [S-STEM](#) (see their websites for more details).

Share Your EDU Impact Story

On May 10, 2025, NSF commemorates its 75th anniversary.

Both NSF and other NSF-funded EDU resource centers are working together to leverage and share the impact of NSF EDU-funded work, aiming to highlight some of the most significant innovations from EDU-funded projects over the years.

Contribute by sharing your EDU story here:

<https://fillout.air.org/t/qwFdPGsZWKus>



Wednesday, April 23

Wed., April 23, 9:00–10:30 a.m.

#2100242: Strategic Use of Data to Scaffold Equity-Centered Institutional Change Initiatives (Paper Session, <https://tinyurl.com/2yys29pk>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 2D

Sandra L. Laursen, University of Colorado at Boulder

Ann E. Austin, Michigan State University

#2300725: Course Scarcity and the Impact on College Progression by Race/Ethnicity and Gender (Paper Session, <https://tinyurl.com/29xystzn>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3D

Claire Wladis, Borough of Manhattan Community College

Catherine A. Manly, Fairleigh Dickinson University

Thursday, April 24

Thu., April 24, 9:50–11:20 a.m.

#2334638: The Power of Many: How Diverse Mentor Networks Enhance STEM Persistence and Identity (Roundtable Session, <https://tinyurl.com/28dog5fh>)

The Colorado Convention Center, Floor: Ballroom Level, Four Seasons Ballroom 2-3

P. Wesley Schultz, Claremont Graduate University

Rachelle M. Pedersen, Texas Tech University

Thu., April 24, 1:45–3:15 p.m.

#2145520: The Phenomenon of Transfer Stigma: Perspectives of Vertical Transfers at Four-year Institutions (Paper Session, <https://tinyurl.com/222za4nh>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3E

Yu April Chen, Louisiana State University



#2201100: Applying an Integrative Climate Framework to Engineering Doctoral Education: Experiences of Students With Minoritized Sexual Identities (Paper Session, <https://tinyurl.com/275wsrct>)

The Colorado Convention Center, Floor: Meeting Room Level, Room 111

Julie Aldridge, The Ohio State University

Thu., April 24, 5:25–6:55 p.m.

#2201100: Developing a Departmental Climate Scale for Engineering Doctoral Students (Paper Session, <https://tinyurl.com/2bzgobgc>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3E

So Yoon Yoon, University of Cincinnati

#2201495: Student Military Service Member/Veteran Engagement with University Veteran-Focused Services: A Mixed Methods, Multi-Institutional Study (Paper Session, <https://tinyurl.com/26kdbc68>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3G

Ross J. Benbow, University of Wisconsin – Madison

#2300612: Development of Dictionaries for Automated Assessment of Response to Self-Regulated Learning Skill Training: Promoting Real-time Responsiveness and Mitigating Bias (Symposium, <https://tinyurl.com/28zf45us>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 2B

Matthew L. Bernacki, University of North Carolina – Chapel Hill

Friday, April 25

Fri., April 25, 9:50–11:20 a.m.

#2313609: Participation Boundaries for Providing Public Comment at a School Board Meeting (Paper Session, <https://tinyurl.com/24nnbsjx>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 2A

Emma Carene Gargroetzi, University of Texas at Austin



ECR Hub Workshop: Fri, April 25, 9:50–11:20 a.m.



ECR Hub
EDU Core Research

**How to Develop and Sustain Partnerships
for Advancing Your Research Agenda**

See location on registration confirmation.

Join the [ECR Hub](#) for a workshop about developing and sustaining partnerships to advance your research agenda.

Description: This workshop is ideal for individuals interested in learning strategies for building and sustaining partnerships to forward their research agenda. The objectives of the workshop are (1) distinguish between networking and partnership building, (2) conduct a personal network analysis, and (3) share strategies for moving individuals from your network to your partners.

Workshop Facilitators:

Roni Ellington, PhD, Co-PI ECR Hub

Danielle Ferguson, EdD, Co-PI ECR Hub

[Registration is required.](#)



Dr. Roni Ellington
Morgan State University
ECR:BCSER Institute [PI](#)
ECR Hub [co-PI](#)



Dr. Danielle Ferguson
American Institutes for Research
ECR Hub [co-PI](#)



Fri., April 25, 1:30–3:00 p.m.

#2201792: Integrating Machine Learning into Systematic Reviews: Strengthening Evidence Synthesis Paper Session, <https://tinyurl.com/2ayqndq9>)

The Colorado Convention Center, Floor: Meeting Room Level, Room 704

Rachel L. Renbarger, FHI 360

#2307285: Fostering Generative Learning with Explaining and Drawing Activities (Paper Session, <https://tinyurl.com/25dr3x7l>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3C

Logan Fiorella, University of Georgia

#2243109: Defining Systemic Racism and Racial Equity in STEM Education (Roundtable Session, <https://tinyurl.com/2cgjyl7w>)

The Colorado Convention Center, Floor: Ballroom Level, Four Seasons Ballroom 2-3

Terrell R Morton, University of Illinois at Chicago

Fri., April 25, 3:20–4:50 p.m.

#2243109: “For Such a Time as This”: Advancing Racial Equity–Focused Research in Varied Sociopolitical Contexts (Symposium, <https://tinyurl.com/22bmjbwb>)

The Colorado Convention Center, Floor: Meeting Room Level, Room 102

Terrell R Morton, University of Illinois at Chicago

Saturday, April 26

Sat., April 26, 8:00–9:30 a.m.

#2201969: Struggling for a Future Self in STEM: How Recent College Graduates Negotiate Transitions into Careers and Graduate Education (Paper Session, <https://tinyurl.com/2bp2o8rb>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3E

Heather Thiry, University of Colorado - Boulder



Sat., April 26, 9:50–11:20 a.m.

#2046233: Belonging Matters: Mediating LGBTQ Homophily and Identity in Science and Engineering (Paper Session, <https://tinyurl.com/2yogfgfl>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3F

Bryce Edward Hughes, Montana State University

Sat., April 26, 11:40 a.m.–1:10 p.m.

#2225306: Cultivating an Engineering Identity Among Latinx Youth and Addressing Gender Disparities Through Culturally Responsive Efforts (Paper Session, <https://tinyurl.com/28knd4rd>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 2D

Dina Verdin, Arizona State University

#2201438: Characterizing Middle School Science Assessment Tasks: Are They Designed to Support Equitable Science Learning? (Paper Session, <https://tinyurl.com/24uyrtls>)

The Colorado Convention Center, Floor: Ballroom Level, Four Seasons Ballroom 1

Cari F. Herrmann-Abell, BSCS Science Learning

Clarissa de Oliveira Deverel-Rico, BSCS Science Learning

Sat., April 26, 5:10–6:40 p.m.

#2000868: Exploring the Correlations Between Self-Reported and Observed Emotions and Engagement While Using ST Math (Poster Session, <https://tinyurl.com/28vu2b5l>)

The Colorado Convention Center, Floor: Exhibit Hall Level, Exhibit Hall F

Teomara Rutherford, University of Delaware

Sunday, April 27

Sun., April 27, 8:00–9:30 a.m.

#2243109: The Impact of an all-Black Research Team on Black Graduate Students' Perceptions of Black Identity, Sense of Belonging, and Community (Paper Session, <https://tinyurl.com/2dajndff>)

The Colorado Convention Center, Floor: Meeting Room Level, Room 107

Terrell R Morton, University of Illinois at Chicago



Sun., April 27, 9:50–11:20 a.m.

#2120742: Validating the Identity-Based Mentoring Scales for Undergraduate Engineering Students with Minoritized Identities (Roundtable Session, <https://tinyurl.com/2d6693ki>)

The Colorado Convention Center, Floor: Ballroom Level, Four Seasons Ballroom 1

Rajashi Ghosh, Teachers College, Columbia University

Sun., April 27, 11:40 a.m.–1:10 p.m.

Featured Symposium Highlighting NSF Funded National AI Institutes

Next-Generation Educational AI Research From Three NSF-Funded National AI Institutes (<https://tinyurl.com/2yrnjkg2>)

The Colorado Convention Center, Floor: Terrace Level, Bluebird Ballroom Room 3D

The National Science Foundation (NSF) has funded a total of twenty-five 5 year, \$20M National Artificial Intelligence (AI) Institutes related to various fields. To date, five of these Institutes are focused on AI-Augmented Learning.

The Principal Scientists of [iSAT](#), [EngageAI Institute](#), and [AI-ALOE](#), will each share their research findings to date, challenges they face, and planned next steps. Major themes in AI and education among these Institutes include AI-based agents that interact with instructors and learners, participatory design, a focus on motivation as well as learning, ethical use of AI, and modification of initial research plans to include the rapid evolution of generative AI.



Sun., April 27, 1:30–3:00 p.m.

#1760491: Does Algebraic Conceptual Understanding Predict Math Course Grades and STEM Degree Completion in College? (Paper Session, <https://tinyurl.com/2avvpzwp>)

The Colorado Convention Center, Floor: Meeting Room Level, Room 712

Claire Wladis, Borough of Manhattan Community College

