

Schedule

Research and Creative Achievement Week (RCAW) 2024

Wednesday, April 3, 2024

Graduate Student and Postdoctoral Scholar Day

Podium Presentations

MCSC Black Box Theatre | Fine Arts, Visual Art, and Design 9:00 AM - 10:15 AM

GPP 9 9:00-9:15	Visceral Narrative, Haley Mcelroy
GPP 10 9:15-9:30	Unveiling Ornamentation in Public Spaces: A Jeweler's Perspective, Chase Shotton
GPP 11 9:30-9:45	77%, Tamla Boone
GPP 12 9:45-10:00	Dueling Identities: An Exploration Within and Beyond Twinship, Haleigh Brewer
GPP 13 10:00-10:15	Exploring Tourette Syndrome with Analog Photography, Katelyn Brewer

MCSC 249 | Natural Sciences

9:30 AM – 11:00 AM

GPP 58 9:30-9:45	Biodiversity and habitat complexity as indicators of community assembly following oyster reef restoration, Grace Loonam
GPP 59 9:45-10:00	Using the Population Genetic Structure of a Unique Parasite to Investigate Diamondback Terrapin Dispersal, Garrett J. Maggio
GPP 60 10:00-10:15	Parasite component community structure within an epiphyte-grazing host indirectly influences the productivity of a seagrass ecosystem, Meghan A. Nadzam
GPP 61 10:15-10:30	Surface modification of magnetic nanoparticles for cancer treatment through magneto-mechanical actuation, Jarrett Nagy
GPP 62 10:30-10:45	Mean System Energy for Particle Pairs in High Energy Physics, Okey Ohanaka
GPP 63 10:45-11:00	Comparing the Optically Stimulated Luminescence Response of Quartz for Beta Irradiation and X-ray Irradiation., Noah Pope

MCSC 253 | Education

9:30 AM – 10:30 AM

GPP 6 9:30-9:45	Examining the Effect on Beginning Teacher Self-Efficacy through Culturally Responsive Teaching Professional Development, Kirby A. Maness
Virtual Poster	Virtual Simulations in the Science Classroom: Investigating the influence of Gizmo's based experiments on student's misconceptions, Elizabeth Proctor
GPP 8 10:00-10:15	Understanding Student Support Needed and Provided by Ph.D. Programs in Rhetoric, Composition, and Technical Communication, Mina Bikhmohammadi

MCSC Black Box Theatre | Fine Arts, Visual Art, and Design

10:30 AM – 11:45 AM

GPP 14 10:30-10:45	Investigation of Materials and Processes, Katelyn Davis
GPP 15 10:45-11:00	Trends in Handedness: conceptual Fine Art exploration in Textile Art through comparative data study, Paul Edwards
GPP 16 11:00-11:15	Critical Design Thinking in Practice, Parker Estes
GPP 17 11:15-11:30	Placebos and Panaceas, Nick Fowler
GPP 18 11:30-11:45	Debunking Phallacies, Michael Gaines

MCSC 253 | Biomedical Sciences & Human Health**10:45 AM – 12:00 PM**

- GPP 24 10:45-11:00 Combating bacterial biofilms: Investigating unconventional regulatory proteins SypA and SypE in *Vibrio fischeri*, Elody Bensch
- GPP 25 11:00-11:15 The Effect of Trunk Strength on Knee Biomechanics During a Single Leg Landing Task, Jonathan Radilla Cortez, Anthony S. Kulas, Zac Domire, Patrick Rider
- GPP 26 11:15-11:30 The Effects of Helmet Loads and Disc Degeneration on Cervical Spine Biomechanics, Mackenzie Hoey
- GPP 27 11:30-11:45 Ecdysone signaling in the *Drosophila* germline regulates a stem cell transcriptional program, Lauren Jung, Alexandria Warren
- GPP 28 11:45-12:00 Young female EDS mice show increased detrusor sensitivity and contraction to muscarinic stimulation, Soumya Kamath, Andrew Readyoff, Nick Williamson, Everett Minchew, Espen E. Spangenburg, Johanna L. Hannan

MCSC 125 | Engineering, Technology, and Computer Science 11:15 AM – 12:30 PM

- GPP 1 11:15-11:30 Assisting Large Equipment Transportation with AR Applications for Existing Facilities, Lijun Liu
- GPP 2 11:30-11:45 High Spatial Resolution Long-Term Temperature Profiling to Inform Near-Shore Atmospheric Sound Propagation, Matthew Stengrim, Andrea Vecchiotti, Jeff Foeller, Diego Turo, Joseph Vignola
- GPP 3 11:45-12:00 Satellite-Based Rainfall Datasets and Autocalibration Techniques' Effects on SWAT+ Flow Prediction, Mahesh R Tapas, Randall Etheridge
- GPP 4 12:00-12:15 Evolving PITON: AI-Driven Simplification of IoT Data Access, Colby Sawyer
- GPP 5 12:15-12:30 Automated Garment Measurements in the Wild via Landmark and Depth Estimation, Cris Zbavitel

MCSC 249 | Social Sciences**11:30 AM – 1:00 PM**

- GPP 45 11:30-11:45 Does My Friend Like My Romantic Partner? Links Among Relationship Work With Partners and Friends and Physiological Implications, Siera Kee, Jakob Jensen, Kayla Reed Fitzke, Matthew Fish
- GPP 46 11:45-12:00 Assessing bias in personal exposure estimates when indoor air quality is ignored: A comparison between GPS-enabled mobile air sensor data and stationary sensor network data, Abdulahi Opejin
- GPP 47 12:00-12:15 Relationships among Cumulative Life Stress, Interoception, and Psychological Presentations with Somatic Features, Alia Simon
- GPP 48 12:15-12:30 Adverse Childhood Experiences, Risk Taking, and Protective Factors, Daniel Stickel
- GPP 49 12:30-12:45 Intentions Defined: How Students' Entrepreneurial Attitudes and Perceptions Are Shaped From a Student Consultant Internship Program, Seth Jones, Toan Tran
- GPP 50 12:45-1:00 Development of a Socio-Hydrological Model for a Coastal Watershed: Using Stakeholders' Perceptions, Randall Etheridge

MCSC Black Box Theatre | Natural Sciences**12:00 PM – 1:00 PM**

- GPP 64 12:00-12:15 Benchmarking charge and baryon stopping in isobar collisions with AMPT, Mason Ross

- GPP 65 12:15-12:30 Using electrical resistivity tomography (ERT) to investigate the role of artificial channels on saltwater transport, Hyde County, NC, Elnaz Pezeshki, Matthew Sirianni, Stephen Moysey, Alex Manda, Andrea Gibbs
- GPP 66 12:30-12:45 Rewilding the River: Assessing the Environmental Effects and Regulatory Influences of the Condit Dam Removal Process, Neda Safari, Jacob Petersen-Perlman
- GPP 67 12:45-1:00 Exploring Climate Resilience Planning in Lower-Income Small-Scale Fishing Communities, Zack Shepard, Daniel Walker, Marissa Diaz, Braden McPhillips, Eric Wade

MCSC 253 | Natural Sciences

12:15 PM - 2:00 PM

- GPP 51 12:15-12:30 Using Gafchromic films for dosimetry of low-energy protons produced in the ECU accelerator laboratory, Homeira Faridnejad
- GPP 52 12:30-12:45 Behavioral and survival impacts of salinity on white shrimp *Penaeus setiferus*, Chloe Gabriel, Amy Fowler, James Morley April Blakeslee
- GPP 53 12:45-1:00 Time-Resolved Spectroscopic Analysis of Avian Cryptochrome 4 Reveals Key Features in Electron Transport Chain Critical for Magnetoreception, Wyatt Guy
- GPP 54 1:00-1:15 Biochemical and structural studies of unusual lipoxygenases from pathogenic fungi, S. Gage Hill
- GPP 55 1:15-1:30 Constraints on subvolcanic magma plumbing system evolution from crystal size distribution analysis of igneous groundmass, Henry Mountains, Utah, Tess Oldroyd-Johnson
- GPP 56 1:30-1:45 Cryptic cohabitation: The quest to divulge arthropod communities and plant selection in the nests of the Prothonotary Warbler (*Protonotaria citrea*) in eastern North Carolina, Skadi Kylander
- GPP 57 1:45-2:00 Predator effects on prey communities differ based on predation strategy and spatial scale, Jasper Leavitt

MCSC 125 | Biomedical Sciences & Human Health

12:45 PM - 2:15 PM

- GPP 33 12:45-1:00 Myoferlin regulates integrin $\alpha 4$ expression to promote invasion by HTLV-1-infected T-cells, Kawsar Sarker, Nicholas Polakowski, Kimson Hoang, Isabelle Lemason
- GPP 34 1:00-1:15 Increased Sensitivity to Postural Perturbation Following COVID-19 Infection, Brittany Trotter, Kendall Nelson, Mackenzie Hoey
- GPP 35 1:15-1:30 The pH-sensing G protein-coupled receptor GPR68 is a novel controller of vascular smooth muscle cell phenotype, Madison D. Williams, Joshua S. Morgan, Cere E. Poovey, Kristen R. Carraway, Kyle D. Mansfield, and David A. Tulis
- GPP 36 1:30-1:45 Infant Mesenchymal Stem Cell Response to Chronic *in Utero* Metformin Exposure from GDM Pregnancies, Ericka M. Biagioni, John C. Rowe IV, Sripallavi Yendamuri, Breanna L. Wisseman, Donghai Zheng, Kelsey H. Fisher-Wellman, P. Darell Neuffer, Linda E. May, Nicholas T. Broskey
- GPP 37 1:45-2:00 Occupational Therapy and the Americans with Disabilities Act: Examining Practitioners' Knowledge, Attitudes, and Implementation, Ellen Cahoon
- GPP 38 2:00-2:15 Impact of Fatigue on Metatarsophalangeal Joint Loads During Load Carriage, Ankur Padhye, Stacey Meardon, Junfei Tong, Jaques Reifman, and John Willson

MCSC Black Box Theatre | Biomedical Sciences

2:00 PM - 3:00 PM

- GPP 29 2:00-2:15 Magneto-mechanical cellular cytoskeletal disruption of breast cancer cells, Yara Maayah, Mahboubeh Nabavina, John Cooper, Juan Beltran-Huarac
- GPP 30 2:15-2:30 Magnetic extracellular vesicles as therapeutic agents to treat breast cancer, Samuel Minier

- GPP 31 2:30-2:45 Exploring the Role of a Putative *Brucella* Exopolysaccharide Biosynthetic Pathway in *Brucella* Virulence, Jodi M. Ogle, Darrel A. Hoppersberger, Ian S. Barton, Connor B. Cribb, Clay Fuqua, R. Martin Roop II
- GPP 32 2:45-3:00 TP63 mutations cause defects in keratinocyte cell-ECM adhesion and migration, Maddison N. Salois, Saiphone Webb, Maranke I. Koster

MCSC 253 | Social Sciences

2:15 PM – 3:45 PM

- GPP 39 2:15-2:30 Mining for Cryptocurrencies, Extracting from Communities: A Case Study of Belvoir, Victor Ihuka
- GPP 40 2:30-2:45 Buyout programme experiences and perspectives of local public officials in eastern North Carolina, Nelson Adeniji, Anuradha Mukherji, Scott Curtis, Jennifer Helgeson, Jamie Kruse and Meghan Millea.
- GPP 41 2:45-3:00 Does elderspeak facilitate comprehension in older listeners? Evidence from eye-tracking, Rose Baker, Matthew Walenski
- GPP 42 3:00-3:15 Perceived Competence, Achievement Goal Orientations, and Psychological Outcomes in PE, Stephanie Fuller
- GPP 43 3:15-3:30 Unveiling the Intersection: Campus Climate and Mental Well-being Among LGBTQ College Students, Haiden Hice
- GPP 44 3:30-3:45 Subjective Age and Effective Leadership: Age-Differentiated Perspectives on Employee Motivations, Seth Jones

MCSC Black Box Theatre | Fine Arts, Visual Art, and Design

3:15 PM - 4:30 PM

- GPP 19 3:15-3:30 Examining the Limitations of Weaving with a TC2 Jacquard Loom, Rachael Lowman
- GPP 20 3:30-3:45 Artistic Resilience, Tansy Obryant
- GPP 21 3:45-4:00 *Canceled Presentation*
- GPP 22 4:00-4:15 Exploring Tourette Syndrome with Analog Photography, Katelyn Brewer
- GPP 23 4:15-4:30 *Canceled Presentation*