AGENDA

Times listed in Eastern Time |Presenters listed in alphabetical order unless otherwise noted. | Session titles linked to online agenda

JUNE 1, 2021

2:00–3:00 PM **Orientation for Attendees**
CADRE staff will guide you through the event platform and answer questions.

JUNE 2, 2021

1:00-2:00 PM **Orientation for Presenters & Moderators**
CADRE staff will demonstrate how to use the event platform for presentations and answer your questions.

3:00–4:00 PM **Office Hours with NSF Program Officers**
During these hours, POs will be available to meet with attendees on a drop-in basis.
Monica Cardella, Margret Hjalmarson, Eric Knuth, Xiufeng Liu, Robert Russell

JUNE 3, 2021

12:00–2:00 PM **Mock Proposal Review** (*Open to Invitees only*)
CADRE Fellows and Postdocs engage in a mock proposal review.

2:00–2:30 PM **Break**

2:30–3:30 PM **Early Career Researcher and NSF Program Officer Meeting** (*Open to Invitees only*)
CADRE Fellows and Postdocs meet with NSF POs for informal discussion.

JUNE 7, 2021

11:00 AM–12:00 PM **Office Hours with NSF Program Officer**
Gavin Fulmer

12:00–1:00 PM **Mid-Career Researcher Roundtables**
Moderator: Hilda Borko, Stanford University; Cory Buxton, Oregon State University; Russell Gersten, Instructional Research Group
Facilitated topical discussion groups for post-tenured faculty and others at a similar career stage.

JUNE 8, 2021

10:30-11:30 AM   **Office Hours with NSF Program Officer**
Gavin Fulmer

12:00–1:00 PM   **Office Hours with NSF Program Officers**
During these hours, POs will be available to meet with attendees on a drop-in basis.
Monica Cardella, Wu He, Margret Hjalmarson, Xiufeng Liu, Robert Ochsendorf, Robert Russell, Finbarr Sloane, Michael Steele

2:00-3:00   **New Awardee Orientation** *(Open to Invitees only)*
Moderators: Zandra de Araujo, University of Missouri; Deborah Hanuscin, Western Washington University; Beth Herbel-Eisenmann, NSF and Michigan State University
New awardees are invited to an orientation, Q&A, and networking.

JUNE 9, 2021

2:00-3:00 PM   **Early Career Researcher Roundtables** *(Open to Invitees only)*
Moderators: Julie Cohen, University of Virginia; Yasemin Copur-Gencturk, University of Southern California; Ilana Horn, Vanderbilt University; Kara Jackson, University of Washington; Madlyn Larson, University of Utah; Deb Morrison, University of Washington; Megan Silander, Education Development Center; Maria Varelas, University of Illinois Chicago
Facilitated topical discussion groups for graduate students, postdocs, pre-tenure faculty, and others at a similar career stage.

JUNE 10, 2021

2:00-3:00 PM   **Early Career Networking**
Informal networking opportunity for graduate students, postdocs, pre-tenure faculty, and others at a similar career stage.

4:00–5:00 PM   **Office Hours with NSF Program Officers**
During these hours, POs will be available to meet with attendees on a drop-in basis.
Monica Cardella, Michael Ford, Margret Hjalmarson, Eric Knuth, Xiufeng Liu, Robert Ochsendorf, Robert Russell, Finbarr Sloane, M. Alejandra Sorto, Michael Steele

JUNE 15, 2021

11:30 AM–12:00 PM   **NSF Welcome**
Karen Marrongelle, Assistant Director, EHR, National Science Foundation
Michael Steele, Program Officer and DRK-12 Program Lead, National Science Foundation
NSF leaders discuss current and future trends with DRK-12 and NSF.

12:00–12:30 PM   **Break**

12:30–1:30 PM   **A Year in Crisis: Impacts and Inequities in American Families, Schools,**

[and Communities](#)
Moderator: Robert Ochsendorf, Program Officer, National Science Foundation
Panelists (in order of presentation): Morgan Polikoff and Anna Saavedra, University of Southern California; Sean Smith and Peggy Trygstad, Horizon Research; Marjorie Bequette and Robby Callahan Schreiber, Science Museum of Minnesota
Respondent: Pedro Noguera, University of Southern California
Recent RAPID awardees discuss the effects of the pandemic and social justice events of the last year on education.

1:30–2:00 PM   **Break**

2:00-3:00   **Concurrent Sessions**
Opportunity for synchronous engagement with topics and interaction with presenters and other participants

- **[Challenges and Opportunities Arising in STEM Education Design-Based Research Focused on Curriculum and Professional Development](#)**
  Leslie Dietiker and Eve Manz, Boston University; William Zahner, San Diego State University
  Panelists and participants discuss navigating a design research tenet, principled cycles of iterative design and theory-building, as we have engaged in partnerships with teachers and school systems.

- **[Considerations for STEM Participation of Emergent Bilinguals During COVID-19](#)**
  Julie Brown and Mark Pacheco, University of Florida; Ji Yeong I, Iowa State University; Karl G. Jung, University of South Florida; Shakhnoza Kayumova, University of Massachusetts; Idalis Villanueva, University of Florida
  Four projects focused on broadening STEM participation of emergent bilingual learners will engage participants in discussion about education and research considerations made during the global COVID-19 pandemic.

- **[Synthesizing Insights from DRK-12 Projects and Developing Future Directions](#)**
  Moderators: Daniel Damelin, Concord Consortium; Ximena Dominguez, Digital Promise; Christopher Wilson, BSCS
  Panelists: Danielle Ferguson, Jonathan Margolin, and David Miller, American Institutes for Research
  This session will highlight insights learned from synthesizing past DRK-12 projects on (a) pedagogical content knowledge, (b) scientific modeling, and (c) elementary science teaching.

3:00–3:30 PM   **Break**

3:30–4:00 PM   **[General Poster Session](#)**
Project posters have representatives available for drop-in discussion.

4:00–4:30 PM   **Break**

4:30–5:00 PM   **Roundtable Discussions**
Facilitated roundtable topical discussions revolve around participant interest. Breakout groups accommodate subtopic discussions.

- **Developing an Evolving Research Agenda**
  Moderators: Paul Cobb, Vanderbilt University; David Purpura, Purdue University
  Discuss strategies for developing and sustaining your research agenda.

- **Early Childhood Education**
  Moderators: Ximena Dominguez, Digital Promise; Christopher Harris, WestEd
  Early learning in mathematics and science will be featured topics for participant discussion. Additional breakout space may be available for other topics of interest.

- **Modeling Across STEM Disciplines**
  Moderators: Ryan S. Jones, Middle Tennessee State University; Carolyn Staudt, Concord Consortium; Charles Xie, Institute for Future Intelligence
  Participants will discuss the STEM practice of modeling in science, mathematics, and engineering.

- **Supporting Diverse Populations of STEM Learners**
  Moderators: Marta Civil, University of Arizona; Leanne Ketterlin Geller, Southern Methodist University; Zahra Hazari, Florida International University
  Multilingual learners, special education, and gender in STEM education are potential topics for participant discussion, with additional breakout space available for other topics of interest.

- **Teacher Education and Professional Development**
  Moderators: Amelia Gotwals, Michigan State University; Ilana Horn, Vanderbilt University; José Felipe Martínez, UCLA; Carol O'Donnell, Smithsonian Institution
  Equity and diversity in STEM teaching, teacher content knowledge, measurement in teacher PD, and online PD environments are potential topics for participant discussion, with additional breakout space available for other topics of interest.

JUNE 16, 2021

12:30–1:30 PM   **Concurrent Sessions**
Opportunity for synchronous engagement with topics and interaction with presenters and other participants

- **Embracing Student Differences in STEM Education**
  Moderator: Jose Blackorby, CAST and Harvard University
  Panelists: Maya Israel, University of Florida; Matthew Marino, University of Central Florida; Emily Moore, University of Colorado Boulder
  Learn how a focus on learner variability can enhance design, relevance, implementation, and impacts of research in STEM. Researchers from general

and special education will discuss problem identification, research questions, design, analysis, and adoption.

- **Lessons Learned in Online Professional Development for Teachers**
  Meltem Alemdar, Michael Helms, and Roxanne Moore, Georgia Institute of Technology; Anne Britt, Northern Illinois University; Kathleen Easley and Steven McGee, The Learning Partnership
  How do teachers learn in a virtual setting? Panelists present lessons learned from two case examples of online professional development with a moderated Q&A.

- **Pandemic Year Insights: Adapting Upper Elementary, Middle School Projects**
  Moderator: Rebecca Mazur, Collaborative for Educational Services
  Presenters: Kirsten Butcher and Madlyn Larson, University of Utah; Isabel Huff, Springfield Technical Community College; Susan Kowalski, BSCS Science Learning; Elizabeth Phillips and Alden J. Edson, Michigan State University; Jeremiah Pina, Smith College
  This session focuses on lessons learned from adapting and testing upper elementary and middle school curriculum development, outreach, professional development, and assessment during the COVID pandemic.

- **Structured Poster Session on CS and Computational Thinking**
  Moderator: Eric Wiebe, North Carolina State University
  Presenters: Satabdi Basu, SRI International; Karen Brennan, Harvard University; Richard Brown, National Math and Science Initiative; Ido Davidesco, University of Connecticut; Mark Hannum, American Association of Physics Teachers; Mark Wilson, University of California, Berkeley; Charles Xie, Institute for Future Intelligence
  Projects with a CS and computational thinking focus present their work in breakout groups, followed by whole group discussion about cross-cutting topics.

1:30–2:00 PM   **Break**

2:00–2:30 PM   **General Poster Session**
Project posters have representatives available for drop-in discussion.

2:30–3:00 PM   **Break**

3:00–4:00 PM   **Concurrent Sessions**
Opportunity for synchronous engagement with topics and interaction with presenters and other participants

- **Creativity, Critical Thinking, and Problem Solving Across STEM**
  Janelle Bailey, Temple University; Joe Champion, Boise State University; Merredith Portsmore, Tufts University
  Join a discussion about teaching and learning critical thinking, problem solving, creativity—crucial areas of STEM education identified by the National Science Board.

- **Digital Arcade**
  Moderator: Chad Dorsey, Concord Consortium
  The digital arcade will provide time for presenters to demo technologies.

- **Getting the Most Out of your Advisory Board Meeting**
  Michelle Cirillo, University of Delaware; Zandra de Araujo, University of Missouri; Beth Herbel-Eisenmann, National Science Foundation & Michigan State University
  Drawing on various experiences (as PIs, program officer, and advisory board members), we consider how to draw on your advisors' expertise in guiding your project.

4:00–4:30 PM   **Break**

4:30–5:00 PM   **Roundtables**
Facilitated roundtable topical discussions revolve around participant interest. Breakout groups accommodate subtopic discussions.

- **Dissemination**
  Moderators: Phil Bell, University of Washington; Jinfa Cai, University of Delaware
  Models for dissemination and engagement as well as scholarly publication and will be featured topics for discussion, but additional topics may be introduced based on participant interest.

- **Effective Partnerships in STEM Education Research**
  Moderators: Jody Bintz, BSCS; Emily Weiss, University of California, Berkeley; Bruce Wellman, Olathe Engineering Academy @ Olathe Northwest High School
  Discuss features of effective partnerships and strategies for developing and maintaining partnerships with teachers, schools, and districts.

- **Evaluation**
  Moderators: Kristin Bass, Rockman et al; Ginger Fitzhugh, Education Development Center
  Join evaluators to discuss the role of evaluation in education research.

- **On the Rebound: Research After COVID-19**
  Moderators: Catrina Adams, Botanical Society of America; Ellen Yezierski, Miami University
  Discuss the effects of the pandemic on various aspects of research and what it may look like going forward.

- **STEM Disciplines**
  Moderators: Mark Chandler, Columbia University; S. Selcen Guzey, Purdue University; Charles Hohensee, University of Delaware
  Climate science education, design challenges in engineering education, and quantitative reasoning featured topics for discussion, with additional breakout space available for other topics of interest.

5:00–5:30 PM   **Social Networking**

11:00–11:30 AM   **General Poster Session**
Project posters have representatives available for drop-in discussion.

11:30 AM–12:00 PM Break

12:00–1:00 PM   **STEM, Civic Discourse, and Reasoning**
Moderator: Marcia Linn, University of California, Berkeley
Presenter: Carol Lee, Northwestern University
Commentators: Judit Moschkovich, University of California, Santa Cruz; Sepehr Vakil, Northwestern University
The provocative NAEd report on Civic Reasoning and Discourse makes the need and urgency for skills in civic reasoning and discourse starkly evident. This session explores the opportunities and challenges for engaging STEM students in civic reasoning and discourse.

1:00–1:30 PM   **Break**

1:30–2:30 PM   **Concurrent Sessions**
Opportunity for synchronous engagement with topics and interaction with presenters and other participants

- **Equitable STEM Education**
  Moderator: Korah Wiley, Digital Promise
  Panelists: Frances Harper, University of Tennessee Knoxville; Lama Jaber, Florida State University; Michael Krezmien, University of Massachusetts; Brian Williams, Georgia State University
  Panelists will generate and exchange ideas related to the role of technology, multi-stakeholder partnerships, curriculum reform, socioemotional learning, and social justice in STEM teaching, learning, and assessment.

- **Exploring Tools and Strategies for Advancing Data Literacy in K-12 Curricula**
  Aditi Wagh, Massachusetts Institute of Technology; Randy Kochevar and Josephine Louie, Education Development Center; Michelle Wilkerson, University of California, Berkeley
  Using three diverse projects as case studies, panelists will address questions about the role of data tools and strategies for introducing data in K-12.

- **Structured Poster Session on Assessment**
  Moderators: Jamie Mikeska, ETS; Mark Wilson, University of California, Berkeley
  Presenters: Jonathan Bostic, Bowling Green State University; Yasemin Copur-Gencturk, University of Southern California; Brian Gane and James Pellegrino, University of Illinois at Chicago; Leanne Ketterlin Geller, Southern Methodist University; FengFeng Ke, Florida State University; Liz Lehman, University of Chicago; Richard Lehrer, Vanderbilt University; Marcia Linn, University of California, Berkeley; Jamie Mikeska, ETS
  Projects with an assessment focus present their work in breakout groups,

followed by whole group discussion about cross-cutting topics.

2:30–3:00 PM   **Break**

3:00–3:30 PM   **Roundtables**

- **Anti-Racism and Justice in STEM Education**
  Moderators: Kari Kokka, University of Pittsburgh; ReAnna Roby, Vanderbilt University
  This roundtable focuses on instructional practices to promote equity, diversity, and justice.

- **Data Science Education/Data Literacy**
  Moderators: Hollylynne Lee, North Carolina State University; Josephine Louie, Education Development Center; Camilla Matuk, New York University
  This roundtable will feature a discussion of data literacy across the disciplines.

- **Educational Technologies**
  Moderators: Libby Gerard, University of California, Berkeley; Karl Kosko, Kent State University
  Discuss AI, technological innovations in PD, and other technological innovations of participant interest.

- **Future Directions and Trends in Research Methods**
  Moderators: Rebecca Passonneau, Pennsylvania State University; Jessaca Spybrook, Western Michigan University
  What is on the cutting edge of research methods in STEM education? Bring your ideas to this roundtable.

- **Scaling and Sustainability**
  Moderators: Anne Kornahrens, American Physical Society; June Mark, Education Development Center; Pooneh Sabouri, Florida International University
  Share strategies for sustaining and scaling STEM education innovations (e.g., curriculum professional development, or learning technologies) and research.

3:30–4:00 PM   **Break**

4:00–4:30 PM   **Closing**
Evan Heit, Division Director, DRL, National Science Foundation; Jamie Mikeska, ETS; Eric Wiebe, North Carolina State University
PI meeting planning committee members reflect on the events and discussions that took place over the course of the meeting.