# Program Agenda

GEER 2021

Greater Everglades Ecosystem Restoration

*Adapting Science and Management to a Changing World*

## Week 1: April 19-22, 2021 | Week 2: April 26-29, 2021

## https://conference.ifas.ufl.edu/GEER

**The Greater Everglades Ecosystem Restoration (GEER)** science conference is designed to bring together scientists and engineers, policy makers, planners and partners actively involved in or affected by all aspects of Everglades ecosystem restoration. GEER 2021 will be conducted on the Zoom virtual platform and will be spread over a two-week period to minimize screen-time fatigue and to allow the maximum number of presentations on Everglades science. The program will consist of a pre-conference workshop, plenary sessions, contributed sessions, lightning talks, round table discussions, posters, and DIG talks. Participants that are not part of a pre-approved session will be able to submit an abstract for a five-minute lightning talk with a maximum of five slides. All sessions will be recorded and published on the GEER web site and paid registrants will receive password-protected and on-demand access for one year.

Greater Everglades science continues to be a foundation element for Everglades restoration and management, and GEER will address the most pressing and complex science issues that we face now and into the future of restoration – a future that includes uncertain climate patterns, threats from invasive species, altered hydrology, development pressure, and degraded water quality.

**A premier gathering on Zoom, GEER is a collaborative effort and we invite you to join us!**

**Nicholas G. Aumen**

Conference Chair
U.S. Geological Survey
Boynton Beach, FL
Email: naumen@usgs.gov

**K. Ramesh Reddy**

Conference Co-Chair
UF/IFAS Soil and Water Sciences Department
Gainesville, FL
Email: krr@ufl.edu

**Beth Miller-Tipton**

GEER Conference Coordinator
UF/IFAS Office of Conferences & Institutes
Gainesville, FL
Email: bmt@ufl.edu

# Week One Commences

## Monday, April 19, 2021

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| PRE-CONFERENCE | **Be Sure to Prepare Well in Advance to Participate**<br>Verify Zoom works on your PC and that you have the latest version so you may self-select which breakout you want to attend.<br>**[PLEASE NOTE: All session times are in the Eastern Daylight Time Zone]** |
| | **For an in-depth checklist on how to prepare for a Zoom meeting, please review this Zoom: Pre-Meeting Checklist.** |
| | **https://conference.ifas.ufl.edu/zoom-meeting-checklist.html** |
|  | ATTENTION: Please run or disable automatic software updates in advance of the conference.<br>If you do not have administrative permission to do so, contact your IT department in advance to ensure your computer does not shut down or begin to run updates while you are presenting or attending a session. |
| 10:00am-12:00pm | **Optional Pre-Conference Workshop - Scientific Data Analysis with R (Part 1 of 4)**<br>This eight-hour workshop is divided into four, two-hour sessions conducted via Zoom over a two-week period. Attendance is limited. Sign up early to secure a seat. Instruction will be delivered sequentially, and data used in exercises build throughout each session, so you should plan to participate in all four parts. Prior to the course, participants will download and install R and RStudio. In addition, participants will be asked to review several introductory videos that describe how to install the programs and R packages. Data files, scripts, and examples should be downloaded prior to the first day. If you miss a session, you may continue participating in subsequent sessions, however, there is no fee reduction for missed portions. *(Workshop registration is closed.)* |
| 12:00pm - 1:00pm | **Lunch Break for Workshop Participants** |
| 1:00pm-3:00pm | **Optional Pre-Conference Workshop - Scientific Data Analysis with R (Part 2 of 4)** |
| 3:30pm - 4:30pm | **Virtual Networking Social & Orientation**<br>Join us for networking and an overview how to access the virtual platform, attend sessions and to get a feel for navigating a virtual GEER. |

## Tuesday, April 20, 2021

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| 10:00AM - 11:00AM | **Need help? Staff will be available at the Conference Help Desk during Arrival and Check-in**<br>Attendees can log into this session to ask questions about the conference, to get help logging into the Virtual Platform or for help using Zoom. |
| 10:30am-12noon | **Opening Plenary**<br><br>**MODERATOR**<br>**Nick Aumen,** Conference Chair, and Regional Science Advisor – South Florida, US Geological Survey, Boynton Beach, FL<br><br>**Opening Remarks**<br>**J. Scott Angle**, Vice President of Agriculture and Natural Resources, University of Florida/IFAS<br><br>**Tanya Trujillo**, Principal Deputy Assistant Secretary - Water and Science, US Department of Interior<br><br>**Plenary Presentation**<br>**Thomas K. Frazer**, Dean and Professor, College of Marine Science, University of South Florida |
| 12:00pm - 1:20pm | **Lunch Break**<br>**— Visit Virtual Field Trip Sites —**<br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html |

## Tuesday, April 20, 2021

### Concurrent Sessions [1:30pm - 3:10pm]

| | Session 1 | Session 2 | Session 3 | Session 4 | Session 5 |
|---|---|---|---|---|---|
| Session Title | **Producing a Restoration Success Show: Planning and Adaptive Management with light, cameras & action** | **Climate Change and Freshwater Restoration: Forecasts from the Interior Everglades** | **Tackling Tegus in Florida: An Interagency Collaborative Effort** | **Water Quality Dynamics Through the South Florida Watershed** | **Tree Island Ecology and Restoration: Lessons from the Loxahatchee Impoundment Landscape Assessment (LILA) Mesocosms** |
| Moderator | **David Rudnick**<br>Institute of Environment<br>Florida International University<br>Miami, FL | **John Kominoski**<br>Florida International University<br>Miami, Florida | **Dan Quinn**<br>Florida Fish and Wildlife Conservation Commission<br>Fort Myers, FL | **Evelyn Gaiser**<br>Florida International University<br>Miami, FL | **Carlos Coronado-Molina**<br>South Florida Water Management District<br>West Palm Beach, FL |
| Co-Moderator | **Jed Redwine**<br>Everglades National Park<br>Homestead, FL | **Lynn Wingard**<br>U.S. Geological Survey<br>Reston, VA | **Sarah Funck**<br>Florida Fish and Wildlife Conservation Commission<br>West Palm Beach, FL | **Tasso Cocoves**<br>US Army Corps of Engineers<br>Jacksonville, FL | **Michelle Afkhami**<br>University of Miami<br>Miami-Dade, FL |
| 1:30pm | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 1:40pm | **Andrew LoSchiavo**<br>Restoration Science Informing Operations Planning and Implementation | **Anteneh Abiy**<br>Century-Long Hydroclimate Variability and Teleconnection: Implications for Long Term Freshwater Availability in the Everglades, Southeast Florida | **Sarah Funck**<br>Tackling Tegus in Florida: Prevention through Regulatory Change | **Erik Saberski**<br>Dynamics of Total Phosphate Through the South Florida Watershed | **Julian Alwakeel**<br>Geochemical Characteristics of Soils and Groundwater at LILA |
| 1:55pm | **Jed Redwine**<br>Bridging Towards Restoration: How Expanding Adaptive Management Processes Will Influence the Next Decade of Ecological Conditions in Northeast Shark River Slough | **Johnna Infanti**<br>Aligning Climate Models with Stakeholder Needs: A Decision Tool for Communicating Future Rainfall Uncertainties to South Florida Decision Makers | **Michael Rochford**<br>Ecological Plasticity and the Future of the Argentine Giant Tegu (*Salvator merianae* Dumeril and Bibron, 1839) in the Southeastern US | **Evelyn Gaiser**<br>Long-term Periphyton Dynamics Reflect Legacy Nutrient Sources and Downstream Biological Spiraling Along the Eastern Boundary of Everglades National Park | **Michelle Afkhami**<br>Diversity and Structure of Soil Fungal Communities across Experimental Everglades Tree Islands |
| 2:10pm | **Fahmida Khatun**<br>Enhancement of The Regional Simulation Model with Extended Climatic Datasets to The Everglades and Lower East Coast for The Comprehensive Everglades Restoration Projects | **Lu Zhai**<br>Improving Evaluations of Hydrological Drivers of Wetland Plant Distributions Using Temporal Variations in Water Depth | **Dan Quinn**<br>Tegus in Florida: Early Detection/Rapid Response | **Binhe Gu**<br>Variations in Total Mercury Concentration of Mosquitofish From Everglades Protection Area | **Susana Stoffella**<br>Stand Survival and Growth along a Flooding Gradient in an Experimental Tree Island: Lessons for Forest Restoration |
| 2:25pm | **Ian Zink**<br>Florida Bay Juvenile Pink Shrimp (*Farfantepenaeus duorarum* ) Density Relative to Habitat Conditions: A Re-Examination of ~30 Yr of Legacy Data | **John Kominoski**<br>Bridging Towards Restoration: Quantifying How Increases in Freshwater Hydroperiod are Changing the Ecology of Northeast Shark River Slough, Everglades National Park | **Jenna Cole**<br>Multi-year Trapping Effort for Removal of Invasive Argentine Black and White Tegus (*Salvator merianae* ) in Miami-Dade County, Florida | **Riley Timbs**<br>Modelling Sulfide Intrusion in *Thalassia testudinum* Across Florida Bay Using a Novel Ecoindicator | **Jay Sah**<br>Incident Light and Flooding Combine to Determine Understory Plant Composition in an Experimental Everglades Tree Island |
| 2:40pm | **Nicole Iadevaia**<br>Uniting Partners and Resources to Protect Central and Southwest Florida's Water, Wildlife, and Habitat: A Habitat Restoration Needs Plan for the Coastal & Heartland National Estuary Partnership Area | **Khandker Ishtiaq**<br>Evaluating Peatland Vulnerability to Sea-Level Rise and Saltwater Intrusion Using Coupled Simulations of Coastal Transport and Soil-Plant Mechanistic Models in the Florida Coastal Everglades | **Hardin Waddle**<br>Quantifying the Effectiveness of Trapping on the Population Dynamics of Tegus in South Florida | **Troy Hill**<br>Thirty Years of Water Quality and Salinity Regime Change in Florida Bay | **Christopher Searcy**<br>Community Composition, Seasonality, and Impacts of Hydrological Regime on Everglades herpetofauna |
| 2:55pm | **Matthew Harwell**<br>Systematic Stakeholder Prioritization Criteria to Support Greater Everglades Ecosystem Science and Restoration | **Michael Ross**<br>Vegetation-Environment Relationships in Two Coastal Ecogeomorphic Settings on a Transgressive Carbonate Platform | **Bryan Falk**<br>A Synthesis of Best Management Practices for Argentine Black and White Tegus | **Maite De Maria**<br>Chronic Exposure to Glyphosate in Florida Manatee | **Discussion** |
| 3:10pm | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** |

## Wednesday, April 21, 2021

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| 10:00AM - 11:00AM | **Staff Available at the Conference Help Desk during Arrival and Check-in**<br>Attendees can log into this session to ask questions about the symposium, to get help logging into the Virtual Platform or to ask for help using Zoom. |

### Concurrent Sessions [10:30am - 12:10pm]

| | Session 6 | Session 7 | Session 8 | Session 9 | Session 10 |
|---|---|---|---|---|---|
| Session Title | **Sea Level Rise and Climate Change Impacts on the Greater Everglades Coastal Environments** | **Northern Everglades Ecosystem HABs: Impact, Research and Management in the Era of Climatic and Anthropogenic Change** | **Combatting Burmese Pythons in Florida** | **Drivers, Patterns and Processes of Nutrients and Water Quality in Biscayne Bay** | **Management, Restoration and Ecological Effects of Wetland Hydrology** |
| Moderator | **Lynn Wingard**<br>US Geological Survey<br>Reston, VA | **Anna Wachnicka**<br>South Florida Water Management District<br>West Palm Beach, FL | **Sarah Funck**<br>Florida Fish and Wildlife Conservation Commission<br>West Palm Beach, FL | **Sharon Ewe**<br>Stantec Consulting<br>Tampa, FL | **Sparkle Malone**<br>Florida International University<br>Miami, FL |
| Co-Moderator | **John Kominoski**<br>Florida International University<br>Miami, FL USA | **Barry Rosen**<br>Florida Gulf Coast University<br>Ft. Myers, FL | **Dan Quinn**<br>Florida Fish and Wildlife Conservation Commission<br>Ft. Myers, FL | **Kristin Vaughan**<br>Stantec Consulting<br>Coral Gables, FL | **Lisa Jackson**<br>South Florida Water Management District<br>West Palm Beach, FL |
| 10:30am | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 10:40am | **Miriam Jones**<br>Interaction of Climate and Sea Level on South Florida's Mangrove Coasts: Lessons from ~3000 Years Ago | **Anna Wachnicka**<br>Abiotic Controls of Harmful Algal Blooms in Lake Okeechobee: Implications for the Lake Management | **Mike Kirkland**<br>Contractor Programs as a Management Tool for Invasive Burmese Pythons | **Nicole Millette**<br>Using Spatial Variability in The Rate of Change of Chlorophyll A to Improve Water Quality Management in Biscayne Bay | **Wossenu Abtew**<br>A-1 Flow Equalization Basin Performance and Seepage Study |
| 10:55am | **Edward Castaneda**<br>Hurricane-induced P Deposition Effects on Plant-Soil Feedbacks in Karstic-Dominated Mangroves of the Florida Coastal Everglades | **Barry Rosen**<br>Why Cyanobacteria Bloom? | **McKayla Spencer**<br>FWC Python Detector Dog Team: Sniffing Out Invasive Snakes | **Galia Varona**<br>Dynamics of Macroalgae Blooms in Biscayne Bay and Their Impact in The Benthic Submerged Aquatic Vegetation Community | **Lisa Jackson**<br>Litter Decomposition Along A Restored Flow Gradient |
| 11:10am | **Laura Feher**<br>Coastal Wetland Soil Elevation Change in the Greater Everglades: A Regional Synthesis of Surface Elevation Table-Marker Horizon (SET-MH) Data | **Viviana Mazzei**<br>Harmful Algal Bloom Dynamics in the Lake Okeechobee System: Preliminary Findings from Monthly Field Monitoring and Experimental Mesocosms | **Matthew McCollister**<br>Big Cypress National Preserve Scout Snake Program Update | **Donatto Surratt**<br>Biscayne National Park: Water Quality and Discharge Influences | **Sparkle Malone**<br>Integrating Aquatic Metabolism and Net Ecosystem $CO_2$ Balance in Calcareous Short- and Long- Hydroperiod Subtropical Freshwater Wetlands |
| 11:25am | **Josh Breithaupt**<br>Organic Carbon Burial Rates increase Following Mangrove Encroachment of Sawgrass Marsh | **Lauren Krausfeldt**<br>A Multi-Omics Approach to Identify the Interconnecting Constraints on Cyanobacterial Blooms in Lake Okeechobee and Downstream Estuaries | **John Humphrey**<br>Novel Trapping Methodologies for Burmese Pythons Across a Changing Landscape | **Sarah Bellmund**<br>Long-Term Patterns and Trends in Salinity in Biscayne Bay: A 15-Year Dataset (2004-2019) | **Shawn Clem**<br>Understanding the Effects of Changes in Regional Land use on the Hydrology of Audubon's Corkscrew Swamp Sanctuary |
| 11:40am | **Michael Osland**<br>Rapid Peat Development Beneath Maturing Mangrove Forests: A Mechanism to Adapt to a Rapidly Changing World | **Thomas Frankovich**<br>Phytoplankton Assemblages in the C44 Canal And St. Lucie Estuary: Relationships to Water Quality | **Andrea Currylow**<br>Evaluating Chemical Communication as a Control Tool in Burmese Pythons | **Todd Crowl**<br>100 Years of Degraded Solitude: How Do We Restore Biscayne Bay | **Andrea Nocentini**<br>Coupling Fire and Water Management to Control Wetland Nutrient Cycling During Everglades Restoration |
| 11:55am | **Kevin Buffington**<br>A New Modeling Approach (WARMER-Mangroves) to Explore Coastal Wetland Response to Sea-Level Rise For Southwest Florida | **Ed Phlips**<br>Hurricanes, El Niño and Harmful Algal Blooms in Florida Estuaries: Direct and Indirect Impacts | **Melissa Miller**<br>Pathway to a Florida Python Control Plan | **Lee Hefty**<br>The Future of the Health of Biscayne Bay: Addressing Complex Issues through a Multi-Disciplinary, Collaborative Approach | **Robert Sobczak**<br>History of Flood and Fire in Big Cypress National Preserve |
| 12:10pm | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** |

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| 12:10pm - 1:50pm | **Lunch Break— Visit Virtual Field Trip Sites —**<br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html |

# Wednesday, April 21, 2021

## Lightning Round Sessions [2:00pm - 3:00pm]

| | Session 11 | Session 12 | Session 13 |
|---|---|---|---|
| Session Title | **Ecological Modeling In The Everglades Under Climate Change** | **How to Manage Flow Connectivity and Constituent Loading for Everglades Health: DPM Lessons for CEPP** | **USGS Science for the 21st Century: Supporting Management and Restoration of America's Everglades** |
| Moderator | **Ruscena Wiederholt**<br>Everglades Foundation<br>Palmetto Bay, FL | **Jud Harvey**<br>U.S. Geological Survey<br>Reston, VA | **Wesley Daniel**<br>U.S. Geological Survey<br>Gainesville, FL |
| Co-Moderator | **Rajendra Paudel**<br>Everglades Foundation<br>Palmetto Bay, FL | **Colin Saunders**<br>South Florida Water Management District<br>West Palm Beach, FL | **Cindy Tam**<br>U.S. Geological Survey<br>Reston, VA |
| 2:00pm | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 2:10pm | **Ruscena Wiederholt**<br>Perspectives on Everglades Ecological Modeling Tools from the User Community | **Fred Sklar**<br>Decompartmentalization Physical Model (DPM) Lessons, Challenges and Relevance for the Central Everglades Planning Project (CEPP) | **Julien Martin**<br>Decision Science for the Optimal Management of Invasive Species in the Everglades |
| 2:15pm | **Christopher Kelble**<br>Ecological Models for Fishery Species in Florida Bay | **Walter Wilcox**<br>Modeling of CERP Informed by Enhanced Landscape Dynamics Algorithms and Metrics to Improve Effective Restoration | **Scott Goetz**<br>Hibernation Behavior and Extralimital Range Expansion: An Update on the Invasive Argentine Black and White Tegu (*Salvator merianae* ) |
| 2:20pm | **Dale Gawlik**<br>Modeling Wading Bird Habitat Changes in Response to Rising Seas: Temporal Availability of Habitat as a Spatial Attribute | **Sue Newman**<br>Algal and Microbial Responses to Restored Flow and Higher Loading of TP | **Jacquelyn Guzy**<br>Turtle Vital Rates - What Do We Have, What Do We Need |
| 2:25pm | **David Essian**<br>Predicting Effects of Water Management on Breeding Abundance of Three Wading Bird Species | **Joel Trexler**<br>Experimental and Model-Driven Evaluation of Effects of Restoring Water Flow on Nutrient Transfer from the Basal to the Consumer Portions of Everglades Marsh Food Webs | **Kristen Hart**<br>Tracking Adult Male Sea Turtles Tagged in Southern Florida |
| 2:30pm | **Stephanie Romañach**<br>Ecological Modeling Under Climate Change | **Colin Saunders**<br>Phosphorus Loading Thresholds, Biophysical Feedbacks, and Biogeochemical Cycling: How Too Much Flow May Drive Downstream Eutrophication | **Gretchen Anderson**<br>Case Study: Testing External Visual Marks on Scout Pythons to Reduce Accidental Removals |
| 2:35pm | **Brian Jeffery**<br>Long-term Variation in Rainfall and its Impacts on Snail Kite Survival | **Christopher Hansen**<br>Effects of Water Velocity and Flow-Loading on Macroinvertebrate and Fish Stocks in the DPM | **Amy Yackel Adams**<br>Outlining a USGS Coordinated and Multi-year Burmese Python Research Strategy for South Florida |
| 2:40pm | **Cody Eggenberger**<br>Prey Fish Community Dynamics in Two Neighboring, Yet Distinct Coastal Everglades Subestuaries | **Carlos Coronado**<br>What is Working and What is not Using Levee Gaps and Backfilled Canals to Convey Water between Wetland Basins | **Jillian Josimovich**<br>A First Glance at Juvenile Burmese Python Survival and Dispersal |
| 2:45pm | **Michelle Petersen**<br>Modeling Trophic Linkages: Dry Season Prey Concentrations of Aquatic Fauna and Wading Bird Nesting | **Jay Choi**<br>Modeling Restored Everglades Flow to Anticipate Increasing Control of Natural Wetland Features on Water Depth and Storage after Levees are Removed | **Austin Fitzgerald**<br>Identifying Sentiment Polarity in the Judas Technique |
| 2:50pm | **DISCUSSION PERIOD** | **DISCUSSION PERIOD** | **DISCUSSION PERIOD** |
| 3:00pm | **Session Concludes** | **Session Concludes** | **Session Concludes** |

## Wednesday, April 21, 2021

### Invited Round Table Sessions [3:30pm - 5:00pm]

| | Session 14 | Session 15 |
|---|---|---|
| Session Title | **Next-Gen Methods for Invasive Species Management** | **Tribal Perspectives: Lessons Learned and Best Practices for Effective Collaboration** |
| Moderator | **Margaret Hunter**<br>U.S. Geological Survey<br>Gainesville, FL | **Stephanie Romañach**<br>U.S. Geological Survey<br>Davie, FL |
| Co-Moderator | **Adam A. Pérez**<br>CNSS<br>Gainesville, FL | **Saira Haider**<br>U.S. Geological Survey<br>Davie, FL |
| 3:30pm | **Introduction & Overview** | **Introduction & Overview** |
| 3:30pm - 5:00pm | Novel synthetic biology tools, like CRISPR, are promising biocontrol alternatives that provide potential species-specific and/or self-propagating targets to suppress invasive species populations and aid with their management. To responsibly investigate these tools, proper regulation, communication, and logistics are required.<br><br>This session will explore recent findings, future applications, and ways to address the complex nature of applying these technologies to ecosystem restoration efforts.<br><br>PANELISTS:<br>**Kristen Hart**, U.S. Geological Survey<br>**Kevin Esvelt,** MIT<br>**Bryan Falk**, National Park Service<br>**Meredith Fensom**, Oxitec, Ltd. | Residents within and around the Everglades share a goal of restoring the Everglades to a healthy ecosystem. Native American Tribes have resided in the Everglades since long before developers moved into the area in the 1880s when they began to drain the Everglades. Determining the best way to restore the Everglades – to not do more harm than good – has sometimes been a source of tension between agencies and tribes. Tribes and agencies have worked well together to achieve ecosystem restoration in many regions. Traditional perspectives can enhance restoration success through the deep understanding tribes hold on ecosystem dynamics and reference conditions.<br><br>In this session, we will hear from local tribes as well as tribes in other parts of the US to share lessons learned and discuss best practices for effective collaboration.<br><br>PANELISTS:<br>**Betty Osceola,** Miccosukee Tribe of Indians of Florida<br>**Joe Frank**, Seminole Tribe of Florida of Florida<br>**Ron Goode**, North Fork Mono Tribe of California |
| 5:00pm | **Session Concludes** | **Session Concludes** |

### Poster Session & Networking Social

6:00pm - 7:30pm

A fun and interactive poster session is scheduled Wednesday, April 21 from 6PM-7:30PM. Conducted as a Zoom meeting, those who are presenting posters virtually will be designated as individual Breakout Rooms. Attendees can jump from room to room (or poster to poster) to engage with presenters and attendees alike. Poster presenters will be able to share their screens and show PowerPoint slides visualizing each section of their posters so they can describe their work in more detail. As an incentive for attendees to visit as many posters as possible, we are giving away four $125 gift cards. The more posters one visits, the more times their name is entered in a drawing for each session. We are also giving a $125 award to the top two poster presenters who receive the most visitors, so make plans to join us!

| Thursday, April 22, 2021 | |
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| 10:30am - 11:30am | **Plenary Session**<br><br>**Moderator**<br>**Nick Aumen,** Conference Chair, and Regional Science Advisor – South Florida, US Geological Survey, Boynton Beach, FL<br><br>**Plenary Presentation**<br>**Holly Greening,** CoastWise Partners, Tampa, FL |
| 11:30am - 1:20pm | **Lunch Break**<br>**— Visit Virtual Field Trip Sites —**<br><br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html |

# Thursday, April 22, 2021

## Concurrent Sessions [1:30pm - 3:10pm]

| | Session 16 | Session 17 | Session 18 | Session 19 | Session 20 |
|---|---|---|---|---|---|
| Session Title | **Potential Impacts of Climate Change in the South Florida and Everglades Ecosystem** | **National Academies' 2020 Review of Everglades Restoration Progress** | **Biscayne and Florida Bay Restoration Science** | **Ecological Processes in Lake Okeechobee** | **Floral and Faunal Studies in Southern Everglades** |
| Moderator | **Rajendra Paudel**<br>Everglades Foundation<br>Palmetto Bay, FL | **Stephanie Johnson**<br>National Academies<br>Washington, DC | **Ryan Rezek**<br>Florida International University<br>Miami, FL | **Todd Osborne**<br>University of Florida Whitney Laboratory<br>St. Augustine, FL | **Matt Pintar**<br>Florida International University<br>Miami, FL |
| Co-Moderator | **Thomas Van Lent**<br>Everglades Foundation<br>Palmetto Bay, FL | **Charles Driscoll**<br>Syracuse University<br>Syracuse, NY | **Lynn Wingard**<br>U.S. Geological Survey<br>Reston, VA | **Paul Jones**<br>South Florida Water Management District<br>West Palm Beach, Florida | **Jordan Massie**<br>Florida International University<br>Miami, FL |
| 1:30pm | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 1:40pm | **Jayantha Obeysekera**<br>Past and Projected Climate Trends in South Florida: Progress and Challenges | **Siobhan Fennessy**<br>The National Academies 2020 Eighth Biennial Review on Progress Toward Restoring the Everglades | **Joan Browder**<br>Applying IBBEAM Salinity, Species, and Community Metrics to Evaluation, Assessment and Adaptive Management of BBCW, BBSEER, and System-wide Comprehensive Everglades Restoration Plan (CERP) Projects | **Paul Jones**<br>Monitoring Cyanobacteria Community Dynamics in Lake Okeechobee Sediments May Improve Bloom Predictions | **Kerry Flaherty-Walia**<br>Decadal Patterns in Fish Community Structure in Northeastern Florida Bay; The Effects of Differing Freshwater Inflow and a Long-Term Fishing Closure |
| 1:55pm | **Rajendra Paudel**<br>Climate Change: Effects on Everglades Hydrology and the Role of the Comprehensive Everglades Restoration Plan (CERP) for Mitigation | **Jeffrey Walters**<br>The Combined Operational Plan as the Transition from Restoration Planning to Implementation in the Heart of the Everglades | **Claire Burgett**<br>Investigating the Declines in Urban-associated Seagrass Beds and Water Quality in Northern Biscayne Bay | **Veronica Ruiz Xomchuk**<br>Overview of HALO: The Harmful Algal Bloom Assessment of Lake Okeechobee | **Michele Fournet**<br>Altered Acoustic Community Structure Indicates Delayed Recovery following Ecosystem Perturbations |
| 2:10pm | **Peter Sheng**<br>Assessing the Role of NNBF for Reducing Coastal Flood, Wave, and Property Damage During Storms in a Changing Climate | **Martha Sutula**<br>The Comprehensive Everglades Restoration Plan and the Northern Estuaries | **Bahram Charkhian**<br>Restoration Benefits Observed from the Biscayne Bay Coastal Wetlands Project | **Ashesh Amatya**<br>Artificial Neural Network Modeling of Harmful Algal Blooms in Lake Okeechobee | **Christopher Johnson**<br>Drivers of Seasonal Leaf and Meristem Internal $O_2$ Dynamics in the Dominant Seagrass (*Thalassia testudinum* ) in Western Florida Bay |
| 2:25pm | **Hilary Flower**<br>Re-Examining Resiliency in the Face of Climate Change | **Denice Wardrop**<br>The Comprehensive Everglades Restoration Plan and the Southern Estuaries; What's at the End of the Line? | **Ryan Rezek**<br>Individual Consumer Movement Mediates Food Web Coupling Across a Coastal Ecosystem | **Zach Welch**<br>How Shifting Conditions May Affect Spatially Variable Resiliency in Submerged Aquatic Vegetation Communities on Lake Okeechobee | **Jordan Massie**<br>Keeping Up with the Currents: Linking Seasonal Flow Dynamics to Downstream Migrations of Common Snook in the Shark River Estuary, Everglades National Park |
| 2:40pm | **Jung-Hun Song**<br>Impacts of Projected Climate Change and Sea-Level Rise on Southeast Florida's Groundwater Resources | **Casey Brown**<br>Science to Inform Decisions in Everglades Restoration: Progress and Promise | **Lynn Wingard**<br>Beyond Oysters - Mollusks As An Assessment Tool for Salinity Performance Measures | **Paul Julian**<br>I'm Calling To You Like A Long Lost Friend: Legacy Phosphorus In Lake Okeechobee | **Alan Mock**<br>An Assessment of Aquatic Communities Along the Eastern Boundary of Everglades National Park |
| 2:55pm | **Xavier Comas**<br>Investigating Mechanisms of Soil Matrix Disturbance Across a Salinity Gradient in the Everglades Using Hydrogeophysical Methods at the Field and Laboratory Scale: Implications for Peat Collapse | **Discussion** | **Nicholas Castillo**<br>Pharmaceutical Contaminants on a Large Spatial Scale: Using Bonefish (*Albula vulpes* ) to Examine the Presence of Pharmaceuticals in South Florida and the Caribbean | **Discussion** | **Matt Pintar**<br>The Aquatic and Semiaquatic Heteroptera of Everglades Marshes |
| 3:10pm | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** |

# Week One Concludes

# Week Two Commences

## Monday, April 26, 2021

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| PRE-CONFERENCE | **Be Sure to Prepare Well in Advance to Participate**<br>Verify Zoom works on your PC and that you have the latest version so you may self-select which breakout you want to attend.<br>**[PLEASE NOTE: All session times are in the Eastern Daylight Time Zone]** |
| | **For an in-depth checklist on how to prepare for a Zoom meeting, please review this Zoom: Pre-Meeting Checklist.** |
| | **https://conference.ifas.ufl.edu/zoom-meeting-checklist.html** |
|  | ATTENTION: Please run or disable automatic software updates in advance of the conference.<br>If you do not have administrative permission to do so, contact your IT department in advance to ensure your computer does not shut down or begin to run updates while you are presenting or attending a session. |
| 10:00am-12:00pm | **Optional Pre-Conference Workshop - Scientific Data Analysis with R (Part 3 of 4)**<br>This eight-hour workshop is divided into four, two-hour sessions conducted via Zoom over a two-week period. Attendance is limited. Sign up early to secure a seat. Instruction will be delivered sequentially, and data used in exercises build throughout each session, so you should plan to participate in all four parts. Prior to the course, participants will download and install R and RStudio. In addition, participants will be asked to review several introductory videos that describe how to install the programs and R packages. Data files, scripts, and examples should be downloaded prior to the first day. If you miss a session, you may continue participating in subsequent sessions, however, there is no fee reduction for missed portions. *(Workshop registration is closed.)* |
| 12:00pm - 1:00pm | **Lunch Break for Workshop Participants** |
| 1:00pm-3:00pm | **Optional Pre-Conference Workshop - Scientific Data Analysis with R (Part 4 of 4)** |
| 3:30pm - 4:30pm | **Virtual Networking Social & Orientation**<br>Join us for fun, networking and an overview how to access the virtual platform, attend sessions and to get a feel for navigating a virtual GEER. |

## Tuesday, April 27, 2021

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| 10:30am-11:30am | **Plenary Session**<br>**Moderator**<br>**Nick Aumen,** Conference Chair, and Regional Science Advisor – South Florida, US Geological Survey, Boynton Beach, FL<br>**Plenary Presentation**<br>**Juan Hernandez**, Florida State Conservationist, USDA Natural Resources Conservation Service (NRCS), Gainesville, FL |
| 11:30am - 1:20pm | **Lunch Break**<br>**— Visit Virtual Field Trip Sites —**<br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html |

# Tuesday, April 27, 2021

## Concurrent Sessions [1:30pm - 3:10pm]

| | Session 21 | Session 22 | Session 23 | Session 24 | Session 25 |
|---|---|---|---|---|---|
| Session Title | **Impacts of Climate Change on the Greater Everglades Biogeochemical Processes and Surface Water Quality** | **Ecosystem Restorations and Mercury Biogeochemistry in Wetlands: Lessons from the Florida Everglades** | **Management of Invasive Plant Species on Public Conservation Lands and Waterbodies** | **Using Forecast Models to Develop CERP Interim Goals and Interim Targets** | **Sustaining Optimal Performance of Everglades STAs at the Limits of Treatment Wetland Technology** |
| Moderator | **Yogesh Khare**<br>Everglades Foundation<br>Palmetto Bay, FL | **Brett Poulin**<br>University of California Davis<br>Davis, CA | **Linda King**<br>Florida Fish and Wildlife Conservation Commission<br>Tallahassee, FL | **Andrea Atkinson**<br>National Park Service-SFNRC<br>Homestead, FL | **Mike Jerauld**<br>DB Environmental<br>Rockledge, FL |
| Co-Moderator | **Steve Davis**<br>Everglades Foundation<br>Palmetto Bay, FL | **David Krabbenhoft**<br>U.S. Geological Survey<br>Middleton, WI | **Samantha Yuan**<br>Florida Fish and Wildlife Conservation Commission<br>Tallahassee, FL | **Agnes McLean**<br>National Park Service - SFNRC<br>Homestead, FL | **Jill King**<br>South Florida Water Management District<br>West Palm Beach, FL |
| 1:30pm | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 1:40pm | **Jung-Hun Song**<br>Performance of Climate Models in Reproducing the Hydrological Characteristics of Rainfall Events in Florida | **Brett Poulin**<br>The Biogeochemistry of Mercury, Sulfur, and Organic Carbon in Wetlands: From the Everglades to the Arctic | **Deah Lieurance**<br>Using Horizon Scanning, Rapid Risk Assessment, and Consensus Building to Identify Invasive Species Threats to Florida | **Agnes McLean**<br>Overview of CERP Interim Goals and Targets | **Jessica Vaccare**<br>Insights into the Drivers of SAV Resilience and Re-growth Following Disturbance |
| 1:55pm | **Satbyeol Shin**<br>Climate Change Impacts on Natural and Managed Wetland Basins in the Western Everglades | **Amanda Booth**<br>Observed and Modeled Mercury and Dissolved Organic Carbon Concentrations and Loads at Control Structure S-12D, Florida Everglades, 2013–17 | **LeRoy Rogers**<br>Invasive Plant Responses to Disturbance and Restoration-Mediated Change in the Everglades: Challenges and Opportunities | **Phyllis Klarmann**<br>CERP Interim Goals for the Eastern Oyster (*Crassostrea virginica* ) in the Northern Estuaries Using Regional Simulation Model and Habitat Suitability Indices | **Kevin Grace**<br>Soil Effects on Plant Growth and Nutrient Cycling Require Options for STA Soil Management |
| 2:10pm | **Carl Fitz**<br>Landscape Soil Carbon Sequestration Under Scenarios of Climate Change and CERP | **Sarah Janssen**<br>Spatial and Temporal Patterns in Water Quality, Mercury and Methylmercury from Everglades National Park | **Greg MacDonald**<br>Maintenance Intervals for Invasive Plant Management | **Therese East**<br>Lake Okeechobee Interim Goals | **Mark Barton**<br>Effects of Fish on Nutrient Removal Efficiency in the Everglades Stormwater Treatment Areas |
| 2:25pm | **Jeremy Conrad**<br>Assessing the Effects of Nutrient Inputs on the Primary Mechanisms of Vertical Land Movement in Tidal Mangrove Forests of the Florida Everglades | **David Krabbenhoft**<br>Biogeochemical Controls on Mercury Methylation in Everglades Peat Soils Spanning a Large Range of Trophic Enrichment | **Dexter Sowell**<br>Monitoring Invasive Plant Treatment Projects: A Quantitative Approach | **Tasso Cocoves**<br>RECOVER Interim Goals and Targets for the Greater Everglades Region | **Patrick Inglett**<br>More Than Indicators: Enzyme Biogeochemistry in Constructed Wetlands |
| 2:40pm | **Lukas Lamb-Wotton**<br>Multi-risk Assessment of Saltwater and Drought-related Vulnerability of Coastal Wetlands to Peat Collapse in the Florida Coastal Everglades | **Benjamin Peterson**<br>Identification of Mercury-Methylating Organisms Along a Trophic Gradient in the Florida Everglades | **Stephen Enloe**<br>Update of Glyphosate Issues | **Ramon Martin**<br>RECOVER Program's 2020 Interim Goals Update for the Southern Coastal Systems Region | **John Juston**<br>Counterintuitive Seasonal and Short-Term Patterns in Outflow Phosphorus Concentrations from Low-P Stormwater Treatment Areas |
| 2:55pm | **Zhuoran Yu**<br>Drivers of Methane Emissions in Freshwater Marshes of the Florida Everglades | **William Orem**<br>Biogeochemical Studies in the Everglades: A Retrospective and Lessons Learned | **James Leary**<br>The Internet of Things Enhancing Aquatic Plant Management | **Andrea Atkinson**<br>CERP Water Supply and Flood Protection Interim Targets | **Matthew Powers**<br>Operational Dynamics Affect Water Quality in the L-8 Flow Equalization Basin |
| 3:10pm | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** |

### 3:30pm - 4:30pm — Network and Meet the Sponsors

The camaraderie and in-person interactions that we all enjoy so much are a hallmark of GEER, but just because we aren't meeting in person doesn't mean we can't meet face-to-face. Take advantage of this opportunity to network with colleagues, recognize our sponsors and participate in some fun trivia activities. We will also be giving away four $125 gift cards in a random drawing of all attendees who participate in the Meet the Sponsors session. Winners will be announced at the closing plenary.

**https://conference.ifas.ufl.edu/geer/meet-sponsors.html**

# Wednesday, April 28, 2021

## Concurrent Sessions [10:30am - 12:10pm]

| | Session 26 | Session 27 | Session 28 | Session 29 | Session 30 |
|---|---|---|---|---|---|
| Session Title | **Resources Informing Improved Management of Native and Non-native Species** | **Carbon Cycling and Potential Soil Accumulation in the Greater Everglades** | **Novel Tools and Technologies for Assessing Ecological Structure and Function in the Everglades** | **Science in the Everglades Southern Estuaries and Implications for Future Management and Restoration** | **Numeric Simulation for Everglades Restoration and Assessment** |
| Moderator | **Jeffrey Kline**<br>Everglades National Park<br>Homestead, FL | **W. Barclay Shoemaker**<br>U.S. Geological Survey<br>Davie, FL | **Morgan Ernest**<br>University of Florida<br>Gainesville, FL | **Theresa Strazisar**<br>South Florida Water Management District<br>West Palm Beach, FL, USA | **Matahel Ansar**<br>South Florida Water Management District<br>West Palm Beach, FL |
| Co-Moderator | **Danielle Drumheller**<br>Florida Atlantic University<br>Boca Raton, FL | **Andre Daniels**<br>U.S. Geological Survey<br>Davie, FL | **Nicole Strickland**<br>Florida International University<br>Miami, FL | **Christopher Madden**<br>South Florida Water Management District<br>West Palm Beach, FL, USA | **Eric Swain**<br>U.S. Geological Survey<br>Davie, FL |
| 10:30am | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 10:40am | **Jason Ferrante**<br>Incorporating Environmental DNA Data into the USGS Nonindigenous Aquatic Species Database | **Tom Dreschel**<br>Estimating Everglades Peat Reserves and Losses on a Landscape Scale | **Shimon Wdowinski**<br>Developing a Space-based Multi-Sensor Monitoring System of Surface Water Level Changes in the Everglades | **Bradley Furman**<br>How Population Structure and Gene Flow Influence *Thalassia testudinum* Recovery in Florida Bay, USA | **Matahel Ansar**<br>2D and 3D CFD Modeling for G6A Pump Intake Design for Applications in Everglades Restoration |
| 10:55am | **Caitlin Beaver**<br>Temporal Assessment of Python eDNA Occurrence in Arthur R. Marshall Loxahatchee National Wildlife Refuge and Expansion North of the Greater Everglades Ecosystem | **Sparkle Malone**<br>Patterns in Net Ecosystem Exchange across Everglades Wetland Ecosystems | **Boya Zhang**<br>Space-based Mapping of the Everglades Mangrove Canopy Height after Hurricane Irma with Multi-sensor Observations and Machine Learning | **Paige Duffin**<br>Spatial Patterns of *Thalassia Testudinum* Immune Status and *Labyrinthula* Spp. Load Implicate Environmental Quality and History as Modulators of Defense Strategies and Wasting Disease In Florida Bay, USA | **Kiren Bahm**<br>Modeling and Analysis of Proposed Seepage Barrier Effects in Everglades National Park |
| 11:10am | **Danielle Drumheller**<br>Chemically-mediated Native Apple Snail Displacement by an Invasive Congener | **Matthew Sirianni**<br>Methane Gas Ebullition Dynamics from Different Wetland Vegetation Communities in Big Cypress National Preserve (Florida) are Revealed Using a Multi-Method Multi-Scale Approach | **Himadri Biswas**<br>Watershed Segmentation of Aerial Photographs for Delineation of Tree Patches in a Mangrove-Marsh Transition Zone | **Alexander Blochel**<br>Preliminary Analyses from an Ongoing Study on Abiotic Effects on Submerged Aquatic Vegetation Throughout the Mangrove Transition Zone in Southern Everglades | **Eric Swain**<br>Utilizing the Everglades Depth Estimation Network for Estimating Wetland Flow Volumes and Management Effects |
| 11:25am | **Jeffrey Kline**<br>Twenty Years of Invasion: Expansion, Dominance, and Decline of African Jewelfish in Everglades National Park | **Jessica Dell**<br>The Effects of Willow Shrub Encroachment on Soil Organic Carbon Storage in a Sawgrass Marsh | **Nicole Strickland**<br>Using Spatially Balanced Vegetation Mapping to Improve Aquatic Animal Biomass Estimates | **Jennifer Rehage**<br>Everglades Recreation Fisheries and their Underappreciated Relationship to Freshwater Flows: Knowns, Hypotheses, and Key Unknowns | **Angela Montoya**<br>Hydrologic Modeling to Evaluate the Agricultural Seasonal Drawdown Operations in Southern Miami-Dade County, Florida |
| 11:40am | **Marcel Bozas**<br>Spatiotemporal Patterns of Wildlife's Use of Everglades Tree Islands | **Andre Daniels**<br>Carbon Cycling and UAS Flights with Digital Imagery in Greater Everglades Forested Wetlands | **Morgan Ernest**<br>Monitoring Wading Bird Nests Using Drones and Machine-Learning | **Jerome Lorenz**<br>Response of Roseate Spoonbills to Increased Hydroperiods on Preferred Foraging Grounds in Response to Sea Level Rise | **Erik Saberski**<br>Empirical Dynamic Modeling of Managed Flow into Everglades National Park |
| 11:55am | **Simeon Yurek**<br>Functional Response for Wading Birds Foraging in Everglades Seasonal Wetlands | **Caiyun Zhang**<br>Mapping $CO_2$ Fluxes of Cypress Swamp and Marshes in the Greater Everglades Using Eddy Covariance Measurements and Landsat Data | **W. Ryan James**<br>Mapping Energy Flow: E-scapes as a System-level Tool to Evaluate Restoration and Ecosystem Function | **Rolando Santos**<br>Integrating Seascape, Trophic and Movement Ecology to Assess Coastal Ecological Responses in the Context of Freshwater Management | **Detong Sun**<br>Application of a Hydrodynamic Model in the Development of Salinity Performance Measure for the St. Lucie and Caloosahatchee Estuaries in South Florida |
| 12:10pm | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** | **Session Concludes** |
| 12:10pm - 1:50pm | **Lunch Break**<br>**— Visit Virtual Field Trip Sites —**<br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html | | | | |

# Wednesday, April 28, 2021

## Lightning Round Sessions [2:00pm - 3:00pm]

| | Session 31 | Session 32 | Session 33 |
|---|---|---|---|
| Session Title | **Predicting and Detecting Change** | **Ecosystem Responses** | **Impacts of Nutrients and Pollution** |
| Moderator | **Stephanie Romañach**<br>U.S. Geological Survey<br>Davie, FL | **Laura Brandt**<br>U.S. Fish and Wildlife Service<br>Davie, FL | **Nora Demers**<br>Florida Gulf Coast University<br>Fort Myers, FL |
| Co-Moderator | **Laura D'Acunto**<br>U.S. Geological Survey<br>Fort Lauderdale, FL | **Natasha Viadero**<br>Florida International University<br>Miami, FL | **Jazmin Locke-Rodriguez**<br>Florida International University<br>Miami, FL |
| 2:00pm | **Introduction & Overview** | **Introduction & Overview** | **Introduction & Overview** |
| 2:10pm | **Laura D'Acunto**<br>Identifying Ecological Vulnerability in the Everglades Using Bayesian Belief Networks | **Jeffrey Sommer**<br>Effects of Wet Season Hydro-Pattern on Fish and Macroinvertebrate Populations | **Jerome Madigan**<br>Home Is Where the Algae Blooms – Begin – and End – If You Follow Our Example |
| 2:15pm | **Mary Morris**<br>Monitoring the Everglades from Space with NASA's CYGNSS Constellation | **Laura Brandt**<br>Are There Skinny Alligators in Florida Panther National Wildlife Refuge? | **Jazmin Locke-Rodriguez**<br>An Evaluation of Market Crops on Floating Treatment Wetlands as a Phytoremediation Strategy for Eutrophic Water in South Florida |
| 2:20pm | **Grant Steelman**<br>Landscape Change Detection on a Macro and Micro Scale | **Kate Shlepr**<br>Thermoregulation by Wading Bird Nestlings is Compromised by Researcher Disturbance | **Marco Fernandez**<br>Aquatic Community Structure and Biomass Response to Experimental Water Flow in the DECOMP Physical Model |
| 2:25pm | **Yuanming Lu**<br>Using Spatially Explicit Individual-Based Modeling to Provide Early Warning of the Spread of an Invasive Plant | **Santiago Acevedo**<br>Submerged Aquatic Vegetation Density Changes Associated with Physical Parameter Trends in the Northeastern Florida Bay Region | **Peter Flood**<br>Alligator-Engineered Impacts on Consumer Nutrient Dynamics and Isotopic Niche |
| 2:30pm | **Robert Fletcher**<br>Landscape Perspectives on Snail Kite Conservation | **Jonathan Rodemann**<br>Impact of Extreme Disturbances on Suspended Sediment in Western Florida Bay: Implications for Seagrass Resilience | **Nora Demers**<br>Evidence of Endocrine Disruption in Local Waterways of Southwest Florida using mosquitofish |
| 2:35pm | **Allison Benscoter**<br>Ecological Factors Affecting Presence of the Cape Sable Seaside Sparrow in the Everglades | **Natasha Viadero**<br>Between Dry Rock and a Salty Place: Can the Coastal Everglades Support a Freshwater Largemouth Bass Population in the Face of Sea Level Rise? | **Valentina Caccia**<br>Conditions that Contributed to the Northern Biscayne Bay Fish Kill Event in August 2020 |
| 2:40pm | **Venetia Briggs-Gonzalez**<br>American Crocodiles as Restoration Bioindicators in the Florida Everglades | **Selena Chavez**<br>Observing Changes in the Mangrove Forests of the South Florida Everglades following Hurricane Irma using Remote Sensing Measurements | **Laura Reynolds**<br>Increased Availability of Phosphorous Impacts Seagrasses in Southern Biscayne Bay |
| 2:45pm | **Katherine Buckman**<br>Spatial Ecology of Bobcats (*Lynx rufus* ) on Everglades Tree Islands | **DISCUSSION PERIOD** | **Reinaldo Garcia**<br>Operational Hydrodynamic Sediment Transport and Water Quality Model for Biscayne Bay, Florida |
| 2:50pm | **DISCUSSION PERIOD** | | **DISCUSSION PERIOD** |
| 3:00pm | **Session Concludes** | **Session Concludes** | **Session Concludes** |

## Wednesday, April 28, 2021

### Invited Round Table Sessions [3:30pm - 5:00pm]

| | Session 34 | Session 35 |
|---|---|---|
| Session Title | **Diversity & Inclusion Round Table** | **Career Forum for Upcoming College Graduates and Early Career Professionals** |
| Moderator | **Saira Haider**<br>U.S. Geological Survey<br>Davie, FL | **Evelyn Gaiser**<br>Florida International University<br>Miami, FL |
| Co-Moderator | **Stephanie Romañach**<br>U.S. Geological Survey<br>Davie, FL | **Nick Aumen**<br>U.S. Geological Survey<br>Boynton Beach, FL |
| 3:30pm | **Introduction & Overview** | **Introduction & Overview** |
| 3:30pm - 5:00pm | While most Americans agree that racial diversity is important in the workplace, Black, Indigenous, and Hispanic Americans are underrepresented in STEM. Many organizations have commitments to increase diversity, yet these efforts fail to produce equitable and inclusive workplaces. The Everglades is no exception, despite being in one of the most diverse areas of the U.S. In this round table, we discuss fostering an inclusive culture, increasing retention, and creating equitable opportunities.<br><br>PANELISTS:<br>**Rev. Houston R. Cypress,** Love The Everglades Movement<br>**Nia Morales**, University of Florida<br>**Darryl Reano**, Florida International University<br>**Maya Trotz**, University of South Florida | What job prospects do I have when I complete my degree? How can I continue to conduct environmental research and influence Everglades restoration? What could my career path look like in an environmental field? What would 'a day in the life' be like in different environmental science organizations? If these are questions you are pondering, the GEER Career Forum is for you. Panelists from an array of local, state, to government organizations, non-governmental organizations, and academia will give a brief overview of their career disciplines, backgrounds, and trajectories. Bring your questions and join in a lively discussion.<br><br>PANELISTS:<br>**Jenifer Barnes**, SFWMD<br>**Kathleen Burchett**, USFWS<br>**Tylan Dean**, NPS<br>**James Erskine**, FWCC<br>**Sharon Ewe**, Stantec<br>**Lawrence Glenn**, SFWMD<br>**Jennifer Jurado**, Broward County<br>**Chris Kelble**, NOAA<br>**Jerry Lorenz**, Audubon of Florida<br>**Melissa Martin**, USDA<br>**Melodie Naja**, NPS<br>**Ken Rice**, USGS |
| 5:00pm | **Session Concludes** | **Session Concludes** |

## Thursday, April 29, 2021

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|---|---|
| 10:30am - 11:30am | **Plenary Session**<br><br>**Moderator**<br>**Nick Aumen,** Conference Chair, and Regional Science Advisor – South Florida, US Geological Survey, Boynton Beach, FL<br><br>**Plenary Presentation**<br>**J. Checo Colón-Gaud,** Associate Dean, Jack N. Averitt College of Graduate Studies, Professor, Department of Biology, Georgia Southern University, Statesboro, GA |
| 11:30am - 1:20pm | **Lunch Break**<br>**— Visit Virtual Field Trip Sites —**<br>https://conference.ifas.ufl.edu/geer/virtual-field-trips.html |

## Thursday, April 29, 2021

### Plenary Session [1:30pm - 2:30pm]

1:30pm - 2:30pm

**Plenary Session**

**Design, Innovation, and Governance (DIG): Solutions for Everglades Restoration**
**"What Conservation-related Issue Keeps You Up at Night?"**

The 2021 GEER conference theme is "Adapting Science and Management to a Changing World". In keeping with that theme, this year's DIG session will feature four conservation leaders, presenting on one theme: "What Conservation-related Issue Keeps You Up at Night?" Because GEER is primarily a science conference, each speaker will share their biggest concern and how they think science might help resolve it. This session is intended to focus our attention on the many opportunities environmental restoration provides, and you won't want to miss it!

**Welcome Remarks**
**Nick Aumen**, Conference Chair, and Regional Science Advisor – South Florida, US Geological Survey, Boynton Beach, FL

**DIG Session Organizer & Moderator**
**Fred Sklar**, Director and Section Administrator, Everglades Systems Assessment Section, South Florida Water Management District, West Palm Beach, FL

**DIG Presentations**
**Eric Eikenberg**, Chief Executive Officer, Everglades Foundation
"The Political Science of Everglades Restoration"

**Rob Moher**, President and CEO, Conservancy of Southwest Florida
"Pythons in Paradise: Keeping this CEO Up at Night"

**Eve Samples**, Executive Director, Friends of the Everglades
"Will Florida seize this moment to act on science-based policy?"

**Audrey Peterman**, President and Co-founder, Earthwise Productions, Inc.
"A Vision for Conservation after COVID"

### Closing Remarks & Awards [2:30pm - 3:00pm]

2:30pm - 3:00pm

**Closing Comments and Discussion of Future GEERs**
**Announcement of Poster Attendance Award Recipients**

**— Conference Concludes —**