

SCHEDULE OF TALKS

*Regional Science Consortium
21st Annual Research Symposium
November 5-7, 2025
Tom Ridge Environmental Center
at Presque Isle State Park*

WEDNESDAY, NOVEMBER 5, 2025

- 8:30 – 9:10 **REGISTRATION OPENS**
 Register, upload presentations
- 8:30 – 9:10 **REFRESHMENTS**
- 9:10 – 9:15 **WELCOME**
 Jen Salem, Plant Lab Manager, RSC

Presentations

Session Chair: Jen Salem, RSC Plant Lab Manager

- 9:15 – 9:35 **Microbial Diversity in the Erie Bluffs Region of northwestern Pennsylvania**
 Chenoa Woods*+, Jeanette Baker*+, Olivia Wojciechowicz*+, Chris
 Dolanc, Rajinikanth Mohan
 Mercyhurst University
- 9:35 – 9:55 **Fungal Microbiome Analysis of Vineyard Soil Samples**
 Elise Kelly*+, Michael Campbell
 *Penn State, Lake Erie Regional Grape Research and Extension Center,
 662 Cemetery Rd, North East, PA 16428*
- 9:55 – 10:15 **Superoxide dismutase as a potential mechanism in *Bacillus subtilis*
saccharotolerance**
 Kailey Tyler*+, Maryam Alsaffar, Rajinikanth Mohan
 Mercyhurst University
- 10:15 – 10:30 **BREAK**

Session Chair: Sean Dalton, RSC Lab and Field Manager

- 10:30 – 10:50 **Trophic overlap between invasive round gobies and native benthic darters in a stream biodiversity hotspot**
Mark A. Kirk*, Casey R. Bradshaw-Wilson, and Kelly J. Pearce
Watershed Conservation Research Center, Allegheny College
- 10:50 – 11:10 **The Influence of Forest Structure on Species Diversity on Foundation for Sustainable Forests Properties in Northwestern Pennsylvania**
Abigail Riedel^{1*}+, Dr. Kelly Pearce^{1,2}
¹ *Allegheny College*
² *Watershed Conservation Research Center*
- 11:10 – 11:30 **Dating Pawpaw Patches in Erie, PA: Assessing Light and Growth Rates**
Tristen Robertson*+
Mercyhurst University
- 11:30 – 12:30 **LUNCH**

Session Chair: Kelly Pearce, Ph.D., RSC Executive Board Member

- 12:30 – 12:50 **A Multidisciplinary Mathematical Modeling Approach to Studying Arachnids**
Dr. Daniel J. Galiffa*
Associate Professor of Mathematics, Penn State Erie, The Behrend College
- 12:50 – 1:10 **Mathematical Models for Predator-Prey Interactions of Erie, PA Wolf Spiders & Extensions**
Gavin Iocona*+, Daniel Galiffa, Amos Ong, Joseph Previte, Alexander Wood, Neil Ghandi
Penn State Erie, The Behrend College
- 1:10 – 1:30 **From Coffee Rings to Capillary Forces: Unveiling Nanoparticle Behavior in Fluid Flow**
Baiou Shi*
Assistant Professor, Department of Mechanical Engineering, Gannon University
- 1:30 – 1:50 **Reinforcement Of Polyurethane Foams With Recycled Brewer's Spent Grain Fillers: A Sustainable Approach For Aerospace Acoustic Insulation Applications**
Christian Johnson*+, Leyre Berganzos Fernandez, Longyan Chen, Xiaoxu Ji
Gannon University Department of Biomedical Engineering
- 1:50 – 2:05 **BREAK**

- 2:05 – 2:25 **The State-of-the-Art in Forensic Human Identification by Skeletal Means**
Joe Adserias-Garriga*
Department of Applied Forensic Sciences, Mercyhurst University
- 2:25 – 2:45 **Reassociation of Commingled Tibiae and Tali Using Geometric Morphometrics**
Nicole Wray, M.S.*, Stephanie Melillo, Ph.D.
Mercyhurst University
- 2:45 – 3:05 **The Effects of Biological Factors on Femoral Fractures**
Kendall Robinson-Jones*+, Rhiannon Toy*+, Kaz Denten, Sydney Carlson, Joe Adserias-Garriga
Department of Applied Forensic Sciences, Mercyhurst University
- 3:05 – 3:25 **Exploring the Use of Zygomatic Arch Extension as a Cranial Sex Indicator**
Kelsey Cole*+, Rachel Becotte*+, Sydney Carlson, Joe Adserias-Garriga
Department of Applied Forensic Sciences, Mercyhurst University
- 4:30 – 6:00 **RSC BOARD MEETING – RSC Board Members – Room 112**
- 6:00 – 8:00 **POSTER SESSION & ART EXHIBITION – All are welcome to attend**
(Refreshments provided)
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THURSDAY, NOVEMBER 6, 2025

- 8:30 – 9:20 **REGISTRATION OPENS**
 Register, upload presentations
- 8:30 – 9:20 **REFRESHMENTS**
- 9:20 – 9:25 **WELCOME**
 Jen Salem, Plant Lab Manager, RSC

Presentations

Session Chair: Hailey Dahl, RSC Education and Outreach Coordinator

- 9:25 – 9:45 **From Reaction to Mechanism: Student Investigation of Isoamyl Acetate Formation and Characterization**
 Madhav Ellini*+, Dylan Crawford*+, Peyton Haight*+, Kaua Dos Santos Da Silva*+, Dr. Femi Oloye
 Division of Physical and Computational Sciences, University of Pittsburgh at Bradford
- 9:45 – 10:05 **Psychoneuroimmunology of Stress: Stress & Cortisol Regulation in Early Adolescent Girls**
 Isabella Udoko*¹+, Phelecia Udoko Ph.D.*²
 ¹*Pennsylvania State University, The Behrend College; Department of Biology Pre-med*
 ²*Gannon University, Department of Psychology & Organizational Learning and Leadership*
- 10:05 – 10:25 **A Lab-on-a-Filter immunoassay for Detecting Microplastics from Human Blood Samples**
 Nardos Bisrat*+, Robe Tefera, Liu Cao, Jun Lin , Andrew Hu, Longyan Chen
 Gannon University
- 10:25 – 10:40 **BREAK**

Session Chair: Femi Oloye, Ph.D., University of Pittsburgh at Bradford

- 10:40 – 11:00 **Determining How Space Use Affects Exposure and Toxicity of Three Common Use Insecticides**
 Samuel Nutile¹*, Kody Klein¹, Lynne Beaty¹, Adam Simpson¹
 ¹*Biology Department, School of Science, Pennsylvania State University – The Behrend College*

- 11:00 – 11:20 **Investigation of Mixed Pollutant Degradation: A Study on Dye and Amoxicillin under UV and Dark Conditions**
 Cassidy D, Elton*+, Thomas M, Burk*+, Dr. Femi Oloye
University of Pittsburgh at Bradford
- 11:20 – 11:40 **The Monitoring and Management of Cyanobacteria HABs in the Shallow, Nearshore Areas of Presque Isle**
 Fred S. Lubnow, Ph.D.*, Senior Technical Director of Ecological Services
Princeton Hydro, LLC
- 11:40 – 12:00 **Using BloomOptix and ELISA to Monitor Multiple Cyanotoxins Along the Pennsylvanian Coastline of Lake Erie**
 Sarah Magyan*
Regional Science Consortium
- 12:00 – 1:00 **LUNCH**

Session Chair: Holly Best, Ph.D., RSC Executive Board Member

- 1:00 – 1:20 **Long term evaluation of three stream restoration projects in the French Creek Watershed**
 Bryan C. Winston*, Mark A. Kirk, Casey R. Bradshaw-Wilson, and Kelly J. Pearce
Watershed Conservation Research Center, Allegheny College
- 1:20 – 1:40 **Assessment of Physicochemical and Microbial Quality of Natural Spring Water in McKean County, Pennsylvania**
 Madhav Ellini*+, Kenneth Alford*+, Ridge G, Gray*+, Melissa K. Odorisio, Dr. Oluwabunmi P. Femi-Oloye, Dr. Femi Oloye
University of Pittsburgh at Bradford
- 1:40 – 2:00 **Comparing the Water Quality and Microbial Ecology of an Urban and a Rural Stream**
 Andrew Samuels*+, Liu Cao
Environmental Science and Engineering, Gannon University
- 2:00 – 2:20 **Changes in Pollinator Communities in a Newly Restored Dune Habitat**
 Tyler Brooks*
Regional Science Consortium
- 2:20 – 2:40 **BREAK**

- 2:40 – 3:00 **Comparative Analysis of Antibiotics and Essential Oils on Classroom Surface Bacteria**
Raquel Sewell*+, Dr. Bunmi Femi-Oloye
Division of Biological and Health Sciences, University of Pittsburgh at Bradford
- 3:00 – 3:20 **Assessing Bacterial Proliferation in Swim Bags Over Time**
Madison Foote*+; Professor: Dr. Bunmi Femi-Oloye
Division of Biological and Health Sciences, University of Pittsburgh at Bradford
- 3:20 – 3:40 **Assessing Lead Paint Exposure in Campus Buildings Using XRF**
Elizabeth Kibler*+, Madelyn Kruth*+, Hwidong Daniel Kim, Ph.D., P.E.
Gannon University
- 3:40 – 4:00 **Mold in Campus Buildings: Environmental Drivers and Mitigation Approaches**
Isaias Sanchez*+; Professor: Dr. Bunmi Femi-Oloye
Division of Biological and Health Sciences, University of Pittsburgh at Bradford

FRIDAY, NOVEMBER 7, 2025

- 8:30 – 9:00 **REGISTRATION OPENS**
 Register, upload presentations
- 8:30 – 9:00 **REFRESHMENTS**
- 9:00 – 9:15 **WELCOME**
 Jeanette Schnars, Ph.D., Executive Director, RSC

Presentations

Session Chair: Sean Dalton, RSC Lab and Field Manager

- 9:15 – 9:35 **Space...the Final Frontier: Tracking Desert and Western Purple Martins with Satellite Tags**
 Joe Siegrist*
 Purple Martin Conservation Association
- 9:35 – 9:55 **Piping Plovers in Pennsylvania: Monitoring a federally-listed species at Presque Isle State Park**
 Mary Birdsong, Sarah Sargent, Holley Short*
 Erie Bird Observatory
- 9:55 – 10:15 **Nine Years of Marsh Bird Monitoring at Presque Isle State Park: 2025 Update**
 Sarah Sargent*, Chris Lundberg and Ron Mumme
 Erie Bird Observatory, 301 Peninsula Dr, Ste 14, Erie, PA 16505
- 10:15 – 10:30 **BREAK**

Session Chair: Jacob Korte, RSC Education Specialist

- 10:30 – 10:50 **Aerial Drone Surveys of Shoreline and Primary Wetland Habitats on Presque Isle State Park, Erie, PA**
 Sean Dalton*
 Regional Science Consortium
- 10:50 – 11:10 **Wetland Restoration at Presque Isle State Park – A Never-ending Story**
 Holly Best*
 Pennsylvania Department of Conservation and Natural Resources
- 11:10 – 11:30 **Wetland and Dune Restoration Updates**
 Jen Salem*
 Regional Science Consortium
- 11:30 – 12:30 **LUNCH**

Session Chair: *Hailey Dahl, RSC Education and Outreach Manager*

- 12:30 – 12:50 **Erie County's 2025 International Coastal Cleanup (ICC)**
 Audrey Knight*
 Erie County Department of Planning and Community Development
- 12:50 – 1:10 **Litter in Waterways and Marine Debris Infrastructure**
 Don Benczkowski*
 Program Coordinator – Lake Erie Region, Keep PA Beautiful
- 1:10 – 1:30 **The Regional Science Consortium's Pennsylvania Clean Marinas and Lake
Friendly Program**
 Jeanette Schnars*, Ph.D.
 Regional Science Consortium

1:30 – 1:45 **BREAK**

Session Chair: *Jen Salem, RSC Plant Lab Manager*

- 1:45 – 2:05 **Mosaicking the PASST: Photogrammetry with the Pennsylvania
Archaeology Shipwreck Survey Team**
 Sarah Magyan*, Sean Dalton*
 Regional Science Consortium
- 2:05 – 2:25 **Coding for Climate Change: An Adaptable STEAM Curriculum**
 Jacob Korte*
 Regional Science Consortium
- 2:25 – 2:45 **School of Sustainability and Experiential Learning (SS&EL) Summer
Camps**
 Hailey Dahl*
 Regional Science Consortium

2:45 – 3:00 **BREAK**

3:00 – 3:15 **PRESENTATION OF THE JERRY COVERT STUDENT RESEARCH AWARDS**
 Jeanette Schnars, Ph.D., Executive Director, RSC
 Jerry Covert, Ph.D., Past Executive Director, RSC
 Student Award Presentations
 Closing Remarks

3:15 – 4:00 **RESEARCH WING TOURS**
