

**Department of Earth & Environment**  
***2024 Graduate Research Symposium***



**School of Environment, Arts and Society**  
**College of Arts, Sciences and Education**  
**Florida International University**

**Friday, February 16, 2024**

**Location: MARC Pavilion**

Program Schedule:

**Welcome and Opening Remarks**

- 8:45 Rosario Vidales, Lead Coordinator of the Symposium
- 8:48 Dr. Maruthi Sridhar Balaji Bhaskar, Graduate Program Director
- 8:51 Dr. Leonard Scinto, Chairperson, Department of Earth & Environment
- 9:00 Invited Speaker, Dr. René Price, Associate Dean, University Graduate School and  
Associate Vice President, Research and Economic Development

**Graduate Student Presentations**

- 9:15 – 10:45 am Session 1 – Oral Presentations
- 10:45–11:00 am Break
- 11:00 – 12:40 pm Session 2 – Poster Presentations
- 12:00-12:40pm Lunch Break (Parallel with Poster)
- 12:40 – 1:30 pm Session 3 – 3 Minute Presentations
- 1:30 – 2:45 pm Session 4 - Oral presentations
- 2:45 – 3:00 pm Break
- 3:00 – 4:15 pm Session 5 - Oral presentations

**Awards**

- 4:15 – 4:30 pm Judges deliberate.
- 4:30 – 5:00 pm Presentation of awards for best posters and best talks

<b>Session 1 – Oral Presentations (9:15 - 10:45)</b>			
<b>Moderators: Vagheeswari Venkadesh and Sana Awan</b>			
<b>Time</b>	<b>Name</b>	<b>Program</b>	<b>Presentation Title</b>
09:15	Anna Fache	PhD	Renewable Energy Policy in the USA: A State Comparison
09:30	Brenna Kays	PhD	Equitable Green Infrastructure Development in Miami Dade county: A Systematic Approach to Addressing Urban Environmental Disparities
09:45	Chloe' Vorseth	PhD	Drops for Dollars: Illuminating South Florida's Willingness to Pay for Everglades Water Management Decisions
10:00	Suraima Aragon Teclas	PhD	Understanding the Rapid Intensification of Tropical Cyclones in a Vertically Sheared Environment using HWRF and HEDAS dataset
10:15	Mekdelawit Deribe	PhD	Rethinking Equity in Water Use: The case of the Nile River Basin
10:30	Pedro Gonzalez	MS	Assessing the Effects of Saltwater Intrusion and Silicon Amendment on the Eco physiological Traits of Cabbage Palm
<b>Coffee Break 10:45-11:00</b>			
<b>Session 2 – Poster Presentations (11:00-12:40, with first authors present)</b>			
<b>Moderators: Chloe' Vorseth and Jose Manuel Torres Parada</b>			
<b>Name</b>	<b>Program</b>	<b>Poster Title</b>	
Jennifer Quintero	MS	<b>Poster 1</b> Identifying the Location and Protection Status of Migratory Bird Stopover Habitats in Urban Miami-Dade County	
Johanset Orihuela	PhD	<b>Poster 2</b> Early Cretaceous Ocean Dyslexia in the Proto-Caribbean Basin: A Geochemical Analysis from Sierra de los Organos, Western Cuba	
Valeria Espina	PhD	<b>Poster 3</b> Analysis of CMIP6 Model Simulations: Sea Surface Temperatures and Teleconnections	
Carlos Tapia	PhD	<b>Poster 4</b> Investigating the Consequences of Ornamental Plant Invasions	

Jose Manuel Torres Parada	PhD	<b>Poster 5</b> Stratigraphic Characterization of El Salto and Salada Formations: Insights of the Cenomanian-Turonian Interval in the Colombian Eastern Cordillera
Sana Awan	PhD	<b>Poster 6</b> Assessing the Effects of Green synthesized Silver, Zinc, and Iron Oxide Nanoparticle Application on Sweet Corn: Implications for Seed Germination, Vegetative Growth, Abiotic Stress Tolerance, Disease Resistance, and Soil Microbial Dynamics
Vagheeswari Venkadesh	PhD	<b>Poster 7</b> A novel electrochemical sensor in measuring soil nutrient runoff
David Santamaria	PhD	<b>Poster 8</b> Changing human perceptions of introduced hippos in Colombia, 2017-2023

Jessica Dominguez	PhD	<b>Poster 9</b> Endophytes as Antimicrobial Agents Against <i>Candidatus Liberibacter asiaticus</i> , Causal Agent of the Citrus Greening Disease
Lucas Le Fournis	PhD	<b>Poster 10</b> Improving habitat sensing efficacy for the St Vincent Amazon parrot, ( <i>Amazona guildingii</i> )
Victoria Ortiz	MS	<b>Poster 11</b> Analyzing the Relationship Between Urban Vegetation and the Spatial and Temporal Variations of Particulate Matter Concentrations in Miami Florida
Daniel Tucker	PhD	<b>Poster 12</b> Application of Remote Sensing Technologies and Historical Maps for the Conservation of <i>Sabal miamiensis</i>
Erika R. Guimaraes	MS	<b>Poster 13</b> Cultivating Urban Sustainability: A Statewide Analysis of Food Forests in Florida
Jordan Prats	PhD	<b>Poster 14</b> Effects of Pruning Techniques on Biomass and Phytochemical Production in <i>Cannabis sativa L.</i>
Md Tanvir Hossain	MS	<b>Poster 15</b> An Integrated Approach for Evaluating the Role of Land Use and Shoreline Changes on Carbon Sequestration in Mangrove Forests of Nijhum Dwip Island, Bangladesh

Milagros Munoz Salas	PhD	<b>Poster 16</b> Plant Growth Regulators on In-Vitro Micropropagation of <i>Anthurium cubense</i>
Noah Frade	MS	<b>Poster 17</b> Evaluating Factors Influencing Habitat Selection by Neotropical Migrants in Urban Hardwood Hammock Forest Fragments in Southeast Florida
Oriana Calagna	PhD	<b>Poster 18</b> Exploration of Environmental Perspectives in Miami Through Document Analysis: A Building Block Towards Supporting Place-Based Learning
Rigoberto Olivera	PhD	<b>Poster 19</b> Natural and Anthropogenic Drivers of Hydroclimate in Florida: Physical Mechanisms
Tania Islam	PhD	<b>Poster 20</b> Flood Susceptibility in Miami-Dade County
Aujeeta Shehrin Razzaque	PhD	<b>Poster 21</b> Integrating Green Stormwater Infrastructure for Sustainable Campus through GIS and SWMM at FIU's Modesto A. Maidique Campus
Nilima Islam Luba	PhD	<b>Poster 22</b> A Longitudinal Assessment of Economic Recovery of Puerto Rican Households after Hurricane Maria
Rachel Stovall	PhD	<b>Poster 23</b> Building Sustainable Cities: A Multi-Hazard Assessment of Green Infrastructure Performance in Miami-Dade County
Shakira Trabelsi	MS	<b>Poster 24</b> Effects of Pharmaceutical Exposure on Wild Fish Health: A Survey of Red Drum Across Florida Estuaries
Latonya Williams	MS	<b>Poster 25</b> Implications of Fire Management In The Wildland-Urban Interface (WUI) of The Bahamian Pineyards
Luis Cendan	PhD	<b>Poster 26</b> Studying the Efficacy of Bradyrhizobium Colonization in Pigeon Pea Cover Crops
Jamal Julien	PhD	<b>Poster 27</b> Evaluating Community Resilience in Florida Through Spatial Analysis and Principal Component Analysis

<b>Session 3 – Three Minute Theses (12:40-1:30 pm). Moderator: Blaire Kleiman and Suraima Aragon Teclas</b>			
<b>Time</b>	<b>Name</b>	<b>Program</b>	<b>Presentation Title</b>
12:40	Daphne Souffront	PhD	Effects of Compost and Vermicompost Teas on Yield And Secondary Metabolite Production In Turmeric ( <i>Curcuma longa</i> )
12:45	Blaire Kleiman	PhD	Heat Stress and Its Influence on A Sub-Tropical Annual Crop and Its Pollinators: Implications For Agriculture in An Era Of Climate Change.
12:50	Michael Borbolla	PhD	Against The Current: Experiences And Perceptions of Fishers Along the Miami River (Florida, USA)
12:55	Brandon Sosa	PhD	Valuing the Use of Marine Grazers as a Tool for Facilitating Coral Reef Restoration in the Florida Keys
1:00	Denise Garcia	PhD	Analyzing Geophysical Characteristics of Groundwater at the Everglades National Park
1:10	Dafrosa Kataraihya	PhD	Short-Term Forecasting of Non-Tidal Residual Influenced by Remote Wind Forcing Along the US Gulf Coast
1:15	Priyanka Belbase	PhD	Quantifying Nutrient Concentrations in Dragon Fruit Soil via XRF: A Comprehensive Analysis
1:20	Anurag Sharma	PhD	Unmasking the Unseen: Journey into the Subsurface of Florida’s East Coast using InSAR
1:25	Moses Kiwanuka	PhD	A Remote Sensing Approach for Water Quality Monitoring in Lake Okeechobee
<b>Session 4 – Oral Presentations (1:30 – 2:45 pm) Moderator: Lauren Emer and Carlos Tapia</b>			
<b>Time</b>	<b>Name</b>	<b>Program</b>	<b>Presentation Title</b>
1:30	Carlos Pulido	PhD	Enhancing Our Understanding of Plant Functional Diversity and Productivity Across Wetland Hydrologic and Nutrient Gradients
1:45	Ethiopia Zeleke	PhD	Enhancing Rainfall Predictions Using Machine Learning
2:00	James Sturges	PhD	Brown, Green, & Everything Between: Seasonality Drives Green and Brown Energy Pathways in Food Webs Across An Ecosystem Gradient
2:15	Sophia Costa	PhD	Hooked on Improvement: Redesigning the Fishing Guide Reporting System In Everglades National Park

2:30	Selena Chavez	PhD	Spatio-Temporal Monitoring of Mangrove Response to Seasonal Changes, Hurricane-Induced Disturbance, And Recovery in The South Florida Everglades Using Decade-Long (2013-2023) Landsat-8 Observations.
<b>Break 2:45 - 3:00 pm</b>			

<b>3:00 - 4:15 pm Session 5 - Oral presentations</b> <b>Moderator: Moses Kiwanuka and Chloe' Vorseth</b>			
3:00	Rosario Vidales	PhD	Leaf Functional Trait Variation in Red Mangroves Along A Dynamic Coastal Gradient
3:15	Mason Bradbury	PhD	Mapping the Pre-Development Upland Vegetation Of Miami-Dade County With A Focus On Tropical Hardwood Hammocks
3:30	Sagar Dahal	PhD	An Overview of Cites Implementation History in Nepal
3:45	Cody Eggenberger	PhD	Seascape Heterogeneity Drives Movements Strategy Selection in Estuarine Predators.
4:00	Ivan Oyege	PhD	Estimation of Plant Chlorophyll And Nutrient Content Using Machine Learning Models
<b>4:15-4:30 pm Judges Deliberate</b>			
<b>4:30 – 5:00 pm Presentation of awards for best posters and best talks</b>			
<b>5.00 pm – 6:00 pm Reception</b>			

### Awards

A panel of judges will announce the winners at 4:30 PM. Awards for best oral presentations, best posters, and best 3-minute talks will be given in both the MSc and PhD cohorts. Best Poster, Best Oral Presentation and Best Three-Minute Thesis awardees, plus runners-up will receive a certificate and monetary award.

### **Acknowledgements**

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