15TH ANNUAL RESEARCH SYMPOSIUM
Oct. 9-10

Environmental Education: A Force for the Future
Welcome to the 15th Annual NAAEE Research Symposium!

Dear Friends and Colleagues:

We are delighted to come together for the 15th Annual NAAEE Research Symposium on the ancestral homelands of the Spokane Tribe of Indians. We acknowledge the important historical significance of the Spokane Tribe as we meet this week in the city that bears the name of its original people, Spokane. We also take this time to recognize the Coeur d’Alene Tribe. The Coeur d’Alene Tribe is a neighboring Tribe to the Spokane Tribe. We are honored to gather in what’s been a traditional meeting place for tribal families, friends, and neighbors here along the Spokane River.

This unique event brings together more than 200 new and experienced researchers from around the globe. Over two days, the 2018 Research Symposium will provide a range of opportunities to gather as a community, examine the mainstays and innovations in research initiatives, and engage in boundary-pushing conversations about the goals of EE research, and this event.

Our themes for the Spokane gathering address ongoing needs to explore new horizons in EE research, participate in intergenerational dialogues about the evolution and challenges of our field, and cultivate fresh and compelling stories from and about research.

Through keynote panels, facilitated discussions, posters, workshops, a range of innovative formats, and informal conversations, we trust the Spokane sessions will be enjoyable and also spark a series of reflections leading to action, that ensure EE research is a force for the future. In short, we invite you to consider not just which or whose stories are told about EE research, or what responses they receive, but what needs crafting, re-storying, or telling to advance the field.

We look forward to your participation!

Alan Reid
NAAEE Research Symposium
Chair

Marcia McKenzie
NAAEE Research Symposium
Co-Chair
Special Events
Monday, October 8

EE Research Field Session:
**Place Matters for Research in EE**
Spokane Convention Center and Spokane River Trail
2:00 PM–5:00 PM
Meander along an ADA accessible trail following the Spokane River while you creatively and critically consider the significance of “place” in EE research. Asking, “How does place matter for how we do our research?” the group will move along the river, stopping to learn from local researchers, practitioners, and community members grappling with the intense complexities of place. Participants will consider how place matters in a diversity of EE research and, through a facilitated culminating activity, how place matters in your own research context. (Pre-registration required.)
**Coordinators:** John Lupinacci, Washington State University; Jenne Schmidt, Washington State University

Research Symposium Networking Dinner
Saranac Public House
7:00 PM–9:30 PM
Join colleagues and mentors for a casual evening of food, fun, and conversation focused on EE research. The group will be dining at Saranac Public House, a local favorite within easy walking distance of the Spokane Convention Center. (Pre-registration required.)
## Schedule at a Glance

**Tuesday, October 9**

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<td>9:15 AM–10:30 AM</td>
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<td><em>New Horizons in EE Research</em></td>
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<td>Facilitated Discussion</td>
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<td>Research Symposium Luncheon</td>
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<td><em>Intergenerational Conversations</em></td>
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<td>3:00 PM–4:00 PM</td>
<td>Comprehensive Poster Session</td>
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<td>4:00 PM–6:00 PM</td>
<td>Reception and NAAEE Research Award Ceremony</td>
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## Schedule at a Glance

### Wednesday, October 10

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**Keynote Presentation:**

**Confronting the Incomprehensible in Research: Ongoing Dispossessive Logics of Colonialism**
Tuesday  
9:00 AM-9:15 AM  
Welcome  
111AB  
Presenters:  
Dr. Alan Reid, Monash University  
Research Symposium Chair  
Dr. Marcia McKenzie, University of Saskatchewan  
Research Symposium Co-Chair  

9:15 AM-10:30 AM  
Keynote Panel  
New Horizons in EE Research  
111AB  

This panel discussion will explore ideas and challenges of the age that might inspire and drive the next generation of EE research. Panelists will consider cutting-edge trends in EE research and the directions in which the EE research field is headed over the next decade.  
Panelists: Olivia Aguilar, Denison University; Charlotte Clark, Duke University; Rachelle Gould, University of Vermont; Clayton Pierce, Western Washington University; Kathryn Stevenson, North Carolina State University  
Moderator: Marcia McKenzie, University of Saskatchewan  

Panelists:  

Dr. Olivia Aguilar is an associate professor in the McPhail Center for Environmental Studies at Denison University. Her research focuses on the nexus of critical learning theories, community environmental action, and the place of race in environmental education, in order to pursue a more inclusive and just field.  

Dr. Charlotte Clark is an assistant professor of the practice of sustainability education at Duke University in the Nicholas School of the Environment. She researches collective learning and behavior, and also has strong interests in sustainable food systems and campus sustainability. She is grateful for the ways that NAAEE’s Annual Conference and Research Symposium anchor her professional and research work.  

Dr. Rachelle Gould, an assistant professor at the University of Vermont, is an interdisciplinary scholar whose work involves social science, the humanities, and a bit of ecology. Her research explores the relationship between people and ecosystems and focuses on Cultural Ecosystem Services and lifelong and life-wide environmental education and learning.  

Dr. Clayton Pierce is an associate professor in Fairhaven College of Interdisciplinary Studies at Western Washington University. His research examines neoliberal education policy and how communities develop ecologically just responses within such contexts. His book Education in the Age of Biocapitalism charts the merging of the highly engineered crop field and the intensely measured classroom while also evaluating learning spaces that resist education as biocapital production.  

Dr. Kathryn Stevenson is an assistant professor in the Parks, Recreation, and Tourism Management Department at North Carolina State University. She runs an EE research lab investigating benefits of nature-based instruction, using intergenerational learning to drive community change, and the intersection of agricultural and environmental literacy.  

Moderator: Dr. Marcia McKenzie is a professor in the Department of Educational Foundations and Director of the Sustainability Education Research Institute at the University of Saskatchewan, Canada (www.seri.usask.ca), and principal investigator of the Sustainability and Education Policy Network (www.sepn.ca). She has published a number of books including Critical Education and Sociomaterial Practice: Narration, Place, and the Social (Peter Lang, 2016); Place in Research: Theory, Methodology, and Methods (Routledge, 2015); and Land Education: Rethinking Pedagogies of Place from Indigenous, Postcolonial, and Decolonizing Perspectives (Routledge, 2016). Her research focuses on the intersections of environment, education policy, social theory, and the politics of social science research.
Collaboratively Developing Regional, Place-Based EE Curriculum In Higher Education
Does your institution want to participate in a collaborative, regional EE place-based curriculum? We have taken the first steps to do so in central North Carolina through faculty development and networking. This presentation will summarize our experience and lessons learned, including research on US exemplars/analogs and interviews with local colleges and universities.
Presenters: Charlotte Clark, Duke University; Noelle Wyman Roth, Duke University

Discourse at a Nature Center: What Subcams Tell Us
Preliminary data from the use of subjective cameras provides an opportunity to envision an experience “through the eyes” of a visitor and to begin to understand the dynamics of discourse within families and other related groups that self select to visit a small nature center in the southeastern United States.
Presenters: Michael Dentzau, Columbus State University; Patricia Patrick, Columbus State University

Effective Strategies for Promoting Sustainable Food Consumption
The impact of food choices on environmental sustainability has become an important issue in recent years. This research investigates the effectiveness of various arguments on individual food attitudes and behaviors. The findings are important to environmental educators who can use this information to promote more sustainable eating habits.
Presenter: Garrett Lentz, University of Otago

Examining Family Dynamics and Children’s Climate Change Perceptions
Despite mounting scientific consensus around needs to address climate change, generating a united response among the American public remains challenging. Children and families may be a promising avenue. This poster will share our exploratory analysis on how parents may encourage mitigation behaviors among children, and how children might influence their parents.
Presenter: Danielle Alexis Lawson, North Carolina State University
TUESDAY

Exploring Factors Influencing the Development of Environmental Sensitivity and the Aspects of ERB
The purposes of this study are to explore factors influencing the development of environmental sensitivity (ES), and self-reported aspects of environmentally responsible behavior (ERB) among secondary school students in Saudi Arabia. Findings will be used to construct scales to assess ES and ERB in this population.
Presenter: Adel Althubyani, Florida Institute of Technology

Informal E-STEM Learning at Biological Field Stations: A Conceptual Framework
Biological field stations are intrinsically valuable for E-STEM learning because they are located in environmentally and scientifically interesting places. This poster will share an emerging conceptual framework, centered on place-based learning, that establishes field stations as key sites for fostering environmental literacy and advancing informal E-STEM learning.
Presenters: Lauren Vilen, Colorado State University; Rachel Short, Texas A&M University

Macoskey Center World Café: Leveraging Campus-Community Partnerships Through Dialogue
Students and faculty from Slippery Rock University facilitated and analyzed the results of a World Café, deliberative dialogue, at the Robert A. Macoskey Center for Sustainability Education (RAMC). This process helped to refocus RAMC’s efforts and mission to expand its interdisciplinary collaborative opportunities and to garner university and administrative support.
Presenters: Samantha Laurence, Robert A. Macoskey Center for Sustainable Systems, Education, and Research; Jacob Smith, Robert A. Macoskey Center for Sustainable Systems Education & Research

Observations of Ecosystems and Human Impacts: Missed Opportunities In NGSS?
Where does place-based education fit in the NGSS? We critically reviewed the standards and found that opportunities for observations of ecosystems and human impacts are scarce. We will share our results and ask participants to reflect on how to prioritize extended explorations of local places given existing curricular constraints.
Presenters: Eileen Merritt, Arizona State University; Nicole Bowers, Arizona State University

The Progression of Student Sense Making Regarding the NGSS Cross Cutting Concepts Through Nature Journaling
With its emphasis on careful observation of natural phenomena through recording behaviors, observing patterns, and asking questions, nature journaling may hold particular promise as an EE technique that supports students’ learning of the NGSS Cross-Cutting Concepts (CCCs). This roundtable will discuss newly developed analytic tools for furthering research on how students learn the CCCs.
Presenters: Anne Kinney Stephens, California State University–Chico; John Muir Laws, Science Education & Nature Journaling

Sensory Tours as Storied Entanglements in-with-for Our Environments
This poster will focus on exploring how Sensory Tours (wearable cameras) can be used as a method for discovering embodied, storied entanglements in EE research. We will explore advantages of this participatory method, limitations and challenges of analysis and interpretation, and new lines for uncovering essences of being-in-the-world.
Presenter: Carie Green, University of Alaska–Fairbanks

Student Learning Outcomes Using Model-Based Climate Literacy in Secondary Geoscience Classrooms
We share the conception, design, and some activities from a curriculum based on the use of a global climate model EzGCM in secondary geoscience classrooms. Implemented through the NSF-funded CLiMES (Climate Literacy through Modeling and Epistemology of Science) project, this curriculum facilitated the in-depth understanding of climate literacy concepts through model-based reasoning.
Presenter: Cory Forbes, University of Nebraska–Lincoln

Survey of Taiwan High School Teachers’ Teaching in Climate Change
Climate change is a serious issue in the United Nations’ Sustainable Development Goals and the government of Taiwan’s Adaptation Strategy to Climate Change. This presentation will share the results of a survey on high school teachers’ obstacles, pedagogy preferences, personal perceptions, and self efficacy in teaching climate change as the basis to develop future modules.
Presenter: Ko-ning Liang, National Taichung University of Education
Toward Interconnected Sustainability Education: A Case Study of North Carolina Green Schools
Data for this qualitative case study was collected at three North Carolina Green Schools of Excellence (K-5 public, K-8 charter, and K-8 independent). Based on the metric of interconnectedness (Warner & Elsar, 2015), we investigated whether and/or how these schools take a whole-school approach to sustainability education.

Presenters: Nathan Hunnicutt, Elon University; Scott Morrison, Elon University

Transformative Experiences in Environmental Education: Exploring Measurement and Methods
Transformative experiences are gaining traction in higher education as an important part of the development of students in their university experience. As environmental education strives to connect participants with the natural world, the methodologies to study transformative experiences need to be more clearly outlined.

Presenter: Shelby Gull Laird, Stephen F. Austin State University

What Are We Doing Inside? Teacher Education in the Woods
This poster is about using a forest school model to teach environmental education to undergraduates. After a brief explanation of the content and pedagogy of the course, participants will be invited to provide feedback on the approach and the research study underway.

Presenter: Scott Morrison, Elon University

10:45 AM–11:15 AM
Facilitated Discussions

Investigating the Confluence of Visitor and Institutional Conservation Learning Agendas 201A
To what degree do conservation and environmental education missions of zoos and aquariums overlap with expectations, agendas, and engagement of visitors? We will discuss lessons learned from a nationwide study conducted collaboratively by three research organizations using a hierarchical, nested study design that investigated these questions.

Presenters: Kelly Riedinger, Oregon State University Center for Research on Lifelong STEM Learning; Mary Ann Wojton, Lifelong Learning Group/COSI; Rupu Gupta, New Knowledge Organization

Tracing and Healing Intergenerational Place Disruption and Historical Place Trauma: Emergent Methods 201B
Ruptures in ancestral place relationship and historical trauma related to displacements and colonization have intergenerational effects on health, learning, presence, access, and justice. Settler-colonial resistance can impede research. How can EE researchers skillfully facilitate inquiry in these sensitive realms? What methods and approaches help?

Presenter: Marna Hauk, Institute for Earth Regenerative Studies & Prescott College

10:45 AM–11:45 AM
Facilitated Panels

Frameworks for Optimizing Environmental and Climate Action: Individual to Global Scales 201C
Starting with a new global research-based framework for optimizing climate action at scale, panelists will share findings—including implications for learning and education, and for underserved communities—then invite dialogue from audience members about other frameworks, data sets, and tools for embracing the complexities of climate breakdown and the Sustainable Development Goals.

Presenters: Deb Morrison, Independent Scholar; Avit Bhowmik, Future Earth, Royal Swedish Academy of Sciences; Mark McCaffrey, ECOS; Moderator: Abby Ruskey, US Partnership for Education for Sustainable Development
Navigating the Emotional Dimensions of Animal-Focused Environmental Education

This session brings together a group of scholars with diverse substantive, methodological, and theoretical backgrounds to explore the complex emotional dimensions of animal-focused environmental education. In particular, presenters will share stories about confronting anthropocentrism and humanism in their research and practice, while they also remain attuned to issues of social justice.

Presenters: Teresa Lloro-Bidart, California State Polytechnic University–Pomona; Patty Born Selly, Hamline University School of Education; John Lupinacci, Washington State University; Valerie Banschbach, Roanoke College

10:45 AM–12:15 PM

Workshop

Dear Researchers: Some Unsolicited Advice from the Community

We share the work of 30 community-based organizations, from culturally diverse communities across the United States, focused on better understanding the role of partnerships between underserved communities and science institutions. We uncover barriers to and opportunities for achieving more equitable collaborations with the goal of improving equity, diversity, and inclusion in STEM.

Presenters: Karen Purcell, Cornell Lab of Ornithology; José González, Latino Outdoors

11:15 AM–11:45 AM

Poster Session

Intergenerational Conversations

Adapting an Environmental Literacy Framework to Measure Agricultural Literacy

Agricultural literacy (AL) is necessary to sustain a healthy food and fiber system, but evaluative tools are limited. Environmental literacy (EL) frameworks may provide a path forward. We will propose an AL evaluation model to generate discussion around how EL may inform AL evaluation across formal and informal EE contexts.

Presenter: Kathryn Stevenson, North Carolina State University

Coastal Fog-Mediated Interactions Between Climate Change, Upwelling, and Coast Redwood Resilience

As ocean temperatures rise, coastal ecosystems and communities are impacted. Our team’s work focuses on the social dimensions of people’s interactions with the coast redwood, a flagship species. Through interviews and surveys, we have explored visitors’ experiences with the coast redwood. We suggest next steps in designing an educational intervention.

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

A Comparative Study of Scales for Junior High School Students’ Nature Connection

This study uses the Connectedness to Nature Scale (CNS) and the Inclusion of Nature in Self (INS) scale to measure Taiwanese middle-school students’ connection to nature and predict their environmental action intentions and behaviors. The results show that CNS scores were more predictive of environmental intention and behavior than INS scores.

Presenter: Han Zhuang, National Taichung University of Education

Demands and Attitudes Toward Required EE Among School Teachers

This study explores teachers’ demand for and attitudes toward required EE in Taiwan. Researchers used surveys to collect data, and 433 surveys were received. The results provide suggestions for EE-related agencies to understand teachers’ wants and suggestions, which is critical for future EE program development and improvement.

Presenter: Judith Chen-Hsuan Cheng, National Ilan University

Develop a Specific Scale to Measure Adolescents’ Connection with Nature

Nature Deficit Disorder is now a primary concern for environmental educators. However, published scales are seldom designed to measure adolescents’ nature connection. This session will introduce how to develop a specific scale for adolescents in Taiwan and the United States from their perspectives and how the new scale relates to and predicts environmental action intention.

Presenter: Yu-Chi Tseng, National Taichung University of Education
Developing 21st Century Naturalists: Interest Development Across the Learning Ecology

How do people develop a lifelong passion for nature? We explore life histories of a diverse group of 18 adult naturalists working in urban communities to reveal experiences that supported their interest development in nature. We also discuss implications for design of learning ecologies to foster the development of naturalists.

Presenter: Marijke Hecht, University of Pittsburgh

Developing a Camp Counselor Competency Model: Defining and Describing Success

Teen counselors often serve a vital role at camps, providing the supervision and instruction needed to deliver environmental education and youth development to campers. Maryland 4-H is researching the camp counselor competencies needed to ensure that counselors have the knowledge, skills, abilities, and other characteristics required for high performance.

Presenter: Rachel Bayer, University of Maryland

Developing an Assessment for Teacher Environmental Literacy

While attention has been focused on developing the environmental literacy of K-12 students, university students, and the general public, less has been paid to the environmental literacy of teachers. This study describes the development and testing of the Teacher Environmental Literacy Assessment (TELA).

Presenters: Roberta Hunter, Rutgers University; Rebecca Jordan, Rutgers University

EE Evaluation Toolkit Prototype Feedback Requested

Do you work with EE practitioners to evaluate their programs? Researchers at Duke University are completing a project to build EE evaluation capacity. We will share a prototype toolkit and seek input on potential collective measures and outcomes. Your feedback will inform training and resources for EE evaluators and practitioners.

Presenters: Charlotte Clark, Duke University; Liz DeMattia, Duke University; Noelle Wyman Roth, Duke University

Environmental Educators’ Global Engagement Through Professional Development MOOCs

Based on a series of professional development MOOCs for environmental educators, this research applies the Global Engagement Survey to measure educators’ global experience, including intercultural competence and civic engagement. The results provide insights into measuring educators’ global learning and suggest ways to foster educators’ understanding of international perspectives and actions as global citizens in environmental education.

Presenters: Yue Li, Cornell University; Marianne Krasny, Cornell University

Environmental Knowledge and Perceived Personal Environmental Education Teaching Efficacy of Preservice Teachers in Wisconsin

The preliminary reported results examine the environmental knowledge (EK) and personal environmental education teaching efficacy (PEETE) of preservice teachers across Wisconsin’s teacher education programs. The research compared preservice teachers’ EK scores to other students with different licensure levels, in addition to the correlation between an individual’s EK score and their total PEETE scores.

Presenter: Caroline Blake, Central Wisconsin Environmental Station

Intercultural Sensitivity and Environmental Identity: Experiences with Study Abroad Programs

Do study abroad programs lend themselves to EE research if the experience is not explicitly EE focused? This poster briefly compares two trips: Peru (EE focused) and the Netherlands (not EE focused). We explore questions about intercultural sensitivity, connection to place, and/or environmental identity development.

Presenters: Allison Freed, University of the Ozarks; Aerin Benavides, The University of North Carolina-Greensboro; Lacey Huffling, Georgia Southern University

Place, Culturally Responsive Pedagogy, and Literacy: Engaging Teachers in EE

We will briefly discuss our work with high school teachers who were selected to participate in summer professional development sponsored by our State GearUP Program. We will explore how emphasizing place, culturally responsive pedagogy, and literacy might increase EE in formal education.

Presenter: Lacey Huffling, Georgia Southern University
Relating Children’s Perceptions and Sustainability Governance
This poster explores children's perceptions of the environment, how these perceptions relate to the curriculum being taught, and how educators may better understand how the curriculum affects children's environmental perceptions and understanding of sustainability education.
Presenter: Joshua Eastes, University of Colorado-Denver

School-Based Outdoor Education: A Multiple Case Study of Three Teachers
A tale of three teachers, or, how and why do certain teachers take their students outside for school-based outdoor learning? This poster presents a look at results of multiple case studies into the practices and motivations of teachers in the Yellowstone Ecosystem who incorporate outdoor teaching in their classroom practice.
Presenter: Rose Vallor, Montana State University

Three Iterations of the Environmental Justice Youth Training Program
The Environmental Justice Youth Training program engaged students regarding disparate air pollution exposure. The program fostered students' ability to participate in environmental decision-making processes through teaching environmental justice, researching environmental burden using low-cost air quality monitors, and creating dissemination materials to engage communities and decision makers about concerns found.
Presenter: John Breskey, University of Wisconsin-Stout

Understanding the Interplay of Gender and Environmentalism
Learn why empowering female students to not just engage in environmentalism, but also participate in leadership might help achieve environmental goals. This poster discusses the current gender skew in environmental leadership, how men and women think about the environment differently, and how gender-inclusive decision making provides real benefits to environmental management.
Presenter: Nadia Tenouri, University of Otago

What Factors Influence on Collective Transition Behaviors of Youth?
To promote sustainability transition, encouraging collective pro-environmental behaviors is necessary. We analyzed factors that promote or impede collective pro-environmental behaviors of Japanese youth by using covariance structure analysis. Based on the results, we discussed key points to encourage youth's collaborative collective behaviors.
Presenter: Tomoko Mori, National Institute for Environmental Studies

What Predicts Behavior?
A recent survey of pro-environmental actions to improve the health of the Indian River Lagoon in eastern Florida enables us to explore whether knowledge, outdoor experience, childhood experience, and environmental identity play a role in these behaviors.
Presenter: Martha Monroe, University of Florida

Facilitated Discussion
Mapping Emerging Landscapes of Environmental Education Research After the Post-Qualitative Turn
Encouraged by papers in recent issues of EE and ESD journals, particularly those tracking shifts toward new materialist and posthuman performativities, we propose several points and questions for discussion. Join us to hear about and participate in continuing debates among active EE researchers, especially those who are rethinking commitments to traditional qualitative methodologies.
Presenters: Catherine Hart, University of Regina; Paul Hart, University of Regina
11:15 AM–11:45 AM

Facilitated Panel

Connectedness Forum: New Horizons in Connectedness to Nature and EE 201A

Increasing connectedness to nature is a common goal of EE. Panelists will briefly share their work related to connectedness to nature. Panelists and participants will then explore new horizons in connectedness to nature research; for example, what does the field look like in our device-heavy world? Or what role does EE play?

Presenters: Rachelle Gould, University of Vermont; Thomas Beery, Kristianstad University; Yu-Chi Tseng, National Taichung University of Education; Chris Parsons, Word Craft; Jeffrey Perrin, Lesley University

11:45 AM–12:15 PM

Poster Session

Stories From Research 111AB

Birdwatchers in Israel—Who Are We?

Birdwatching is a growing hobby in Israel, but not much is known about its participants. Who are they and what are their needs and motivations? A survey was conducted to assess this population with the hope that EE programs could become more targeted in addressing these unique needs and challenges.

Presenter: Alena Kacal, Jerusalem Bird Observatory, Society for the Protection of Nature in Israel

Children’s Perspectives on Nature Preschool Through Photovoice

See how cameras can be used as a research tool by young children as data gatherers and analyzers. Using photovoice methodology, this research project described and documented the experiences of children ages 3 to 6 attending a nature preschool located on a private nature preserve in the United States.

Presenter: Laura Dell, University of Cincinnati

Discourses About Children, Childhood, and Environment: Why It Matters

Children inhabit the socially defined world of childhood, yet environmental education research tends to emphasize children rather than childhood. This session presents international research on children’s drawings of the environment to facilitate a discussion about dominant discourses regarding childhood, how they shape children’s realities, and the role of research therein.

Presenter: Bryan Wee, University of Colorado-Denver

An Educational Framework for Participatory and Action-Oriented EE Projects

We will present a framework for participatory, action-oriented environmental education projects that incorporate inquiry into social theories of learning and aim to satisfy the needs of elementary school children for meaningful participation and action. The framework is characterized by constructivism, reflection, and critical stance.

Presenter: Konstantinos Korfiatis, University of Cyprus

Effects of Residential Development in Cape Coral, FL on Children’s Special Outdoor Places

This research project investigates children’s perceptions and use of the outdoors within different quadrants of Cape Coral, Florida to determine if and how residential development is affecting their childhood experiences.

Presenter: Heather Skaza Acosta, Florida Gulf Coast University

Encouraging Science Literacy: Student Use of Evidence When Solving Socio-Environmental Issues

Structured decision-making frameworks have been proposed to encourage people to make objective and informed decisions. We incorporate our framework in the context of socio-environmental issues and showcase how undergraduate STEM and non-STEM majors have difficulties interpreting and applying scientific information to their decision making over these issues.

Presenter: P. Citlally Jimenez, University of Nebraska-Lincoln

Engaging Community-Based Institutions Through Conservation Education in Tanzania

We present findings from a study of Watu, Simba na Mazingira (WASIMA: People, Lions, and the Environment) to harness community-based institutions to help villages surrounding a National Park in Tanzania address lion killing. We found community leaders gained awareness and committed to take action after participating in WASIMA events.

Presenter: Amanda Lindell, University of California-Davis
“Environmentalism” and Being an “Environmentalist” in Residential Environmental Education Programs
To aid in the environmental movement, students have to feel they are a part of the environmental movement. In this work, I ask: (1) How are the concepts of the “environmentalist” and “environmentalism” constructed in EE? (2) What opportunities are provided for students to feel included?
Presenter: Indira Phukan, Stanford University

Frogs, Newts, and Australian-USA Early Childhood Teacher-Researchers
Local environmental contexts provide unique opportunities for three-phase inquiry projects. Hear about Australian and US teachers’ experiences as researchers and their impressions of preschool children’s conceptual development within this narrative inquiry study. Learn to engage a “critical friend” for reflective pedagogy and how to replicate this study in your program.
Presenter: Victoria Carr, University of Cincinnati

Numbers Are Everywhere: Examining the Effects of Teaching Math Outside
In this qualitative case study, we examined the effects of teaching math outside with a class of seventh grade students and their teacher at a rural middle school in North Carolina, adding to the literature on place-based mathematics education.
Presenters: Mirella Cisneros, Elon University; Scott Morrison, Elon University

Outdoor Education’s Relation to Adolescent Behavior and Academic Performance
This session focuses on a study exploring the relationship between outdoor education and adolescent behavior and academic performance in a classroom setting. The study was a mixed methods analysis on trends in behavior and academic performance in rural, underserved middle school students.
Presenter: Trenton Stiefel, Stephen F. Austin State University

PLACE4FEWS: Community-Based Food, Energy, and Water Systems Education for Resilience
In this “Stories from Research” poster, we describe our learning from the first implementation of the PLACE4FEWS project. Using design-based research enabled the project leaders and participants to negotiate tensions between addressing the project’s need for local data on food, energy, and water systems and volunteers’ strongly held values regarding FEWS.
Presenter: Elisabeth Roberts, Northern Arizona University

Putting an Identity Lens on a Longitudinal Look at Fieldwork
Our research question: “What is the nature of youths’ science and environmental identity formation triggered by high school scientific fieldwork experiences when viewed longitudinally?” Using an identity model based upon disciplinary agency, positioning/recognition, knowledge, and/or engagement, we seek to explain the potential long-term impacts of well-designed nonformal science learning environments.
Presenters: Aerin Benavides, The University of North Carolina at Greensboro; Catherine Matthews, The University of North Carolina at Greensboro; Lacey Huffling, Georgia Southern University; Heidi Carlone, The University of North Carolina at Greensboro

Qualitative Representations of Environmental Health Literacy: Informal Educators & Fish Consumption Advisories
Learn about a new conceptual framework—environmental health literacy (EHL)—that aims to foster action to reduce environmental exposures that can harm health and provide feedback on a visual representation of the knowledge, skills, and actions that are embedded in this form of literacy.
Presenter: Kathleen Gray, The University of North Carolina

Research Process for Developing a Sustainability Empowerment Action Scale
A considerable amount of research has found that there is a relationship between locus of control, self efficacy, and empowered actions towards sustainability. This presentation will discuss a new theoretical understanding about the locus of control, self efficacy, and sustainability action guided by an iterative process of literature review, and qualitative data collection.
Presenter: Alan Reid, Monash University

The Role of Animals in Early Childhood Environmental Education
Most educators identify animal relationships as important for young children’s environmental development. But how do they intentionally create opportunities for connection between children and animals? I explored the role of animals, including the use of classroom pets and encounters with wildlife. Teachers’ attitudes, barriers, and strategies are identified, along with questions that invite further exploration.
Presenter: Patty Born Selly, Hamline University School of Education
The Story of STEM and LEAF
In this session, using techniques such as storytelling, analogy, and metaphor, I will offer the beginnings of a socio-cultural and environmental critique to the current STEM movement. A tentative (and alternative) framework: LEAF will then be discussed and further considered.

Presenter: David Zandvliet, Simon Fraser University

Teachers’ Perspectives on Citizen Science: Helping Students Understand Biodiversity
Our team of K-20 educators is using self-study to analyze how citizen science wildlife camera projects help our students understand biodiversity around the world. Questions to consider include: How can citizen science projects be used to promote EE in formal education? What are the affordances and constraints of self-study?

Presenters: Lacey Huffling, Georgia Southern University; Heather Scott, Georgia Southern University

11:45 AM–12:15 PM
Skill Builder

Editors’ Panel: What and Where to Publish 201B
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. Scholars with experience writing and editing books, as well as serving as editors on leading EE journals will host the session.

Presenters: Martha Monroe, University of Florida; Alan Reid, Monash University; Paul Hart, University of Regina; Marcia McKenzie, University of Saskatchewan

Facilitated Discussions

Nature and Neuroscience 202A
The health and socio-emotional benefits of green space and outdoor activity are well reported. With portable electroencephalogram (EEG) scans now available, our panel will report on two EEG studies and encourage researchers to use this tool to further understand and quantify the benefits of nature.

Presenters: Melissa Wilson, Harvard University; Brad Daniel, Montreat College; Brad Faircloth, Montreat College

Redefining and Researching Environmental Literacy at the Community Level 201C
Many of today’s environmental problems are large-scale, collective issues. Perhaps in response, EE research has shifted focus from individual-level to community-level environmental learning and literacy. In this session, participants will discuss theories, epistemologies, and methodologies appropriate for measuring and advancing environmental literacy at the community level.

Presenters: K.C. Busch, North Carolina State University; Kathryn Stevenson, North Carolina State University

11:45 AM–12:15 PM
Facilitated Discussions

Theorizing Collaboration Between Informal and Formal Garden Educators
School gardens are ideal spaces where the worlds of informal and formal educators can merge. I will be using a partnership between a local garden education nonprofit, area teachers, and a teacher educator/education researcher as a case study for a conceptual model of collaboration between formal and informal EE.

Presenter: Sarah Stapleton, University of Oregon

Young Children’s Drawings of Outdoor Adventures in Rural Alaska
This poster presentation explores rural Alaskan children’s preferences for outdoor activities. Utilizing a draw and write method, we examined the types of activities children preferred, where they took place, who accompanied children on their adventures, and the significance of cultural subsistence.

Presenter: Carie Green, University of Alaska-Fairbanks
12:15 PM–1:30 PM
Research Symposium Luncheon
111C

1:30 PM–2:45 PM
Keynote Panel
Intergenerational Conversations
111AB

What are the implications for our field of bringing new scholars and experienced scholars together through collaboration, peer learning, mentoring, and other aspects of diversity in career stage? Panelists will explore intergenerational aspects of the field, and how they can strengthen EE research.

Panelists: Carie Green, University of Alaska–Fairbanks; John Lupinacci, Washington State University; Martha Monroe, University of Florida; Milton Newberry III, University of Georgia; Fikile Nxumalo, University of Texas–Austin
Moderator: Alan Reid, Monash University

Panelists:

Dr. Carie Green is an associate professor in the School of Education at the University of Alaska–Fairbanks. She teaches place-based education and social science research methods in the People, Place, and Pedagogy graduate program. She was recently awarded a National Science Foundation CAREER: A Longitudinal Study of the Emotional and Behavioral Processes of Children’s Environmental Identity Development Among Rural and Nonrural Alaskan Children. She is the author of the book, Children’s Environmental Identity Development (Peter Lang, 2018).

Dr. John Lupinacci is an assistant professor of cultural studies and social thought in education at Washington State University. He is co-author of EcoJustice Education: Toward Diverse, Democratic, and Sustainable Communities. His experiences as a classroom teacher, outdoor environmental educator, and community activist-artist all contribute to his research and teaching in support of socially just, diverse, and sustainable communities.

Dr. Martha Monroe is a professor at the University of Florida’s School of Forest Resources and Conservation. She has worked in EE for 40 years (if you count summer jobs) in community EE, teacher training, curriculum development, evaluation, and research.

Dr. Milton Newberry III is an assistant professor at the University of Georgia’s Department of Agricultural Leadership, Education, and Communication. He has worked in EE across the eastern United States, focusing on evaluation, using animal ambassadors, and building EE capacity. He runs a lab on animal ambassadors and effective teaching strategies in EE and informal STEM education.

Dr. Fikile Nxumalo is an assistant professor of early childhood education at the University of Texas at Austin where she is also affiliated faculty in Black Studies and in Native American and Indigenous Studies. Her research and pedagogical interests are centered on environmental education that is situated within and responsive to young children’s unevenly inherited ecological precarities.

Moderated by Dr. Alan Reid, associate professor and associate dean, Faculty of Education, Monash University. Alan edits the international research journal, Environmental Education Research, and publishes regularly on environmental and sustainability education (ESE). Recent examples include editing Environmental Education: Critical Concepts in the Environment, which reviews 50 years of activity in this area, and Curriculum and Environmental Education: Perspectives, Priorities and Challenges. Alan’s interests in research and service focus on growing traditions, capacities, and the impact of ESE research.
Wednesday
7:30 AM–9:00 AM
Graduate Student Breakfast
111C

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

9:00 AM–10:00 AM
Keynote Panel
Stories From Research
111AB

What have we learned that might guide or prepare us for future research? Panelists will take an aspirational view as they consider research design, methods, models, and dilemmas and their influences on practical applications.

Presenters: Heidi Ballard, University of California–Davis; Scott Morrison, Elon University; Indira Phukan, Stanford University; Timothy Zimmerman, Hampshire College

Moderator: Nicole Ardoin, Stanford University

Panelists:

Dr. Heidi Ballard is an associate professor of science education in the Graduate School of Education at University of California–Davis. Dr. Ballard conducts research with and trains educators and conservation biologists on how to better involve people in science, from the perspective of an ecologist and social scientist.

Dr. Scott Morrison is assistant professor of education at Elon University. He is the coordinator for the environmental education minor, the middle grades education program, and the secondary social studies program, and he is the co-creator and co-moderator of the #ElonEd Twitter chat. His research focuses on ecologically-minded teaching, place-based education, and social media, and has been published in Environmental Education Research, Social Studies and the Young Learner, and Phi Delta Kappan.

Indira Phukan is a doctoral candidate at Stanford's Graduate School of Education. She has an MS in Environmental Sciences from Stanford, an MEd in Special Education, and a BA in History from Harvard. She worked as an environmental educator and diversity coordinator in Yosemite, and a teacher in Las Vegas. She researches stereotypes about the environmental movement in order to illuminate ways that people have been systematically and institutionally excluded and suggests ways of inclusion.

Dr. Timothy Zimmerman is Jonathan Lash Chair and Assistant Professor of Environmental Education at Hampshire College in Amherst, Massachusetts. As a learning scientist, his scholarship and teaching focus on designing and improving pedagogical practices and learning tools, for use in a variety of formal (e.g., schools) and informal (e.g., aquariums, outdoors) learning contexts, that foster environmental decision making.

Moderated by Dr. Nicole Ardoin, associate professor at Stanford University. Nicole has a joint appointment in the Graduate School of Education and Woods Institute for the Environment. She is also the faculty director of the Emmett Interdisciplinary Program in Environment and Resources in the School of Earth, Energy, and Environmental Sciences. Nicole's scholarship focuses on individual and collective engagement in environmental and sustainability behaviors and practices as well as people's connection(s) to place(s) and how those influence their relationships to each other and the natural world.
Are Nature Connections and Wi-Fi Connections Compatible?
Recent studies have explored the impact of social media and mobile technologies on visitor programs. However, few have investigated how technology influences visitors’ connection to nature. This presentation will review emerging data and discuss if, how, and when educators could use technology to connect people to nature.
Presenter: Jeffrey Skibins, East Carolina University

Connecting Science Learning with Environmental Issues: Teacher and Student Perspectives
This session addresses the question of how to enhance environmental teaching and learning in science education. Stories, including words and diagrams from science teachers and students, from two studies in progress will be shared followed by discussion of how we can improve environmental learning in schools.
Presenter: Erica Blatt, Rowan University

Courage, Dear Heart: Disrupting “Analysis” in Post-Qualitative Research
In this presentation I look back at my research process as it both takes away and gives me voice through a resistance to analysis. I both disrupt and open up discussion on possibilities for emergent (non) methodological perspectives, non-representation, and pedagogical applications using examples from recent research, including my doctoral study.
Presenter: Catherine Hart, University of Regina

Embracing Discomfort in Environmental Research When Working with Indigenous Youth
Uncomfortable moments in research can be opportunities to grow and co-create new patterns. This presentation and discussion will focus on how such moments can humanize relationships, particularly in the context of non-Indigenous researchers doing research with Indigenous research participants on subjects of environmental protection and resource development.
Presenter: Kristy Franks, Concordia University

Global Networking for Local Action: Education and Collaboration Across Scales
Environmental education is unique in that it brings together place-specific needs and global scale awareness at the intersections of the physical and social worlds. Yet, how can lessons learned in one location be repositioned elsewhere without applying one-size-fits-all solutions? Attendees will explore and expand upon this question during this session.
Presenter: Lee Frankel-Goldwater, University of Colorado–Boulder

The Interdisciplinarity of EE Research: What Fields are Included?
Have you read Nudge, Thinking Fast and Slow, or Don’t Think of an Elephant, and considered their relevance to EE? EE research draws on scores of other fields. In this session, we will share favorite influential fields and discuss how to make sense of wide variability in philosophies and approaches.
Presenter: Rachelle Gould, University of Vermont

Re-Imaging Environmental Education Through Holism
We understand holism as balancing physical, mental, emotional, and spiritual well-being. Our research investigates, within the holistic perspective, how our human beingness is enmeshed in a series of relationships that are cyclical and reciprocal. Join us for a facilitated discussion around holism in daily life, and in relation to land and environmental education.
Presenters: Jennifer MacDonald, University of Calgary; Margaret McKeon, University of British Columbia

Relevance in Place-Based Climate Change Education
What does “personal relevance” actually mean? What factors of personal relevance are enhanced by place-based approaches? Drawing on research currently underway on climate-related civic ecology practices and education programs, this session will explore intersections between psychological distance, relevance, and place in climate change education.
Presenter: Anne Armstrong, Cornell University

Revitalizing Research on Encouraging Equity and Intersectionality in Environmental Education
We foster discussion about the research implications of emergent challenges in applying intersectionality, the overlapping notions of gender, race, socioeconomic status, etc., within social justice-oriented environmental education. Our ongoing research examples, free writing activities, and idea sharing provide opportunities to reshape future intersectionality research as a force for the future.
 Presenters: Sweeney Sweeney, Hampshire College; Timothy Zimmerman, Hampshire College
Uncovering Environmental Identities of Youth in Marginalized Urban Communities

Environmental identity expresses itself as a narrative, therefore to know an environmental identity is to know one’s story. To uncover these stories, we must understand how/where they originate. This study explores the development of environmental identities among youth in marginalized urban communities and how family experiences influence these identities.

Presenter: Christina Guevara, University of Colorado–Denver

When Your Beautiful Theory of Change Goes Boink

Articulating and sustaining the theory of change underlying your research is challenging work. Every intervention is built on such a theory, involving a network of human and nonhuman actors. How can you make your theory explicit, and how can you adapt it over time without compromising your research agenda?

Presenter: Robert Coulter, Missouri Botanical Garden

10:45 AM–11:15 AM
Facilitated Discussion
Creating Opportunities to Diversify the Environmental Movement and EE

This panel will discuss and offer solutions for the lack of diversity in environmental movements. The core of this session will be an interactive activity based on our past research and our collective experience. We will suggest how to address the lack of diversity by seeking to address core issues.

Presenters: Rachelle Gould, University of Vermont; Indira Phukan, Stanford University; Samantha Selby, Stanford University; Austin Cruz, University of Arizona

10:45 AM–11:45 AM
Facilitated Panel
Rethinking Nature-Based Early Childhood Education: Common World Pedagogies

Inspired by common world perspectives in early childhood, this panel explores what happens when we locate pedagogical intentions at the crossroads of colonial relations and environmental education. Sharing video of specific moments from everyday practice, the session foregrounds young children's relationships with waste, water, food, and animals to reconsider entanglements with geographies, histories, and geopolitical processes.

Presenters: Fikile Nxumalo, University of Texas at Austin; Veronica Pacini-Ketchabaw, Western University; Cristina Delgado-Vintimilla, Capilano University; Narda Nelson, University of Victoria

10:45 AM–11:45 AM
Skill Builder
#eeHACK: Designing and Participating in Collective Experiments to Address EE Challenges

Join with your colleagues to tackle some of the biggest challenges in EE. This interactive, fast-paced session will use design-based thinking to creatively brainstorm and prototype solutions to some of the greatest issues facing EE and EE research.

Presenters: Indira Phukan, Stanford University; Alan Reid, Monash University; Charlotte Clark, Duke University; Nicole Ardoin, Stanford University

10:45 AM–12:15 PM
Workshops
Encountering Ecojustice with Salmon in Alaska and the Pacific Northwest

Salmon migration is a powerful topic for ecojustice in Alaska and the Pacific Northwest. This session focuses on how to approach ecojustice issues with educators. As we share stories from research, we discuss research ideas, partnerships, citizen science, and youth-guided activism. Place-based education is emphasized and publication opportunities are provided.

Presenters: Mike Mueller, University of Alaska-Anchorage; John Lupinacci, Washington State University; Clayton Pierce, Western Washington University; Nini Hayes, Western Washington University; Carie Green, University of Alaska-Fairbanks
**WEDNESDAY**

**Exploring Cross-Cultural Methodological Research Challenges In Environmental Education**

**202B**

This session will explore challenges that can arise when scholars conduct cross-cultural research focused on approaches and outcomes of different EE interventions. It will create a forum for researchers to both share their own experiences conducting EE research around the globe, and discuss strategies and opportunities for collecting meaningful data.

**Presenter:** Lilly Pascoe Briggs, Cornell Lab of Ornithology

**11:45 AM-12:15 PM**

**Facilitated Discussion**

**Connection to Nature: Approaches, Measures, and Collaborative Opportunities**

**201B**

We, as researchers and evaluators, use a variety of strategies to assess connection to nature. Using the lenses of practicality and utility, we introduce several frequently used tools with the hope of encouraging practitioners to collaborate with us to examine connectedness to nature in a variety of settings in the coming year.

**Presenters:** Nicole Ardoin, Stanford University; Martha Monroe, University of Florida; Cathy Jordan, Children & Nature Network; Kristen Kunkle, NAAEE; Lauren Watkins, White Oak Conservation/University of Florida; Anna Lee, Stanford University

**12:15 PM-1:30 PM**

**Buffet Lunch**

**111C**

**1:30 PM-2:00 PM**

**Roundtables**

**111AB**

**Addressing the Challenge of Characterizing Settings and Youth Participation in Citizen Science Projects**

In this session, we explore early data from multiple natural history museums in our study of youth participation in both field-based and online citizen-science learning settings. We will discuss methodological obstacles to qualitative and quantitative data collection and analysis across this range of youth citizen science experiences.

**Presenter:** Heidi Ballard, School of Education, University of California-Davis

**Building a Conceptual Model for Environmental Identity Development**

Environmental identity, or the meanings we attach to our relationship with the environment, guides how we educate and make decisions about environmental issues. In this roundtable session, we propose a conceptual model for capturing environmental identity through personal narrative work. Further development of the model and its implications will be discussed.

**Presenters:** Hillary Marie Mason, University of Colorado-Denver; Bryan Wee, University of Colorado-Denver

**Deep and/or Wide? Youth Agency Across Ten Citizen Science Cases**

How can participation in citizen science foster youth agency within science, the environment, and their community? Working with data from our in-progress study of 12 cases of youth-focused citizen science, we invite participants to critique and build analysis frames that allow comparison across EE cases more broadly in collaboration with practitioners.

**Presenter:** Heidi Ballard, School of Education, University of California-Davis

**Early Childhood EE Research**

NAAEE’s Natural Start Alliance and the *International Journal of Early Childhood Environmental Education (IJECEE)* are building a research base for early childhood EE. Join a discussion to share what you are doing; hear about other early childhood EE research; learn about *IJECEE*, including an upcoming special issue; and discuss what’s needed to advance research in the field.

**Presenters:** Emilian Geczi, NAAEE; Betty Olivolo, NAAEE; Yash Bhagwanji, Florida Atlantic University

**EE Lab School(s): Preparing “Preservice” Environmental Educators for the Future**

In this roundtable session, we foster discussion around an intriguing research and practice thought experiment: Could John Dewey’s Lab School approach be a model for preparing undergraduates to become future environmental education change agents? Join us to explore an example space that could pilot and study an EE Lab School.

**Presenters:** Timothy Zimmerman, Hampshire College; Colleen Kelley, Hitchcock Center for the Environment
Environmental Decision Making: How Youth Use Their Citizen Science Data
Once youth have collected data through environmental monitoring programs, how do they use their data to make environmental decisions? What other information do they draw on? We examine ways youth navigate campus-based habitat restoration projects through their community and a citizen science project on local birds.
Presenters: Erin Bridges Bird, School of Education, University of California–Davis; Heidi Ballard, School of Education, University of California–Davis

Examining the Role of Social and Emotional Learning in Residential EE
Residential environmental education (REE) supports young people’s social and emotional development. To date, social and emotional learning (SEL) within EE has not been well articulated. We will share and discuss a draft framework theorizing how SEL and REE align, REE supports SEL growth, and SEL skills support environmental literacy development.
Presenters: Kathleen O’Connor, NatureBridge; Indira Phukan, Stanford University; Nicole Ardoin, Stanford University

Harnessing Digital Media to Support, Rather Than Hinder, Environmental Literacy
Digital media have potential to engage youth in place-based education and in social and civic participation. We will share our approach to engage and research art-oriented teenage girls in science-based stories about their communities using augmented reality, and will facilitate a discussion on harnessing digital media to support environmental literacy.
Presenters: Cathlyn Stylinski, University of Maryland Center for Environmental Science; Kelly Riedinger, Oregon State University Center for Research on Lifelong STEM Learning; Ruth Kermish-Allen, Maine Math and Science Alliance

Leveraging Environmental Education’s Catch-Up Effect
Environmental education can help traditionally underachieving students catch up to their peers. How can researchers leverage their studies to emphasize these results? Come share your experiences and your research as we discuss measurement, applications, and dissemination of findings.
Presenters: Kathryn Stevenson, North Carolina State University; Steven Jackson, North Carolina State University; Renee Strnad, North Carolina State University; Ryan Olson, Muddy Sneakers, Inc.

Nature Playscapes and Pedagogies: Research, Affordances, and Teachers’ Practice
Are nature playscapes a “third teacher” for early childhood environmental education? How can teachers facilitate and substantiate positive child outcomes in playscapes? How critical is playscape design? What affordances and teacher pedagogy best support play and inquiry? Come debate results from a National Science Foundation supported research project.
Presenters: Victoria Carr, University of Cincinnati; Rhonda Brown, University of Cincinnati; Heidi Kloos, University of Cincinnati; Catherine Maltbie, University of Cincinnati; Leslie Kochanowski, University of Cincinnati; Sue Schlembach, University of Cincinnati

Leap from Climate Change Concept Map to Collaborative Metacognition Toolbox
Listen to the story of the development of the resource-linked climate change concept map and how it catalyzed preliminary development of a metacognition toolbox. Imagine a collaborative Metacognition Toolbox to support learning about and acting on “wicked big problems.” Bring your favorite thinking tools to write the next chapter.
Presenter: Jane Heinze-Fry, Museum Institute for Teaching Science (MITS, Inc.)

Facilitated Discussion
Research Lessons: Working with Teachers and Schools
When researchers enter the K–12 realm, we engage in boundary crossing. The two communities vary enough that issues of culture and bureaucracy can arise. How we handle these issues can lead to frustration or successful research. In this session, we will make space for participants to share their own knowledge.
Presenters: Roberta Hunter, Rutgers University; Rebecca Jordan, Rutgers University

2:00 PM–2:30 PM
201A
2:00 PM–2:30 PM

**Skill Builder**

**Research and Evaluation @eePRO**

**201C**

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](http://naaee.org/eeapro/groups/research-and-evaluation)

**Presenters:** Kathayoon Khalil, Seattle Aquarium; Alan Reid, Monash University; Nicole Ardoin, Stanford University

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2:00 PM–3:30 PM

**Workshops**

**EE Research in the Age of #MeToo: Feminist Caucus Workshop**

**202B**

In light of the #MeToo movement, this workshop will be restricted to those who identify as women. We will: discuss challenges women researchers have faced in the field, noting how these can be amplified by race, class, sexuality, ability, and body size; offer support; and identify future professional needs.

**Presenters:** Catherine Hart, University of Regina; Teresa Lloro-Bidart, California State Polytechnic University, Pomona; Sarah Riggs Stapleton, University of Oregon

**From Wading Through Data to Swimming Efficiently: Qualitative Data Analysis Software**

**201B**

Handling large amounts of qualitative data in various formats can be a challenge in EE research and evaluation. Qualitative data analysis software (QDAS) packages are one way to streamline your coding and analysis through improved data management and organization. This session will introduce the basics of coding and QDAS.

**Presenters:** Indira Phukan, Stanford University; Noelle Wyman Roth, Duke University

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2:30 PM–3:30 PM

**Facilitated Panels**

**A National Collaborative for Food, Energy, and Water Education Research**

**201A**

This session highlights efforts to cultivate a national, transdisciplinary network of educators and education researchers focused on the food-energy-water nexus. This session will feature a panel of experts and an opportunity to explore synergies and shared commitments between the Nebraska Collaborative for Food, Energy, & Water Education (NC-FEW) and the NAAEE community.

**Presenters:** Christine Jie Li, University of Missouri; Nicole Ardoin, Stanford University; K.C. Busch, North Carolina State University; Kathryn Stevenson, North Carolina State University

**Moderator:** Cory Forbes, University of Nebraska–Lincoln

**Trajectories in Climate Change Education and Research**

**201C**

This session explores the current state of climate change education and research. Presentations will synthesize past and present research initiatives and highlight ongoing projects, which will set the stage for lively discussions, hopes, and imaginings about the future of climate change education and research.

**Presenters:** Kristen Hargis, University of Saskatchewan; Alan Reid, Monash University; Yanyu Li, University of Saskatchewan

**Moderator:** Marcia McKenzie, Sustainability Education Research Institute, University of Saskatchewan
3:45 PM–4:45 PM

**Keynote Presentation**

**Dolores Calderon**

Confronting the Incomprehensible in Research: Ongoing Dispossessive Logics of Colonialism

111AB

Dr. Dolores Calderon (Mexican/Tigua) is an associate professor of youth, society, and justice at Western Washington University’s Fairhaven College of Interdisciplinary Studies. She is from the El Paso/Juarez border region and now lives on the US/Canadian border. Her research interests include coloniality/settler colonialisms, land education, indigenous epistemologies, and border issues as they manifest themselves in educational contexts. Some of her research projects include examining how settler colonial ideologies shape social studies curriculum, in attitudes around Title XI American Indian programs (formerly Title VII), teacher education, and notions of dispossession broadly.

A research project she is excited in pursuing is examining how archives have been (mis)used to frame ideas of mestizaje. As a firm believer that theory is best illuminated by engagement, she values the work educators do to concretize critical perspectives. She has published in *Qualitative Inquiry, Educational Studies, Environmental Education Research, Harvard Educational Review,* and *Anthropology & Education Quarterly.* She is also the co-author of *Reclaiming the Multicultural Roots of US Curriculum: Communities of Color and Official Knowledge in Education.*

4:45 PM–5:00 PM

**Wrap-Up and Thanks**

**111AB**

**Presenters:**

Alan Reid, Monash University Research Symposium Chair

Marcia McKenzie, University of Saskatchewan Research Symposium Co-Chair

Look forward to the rolling hills and beautiful horse farms of **Lexington, Kentucky**, the Horse Capital of the World and home of the 2019 NAAEE Conference (October 15–19).

Plan a horse farm tour and discover everything Lexington has to offer with curated guides at [sharethelex.com](http://sharethelex.com).