

Convocation on the Status of Informal Science and Engineering Education

Keck Center of the National Academies, Room 100
Washington, DC

MONDAY, JUNE 16, 2025 · ALL TIMES ARE ET

8:45-9:45 Registration and Networking Breakfast

Breakfast is available for in-person attendees. Please come and spend time with fellow attendees before our meeting begins.

9:45–10:00 Welcome and Overview of Agenda

Heidi Schweingruber, Board on Science Education (Board Director)

Kirsten Ellenbogen, Great Lakes Science Center (Committee Chair)

10:00–11:00 15 Years After LSIE: Where are we now? Where have we moved the needle?

As STEM education faces new challenges and opportunities, this session will kick off the convocation with a dynamic conversation about the trajectory of the field of informal science and engineering education since the release of *Learning Science in Informal Environments* (LSIE). Panelists will highlight progress over the past 15 years and critically reflect on the goals and aspirations that have not yet been realized.

Moderator: **Scott Pattison**, TERC (Committee Member)

Speakers:

- **Flavio Azevedo**, Southern Methodist University (virtual)
- **Jamie Bell**, Association of Science and Technology Centers
- **Laura Huerta Migus**, LLC, EELO Group
- **Ron Ottinger**, STEM Next Opportunity Fund

10:40–11:00 Audience Discussion

11:00-11:15 Interactive Break: What comes to mind as you reflect on the last 15 years of informal science and engineering education?

11:15-12:15 What are the different goals for science and engineering learning in informal settings and how do we know we're achieving them?

Goals in the field of informal science and engineering education have included a broad range, such as workforce development, STEM literacy, informed citizenry, and community improvement. This session focuses on the goals for informal science and engineering learning across different settings, identities of learners, ages, and how such goals are being met. Panelists will discuss how different goals have informed practice, evaluation, and research, how differing goals have shaped the focus

on different learners, and how the infrastructure for informal science and engineering learning environments influences these goals and outcomes.

Moderator: **Cecilia Garibay**, *Garibay Group* (Committee Member)

Speakers:

- **Caren Cooper**, *North Carolina State University*
- **Leslie Goodyear**, *Education Development Center*
- **Christine Reich**, *TERC*
- **Edna Tan**, *University of North Carolina, Greensboro*

11:55–12:15 Audience Discussion

12:15–1:15 Lunch and Poster Session: What are the notable impacts of research and practice in informal science and engineering education settings?

Lunch available for in person attendees in the E. Street Collaboration Room

During the lunch break, participants will also have an opportunity to view the [poster gallery](#) of impact stories submitted by members of the field and reflect on key factors that were critical for achieving these impacts, areas of impact that are poised to help with navigating the current moment in science and education, and implications for future directions for the field.

1:15–2:00 Invited commentary on the “notable impacts” posters

This session will highlight key themes from the posters contributed prior to the Convocation (all available online) including key learnings, critical relationships, new perspectives, advancements in scholarship and practice, and assets created since the release of LSIE. This session will begin with invited commentary, followed by open sharing of ideas from the audience.

Moderator: **Sue Allen**, *Allen & Associates* (Committee Member)

Commentators:

- **Diane Miller**, *Detroit Zoological Society and REVISE*
- **Rae Ostman**, *Arizona State University and NISE Net*

1:35–2:00 Audience Discussion

2:00–3:00 Who is the workforce that supports learning in informal settings and what supports do they need?

Staff in informal science and engineering settings play an important role in designing, implementing and often times, modeling these learning experiences. This session focuses on deepening the conversation on what needs to be considered to support the informal science and engineering educator workforce in doing their work most effectively, including the capacities that need to be developed and the skills, competencies, and responsibilities that need to be anticipated for the future workforce in informal science and engineering learning environments.

Moderator: **Preeti Gupta**, *American Museum of Natural History* (Committee Member)

Speakers:

- **Melissa Ballard**, *Association of Science and Technology Centers*

- **Perrin Chick**, *Maine Math and Science Alliance*
- **Kathayoon Khalil**, *Columbus Zoo and Aquarium* (virtual)
- **Gina Navoa Svarovsky**, *University of Notre Dame*

2:40–3:00 Audience Discussion

3:00–3:15 Break

3:15–4:15 What are the opportunities and challenges for informal science and engineering learning in an evolving policy landscape?

This session will examine the role that policy has played in shaping and advancing the field of informal science and engineering education over the past decade. Panelists will offer expert insights on the opportunities and challenges to supporting and fostering more robust learning and public engagement with science and engineering in informal settings amidst evolving financial and policy priorities.

Moderator: **Anita Krishnamurthi**, *The Afterschool Alliance* (Committee Member)

Speakers:

- **James Brown**, *STEM Education Coalition*
- **Melissa Moritz**, *Alliance for Learning Innovation*
- **Erika Shugart**, *Erika Shugart Consulting*
- **David Sittenfeld**, *Museum of Science, Boston*

3:55–4:15 Audience Discussion

4:15–4:40 Illuminating Key Takeaways and Insights

Kirsten Ellenbogen, *Great Lakes Science Center* (Committee Chair)

In this Think-Pair-Share activity, participants will have the opportunity to reflect on the discussions of the meeting so far and share one new insight or important takeaway from the day and a wondering or remaining question.

4:40–4:50 Reflections from Sponsor

Emma Banay, *Overdeck Family Foundation*

4:50–5:00 Wrap up Day 1 Summary and Looking Ahead to Day 2

Kirsten Ellenbogen, *Great Lakes Science Center* (Committee Chair)

END OF DAY 1

TUESDAY, JUNE 17, 2025 · ALL TIMES ARE ET

8:00-9:00 Networking Breakfast

Breakfast available for in-person attendees. Please come and spend time with fellow attendees before Day 2 begins.

9:00–9:15 Welcome to Day 2 and Recap of Day 1

Kirsten Ellenbogen, *Great Lakes Science Center* (Committee Chair)

9:15–10:15 What are the new insights about learning science and engineering in informal settings and how to support learning across the lifespan?

This session focuses on education and learning in informal science and engineering environments. Panelists will critically reflect on and look ahead at specific advances in research and practice that have increased understanding about the breadth of who learners are and how they learn across a wide range of contexts. The panel will also explore how to better design for and support the many different ways of teaching and learning.

Moderator: **Joe Heimlich**, *COSI* (Committee Member)

Speakers:

- **Amaris Alanis-Ribeiro**, *Hispanic Access Foundation*
- **Monica Cardella**, *Florida International University*
- **Veronica Garcia-Luis**, *Exploratorium*
- **Kylie Peppler**, *University of California, Irvine*
- **Tina Phillips**, *Cornell Lab of Ornithology*

9:55–10:15 Audience Discussion

10:15–10:30 Break

10:30–11:30 What is the role of ecosystems in advancing informal science and engineering learning?

Informal science and engineering education is part of broader learning ecosystems that include formal, informal, and everyday opportunities to learn and engage with science and engineering. This session will focus on how an ecosystems perspective to learning influences practice, assessment, and participation in science and engineering. Panelists will share insights on how to support learners as they navigate pathways through learning ecosystems, including the role of collaborations, and how learning ecosystems can be strengthened and more resilient.

Moderator: **Kevin Crowley**, *University of Pittsburgh* (Committee Member)

Speakers:

- **Tom Akiva**, *University of Pittsburgh*
- **Marijke Hecht**, *The Ohio State University*
- **Heather Jameson**, *Montana Afterschool Alliance*
- **Nichole Pinkard**, *Northwestern University*
- **Steve Snyder**, *Fleet Science Center*

11:10–11:30 Audience Discussion

11:30–12:30 Lunch and Table Discussions: What are the next steps of highest priority for research, practice, and policy in informal science and engineering education?

During lunch participants will also have the opportunity to reflect on the meeting so far and generate ideas for next steps and future priorities of the field through discussions with others.

12:30–1:30 What are the affordances and challenges of digital media for learning and engaging in science and engineering?

Digital media and digital communities on social media platforms, messaging forums, and live streaming channels are increasingly being leveraged for STEM learning and engagement. This session will explore the current landscape of digital-based science and engineering learning and engagement, the affordances and challenges associated with producing and communicating science content with digital tools and platforms, and how digital media can be better leveraged across informal STEM education settings to support diverse populations of learners.

Moderator: **Ralph Bouquet**, *NOVA/PBS* (Committee Member)

Speakers:

- **Joe Hanson**, *Be Smart, PBS Digital Studios*
- **Mimi Ito**, *University of California, Irvine* (virtual)
- **Nehemiah Mabry**, *STEMedia Incorporated*
- **Reyhaneh Maktoufi**, *Howard Hughes Medical Institute*

1:10–1:30 Audience Discussion

1:30–2:30 Cutting Edge ISEE: What are the innovative approaches to making science and engineering relevant to the learners and challenges of today?

This session will highlight some approaches to science and engineering learning and engagement that push the boundaries and practices of the field and address critical needs. Panelists will share some of the innovative, community-driven, and culturally sustaining approaches they are being employed to support the science and engineering learning goals and needs of individuals and communities.

Moderator: Darryl Williams, *The Franklin Institute* (BOSE Board Member)

Speakers:

- **Kareem Edouard**, *Drexel University*
- **Nalini Nadkarni**, *University of Utah* (virtual)
- **Dionne Nicole Champion**, *University of Florida and TERC*
- **Jylana Sheats**, *Tulane University* (virtual)

2:10–2:30 Audience Discussion

2:30–2:50 Networking Break

2:50–3:50 Reflections on What's next? What are the Highest Priorities?

Kirsten Ellenbogen, *Great Lakes Science Center* (Committee Chair)

Convocation on the Status of Informal Science and Engineering Education

This session will focus on highlighting key themes and insights generated during the lunch discussions with an eye towards the future priorities for research, practice, and policy in informal science and engineering education. This session will begin with invited commentary from members of the planning committee, followed by open sharing of additional ideas from the audience.

3:50–4:00 **Final Reflections from Committee Chair**
Kirsten Ellenbogen, *Great Lakes Science Center*

MEETING ADJOURNS