13TH ANNUAL RESEARCH SYMPOSIUM
Oct. 18-19

MADISON 2016
FROM INSPIRATION TO IMPACT
Dear Friends and Colleagues:

WELCOME TO THE NAAEE 13TH ANNUAL RESEARCH SYMPOSIUM!

We are so excited to have you join us in Madison, Wisconsin, for the Annual NAAEE Research Symposium, which draws colleagues from around the world. Over two days, this symposium provides an ideal venue to gather as a community, engage in boundary-pushing dialogue, and create the foundation of exciting environmental education (EE) research initiatives. We will explore new ideas and approaches, reflect on the evolution of our field, address complex problems, and cultivate collaborations through facilitated discussions, posters, workshops, and informal conversation. As you attend the sessions, we challenge you to consider how emerging issues, solutions, methods, and theories can inform current and future EE research. We are eager to hear your reflections throughout the symposium and during the closing plenary.

All best wishes,

Ruth Kermish-Allen
Chair, NAAEE Research Special Interest Group
Chair, Research Symposium

Nicole Ardoin
Chair-Elect, NAAEE Research Special Interest Group
Co-Chair, Research Symposium

FROM INSPIRATION TO IMPACT
Monday, October 17 (Special Events)

Place-Based Research: A Field Session
Location: University of Wisconsin, Madison Arboretum
1:00 PM-5:00 PM

There are many considerations to take into account when contemplating, conducting, and reflecting on research in and about place. During this field session, participants will explore questions of personal experience, historical context, and meaning-making in place-based environmental education research. Along with the session leads, we will also be joined by arboretum historian Frank Court, who will discuss the legacy of ecological restoration and tensions between research and practice at the University of Wisconsin Arboretum. We will discuss and use emerging methodologies, such as collaborative arts-based methods, to develop the meaning of our collective experience exploring the arboretum. Join us to explore these tensions and opportunities at the world’s oldest restored tall-grass prairie in fall glory in the place where Aldo Leopold served as the inaugural research director. (Pre-registration required)

David Greenwood, Lakehead University; Marna Hauk, Institute for Earth Regenerative Studies and Prescott College

Research Symposium Networking Dinner
Location: Great Dane Pub and Brewing Company
6:00 PM-8:00 PM

Join us for a casual evening of food, fun, and conversation focused on EE research. The group will be dining in the Rathskellar at the popular downtown Great Dane Pub and Brewing Company, which features old stone walls, warm lighting, oak booths, and a beautiful copper-top bar.

Participants must register by October 1 and will have the opportunity to select from four entrée choices, including vegetarian, vegan, nut-free, and dairy-free options. NAAEE will order these meals in advance; individuals will pay for their own dinners at the restaurant. Please bring cash to cover your entrée, drinks, sides, and desserts. There is also an ATM available at the restaurant. (Pre-registration required)
## Schedule at a Glance

### Tuesday, October 18

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>9:00 AM–9:15 AM</td>
<td>Welcome &amp; Introductions</td>
<td>Ballroom D</td>
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| 9:15 AM–10:30 AM | **Keynote Panel**  
Crossing Boundaries: The Makings of High-Quality EE Research | Ballroom D    |
| 10:30 AM–10:45 AM| **BREAK**                                     |               |
| 10:45 AM–12:00 PM| **Posters I**                                 | Ballroom A    |
| 12:00 PM–1:15 PM | **LUNCH**                                     | Grand Terrace |
| 1:15 PM          | **Research Panel** (1:15 PM–2:15 PM)  
60-minute presentation  
Disrupting Climate Change Education and its Research | Ballroom D    |
|                  | **Facilitated Issue Discussions** (1:15 PM–1:45 PM)  
30-minute presentations
Rooms: KL, MN, OP, QR, Hall of Fame |               |
|                  | **Roundtables I**   (1:15 PM–1:45 PM)  
30-minute sessions | Ballroom A    |
| 1:45 PM–2:00 PM  | **BREAK**                                     |               |
| 2:00 PM–2:30 PM  | **Facilitated Issue Discussions**  
30-minute sessions
Rooms: KL, MN, OP, QR, Hall of Fame |               |
|                  | **Roundtables II**   (2:45 PM–3:45 PM)  
30-minute sessions | Ballroom A    |
| 2:30 PM–2:45 PM  | **BREAK**                                     |               |
| 2:45 PM–3:45 PM  | **Posters II**                                 | Ballroom A    |
| 3:45 PM–4:00 PM  | **BREAK**                                     |               |
| 4:00 PM–6:00 PM  | **Reception**                                 | Ballroom A    |
| 6:30 PM–8:00 PM  | **Special Topic Dinner**  
Collaborative Tools and Building Blocks | Ballroom B    |
**Wednesday, October 19**

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<tr>
<th>Time</th>
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<tr>
<td>7:30 AM-9:00 AM</td>
<td>Graduate Student &amp; Early Career Breakfast</td>
<td>Ballroom D</td>
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<tr>
<td>9:00 AM-9:30 AM</td>
<td><strong>Facilitated Issue Discussions</strong>&lt;br&gt;30-minute presentations&lt;br&gt;Rooms: KL, MN, OP, QR</td>
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<td><strong>Skill Builder</strong>&lt;br&gt;30-minute presentation&lt;br&gt;<strong>Hall of Fame</strong></td>
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<td><strong>Roundtables III</strong>&lt;br&gt;30-minute sessions</td>
<td>Ballroom A</td>
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<td>9:30 AM-9:45 AM</td>
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<td>9:45 AM-10:15 AM</td>
<td><strong>Facilitated Issue Discussions</strong>&lt;br&gt;30-minute presentations (1 per room)&lt;br&gt;Rooms: Ballroom D, KL, MN, OP, QR, Hall of Fame</td>
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<td><strong>Roundtables IV</strong>&lt;br&gt;30-minute sessions</td>
<td>Ballroom A</td>
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<td>10:15 AM-10:30 AM</td>
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<tr>
<td>10:30 AM</td>
<td><strong>Workshops</strong> (10:30 AM-12:00 PM)&lt;br&gt;90-minute presentations (1 per room)&lt;br&gt;Rooms: KL, MN</td>
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<td><strong>Research Panel</strong> (10:30 AM-11:30 AM)&lt;br&gt;60-minute presentation&lt;br&gt;Room OP</td>
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<td><strong>Skill Builder</strong> (10:30 AM-12:00 PM)&lt;br&gt;90-minute presentation&lt;br&gt;Room QR</td>
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<td><strong>Emergent Topic Areas</strong> (10:30 AM-12:00 PM)&lt;br&gt;90-minute presentation&lt;br&gt;<strong>Hall of Fame</strong></td>
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<td>12:00 PM-1:30 PM</td>
<td>LUNCH</td>
<td>Capital Promenade</td>
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<td>1:30 PM-3:00 PM</td>
<td><strong>Workshops</strong> (1:30 PM-3:00 PM)&lt;br&gt;90-minute presentations&lt;br&gt;Rooms: KL, MN, OP</td>
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<td><strong>Skill Builders</strong> 1:30 PM-3:00 PM&lt;br&gt;90-minute presentations (1 per room)&lt;br&gt;Room QR, <strong>Hall of Fame</strong></td>
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<td>3:00 PM-3:15 PM</td>
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<td>3:15 PM-5:00 PM</td>
<td><strong>Final Session:</strong>&lt;br&gt;Outstanding Contributions to Research in EE Awardee&lt;br&gt;Keynote and Closing Plenary</td>
<td>Ballroom D</td>
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This interactive panel will engage challenges of conducting environmental education (EE) research in ways that account for issues of quality in inquiry across an increasingly diverse spectrum of methodologies and methods. In response to questions concerning how EE and EE research can make a difference, panelists will discuss new theoretical and practical research movements related to teaching, learning, pedagogy, and practice. They may question some of the taken-for-granted assumptions and conceptualizations that researchers use to interact with and, perhaps, disrupt traditional thinking. Panel members have been invited to approach challenges to EE research from their own unique perspectives, with the realities of academic demands in mind. Given the complexities of research, as well as demands on researchers, panelists will endeavor to create openings for interactive discussion within the session and also during the course of the symposium.

Chair: Paul Hart, University of Regina
Panelists: Teresa K. Lloro-Bidart, Liberal Studies Department, Cal Poly, Pomona; Gregory Lowan-Trudeau, University of Calgary; Phillip Payne, Monash University; Bonnie Shapiro, University of Calgary

Paul Hart, PhD, is a professor of Science and Environmental Education at the University of Regina in Canada, where he teaches graduate and undergraduate courses in these areas. His research interests extend from genealogical roots of teacher thinking and children’s ideas about environment-related education to sociocultural views on learning.

Teresa K. Lloro-Bidart, PhD, is an assistant professor in the Liberal Studies Department at California State Polytechnic University, Pomona. As a feminist political ecologist and multispecies ethnographer, she works in the fields of environmental education, animal studies, and food studies.

Gregory Lowan-Trudeau, PhD, is an assistant professor in the Werklund School of Education at the University of Calgary in Canada. His interests include Indigenous environmental health, education, justice, and activism; renewable energy development in Indigenous communities; Métis languages, histories, and cultures; and interpretive and Indigenous research methodologies.

Phillip Payne, EdD, is an Adjunct Professor of Education at Monash University in Australia. His research interests include research methodology experiments in the social sciences interpreted within environmental, experiential, and outdoor education, with a particular focus on ecoaesthetics–environmental ethics–ecopolitics and critical phenomenology of the moving body (human and other than human) in time-space.

Bonnie Shapiro, PhD, is a Faculty Professor in the Werklunk School of Education at the University of Calgary in Canada. She works with graduate and undergraduate students and engages in research and teaching, learning, and curriculum studies in science, STEM, and environmental education. Her research interests include understanding learners’ experiences in science and environmental education and helping educators explore environmental messages and value in their work.
10:45 AM–11:45 AM

Posters I

Ballroom A

1.1 Analyzing Our Practices to Provide a More Inclusive Environment
10:45 AM–11:45 AM, Ballroom A
Using a “Disabilities Studies in Education” framework and “Universal Design for Learning” practices, we analyzed our work with high school students who were deaf and hard of hearing. Our findings challenge how field ecology work is typically accomplished and provide implications for increasing access and diversity in EE.
Presenters: Catherine Matthews, The University of North Carolina at Greensboro; Aerin W. Benavides, The University of North Carolina at Greensboro

1.2 Are We Really Fostering Change?
10:45 AM–11:45 AM, Ballroom A
Environmentally focused organizations work passionately to create change in their communities. However, it’s possible that they are putting time and energy into strategies that don’t create change! Understanding how these organizations theorize behavioral change may encourage dialogue between researchers and practitioners in order to create more effective approaches to foster stewardship.
Presenter: Amanda Obery, Montana State University

1.3 Assessing Environmental Literacy in the Galápagos Islands School System
10:45 AM–11:45 AM, Ballroom A
The Galápagos, one of the world’s most diverse and vulnerable natural ecosystems, now includes a human population of more than 30,000 people. We analyze results of the Middle School Environmental Literacy Instrument (MSEL), translated and administered in schools across three islands, to assess the presence and potential of formal environmental education in Galápagos.
Presenters: Amelia Farber, Stanford University; Nicole Ardoin, Stanford University

1.4 Childhood Collecting in Nature: Quality Experience in Important Places
10:45 AM–11:45 AM, Ballroom A
There is growing concern for a substantial negative impact that a diminished experience of nature appears to have on child development. In an attempt to address this concern and contribute toward a better understanding of the importance of childhood nature experience, one specific example is investigated: collecting in nature.
Presenter: Thomas Beery, Kristianstad University

1.5 Climate Change Communication in Environmental Education
10:45 AM–11:45 AM, Ballroom A
Literature from communication and psychology offers clues for effective ways of addressing the complex and challenging topic of climate change. This research investigates how environmental educators are communicating about climate change and to what extent their methods overlap with climate change communication and psychology research.
Presenter: Anne Armstrong, Cornell University

1.6 Cree Youth, Connections with Water, and Water Education
10:45 AM–11:45 AM, Ballroom A
My master’s research focused on water ethics (or water worldviews) related to water education and the human relationship with water. Specifically, I explored how and what Cree youth learn about water, in addition to both the traditional and contemporary knowledge they wish to transmit to future generations across North America.
Presenter: Kristy Franks, Concordia University

1.7 Cultivating Hope with Climate Change Education
10:45 AM–11:45 AM, Ballroom A
Why do some people more actively engage in climate change and make things happen? It may be because they have hope. This poster will define hope and share ideas about measuring and enhancing hope through environmental educational programs.
Presenters: Christine (Jie) Li, University of Missouri; Martha Monroe, University of Florida

1.8 Professional Networks and Practice Change in EE
10:45 AM–11:45 AM, Ballroom A
This study investigates how diverse groups of environmental educators develop practice innovation through participation in online and face-to-face professional development activities. We use social network analysis and practice theory to identify changes of networks among educators and examine the impact of these changes on practice innovation.
Presenters: Yue Li, Cornell University; Marianne Krasny, Cornell University
TUESDAY

1.9 Don’t Kill Bugs: Examining Environmental Literacy in a School Garden
10:45 AM–11:45 AM, Ballroom A
Researchers suggest that English Learners (ELs) learn both science and language more effectively when engaged in authentic communicative purposes situated within real-world experiences. This yearlong study focused on communicative purposes of science lessons for six K-3 classes in a school garden located in a two-way bilingual Spanish-English immersion school.
Presenter: Carrie Strohl, University of California, Davis

1.10 “Drawing” Conclusions: Using Cognitive Mapping to Evaluate Connection with Nature
10:45 AM–11:45 AM, Ballroom A
Cognitive mapping investigated participants’ connection to nature and sense of place during the Wildlife Conservation Society’s Project TRUE (Teens Researching Urban Ecology) after-school program in Brooklyn, New York.
Presenter: Christine Biela, Western Sydney University

1.11 Framing Food Resilience: Photovoice, Workplace Gardens, and Community-Based Participatory Research
10:45 AM–11:45 AM, Ballroom A
As a research method, photovoice can capture the immediate perspectives of people engaged in food projects, particularly around issues of local food security and resilience. Workplace gardens provide a backdrop and means for connection, generosity, and equity. Learn how community members portray their various roles in one local foodscape.
Presenter: Jess Gerrior, Antioch University

1.12 Imperiled Species Protection on Private Lands: Landowner Knowledge and Attitudes
10:45 AM–11:45 AM, Ballroom A
Forest landowner adoption of Wildlife Best Management Practices (WBMP) in Florida could illustrate the potential for using voluntary approaches to protect imperiled wildlife species. However, landowner knowledge about these species and how to implement the practices will likely impact WBMP adoption, as well as financial constraints and attitudes toward regulations.
Presenter: Nancy Peterson, University of Florida

1.13 Increasing Teacher Self-Efficacy in Systems Thinking through Professional Development
10:45 AM–11:45 AM, Ballroom A
This poster explores data from a week-long workshop that attempted to increase teachers’ self-efficacy in adopting systems-thinking habitats in their classrooms. The Science Teaching Efficacy Belief Instrument (STEBI) from Enochs and Riggs (1990) was modified with questions about systems thinking to assess teacher efficacy before and after the workshop.
Presenter: Tracey Ann Ritchie, University of Florida

1.14 Kindergarten Children’s Constructs of “Nature:” A Case Study from Toronto
10:45 AM–11:45 AM, Ballroom A
This case study investigated Toronto kindergarten children’s perspectives on the concept of “nature.” The findings suggest that children think of nature as separate from “the outside,” and that they prefer to spend time outside versus in nature. These findings have implications for where early childhood environmental education programs happen.
Presenter: A. Elizabeth Beattie, University of British Columbia

1.15 Links Between Environmental Learning and Behavior in Everyday Life
10:45 AM–11:45 AM, Ballroom A
The nuances of the link between environmental learning and pro-environmental behavior are one of EE’s biggest mysteries. This study chips away at that important question via a multiple case study in Northern California. Based on over 200 interviews, we present a framework of five factors that influence the learning–behavior link.
Presenters: Rachelle Gould, University of Vermont; Nicole Ardoin, Stanford University

1.16 Novelty, Agency, Aesthetic Shifts, and Environmental Awakenings in Field Ecology
10:45 AM–11:45 AM, Ballroom A
In a summer Herpetological Research Experience (HRE) field ecology program for youth, novelty came first. Even for those more experienced in the outdoors, there was a novelty of place, and this gave way to agentic and aesthetic shifts. For many participants, it changed the way they related to the environment.
Presenters: Aerin W. Benavides, The University of North Carolina at Greensboro; Heidi Carlone, The University of North Carolina at Greensboro; Catherine Matthews, The University of North Carolina at Greensboro

1.17 Place-Based Design Recommendations for Outdoor-Based, Self-Guiding Mobile Programs
10:45 AM–11:45 AM, Ballroom A
Through a design-based research project focused on three iterations of revision and enactment of an e-trailguide, four empirically derived place-based design features provide a starting point for research and practices intended to integrate self-guiding technologies into outdoor science learning settings in order to engage audiences with the natural world.
Presenter: Lucy Richardson McClain, Shaver’s Creek Environmental Center, Penn State University
1.18 Pre-Adolescent Refugee Voices Inform Culturally Responsive Teaching for Ecological Justice
10:45 AM–11:45 AM, Ballroom A
Photo-elicitation and phenomenological interviewing reveal refugee children's experiences of place attachment to their “host” communities, leading to implications for culturally responsive place-based education in the public schools. Strengths and shortcomings of using nonverbal data collection strategies, such as using visual materials to decrease language barriers, will be presented.
Presenter: Anneliese Mueller Worster, Salem State University

1.19 Using Formative Evaluation to Inform Horticulture Therapy Programming
10:45 AM–11:45 AM, Ballroom A
Horticultural therapy is the use of plants and nature to improve people’s physical, mental, social, emotional, and spiritual well-being. Discover how horticulture therapy is employed and supported to engage populations in learning, growth, and recovery in southeastern New Hampshire. Learn how formative evaluation informed regional programming around these themes.
Presenter: Michelle Stewart, Antioch University

1.20 Using Identity in Education to Evaluate Collective Action for Conservation
10:45 AM–11:45 AM, Ballroom A
Identity theory could spotlight bridges between education programs and environmental collective action. This poster presents a research proposal assessing educational approaches in zoos and aquaria to encourage group discussion of researchable connections between conservation education, identity, and commitment to collective action.
Presenter: Lily Maynard, University of Florida

1.21 Using School Grounds to Provide Outdoor Learning Experiences in Wisconsin
10:45 AM–11:45 AM, Ballroom A
This poster will focus on a graduate-level study looking at how teachers, administrators, and site managers view their school's grounds. Data will be presented on how schools across Wisconsin are utilizing their grounds for positive learning experiences and how school ground type impacts staff attitudes to outdoor learning.
Presenter: Brent Burton, Central Wisconsin Environmental Station

1.22 Walking the Talk: Environmental Literacy in Wisconsin
10:45 AM–11:45 AM, Ballroom A
In the early 1990s, the Wisconsin Center for Environmental Education assessed fifth graders, high school juniors, and teachers for environmental literacy. With this baseline in hand, it is time to compare current environmental literacy. What are the best strategies to implement such a research project?
Presenters: Rebecca Lee Franzen, University of Wisconsin-Stevens Point-Central Wisconsin Environmental Center; Kendra Liddicoat, University of Wisconsin-Stevens Point; Darcie Howard, Wisconsin Center for Environmental Education; Laurie Gharis, University of Wisconsin-Stevens Point

1:15 PM–2:15 PM
Research Panel
Ballroom D
Disrupting Climate Change Education and its Research
This panel brings together leading and emerging researchers in climate change education. In a broader Anthropocene context, the overarching focus of the session centers on disrupting climate change education and its research through the theoretical guises of childhood studies, posthumanism, and new materialism.
Presenters: Amy Cutter-Mackenzie, Southern Cross University; Robert Barratt, University of Gloucestershire; Elisabeth Barratt Hacking, University of Bath; Martha C. Monroe, University of Florida; David Rousell, Southern Cross University
Measuring Practice Change and Social Innovation in EE
1:15 PM–1:45 PM, Room KL
We used practice, social innovation, and social networking theories to understand how online and face-to-face interactions led to changes in practice at the individual and group level. We discuss measures of practice change and innovation in EE using three professional development approaches as part of EECapacity, EPA’s national EE training program.
Presenters: Marianne Krasny, Cornell University; Yue Li, Cornell University

Critical Place-Based Curriculum Research and Development Processes
1:15 PM–1:45 PM, Room MN
The presenter will facilitate a discussion about developing place-based curriculum materials and how a continuous critical analysis of those materials can lead to effective environmental educational materials. The presenter will use examples from her work in the Flathead Watershed in Montana and encourage participants to share their curriculum research related to place-based curricula.
Presenter: Rose Vallor, Montana State University

Turning Red States Green: Bipartisanship in Environmental Education Policy
1:15 PM–1:45 PM, Room OP
What does ongoing research say about the levels of bipartisan support for environmental education policies? This poster opens a timely and critically important conversation on how best to capture and capitalize on politically conservative interest in EE as a combined effort between researchers, educators, and policymakers.
Presenter: Karena Mary Ruggiero, Earth Day Network

Measures of Emotions in Environmental Education Research with Children
1:15 PM–1:45 PM, Room QR
This session explores the emotional dimensions of EE research as well as innovative methods and tools for measuring and describing human emotional encounters with the environment. GoPro Tours, bookmaking, role-playing, and the use of an Emotiv EPOC+ unit are some of the methods and tools that will be shared.
Presenter: Carie Green, University of Alaska Fairbanks

Exploring Participant Representation: Insights from Indigenous Environmental Activism and Educational Research
1:15 PM–1:45 PM, Hall of Fame Room
Is it possible to adequately represent research participants’ stories in traditional academic fora? In this discussion, I will share insights from a study into the experiences of educators with teaching and learning about Indigenous environmental activism to facilitate consideration of the implications for such a question in environmental education research.
Presenter: Gregory Lowan-Trudeau, University of Calgary

Roundtables I
Ballroom A
Beyond the Individual: Measuring Community Outcomes to Understand Community Impact
1:15 PM–1:45 PM, Ballroom A
As part of a new community engagement initiative, Lincoln Park Zoo is striving to understand the relationship between individual learning, community outcomes, and positive environmental change. Zoo staff seeks feedback on our research agenda and methodology, as well as collegial discussion of literature and methods important to measuring community-level change.
Presenter: Stephanie Bohr, Lincoln Park Zoo

Developing a Sense of Place: School and Community Partnerships
1:15 PM–1:45 PM, Ballroom A
Our research invites sustained deliberations on the connections between Aboriginal knowledge systems and place-based thinking in an effort to reframe environmental education. In this session, our dialogue will explore how Aboriginal knowledge systems might inform and/or challenge critical investigations for teacher candidates through ecological studies, environmental assessments, and cultural activities.
Presenter: Kevin O’Connor, Mount Royal University

Early Childhood EE Research
1:15 PM–1:45 PM, Ballroom A
NAAEE’s Natural Start Alliance and the International Journal of Early Childhood Education are aiming to build the research base for early childhood environmental education. Join a discussion to share what you are doing, hear about other early childhood EE research, and discuss what’s needed to advance research in the field.
Presenters: Christy Merrick, NAAEE; Betty Olivolo, NAAEE
Examining Participation in Citizen Science, Science Identity, and Conservation Actions

1:15 PM–1:45 PM, Ballroom A
Citizen science (CS) as environmental education? We know little about how participating in environmental research and monitoring may lead to science learning and conservation. Beginning with our mid-project analysis of repeated interviews with 60 participants in 6 CS projects, we asked: How can EE research link identity and conservation actions?
Presenter: Heidi Ballard, University of California, Davis

2:00 PM–2:30 PM
Facilitated Issue Discussions

Comparative Study of Teenagers’ Nature Experiences in the United States and Taiwan
2:00 PM–2:30 PM, Room KL
Based on the findings of significant life experience studies that nature experiences in childhood and adolescence could influence adults’ concern and commitment to the environment, my research explores the common elements in teenagers’ nature experiences both in Taiwan and the United States. Initial findings and challenges will be shared.
Presenter: Yu-Chi Tseng, National Academy for Educational Research

Measuring Learning on the Go: Piloting an Art-Based Embedded Assessment
2:00 PM–2:30 PM, Room MN
In order to evaluate EE programs, teachers need to understand the experience of their students and gauge their learning. These elements of environmental learning, however, are notoriously difficult to measure. We will share results from a pilot of an art-based assessment of learning and discuss next steps.
Presenters: Indira Phukan, Stanford University; Nicole Ardoin, Stanford University; Lynne Zummo, Stanford University

Environmental Education and Systems Thinking

2:00 PM–2:30 PM, Room OP
How can environmental educators support the development of systems thinking? What strategies should be used to assess systems thinking skills? Based on the results of four investigations, participants in this panel discussion will explore these questions and others to develop a research agenda for environmental education and systems thinking.
Presenters: Armagan Ateskan, Bilkent University; Matthias Barth, Leuphana University Lueneburg; Sebnem Feriver, Middle East Technical University; Guliz Karaarslan, Middle East Technical University; Oyku Dulun, Bilkent University; Jennie Farber Lane, Bilkent University

(Re)Imagining Gendered Environmental Education Research: Post-Informed and New Materialist Perspectives
2:00 PM–2:30 PM, Room QR
Using two case examples, I propose to engage the use of theoretical concepts—including those framed and influenced by Judith Butler, Gilles Deleuze, Felix Guattari, Angela McRobbie, and Rosi Braidotti—to ground feminist and gendered environmental education research in credible and legitimate ways.
Presenter: Catherine Hart, University of Regina

Conducting Place Research as Nomadic Researchers
2:00 PM–2:30 PM, Hall of Fame Room
How can we “learn” a new place and when (if ever) can we know a place well enough to responsibly perform place-relevant work? We will discuss steps we have taken to know a place, how our place-identity interacts with our research, and challenges of researching place as a nomadic researcher.
Presenter: Sarah Stapleton, University of Oregon

2:00 PM–2:30 PM
Roundtables II

Ballroom A
Rethinking How We Study Integrating Environmental Topics into Science Classrooms
2:00 PM–2:30 PM, Ballroom A
This discussion focuses on the need for reimagined conceptual frameworks for researching challenges to teaching environmental concepts in science classrooms. From our in-progress study, we present early data that reveal new and emerging challenges that go beyond teachers’ content knowledge limitations and highlight important domain-specific challenges and institutional barriers.
Presenters: Samantha O’Brien, Hampshire College; Timothy D. Zimmerman, Hampshire College
The Past Is Not Over: Environmental “Classics,” Biography, and Place
2:00 PM–2:30 PM, Ballroom A
How might new appraisals of environmental “classics” enrich and guide environmental education? Based on a book in progress that explores the lives, writings, and sacred places of several “literary ancestors,” this session reimagines Rachel Carson’s timely contributions not just to the past, but also to contemporary environmental thought, policy, and education.
Presenter: David Greenwood, Lakehead University

Utilizing Stories to Explore Philosophy, Pedagogy, and Community in Australian Environmental Education
2:00 PM–2:30 PM, Ballroom A
This roundtable session will stimulate discussion surrounding the philosophies and pedagogies of teachers who employ place-based, community-focused environmental education in Australian primary schools. Issues and opportunities arising from the chosen narrative inquiry methodology will be explored and the value of fostering authentic researcher-practitioner partnerships will be considered.
Presenter: Maia Osborn, Southern Cross University

2:45 PM–3:45 PM
Posters II
Ballroom A

2.1 Students’ Commitments to the Environmental Commons through Place-Based Stewardship Education
2:45 PM–3:45 PM, Ballroom A
Learn how place-based stewardship education (PBSE) nurtures youths’ dispositions, commitments, and civic capacities in stewardship of the environment and their communities. We summarize findings showing how PBSE increases youths’ environmental sensitivity, awareness of human impact, environmentally responsible behaviors, community attachment, and confidence in their capacities for civic action.
Presenters: Erin Gallay, University of Wisconsin-Madison; Connie Flanagan, University of Wisconsin-Madison

2.2 What Factors Influence Teachers Implementing a Place-Based Watershed Curriculum?
2:45 PM–3:45 PM, Ballroom A
What factors do teachers face when they want to implement a place-based watershed curriculum in their classrooms? This poster will present findings of a case study research project into middle-school teachers’ barriers and motivations to using a watershed curriculum for their classrooms in the Flathead Watershed in northwest Montana.
Presenter: Rose Vallor, Montana State University

2.3 What Factors into College Students’ Participation in a Composting Program?
2:45 PM–3:45 PM, Ballroom A
What determines college students’ composting behavior? What factors determine whether they will actually exhibit the behavior or not? After compost bin implementation in a dining facility, the presenters began a quantitative research study to explore what determines college student composting behavior. This poster will focus on the results and impact.
Presenters: Amanda Kyle, U.S. Forest Service-Eastern Region (R9); Rebecca Lee Franzen, University of Wisconsin-Stevens Point Central Wisconsin Environmental Center

2.4 Nurturing Narratives in an Intergenerational Garden
2:45 PM–3:45 PM, Ballroom A
This research reveals the narratives of the group of senior-aged volunteers involved in an intergenerational program at a large urban park in North America. The research describes how this unique program enhanced their lives through expanded social connections and shifted their environmental attitudes and knowledge.
Presenter: Bonnie Tulloch, Assiniboine Park Conservancy

2.5 Technology of Healing: Exploring Simulated Natural Environments for Therapeutic Applications
2:45 PM–3:45 PM, Ballroom A
Exposure to natural environments has been linked to numerous health benefits. Virtual reality (VR) provides the opportunity to prototype and test the therapeutic potential of different landscapes and environmental features. Our poster will allow participants to experience natural scenes in VR and discuss applications for EE practice and research.
Presenters: Matthew H. Browning, University of Illinois; Katherine Mimnaugh, University of Illinois

2.6 Climate Change Literacy and Self-Efficacy toward Teaching about Climate Change
2:45 PM–3:45 PM, Ballroom A
There are three main goals for this research project: (1) attain baseline data on pre-service teachers’ climate change literacy and self-efficacy toward teaching about climate change, (2) develop and implement a climate change literacy action plan, and (3) assess the impact of the climate change literacy action plan.
Presenter: Dennis Sanchez Rosemartin, Salem State University
2.7 Exploring Systematic Literature Reviews as a Tool for Developing Researchable Insights
2:45 PM–3:45 PM, Ballroom A
Using a review of community climate change adaptation, we will discuss systematic reviews in environmental education. We will explore the systematic review process, results likely to be overlooked, associated bias, and how researchers could use these findings to shape policy, practice, and research.

Presenters: Martha Monroe, University of Florida; Annie Oxarart, University of Florida

2.8 Framing Climate Change for Agricultural Audiences
2:45 PM–3:45 PM, Ballroom A
What lessons can environmental educators learn from message framing research? We will highlight results from a study about how climate change message framing shapes perceptions of climate change among agricultural education students and discuss implications for how we might shape climate education for different audiences.

Presenters: Kathryn Stevenson, North Carolina State University; Martha Monroe, University of Florida

2.9 Outdoor Science Education’s Role in Developing Teachers’ Understanding of NGSS
2:45 PM–3:45 PM, Ballroom A
Informal environmental education programs have a potential role in supporting teachers’ understanding and implementation of the Next Generation Science Standards (NGSS). We have developed a program that allows teachers to gain a deeper understanding of NGSS through their classes’ participation in a field trip outdoor science program. Affect is measured through a retrospective survey.

Presenter: Stephanie Wagner, Portland State University

2.10 Using Simulation Game “Fishbanks Ltd.” to Deepen Concepts of Sustainability
2:45 PM–3:45 PM, Ballroom A
The simulation game, Fishbanks Ltd., demonstrates the unsustainable scenario “the tragedy of the commons.” Game participants create the difficulty together and try to fix it through inter-team negotiation. The game experience was found to enhance participants’ understanding of sustainability and systems thinking, and expand their thoughts on factors influencing fish populations.

Presenter: Susan Shiau, Graduate Institute of Environmental Education, National Taiwan Normal University

2.11 The Role of Social Dynamics in Immersive EE Experiences
2:45 PM–3:45 PM, Ballroom A
We will examine a study that focused on a 14-day environmental science backpacking trip for high-school students that combined social network analysis and relational theory. The study explores the relationship between connection to nature, community-building, and stewardship behavior. We will share results and discuss successes and challenges in examining social dynamics.

Presenters: Indira Phukan, Stanford University; Lynne Zummo, Stanford University; Nicole Ardoin, Stanford University

2.12 Creating New Measures of Environmental Literacy
2:45 PM–3:45 PM, Ballroom A
Environmental literacy (EL) is the primary goal of environmental education, yet measurement and evaluation of EL remains challenging. New methods of assessment are needed to strengthen evaluation capacity of the field. We have created a valid, reliable instrument to measure high schoolers’ EL. Join us to discuss the development process, current needs, and future possibilities.

Presenters: Rachel Szczytko, North Carolina State University; Kathryn Stevenson, North Carolina State University

2.13 From Landbound to Landless to Land Ethics
2:45 PM–3:45 PM, Ballroom A
Come to this poster to learn about our views of and relationships with “the land” (broadly defined): where we were before, where we are now, and where we might be in the near and far future.

Presenter: Xia Ji, University of Regina

2.14 How Should Place Inform the Design of Online Environmental Education?
2:45 PM–3:45 PM, Ballroom A
In environmental education, we discuss connecting people to places, and often we interact with these places in person, such as through field trips to nature centers or visits to local open space preserves. However, how does our understanding of place change when we interact with these spaces in an online environment?

Presenters: Amanda Siebert-Evenstone, Epistemic Games Group; Kris Scopinich, Mass Audubon; Jennifer Klein, Lesley University
2.15 Using Twitter in #EnviroEd: How and Why
2:45 PM–3:45 PM, Ballroom A
Twitter is a social media platform that is increasingly being used for professional development, networking, and collaborating. This poster highlights how Twitter is being used in and for environmental education.
Presenter: Scott Morrison, Elon University

2.16 Fostering a Discourse of Connection: Personal Narratives of Place
2:45 PM–3:45 PM, Ballroom A
The method of currere illuminates connections between life history and academic knowledge. I briefly describe this method and use it to derive a personal definition of “sense of place,” one that examines my own life experiences alongside participant narratives and the theoretical literature.
Presenter: Naamal DeSilva, George Washington University

2.17 Measuring Empathy for Wildlife in Zoos and Aquariums
2:45 PM–3:45 PM, Ballroom A
Developing empathy toward wildlife is an important step in building pro-environmental behaviors. This research looks at best practices in developing empathy in zoo and aquarium visitors, as well as indicators and tools for measuring empathy elicited through the visit.
Presenters: Kathayoon Khalil, Seattle Aquarium; Zachary Hawn, Point Defiance Zoo & Aquarium

2.18 Measuring Environmental Program Outcomes among Elementary School Students
2:45 PM–3:45 PM, Ballroom A
Through the evaluation of an environmental education program in North Carolina, researchers at North Carolina State University have developed scales on connection to nature, science efficacy, and science knowledge. We will share these scales, as well as the pilot testing process and preliminary findings.
Presenters: Rachel Szczytko, North Carolina State University; Kathryn Stevenson, North Carolina State University; Renee Strnad, North Carolina State University

2.19 Bringing the Outside In: Transplanting Experiential Garden Knowledge in Computational Models
2:45 PM–3:45 PM, Ballroom A
This project follows the design and pilot tests of a modeling tool intended to help students develop reasoning about their school garden’s ecosystem by manipulating its elements in NetLogo. Ongoing research reveals how learners orient and make scientific inferences. This poster session will include the opportunity to interact with the current model.
Presenter: Rebecca Shareff, University of California, Berkeley

2.20 Integrating Place-Based Education and Positive Youth Development in Environmental Education
2:45 PM–3:45 PM, Ballroom A
This poster will present a framework that could allow scholars and practitioners to conceptualize and/or assess environmental education programs that integrate elements of place-based education and positive youth development. It will illustrate this framework using a program entitled, “Women, Agroecology, and Leadership for Conservation,” involving young Q’eqchi’ Maya women in Guatemala.
Presenter: Lilly Briggs, Cornell University

2.21 Wisconsin’s Polycentric Governance Response to Green Ribbon Schools Award Program
10:45 AM–11:45 AM, Ballroom A
A polycentric governance theoretical framework is being used to investigate whether the U.S. Department of Education Green Ribbon Schools Program, which relies on the loosely coordinated and lightly incentivized collaboration of parties at multiple levels of governance, can produce concrete impacts at the level of schools and practices within Wisconsin.
Presenter: Ginny Carlton, Wisconsin Environmental Education Board

2.22 Youth Voices Resisting Master Scripts to Create Polyculture Nature Narratives
10:45 AM–11:45 AM, Ballroom A
This poster highlights findings from a study on narratives of nature using a community mapping methodology with a multicultural middle school science class. The framework of the study centers on student knowledge, experience, and identity. Student narratives, the research methodology, and emergent curriculum will be discussed.
Presenter: Tallie Segel, Northern Arizona University
**Wednesday**

**4:00 PM-6:00 PM**

**Reception**
**Ballroom A**

**6:30 PM-8:00 PM**

**Special Topic Dinner**
**Ballroom B**

Collaborative Tools and Building Blocks: Working Toward Transformation

Join us for a casual pizza dinner to discuss tools to facilitate large-scale (in terms of time, geography, and team size) collaborative projects. We will also brainstorm about opportunities for national and international collaborative efforts that could expand the reach and impact of EE.

**Presenters:** Marcia McKenzie, University of Saskatchewan; Nicole Ardoin, Stanford University; Ruth Kermish-Allen, Maine Mathematics and Science Alliance

**7:30 AM-9:00 AM**

**Graduate Student & Early Career Breakfast**
**Ballroom D**

Enjoy coffee and breakfast with friends, colleagues, and mentors as we learn about each other and our work.

**9:00 AM-9:30 AM**

**Facilitated Issue Discussions**

**From Fish to Flame-Retardants: Extending Reach of Basic Science Research**
9:00 AM-9:30 AM, Room KL
Discuss how EE researchers can further EE research agendas through collaboration with basic science researchers at their institutions. This session will describe collaborative experiences with our National Institute of Environmental Health Sciences (NIEHS)-funded Superfund Research Center through two case studies of exposure to chemical toxins through (a) fish consumption or (b) household furniture and other products.
**Presenter:** Charlotte Clark, Duke University

**Outcomes of EE and Cultural Ecosystem Services**
9:00 AM-9:30 AM, Room MN
Cultural ecosystem services (intangible ways that ecosystems benefit people, such as through spirituality, inspiration, or identity) are receiving increasing attention. Almost all cultural ecosystem services studies assume that these “nonmaterial benefits” are static. This session explores the notion that they are dynamic: that peoples’ perceptions of them change, largely through education.
**Presenters:** Rachelle Gould, University of Vermont; Sonya Buglion-Gluck, University of Vermont

**Points of Connection: Language Use in Environmental Education**
9:00 AM-9:30 AM, Room OP
This session will examine data from a project that looks at how EE uses language to foster a sense of connection with nature, particularly across diverse groups. Specifically, we will look at the points of connection—or the points at which differing norms, perceptions, and expectations about the environment surface.
**Presenters:** Indira Phukan, Stanford University; Lynne Zummo, Stanford University; Nicole Ardoin, Stanford University
A New Generation of Citizen Science: Designing for Online Collaborations and Local Environmental Action
9:00 AM–9:30 AM, Room QR
This presentation builds on the findings of a multiple case study that looked across three online citizen projects that all were successful in fostering collaboration and environmental actions. Join us to unpack the stories behind the data to identify new areas of research that could expand this initial work.
Presenter: Ruth Kermish-Allen, Maine Mathematics and Science Alliance

Beyond Barriers: Advancing Accessibility and Inclusion in the Field of EE
9:00 AM–9:30 AM, Ballroom A
People with disabilities are the fastest growing subgroup in the United States. Despite the growing body of research in related fields, EE-specific data is limited. Feedback from focus group participants with disabilities regarding barriers to EE and their recommendations for advancing accessibility and inclusion will be explored in this session.
Presenter: Emily Brown, Wehr Nature Center

Skill Builder
Hall of Fame Room
Editor’s Panel: What and Where to Publish
9:00 AM–9:30 AM, Hall of Fame Room
Are you trying to figure out where and how to share your research with the field? Join us for a candid discussion on the various opportunities for and challenges to publishing environmental education research in books, peer-reviewed journals, and non-traditional venues. The session will be hosted by scholars with experience writing and editing books, as well as serving as editors on leading EE journals.
Presenters: Paul Hart, University of Regina; Martha Monroe, University of Florida; Alan Reid, Monash University

Intersectionality, Gender, and Sustainability Policy in Canadian Higher Education
9:00 AM–9:30 AM, Ballroom A
Using a feminist and decolonizing framework, this paper uses the theory of relationality to examine how sustainability policy in higher education addresses the intersectionality/interconnectivity of multiple elements of power relations. We embraced the theory of relationality through the sharing of stories, intimate discussions surrounding our experiences as women, and the analysis of the sustainability data.
Presenter: Jada Renee Koushik, University of Saskatchewan

Roundtables III
Ballroom A
Technology-Integrated Lessons: A Way to Engage Underserved Youth Outdoors?
9:00 AM–9:30 AM, Ballroom A
The study that will be discussed collected data on the impact of classic and technology-integrated EE programming on underserved youths’ environmental awareness, knowledge, and attitudes toward technology in the natural world. The discussion will focus on identifying strengths and challenges that educators have with implementing mobile technologies in the field.
Presenters: Marc Nutter, University of Wisconsin Cooperative Extension; Robert Justin Hougham, University of Wisconsin Cooperative Extension

Facilitated Issue Discussions
Future Scenarios that Support Environmental Education Research
9:45 AM–10:15 AM, Ballroom D
At the 2015 Research Symposium, five scenarios for the future of the research symposium were presented, rated, and discussed. Come to this session to find out about the patterns and key themes that emerged from that, and recommendations for the future.
Presenters: Alan Reid, Monash University; Nicole Ardoin, Stanford University
Places, Faces, and Spaces for Learning
9:45 AM-10:15 AM, Room KL
Learning environments research provides a key framework for considering the description of student experience for either research or program evaluation in environmental education.
Presenter: David Bryan Zandvliet, Simon Fraser University

Intergenerational Transfer: Leveraging the Power of Children to Promote Sustainability
9:45 AM-10:15 AM, Room MN
Although EE efforts with children invest in the future, reaching adults is challenging, yet critical, because actions today hold consequences for tomorrow. We will review recent research and lead a discussion to identify future pathways for intergenerational transfer as a promising strategy for reaching adults, as well as children.
Presenters: Danielle Lawson, North Carolina State University; Kathryn Stevenson, North Carolina State University; Michaela Zint, University of Michigan; Renee Strnad, North Carolina State University

Novel Methods to Investigate Teaching Approaches, Student Engagement, and Outcomes
9:45 AM-10:15 AM, Room OP
This session is a discussion of methods used in a current study investigating links between pedagogical approaches, student engagement, and outcomes at a residential environmental education center. We will share preliminary findings and discuss some implications of learning not only if a program works, but also why and how it works.
Presenters: Troy Frensley, Virginia Tech; Marc Stern, Virginia Tech

Applying Connection to Nature Indicators
9:45 AM-10:15 AM, Hall of Fame Room
Participants at this workshop will receive an introduction to connection to nature indicators and will gain experience completing and comparing several commonly used instruments. These indicators can reveal a wealth of information related to how a person views nature and can be incorporated into existing environmental education programs or research.
Presenter: Kelly Cartwright, College of Lake County

9:45 AM-10:15 AM

Roundtables IV
Ballroom A
Place-Based Science Learning Across Contexts in Youth Citizen Science
9:45 AM-10:15 AM, Ballroom A
We investigate youth participation in citizen science across classroom, garden, and science lab contexts. We explore how students pursue their interests, leverage their sense of place, and engage in science learning across multiple contexts. We share data from case studies of youth-focused citizen science.
Presenters: Emily Harris, University of California, Davis; Heidi Ballard, University of California, Davis

The Importance and Difficulty of Measuring “Connection to Nature”
9:45 AM-10:15 AM, Ballroom A
Several environmental education organizations desire to connect children to nature; however, many of these organizations struggle with measuring this outcome. In this roundtable discussion, I will briefly discuss findings from my research investigating the landscape of connection to nature outcome assessment and will facilitate a discussion around measuring this concept.
Presenter: Jeffrey Perrin, Lesley University

10:30 AM-12:00 PM

Workshops
The Special Role of Journal “Special Issues” in Environmental Education
10:30 AM-12:00 PM, Room KL
Participants are invited to prepare responses for two discussions. First, in a large group, the participants will discuss: What is “special” about, in, and for environmental education as the field, locally–globally, navigates various transitions in different contexts? Second, in small groups, participants will discuss: What are the special issues now confronting environmental education and its research?
Presenters: Phillip Payne, Monash University; Paul Hart, University of Regina; Catherine Hart, University of Regina; Teresa Lloro-Bidart, California State Polytechnic University, Pomona
Co-Research Play Space: Child-Framed Methodologies in Environmental Education Research

10:30 AM-12:00 PM, Room MN

This workshop explores child-framed research methodologies in environmental education research. We focus on research in which children are positioned as active researchers and collaborators. We also consider emergent child-framed research methodologies in environmental education research drawing upon works in the areas of arts-based educational research and post-qualitative inquiry.

Presenters: Amy Cutter-Mackenzie, Southern Cross University; Robert Barratt, University of Gloucestershire; Elisabeth Barratt Hacking, University of Bath; Marianne Ruth Logan, Southern Cross University

10:30 AM-11:30 PM

Research Panel

Room OP

Vibrant Intersectionalities: Gender, Culture, Power, Queer: Emergent Gender Research in Environmental Education

10:30 AM-11:30 PM, Room OP

EE research is revealing vibrant capacities, voices, and perspectives, liberating the lived intersections of gender and culture for researchers, educators, and learners. This panel’s research applies emergent theorizing—in queer theory, black feminism, intersectionality, feminist materialism, critical discourses, and ecofeminism—sharing findings from the field and recommendations for future research.

Presenters: Marna Hauk, Institute for Earth Regenerative Studies & Prescott College; Jada Renee Koushik, University of Saskatchewan; Jesse Bazzul, University of Regina; Clare Hintz, Journal of Sustainability Education; Mandisa Wood, Napa Valley College; (Moderator) Denise Mitten, Prescott College

10:30 AM-12:00 PM

Skill Builder

Pros and Cons of Using Qualitative Research Software: Our Experience

10:30 AM-12:00 PM, Room QR

A challenge of working with large amounts of qualitative data in EE research and beyond is handling the quantity and sources of data. One way to streamline your qualitative data analysis is by using available software packages to assist in management and coding.

Presenters: Roberta H. Hunter, Acorn to Oak Environmental Education, Rutgers University; Charlotte Clark, Duke University; Ruth Kermish-Allen, Maine Mathematics and Science Alliance

Emergent Topic Areas

10:30 AM-12:00 PM, Hall of Fame Room

This space is available for emergent discussions of topic(s) that participants would like to propose. Topics and facilitators will be posted near Ballroom D.

1:30 PM-3:00 PM

Workshops

Using Machine Learning Methods to Assess Environmental Education Outcomes

1:30 PM-3:00 PM, Room KL

Advances in machine learning, natural language processing, and social network analysis offer exciting opportunities for advancing environmental education research. Learn about some of the latest computational methods and big data tools to measure cognitive change, information flows, behavioral intention, and place-based sentiment as impacts of environmental education.

Presenters: Justin Smith, Washington State University; Yue Li, Cornell University; Bryce DuBois, Cornell/CUNY

Métissage as Meta-Methodology: A Theoretical Framework for Research Program Conceptualization

1:30 PM-3:00 PM, Room MN

Métissage is increasingly employed as a cultural metaphor, storytelling style, and research methodology. In this workshop, métissage will be presented as a meta-methodology for considering the relationships between the various streams of participants’ individual and collective research interests.

Presenter: Gregory Lowan-Trudeau, University of Calgary
Research and Evaluation @eePRO

1:30 PM–3:00 PM, Room OP
Join us to meet up with members of the research and evaluation community. Find out more about the purpose and scope of the NAAEE eePRO online group, learn about new resources, ask questions, and help develop this important NAAEE community. All welcome! naaee.org/eeapro/groups/research-and-evaluation

Presenters: Alan Reid, Monash University; Nicole Ardoin, Stanford University

1:30 PM–3:00 PM

Skill Builders

How to Find and Leverage International Fellowships for Future Success
1:30 PM–3:00 PM, Room QR
Ever dream of doing research in new international contexts? Come and join the discussion about how to find the right experience for you and your research.

Presenters: Karen S. Hollweg, Fulbright Specialist; Ruth Kermish-Allen, Maine Mathematics and Science Alliance

Transitioning from Mentee to Mentor: Best Practices from Both Sides
1:30 PM–3:00 PM, Hall of Fame Room
We will discuss strategies for how to manage the transition from mentee to mentor, identifying best practices based on our own experiences and data collected from individuals in the EE community. We welcome participation from EE community members at all career stages, as this discussion will ideally include diverse perspectives.

Presenters: Kathryn Stevenson, North Carolina State University; Kathayoon Khalil, Seattle Aquarium; Susan Caplow, University of Montevallo

3:15 PM–5:00 PM

Final Session

Outstanding Contributions to Research in EE Awardee Keynote and Closing Plenary
Ballroom D

Join us as we celebrate the NAAEE 2016 Outstanding Contributions to Research in EE Awardee and listen to his/her reflections on the state of the field. After the keynote we will continue the discussion through a reflective panel complemented by interactive discussions among Research Symposium participants. Drawing on the two-day Symposium, the closing plenary will highlight key themes that emerged from the workshops, presentations, posters, and informal conversations; we will also discuss forthcoming opportunities in the field. In addition to a synthetic summary session, the closing plenary serves as the annual business meeting for the Research and Evaluation eePRO Group, so we will discuss plans for next year’s Symposium in light of this year’s challenges and successes as well as our vision for the future of our vibrant community.

Presenters: Research Symposium Chair Ruth Kermish-Allen, Maine Mathematics and Science Alliance; Research Symposium Co-Chair Nicole Ardoin, Stanford University; and colleagues
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Sharing ideas that create a more just and sustainable future through the power of environmental education

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For more than four decades, the North American Association for Environmental Education has worked to strengthen and expand the field of environmental education. Our growing network of support includes:

- More than 20,000 members and supporters
- 56 state and regional Affiliate organizations
- 30 countries around the world

Today, as we build on this foundation, NAAEE looks forward to strengthening our core and stimulating new thinking that will best meet the environmental and social challenges of the next decade.

Building a network

Annual Conference: NAAEE has convened an annual conference for environmental education professionals since 1972. Averaging more than 1,000 participants each year, the event is designed to promote innovation, networking, learning, and dissemination of best practices.

Early Childhood EE Alliance: In 2013, NAAEE launched the Natural Start Alliance—a coalition of educators, parents, and organizations focused on linking early childhood education with EE to connect young children with nature and enhance opportunities for creative play and learning.

Strengthening the field

EE Advocacy: NAAEE has helped lead policy and outreach efforts on behalf of the field since its inception. NAAEE sponsors a monthly Action Network Call to highlight key opportunities for people across the country to get involved in local, state, and national issues, from supporting legislation and State Environmental Literacy Plans to strengthening public support for environmental education.

EE Resources: NAAEE’s National Project for Excellence in EE has produced the Guidelines for Excellence series, the most widely accepted guidelines for environmental education around the globe. NAAEE’s newly designed web site, including eePRO, provides up-to-date environmental education research, curriculum guides, monthly webinars, professional development opportunities, and job postings.

Research and Practice: NAAEE and Stanford University are collaborating with university partners to highlight existing peer-reviewed research that demonstrates the impact of EE and helps translate research into practice.

Inspiring innovation

Building STEM Skills: Through a partnership between UL and NAAEE, the UL Innovative Education Award is a first-of-its-kind initiative, investing $250,000 in recognition grants to increase the impact of innovative nonprofit programs that use the environment as a pathway for STEM learning, creating more sustainable communities, and empowering youth.

Broadening the Conversation: With support from the U.S. EPA, NAAEE has collaborated with the Cornell Civic Ecology Lab and others on EECapacity, a project aimed at bringing new voices, innovation, and ideas together to broaden the reach and impact of environmental education.

Connect with NAAEE today and join the movement to create a more sustainable future together.

Our Mission
NAAEE brings together the brightest minds to advance environmental literacy and civic engagement through the power of education.

Our Vision
A sustainable world where environmental and social responsibility drive individual and institutional choices.
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