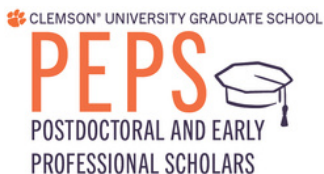


# 2025 Postdoctoral Research Symposium

Atrium - Watt Innovation Center  
Tuesday, April 22nd  
12PM - 3PM



*Presented By:*



## AGENDA

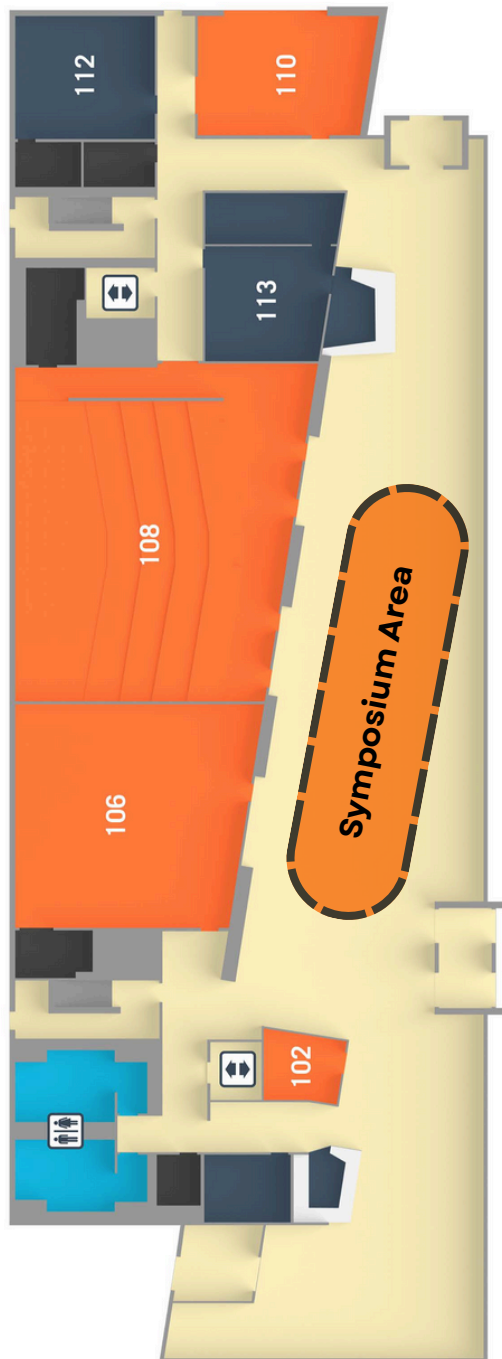
Networking	12:00pm - 12:30pm
Poster Presentations Group A	12:30pm - 1:15pm
Intermission I	1:15pm - 1:30pm
Poster Presentations Group B	1:30pm - 2:15pm
Intermission II	2:15pm - 2:30pm
Awards and Closing Dean Lopes	2:30pm - 3:00pm



Dr. John Lopes  
Graduate School Dean

Dr. John Lopes joined Clemson University in August 2020 as Associate Provost and Dean of the Graduate School. Previously, he served as Associate Dean for Operations & Graduate and Postdoctoral Programs in the College of Natural Sciences at UMass Amherst, overseeing budgets, facilities, and graduate programs across 13 departments and two schools. He earned a BS in Zoology from the University of Rhode Island, a Ph.D. in Biology from the University of South Carolina, and completed an NIH-funded postdoctoral fellowship at Carnegie Mellon University. Dr. Lopes' research focused on gene expression regulation, particularly phospholipid biosynthesis in yeast, resulting in 47 publications and mentorship of 26 graduate and 32 undergraduate students. His work was supported by the National Science Foundation and the American Cancer Society.

# Watt Innovation Atrium



# Postdoctoral Presenters

## Discrete Modeling of Composite Failure Using CPD (A1)

Dr. Venkatesh Ananchaperumal  
Mechanical Engineering

## Identification of Genomic Loci Associated with Seed Oil Content in Cotton (*Gossypium hirsutum*) Using a Segregating RIL Population (B2)

Dr. Helan Baby Thomas  
Plant and Environmental Sciences

## Understanding the Genetic Basis of Protein Content in Pea (*Pisum sativum* L.) (A3)

Dr. Carolina Ballen Taborda  
Plant and Environmental Sciences

## Comparative Study of the Postharvest Performance of Five Evergreen Species under Wet and Dry Handling Conditions in a Retail Environment (B4)

Dr. Ana Maria Borda  
Plant and Environmental Sciences

## Fine-Grained Insights into COVID-19 via Wastewater-Based Epidemiology (A5)

Dr. Mohammad Mihrab Uddin Chowdhury  
Public Health Science

## Mitigating Enteric Methane Emissions in Grazing Beef Cattle: Preliminary Data of A Farm-Level Assessment of Climate-Smart Practices (B6)

Dr. Wilmer Cuervo  
Animal and Veterinary sciences

## A Quick Estimation for Nitrogen Availability in Southeastern Soils (A7)

Dr. Than Dam  
Plant and Environmental Sciences

## Using Virtual Mock-up for Simulation-based Evaluation of Design Proposals for the Pediatric Emergency Department (B8)

Dr. Fernanda de Moraes Goulart  
Center for Health Facilities Design and Testing

**Mechanistic Insights into Bacterial DNA Partitioning Complex (A9)**

Dr. Ritika Gupta  
Physics and Astronomy

**Insights into the Functional Redundancy and Metabolic Flexibility of Estuarine Microbiome (B10)**

Dr. Jojy John  
Biological Sciences

**Demand Driven Innovation; Shaping Cotton Plant Architecture (A11)**

Dr. Priyanka Joshi  
Plant and Environmental Science

**Subjective and Objective Benefits of Occupational Soft and Rigid Back-Support Exoskeletons: A Comparative Study in Simulated Automotive Assembly Tasks (B12)**

Dr. Zeinab Kazemi  
Industrial Engineering

**Collective Dynamics in Solids Composed of Velocity-Aligning Active Particles (A13)**

Dr. Yutaka Kinoshita  
Materials Science and Engineering

**The Effect of Macromolecular Crowding on DNA Under Tension (B14)**

Dr. Narendar Kolimi  
Physics and Astronomy

**Linking Arctic Variability and Changes in the Stratosphere, Mesosphere, and Lower Thermosphere (A15)**

Dr. Sunil Kumar  
Physics and Astronomy

**Localized and Systemic nature of metabolic Responses in Root-Mycorrhizae Interactions (B16)**

Dr. Rohit Kumar  
Plant and Environmental Sciences

**Investigation of Abiotic and Biotic Degradation of 1,4-Dioxane and Co-contaminants (A17)**

Dr. Kelli McCourt  
Environmental Engineering and Earth Sciences

**The Impact of Morphology and Oxygen Vacancy Content in Ni, Fe co-doped Ceria for Efficient Electrocatalyst Based Water Splitting (B18)**

Dr. Abhaya Mishra  
Materials Science and Engineering

**State of Rural Education in South Carolina (A19)**

Dr. Oluwaseun Oti  
Education and Human Development

**Non-coding RNA afu-182 Mediates Crosstalk Between Fungal Thermotolerance and Azole Drug Response in Aspergillus Fumigatus (B20)**

Dr. Nava Poudyal  
Biological Sciences

**High-Permeability Zone Volume Fraction and First-Order Rate Constant Effects on 1,4-Dioxane Degradation in Simulated Aquifer-Aquitard Systems (A21)**

Dr. Juan Romero  
Environmental Engineering and Earth Sciences

**Physical Adversarial Attack for Vehicle Detection Module (B22)**

Dr. Amir Salarpour  
School of Computing

**Novel Armillaria Root Rot Resistant Peach Rootstocks via Biotechnological Interventions (A23)**

Dr. Gautam Saripalli  
Plant and Environmental Sciences

**Developmental Toxicity of Perfluoronanoic acid (PFNA) in Zebrafish Embryos (A25)**

Dr. Sunil Sharma  
Biological Sciences

**Exploring Mental Health Court Selection, Eligibility Criteria, and Their Relationship with Failure and Participant Diversity (A27)**

Dr. Emily Suiter  
Sociology, Anthropology, and Criminal Justice

**Predicting the Ecological Drivers and Current Distribution of Lone Star Tick in South Carolina State Parks (B28)**

Dr. Nusrat Tabassum  
Public Health Science

**Predicting the Ecological Drivers and Current Distribution of Lone Star Tick in South Carolina State Parks (A29)**

Dr. Shakhawat Tanim  
Public Health Science

**From Numbers to Narratives: How Data Storytelling Enhances Visualization Literacy in Middle School (B30)**

Dr. JaCoya Thompson  
Education and Human Development

**Managing the Complexity: Phenotypic Data Infrastructure for Next-Gen Plant Breeding (B32)**

Dr. McKena Wilson  
Plant and Environmental Sciences

**Mathematical and Machine Learning Models for siRNA Delivery: Understanding Endosomal Escape in Cancer Therapy (A33)**

Dr. Nisha Yadav  
Mathematics and Statistics

**Removal and Inactivation of Coronavirus Surrogates on Abiotic Surfaces Using Pre-Saturated Disinfectant Wipes (B34)**

Dr. Runan Yan  
Food Nutrition Packaging Science

*Special Thanks*

**Our Panel of Judges**

Dr. Mark Cawood

Dr. Lori Dicks

Dr. John Gaber

Dr. Pierce Greenberg

Dr. Prasad Rangaraju

Dr. Ravi Ravichandran

**PEPSA Executive Committee**

Dr. Dillip Mishra - Chair

Dr. Priyanka Joshi - Vice Chair

Dr. Ajay Singh - Secretary

Dr. Than Dam - Treasurer

Dr. Vinita Jansari - Graduate  
School Liaison

**PEPS Initiatives Coordinator**

Dr. Rieta Drinkwine

**PEPS Marketing & PR Intern**

Reid Farley