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 Bikmohammadi

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
Combating bacterial biofilms: Investigating unconventional regulatory proteins SypA and SypE in Vibrio fischeri, Elody Bensch

The Effect of Trunk Strength on Knee Biomechanics During a Single Leg Landing Task, Jonathan Radilla Cortez, Anthony S. Kulas, Zac Domire, Patrick Rider

The Effects of Helmet Loads and Disc Degeneration on Cervical Spine Biomechanics, Mackenzie Hoey

Ecdysone signaling in the Drosophila germline regulates a stem cell transcriptional program, Lauren Jung, Alexandria Warren

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

Assisting Large Equipment Transportation with AR Applications for Existing Facilities, Lijun Liu

High Spatial Resolution Long-Term Temperature Profiling to Inform Near-Shore Atmospheric Sound Propagation, Matthew Stengrim, Andrea Vecchiotti, Jeff Foeller, Diego Turo, Joseph Vignola

Satellite-Based Rainfall Datasets and Autocalibration Techniques’ Effects on SWAT+ Flow Prediction, Mahesh R Tapas, Randall Etheridge

Evolving PITON: AI-Driven Simplification of IoT Data Access, Colby Sawyer

Automated Garment Measurements in the Wild via Landmark and Depth Estimation, Cris Zbavitel

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

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

Relationships among Cumulative Life Stress, Interoception, and Psychological Presentations with Somatic Features, Alia Simon

Adverse Childhood Experiences, Risk Taking, and Protective Factors, Daniel Stickel

Intentions Defined: How Students’ Entrepreneurial Attitudes and Perceptions Are Shaped From a Student Consultant Internship Program, Seth Jones, Toan Tran

Development of a Socio-Hydrological Model for a Coastal Watershed: Using Stakeholders’ Perceptions, Randall Etheridge

Benchmarking charge and baryon stopping in isobar collisions with AMPT, Mason Ross
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

Rewilding the River: Assessing the Environmental Effects and Regulatory Influences of the Condit Dam Removal Process, Neda Safari, Jacob Petersen-Perlman


Using Gafchromic films for dosimetry of low-energy protons produced in the ECU accelerator laboratory, Homeira Faridnejad

Behavioral and survival impacts of salinity on white shrimp *Peneaus setiferus*, Chloe Gabriel, Amy Fowler, James Morley April Blakeslee

Time-Resolved Spectroscopic Analysis of Avian Cryptochrome 4 Reveals Key Features in Electron Transport Chain Critical for Magnetoreception, Wyatt Guy

Biochemical and structural studies of unusual lipoxygenases from pathogenic fungi, S. Gage Hill

Constraints on subvolcanic magma plumbing system evolution from crystal size distribution analysis of igneous groundmass, Henry Mountains, Utah, Tess Oldroyd-Johnson

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

Predator effects on prey communities differ based on predation strategy and spatial scale, Jasper Leavitt

Myoferlin regulates integrin α4 expression to promote invasion by HTLV-1-infected T-cells, Kawsar Sarker, Nicholas Polakowski, Kimson Hoang, Isabelle Lemason

Increased Sensitivity to Postural Perturbation Following COVID-19 Infection, Brittany Trotter, Kendall Nelson, Mackenzie Hoy

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

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. Wiseman, Donghai Zheng, Kelsey H. Fisher-Wellman, P. Darell Neufer, Linda E. May, Nicholas T. Broskey

Occupational Therapy and the Americans with Disabilities Act: Examining Practitioners’ Knowledge, Attitudes, and Implementation, Ellen Cahoon

Impact of Fatigue on Metatarsophalangeal Joint Loads During Load Carriage, Ankur Padhye, Stacey Meardon, Junfei Tong, Jaques Reifman, and John Willson

Magneto-mechanical cellular cytoskeletal disruption of breast cancer cells, Yara Maayah, Mahboubeh Nabavina, John Cooper, Juan Beltran-Huarac

Magnetic extracellular vesicles as therapeutic agents to treat breast cancer, Samuel Minier
Exploring the Role of a Putative *Brucella* Exopolysaccharide Biosynthetic Pathway in *Brucella* Virulence, Jodi M. Ogle, Dariel A. Hopersberger, Ian S. Barton, Connor B. Cribb, Clay Fuqua, R. Martin Roop II

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 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*