

# 17th Annual NAAEE Research Symposium

## Event Schedule

Thu, Oct 08, 2020

7:00pm

### Reception: Networking Opportunity

🕒 7:00pm - 8:00pm, Oct 8

📍 Special Event

We hope you'll join us as we build on established relationships and meet new colleagues during this informal kick off to the 2020 Research Symposium.

Fri, Oct 09, 2020

11:00am

### Welcome

🕒 11:00am - 11:30am, Oct 9

Plenary Session

#### 📣 Speakers



**Olivia Aguilar (she/her)** Leslie and Sarah Miller Director of the Miller Worley Center for the Environment, Mount Holyoke College



**Charlotte Clark** Assistant Professor of the Practice, Duke University

11:30am

### Children "Greening" and "Blueing" Their Community

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

Pedagogy and Programming

Based on my work in the Dominican Republic and the United States, this project explores how children (5–8 years) can directly engage in civic ecology practices (CEPs), such as community gardening and shoreline cleanups, and the implications of this engagement for sustainability pedagogy, children's learning, and broader social-ecological systems.

#### 📣 Contributor



**Marianne Krasny** Professor, Cornell University

 **Presenter**



**Elena Dominguez Contreras** Cornell university

## Climate Change, Marine Science, and the NGSS Professional Development: Planning for K-8

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

Climate change and marine science are often unfamiliar topics for K-8 teachers. The NGSS provide many opportunities to address them, but teachers are sometimes uncomfortable with their use. We used a focus group to describe the current state of baseline knowledge in these topics and offer plans for professional development.

 **Presenter**



**Lauren Madden** Associate Professor, The College of New Jersey



**Louise Ammentorp** Associate Professor, The College of New Jersey

## Culturally Responsive Evaluation and Equity of Educational Outcomes: Conversation Continued

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

**Method and Theory**

How can EE programs produce high quality evaluation that infuses culturally responsive practices? To spark audience discussion, professional evaluators will describe their progress and challenges on a national culturally-responsive and equitable evaluation initiative. Come exchange with us on an emerging framework and strategies for authentic stakeholder engagement and inclusive evaluation.

 **Moderator**



**Charlotte Clark** Assistant Professor of the Practice, Duke University

 **Presenter**



**Libby McCann** Faculty & Director, Environmental Education Program, Antioch University New England



**Jean Kayira** Core Faculty, Antioch University New England



**Liz DeMattia** Duke University



**Karyl Askew** Principal Consultant, Karyl Askew Consulting, LLC Self-employed

## EE Empowering Communities

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

Method and Theory

### 2 Subsessions

- **Can EE Promote Collaborative Management Between Communities and Federal Agencies in Puerto Rico?**

🕒 11:30am - 12:15pm, Oct 9

- **Ethically Bridging Community and Conservation**

🕒 11:30am - 12:15pm, Oct 9

## Pedagogical Approaches to Sustainability in Higher Education

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

Method and Theory

Pedagogy and Programming

### 2 Subsessions

- **Competency-Based Self-Reflection to Boost Sustainability Mindset: An Action Research Study**

🕒 11:30am - 12:15pm, Oct 9

- **Professor as Guide on the Side: Student-Led Discussions to Teach the Environmental Humanities**

🕒 11:30am - 12:15pm, Oct 9

## Teach ME Outside: Evaluating a Systemic Capacity-Building Initiative in Maine

🕒 11:30am - 12:15pm, Oct 9

📍 Research Roundtable

Method and Theory

Informed by the findings of a landscape analysis of the state of EE in Maine, a collaborative effort is working to inject capacity-building opportunities across the state to build and advance the field. This roundtable discussion will share our process for engaging stakeholder voices and studying systems-level change.

🗣️ Contributor



**Nathan Broaddus** Manager, Nature Based Education Consortium

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 **Presenter**



**Alexandria Brasili** Research Associate II, Maine Mathematics and Science Alliance



**Ruth Kermish-Allen** Executive Director, Maine Mathematics and Science Alliance



**Olivia Griset** Executive Director, Maine Environmental Education Association

**12:30pm**

### A Lifeline for Rescuing Research Questions While Swimming in Bias

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Method and Theory**

Positive change begins with understanding the role personal experience and academic effort play in the identification of meaningful research questions. If we initially attend to multiple factors and confounding variables early in the research design process, they become valuable aids for testable research questions that can lead to inspiring results.

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 **Speaker**



**Susan Duncan** Environmental Educator, Middle School Science Teacher & Researcher, Willamette Valley Ecoregion

### Challenges in Implementing Science Learning Experiences in Outdoor Education Programs

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

This session aims to explore our two-pronged research question: What challenges emerge in the implementation of high-quality student- and science-centered education in outdoor science learning experiences, and where is the disconnect (“the research to practitioner gap”), if any, between research-based program design, and the translation of those into practitioner practice?

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 **Contributor**



**Craig Strang** Co Chair, California Environmental Literacy Initiative

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**Presenter**



**Aparajita Pande** UC Berkeley



**Valeria Romero** Research Group Deputy Director, Lawrence Hall of Science, UC Berkeley



**Vasiliki Laina** Graduate Student Researcher, UC Berkeley



**Melissa Collins** Senior Research Lead, Lawrence Hall of Science, UC Berkeley

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## Design of a 13-Year Collaborative Continuous EE Partnership

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

I am developing a long-term collaboration with my local schools to provide EE experiences for every student every year, K-12. We will discuss how to design curriculum to provide long-term continuity and how to measure program outcomes to capture the value of a multi-year experience.

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**Presenter**



**Susan Caplow** University Of Montevallo

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## Learning Gardens Laboratory: Higher Education's Role in Community Food Security

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

Higher education has a role and responsibility in supporting local communities to build resilience and food security. Learning gardens and educational farms offer spaces for people to connect directly with the food system and begin reclaiming their food sovereignty. The Learning Gardens Laboratory serves as a case study for discussion.

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**Presenter**



**Sybil Kelley** Associate Professor of Science Education & Sustainable System, Portland State University Full-time

## Nature Preschools, Executive Function Skills and Early Academic Learning: How and for Whom

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Method and Theory**

As evidence of nature preschool benefits grow, research investigating the "why" and "how" and "for whom" is needed. This discussion focuses on a study underway that aims to explore what configurations of nature play best support EFS development and early academic learning, and the unique contribution of play in nature in supporting these school readiness outcomes.

🗣️ **Presenter**



**Julie Ernst** Professor, University of MN Duluth

## Partners Learning in Place: Researching a STEAM Teacher Education Semester

🕒 12:30pm - 1:15pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

The purpose of our research is to investigate how teacher candidates' experiences in STEAM field studies with community partners can inform our work with an integrated practicum semester based on a curriculum of place. Our project considers varying perspectives of place as it informs STEAM teacher education pedagogy.

🗣️ **Presenter**



**Kevin O'Connor** Associate Professor, Mount Royal University

**1:30pm**

## EE Pedagogy That Inspires Change

🕒 1:30pm - 2:30pm, Oct 9

**Plenary Session**

🗣️ **Speakers**



**Corey Knox** Research Scientist/Program Director, University of Arizona—College of Education



**Fikile Nxumalo** University of Toronto



**Alexa Schindel** University at Buffalo-SUNY

3:00pm

## Beyond the Wood Cookie: Engaged Research in Outdoor Education

🕒 3:00pm - 3:45pm, Oct 9

📍 Panel Presentation

**Method and Theory**

This session explores an ongoing research collaboration between an Indigenous and a White researcher from different epistemological and ontological positions conducting research with outdoor schools in Oregon. The research story presented explores the process of situating a research agenda in time, place, and context, distinctly Indigenous methodological positions.

### 🗣️ Presenter



**Spirit Brooks** Research, Evaluation, and Assessment Coordinator, Oregon State University Extension Outdoor School Program

### 🗣️ Speaker



**Steven Braun** Oregon State University Outdoor School

## Opening the Black Box of Publishing in Environmental and Sustainability Education

🕒 3:00pm - 3:45pm, Oct 9

📍 Panel Presentation

**Method and Theory**

This session reunites editors from two key journals on environmental and sustainability education: Environmental Education Research and The Journal of Environmental Education. The session (1) explores how researchers might navigate the shifting landscape and priorities in academic publishing, and (2) discusses common publishing pitfalls, and how to address them.

### 🗣️ Presenter



**Alberto Arenas** Assistant Professor, University of Arizona



**Alan Reid** Monash University



**Austin Cruz** University of Arizona



**Kelly Smith** University of Arizona

## Promising Practices in Collective Evaluation

🕒 3:00pm - 3:45pm, Oct 9

📍 Panel Presentation

### Method and Theory

Collective evaluation—a process by which multiple organizations use the same instrument to measure outcomes—provides a new way for EE to demonstrate its impact as a field. Join us for a panel discussion sharing researcher and practitioner perspectives on promising practices in collective evaluation.

### 🗣️ Moderator



**Lauren Gibson** PhD student, North Carolina State University

### 🗣️ Presenter



**Kathryn Stevenson** Assistant Professor, NC State University



**Charlotte Clark** Assistant Professor of the Practice, Duke University

4:00pm

## Australasian Environmental Educators' Perceptions of Education for Sustainability

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

### Pedagogy and Programming

Three Australasian environmental education organisations surveyed their members about their perceptions of EFS. Using current EFS theoretical positions, their perceptions were thematically analysed. Initial results suggest there is a rift between theory and educators' perceptions. How can we ensure our data analysis is rigorous? How could this rift be bridged?

### 🗣️ Presenter





**Peta White** Academic, Deakin University

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**Speaker**



**Sally Birdsall** Senior Lecturer, The University of Auckland

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## Community, Collaboration, and Care: Feminist Methodologies for Environmental Education Research

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

**Method and Theory**

Girls Outdoor Adventure in Leadership and Science assumes a feminist approach to collective knowledge-making through a participatory research team. This roundtable explores practical examples of the process, challenges, and opportunities of feminist methodologies in environmental education research, while opening up broader conversations about theoretical and methodological considerations of feminist research.

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**Contributor**



**Rylie Ellison** Graduate Student Researcher, University of California, Davis



**Katherine Dynarski** Postdoctoral Scholar, University of California, Davis

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**Presenter**



**Kaitlyn Murray** University of California, Davis



**Chris Jadallah** PhD Student, University of California, Davis



**Jenna Turpin** Girls Outdoor Adventure in Leadership and Science (GOALS)



**Maria Camila Ospina** Graduate Student, UC Davis



**Emily Pascoe** University of California Davis



**Alycia Drwencke** Cornell Cooperative Extension



**Rebecca Godwin** PHD Student, University of California, Davis

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 **Speaker**



**Sarah Abusaa** Girls Outdoor Adventure in Leadership and Science (GOALS)

## Exploring Affective Relations with the More-Than-Human World at Forest School

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

**Method and Theory**

To spark conversation about ways EE researchers might broaden their research beyond focusing only on human experiences, the presenter will share insights gleaned from her research on empathy within outdoor nature-based programs, taking inspiration from posthumanism, common worlds research, and multispecies ethnography.

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 **Presenter**



**Elizabeth Boileau** PhD Candidate, Lakehead University

## Informal Environmental Learning at Biological Field Stations

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

This session explores the variety of pedagogies and approaches to science and environmental learning used by biological field stations when offering informal STEM programs to the public. This session is relevant to practitioners and researchers interested in discussing how these place-based programs can innovatively inspire change and expand public participation.

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 **Contributor**



**Jill Zarestky** Assistant Professor, Colorado State University



**Rachel Short** Texas A&M University



**Anna Lawing** Assistant Professor, Texas A&M University

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**Presenter**



**Rhonda Struminger** Assistant Professor of the Practice, Texas A&M University



**Lauren Vilen** Colorado State University

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## The Impacts of Environmental Identities on Ocean Acidification Free-Choice Learning

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

**Method and Theory**

Ocean acidification is a critical global issue, challenging to communicate. Environmental identities (e.g., culture, knowledge, and traditional wisdom) can be leveraged to shape what we find as relevant and thus can be used to shape interest and future museum exhibition designs, but require new cross-cultural research techniques.

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**Presenter**



**Shu-Min Yang** Ph.D. student, Oregon State University

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## Using Virtual Reality to Connect Students to the Environment

🕒 4:00pm - 4:45pm, Oct 9

📍 Research Roundtable

**Pedagogy and Programming**

In today's urbanised world, the ideal of taking children into the environment to foster connections may not always be possible. Virtual Reality has potential to be the next best thing. We are using Design Based Implementation Research to trial giving children 'immersive' underwater experiences to enhance learning about marine conservation.

 Presenter



**Chris Eames** Associate Professor in Environmental and Sustainability education, University of Waikato

5:00pm

### Research Poster Session

🕒 5:00pm - 6:15pm, Oct 9

Enjoy the poster presentations, watch introductory videos, and drop in to virtual meets for live meetings hosted by the researchers through Whova's community board.

6:30pm

### Co-Designing Equitable Field-Based Learning Environments

🕒 6:30pm - 7:30pm, Oct 9

📍 Research Workshop

**Pedagogy and Programming**

This workshop for environmental educators and researchers will explore an equitable model of field-based science learning that focuses on learner sense making. We will co-design pedagogical tools for supporting young learners' complex socioecological deliberation and decision-making in ways that build with family and community knowledges and practices.

 Presenter



**Priya Pugh** Postdoctoral Researcher, University of Washington Bothell



**Megan Bang** Associate Professor, University of Washington



**Charlene Montaño Nolan** Assistant Professor, Western Washington University



**Jordan Sherry-Wagner** Course Instructor, University of Washington



**Leah Bricker** Research Scientist, Northwestern University School of Education and Social Policy



**Carrie Tzou** Assistant Professor, University of Washington Bothell

## Navigating Grad Life in the EE Field

🕒 6:30pm - 7:30pm, Oct 9

📍 Research Workshop

This workshop is taking the place of our usual Graduate Student Breakfast and will give graduate students a chance to interact as well as provide time to breakout into small groups to talk with experienced mentors around special topics like writing, teaching virtually, working with mentors, and maintaining networks.

### 👤 Presenter



**Naama Sadan** Visiting PhD Student, University of California, Berkeley



**Roberta Hunter** Research Associate, Michigan State University



**Teresa Lloro-Bidart** California State Polytechnic University–Pomona



**Johnny Lupinacci** Associate Professor, Washington State University

## Using a Mixed-Methods Approach to Evaluate Participant Outcomes

🕒 6:30pm - 7:30pm, Oct 9

📍 Research Workshop

### Method and Theory

When engaging community members in environmental education, it is critical to assess outcomes that may result from participation, such as changes in self-efficacy, knowledge, and motivations. There are many ways to do so, both quantitatively and qualitatively, and this hands-on workshop will review different methods.

### 👤 Contributor



**Ariane Mohr-Felsen** Graduate Research Assistant, Project Harvest, University of Arizona

### 👤 Presenter



**Shana Sandhaus** Research Specialist, University of Arizona



**Dorsey Kaufmann** Multimedia Specialist, University of Arizona



**Kunal Palawat** Graduate Research Assistant, Integrated Environmental Science and Risk Lab

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**Speakers**



**Sanlyn Buxner** Post Doctoral Research Associate, University of Arizona



**Monica Ramirez-Andreotta** Assistant Professor of Soil Water and Environmental Science, University of Arizona

Sat, Oct 10, 2020

12:00am

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**Research Poster Gallery**

🕒 12:00am - 11:55pm, Oct 10

Open to view all Research Poster Sessions.

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**35 Subsessions**

- **A Grounded Theory Exploration of University Students' Sustainability Leadership Development**  
🕒 12:00am - 11:55pm, Oct 8
- **Adolescent Outdoor Activity Participation Impacts Well-Being During the COVID-19 Pandemic**  
🕒 12:00am - 11:55pm, Oct 8
- **Analyzing Youth Action on Socioenvironmental Challenges Across Scale**  
🕒 12:00am - 11:55pm, Oct 8
- **Assessing Alumni Outcomes of a Positive Youth Development Organization**  
🕒 12:00am - 11:55pm, Oct 8
- **Children Film Climate Change: Insights from a Participatory Programme with Upper-Elementary School Children**  
🕒 12:00am - 11:55pm, Oct 8
- **Cognitive and Behavioral Engagement to Increase Student Environmental Literacy and Empowerment**  
🕒 12:00am - 11:55pm, Oct 8
- **Collective Environmental Literacy: Pilot Testing Measures in Two Communities**  
🕒 12:00am - 11:55pm, Oct 8

- **Designing Meaningful Environmental Education That Builds Student Agency**  
🕒 12:00am - 11:55pm, Oct 8
- **Developing a Conceptual Model for Facilitating Citizen Science In and Out of Schools**  
🕒 12:00am - 11:55pm, Oct 8
- **Do Nature Experience and Socialization Predict Preschoolers' Environmental Moral Reasoning?**  
🕒 12:00am - 11:55pm, Oct 8
- **Environmental Education in Tourism Contexts: A Systematic Review of Methodology**  
🕒 12:00am - 11:55pm, Oct 8
- **Evaluation of Experiences in the Canadian Conservation Corps**  
🕒 12:00am - 11:55pm, Oct 8
- **Everyone Wins! Designing Citizen Science Programs for Educators and Scientists**  
🕒 12:00am - 11:55pm, Oct 8
- **Flourishing in Nature: Researching Impacts of Nature Play on Young Children**  
🕒 12:00am - 11:55pm, Oct 8
- **Fostering Conservation Ethic with Repeated Exposure to an Environmental Education Program**  
🕒 12:00am - 11:55pm, Oct 8
- **Fostering Undergraduate Students' Water Literacy: Discipline-Based Education Research in a Transdisciplinary Water Course**  
🕒 12:00am - 11:55pm, Oct 8
- **Freedom Seekers: The Underground Railroad, Great Lakes, and Science Teaching**  
🕒 12:00am - 11:55pm, Oct 8
- **From Urban Agriculture Education to Civic Engagement: Scoping Review**  
🕒 12:00am - 11:55pm, Oct 8
- **Gaps and Opportunities for China's Secondary School Climate Change Education**  
🕒 12:00am - 11:55pm, Oct 8
- **Gendered Matters in Nature-Based Education**  
🕒 12:00am - 11:55pm, Oct 8
- **Impacting Positive Student Outcomes by Empowering Teachers: A Mixed-Methods Approach**  
🕒 12:00am - 11:55pm, Oct 8
- **Insights for Teacher Education for Sustainable Development Practice and Research**  
🕒 12:00am - 11:55pm, Oct 8
- **Lessons From Developing a Climate Change Education Workshop for Remote Communities During COVID-19**  
🕒 12:00am - 11:55pm, Oct 8
- **Mediational Constellations of Sense Making in Field-Based Learning**

## Environments

🕒 12:00am - 11:55pm, Oct 8

- **On the Continuum: Reviewing Preservice Sustainability Science Education Literature**  
🕒 12:00am - 11:55pm, Oct 8
- **Pilot Cross-Country Survey on Taiwanese and Japanese Undergraduates' Nature Connection**  
🕒 12:00am - 11:55pm, Oct 8
- **Preschool Children's Perspectives on Play Spaces: A Photo Elicitation Study**  
🕒 12:00am - 11:55pm, Oct 8
- **Recycled Fireballs: Transmission of Youth EE Skills Across Communities**  
🕒 12:00am - 11:55pm, Oct 8
- **Significant Adults' Perspectives About Young Children's Engagement in Environmental Stewardship**  
🕒 12:00am - 11:55pm, Oct 8
- **Supporting Elementary Teachers' Pedagogical Change to Include Outdoor Learning**  
🕒 12:00am - 11:55pm, Oct 8
- **The Relationships Among Social Norm, Nature Connection and Environmental Behavior**  
🕒 12:00am - 11:55pm, Oct 8
- **The Role of Resilience Education Facing Climate Crisis**  
🕒 12:00am - 11:55pm, Oct 8
- **The Watershed Awareness Using Technology and Environmental Research for Sustainability (Waters)**  
🕒 12:00am - 11:55pm, Oct 8
- **VCAR: An Empowerment- and Action-Oriented Methodology for Participant-Driven Research**  
🕒 12:00am - 11:55pm, Oct 8
- **Who Participates in Citizen Science? A Preliminary Sociodemographic Meta-Analysis**  
🕒 12:00am - 11:55pm, Oct 8

## 11:00am

### Conceptualizing Community-Level Environmental Literacy

🕒 11:00am - 11:45am, Oct 10

📍 Panel Presentation

#### Method and Theory

EE research tends to focus on changes within individuals, but today's environmental problems are not solved by individuals. To encourage the collective action needed to address large-scale problems, we must understand environmental literacy at the community level. Here, we present different perspectives on and working definitions for community-level environmental literacy.

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👤 Contributor





**Sarah Carrier** Associate Professor, North Carolina State University



**Charlotte Clark** Assistant Professor of the Practice, Duke University



**Danielle Lawson** Assistant Professor, Penn State University

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**Presenter**



**Lauren Gibson** PhD student, North Carolina State University



**Kathryn Stevenson** Assistant Professor, NC State University



**Mele Wheaton** Research Scholar, Stanford University



**Liz DeMattia** Duke University



**K.C. Busch** Asst. Professor of STEM Education, North Carolina State University

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## Inspiring Theories and Methods in EE

🕒 11:00am - 11:45am, Oct 10

📍 Panel Presentation

**Method and Theory**

**Pedagogy and Programming**

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### 3 Subsessions

- **Bias, Blame, and Bright Spots: Narrative Fallacies of Environmental Issues**  
🕒 11:00am - 11:45am, Oct 10
- **Practicing Change: A Practice Theory Approach to Climate Change Education**  
🕒 11:00am - 11:45am, Oct 10
- **Recognizing Narrative Identities and the Design of Environmental Education Programs**

🕒 11:00am - 11:45am, Oct 10

## Listening to Young Children's Voices In EE Research

🕒 11:00am - 11:45am, Oct 10

📍 Panel Presentation

### Method and Theory

This panel presentation describes methods for eliciting children's perspectives on nature, including their knowledge, feelings, place preferences, activities, and environmental moral reasoning. Interview and photo elicitation techniques will be described. Considerations for interviewing children with limited nature experience will be discussed.

### 🗣️ Moderator



**Julia Torquati** Professor, University of Nebraska-Lincoln

### 🗣️ Presenter



**Hyerim Shin** University of Nebraska-Lincoln



**Donger Liu** Doctoral student, University of Nebraska-Lincoln



**Katie Krause** Extension Educator, University of Nebraska Extension

## Partnership-Based Design Thinking: Connecting Undergraduate Pedagogy with Practical Service

🕒 11:00am - 11:45am, Oct 10

📍 Panel Presentation

### Pedagogy and Programming

Service-learning projects with community partners can strongly connect undergraduate pedagogy and environmental practice. I suggest that "human-centered design-thinking" is an especially adaptable form of this approach, and present how design-thinking projects in the context of environmental equity are pedagogically rich for students and instructors and particularly generative for community partners.

### 🗣️ Presenter



**JuanMiguel Arias (he/él)** Postdoctoral Scholar, Colorado College

## Toward Everyday Environmental Education: Wild Pedagogies for Teacher Training

🕒 11:00am - 11:45am, Oct 10

📍 Panel Presentation

### Pedagogy and Programming

In this interactive session, we will focus on two questions: What knowledge and skills do PK-12 teachers need to become everyday environmental educators? If Jickling et al. (2018) argue for wild pedagogies in PK-12 education, what might wild pedagogies look like in teacher training programs and professional development opportunities?

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#### 📣 Presenter



**Scott Morrison** Associate Professor, Elon University



**Megan Zeni** PhD student, The University Of British Columbia



**Abigail Decker** Undergraduate Student, Elon University

12:00pm

## Welcome

🕒 12:00pm - 12:15pm, Oct 10

### Plenary Session

#### 📣 Presenter



**Jason Morris** Senior Program Officer, Pisces Foundation



**Judy Braus** Executive Director, North American Association for Environmental Education (NAAEE)

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#### 📣 Speaker



**Olivia Aguilar (she/her)** Leslie and Sarah Miller Director of the Miller Worley Center for the Environment, Mount Holyoke College

12:15pm

## COVID-19 and a Pedagogy of Eco-Solidarity

🕒 12:15pm - 1:00pm, Oct 10

**Plenary Session**

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👤 **Speaker**



**Alberto Arenas** Assistant Professor, University of Arizona

1:15pm

**Design-Based Research for Urban Outdoor Science Education**

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

**Method and Theory**

The Teaching Science Outdoors–Urban Partnerships (TSO–UP) project uses design-based research (DBR) methodology to examine how urban elementary teachers learn about using outdoor spaces around their school buildings for instruction. This session reflects on DBR in progress, identifying generative moments and challenges and taking an expansive view of DBR in environmental education research.

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👤 **Contributor**



**Gail Richmond** Present-elect, National Association for Research in Science Teaching



**Irene Bayer** Michigan State University



**Eleanor Kenimer** Doctoral Student, Michigan State University Full-time



**Tali Tal** Dean, Faculty of Education in Science and Technology, Technion - Israel Institute of Technology

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👤 **Presenter**



**Roberta Hunter** Research Associate, Michigan State University



**Kara Haas** Science Education & Outreach Coordinator, Michigan State University

## Growing Together: Opportunities for Collaboration Between Agricultural and Environmental Education

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

### Method and Theory

Agricultural and environmental education have significantly different histories as academic fields, which has led to disciplinary siloes. In this roundtable we will address ways in which agricultural and environmental scholars can make a more concerted effort to work together and advance avenues for collaboration.

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### 🗣️ Speakers



**Caitlin Reilly** Graduate Student, North Carolina State University



**Kathryn Stevenson** Assistant Professor, NC State University

## Internalizing Social Justice to Conduct Equitable Citizen Science Research

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

### Method and Theory

Social identities and systems of inequity inform research/academic institutions. What are the implications of scientific research that exclude certain groups of people? How do we internalize social justice in order to conduct more inclusive research? In this roundtable, we will ideate ways to better tackle inequality in ourselves and the systems we work in.

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### 🗣️ Contributor



**Ariane Mohr-Felsen** Graduate Research Assistant, Project Harvest, University of Arizona

### 🗣️ Presenter



**Kunal Palawat** Graduate Research Assistant, Integrated Environmental Science and Risk Lab



**Dorsey Kaufmann** Multimedia Specialist, University of Arizona



**Shana Sandhaus** Research Specialist, University of Arizona



**Sanlyn Buxner** Post Doctoral Research Associate, University of Arizona



**Monica Ramirez-Andreotta** Assistant Professor of Soil Water and Environmental Science, University of Arizona

## Investigating Community-Level Learning in Community and Citizen Science

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

**Method and Theory**

Investigations of individual outcomes in community and citizen science (CCS) are common. But how do communities also learn and change through such initiatives? This roundtable will explore the research challenges of assuming “the community” as a unit of analysis, drawing on examples from our research on CCS and dam removal.

### 🗣️ Contributor



**Ryan Meyer** UC Davis Center for Community and Citizen Science



**Heidi Ballard** School of Education, Univ. of California

### 🗣️ Presenter



**Chris Jadallah** PhD Student, University of California, Davis

## Online Interventions to Enhance Learning and Practice in Environmental Education

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

**Method and Theory**

The increasing demand for online learning in environmental education calls for sound pedagogies to foster learning and practice. We will share three interventions, including social norms, study groups, and social accountability, used in 5 online courses with over 3000 participants, and open a discussion on exploring other innovative online interventions.

### 🗣️ Presenter



**Yue Li** Cornell University



**Ji Yong Cho** Cornell University



**Alex Kudryavtsev** Research Associate, Cornell University



**Anne Armstrong** PhD Student, Cornell University

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**Speaker**



**Marianne Krasny** Professor, Cornell University

## Transforming School Systems Today; Ensuring a Sustainable Future for All

🕒 1:15pm - 2:00pm, Oct 10

📍 Research Roundtable

**Pedagogy and Programming**

This session is intended to spark a lively discussion about programming that can transform our educational systems into systems for sustainable education. As the world unravels around us, transformational change in schools and communities is needed to build resiliency and regenerative hope.

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**Presenter**



**Sybil Kelley** Associate Professor of Science Education & Sustainable System, Portland State University Full-time

**2:15pm**

## Collaborative Learning Among Teachers, Scientists and Youth Through University Science Outreach

🕒 2:15pm - 3:00pm, Oct 10

**Pedagogy and Programming**

We will discuss an ongoing action-oriented outreach program that examines collaborative learning among pre-service teachers, undergraduate science students and school-age youth in Montreal. This intergenerational, transdisciplinary project bridges across research in science teacher education, environmental science and youth engagement to learn and act together for our environment.

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**Presenter**



## EE Evaluation Research: Inspiring Collaborative/Collegial Engagement

🕒 2:15pm - 3:00pm, Oct 10

📍 Research Roundtable

### Method and Theory

O'Sullivan (2004) writes, "Unlike distanced evaluation, in which evaluators have little or no contact with program staff, collaborative evaluation deliberately seeks involvement from all program stakeholders during all stages of the evaluation." What might this mean in practice? Join us in this roundtable as we discuss planning for collaborative/collegial evaluation research design.

### 👤 Contributor



Mike Bingley n/a

### 👤 Presenter



Bonnie Shapiro Faculty Professor, Werklund School of Education, University of Calgary



Nicholas Butt Student, University of Calgary

## Engaging Community Partners in Youth-Focused Citizen and Community Science

🕒 2:15pm - 3:00pm, Oct 10

📍 Research Roundtable

### Pedagogy and Programming

Teachers are increasingly interested in using citizen and community science (CCS) in the classroom. Interacting with community partners supports agency with environmental science for students participating in CCS projects. How can environmental educators and researchers effectively engage local community members as well as environmental scientists and land managers in collaborative EE research?

### 👤 Presenter



Rebecca Perez University of California, Davis



Erin Bird Postdoctoral Researcher, University of California, Davis





**Ryan Meyer** UC Davis Center for Community and Citizen Science



**Heidi Ballard** School of Education, Univ. of California

## Exploring the Key Elements of a Climate Change Education Programme

🕒 2:15pm - 3:00pm, Oct 10

📍 Research Roundtable

### Pedagogy and Programming

An examination of a new resource showed that its elements are associated with instrumental environmental education where acquisition of knowledge leads to behaviour change. What it lacks is intrinsic, emancipatory elements which foster learners' environmental connectivity. What elements should be included so that the latter form of education is realised?

### 🗣️ Presenter



**Sally Birdsall** Senior Lecturer, The University of Auckland



**Chris Eames** Associate Professor in Environmental and Sustainability education, University of Waikato

## Jobs of the Future: Skills for Sustainability

🕒 2:15pm - 3:00pm, Oct 10

📍 Research Roundtable

### Method and Theory

This presentation draws on research into global trends involving expert interviews that identified '100 jobs of the future' in key areas and the skills needed for these. We interrogate future jobs relating to sustainability and community to identify future work and the skills needed by youth in the Anthropocene.

### 🗣️ Presenter



**Peta White** Academic, Deakin University

## Locating Science in Politics: New Approaches to Climate Change Education

🕒 2:15pm - 3:00pm, Oct 10

### Pedagogy and Programming

In the US, climate change remains a contentious topic that many science teachers avoid. This session will engage participants in considering the opposite--an approach that deliberately engages with denial and the contentious social history of climate change. Working together, researchers and practitioners will explore

data and share insight.

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 **Presenter**



**Lynne Zummo** Assistant Professor of Learning Sciences, University of Utah

**3:15pm**

### A National Collaborative for Research on Food, Energy, and Water Education

🕒 3:15pm - 4:00pm, Oct 10

📍 Panel Presentation

**Method and Theory**

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

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 **Moderator**



**Cory Forbes** Associate Professor | Director | Coordinator, University of Nebraska-Lincoln

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 **Presenter**



**Sarah Haines** Professor, Biology & Science Education, Towson University



**Erin McCool** Riverbend



**K.C. Busch** Asst. Professor of STEM Education, North Carolina State University



**Kathryn Stevenson** Assistant Professor, NC State University

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### Advancing Early Childhood Environmental Education Through Research

🕒 3:15pm - 4:00pm, Oct 10

📍 Research Roundtable

**Pedagogy and Programming**

Learn about the latest research published in the International Journal of Early Childhood Environmental

Education, an upcoming special issue, and how you can become involved as a reviewer and contributor. We'll discuss ways we can advance the field.

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 **Presenter**



**Yash Bhagwanji** Associate Professor, Florida Atlantic University



**Christy Merrick** Special Projects Adviser, North American Association for Environmental Education (NAAEE)



**Betty Olivolo** NAAEE

## Creating a New Normal: Intergenerational Pathways to Address Environmental Issues


🕒 3:15pm - 4:00pm, Oct 10

📍 Panel Presentation

**Pedagogy and Programming**

Children often inherit ideas from caregivers, but they are also important information sources for older relatives and community members. However, these bidirectional relationships are not always fully considered when assessing and designing environmental education programs. This panel presentation will center around three promising environmental topics for positive intergenerational learning outcomes.

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 **Moderator**



**Kathryn Stevenson** Assistant Professor, NC State University

 **Presenter**



**Danielle Lawson** Assistant Professor, Penn State University



**Jenna Hartley** PhD Student and ORISE Participant, NC State University and ORISE/US Environmental Protection Agency



**Caitlin Reilly** Graduate Student, North Carolina State University

4:15pm

## Approaches to Engaged Teaching and Research in Environmental Education

🕒 4:15pm - 5:15pm, Oct 10

📍 Research Workshop

### Method and Theory

Members of the Civic Ecology Lab will present their work across a spectrum of engaged research and teaching models. The session will afford scholars with engaged research experience the chance to reflect on their current efforts and researchers new to engagement the opportunity to develop a scholarship or syllabus plan.

### 📣 Presenter



**Anne Armstrong** PhD Student, Cornell University



**Alex Kudryavtsev** Research Associate, Cornell University



**Melanie Quiñones Santiago** Cornell University



**Yue Li** Cornell University



**Elena Dominguez Contreras** Cornell university



**Xoco Shinbrot** Postdoctoral Scholar, Cornell University



**Marianne Krasny** Professor, Cornell University

## Environment-Based Literacy: The Power of Writing Outside

🕒 4:15pm - 5:15pm, Oct 10

📍 Research Workshop

### Pedagogy and Programming

Writing is used in every subject, but many schools keep students on screens indoors rather than encouraging unstructured exploration. Educators, researchers, nonprofits, and other stakeholders need increased access to interdisciplinary environment-based literacy within their communities. Learn about environment-based literacy, join in brainstorming breakouts, and participate in facilitated question-and-answer discussions.

 Presenter



**Katrina Broughman** Nelson County Public Schools



**Marianne Krasny** Professor, Cornell University


## 5:45pm

### Mobilizing Climate Change Education Research to Inform Policy and Practice

🕒 5:45pm - 6:45pm, Oct 10

**Plenary Session**

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 Speakers



**Marcia McKenzie** Director and Professor , Sustainability and Education Policy Network



**Martha Monroe** Professor, University of Florida

## 6:45pm

### Closing

🕒 6:45pm - 7:00pm, Oct 10

**Plenary Session**

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 Speaker



**Olivia Aguilar (she/her)** Leslie and Sarah Miller Director of the Miller Worley Center for the Environment, Mount Holyoke College