



naaee

North American Association
for Environmental Education

In partnership with:



14TH ANNUAL RESEARCH SYMPOSIUM

October 17-18



SAN JUAN 2017

IMAGINE A WORLD



SAN JUAN 2017

IMAGINE A WORLD



Dear Friends and Colleagues:

Welcome to the NAAEE 14th Annual Research Symposium!

We are delighted to welcome you to this gathering of environmental education scholars from around the world. At this milestone year of Tbilisi +40, our Annual NAAEE Research Symposium encourages us to reflect on the evolution of our field and its trajectory, in light of today's trends, challenges, and opportunities. Through our keynote panels, facilitated discussions, poster sessions, and workshops, we will explore new ideas and approaches to advance our work. Over these two days, we encourage you to consider how emerging issues, methods, and theories might inform current and future EE research. We are eager to hear your thoughts throughout the symposium, and we promise there will be many opportunities for great conversation, networking, and collaboration.

All best wishes,

A handwritten signature in black ink, appearing to read "Nicole Ardoin".

Nicole Ardoin

Chair, Research Symposium
Co-Moderator, eePRO Research
and Evaluation Group

A handwritten signature in black ink, appearing to read "A. Reid".

Alan Reid

Co-Chair, Research Symposium
Co-Moderator, eePRO Research
and Evaluation Group

Monday, October 16 (Special Events)



Field Session

Today's Practices, Tomorrow's Opportunities: EE in a Long-Term Ecological Research (LTER) Program

Location: El Verde Research Station, El Yunque National Forest

11:00 AM-5:00 PM

During this field session, we will visit the El Verde Research Station, the research center for El Yunque National Forest, part of the US National Forest System. The session will have three primary components: (1) an interactive activity in the ecological teaching garden during which local students will share their research projects; (2) a tour of forest research sites, led by station director Dr. Jess Zimmerman; and (3) a design charrette wherein session participants will collaborate with the Station and Forest Service staff to brainstorm ways of maximizing and managing an upcoming change in visitor use of the area. Lunch will be provided and shared with local students, teachers, and station staff. (Pre-registration required.)

Coordinators: Dr. Rachelle Gould, University of Vermont; Dr. Charlotte Clark, Duke University; Dr. Noelia Báez Rodríguez, University of Puerto Rico, Río Piedras



Research Symposium Networking Dinner

Location: Touro Restaurant

7:00 PM-9:30 PM

Join with colleagues and friends for an evening of food, fun, and conversation focused on EE research. The group will be dining at Touro, which features Spanish and Caribbean-style tapas. In addition to casual conversation, from 8:00 PM to 9:00 PM, we'll have an engaging, low-stress, research-focused activity. Participants must have pre-registered and selected their meal choice by October 1. Registration fee does not include alcoholic beverages; please bring money to pay for drinks. Touro is located in Paseo Caribe within easy walking distance of the Caribe Hilton.

Schedule at a Glance

Tuesday, October 17

9:00 AM-9:15 AM	Welcome	Las Olas
9:15 AM-10:30 AM	Opening Keynote Panel Research Challenges and Opportunities at Tbilisi+40	Las Olas
10:30 AM-10:45 AM	BREAK	
10:45 AM-12:15 PM	Morning Poster Session	Salon Del Mar
10:45 AM-12:15 PM	Discussions and Workshops	See schedule for rooms
12:15 PM-1:30 PM	Research Symposium Luncheon	Las Olas Terrace
1:30 PM-2:45 PM	Keynote Panel	Las Olas
2:45 PM-3:00 PM	BREAK	
3:00 PM-4:00 PM	Afternoon Poster Session	Salon Del Mar
3:00 PM-4:00 PM	Roundtables	Las Olas
4:00 PM-6:00 PM	Reception and NAAEE Research Award Ceremony	Las Olas Terrace

Wednesday, October 18

7:30 AM-9:00 AM	Graduate Student Breakfast	Las Olas Terrace
9:00 AM-10:00 AM	Keynote Plenary Discussion	Las Olas
10:00 AM-10:15 AM	BREAK	
10:15 AM-10:45 AM	Roundtables	Las Olas
10:45 AM-12:15 PM	Discussions and Workshops	See schedule for rooms
12:15 PM-1:30 PM	Buffet Lunch	Gran Salon Las Rosales A
12:30 PM-1:30 PM	EE Feminist Caucus	Gran Salon Las Rosales E
1:30 PM-2:00 PM	Roundtables	Las Olas
2:00 PM-3:30 PM	Discussions and Workshops	See schedule for rooms
3:30 PM-3:45 PM	BREAK	
3:45 PM-4:45 PM	Closing Keynote Panel	Las Olas
4:45 PM-5:00 PM	Wrap-Up and Thanks	Las Olas

Tuesday

9:00 AM-9:15 AM

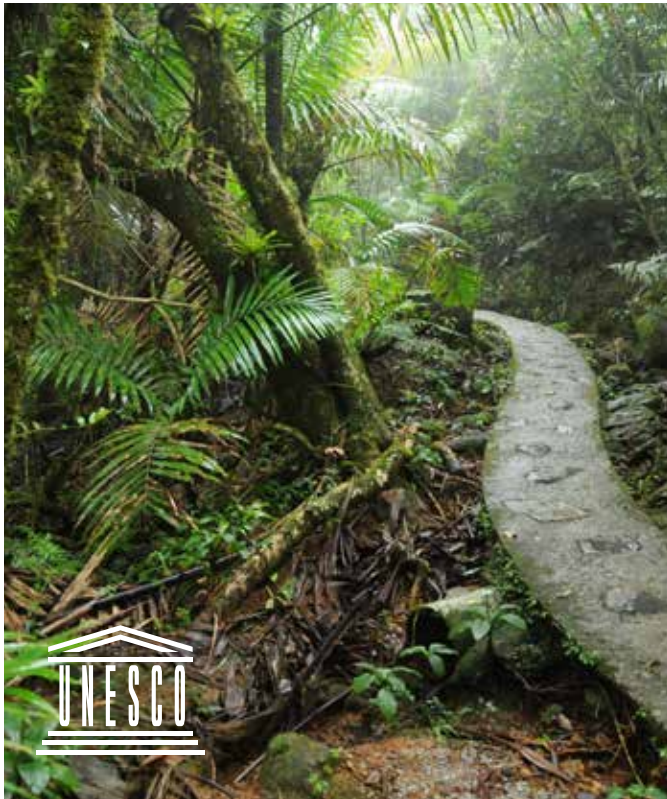
Welcome

Presenters:

Dr. Nicole Ardoin, Stanford University,
Research Symposium Chair

Dr. Alan Reid, Monash University,
Research Symposium Co-Chair

Las Olas



9:15 AM-10:30 AM

Opening Keynote Panel

Research Challenges and Opportunities
at Tbilisi+40

Las Olas

Our opening keynote speakers will reflect on the past 40 years of the environmental education field's history, with an emphasis on what has been researched since the 1977 signing of the Tbilisi Declaration at UNESCO's Intergovernmental Conference on Environmental Education. Panelists will consider how our research can play a role in the shared vision for the field's future.

Panelists: Dr. Marcia McKenzie, University of Saskatchewan; Dr. Martha Monroe, University of Florida; Dr. Arjen E.J. Wals, Wageningen University
Moderator: Dr. Alan Reid, Monash University

Panelists:



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. She is Principal Investigator of the Sustainability and Education Policy Network (www.sepn.ca), and co-author of the books *Critical Education and Sociomaterial Practice* (Peter Lang, 2016) and *Place in Research* (Routledge, 2015).



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 settings, teacher training, curriculum development, evaluation, and research.



Dr. Arjen E.J. Wals is Professor of Transformative Learning for Socio-Ecological Sustainability at Wageningen University in The Netherlands. Furthermore, he is the Carl Bennet Guest Professor in Education for Sustainable Development at IDPP, Gothenburg University, and he holds the UNESCO Chair of Social Learning and Sustainable Development. He maintains a popular blog at www.transformativelearning.nl.

10:45 AM–12:15 PM

Poster Session

Salon Del Mar AB

Assessing Outcomes of Safari Amphitheater Shows at the Pittsburgh Zoo and PPG Aquarium

The Pittsburgh Zoo's Conservation Education Department recently developed a program aimed at educating public audiences about the zoo's current efforts in conservation, rescue, research, and rehabilitation around the world.

Presenters: Jacob M. Smith, Slippery Rock University; Rebecca Thomas, Slippery Rock University



Photo: © NatureBridge

Assessing the Environmental Literacy of Teachers: A Novel Instrument

We want teachers and EE practitioners to be environmentally literate, yet we lack an instrument to assess teacher literacy. This poster explores the development of a new instrument for assessing teacher environmental literacy, and its use to determine the effects of professional development on environmental literacy.

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

At-Risk Teens Shape Environmental Challenges with Design

Can "design thinking" equip at-risk students with an ability to understand and propose solutions to the complex environmental challenges disproportionately impacting their lives and neighborhoods? This research showcases the perspectives of youth living in drought-ridden Los Angeles, California, toward design thinking as a teaching methodology and learning approach.

Presenter: Yanin Kramsky, Yale University

Comparative Analysis of National Environmental Education Acts in the World

As part of the effort by the Global Environmental Education Partnership (GEEP) to develop open access EE policy-related resources for capacity building worldwide, the study evaluates existing national EE acts to serve as a baseline for improvement and for adoption by countries seeking to formulate similar acts.

Presenter: Paul Ofei-Manu, Institute for Global Environmental Strategies

Connecting Audiences to Animals: To Name or Not to Name?

This exploratory study strived to expand on prior research regarding the effects of naming animals used as environmental education teaching tools. We measured participants' connectedness to nature and empathy after participating in animal programming when given a species common name against a name resembling their natural history or species' characteristics.

Presenter: Darcy Schueler, University of Georgia

Developing Energy Literacy in the Elementary Classroom

This in-progress interdisciplinary project combines elementary science education and sustainable architecture to develop, pilot, and assess fifth-grade energy literacy curriculum. The curriculum will increase students' energy literacy through supporting connections between Earth systems, energy production and use, and human-built infrastructure, with an emphasis on green buildings.

Presenters: Laura Zangori, University of Missouri

Direct Assessment of Skills in Citizen Science: Status, Challenges, and Opportunities

We will share our approach and findings on opportunities and challenges associated with directly assessing volunteers' skill in the context of citizen science. We will focus on embedded assessments and will discuss your experience, perspective, and questions with this method to understand participants' skills and even behavioral change.

Presenters: Cathlyn Styliniski, University of Maryland; Rachel Becker-Klein, PEER Associates

TUESDAY

Examining Organizational Identity of Zoos to Enhance Conservation Education Research

This poster presents ongoing research examining zoos' conservation identities and their education and conservation strategies. By revealing connections between organizational goals and their project outcomes, such as conservation education and communication practices, organizational identity theory can provide a useful framework for conservation education research.

Presenter: Lily Maynard, University of Florida



An Exploratory Study Examining Factors Influencing Zoo Educator Message Communication

Zoo educational personnel do not always communicate messages that align with organizational objectives, which suggests that there is a gap in the communication process. The purpose of this study was to explore the different factors that influence which conservation messages educators communicate with visitors during programming.

Presenter: Katheryn Zelak, Ohio State University

Exploring Environmental Education Interdisciplinarity in Teacher Education

How are teachers being prepared to embed/integrate environmental education in its various forms, in the myriad of subjects that they will teach? Our research suggests that teacher candidates must be provided multiple opportunities to experience models of integration, specifically combinations that focus on outdoor and environmental education across the curriculum.

Presenters: Astrid Steele, Nipissing University; Jeff Scott, Nipissing University

Navajo Nation Tribal College Students' Perspective on Environmental Education

Several studies have been conducted outside the United States in the arena of indigenous knowledge in environmental education. Yet, little research has been conducted with the American Indigenous tribes. This study proposes using cultural transmission and indigenous knowledge to encourage environmental education in the tribal colleges on the Navajo Nation.

Presenter: Dwight Carlston, University of Georgia

Participatory Approaches to Understanding Gardener Awareness of Soil Contaminant Risks

Community gardens can promote environmental education, but soil contaminants present "invisible risks" in many urban gardens. The Duke Superfund Research Center is using community-based participatory research and other innovative tools to explore knowledge and behaviors of gardeners, increase awareness, and influence behavior change to reduce exposure. Feedback from garden researchers/practitioners is welcomed.

Presenters: Catherine Kastleman, Duke University; Bryan Luukinen, Duke University

Reaching Underserved Populations Through Environmental Education: A Fisheries Program Evaluation

Technical solutions to issues in fisheries conservation depend upon environmentally literate citizens making informed decisions. Fisheries environmental education programs can address this need. Using a pre/post-treatment survey method, we identified how a fisheries program results in equal learning outcomes for students of all ethnicities and students with limited outdoor experiences.

Presenter: Kalysha Clark, North Carolina State University

A Retroductive Approach to Developing a Theoretical Community EE Framework

This poster explores a retroductive approach to developing a theoretical model of community EE, focusing on the re-conceptualization and re-testing of the model, which highlights agency and self-efficacy. Initial findings indicate different pathways for self-efficacy and agency in community EE programs, which can lead to further participation and transformative learning.

Presenter: Olivia Aguilar, Denison University

Student Problematization and Decision-Making on a Wind Energy Socio-Scientific Issue

We explore how students frame, reason, and make decisions on a wind energy socio-scientific issue (SSI) using Construal Level Theory (CLT) as a lens. Results suggest perceptions of wind energy are related to abstraction of the issue, which has implications for the design of SSI-based curriculum and instruction.

Presenter: McKinzie Peterson, University of Nebraska-Lincoln

Teaching for a Sustainable Future: Teacher Capacity
Are classroom teachers equipped for environmental literacy? View research that was conducted with elementary teachers examining their environmental knowledge, training, teaching practices, and the relationship with their confidence in their ability to teach in this area. Obtaining this information can provide needed background for working with our inservice teachers.

Presenter: [Melanie Parker, Anne Arundel County Public Schools/Arlington Echo Outdoor Education Center](#)

TPB and Identity to Predict Willingness to Help Sea Turtles

Using the theory of planned behavior (TPB) and environmental identity as theoretical frameworks, we explore willingness to enter into coastal conservation easements. Over 400 respondents to a mailed survey provide clues to the role of knowledge, subjective norms, perceived control, and environmental identity in conserving sea turtle habitat.

Presenter: [Melissa Hill, University of Florida](#)

10:45 AM–12:15 PM

Workshops

Wild Pedagogies: A Scholastic Experiment in Re-Wilding Research

Tropical B

Wild Pedagogies offers an alternative to conventional research conferences bringing scholars together to co-create knowledge collaboratively with/in wilderness. In this session, we reflect upon the promise and perils of collaborative writing, and some of the challenges, conceptual and practice-based, with recognizing the “voice(s)” of place or other-than-human beings in research.

Presenters: [Michael Sitka-Sage, Simon Fraser University](#); [Bob Jickling, Lakehead University](#)

Two New Instruments to Assess and Predict Environmental Behavior

Flamingo B

In this workshop, we introduce two new validated instruments aimed at measuring environmental behavior. The Behavioral Intention Scale is a customizable diagnostic tool to assess and predict behavioral intention. The General Environmental Stewardship Scale measures the intensity of commitment to environmental behaviors from common activities to transformative lifestyle changes.

Presenters: [Tina Phillips, Cornell Lab of Ornithology](#); [Joe E. Heimlich, Institute for Learning Innovation](#); [Heidi Ballard, University of California-Davis](#)

10:45 AM–12:15 PM

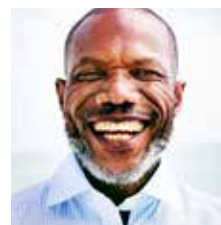
Facilitated Panel

Intergenerational Learning Strategies and Outcomes in Environmental Education

10:45 AM–12:15 PM, **Flamingo A**

This session will explore several examples of intergenerational environmental education programming in a variety of contexts, discuss the methods used to understand impact, and include a frank discussion on the challenges encountered. The audience will have the opportunity to deeply explore key challenge themes related to intergenerational work and explore new methodological approaches to address them.

Presenters: [Ruth Kermish-Allen, Maine Math and Science Alliance](#); [Kathryn Stevenson, North Carolina State University](#); [Danielle Lawson, North Carolina State University](#)



TUESDAY

10:45 AM–12:15 PM

Facilitated Discussions

GROUP 1, TROPICAL A

Storylines in Science: The Role of Place

10:45 AM–11:15

This study explores place-based learning in science education. It asks how place contributes to the inclusivity of science. Additionally, it examines how damaging discourses around science education are perpetuated within place-based learning contexts. Ultimately, this study seeks to shed light on the mutually beneficial relationship between science and environmental education.

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

#eeHACK: Designing and Participating in Collective Experiments to Address EE Challenges

11:15 AM–11:45 AM

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; Lynne Zummo, Stanford University; Alan Reid, Monash University

GROUP 2, TROPICAL C

Online Learning Communities for Professional Development in Environmental Education

10:45 AM–11:15 AM

By creating online learning communities, professional development programs encourage interactions among educators with diverse perspectives, which may foster exchange of ideas and lead to innovative practices. We will discuss research ideas to explore educators' online learning process and the impact of their interactions on practice innovation in environmental education programs.

Presenters: Yue Li, Cornell University; Alex Kudryavtsev, Cornell University

12:15 PM–1:30 PM

Research Symposium Luncheon

Las Olas Terrace

Value of an Online Professional Development Course for Informal Educators

11:15 AM–11:45 AM

We will share an online professional development course for informal science educators. The course addresses defining conservation and environmental education, designing programs, and bridging formal and informal education. Bring your laptops and you will be able to complete part of the course during the workshop.

Presenters: Patricia Patrick, Columbus State University; Michael Dentzau, Columbus State University

Service Learning: A Powerful Pathway for Energy Literacy Development?

11:45 AM–12:15 PM

Service learning can empower students to engage in individual and collective actions that improve the world. Come hear about our work with fourth-grade teachers and students who are implementing energy-related service-learning projects this year. Help us reflect on critical energy literacy goals and refine our outcome measures for elementary students.

Presenters: Eileen Merritt, Arizona State University; Nicole Bowers, Arizona State University

1:30 PM–2:45 PM

Keynote Panel

Intergenerational Conversations about the Past, Present, and Future of Environmental Education Research

Las Olas

Speakers in this keynote discussion will explore intergenerational conversations to generate change, with an emphasis on the dynamism of the field within the context of responding to new horizons and challenges for researchers, research, and the NAAEE Research Symposium itself. A key theme is "Re-engaging the Debate on What's Needed as the Mainstream and Alternatives in Environmental Education Research."

Panelists: Dr. Olivia Aguilar, Denison University; Dr. Joseph Henderson, Paul Smith's College of the Adirondacks; Dr. Constance Russell, Lakehead University, Canada

Moderator: Dr Nicole Ardoin, Stanford University

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. Joseph Henderson is a Lecturer in the Department of Environment and Society at Paul Smith's College of the Adirondacks. Trained as an anthropologist of environmental education, his research investigates how sociocultural, political, and geographic factors influence teaching and learning in emerging energy and climate systems.



Dr. Constance Russell is Professor in the Faculty of Education, Lakehead University, Thunder Bay, Canada, where she teaches courses in environmental and sustainability education, social justice education, and interspecies education. She recently stepped down as the editor of the *Canadian Journal of Environmental Education* after 12 years in that role and is currently editor of the Peter Lang book series, *(Re)thinking Environmental Education*.



Moderator: Dr. Nicole Ardoin is Associate Professor and Senior Fellow at the Graduate School of Education and Woods Institute for the Environment, Stanford University.

3:00 PM–4:00 PM

Poster Session**Salon Del Mar AB****Assessing Sustainability Learning in Math Classrooms Using Systems Representation Tools**

This research piloted use of PMC-2E (Phenomenon, Mechanisms, Components, Evidence, and Explanation) system representations to assess sustainability learning of high school students in the PS-Future program. Pre/post representations were analyzed to determine which components and mechanisms students understood as part of the central sustainability phenomenon of the module.

Presenters: [Roberta Hunter, Rutgers University;](#) [Rebecca Jordan, Rutgers University](#)

Coastal Fog-Mediated Interactions: The Human Response

As ocean temperatures rise, these changes affect coastal ecosystems and human communities. Our work focuses on the social dimensions of people's interactions with the coast redwood, a flagship species. Through interviews, observations, and surveys, we are exploring visitors' experiences of coast redwood forests. We discuss next steps in collaboratively designing related educational interventions.

Presenters: [Indira Phukan, Stanford University;](#) [Nicole Ardoin, Stanford University;](#) [Mele Wheaton, Stanford University](#)

Collaboratively Developing Regional, Place-Based EE Curriculum in Higher Education

Does your institution participate in a collaborative, regional EE place-based curriculum? Might you want to? We are conducting a feasibility study in central North Carolina on faculty development programs to integrate place-based EE across the curriculum. This poster will summarize research on US exemplars/analogs and interviews with colleges/universities in our region.

Presenters: [Charlotte Clark, Duke University;](#) [Nicolette Cagle, Duke University](#)

A Content Analysis of Environmental Education Job Postings

This study included an inductive content analysis performed on environmental education job postings in the United States to determine which skills and expertise are most in demand for new hires. This information will help further professional development of educators interested in pursuing a career in the field of environmental education.

Presenter: [Katheryn Zelak, Ohio State University](#)

TUESDAY

Developing a Regional Approach to Education About Conservation Action

Encouraging conservation action may require EE providers repeating similar messages. We present our process to identify ideal actions with a comparison of views from scientists, educators, and citizens and ask if educators should focus on the most important, the most likely to achieve results, or the most popular actions.

Presenters: [Martha Monroe, University of Florida](#); [Lily Maynard, University of Florida](#)

Do Role Models Matter? Investigating Their Influence on Student Outcomes

Which role models have the greatest potential to help students reach environmental literacy and positive youth development outcomes? Can a residential environmental education program influence who students view as their role models? We will discuss findings from a study investigating role models and outcomes at a residential EE program.

Presenter: [Troy Frensley, Virginia Tech](#)

Evaluating Climate Change Education Through the Lens of Intergenerational Transfer

Although promoting an environmentally friendly future is admirable, many of our current environmental problems demand action today rather than in the future. Throughout our poster presentation, we will discuss the results of a new climate communication strategy through the pathway of intergenerational transfer.

Presenters: [Danielle Lawson, North Carolina State University](#); [Kathryn Stevenson, North Carolina State University](#)

Exploring the Value of Photovoice in EE Research

As part of a larger study exploring community EE, we included photovoice methods, hoping to supplement our qualitative data. Initial results indicate correspondence between themes found in the qualitative and photovoice data. However, additional perspectives were added through photovoice, which will be further explored and discussed in our poster.

Presenters: [Craig Freeland, Denison University](#); [Olivia Aguilar, Denison University](#)

How to Evaluate Socioenvironmental Capacity Building with a Scientific-Practical Approach

How might we tackle challenges of producing robust scientific data and useful information to guide social learning and adaptation, within the process of evaluating capacity building in complex socioenvironmental scenarios? This is a question that I want to explore in the context of initiatives undertaken by nongovernmental organizations in the Brazilian Amazon.

Presenter: [Carolina De Oliveira Jordao, University of Florida](#)

Massive Open Online Course to Engage Participants in Environmental Stewardship

This research used the "Civic Ecology" Massive Open Online Course offered on edX (US) and XuetangX (China) platforms to explore the impact of the course on participants' environmental stewardship practice, as well as on their leadership in involving other people in environmental practices in different cultural and linguistic contexts.

Presenter: [Yue Li, Cornell University](#)

Shaping Lifelong Environmental Engagement: Pathways to Connection to Nature

Researchers have identified that time in nature alone and with others are key factors that lead to lifelong environmental engagement. Yet, the relative importance of specific activities, including solitary versus group activities, is poorly understood. Using decision trees, we modeled fifth-grade students' connection to nature based on their recreation habits.

Presenter: [Rachel Szczytko, North Carolina State University](#)

Significant Life Experiences of Identified Influential Environmental Educators

Are there specific "ingredients" that influence someone to pursue environmental education as a career? The goal of this study is to determine similarities across experiences of those considered "influential" environmental educators. Interviews will be used to identify commonalities across individuals and recommendations will be made to enhance environmental education.

Presenter: [Elizabeth Fincher, University of Georgia](#)

Systematic Review of Outcomes of Place-Based Environmental Education

Place-based environmental education utilizes the local community as a critical context and resource for teaching and learning. Place-based environmental education has the potential to strengthen community and school relations and increase academic achievement by improving the social, economic, and environmental health of a community.

Presenters: [Samantha Laurence, Allegheny College](#); [Rebecca Thomas, Slippery Rock 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 Laird, Stephen F. Austin State University](#)

The Value of Multiple Engagements with EE Over Time

Most in the field assume programs should strive for repeat opportunities to engage with environmental issues. Emerging research, however, suggests that the periodicity of this engagement may be extremely important. This study looks at student interview data from two experiences separated by three years (elementary/middle school) in an informal program.

Presenter: [Michael Dentzau, Columbus State University](#)

Yosemite Leadership Program: Program Outcomes and the Factors Affecting Implementation

The Yosemite Leadership Program is a two-year program that integrates leadership skills with place-based wilderness experiences. The purpose of this research was to assess the impact of the implementation on program outcomes and also to identify factors affecting the implementation process.

Presenter: [Amanda Dworak Rowland, National Park Service](#)



3:00 PM–4:00 PM

Roundtables

Las Olas

Art as Language: Program Evaluation Through Children's Drawings

We have collected artwork from nearly 100 children as a means of program evaluation. We have developed a rubric by which to interpret artwork and align it with program goals. Now, we seek input on how to further refine and ultimately scale this rubric for program evaluation across contexts.

Presenters: [Lynne Zummo, Stanford University](#); [Indira Phukan, Stanford University](#)

Changing Environmental Behaviour of Marine Protected Area Communities in Vietnam

This work will present the methods and the peer research findings from the first fieldwork of my PhD thesis in Cu Lao Cham Island, Hoi An heritage, Vietnam, where people have changed their environmental behaviour positively since a Marine Protected Area was established.

Presenter: [Ngoc Pham, Vietnam National University-HCMC](#)

Community Engagement in International Environmental Education Research

International environmental education research has complexities as diverse as the communities and locations wherein this research occurs. We will facilitate a conversation based on navigating these complexities, including discussions of design challenges, cultural competency, service learning, and recognizing privilege.

Presenters: [Kathayoon Khalil, Seattle Aquarium](#); [Annie Montague, University of British Columbia](#)

Conceptually Mapping Middle School Students' Knowledge of Climate Change Science

How do middle-school students conceptualize the process of gathering scientific evidence about climate change? We developed an intervention that teaches climate change modeling and used conceptual content cognitive mapping (3CM) techniques to explore changes in students' knowledge. In this roundtable session, we demonstrate the 3CM technique and discuss preliminary results.

Presenter: [Jennifer Carman, University of Michigan](#)

TUESDAY

Designing Educational Frameworks for Participatory and Action-Oriented EE Projects

We present a framework for participatory action-oriented EE projects, which incorporates inquiry into social theories of learning and aims 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

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

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

Investigating Effects of Outdoor Learning Environments on Students with Autism

In this mixed-methods study, we investigated the behavioral and social-emotional effects of outdoor learning environments on students with autism. Participants included two special education teachers and six students attending a rural elementary school in the southeast United States. The teachers and students were observed twice per week for six months.

Presenters: Samantha Friedman, Elon University

Making the Case for Risky Nature-Based Outdoor Play

This session seeks to build on existing research by the authors that deals with perceptions and practices of risky nature-based outdoor play. Participants will briefly explore research, and then discuss next steps to move research into both experimental methods and toward shifts in perceptions through implementing changes in practice.

Presenters: Shelby Laird, Stephen F. Austin State University; Kelly Hoke, Oregon State University

Placing Student Experiences at the Center to Broaden EE Participation

We will briefly discuss our work with middle-school students who were selected to participate in an informal summer program sponsored by our State Department of Education Migrant Program. Then, we will facilitate a discussion around how emphasizing migrant student families' connections to soil might increase participation in EE programs.

Presenters: Lacey Huffling, Georgia Southern University

Research Leading to Best Practices

Significant life experience research suggests that family influences the development of adult environmental literacy. With this being true, family programming has great potential. Sadly, little research has been conducted to inform program development and best practices. What research could lead to the formulation of best practices? Where do we begin?

Presenter: Jessica Stump, Montreat College

Terrain Weavings: A Novel Method for Coding Complex Place Data

Places communicate in unexpected ways, through sign, symbol, and soma. The researcher must learn to translate symbol into meaning to record the subtleties of complex, emergent data. Come explore terrain weaving, an arts-based embodied coding method designed to aid in the interpretation, processing, and synthesizing of complex place emanations.

Presenter: Amanda Leetch, Prescott College

Unearthing Landscapes: Exploring Environmental Justice Perspectives Through Walking Ethnography

This session encourages researcher-participants to engage with landscape as a method for inspiration and dialogue to unearth environmental justice perspectives. Attunement to subtle perception of layers, paths, motivations, wayfinding, edges, and ecotones supports finely grained data and inclusive perspectives. Come take a mock walk while we explore the possibilities.

Presenter: Amanda Kippen, City of Watsonville

4:00 PM–6:00 PM



Wednesday

7:30 AM–9:00 AM

Graduate Student Breakfast

Las Olas Terrace

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 Plenary Discussion

Reflecting on the Present and Future of Our EE Research Community

Las Olas

This plenary discussion will encourage environmental education researchers to consider the current state of our community in light of our aspirations for where we would like to go over the next several decades. Through individual reflections, interactive technology, group discussions, and provocations from the session leaders, we will work toward a collective vision of our research community (or communities), envision where we wish to be, and consider potential future pathways.

Discussants: Dr. Charlotte Clark, Duke University; Dr. Alan Reid, Monash University; Dr. Cathlyn (Cat) Stylinski, University of Maryland; Dr. Ruth Kermish-Allen, Maine Math and Science Alliance

Discussants:



Dr. Charlotte Clark, Assistant Professor of the Practice of Sustainability Education at Duke University in the Nicholas School of the Environment, researches collective learning and behavior, and also has strong interests

in sustainable food systems and campus sustainability. She is current president of the NAAEE board and former chair of the NAAEE Research Symposium.



Dr. Alan Reid is Associate Professor and Associate Dean in the Faculty of Education at Monash University, Australia. He edits the international journal, *Environmental Education Research*, and is a member of the

Education, Environment, and Sustainability Faculty Research Group. His research interests focus on teachers' thinking and practice in environmental education.



Dr. Cathlyn (Cat) Stylinski is a tenured researcher at the University of Maryland Center for Environmental Science and a past chair of the NAAEE Research Symposium. Her work focuses on public engagement in science and

includes studies on citizen science assessment, communities of practice around climate change education, stealth science, and the role of scientists in outreach.



Dr. Ruth Kermish-Allen, immediate past chair of the NAAEE Research Symposium, is the executive director of the Maine Math and Science Alliance, a nonprofit organization committed to inspiring and fostering critical thinking,

problem solving, and civic engagement for youth through STEM education research and educator professional development. Ruth's research focuses on working in partnership with rural communities to design learning models that integrate place-based pedagogy, innovative technologies, and non-hierarchical learning to empower students to find solutions to local environmental problems.

10:15 AM–10:45 AM

Roundtables

Las Olas

Developing a Framework of Social and Emotional Learning in Residential Environmental Education

Residential environmental education supports young people's social and emotional development. To date, the role of social-emotional learning (SEL) within EE has not been well articulated. We will discuss a draft framework theorizing how SEL and residential EE align, residential EE supports SEL growth, and SEL skills support environmental literacy development.

Presenters: Kathleen O'Connor, NatureBridge; Nicole Ardoin, Stanford University

Developing Global Competency Through Student Urban Environmental Investigations and Exchanges

This study connects Washington, DC students with children throughout the Arctic to conduct investigations into local urban ecological issues and share them transregionally as 60-second selfies. Through this study, researchers are seeking to understand the impact digital environmental storytelling exchanges may have on student ecological literacy and global competency.

Presenter: Beth Short, The George Washington University

WEDNESDAY

Engaging New American Children's Voices: EE Research Design and Dilemmas

We will explore engaging the voices of underserved audiences, particularly resettled New American children, to help create culturally responsive, place-based environmental education. Issues discussed include photo elicitation, data collection with young children, ethical dilemmas surrounding language barriers, and parental consent. Bring four or more original photographs that convey your impressions of Puerto Rico.

Presenter: Anneliese Worster, Salem State University

Environmental Decision Making: How Youth Use Their Citizen Science Data

Once youths recognize the ways in which humans impact the local environment, how can we support them in responsible decision making and informed environmental action? We examine ways youths navigate a school-based habitat restoration project using their data on local birds from their community-based citizen science project.

Presenters: Erin Bird, University of California-Davis; Heidi Ballard, University of California-Davis

Finding the Connection Points: Language, Identity, and Diversity in EE

In this project, we explore issues of equity by examining the social practices of language in environmental education. As research demonstrates, language is one way in which culture manifests in learning spaces, and valuing the cultures of students in these spaces enables a more meaningful learning experience.

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

Global Networking for Local Action: Education and Collaboration Across Scales

Environmental education is unusual in that it brings together place-specific needs and global-scale awareness at the intersections of physical and human-social worlds. Yet how can lessons learned in one location be repositioned elsewhere without leaning on one-size-fits-all solutions? Attendees will explore and expand upon this question during this session.

Presenter: Lee Frankel-Goldwater, University of Colorado-Boulder

Layering Perspectives: Representing Multiplicity and Complexity in a Research Narrative

In moving toward a more diverse and inclusive environmental education field, we must represent research findings in a way that honors multiplicity and complexity. I discuss how I layer perspectives in my own dissertation on environmental educators, and welcome discussion and debate about other approaches.

Presenter: Naamal DeSilva, George Washington University

Leap from Climate Change Conceptual Maps to Collaborative Metacognition Toolbox

Receive links to newly researched/developed resource-linked climate change concept maps and NGSS weather-climate strand maps. Imagine expanding these metacognitive tools to a collaborative Metacognition Toolbox to assist learning about and acting on "wicked big problems." Bring your favorite thinking tools and contribute to the structure of such a box!

Presenter: Jane Heinze-Fry, Museum Institute for Teaching Science

A New Way to Explore Your Local Parks

Pokémon Go, the augmented-reality pocket monster game, lets people locate and catch Pokémon in real life. Pokémon Go may inspire you to offer some environmental education programs through the use of augmented reality games. Playing the EE-related augmented reality games may offer a new way to explore your local parks.

Presenter: Xue Dong, State University of New York

Studying Youths' Disciplinary Identities Over Time: A New (Evolving) Model

Could a summer enrichment program focused on field studies of reptiles and amphibians have an enduring effect on diverse youths' disciplinary identities? This session prompts discussion about a new model of disciplinary identity and an accompanying longitudinal study of 220 diverse high school youths' triggered and sustained EE-linked identities.

Presenters: Lacey Huffling, Georgia Southern University; Aerin Benavides, The University of North Carolina at Greensboro; Catherine Matthews, The University of North Carolina at Greensboro

10:45 AM-12:15 PM

Workshop

Liberating Diverse Creativities: The Future of Arts-Based Environmental Education Research

Tropical B

This professional development workshop nurtures liberating creativities, introducing EE researchers to arts-based educational research. Together we explore justice and empathy, surface and value diversity through multiple ways of knowing, and engage with arts-informed ways of researching (areas of research design and quality criteria). Practice with hands-on, interactive infusions and collaborative inquiry.

Presenters: Marna Hauk, Institute for Earth Regenerative Studies & Prescott College; Mandisa Wood, Napa Valley College; Amanda Kippen, City of Watsonville; Amanda Leetch, Prescott College

10:45 AM–12:15 PM

Facilitated Panel**Authors and Editors Panel: Writing Journal Articles and Books****Flamingo A**

Scholars with extensive experience as editors on leading EE journals, as well as writing and editing books host a lively, candid discussion on publishing. The first half of the session focuses on publishing EE research in peer-reviewed journals and the second half focuses on writing and editing books (single-authored as well as edited volumes).

Presenters: Nicole Ardoin, Stanford University; Teresa Lloro-Bidart, University of California, Riverside; Martha Monroe, University of Florida; Alan Reid, Monash University; Constance Russell, Lakehead University; Marc Stern, Virginia Tech; Arjen Wals, Wageningen University

10:45 AM–12:15 PM

Facilitated Discussions

GROUP 1, TROPICAL A

Measures of Emotions in Environmental Education Research with Children**10:45 AM–11:15 AM**

This session explores the emotional dimensions of EE research as well as innovative methods and tools for measuring and describing human emotional encounters with the environment. Sensory tours, bookmaking, role-playing, and the use of an Emotiv EPOC+ unit are some of the methods and tools that will be shared.

Presenter: Carie Green, University of Alaska–Fairbanks

Using Cognitive Interviews to Examine Elementary Students' Conceptual Processes Through Nature Journaling**11:15 AM–11:45 AM**

Nature journaling deepens students' observations of natural phenomena by encouraging conscious, focused attention of their surroundings. Our research with naturalist and author John Muir Laws explores how nature journaling can support students' ability to form conceptual models that can be used to answer questions and solve problems.

Presenter: Anne Kinney Stephens, California State University–Chico

Developing 21st Century Naturalists: A Research-Practice Partnership**11:45 AM–12:15 PM**

Learn about "21st Century Naturalist," a research-practice partnership of the University of Pittsburgh Center for Learning in Out-of-School Environments (UPCLOSE) and the Carnegie Museum of Natural History. Hear specific examples of successful collaboration tools, alongside forthright examples of challenges.

Presenters: Steve Tonsor, Carnegie Museum of Natural History; Kevin Crowley, University of Pittsburgh; Karen Knutson, University of Pittsburgh; Marijke Hecht, University of Pittsburgh

GROUP 2, TROPICAL C

Leveraging Environmental Education's Catch-Up Effect**10:45 AM–11:15 AM**

Environmental education can help 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: Rachel Szczytko, North Carolina State University; Kathryn Stevenson, North Carolina State University

Novel Methods to Investigate Teaching Approaches, Student Engagement, and Outcomes**11:15 AM–11:45 AM**

Join us to explore a study investigating the links between pedagogical approaches, student engagement, and outcomes at a residential environmental education center. We will discuss methods, preliminary findings, and the development of a future large-scale study to examine not only if a program works, but why and how it works.

Presenter: Troy Frensley, Virginia Tech

Taiwan Teachers' Perception and Self-Efficacy When Teaching Climate Change**11:45 AM–12:15 PM**

Climate change has become a necessary topic in science-related subjects in Taiwan National Curriculum Standard. To develop better curricula, we conducted a nationwide survey to understand Taiwan teachers' perception, self-efficacy, needs, and barriers when teaching climate change at schools. We invite you to review our findings and share your own experiences.

Presenter: Yu-Chi Tseng, National Taichung University of Education

WEDNESDAY

12:15 PM–1:30 PM

Buffet Lunch

Gran Salon Los Rosales A

12:30 PM–1:30 PM

EE Feminist Caucus

12:30-1:30, Gran Salon Los Rosales E

Bring your lunch and join other feminist environmental education researchers for an informal chat on topics of interest to you. These might include navigating the academy as a woman, addressing gender and other biases in research or teaching, or furthering feminist EE research or practice. We particularly welcome graduate students and new scholars.

Facilitators: [Teresa Lloro-Bidart, California State Polytechnic University](#); [Constance Russell, Lakehead University](#)

1:30 PM–2:00 PM

Roundtables

Las Olas

Bridging Environmental and Agricultural Education Through Research

Environmental and agricultural education have many shared objectives in promoting healthy agro-ecosystems. However, these communities rarely communicate, perhaps in part due to differences in culture and tradition. We will discuss research that attempts to bridge this gap, including methodological challenges and opportunities for future work. Come share your ideas and experiences!

Presenters: [Kathryn Stevenson, North Carolina State University](#); [Christine Jie Li, University of Missouri](#); [Martha Monroe, University of Florida](#); [Tracey Ritchie, University of Florida](#); [Renee Strnad, North Carolina State University](#)



Photo: © NatureBridge

Creating Opportunities to Diversify the Environmental Movement and EE

This roundtable will discuss challenges and explore potential solutions (e.g., by redefining “environment” and embracing narrative) related to the lack of diversity, defined broadly, in environmental movements. The core of this session will center on sparking discussion based on some of our past research and collective experience, as well as experiences and research of other symposium participants and discussants.

Presenters: [Rachelle Gould, University of Vermont](#); [Indira Phukan, Stanford University](#); [Noelia Báez Rodríguez, University of Puerto Rico](#); [Marcia McKenzie, University of Saskatchewan](#); [Austin Cruz, University of Arizona](#)

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

How can participation in citizen science foster youth agency with science, environment, and 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.

Presenters: [Heidi Ballard, University of California-Davis](#); [Emily Harris, University of California-Davis](#); [Erin Bird, University of California-Davis](#)

Ecopedagogy in Praxis: Researching Earth as a Marginalized Population

To truly develop environmentally literate citizens who will work to change the oppressive habits of our dominant culture, people must be willing to enter into discourse to understand and be empowered to work towards a solution. Join us for a participatory dialogue around altering epistemological underpinnings from the dominant truth to holistic learning.

Presenter: [Joey Zocher, Escuela Verde](#)

Exploring the Value of Emotions Through Learning Stories

Teacher experience, intuition, and the neurosciences confirm the importance of emotion in focusing attention and supporting memory. This is particularly relevant in outdoor settings, rich in sensory experiences that trigger emotions. We explore Learning Stories as ways to document (and assess) the emotionality of learning in, about, and for nature.

Presenters: [Astrid Steele, Nipissing University](#); [Jeff Scott, Nipissing University](#)

Indigenous Environmental Education Lessons from Yakama Tribal Elders: *Anaku Iwacha*

How do we bring Indigenous Traditional Ecological Knowledge into environmental education teaching and research? Should we? Why/not? These are some of the questions we will engage as I share examples from my own work analyzing and teaching with Yakama Tribal legends from the book, *Anaku Iwacha (The Way It Was)*.

Presenter: Michelle Jacob, University of Oregon

Navigating the Evaluation Capacity-Building Waters: Putting Research into Practice

Research on evaluation capacity building has laid a strong theoretical framework from which to build robust plans for implementation. This session raises the question of how to effectively translate these theoretical frameworks into practice for complex interventions such as a large, diverse network of environmental education centers.

Presenters: Rachel Becker-Klein, PEER Associates; Joy Kubarek, PEER Associates

New Assessment Designed to Measure and Strengthen Environmental Reasoning Skills

To more effectively assess environmental literacy, we are creating and piloting a formative, diagnostic assessment of children's and adults' ecological reasoning skills that is designed to support the development of more complex and coherent reasoning about environmental issues and study the relative effectiveness of environmental curricula.

Presenter: Shanti Gaia, Lectica, Inc.

Study Abroad Programs: Exploring Intercultural Sensitivity and Environmental Identity

Come join a discussion on whether study abroad trips lend themselves to EE research. We will briefly compare two trips: One to Peru (EE focused) and one to the Netherlands (not EE focused). Does having an EE focus increase intercultural sensitivity, connection to place, and/or environmental identity development?

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

What's Happening in Early Childhood Environmental Education Research

NAAEE's Natural Start Alliance and the *Journal of Early Childhood Environmental Education* 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, and discuss what's needed to advance research in the field.

Presenters: Emilian Geczi, NAAEE; Betty Olivolo, NAAEE

2:00 PM–3:30 PM

Workshops



Dear Researchers: Some Unsolicited Advice from the Community

Flamingo A

We share the work of 30 community-based organizations from culturally diverse communities across the U.S. focused on better understanding the role of partnerships and relationships between underserved communities and science institutions. Results include tangible applications for researchers, and we uncover barriers and opportunities for achieving real impact in practice.

Presenter: Karen Purcell, Cornell Lab of Ornithology; Marilú Lopez Fretts, Cornell Lab of Ornithology; Fanny Villarreal, YWCA/Nosotros Radio Inc.

It Takes a Village: Writing Groups for Students and Early-Career Researchers

Flamingo B

We invite students at all levels, postdocs, and early-career scholars to come build networks for writing in research. In this dynamic session, we share lessons learned and guidelines for writing groups. We will focus on writing practices and community building, and we will discuss ways to stay engaged throughout the year.

Presenters: Rachel Szczytko, North Carolina State University; Evan Kuras, University of Massachusetts-Amherst; Danielle Lawson, North Carolina State University

2:00 PM–3:30 PM

Facilitated Discussions

GROUP 1, TROPICAL A

Theorizing the Interconnections Between Informal and Formal Garden Educators

2:00 PM–2:30 PM

School gardens are spaces where the worlds of informal and formal educators can merge. In this presentation, I will be using a partnership between a local garden-education non-profit, area teachers, and an education researcher as a case study for a conceptual model of collaboration between formal and informal EE.

Presenter: Sarah Stapleton, University of Oregon



Troubling How We Reconnect Children with Nature Research and Practice

2:30 PM–3:00 PM

The purpose of this interactive session is to advance a discussion about children's Environmental Identity Development by examining findings from a semi-urban, Western-influenced setting and from a rural Indigenous context in order to explore epistemological positioning, methodological relations, and Westernized standards of Childhood Nature research and practice.

Presenter: Carie Green, University of Alaska-Fairbanks

Land and Place as Principal Investigator: Turning the Research Spiral

3:00 PM–3:30 PM

Imagine a future in which land and place increasingly serve as co-researchers or principal investigators in EE research. Land-based pedagogy, critical place inquiry, indigenous knowledge, feminist materialisms, terrapsychology, and Gaian methods converge. Explore questions of consent, data gathering, authorship, and ethics through experiential, collaborative dialogue with examples, paradigms, and methods.

Presenters: Marna Hauk, Prescott College; Amanda Leetch, Prescott College; Mandisa Wood, Napa Valley College; Amanda Kippen, City of Watsonville

GROUP 2, TROPICAL B

Indicators for Measuring Community Development and Change

2:00 PM–2:30 PM

A new Extension program in Florida is focused on facilitating community discussions around local issues and creating opportunities for citizen involvement in addressing issues. We will briefly describe the expected program outcomes, and then engage participants in thinking about indicators for measuring community development and detecting change among program participants.

Presenter: Martha Monroe, University of Florida

Redefining and Researching Environmental Literacy at the Community Level

2:30 PM–3:00 PM

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

GROUP 3, TROPICAL C

De-Growth and Localization: An Alternative Theoretical Framework for Environmental Education in Developed Countries

2:00 PM–2:30 PM

Forty years after Tbilisi, this session calls for a reorientation of EE with a change of focus from individual behavior to social practices and proposes an alternative framework for EE: that of de-growth and localization. In this light, examples from relevant case studies will be discussed.

Presenters: Konstantinos Korfiatis, University of Cyprus; Marianna Kalaitzidaki, University of Crete

Contemplating Connections: EE, Deliberative Processes, and Cultural Ecosystem Services

2:30 PM–3:00 PM

The conservation field, and especially the ecosystem services field, increasingly embraces concepts of deliberative valuation and shared, plural values. One important question is with regard to the relationships between value formation and change—a hallmark of EE research. This session explores how EE research relates to policy debates and deliberative valuation processes.

Presenter: Rachelle Gould, University of Vermont

3:45 PM–4:45 PM

Closing Keynote Panel

Mainstays and Innovations at the Research Symposium

Las Olas

In keeping with the aims and scope of the NAAEE Research Symposium, the closing keynote panel will discuss opportunities, challenges, conceptual models, ethical dilemmas, new (and overlooked) methods, applications to practice, and emotional responses related to undertaking environmental education research. In particular, the panelists will take an aspirational view by considering how what we have learned prepares us for future research.

Panelists:



Dr. Bob Jickling, Professor Emeritus at Lakehead University, received the North American Association of Environmental Education’s Award for Outstanding Contributions to Research in 2009 and Global Environmental Education Award

in 2001. As a long-time wilderness traveler, much of his inspiration derives from the landscape of his home in Canada’s Yukon.



Dr. Kathayoon Khalil is the Principal Evaluator at the Seattle Aquarium. She received her PhD from the Graduate School of Education at Stanford University and her Master’s degree from the Yale School of Forestry

and Environmental Studies. Kathayoon’s primary interests center on the role of zoos and aquariums in wildlife conservation.



Dr. Michaela Zint is a Professor at the University of Michigan. She received NAAEE’s Award for Outstanding Contributions to Research in 2014, developed the My Environmental Education Evaluation Resource

Assistant (MEERA) website, and serves as a Consulting Editor for the *Journal of Environmental Education*. Much of her research has focused on environmental education program evaluation, in great part because of its potential to improve practice.



Moderator: **Dr. Joe E. Heimlich** is Co-Director for the COSI Center for Research and Evaluation, and a Researcher with the Center’s Lifelong Learning Group. He is also an Academy Professor Emeritus with The Ohio State

University. Joe’s research focus is lifelong learning about and in the environment, with interests in integration of social role, context, and conditions of the visit.

4:45 PM–5:00 PM


Wrap-Up and Thanks

Las Olas

Presenters:

Dr. Nicole Ardoin, Stanford University, Research Symposium Chair

Dr. Alan Reid, Monash University, Research Symposium Co-Chair

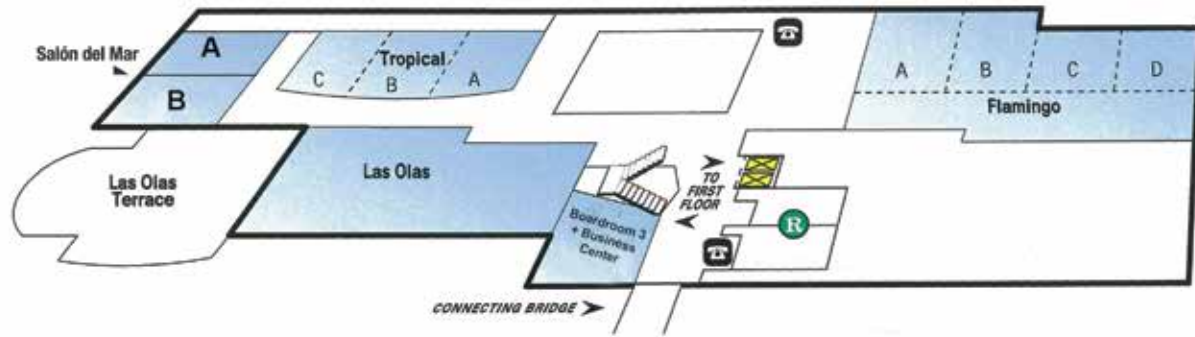


Find your group.
Encuentre su grupo.

- EE Central
- Global EE
- Advocacy
- Affiliates
- Climate Change Education
- Connecting to Nature
- Conservation and Behavior Change
- Diversity Equity and Inclusion
- Early Childhood EE
- EE in Urban Settings
- Green Schools
- Guidelines for Excellence
- Higher Education
- Research and Evaluation
- Sustainable Communities
- Technology and EE

naee.org/eePRO

Caribe Hilton Conference Rooms – Second Floor



Geep GLOBAL ENVIRONMENTAL EDUCATION PARTNERSHIP

SHARE. NETWORK. INNOVATE.

The Global Environmental Education Partnership is a vibrant learning network designed to strengthen environmental education globally to create a more sustainable future for all.



thegeep.org

SPOKANE 2018

 **naaee**
Spokane, Washington

48TH NAAEE ANNUAL CONFERENCE | OCT. 9-12

Aguilar, Olivia, aguilaro@denison.edu
Ardoin, Nicole, nmardoin@stanford.edu
Ballard, Heidi, hballard@ucdavis.edu
Becker-Klein, Rachel, rachel@peerassociates.net
Benavides, Aerin W, awbenavi@uncg.edu
Bird, Erin, bird@ucdavis.edu
Bowers, Nicole, nbowers1@asu.edu
Busch, K.C., kbusch@ncsu.edu
Cagle, Nicolette, nicolette.cagle@gmail.com
Carlston, Dwight, dc42757@uga.edu
Carman, Jennifer, jpcarman@umich.edu
Clark, Charlotte, cclark@duke.edu
Clark, Kalysha, keclark@ncsu.edu
Crowley, Kevin, crowleyk@pitt.edu
De Oliveira Jordao, Carolina, caroljordao@ufl.edu
Dentzau, Michael, dentzau_michael@columbusstate.edu
DeSilva, Naamal Kaushalya, ndesilva@gwmail.gwu.edu
Dong, Xue, dongxue7@outlook.com
Dworak Rowland, Amanda Jean, amanda_rowland@nps.gov
Fincher, Elizabeth, efinch24@uga.edu
Frankel-Goldwater, Lee, lee.fg@colorado.edu
Franks, Kristy, kfranks@hotmail.com
Freed, Allison L., allisonlwebster@gmail.com
Freeland, Craig, freela_c1@denison.edu
Frensley, Troy, btgren@vt.edu
Friedman, Samantha, sfriedman7@elon.edu
Gaia, Shanti Om, shantiomgaia@gmail.com
Geczi, Emilian, egeczi@gmail.com
Gould, Rachele, rachele@post.harvard.edu
Green, Carie J., carie.green@alaska.edu
Harris, Emily, eharris@ucdavis.edu
Hauk, Marna, earthregenerative@gmail.com
Hecht, Marijke, meh183@pitt.edu
Heimlich, Joe E., heimlich.1@osu.edu
Heinze-Fry, Jane Ann, jahfry@rcn.com
Henderson, Joseph A, jhenderson11@gmail.com
Hill, Melissa, melissakhill@ufl.edu
Hoke, Kelly, hokeke@oregonstate.edu
Huffling, Lacey Denise, lhuffling@georgiasouthern.edu
Hunter, Roberta, roberta.hunter@rutgers.edu
Jacob, Michelle, mjacob@uoregon.edu
Jickling, Bob, bob.jickling@lakeheadu.ca
Jordan, Rebecca, rebecca.jordan@rutgers.edu
Kalaitzidaki, Marianna, mkalaitz@edc.uoc.gr
Kastleman, Catherine, catherine.kastleman@gmail.com
Kermish-Allen, Ruth, rkermishallen@gmail.com
Khalil, Kathayoon, k.khalil@seattleaquarium.org
Kippen, Amanda, amanda.kippen@student.prescott.edu
Knutson, Karen, knutson@pitt.edu
Korfiatis, Konstantinos, korfiati@ucy.ac.cy
Kramsky, Yanin, yanin.kramsky@yale.edu
Kubarek, Joy, joy@peerassociates.net
Kudryavtsev, Alex, ak383@cornell.edu
Kuras, Evan, ekuras@umass.edu
Laird, Shelby Gull, shelby.gull.laird@gmail.com
Laurence, Samantha Marie, laurences@allegheny.edu
Lawson, Danielle Alexis, dafrank2@ncsu.edu
Leetch, Amanda, mleetch@gmail.com
Li, Christine Jie, lij1@missouri.edu
Li, Yue, yl983@cornell.edu
Lloro-Bidart, Teresa, tllor001@ucr.edu
Lopez Fretts, Marilu, ml869@cornell.edu
Luukinen, Bryan, bryan.luukinen@duke.edu
Matthews, Catherine, cmatthews@uncg.edu
Maynard, Lily, lilytmaynard@ufl.edu
McKenzie, Marcia, marcia.mckenzie@usask.ca
Merritt, Eileen, eileen.merritt@asu.edu
Monroe, Martha C., mcmonroe@ufl.edu
Montague, Annie Elizabeth, anniemontague@gmail.com
O'Connor, Kathleen M, koconnor@naturebridge.org
Ofei-Manu, Paul, ofei-manu@iges.or.jp
Olivolo, Betty, bettyolivolo@gmail.com
Parker, Melanie, mdparker@aacps.org
Patrick, Patricia, trish.patrick.ise@gmail.com
Peterson, A. McKinzie, kinzie.peterson@huskers.unl.edu
Pham, Ngoc, bichngocee@yahoo.com
Phillips, Tina, tina.phillips@cornell.edu
Phukan, Indira, iphukan@stanford.edu
Purcell, Karen, kap7@cornell.edu
Reid, Alan, alan.reid@monash.edu
Reid, Alan, alan.reid@monash.edu
Ritchie, Tracey Ann, tracey.ritchie@gmail.com
Russell, Constance, crussell@lakeheadu.ca
Schueler, Darcy, darcy.schueler25@uga.edu
Scott, Jeff, jeffs@nipissingu.ca
Short, Beth, bshort@gwu.edu
Sitka-Sage, Michael Whitefield, mderby@sfu.ca
Smith, Jacob, jacob.mathew.smith88@gmail.com
Stapleton, Sarah, sstaplet@uoregon.edu
Steele, Astrid, astrids@nipissingu.ca
Stephens, Anne Kinney, akstephens@csuchico.edu
Stern, Marc, mjstern@vt.edu
Stevenson, Kathryn, kathryn_stevenson@ncsu.edu
Stump, Jessica, jstump14@montreat.edu
Styliński, Cathlyn, cstyliniski@umces.edu
Szczytko, Rachel, reszczyt@ncsu.edu
Thomas, Rebecca, rebecca.thomas@sru.edu
Tonsor, Steve, tonsors@carnegiemnh.org
Tseng, Yu-Chi, yctseng1201@mail.ntcu.edu.tw
Villarreal, Fanny, fvillarreal@ymail.com
Wals, Arjen, arjen.wals@wur.nl
Wheaton, Mele E.M., melwheat@gmail.com
Wood, Mandisa Amber,
mandisa.wood@student.prescott.edu
Worster, Anneliese Mueller, aworster@salemstate.edu
Zangori, Laura, zangoril@missouri.edu
Zelak, Katheryn, zelak.1@osu.edu
Zint, Michaela, zintmich@umich.edu
Zocher, Joey, joellazocher@gmail.com
Zummo, Lynne, lzummo@stanford.edu



naaee

North American Association
for Environmental Education

Education We Need for the World We Want

naaee.org

