NERR

The National Environment and Recreation Research Symposium

Celebrating 31 Years of NERR

Annapolis, MD
April 7 – 9, 2019

Schedule of Presentations and Events
ACKNOWLEDGEMENTS

2019 Conference Committee
Carla Barbieri (North Carolina State University) – 2019 Conference Chair
David K. Loomis (East Carolina University) – 2018 Conference Chair
Charles –Chuck– Nelson (Michigan State University) – 2020 Conference Chair

Scholarship Committee
Chair: Laurie Harmon (University of Wisconsin – La Crosse)
Co-chair: Ellen Drogin Rodgers (George Mason University)
Members: Andy Holdnak (University of West Florida) & Stella Liu (South Dakota State University)

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- Social networking: Sara Brune (North Carolina State University), Kathryn Stevenson (North Carolina State University) & Sonja Wilhelm Stanis (University of Missouri)
- Fund raising & raffle: Sharon Todd (SUNY Cortland) & Kelly Bricker (University of Utah)
- Marketing & promotion: Jerry Vaske (Colorado State University), Kelly Bricker (University of Utah) & Craig Miller (Illinois Natural History Survey)
- Social media: John Confer (California University of Pennsylvania)
- Communications: Adam Landon (Minnesota Department of Natural Resources)

2019 NERR Scholarship Recipients
Brent Jackson
Ph.D. student in Parks, Recreation, and Tourism Management (North Carolina State University)

Leah Joyner
Ph.D. student in Parks, Recreation, and Tourism (University of Utah)

Aaron Krinsky
M.S. student in Natural Resources Management (SUNY College of Environmental Science and Forestry)

Qwynne Lackey
Ph.D. student in Parks, Recreation, and Tourism (University of Utah)

Myles Lynch
Ph.D. candidate in Education (University of New Hampshire)

Camille Marcotte
M.S. student in Natural Resources (University of Vermont)

Emily Piontek
M.S. student in Human Dimensions of Natural Resource Management (University of Missouri)

Jaclyn Rushing
Ph.D. student in Parks, Recreation, and Tourism Management (North Carolina State University)
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History of NERR

The first Northeastern Recreation Research Symposium (NERR) was held April 2 - 4, 1989 at the New York State Park Management Institute in Saratoga Springs State Park, where 75 participants enjoyed the hospitality of the iconic and historic Gideon Putnam Hotel. The original idea was born two years earlier in the reception buffet line at the first ISSRM symposium in Corvallis, Oregon. Hungry and thirsty friends and colleagues Tom More, Jerry Vaske, Maureen Donnelly and Alan Graefe, who were familiar with the Southeast Recreation Research Symposium and other regional meetings, discussed the need for a suitable annual conference for recreation researchers in the northeast United States. NERR was the result of that discussion.

That first successful meeting led to a continuous stream of annual meetings in several locations. In 1996, the symposium moved to the Sagamore Resort in Bolton Landing on the shore of Lake George, New York, where it remained for many years. In 2012, the symposium moved to the historic Otesaga Hotel in Cooperstown, New York, after the Sagamore could no longer accommodate us due to a major renovation project. NERR was held at the Otesaga for three years before moving to Annapolis, Maryland, when an opportunity arose to partner with the Society of Outdoor Recreation Professionals to hold a joint conference in 2015. Annapolis provided more convenient access for the increasing number of attendees flying in from all around the country and even from overseas countries. This accessibility, combined with the warm reception we received from the Loews Hotel (now Hotel Annapolis), led to the decision to stay in Annapolis since 2016.

NERR typically attracts between 120-150 participants. The attendees have been mostly academics and recreation resource management professionals from state and federal agencies and non-governmental organizations. From the beginning, NERR has welcomed students, many of whom made their first research presentations at this meeting, and later returned as professors bringing their own students along, creating a second generation of committed participants. Until recently, the symposium was managed by an informal “steering committee” and operated under the auspices of several universities, originally SUNY-ESF in Syracuse and then Penn State. In 2017 the National Environment and Recreation Research Association (NERRA) was formed to manage the conference. The symposium name was changed to National Environment and Recreation Research, but the NERR acronym was maintained, to reflect the broader geographic and topical focus of the meeting. We now welcome you to the 2019 NERR Symposium and thank you for helping to continue and expand the reach of this historic event.
### DAY 1 - SUNDAY, APRIL 7, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>10:00 a.m. – 5:30 p.m.</td>
<td>Registration</td>
<td>Atrium</td>
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<tr>
<td>10:15 – 11:45 a.m.</td>
<td>Pre-conference Networking Cruise ($17 per person not included; to be paid on site)</td>
<td>Meet at Hotel Lobby</td>
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<tr>
<td>1:00 – 1:20 p.m.</td>
<td>Welcome and Opening Remarks</td>
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#### NERR 2019 Chair, Carla Barbieri, North Carolina State University

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### SESSION I (Sunday, 1:30 – 3:00 p.m.)

#### 1:30 – 3:00 p.m.  
**Session I-A: Niche Tourism**  
**Ballroom A**  

**Facilitator:** Lisa Groshong (University of Missouri)

- **Festival authenticity, quality, satisfaction and loyalty: A case of an international festival.**
  Joohyun Lee (Eastern Mennonite University).

- **Surf tourism destination governance in Bocas del Toro, Panama: Understanding how actors in the surf tourism system shape destination development.**
  Leon Mach (School for Field Studies — Panama).

- **Substitution interests among active-sport tourists: The case of a cross-country ski event.**
  Madeleine Orr & Ingrid Schneider (University of Minnesota).

- **U-pick farms: Harvesting more than pumpkins?**
  Sara Brune, Whitney Knollenberg, Kathryn Stevenson & Carla Barbieri (North Carolina State University).

#### 1:30 – 3:00 p.m.  
**Session I-B: Outdoor Recreation**  
**Ballroom B**

**Facilitator:** Lincoln Larson (North Carolina State University)

- **The impacts of Marcellus Shale natural gas energy development on outdoor recreation: A statewide assessment of Pennsylvanians.**
  Michael Ferguson¹, Samantha Powers², Myles Lynch¹, Darrick Evensen³, Alan Graefè² & Andrew Mowen² (¹University of New Hampshire, ²The Pennsylvania State University, ³The University of Edinburgh).

- **Psychological stress responses in natural environment.**
  Sharon Tessneer (Indiana University).

- **Igniting the science of outdoor recreation: Presenting a research strategy and agenda.**
  Anna B. Miller¹, Lee Cerveny¹, Monika Derrien¹ & Steven Selin² (¹USFS Research & Development, ²West Virginia University).
### 1:30 – 3:00 p.m.  
**Session I-C: Management & Governance**  
**Ballroom C**

*Facilitator: I-Chun (Nicky) Wu (Middle Tennessee State University)*

- **Understanding differences and barriers to creativity among first year and returning staff members in a residential camp setting.**  
  Myles Lynch\(^1\) & Nate Trauntvein\(^2\) (\(^1\)University of New Hampshire, \(^2\)Utah State University).

- **Encouraging voluntary use of nonlead ammunition on national wildlife refuges: Field staff perceptions.**  
  John H. Schulz\(^1\), Sonja A. Wilhelm Stanis\(^1\) & Elisabeth B. Webb\(^2\) (\(^1\)University of Missouri, \(^2\)U.S. Geological Survey).

- **Exploring how lake associations contribute to governance of lakes and their catchments.**  
  Leah Fitchett, Michael G. Sorice & Kevin J. Boyle (Virginia Polytechnic Institute and State Univ.).

- **Sustainable rural livelihood under different governance models of tourism development: A case study of Villages in Yunnan, China.**  
  Qianlang Shang & Philip Wang (Kent State University).

### 3:00 – 3:30 p.m.  
**Afternoon Break**  
**Atrium**

### SESSION II (Sunday, 3:30 – 5:00 p.m.)

### 3:30 – 5:00 p.m.  
**Session II-A: Heritage Conservation**  
**Ballroom A**

*Facilitator: Sonja Wilhelm Stanis (University of Missouri)*

- **Historical and cultural resource visitation in Alpena, MI.**  
  Danielle Schwarzmann\(^1\), Vernon –Bob– Leeworthy\(^2\) & Mary Tagliareni\(^2\) (\(^1\)National Marine Sanctuary Foundation, \(^2\)NOAA’s Office of National Marine Sanctuary).

- **Land of encroachment: Identifying sociocultural impacts of ecosystem change on New Mexico grasslands.**  
  Maude Dinan & Bethany Cutts (North Carolina State University).

- **Guiding hunter recruitment, retention, and reactivation: A market-driven approach.**  
  Dan Stephens, Kristen Black & Craig A. Miller (Illinois Natural History Survey).

- **The conservation funding crisis: What solutions do college students support?**  
  Lincoln Larson\(^1\), Victoria Vayer\(^1\), Kangiae Jerry Lee\(^1\), Nils Peterson\(^1\), Adam Ahlers\(^2\), Ryan Sharp\(^2\), Kris Irwin\(^3\), Kyle Woosnam\(^3\), Sam Keith\(^3\), James Farmer\(^4\), Elizabeth Metcalf\(^5\), Tim Van Deelen\(^6\), Christine Anhalt-Depies\(^6\), Jeremy Bruskotter\(^7\), Richard Stedman\(^8\), William Siemer\(^9\), Shari Rodriguez\(^9\), Matt Springer\(^10\), Alan Graefe\(^11\), Tom Mueller\(^11\), Matt Kelly\(^12\), Richelle Winkler\(^12\), Chelsie Romulo\(^13\) & Michael Quartuch\(^14\) (\(^1\)NC State University, \(^2\)Kansas State University, \(^3\)University of Georgia, \(^4\)Indiana University, \(^5\)University of Montana, \(^6\)University of Wisconsin, \(^7\)Ohio State University, \(^8\)Cornell University, \(^9\)Clemson University, \(^10\)University of Kentucky, \(^11\)Pennsylvania State University, \(^12\)Michigan State University, \(^13\)University of Northern Colorado, \(^14\)Colorado Parks & Wildlife).
3:30 – 5:00 p.m.  Session II-B: Destination Image & Loyalty  Ballroom B

Facilitator: Stella Liu (South Dakota State University)

- **Impacts of motivation, past experience, and satisfaction on destination loyalty: A case study of Lushan National Park, China.**
  Jinyang Deng¹ & Jianqiong Yuan² (¹West Virginia University, ²Central South University of Forestry & Technology, China).

- **Exploring destination image from Social Network and Text Analysis.**
  So Young Park, Athar Sefid & Bing Pan (Pennsylvania State University).

- **The effect of a virtual reality experience on destination image: A case study of education abroad programs.**
  Sarah Collins & I-Chun (Nicky) Wu (Middle Tennessee State University).

- **Poetry and dramatic landscape: An interpretation.**
  Philip Wang, Barbara Atanga & Qianlang Shang (Kent State University).

3:30 – 5:00 p.m.  Session II-C: Education & Capacity Building  Ballroom C

Facilitator: Danielle Lawson (North Carolina State University)

- **Addressing budgetary shortfalls through grant-writing success: Capacity-building lessons from local parks and recreation agencies in North Carolina.**
  Kyle Smith & Lincoln Larson (North Carolina State University).

- **Does experiential wilderness-based training influence secondary educator’s importance and confidence utilizing experiential teaching methods?**
  W. Hunter Holland¹, Robert Powell² & Kathleen K. Holland¹ (¹University of North Carolina at Wilmington, ²Clemson University).

- **Reducing physical and social fears of the outdoor environment through education and practice.**
  Sharon L. Todd, Eric Kovatchitch & Anderson Young (SUNY Cortland).

- **Community engagement: Case study of applying appreciative inquiry in nearby communities at Theodore Roosevelt National Park.**
  Leah Joyner, N. Qwynne Lackey & Kelly S. Bricker (University of Utah).

3:30 – 5:00 p.m.  Session II-D: Roundtable I  Mainsail

Adapting to increasing visitation: Application of human dimensions research in an urban-proximate open space district

Deonne VanderWoude, Colin Leslie, Anna Kellogg & Heidi Seidel (City of Boulder, Colorado)

The City of Boulder Open Space and Mountain Parks (OSMP) is an urban-proximate open space district situated in the Front Range of Colorado. To understand visitation dynamics on open space, OSMP staff conducted a 12-month system-wide study from June 2016-May 2017. This included both quantifying when, where and how people are distributed across the system as well as the types of activities, experiences and benefits they are seeking to fulfill. This roundtable session will begin with a brief overview of the results from
this study, including trend data from previous data collection efforts. This will be followed by a Q&A and 
discussion on the management opportunities and challenges that surround increasing visitation in open space 
areas, and ways data can help managers adapt to these changes. Specific topics to be covered are: spatial and 
temporal variation, demographic homogeneity, busting visitation myths, informing visitor management 
strategies, policy creation and adaptively modifying on-going operations.

<table>
<thead>
<tr>
<th>5:15 – 6:15 p.m. (Sunday)</th>
<th>POSTER SESSION AND RECEPTION</th>
<th>Atrium</th>
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<tbody>
<tr>
<td>❖ Attitudes toward wilderness mobile phone usage in outdoor colligate orientation programs. Alice Morgan &amp; Dave Smaldone (West Virginia University).</td>
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<td>❖ Exploring career women’s leisure participation and satisfaction in urban China. Linan Zhang, Jie Gao &amp; Yawei Wang (Montclair State University).</td>
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<td>❖ Dimensions in tourists’ stress and coping strategies during vacation. Linan Zhang, Jie Gao &amp; Yawei Wang (Montclair State University).</td>
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<td>❖ Examining the advantages of geographically weighted regression techniques for understanding impacts to recreation resources. Min Kim &amp; David Graefe (Marshall University).</td>
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<td>❖ Hiking the woodland edge: A Gibsonian approach to the perception and experience of liminality. Chad D. Pierskalla (West Virginia University).</td>
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<td>❖ Intergenerational learning beyond the immediate family: Are students environmental change-agents in their communities? Jenna Hartley¹, Kathryn Stevenson¹, Nils Peterson¹, Elizabeth DeMattia², Renee Strnad¹, Sarah Carrier¹ &amp; K.C. Busch¹ (¹North Carolina State University, ²Duke University).</td>
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<tr>
<td>❖ Studying the relationship between social media data and park attendance in the Northern Forest Region. Diane Kuehn¹, James Gibbs¹, Alden Sampson², Marshall Moutenot² &amp; Lilly Stradtman¹ (¹SUNY College of Environmental Science and Forestry, ²Upstream PBC).</td>
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<td>❖ Parks and vacant lots: Residents' perceptions of the contributions of urban green spaces to socio-ecological outcomes. Emily Piontek¹, Sonja Wilhelm Stanis¹, Damon Hall¹, Lauren Mullenbach², Andrew Mowen² &amp; Birgitta Baker² (¹University of Missouri, ²Pennsylvania State University).</td>
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<td>❖ Debris Free D&amp;E: An examination of intervention strategies for reducing littering behavior on campus. Lucas Powell &amp; Rick Gage (Davis &amp; Elkins College).</td>
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● **A city park: An ideal place for family recreation.**
  Bob Lee (Bowling Green State University).

● **Idealized locations for floating offshore wind turbines (FOWT) in the Gulf of Mexico and projections utilizing MATLAB Machine Learning.**
  Gary Thomas Talor & Doeun Choe (Prairie View A&M University).

● **Tourism training at the secondary level: An assessment of attitudinal impacts.**
  Roy Ramthun & Susan Williams (Concord University).

● **Capturing long-term impacts of the Muddy Sneakers environmental education program through qualitative interviews and a longitudinal snapshot survey.**
  S. Brent Jackson, Kathryn Stevenson, Nils Peterson, Lincoln Larson, Sarah Carrier & Renee Strnad (North Carolina State University).

● **Impacts of geoscience-focused STEM education combined with recreation activities on middle school to high school-aged youths.**
  Lauren Janowicz, Jonas Leveque & Robert Burns (West Virginia University).

● **Improving landowner connections to conservation: Linking organizational and landowner values in wildlife incentive programs.**
  Madeline Grupper¹, Paxton Ramsdell² & Michael G. Soricé¹ (¹Virginia Tech, ²Environmental Defense Fund).

● **Does the location matter?**
  Kyung Ho Yu & Joohyun Lee (Eastern Mennonite University).

● **Political mobilization via Twitter and Instagram: A case study on #AltNPS.**
  Olivia Vila, Joshua Randall, Maude Dinan & Bethany Cutts (North Carolina State University).

● **Understanding the perceptions and experiences of African-American outdoor recreationalists.**
  Diquan Edmonds, Michael B. Edwards, Myron F. Floyd & Kang-Jae “Jerry” Lee (NC State University).

● **Measuring the socioeconomic impacts of water restoration projects: Contributions to community vibrancy.**
  Erin Keller, Lissy Goralnik, Michelle Rutty & Jessica Brunacini (Michigan State University).

● **The role of social norms and identity in landowners’ use of prescribed fire.**
  Andrew Johnson, Kiandra Rajala & Michael G. Soricé (Virginia Tech).

● **Costa Rica agritourism: Lessons in tourism education, sustainability and development.**
  Mark Gleason¹ & Deborah Steketee² (¹Grand Valley State University, ²Aquinas College).

● **Bodies or boats: Differentiating beach-based density and displacement.**
  Ingrid E. Schneider, Ami Choi, Ben Pflugheft, Christopher Nachtseim & Anna Eorre (University of Minnesota).

● **Tourists’ preferences for weather and environmental conditions: A pilot study of Virginia Beach.**
  Lindsay Usher & Michael Allen (Old Dominion University).

● **Obesity and recreation opportunities from a regional planning perspective.**
  Kyung Hee Lee (Central Michigan University).

● **Valuing recreational beaches: A spatial hedonic property value approach.**
  Jinwon Kim, Eunjung Yang & Brijesh Thapa (University of Florida).
Charles –Chuck– Nelson, Ph.D.
Department of Community Sustainability, Michigan State University

Natural resource recreation: A lifelong love affair.

Chuck Nelson has a BS in Resource Development, a MS in Park and Recreation Resources and a Ph.D. in Forestry, all from Michigan State University (MSU). He has spent a 39-year career at MSU teaching, supervising interns, and conducting research. Key areas include natural resource recreation management, planning, policy and law enforcement. He has had the privilege to work with 10,000 students in his career.

He enjoys service including as the faculty advisor for the MSU Ducks Unlimited chapter, chair for the North American Waterfowl Management Plan Michigan Implementation Committee, president of the Michigan Duck Hunters Association, chair of the Clinton County Parks and Green Space Commission, and president of the Friends of the Shiawassee National Wildlife Refuge.

Fortunately, his wife Susan and sons Mike and Dan support and share his commitment to conservation, passion for natural resources and mission of introducing others to the outdoors. As you may guess, he has fun outside.

DAY 2 - MONDAY, APRIL 8, 2019

7:00 a.m. – 8:00 a.m. Breakfast Atrium
7:00 a.m. – 5:30 p.m. Registration Atrium

SESSION III (Monday, 8:00 – 9:30 a.m.)

8:00 – 9:30 a.m. Session III-A: Homeownership: Values & Pitfalls Ballroom A

Facilitator: Whitney Knollenberg (North Carolina State University)

- Investigating factors influencing homeowners’ adoption of Firewise activities in southern California wildland-urban interface areas.
  Benjamin Ghasemi¹, Gerard T. Kyle¹ & James D. Absher² (¹Texas A&M University, ²Natural Resources Sociologist).

- Rail trails and home values: A longitudinal study.
  Robert S. Bristow¹ & Jo Beth Mullens² (¹Westfield State University, ²Keene State College).

- Recreational displacement following introductions of the nonnative Tui Chub at Diamond Lake, Oregon.
  Mary E. Allen & Robert C. Burns (West Virginia University).

- Exploring the fluid identity of the short-term vacation rental host in Savannah, GA.
  Emily Yeager¹, Bynum Boley², Meredith-Welch Devine² & Cari Goetcheus² (¹East Carolina University, ²University of Georgia).
### 8:00 – 9:30 a.m.  Session III-B: Communication Methods & Messages  Ballroom B

**Facilitator:** Lindsay Usher (Old Dominion University)

- **Social media and national parks: An exploratory study.**  
  Camille Marcotte & Patricia A. Stokowski (University of Vermont).

- **Connectivity across the citizen science landscape: Using Social Network Analysis to inform project management.**  
  Sara E. Futch, Lincoln R. Larson & Caren B. Cooper (North Carolina State University).

- **Disaster communication on social media during hurricane Florence: A cross-platform comparison of message framing by tourism organizations.**  
  Danielle Barbe¹, Ashley Schroeder² & Lori Pennington-Gray¹ (¹University of Florida, ²The Pennsylvania State University).

- **Zen and the art of leisure.**  
  Philip Wang (Kent State University).

### 8:00 – 9:30 a.m.  Session III-C: Human Dimensions of Wildlife  Ballroom C

**Facilitator:** Craig Miller (University of Illinois)

- **Springtime exploitation of brook trout by anglers in remote headwater streams of central Appalachia.**  
  Kyle J. Hartman¹, Ross G. Andrew¹, Christopher W. Schwinghamer¹, David W. Thorne² & Jeremy S. Webster¹ (¹West Virginia University, ²West Virginia Division of Natural Resources).

- **Anglers’ perceptions of varying resource quality.**  
  Lija Krievs & David B. Klenosky (Purdue University).

- **Recruiting, retaining, and re-engaging new hunters in Illinois by creating an adult learn to hunt program.**  
  Kristen Black¹, Daniel Stephens¹ & Craig A. Miller² (¹University of Illinois at Urbana-Champaign, ²Illinois Natural History Survey).

- **Hunters’ knowledge of and support for chronic wasting disease management in Illinois.**  
  Craig A. Miller¹ & Jerry J. Vaske² (¹Illinois Natural History Survey, ²Colorado State University).

### 8:00 – 9:30 a.m.  Session III-D: Roundtable II  Mainsail

**Navigating the transition from graduate student to professional in today’s recreation and tourism field.**

Rick Gage¹, Alison Murray², Michael D. Ferguson³, Kyle Olcott⁴ & Nick Pitas⁵ (¹Davis & Elkins College, ²Eastern Washington University, ³University of New Hampshire, ⁴Federal Energy Regulatory Commission, ⁵State University of New York).

In this roundtable session, recent graduates of recreation, park, and tourism programs who have gained successful employment in both academic and practitioner roles, will share their experiences in today’s competitive job market. Perspectives represented by the panel include academic institutions ranging from a small liberal arts teaching college to a prominent research-focused state university, as well as the United State
federal government. Participants will discuss changes in the field over the past two decades and the nuances of tenure-track, non-tenure track, and short-term contract positions. They will discuss the balance between research, teaching, and service expectations at various types of institutions, and what to expect in life after graduate school, among other topics. Participants will provide “lessons learned” and offer practical and applicable advice for strategic career advancement within the field.

9:30 – 10:00 a.m. 
Mid-morning Break 
Atrium

SESSION IV (Monday, 10:00 – 11:30 a.m.)

10:00 – 11:30 a.m. 
Session IV-A: Weather & Climate Change 
Ballroom A

Facilitator: Michael Ferguson (University of New Hampshire)

- Climate change and recreation: Harnessing travel experiences for climate benefit.
  Paige P. Viren1, Christina Beckmann2 & Pavlína Látková1 (1San Francisco State University, 2Adventure Travel Trade Association).

- The influence of temporal and weather dimensions on outdoor recreation in the wildland-urban interface.
  Eleanor Crofford1, Forrest South1, Jessica Klamut1, Chris Zajchowski1 & Jeff Rose2 (1Old Dominion University, 2University of Utah).

- Optimizing historic preservation under climate change: Decision support for cultural resource adaptation planning in national parks.

- Park-based climate change resilience: Place attachment, pro-environmental behavior and support for management actions.
  Lisa Groshong, Sonja A. Wilhelm Stanis, Mark Morgan & Christine Li (University of Missouri).

10:00 – 11:30 a.m. 
Session IV-B: Tourism Management & Development 
Ballroom B

Facilitator: Ashley Schroeder (The Pennsylvania State University)

- Guest workers in the US tourism, hospitality, and recreation industries.
  Wesley S. Roehl (Temple University).

- Working in paradise: Resources and strategies supporting the tourism workforce in Ocracoke, NC.
  Sara Brune1, Whitney Knollenberg1, Jane Harrison2 & Ann Savage3 (1North Carolina State University, 2North Carolina Sea Grant, 3Alexandria/Pineville Area CVB).

- Mapping and prioritizing rural communities for tourism development in Tennessee by using GIS based site suitability analysis and multi-criteria decision-making methods.
  I-Chun (Nicky) Wu & Kahler Stone (Middle Tennessee State University).

- Social interactions and attitudes towards tourism development in a rural area.
  Alison Murray (Eastern Washington University).
**10:00 – 11:30 a.m.  Session IV-C: Community & Citizen Engagement  Ballroom C**

**Facilitator:** Kathryn Stevenson (North Carolina State University)

- **Do project owner attitudes constrain citizen science? Enabling the shift from silo to holistic volunteer management.**
  Maria Sharova, Lincoln Larson & Caren Cooper (North Carolina State University).

- **Impacts of a wildlife-monitoring experience on citizen science volunteers.**
  Charmaine Pedrozo¹, Lincoln L. Larson¹, Caren Cooper², Kathryn Stevenson¹, Roland Kays² & Stephanie Schuttler² (¹North Carolina State University, ²NC Museum of Natural Sciences).

- **Where did they come from and where do they go: Does volunteer starting point predict sustained engagement in citizen science?**
  Bradley Allf (North Carolina State University).

- **Community resilience: A case study in planning in rural eastern North Carolina.**
  Daniel Pilgreen¹, Paige P. Viren² & Clifton E. Watts³ (¹Texas A&M University, ²San Francisco State University, ³East Carolina University).

**10:00 – 11:30 a.m.  Session IV-D: Roundtable III  Mainsail**

**Omnivores, sustainability, and action: A critical examination of food and animals in recreation and tourism.**

Kelly S. Bricker¹, Carol Kline², Kristin Lamoureux³, Leah Joyner¹ & Carla Barbieri⁴ (¹University of Utah, ²Appalachian State University, ³Virginia Tech University, ⁴North Carolina State U.).

Because the provision of food is a significant part of any tourism/recreation experience, we explore the impact of unsustainable food production and the related use of food animals that is largely ignored in recreation and tourism operations and destination landscapes, and thus detracts significantly from the environmental and social sustainability of tourism, recreation, and development goals. This roundtable will address important considerations in connecting food, animals, and sustainable development in tourism and recreation, while considering a research agenda for the future. Discussion will focus on: (1) Examining how tourism can amplify, distort or threaten local culinary traditions for the purpose of earning revenue; (2) exploring the perceptions of tourists and operators regarding the combined “uses” of “food animals” (e.g., animals as food, animals as worker); and (3) examining systems’ approaches that can help to negotiate different perspectives of foods between tourism actors (providers and consumers) with different cultural norms.

**12:00 – 1:15 p.m. (Monday)  LUNCH AND KEYNOTE ADDRESS  Atrium**

Anupama Joshi, M.S.
Executive Director, Blue Sky Funders Forum

**Cross-Sector Collaborations: Breaking Down Silos for Maximizing Impact**

Anupama Joshi is the executive director of Blue Sky Funders Forum—a funder affinity group focused on expanding philanthropy to promote environmental literacy. Anupama has worked at the nexus of food systems, health and the environment throughout her career, and is an accomplished leader in the non-profit social sector in the US and abroad. She was previously executive director of the National Farm to School Network, which she co-founded in 2007, building a movement to incorporate local procurement, gardens and food and farm education in schools and early care sites across the US.
Anupama is co-author of Food Justice (MIT Press, 2010). She has advised the US Department of Agriculture on the Farm to School Census. Anupama currently serves on the board of directors for the Farmers Market Coalition, and was previously a board member with FoodCorps and the Community Alliance with Family Farmers. Anupama provides mentorship to emerging leaders through the Community Food Systems Mentorship Program. She is a mom, loves to travel, and cook, and currently lives in North Carolina.

**1:15 – 1:45 p.m. SILENT AUCTION Atrium**

**SESSION V (Monday, 2:00 – 3:30 p.m.)**

**2:00 – 3:30 p.m. Session V-A: Youth as Agents of Change Ballroom A**

**Facilitator:** Sharon Todd (SUNY Cortland)

- **Outside your door: Young producers bridge the divide between urban youth and public lands.** Nina S. Roberts, Nancy (“Sami”) Reist & Kristen Pozzoboni (San Francisco State University).

- **Roleplaying to understand youth values towards forests: Quantitative results for forest plan revision.** Christopher J. Wynveen & Kelli K. McMahan (Baylor University).

- **A changing face for hunting? Insights from college campuses across the United States.** Victoria Vayer¹, Lincoln Larson¹, Kangia Jerry Lee¹, Nils Peterson¹, Adam Ahlers², Ryan Sharp², Kris Irwin³, Kyle Woosnam³, Sam Keith³, James Farmer⁴, Elizabeth Metcalf⁵, Tim Van Deelen⁶, Christine Anhalt-Depies⁶, Jeremy Bruskotter⁷, Richard Stedman⁸, William Siemer⁹, Shari Rodriguez⁹, Matt Springer¹⁰, Alan Graefe¹¹, Tom Mueller¹¹, Matt Kelly¹², Richelle Winkler¹², Chelsie Romulo¹³ & Michael Quartuch¹⁴ (¹North Carolina State U., ²Kansas State University, ³University of Georgia, ⁴Indiana University, ⁵University of Montana, ⁶University of Wisconsin, ⁷Ohio State University, ⁸Cornell University, ⁹Clemson University, ¹⁰University of Kentucky, ¹¹Pennsylvania State University, ¹²Michigan State University, ¹³University of Northern Colorado, ¹⁴Colorado Parks & Wildlife).

- **Intergenerational communication: Children as catalysts to climate change action.** Danielle Lawson, Kathryn Stevenson, Nils Peterson, Sarah Carrier & Renee Strnad (North Carolina State University).

**2:00 – 3:30 p.m. Session V-B: Urban Spaces Ballroom B**

**Facilitator:** Phillip Wang (Kent State University)

- **Spatial analysis of constraints to urban park visitation among diverse residents in the Portland metropolitan area.** Jaclyn R. Rushing¹, Ashley D’Antonio² & Mark D. Needham² (¹North Carolina State University, ²Oregon State University).

- **The mediating role of use and perceptions of urban greenspace on the association between socioeconomic status and wellbeing.** Rebecca Koroll & Bryan Smale (University of Waterloo).
**Visitor preferences in differently developed urban green areas: A case study from Tallinn, Estonia.**
Mart Reimann¹, Piret Kuldna², Helen Sooväli-Sepping¹ & Helen Poltimäe² (¹Tallinn University, ²Stockholm Environment Institute).

**Exploring the relationship between urban park development and gentrification worldview.**
Lauren E. Mullenbach, Andrew J. Mowen & Birgitta L. Baker (The Pennsylvania State University).

### 2:00 – 3:30 p.m.  
**Session V-C: Management of Public Parks**  
**Ballroom C**

**Facilitator:** Paige Viren (San Francisco State University)

- **A national look at unconfined recreation in wilderness managed by the Bureau of Land management.**
  C. Griff Griffin & Jager Kukowski (Grand Valley State University).

- **Porous boundaries in the National Capital Region: Opportunities and challenges with visitor counts.**
  Laurlyn K. Harmon¹, Margaret Daniels² & John Read² (¹University of Wisconsin – La Crosse, ²George Mason University).

- **Assessing trends in Michigan State Park use and users.**
  Charles M. Nelson, Kali Maisano, Shaun Hixson & Dennis Maxwell (Michigan State University).

- **Managers’ perceptions of crowding in New York State Parks.**
  Aaron Krinsky & Diane Kuehn (SUNY College of Environmental Science and Forestry).

### 2:00 – 3:30 p.m.  
**Session V-D: Roundtable IV**  
**Mainsail**

**Using research to build coalitions for the greater good of parks, recreation, and tourism.**

Whitney Knollenberg¹ & Ashley Schroeder²  
(¹North Carolina State University, ²The Pennsylvania State University).

Parks, recreation, and tourism stakeholders are influenced by political decisions at the local, state, and federal level. These decision may be related to social policies (e.g., bathroom bills), environmental policies (e.g., land use and conservation), or funding for public or public/private organizations (e.g., National Park Service and destination management organizations). Such decisions affect the everyday functions of these stakeholders and the sustainability of the resources that they manage. Therefore, it is vital for parks, recreation, and tourism stakeholders to have a voice in the political decision-making process. To ensure this voice resonates with decision makers these stakeholders require a strong coalitions and reliable data which tell the story of the impacts of parks, recreation, and tourism. This roundtable session will utilize case studies and small group discussion to identify opportunities to use data in coalition building among parks, recreation, and tourism stakeholders in efforts to influence the political decision-making process.

### 3:30 – 4:00 p.m.  
**Afternoon Break**  
**Atrium**
SESSION VI (Monday, 4:00 – 5:30 p.m.)

4:00 – 5:30 p.m.  Session VI-A: Partnerships & Collaborations  Ballroom A

Facilitator: Xiao Xiao (Arizona State University)

- Collaboration in the National Park Service: The role of advisory committees.
  Megan L. Foster (University of California, Davis).

- The relationships between parks and protected areas and communities: Two scoping reviews on the current state research globally and in the United States and Canada.
  N. Qwynne Lackey & Kelly S. Bricker (University of Utah).

- Elevating outdoor recreation together: State offices and potential partnerships in outdoor recreation, conservation, and economic development.
  Brooke Sausser¹, Jordan W. Smith¹, Krista Sherwood², Adam Milnor² & Bob Ratcliffe² (¹Utah State University, ²National Park Service).

- Outdoor education partnership in urban communities: A case study in South Dakota.
  Paige O’Farrell & Hung-Ling –Stella– Liu (South Dakota State University).

4:00 – 5:30 p.m.  Session VI-B: Place Meaning & Attachment  Ballroom B

Facilitator: Diane Kuehn (SUNY College of Environmental Science and Forestry)

- Identifying hikers’ special place meanings and geopiety: The Baekdu-Daegan trail, South Korea.
  Jihee Park & Gerard Kyle (Texas A&M University).

- Place identity and support for tourism development in coastal communities across Michigan (USA).
  Michelle Rutty, Lissy Goralnik, Jessica Brunacini & Erin Keller (Michigan State University).

- Contributions of sense of place to perceptions of ecosystem transformation.
  Kiandra Rajala & Michael G. Sorice (Virginia Tech).

- Considering the role psychological needs satisfaction plays in explaining place attachment among Southern Appalachian Region (U.S.) wilderness visitors.
  Samuel J. Keith¹, Kyle M. Woosnam¹, Adam C. Landon² & Gerard T. Kyle³ (¹University of Georgia, ²Minnesota Department of Natural Resources, ³Texas A&M University).
Facilitator: Alison Murray (Eastern Washington University)

  Nick Pitas¹, Andrew J. Mowen², Alan R. Graefe², & Geoffrey C. Godbey² (¹State University of New York, ²The Pennsylvania State University).

- Parks for ALL: A validation study of diversity and inclusion in Michigan’s National Parks.
  Mark Gleason & Michael Scantlebury (Grand Valley State University).

- Navigating trailheads: Capturing the stories of women adventurers.
  Olivia McAnirlin (Miami University).

- Place and pooches: Differentiating dog-walkers.
  Ingrid E Schneider¹, Sonja Wilhelm-Stanis² & Arne Arnberger³ (¹University of Minnesota, ²University of Missouri, ³University of Natural Resources and Life Sciences – Austria).

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Visitor use monitoring & management in & around federal aquatic sanctuaries and parks: A sea of opportunity.

Robert Burns¹, Bob Leeworthy², Kyle Hartman¹, Danielle Schwarzmann², Bret Meldrum³, Mary Allen¹, Ross Andrew¹ & Don English⁴.
(¹West Virginia University, ²NOAA Office of National Marine Sanctuaries, ³National Park Service Social Science Program, ⁴US Forest Service).

Visitors to federal protected area settings number in the hundreds of millions annually, and account for significant economic impacts in gateway communities and within some protected areas. However, a knowledge gap exists with respect to fully understanding the number of visitors in many agencies. While the US Forest Service has a good understanding of the numbers of visitors who use National Forest settings, many federal agencies are just beginning to quantify use (e.g., boating and fishing in NMS settings and viewing wildlife and viewing scenery in NPS settings). This Roundtable will focus on various approaches of estimating visitation in protected areas, as well as the opportunities and challenges associated with the management of visitors.

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DINNER ON YOUR OWN
DAY 3 - TUESDAY, APRIL 9, 2019

7:00 a.m. – 8:00 a.m.  Breakfast  Atrium
7:00 a.m. – 12:00 p.m.  Registration  Atrium

SESSION VII (Tuesday, 8:00 – 9:30 a.m.)

8:00 – 9:30 a.m.  Session VII-A: Residents’ Perspectives  Ballroom A

Facilitator: Ellen Drogin Rodgers (George Mason University)

Public values and attitudes toward public parks and recreation services.  
Hung-Ling (Stella) Liu & Paige O’Farrell (South Dakota State University).

Wilderness preservation values and support among residents of varying political persuasions within the Southern Appalachian Region.  
Samuel J. Keith & Kyle M. Woosnam (University of Georgia).

“Show me the benefits, I will show you the money”: The relationship between use and willingness to support community parks and recreation.  
Samantha L. Powers¹, Robert J. Barcelona² & Nate E. Trauntvein³ (¹The Pennsylvania State University, ²University of New Hampshire, ³Utah State University).

Determinants of support for recovery of large carnivores in Illinois.  
Benjamin Ghasemi¹, Adam C. Landon², Craig A. Miller³ & Brent D. Williams³ (¹Texas A&M University, ²Minnesota Department of Natural Resources, ³University of Illinois).

8:00 – 9:30 a.m.  Session VII-B: Sustainable Tourism  Ballroom B

Facilitator: Laurie Harmon (University of Wisconsin – La Crosse)

Facilitating sustainable outdoor recreation and ecotourism growth through Extension Service programming.  
Shane Feyers & Taylor Stein (University of Florida).

Environmental quality and its impact on business performance of the Bed and Breakfasts (B&B) industry in Taiwan.  
Chia-Ning Chiu¹ & Hsuan Yu² (¹National Ilan University - Taiwan, ²University of Maryland).

Destination stewardship: Understanding sustainable tourism through WTTC Tourism for Tomorrow Award finalists.  
Ruan De Lange & Kelly S. Bricker (University of Utah).
### Session VII-C: Visitors & Tourists

**Facilitator:** Sara Brune (North Carolina State University)

- **Consumer benefits and sustainable funding for outdoor recreation.**
  Kelly Horvath (Duke University).

- **Visitors’ spatial movement patterns and market segmentation in Washington D.C.**
  Jinyang Deng¹ & Rogelio Andrada II² (¹West Virginia University, ²University of the Philippines Los Baños - Philippines).

- **Potential impacts of bark-beetles on visitor interference and displacement: Cross-national perspectives.**
  Ingrid E. Schneider¹, Arne Arnberger², Stuart Cottrell³, Paul Gobster⁴, Stephanie Snyder⁴ & Robert C. Venette⁴ (¹University of Minnesota, ²University of Natural Resources and Life Sciences - Austria, ³Colorado State University, ⁴USDA Forest Service).

- **The devil made me do it: Interpretation and values as predictors of zoo visitors’ pro-conservation behaviors for Tasmanian Devils.**
  Jeffrey C. Skibins¹, Betty Weiler² & Kevin Markwell² (¹East Carolina University, ²Southern Cross University).

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### Session VII-D: Economic Considerations

**Facilitator:** Jerry Vaske (Colorado State University)

- **Building program desirability into payment for ecosystem services programs.**
  Michael G. Sorice¹, C. Josh Donlan², Kevin J. Boyle¹, Weibin Xu¹ & Stefan Gelcich³ (¹Virginia Tech, ²Advanced Conservation Strategies – Spain, ³Pontificia Universidad Católica de Chile - Chile).

- **Becoming a tourism economy: A cross-cultural examination of emerging tourism markets in rural China and Appalachia.**
  Rick Gage (Davis & Elkins College).

- **Economic impact measures: EI benchmarking and market profiling of non-attendees at regional special events.**
  Rodney B. Warnick¹ & David C. Bojanic² (¹University of Massachusetts at Amherst, ²University of Texas at San Antonio).

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### 9:30 – 10:00 a.m.

**Morning Break**
SESSION VIII (Tuesday, 10:00 – 11:30 a.m.)

**10:00 – 11:30 a.m. Session VIII-A: Stakeholders’ Perspectives Ballroom A**

**Facilitator:** Leah Joyner (University of Utah)

- **Analyzing sustainable recreation intentions: A qualitative content analysis of Forest Service Region 3 Recreation Investment Fund proposals.**
  Jeremy Golston¹, Steven Selin², Chad Pierskalla² & Francisco Valenzuela¹ (¹Forest Service Southwest Regional Office, ²West Virginia University).

- **Sense of responsibility as a socio-psychological dimension of the owner-land relationship.**
  Evgenia Spears & Michael A. Schuett (Texas A&M University).

- **Perceived benefits, demographics and dog park use.**
  Edwin Gómez¹ & Ron Malega² (¹East Carolina University, ²Missouri State University).

- **Assessing stakeholders’ perceptions of the entry fee removal at Bastimentos National Marine Park in Bocas Del Toro, Panama.**
  Melanie Klemond¹, Camila Rojas² & Carly Winner³ (¹University of Minnesota, ²St. Edward’s University, ³University of Wisconsin-Madison).

**10:00 – 11:30 a.m. Session VIII-B: Innovative Methods Ballroom B**

**Facilitator:** Emily Yeager (East Carolina University)

- **How do you say “crowding” in Spanish? Innovative data collecting methods on diverse times.**
  Adrian Benedetti, Alan Graefe, Derrick Taff & Max Olsen (The Pennsylvania State University).

- **Distance-related human-wildlife conflict: A virtual reality approach to understanding visitor perceptions.**
  Stephanie E. Freeman, Zachary D. Miller, Jacob A. Benfield, B. Derrick Taff & Peter Newman (The Pennsylvania State University).

- **GPS-based mobile exercise application: An alternative tool to assess spatio-temporal dynamics of residents’ physical activities in community recreation.**
  Eunjung Yang, Jinwon Kim & Brijesh Thapa (University of Florida).

- **The influence of priming on indicators and thresholds for outdoor recreation.**
  Chris Zajchowski¹, Jeff Rose², Kensey Baker² & Matthew Brownlee³ (¹Old Dominion University, ²University of Utah, ³Clemson University).

**SYMPOSIUM CONCLUDES (Tuesday 11:30)**

**Thanks for your participation.**

**See you next year!**
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ABSTRACT REVIEWERS

**Oral Presentations:**
Kelly Bricker (University of Utah), Robert Bristow (Westfield State University), Robert Burns (West Virginia University), Michael Ferguson (University of New Hampshire), Jie Gao (Montclair State University), Andy Holdnak (University of West Florida), Whitney Knollenberg (North Carolina State University), Diane Kuehn (SUNY College of Environmental Science and Forestry), Adam Landon (Minnesota Department of Natural Resources), Lincoln Larson (North Carolina State University), Pavlina Latkova (San Francisco State University), Stella Liu (South Dakota State University), Dan McCole (Michigan State University), Alison Murray (Eastern Washington University), Ashley Schroeder (The Pennsylvania State University), Kathryn Stevenson (North Carolina State University), Lindsay Usher (Old Dominion University), Gail Vander Stoop (Michigan State University), Paige Viren (San Francisco State University), Hans Vogelsong (East Carolina University), Phillip Wang (Kent State University), Rodney Warnick (University of Massachusetts at Amherst), Sonja Wilhelm Stanis (University of Missouri), I-Chun Mullenbach (Nicky) Wu (Middle Tennessee State University) & Chris Wynveen (Baylor University).

**Poster Presentations:**
Claudia Alberico (North Carolina State University), Sara Brune (North Carolina State University), Bruno Ferreira (North Carolina State University), Ladan Ghahramani (North Carolina State University), Claudia Gil Arroyo (North Carolina State University), Lisa Groshong (University of Missouri), Jenna Hartley (North Carolina State University), Jing Huei Huang (North Carolina State University), Brent Jackson (North Carolina State University), Zeynab Jouzi (North Carolina State University), Leah Joyner (University of Utah), Danielle Lawson (North Carolina State University), Lauren Mullenbach (The Pennsylvania State University), So Young Park (The Pennsylvania State University), Daniel Pilgreen (Texas A&M), Samantha Powers (The Pennsylvania State University), Josh Randall (North Carolina State University), Sarah Standridge (Middle Tennessee State University) & Olivia Vila (North Carolina State University).

**Round-Tables:**
Alan Graefe (The Pennsylvania State University), David Loomis (East Carolina University), Craig Miller (University of Illinois) & Charles –Chuck– Nelson (Michigan State University).