February 29, 2016

Welcome to the 2016 Advancing Informal STEM Learning (AISL) Program Principal Investigators (PI) Meeting.

This biennial gathering brings together practitioners, researchers, and evaluators actively working to improve learning in informal environments. Representing a wide range of organizations, you are a group of highly creative and dedicated professionals in the fields of education research, development, design, communication and evaluation. You represent science centers and museums; zoos and aquariums, botanical gardens, and nature centers; universities; libraries; youth, community, and after-school programs; technology, digital media, and gaming organizations; and broadcast media and science communications. Some of you also have active science and engineering research careers. In addition, colleagues representing other federal and private funding agencies are participating. As with past AISL PI Meetings, we trust that your activities over the next few days will continue to foster a stronger sense of identity and a more cohesive community to advance shared knowledge-building, practice, and capacity. Ultimately, our shared goal is to have an impact on STEM engagement and learning.

The National Science Foundation (NSF) Directorate for Education and Human Resources (EHR) continues to focus attention on three major areas of impact of our investments: learning and learning environments, broadening participation, and workforce development. Your meeting agenda attends to these three strategic areas. We are especially grateful for the organizing role that the Center for Advancement of Informal Science Education (CAISE) played this past year in NSF’s Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science (INCLUDiES) initiative on broadening participation. We are pleased that over the past two years—as a result of other CAISE initiatives and now at this PI Meeting—there is a lively dialogue around the need to forge productive research and practice partnerships in informal STEM education and science communication to share what we are learning, and to leverage each other’s strengths, innovations, and collaborative networks for greater collective impact.

Special thanks for planning and hosting the PI Meeting go to Project Director Jamie Bell and the CAISE team, as well as the many others who have contributed, including Julie Johnson, NSF AISL Program Lead; Al DeSena, cognizant NSF Program Officer for CAISE; and all of the AISL Program staff and program officers in the Division of Research on Learning in Formal and Informal Settings (DRL).

I wish you the best for a productive meeting.

Sincerely,

Joan Ferrini-Mundy
Assistant Director

Telephone (703) 292-8600
FAX (703) 292-9179
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About CAISE

The Center for Advancement of Informal Science Education (CAISE) works in cooperation with the U.S. National Science Foundation (NSF) Advancing Informal STEM Learning (AISL) program to strengthen and advance the field of professional informal STEM education (ISE) by providing resources, infrastructure, and connectivity for project leaders, researchers, practitioners, and evaluators, as well as natural, physical, and social scientists.

CAISE’s roles are to characterize what is current in the ISE field with regard to learning content, context, and approach; connect and convene professionals from across different field sectors on important topics and issues; and to communicate to the broader informal STEM learning community what we are observing and learning. The sectors that we serve and support include those working in: media (TV, radio, and film); science centers and museums; zoos and aquaria; botanical gardens and nature centers; science festivals and events; cyberlearning and gaming; youth, community, and out-of-school-time programs; and in a variety of engagement activities conducted by scientists and their education and outreach staffs.

Established in 2007 with support from NSF, CAISE is a partnership between core staff at the Association of Science-Technology Centers (ASTC) in Washington, D.C. and co-principal investigators at informal science and academic institutions across the country. ASTC is an international membership organization of science centers and museums dedicated to public engagement with science among increasingly diverse audiences.

CAISE manages InformalScience.org, a central portal to project, research, and evaluation resources designed to support and connect the informal STEM learning community. Through InformalScience.org, CAISE strives to support knowledge-sharing, collaboration, and the dissemination of innovation among diverse professionals in the field. InformalScience.org is a searchable repository that provides users with free access to thousands of project descriptions, evaluation reports and instruments, and research and reference materials. The site offers a forum function to encourage dialogue and documentation of processes, and the site’s member directory provides a valuable resource for networking and communication.

The 2016 NSF AISL PI Meeting is the fifth biennial Principal Investigator (PI) Meeting or Summit that CAISE has convened. While each meeting has been unique, they have all provided a time for the field to come together and discuss current topics and trends, share successes and challenges, and explore new collaborations. For documentation of past PI Meetings, visit InformalScience.org/about-caise/pi-meetings.
CAISE Staff and Co-Principal Investigators

Jamie Bell, PI and Project Director  
Patricia Montaño, Program Manager  
Grace Troxel, Digital Librarian  
Jared Nielsen, Online Producer  

Kevin Crowley, CAISE Co-PI,  
University of Pittsburgh Center for Learning in Out of School Environments  

Kirsten Ellenbogen, CAISE Co-PI,  
Great Lakes Science Center  

John Falk, CAISE Co-PI,  
Oregon State University Center for Research on Lifelong STEM Learning  

KQED  
Sue Ellen McCann, CAISE Co-PI,  
KQED Public Media  

CAISE Advisors  
Dr. Nalini Nadkarni, University of Utah  
Barry Van Deman, North Carolina Museum of Life and Science  
Anthony “Bud” Rock, Association of Science-Technology Centers
# The National Science Foundation

## Advancing Informal STEM Learning (AISL) Program

### Center for Advancement of Informal Science Education

February 29, 2016 - March 2, 2016  
*Bethesda North Marriott Hotel & Conference Center*

## Program Agenda

### Day 1: Monday February 29, 2016

<table>
<thead>
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<th>Time</th>
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<tr>
<td>11 a.m. - 5 p.m.</td>
<td>Registration (Grand Foyer)</td>
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<tr>
<td>11 a.m. - 12:30 p.m.</td>
<td>Poster Set-up (Salons H-F)</td>
</tr>
<tr>
<td>12:30 p.m. - 2 p.m.</td>
<td>Technical Assistance I, Grant Management (Salon E)</td>
</tr>
<tr>
<td>2:30 p.m. - 4 p.m.</td>
<td>Technical Assistance II, Current NSF Opportunities Related to Informal STEM Learning (Salon E)</td>
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<tr>
<td>4:30 p.m. - 6 p.m.</td>
<td>Technical Assistance III, Evaluation in Informal STEM Education: Ask An Evaluator (Salon E)</td>
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<td>6 p.m. - 7:30 p.m.</td>
<td>Welcome Reception (Grand Foyer)</td>
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### Day 2: Tuesday March 1, 2016

<table>
<thead>
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<tbody>
<tr>
<td>7:30 a.m. - 12 p.m.</td>
<td>Registration (Grand Foyer)</td>
</tr>
<tr>
<td>7:30 a.m. - 9 a.m.</td>
<td>Poster Set-up (Salons H-F)</td>
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<td>8 a.m. - 9:15 a.m.</td>
<td>Breakfast (Salon E)</td>
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<tr>
<td>9 a.m. - 9:15 a.m.</td>
<td>Welcome (Salon E)</td>
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<tr>
<td>9:15 a.m. - 10 a.m.</td>
<td>Keynote Presentation (Salon E)</td>
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<tr>
<td>10 a.m. - 10:15 a.m.</td>
<td>Words from the Center for Advancement of Informal Science Education (Salon E)</td>
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<tr>
<td>10:15 a.m. - 10:30 a.m.</td>
<td>Transition</td>
</tr>
<tr>
<td>10:30 a.m. - 12 p.m.</td>
<td>Morning Concurrent Sessions (Lower Level Meeting Rooms)</td>
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<tr>
<td></td>
<td>• Media and Technology in the Learning Ecosystem (Linden Oak)</td>
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<td>• Cyberlearning &amp; Computer Science (White Flint Amphitheater)</td>
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<td></td>
<td>• The Research Behind How We Measure Learning (Brookside A)</td>
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<td>• Connecting Research and Practice: How to Create a More Equitable Relationship (Brookside B)</td>
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<td>• Public Participation in STEM Research: Citizen Science (Glen Echo)</td>
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<td>• Documenting Impact Over the Long-Term and Across the Ecosystem (Forest Glen)</td>
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<td>• Strategies for Sharing Project Resources, Findings, and Professional Development through Networks and Resource Centers (Timberlawn)</td>
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<tr>
<td></td>
<td>• Broadening Participation: The NSF INCLUDES Initiative and Implications and Directions for Informal STEM Education (Oakley)</td>
</tr>
</tbody>
</table>
12 p.m. – 1:30 p.m. Working Lunch with NSF AISL Program Officers (Salon E)
12 p.m. – 4:30 p.m. Open Space Session Nominations (Salons F-H)
1:30 p.m. – 1:45 p.m. Transition
1:45 p.m. – 3:15 p.m. Afternoon Concurrent Sessions (Lower Level Meeting Rooms)
  • Media and Technology in the Learning Ecosystem (Linden Oak)
  • Cyberlearning & Computer Science (White Flint Amphitheater)
  • The Research Behind How We Measure Learning (Brookside A)
  • Connecting Research and Practice: How to Create a More Equitable Relationship (Brookside B)
  • Public Participation in STEM Research: Citizen Science (Glen Echo)
  • Documenting Impact Over the Long-Term and Across the Ecosystem (Forest Glen)
  • Strategies for Sharing Project Resources, Findings, and Professional Development through Networks and Resource Centers (Timberlawn)
  • Broadening Participation: The NSF INCLUDES Initiative and Implications and Directions for Informal STEM Education (Oakley)
3:15 p.m. – 3:30 p.m. Transition
3:30 p.m. – 3:45 p.m. Announcements (Salons E-H)
3:45 p.m. – 4:45 p.m. Afternoon Concurrent Sessions (Lower Level Meeting Rooms)
4:45 p.m. – 5:45 p.m. Poster Session I (Salons F-H)
4:30 p.m. – 6 p.m. Open Space Session Voting (Salons F-H)
5:45 p.m. – 7 p.m. Reception (Salons F-H)
7 p.m. – 8 p.m. Poster Breakdown (Salons F-H)

Day 3: Wednesday March 2, 2016

8 a.m. – 9 a.m. Breakfast with representatives of Other Federal Agencies (Salon E)
9 a.m. – 9:30 a.m. Welcome and Open Space Session Announcements (Salon E)
9:30 a.m. – 10:45 a.m. A Conversation About Media & Science Communication (Salon E)
with Panelists Sue Ellen McCann (KQED Executive in Charge, Science), Miles O’Brien (Science Correspondent, PBS NewsHour), Flora Lichtman (Co-Director of “Animated Life” and Host of The Adaptors podcast), and John Besley (Associate Professor, College of Communication Arts and Sciences, Michigan State University)
10:45 a.m. – 11 a.m. Transition
11 a.m. – 12:30 p.m. Update on the Online Project Monitoring System (OPMS) (Timberlawn)
  Gary Silverstein, Associate Director, Westat
11 a.m. – 12:30 p.m. Open Space Sessions (Lower Level Meeting Rooms)
  Topics to be determined by attendees on Tuesday
12:30 p.m. – 1:45 p.m. Working Lunch with NSF AISL Program Officers (Salon E)
1:45 p.m. – 2:45 p.m. Open Space Sessions Report Out (Salon E)
2:45 p.m. – 3:30 p.m. Closing Remarks & Thank You (Salon E)
Hotel Map
Technical Assistance Sessions

**Grant Management**
Come hear from representatives from NSF’s Division of Grants and Agreements (DGA). The DGA is responsible for the award of NSF grants and agreements recommended for support by NSF program offices. From pre-award through closeout, DGA conducts a variety of business, financial, and award administrative reviews to ensure compliance with award terms and conditions, NSF policies and procedures, and Federal rules and regulations.

Session Leaders: L. Rashawn Farrior & Daniel P. McEnrue, NSF Division of Grants and Agreements

**Evaluation in Informal STEM Education: Ask An Evaluator**
Ask your evaluation questions in this participatory session on evaluating informal STEM learning projects. A panel of evaluators experienced in a variety of informal STEM education settings and environments will reflect on the best and worst of their experiences to answer common - and not so common - questions about evaluation in our field. Expected topics include writing project outcomes, measuring the impact of brief experiences, differences between research and evaluation, getting IRB approval, and new approaches to measurement.

Session Leader: Kirsten Ellenbogen, CAISE coPrincipal Investigator, President & CEO Great Lakes Science Center

**Current NSF Opportunities Related to Informal STEM Learning**
NSF AISL Program Officers will talk in detail about current NSF funding opportunities, including the NSF Advancing Informal STEM Learning (AISL) solicitation and agency-wide funding mechanisms. Part of the session will be a helpful discussion on interpreting the NSF AISL solicitation. This will be an opportunity for questions and in-depth conversations between NSF Program Officers and Principal Investigators.

Session Leaders: NSF AISL Program Officers
Descriptions of Concurrent Sessions

The Concurrent Session topics emerged from a pre-meeting survey of AISL-funded Principal Investigators (PIs); discussions with PIs and others who have participated in CAISE convenings; and input from CAISE staff, CAISE co-PIs, and NSF Program Officers. These sessions are intended to stimulate discussions about cross-sector topics and issues that can continue beyond the meeting and generate new ideas for future projects and collaborations.

Media and Technology in the Learning Ecosystem
Linden Oak Meeting Room
What is the purpose of media in the Learning Ecosystem? How does it serve as a connective tissue that links people with the world around them? How does media support use of STEM content to create a better world? Building on insights gleaned from the 2014 meeting, this program will attempt to think about learning across media platforms and funded projects to explore what collective insights may be emerging in the field. We seek to explore what we can learn when we put projects together with the purpose of advancing practice.

Leaders: Lisa Samford, Executive Director, Jackson Hole Film Festival, John Fraser, President & CEO New Knowledge Organization Ltd.

Cyberlearning & Computer Science
White Flint Amphitheater
Digital technologies—from computer games to social media to mobile phones—play an integral role in the lives of young people. Leveraging that interest, NSF has provided funding for informal educators to develop projects that encourage youth to become creators rather than just consumers of digital media, provide opportunities for young people to engage in scientific inquiry using sophisticated tools and resources, and establish more authentic methods for documenting and measuring program impact. In this session, we will discuss key questions and issues for practitioners, researchers and evaluators involved in cyberlearning and computer science in informal settings.

Leaders: Wendy Martin, Research Scientist, CIRCL Resource Center, Education Development Center, Kea Anderson Vogt, Education Research, Center for Technology in Learning, SRI International, Paul Phamduy, New York University, Tandon School of Engineering

The Research Behind How We Measure Learning
Brookside A Meeting Room
How do we measure learning in informal settings? The 2009 volume Learning Science in Informal Settings officially opened our field’s horizons for how we view learning. More than knowledge, or skill acquisition, learning includes aspects of motivation, interest, identity, and more. Since 2009, there has been a new wave of research on measures that reflect such broad and exciting definitions of learning. In this session we will review current work, talk about future directions, and discuss the merits of shareable measures and perhaps even standardized assessments of informal learning.

Leader: Kevin Crowley, CAISE co-Principal Investigator, Professor of Learning Sciences and Policy, Director UPCLOSE, University of Pittsburgh

Connecting Research and Practice: How to Create a More Equitable Relationship
Brookside B Meeting Room
How can informal STEM Education (ISE) practices better inform the ways in which learning is conceptualized, studied, and evaluated? In this interactive session, we will identify new models for the relationship between research and practice, including approaches that build on youth voice and practitioner knowledge. Participants will engage in a design task to identify pressing questions, emerging understandings, and the fertile ground for the integration of research and practice.

Leaders: Bronwyn Bevan, Senior Research Scientist, University of Washington, Angela Calabrese Barton, Professor, Michigan State University
Public Participation in STEM Research: Citizen Science
Glen Echo Meeting Room

How are, and how can, different citizen science projects advance knowledge in informal learning? AISL principal investigators will reflect on one or more of three questions: What are the unanswered questions about how to achieve citizen science learning outcomes? What is needed to help projects engage culturally diverse audiences? What cross-cutting resources would help individual projects improve their efforts? Attendees will be invited to join a discussion of ideas presented, and will help identify priority needs for coordinated work to advance informal learning and citizen science more generally.

Leaders: Rick Bonney, Director, Public Engagement in Science, Cornell Lab of Ornithology, Jennifer Shirk, Project Leader, CitizenScience.org, Cornell Lab of Ornithology

Documenting Impact Over the Long-Term and Across the Ecosystem
Forest Glen Meeting Room

There is an increasing awareness within the education community in general and the ISE community in particular of the need for greater understanding and documentation of the ways educational interventions influence learners beyond the time and space of the immediate experience. That said, collecting data over extended time periods and multiple settings creates unique theoretical, methodological, and logistical challenges. Through brief presentations of selected examples of past and current research, as well as whole-group discussions, this session will explore strategies for investigating the ways ISE experiences affect the public over the long-term and across the learning ecosystem.

Leaders: John Falk, CAISE co-Principal Investigator, Executive Director Institute for Learning Innovation, Sea Grant Professor of Free-Choice Learning, Oregon State University, Leslie Goodyear, Principal Research Scientist, Education Development Center, Inc. (EDC)

Strategies for Sharing Project Resources, Findings, and Professional Development through Networks and Resource Centers
Timberlawn Meeting Room

Over the last decade, NSF has made significant investments in networks, resource centers, and infrastructure to advance the field of informal science learning and disseminate the broader impacts of scientific research. What strategies have proven successful for building and sustaining nationwide projects? What models and methods are most effective for broadly distributing educational resources, sharing knowledge, promoting evidence-based practices, and offering professional development? Join us to learn how the infrastructure and findings of networks and resource centers can benefit projects of all types, and consider priorities for future large-scale collaborations.

Leaders: Catherine McCarthy, Science Museum of Minnesota (NISE Network), Rae Ostman, Arizona State University (NISE Network)

Broadening Participation: The NSF INCLUDES Initiative and Implications and Directions for Informal STEM Education
Oakley Meeting Room

Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science (INCLUDES) is a multi-year national initiative launched by the National Science Foundation in 2016 to develop and implement scalable solutions to broadening participation in STEM education. A workshop in June 2015 convened thought leaders from across the nation, sectors, and academic disciplines for brainstorming and prioritizing of ideas, strategies, and actions that could be aggressively pursued by this initiative. This session invites presenters from NSF and AISL-funded programs to share innovations, and discuss issues and challenges in fostering inclusion and equity for all in STEM education.

Leaders: Margaret Glass, Director, Professional Development, Association of Science-Technology Centers, Laura Peticolas, Director and Senior Fellow, University of California, Berkeley
Process for Open Space Sessions

Open Space sessions allow meeting participants the flexibility to nominate topics of currency and interest in informal STEM learning, and invite others to be a part of the discussion. Some attendees might arrive with topics in mind, and for others topics of interest may be inspired by a technical assistance session, concurrent session, or their interactions with colleagues.

The morning of Tuesday, March 1, 2016, CAISE Project Director Jamie Bell will explain the process of nominating and voting for Open Space sessions. An announcement asking for nominations for sessions will start during lunch on Tuesday, March 1st. Meeting attendees will be able to nominate sessions until the start of the poster session presentations. If you wish to nominate an Open Space session, please proceed to the registration desk, or Open Space session board, to complete a form that will be posted to the voting board. You will be asked for the title of your topic, name, and a description.

Voting for Open Space sessions is a democratic process. During the poster session the meeting organizers will announce the start of voting. Meeting participants will have until the end of the poster session to vote for their preferred topics; participants will be provided with two stickers to use to vote for two separate session topics. The seven most popular session topics, and their locations, will be announced at breakfast on Wednesday, March 2nd.

Tips for nominating and voting in the Open Space session process:

- You may nominate as many Open Space sessions as you like, but you may only vote for two.

- The title of your nominated Open Space topic should clearly state the content area, learning platform or strategy, or audience challenge. For example, “How can the Engineering Design Process be successfully applied to programs that reach primary school-aged children?”

Tips for participating in an Open Space session:

- Each Open Space session will be assigned a facilitator. We encourage participants and nominators to prepare provocative questions in order to stimulate the discussion.

- All Open Space sessions will be documented. Each Open Space session is required to name a notetaker. Instructions for recording notes will be provided at the meeting.

- Open Space sessions are truly “open.” Feel free to add to the discussions, and to move from one session to another.

- You may choose to break off and form a new session during the Open Space session time—if this occurs, please make sure to document your discussion.

- Participants are encouraged to share their thoughts during a “report out” on the afternoon of March 3rd. After the meeting, participants may share their notes and continue the discussions using the meeting discussion forum found on InformalScience.org.
Documenting the 2016 NSF AISL PI Meeting

Notetakers for each technical assistance session, concurrent session, and open-space session ensures the meeting will be well-documented. Notes will be accessible after the meeting on InformalScience.org. A discussion forum on InformalScience.org that is dedicated to the meeting can be used to gather the thoughts, questions, and experiences of meeting participants.

And, you are always welcome to join the conversation on Twitter, #AISL2016.

2016 NSF AISL PI Meeting Online Forum

▲ The forum for the meeting, hosted by CAISE, can be found on the Community webpage of InformalScience.org. Please email caise@informalscience.org with any questions about how to use the forum.

▲ First, login to InformalScience.org, then visit the Community page and click “Participate” to be redirected to the Forums webpage. Or, navigate to http://www.informalscience.org/forum. Please remember to log in to InformalScience.org with your username and password to participate in the Forum. Click on 2016 NSF AISL PI Meeting to start using the forum.
To reply to a topic and add your thoughts, click on a topic that interests you and then click on “Post reply.” You can post replies to topic threads throughout the meeting and after the meeting closes.

If you would like to add a new comment to an existing topic, scroll to the bottom of the webpage and click on “Add New Comment.”

Whenever adding a topic, reply, or a new comment, please be sure to click “Save.” You will then receive a confirmation stating “Your comment has been posted.”
Participant List

Visit the InformalScience.org member directory to contact participants and learn more about their work.

Eleanor Abrams
Department of Education,
University of New Hampshire
Community based science
learning: Making classroom
learning relevant to students
everyday lives

Jennifer Adams
Brooklyn College
Place or Practice: Negotiating
teaching identities and the
boundary of formal/informal
science learning in the
classroom

Leslie Allee
Cornell University
The Lost Ladybug Project

Ethan Allen
Pacific Resources for Education & Learning
Water for Life

Sue Allen
Maine Mathematics and Science Alliance

Kea Anderson Vogt
SRI International

Tamara Ball
UCSC
Formulating the Problem: STEM Apprenticeships through Digital Storytelling

Heidi Ballard
University of California-Davis, School of Education
Collaborative Research: Exploring Engagement and Science Identity Through Participation—A Meta-Analysis of Citizen Science Outcomes

Melissa Ballard
Afterschool Alliance

Susan Baron
Missouri Botanical Garden
Informal Community Science Investigators (iCSI)

Cheryl Bauer-Armstrong
University of Wisconsin-Madison Arboretum
Earth Partnership: Indigenous Arts & Sciences

Tony Beck
National Institutes of Health

Rachel Becker-Klein
PEER Associates
Citizen Science Embedded Assessment

Andrea Beesley
IMPAQ International
Improving Math Identity for Underrepresented Populations: After-School Math Plus

Janet Beissinger
University of Illinois at Chicago
CryptoClub: Cryptography and Mathematics, Afterschool and Online

Jamie Bell
Association of Science-Technology Centers
Center for Advancement of Informal Science Education

Larry Bell
Museum of Science
Nanoscale Informal Science Education Network

Marcie Benne
Oregon Museum of Science and Industry
Head Start on Engineering: Supporting Engineering Interest Development in Early Childhood

Marjorie Bequette
Science Museum of Minnesota
Making Connections

Mark Berry
School of Science at Acadia National Park
Workshop Proposal: Integrating Citizen Science into the STEM Learning Ecosystem

John C. Besley
Michigan State University
Scientists’ Views of the Public, Public Engagement Practice, and Public Engagement Goals

Bronwyn Bevan
University of Washington
Research + Practice Collaboratory

Marta Biarnes
Museum of Science
Creating Communities of Learners For Informal Cognitive Science Education

Rick Bonney
Cornell Lab of Ornithology
Toolkit for Evaluating Outcomes of Citizen Science

Carol Boston
University of Maryland
Community-Driven Projects That Adapt Technology for Environmental Learning in Nature Preserves

Judy Brown
Patricia and Phillip Frost Museum of Science
Move2Learn: Engaging Preschool Scientists through Embodiment and Technology

Tyson Brown
National Science Teachers Association
Connected Science Learning: A journal bridging formal and informal science education

David Burghardt
Hofstra University
Wise Guys & Gals—Boys & Girls as WISEngineering STEM Learners
William Burns  
*National Center for Science and Civic Engagement*  
SENCER-ISE (Science Education for New Civic Engagements and Responsibilities—Informal Science Education)

Angela Calabrese Barton  
*Michigan State University*  
Making 4 Change: Becoming Community Engineering Experts through Makerspaces and Youth Ethnography

Martha Cardona  
*Art of Science Learning*

Diane Carlson  
*Pacific Science Center*  
Amazon Adventure

Becky Carroll  
*Inverness Research*  
Center for Advancement of Informal Science Education

Darlene Cavalier  
*SciStarter*  
SciStarter 2.0: A Dashboard to Drive Research, Participation, and Community-building in Citizen Science

Robert Chen  
*University of Massachusetts, Boston*

Hailey Chenevert  
*National Center for Science and Civic Engagement*

Tara Chklovski  
*Iridescent*  
Engaging underserved families in engineering design courses

Tamara Clegg  
*University of Maryland*  
ScienceKit for ScienceEverywhere—A Seamless Scientizing Ecosystem for Raising Scientifically-Minded Children

Victoria Coats  
*Oregon Museum of Science and Industry*  
The Hidden World of Permafrost

Tsivia Cohen  
*Chicago Children’s Museum*  
Advancing Early STEM Learning Opportunities Through Tinkering and Reflection

Nicole Colston  
*Oklahoma State University*  
Spotty Rain Campaign: Pathways and Partners in Drought Adaptation

Laura Conner  
*University of Alaska Fairbanks*  
Colors of Nature: a STEAM approach to science engagement

Sharon Cooper  
*U.S. Science Support Program, IOGP*  
Pop-Up/Drill Down Vision and Goals

Katharine Covert  
*National Science Foundation*

Kent Crippen  
*College of Education*  
FOSSIL—Social Paleontology Through Amateur and Professional Collaboration

Rachel Crowley  
*Westat*

Kevin Crowley  
*University of Pittsburgh*  
Center for Advancement of Informal Science Education

Diana Dalbotten  
*University of Minnesota*  
Walking in Two Worlds

Toni Dancu  
*Exploratorium*  
Exhibit Designs for Girls’ Engagement

P Thompson Davis  
*Bentley University*  
Broadcast Meteorologists and Climate Change Communication

James Diamond  
*EDC/Center for Children & Technology*  
Planning a design-based implementation research agenda to investigate digital badges as transformative assessment in informal science learning

Lynn Dierking  
*Oregon State University Center for Research on Lifelong STEM Learning*

Johanna Duncan-Poitier  
*The State University of New York System Administration*  
SUNY/NTAS STEM Mentoring Program Statewide Scale Up Project

Paul Dusenbery  
*Space Science Institute*  
STAR Library Education Network: Phase 2

Elyse Eidman-Aadahl  
*National Writing Project*  
Informal Science Learning and Literacy Partnerships: Exploring the Intersections

Kirsten Ellenbogen  
*Great Lakes Science Center*  
Center for Advancement of Informal Science Education

John Falk  
*Oregon State University*  
Center for Advancement of Informal Science Education

Mark Farley  
*Huifield Marine Science Center Visitor Center*  
Cyberlab: Human Observation Network

Cheri Fancsali  
*Research Alliance for NYC schools*  
An impact study of math identity in underrepresented groups
Richard Ferdig
Kent State University
The Use of Mobile Applications for Informal Science Learning in Parks

Barbara Flagg
Multimedia Research
Contribution of SciGirls Multimedia to the Experience of Citizen Science

John Fraser
New Knowledge Organization Ltd.
Experiments in Transmedia: Studying Techniques for Increasing STEM Content Acquisition by Young Adults

Jennifer Frazier
Exploratorium
Living Liquid: Creating Interactive Visualizations of Ocean Datasets

Peter Fristedt
National Endowment for the Humanities

Alice Fu
SK Partners

Veronica Garcia-Luis
Exploratorium
Exhibit Designs for Girls’ Engagement

Cecilia Garibay
Garibay Group

Sarah Garlick
Hubbard Brook Research Foundation
Forest Science Dialogues

Elisabeth Gee
Arizona State University
The Role of Story in Computer Science Games for Girls

Darcy Gentleman

Margaret Glass
Association of Science-Technology Centers
An Evidence-based Informal STEM Learning (ISL) Professional Framework

Leslie Goodyear
Education Development Center

Meghan Groome
New York Academy of Sciences
Balancing Scale and Local Innovation

Dean Grosshandler
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Suzanne Gurton
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Mareca Guthrie
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Catherine Haden
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Mary Haggerty
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Isabel Hawkins
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Deborah Hecht
Center for Advanced Study in Education, CUNY Graduate Center

Joseph Heimlich
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Jesse Heines
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Theresa Horstman
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Lacey Huffling
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Carol Inman
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Monica Jones  
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Elizabeth Kollmann  
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Anita Krishnamurthi  
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Sonja Latimore  
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Ellen Lettvin  
U.S. Department of Education

Abigail Levy  
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Brian Mancuso  
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Mary Marcussen  
Marcussen & Associates

Lesley Markham  
Association of Science-Technology Centers

Wendy Martin  
Education Development Center  
CIRCL Resource Center

Paul Martin  
Science Museum of Minnesota  
Nanoscale Informal Science Education Network

Nancy C Maryboy  
Indigenous Education Institute  
Native Universe

Catherine Matthews  
University of North Carolina Greensboro  
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Sue Ellen McCann  
KQED  
Center for Advancement of Informal Science Education

Catherine McCarthy  
Science Museum of Minnesota  
Nanoscale Informal Science Education Network

Dale McCreedy  
The Franklin Institute  
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Carrie McDougall  
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MaryAnn McGarry  
Plymouth State University  
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Jo-Elle Mogerman  
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Patricia Montaño  
Association of Science-Technology Centers  
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Brian Nelson  
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Ricardo Nemirovsky  
SDSU  
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Trevor Nesbit  
Mkit Digital

Jared Nielsen  
Association of Science-Technology Centers  
Center for Advancement of Informal Science Education

Katherine Nielsen  
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Arizona State University

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COASSTaI Communities of Science

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Pamela Rosenstein  
NOVA/WGBH Science Unit

Mario Rotea  
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Meeta Sharma-Holt  
Techbridge  
Techbridge

Jennifer Shirk  
Cornell Lab of Ornithology

Erika Shugar  
American Society for Microbiology

Paul Siboroski  
Reuben H. Fleet Science Center  
InforMath Collaborative

Gary Silverstein  
Westat

Ashley Simpkins  
Westat

David Sittenfeld  
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Eileen Smith  
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Gregg Solomon  
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LaToya Strong  
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City University of New York

Matthew Sturm  
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Grace Troxel  
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Robert Tai  
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Colorado State University

David Ucko  
Museum + More LLC

Monae Verbeke  
Institute for Learning Innovation

Shannon Wanless  
University of Pittsburgh  
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Timothy Watkins  
National Park Service

Noah Weeth Feinstein  
University of Wisconsin-Madison  
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Ben Wiehe  
Science Festival Alliance, MIT Museum  
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Erin Wilcox  
Marisa Wolsky  
WGBH  
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Bryan Wunar  
Museum of Science and Industry  
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Denise Young  
Morehead Planetarium and Science Center  
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Kristina Yu  
Exploratorium  
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Bill Zoellick  
Schoodic Institute at Acadia National Park
National Science Foundation  
Directorate for Education and Human Resources (EHR)  
Research on Learning in Formal and Informal Settings (DRL)  
Advancing Informal STEM Learning (AISL)

Program Officers

Alphonse DeSena  
adesena@nsf.gov  
Program Director  
EHR/DRL  
Programs: AISL, Dear Colleague Letter: Enabling the Future of Making to Catalyze New Approaches in STEM Learning and Innovation; Sustainability Research Networks

Catherine Eberbach  
ceberbac@nsf.gov  
Program Director  
EHR/DRL  
Programs: AISL, ITEST, STEM+C

Christopher Hoadley  
choadley@nsf.gov  
Program Director  
EHR/DRL  
Programs: AISL, STEM+C

Julie I. Johnson  
jjohnson@nsf.gov  
Program Director and Program Lead  
EHR/DRL  
Programs: AISL, ITEST, CAREER

Valentine Kass  
vkass@nsf.gov  
Program Director  
EHR/DRL  
Programs: AISL, Manager Antarctic Artists and Writers Program in the Polar Division

Ellen McCallie  
emccalli@nsf.gov  
Program Director  
EHR/DRL  
Programs: AISL/Science Learning+
# North Bethesda Neighborhood Guide

## Transportation Near the Hotel
The hotel is conveniently located near the White Flint Metro Station where you can take the Red Line train south towards Glenmont to reach the National Zoo near Cleveland Park Metro, or travel to downtown D.C. You can transfer to the Blue, Orange, and Silver Lines at Metro Center for stops that service the White House, National Mall, and various national monuments and memorials. To transfer to the Green and Yellow Metro lines, take the Red line toward Glenmont and transfer at Gallery Place-Chinatown.

Visit [www.wmata.com/rider_tools/tripplanner](http://www.wmata.com/rider_tools/tripplanner) for exact times and routes using the Washington Metro system.

## Nearby Restaurants & Coffee Shops
The following restaurants and cafes are within walking distance, 0.5 miles or less from the hotel.

<table>
<thead>
<tr>
<th>Restaurant/Cafe</th>
<th>Address</th>
<th>Phone</th>
<th>Cuisine/Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Perch Kitchen &amp; Bar</td>
<td>11830 Grand Park Ave</td>
<td>(301) 231-2310</td>
<td>American fare &amp; craft cocktails</td>
</tr>
<tr>
<td>Del Frisco’s Grille</td>
<td>1800 Grand Park Ave</td>
<td>(301) 881-0308</td>
<td>American chophouse</td>
</tr>
<tr>
<td>La Madeleine Country French Cafe</td>
<td>7607 Old Georgetown Rd</td>
<td>(301) 215-9142</td>
<td>French bakery &amp; cafe</td>
</tr>
<tr>
<td>Paladar Latin Kitchen &amp; Rum Bar</td>
<td>11333 Woodglen Dr</td>
<td>(301) 816-1100</td>
<td>Pan-Latin food &amp; rum bar</td>
</tr>
<tr>
<td>Seasons 52</td>
<td>11414 Rockville Pike</td>
<td>(301) 984-5252</td>
<td>American &amp; seasonally-inspired</td>
</tr>
<tr>
<td>ShopHouse Southeast Asian Kitchen</td>
<td>11584 Old Georgetown Rd</td>
<td>(301) 816-6930</td>
<td>Southeast Asian fast casual</td>
</tr>
<tr>
<td>Starbucks</td>
<td>11802 Rockville Pike</td>
<td>(301) 770-9096</td>
<td>Coffee &amp; tea</td>
</tr>
<tr>
<td>Stella Barra Pizzeria</td>
<td>11825 Grand Park Ave</td>
<td>(301) 770-8609</td>
<td>Artisanal pizza</td>
</tr>
<tr>
<td>Summer House Santa Monica</td>
<td>11825 Grand Park Ave</td>
<td>(301) 881-2381</td>
<td>California fare &amp; wines</td>
</tr>
<tr>
<td>Whole Foods Market</td>
<td>11355 Woodglen Dr</td>
<td>(301) 984-4880</td>
<td>Grocery store, cafe, cafeteria</td>
</tr>
</tbody>
</table>