



Program Book

Friday, August 2, 2024
Popp Martin Student Union
&
Online via Symposium

<https://symposium.foragerone.com/srs-2024>

Welcome to 2024 OUR Summer Research Symposium!

The Summer Research Symposium celebrates the intellectual exploration and creativity of our students. With over 140 presenters, 2024 represents our largest ever Summer Symposium. The presentations are the result of nearly 30,000 hours of collaborative work between students and mentors in the labs, libraries, studios, field sites, and with community partners. We encourage you to engage broadly with the diverse projects representing 7 colleges from across the University of North Carolina at Charlotte.

The research presented here represents multiple National Science Foundation supported programs, the Charlotte Teachers Institute, the Louis Stokes Alliance for Minority Participation, and the OUR Summer Scholars.

The Summer Research Symposium would not be possible without the commitment of our UNC Charlotte research mentors. A big thank you to all mentors for your service and dedication to undergraduate research, scholarship, and creative activities at UNC Charlotte.

View presentations, ask questions, and continue conversations online
at the 2024 Summer Research Symposium site



2024 Summer Research Symposium Schedule of Sessions

8:30 AM - On-site Conference Registration Opens (Rm 340)

9:15 AM - 9:30 AM - Welcome

9:30 AM - 10:30 AM - First Session of Poster Presentations (340)

10:00AM - 11:00 AM - First Oral Presentation Session (200 rooms)

10:30 AM - 10:45 AM - Poster Swaps (340)

10:45 AM - 11:45 PM - 2nd Session of Poster Presentation (340)

11:30AM - 12:30 PM - 2nd Oral Presentation Session (200 rooms)

11:45 AM - 12:00 PM - Poster Swaps (340)

12:00 PM - 1:00 PM - Third Session of Poster Presentation (340)

1:00 PM - 2:00 PM - Lunch for Presenters & Mentors (back of 340)

First Oral Presentation Session 10:00-11:00AM

Room 261

Abstract #401 - Efficacy of Anterior Heel Wedge at Reducing Knee Flexion Contracture after Total Knee Arthroplasty: A Pilot Investigation by Gracy Dwyer; Mentor: Abbey Thomas, College of Health and Human Services

Abstract #402 - Mexico's Economic Influence and the Debt Crisis of the 1980s by Ashley Alcivar Conteron; Mentor: Jurgen Buchenau, College of Humanities & Earth and Social Sciences

Abstract #403 - Improving State Space Models using Structured Low Rank Optimization by Brian Mohseni; Mentor: Kümmerle, College of Computing and Informatics

Room 263

Abstract #404 - Designing parts as combinations of smaller pieces for sustainable Manufacturing by Gabriel Bonus; Mentor: Mahmoud Dinar, William States Lee College of Engineering

Abstract #405 - Effect of KRAS Inhibitors on Oncolytic Virotherapy by Nathaniel Foret; Mentor: Valery Grdzlishvili, College of Science

Abstract #406 - Measurement of Gas Flow in the Laser Powder Bed Fusion Additive Manufacturing Process by Andrew Thompson; Mentor: Jaime Berez, William States Lee College of Engineering

Room 265

Abstract #407 - The Mechanism and Sensitivity of Alcohol Sensing Utilizing Dipyrindinium Thiazolo[5,4-d]Thiazole by Aiden Hawkins; Mentor: Michael Walter, College of Science

Abstract #408 - Revisiting the Mission: An Ethnographic Evaluation of Identity Discourse and Advocacy Efforts in Non-Profit Organizations by Eesha Alla; Mentor: Sharon Watson, College of Humanities & Earth and Social Sciences

Abstract #409 - Multisite phosphorylation of the yeast co-chaperone Cdc37 fines-tunes the global yeast stress response by Ashley Choi; Mentor: Andrew Truman, College of Science

Second Oral Presentation Session 11:30AM - 12:30PM

Room 261

Abstract #501 - Mrs. E.W. Payne: A Literary Contribution to Science and Religion by Haywood Hayes; Mentor: Alan Rauch, College of Humanities & Earth and Social Sciences

Abstract #502 - Understanding the Kar2 Chaperone Code by Erica Flores; Mentor: Chathura Paththamperuma, and Andrew W. Truman, College of Science

Abstract #503 - The Mechanical Integrity of Mycelium-Hemp Structures by Trenton Brooks; Mentor: Brigid Mullany, William States Lee College of Engineering

Room 263

Abstract #504 - Mexico and Global Economic Justice: An analysis on the Carter administration by Sofia Fuentes; Mentor: Jurgen Buchenau, College of Humanities & Earth and Social Sciences

Abstract #506 - Prototyping a Coordinated Multi-Drone Network System using Autonomous Path-finding Algorithms by Chandra Siddhartha Geddam, Mohammad Hasan; Mentor: Ran Zhang, William States Lee College of Engineering

Abstract #507 - What does Wilhelm Reich have to teach us about health today? by Joseph Thompson; Mentor: Shannon Sullivan, College of Humanities & Earth and Social Sciences

Room 265

Abstract #508 - Light-Activated Nanoparticles for The Elimination of Bacterial Biofilms by Atqiya Nafisa; Mentor: Juan Vivero-Escoto, College of Science

Abstract #509 - Blood Memory - Resistance by Amaree Ratliff; Mentor: Tamara Williams, College of Arts and Architecture

First Session of Poster Presentations 9:30-10:30AM

Abstract #101 - Discovering the Knowledge, Perspectives, Beliefs and Experiences of Teacher Assistant to Teacher Candidates Learning to Design Instruction Using Universal Design for Learning by Lori Glavan; Mentor: Holly Johnson, Cato College of Education

Abstract #102 - Fuel for Thought Biodiesel in the STEM Classroom by Evelyn King Metcalf, Jordan White, Aaron Socha, Kyle McGuff; Mentor: Scott Gartlan, Charlotte Teachers Institute

Abstract #103 - Complimenting Interactive Visualization of High-Performance Scientific Application with Hardware Utilization Dashboard by Jaiden Daya; Mentor: Tyler Allen, College of Computing and Informatics

Abstract #104 - Reliving History: Don't Fumble the Freedom Struggle; Its Rich in our Legacy of Survival by Thomas Murphy; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences and Charlotte Teachers Institute

Abstract #105 - ROS alters NLRP3 Inflammasome activities in breast tumor associated macrophages by Shely Acosta; Mentor: Didier Dréau, College of Science

Abstract #106 - Forging the Future of Manufacturing Education: Developing Augmented Reality Experiences to Shallow the Learning Curve by Austin Varghese, Arjun Phadke; Mentor: Jose Martins do Outeiro, William States Lee College of Engineering

Abstract #107 - From Science to Civil Rights: Examining teachers' experiences in three intensive and experiential summer teacher professional development programs by Madelyn Torkelson, Kendall Fording; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences and Charlotte Teachers Institute

Abstract #109 - Explain Your Thinking: What Does this Mean in Math? by Susan Lima-Romano, Amelia Crawford; Mentor: Madelyn Colonnese, Cato College of Education

Abstract #110 - Sankofa: Looking Back to Move Forward by Melanie Creech; Mentor: Scott Gartlan, Charlotte Teachers Institute

Abstract #111 - The Decomposition of Mental Health Barriers within the African American Community by Ayanna Lee; Mentor: Dale-Marie Wilson, College of Computing and Informatics

Abstract #112 - Examining Intersecting Employment & Early Care and Education Sector Opportunities and Barriers for Latina Mothers in Charlotte, NC Abstract by Wendy Castellanos-Olivares, Isabel Almonte-Tavarez; Mentor: Stephanie Potochnick, College of Humanities & Earth and Social Sciences

Abstract #113 - Examining Eye Gaze in Students From the Marshall Islands Through the Lens of Critical Language Awareness; by Clare Grealey; Mentor: Elise Berman, College of Humanities & Earth and Social Sciences

Abstract #114 - Directly measuring Viral Dark Matter within the Terrestrial Biosphere by Sean Madden; Mentor: Richard Allen White III, College of Science

Abstract #115 - 3D Printing of Fully Integrated Flexible Humidity Sensor for Long-Term Health Monitoring by Dylan Burke; Mentor: Erina Joyee, William States Lee College of Engineering

Abstract #116 - The effects of leaf stomatal closure on humidity in a prominent climate model by Joe Wholey; Mentor: Jacob Scheff, College of Humanities & Earth and Social Sciences

Abstract #117 - Overshadowed but Not Forgotten: Surviving in a Nation That Still Feeds on Us by Christopher Lawson; Mentor: Scott Gartlan, Charlotte Teachers Institute

Abstract #118 - Resolving Thymic T-cell Development within Chiroptera by Andra Buchan; Mentor: Richard Allen White III, College of Computing and Informatics

Abstract #119 - The Psychological and Emotional Toll of Food Insecurity, & Resulting Presentation of Survival Mode; An explanatory process model by Rae Hallo-Gordon; Mentor: Nicole Peterson, College of Humanities & Earth and Social Sciences

Abstract #120 - Building an Emotionally Intelligent Writing Center through Mindfulness Training for Tutors by Bree Johnson; Mentor: Katie Garahan, College of Humanities & Earth and Social Sciences

Abstract #121 - Investigating the Role of *S. aureus* Membrane Vesicles in Stimulating Resident Bone Cell Responses During Osteomyelitis by Ishan Patel; Mentor: M. Brittany Johnson, College of Science

Abstract #122 - Design of a Buoyancy Control System for a Miniature Aquatic Robot by Joey Porter; Mentor: Artur Wolek, William States Lee College of Engineering

Abstract #123 - Remembrance Through Art: Examining the Narrative of Slavery and Oppression through Artistic Work by Shannon McFarland; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #124 - Providing Creative Space for Artists & Arts Engagement in the Queen City by Jenna Drew; Mentor: Vaughn Schmutz, College of Humanities & Earth and Social Sciences

Abstract #125 - Freedom Lighters by Rochelle Stanley; Mentor: Scott Gartlan, Charlotte Teachers Institute

Abstract #126 - Designing Introductory Visual Programming Assignments for Computer Science Students by Neil Huntley; Mentor: Kalpathi Subramanian, College of Computing and Informatics

Abstract #127 - The ARC of Racial Justice: Awareness, Relationships, and Commitment by Meagan Lineberger; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #128 - CXCL4 peptide derived from the CXCL12-CXCL4 heterodimer interface alter breast cancer cell CXCL12-CXCR4 signaling by Jenna Venditti; Mentor: Didier Dréau, College of Science

Abstract #129 - Filtration of PFAS through Ion Exchange Resins by Rachel Irving; Mentor: Mei Sun, William States Lee College of Engineering

Abstract #130 - Chicago-Money & Sumner, MS Reflections on Emmett Till and the Mississippi Campaign by Floyd Carroll; Mentor: Scott Gartlan, Charlotte Teachers Institute

Abstract #131 - Morphological Analysis of North American River Otter (*Lontra canadensis*) Diet Across an Urbanization Gradient by Alexandria Lupton; Mentor: Sara Gagne, College of Humanities & Earth and Social Sciences

Abstract #132 - Resolving the virome of marginally farmed *Panicum virgatum* by Ivy Mateos Guevara; Mentor: Richard Allen White III, College of Computing and Informatics

Abstract #133 - Establishing a Connection with the Past to be Better Prepared for the Future by Garland Sweeney Jr.; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #134 - Visualizing the Spatiotemporal Localization of HSFs in Heat-Shocked *Nematostella vectensis*; by Ciela Crane; Mentor: Adam Reitzel, College of Science

Abstract #135 - Reinforcement Learning (RL)-Based Smart Control System for Wastewater Treatment Process Control by Justin Logan; Mentor: Michael Smith & Nicole Roberts, William States Lee College of Engineering

Abstract #136 - An Analysis of General Research Literature on Serial Murder to the Specific Case of Gary Ridgway "The Green River Killer" by Abbey Beam; Mentor: Charisse T. M. Coston, College of Humanities & Earth and Social Sciences

Abstract #137 - Exploring Plasmid Content and Mobility in Endohyphal Mycetohabitans Species by Sara Field; Mentor: Morgan Carter, College of Science

Abstract #138 - Atomistic Simulation of Thermal / Ionic Conduction in YSZ/STO Superlattices by Jan Zavaleta Molina; Mentor: Xiang Chen, William States Lee College of Engineering

Abstract #139 – 'It was so painful': A qualitative analysis of women's experiences of pain during reproductive endocrinology and infertility (REI) treatment by Joy Yochem; Mentor: Margaret Quinlan, College of Humanities & Earth and Social Sciences

Abstract #140 - Preparation and characterization of fluorescently labeled APE1 recombinant protein for mechanistic studies in liquid-liquid phase separation by Anthony Malone; Mentor: Shan Yan, College of Science

Abstract #141 - Black Sexual Health in Young Adults Study by Victoria Smith; Mentor: Jasmine Temple and Erika Montanaro, College of Humanities & Earth and Social Sciences

Abstract #142 - Influence of Biofilms on Settlement of *Ectopleura crocea* Larvae in the Gulf of Maine by Christian Klepper; Mentor: Adam Reitzel, College of Science

Abstract #143 - Thermal influence on the development rate of the model sea anemone, *Nematostella vectensis* by Caitlin Kennedy; Mentor: Quinton Krueger, College of Science

Abstract #144 - From Streets to Suits: The Effects of Adolescent Gang Involvement on Adult Employment through Life Course Theory by Isabelle Gochtovtt, Mazie Hill, Maria Holmes, Sonya Ngwafang; Mentor: Michael Turner, College of Humanities & Earth and Social Sciences

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Second Session of Poster Presentations 10:45-11:45AM

Abstract #202 - Studying Usability of Expert Cybersecurity Tools by Toya Okey-Nwamara; Mentor: Cori Faklaris, Prakruthi Reddy, College of Computing and Informatics

Abstract #203 - An Experience of the Heart: Bringing This Experience Home (Literally) by Sandie Spraggins; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #204 - The Effects of Urbanization on Dragonfly (Insecta: Odonata: Anisoptera) Metacommunity Structure and Connectivity by Brody Moran; Mentor: Sandra Clinton, College of Humanities & Earth and Social Sciences

Abstract #205 - Developing a Light-Assisted Drying Technique to Thermally Stabilize Poliovirus Vaccine by Jade Duerr; Mentor: Susan Trammell, College of Science

Abstract #206 - Resources for Firefighter Mental Health by Jordan Dunn; Mentor: Michael Benjamin, William States Lee College of Engineering

Abstract #207 - How 'Universal' is Universal Design for Learning in Teacher Education Programs? by Jordan Rierson; Mentor: Holly Johnson, Cato College of Education

Abstract #208 - On the Civil Rights Trail by Larry Bosc; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #209 - A Journey In History: The Power of Waves, Chains, and Mothers by Regina Graves; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #210 - Engineer Multi-Qubit Hamiltonians through Optical Cavity Design by M. Elijah Wangeman; Mentor: Jay Foley, College of Science

Abstract #211 - Analysis of Hollow Microneedle Efficacy for Painless Interstitial Fluid Extraction by Michelle Abigail De Paz Hernandez; Mentor: Erina Joyee, William States Lee College of Engineering

Abstract #212 - Optimizing the Performance of Computer Vision Application by Caleb Brohman; Mentor: Erik Saule, College of Computing and Informatics

Abstract #213 - The Power of Slave Narratives by Jacqueline Smith; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #214 - A Memory From the Past: Meeting an Original Freedom Rider by Ernisha Ballard; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #215 - Quantifying Silanol Groups on Zeolite to Functionalize it for PFAS Removal by Maren Clark; Mentor: Jordan Poler, College of Science

Abstract #216 - Partitioned Allocation for 3D Memory Performance: Python-Based by Monse Montes-Bocanegra; Mentor: Ron Sass, William States Lee College of Engineering

Abstract #217 - Title: Enabling Advisors to Guide Students: Ensuring Financial Readiness for Graduation by Meelad Doroodchi; Mentor: Elise Demeter, College of Computing and Informatics

Abstract #218 - An Accurate Contextualization of African Diasporic History in Advanced Literature Instruction by Angela Walker, Ph.D.; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #219 - Stemming the Loss of Urban Tree Canopy: GIS Analysis to Locate the Last Plantable Riparian Lands in Charlotte by Natalie Stotz; Mentor: Douglas A. Shoemaker, College of Humanities & Earth and Social Sciences

Abstract #220 - CXCL4 peptides derived from CXCL4-CXCL12 heterodimer interface alter CXCL12-CXCR4 breast cancer cell migration by Najee Tidmore; Mentor: Didier Dreau, College of Science

Abstract #221 - Mental Health Resources for Firefighters. by Mariah Manley; Mentor: Michael Benjamin, William States Lee College of Engineering

Abstract #222 - A Preliminary Assessment of Water Quality in Cove and Main Lake Locations in an Urbanizing North Carolina Piedmont Reservoir by Emma Doherty; Mentor: Craig Allan, College of Humanities & Earth and Social Sciences

Abstract #223 - Characterizing Microplastics in the Restored Floodplains of Charlotte's Urban Streams by Mollie Davis; Mentor: Sandra Clinton, College of Humanities & Earth and Social Sciences

Abstract #224 - International Students' Interaction with Social Media: How the Pressure of "Double Presence" Impacts Privacy Practices by Nishka Mathew, Jabou Jallow; Mentor: Sarah Tabassum and Cori Faklaris, College of Computing and Informatics

Abstract #225 - Spatial and Temporal Patterns of Water Quality in Charlotte's Watersheds by Dezzie Niemann; Mentor: Fushcia Hoover, College of Humanities & Earth and Social Sciences

Abstract #226 - Synthesis and characterization of Conjugated Fulleride Dimers Linked by N-Heterocyclic Carbenes (NHCs) by Sebastian Zaatini, Jonathan Gillen; Mentor: Christopher Beijer, College of Science

Abstract #227 - Predicting Nitrogen in the Wastewater Treatment Process by Hannah Zeru; Mentor: Michael Smith and Nicole Roberts, William States Lee College of Engineering

Abstract #228 - Managing the Burden: College Students' Perceptions of Debt by Maya Barbee; Mentor: Scott Fitzgerald, College of Humanities & Earth and Social Sciences

Abstract #229 - Overexpressing, Purifying, and Assessing Superoxide Dismutase-1 by Payton Roy; Mentor: Eva Ge, College of Science

Abstract #230 - Autonomous Surface Vessel (ASV): Field Testing and Sensor Integration by Ryan Monroe; Mentor: Artur Wolek, William States Lee College of Engineering

Abstract #231 - Enhancing HPC Job Scheduling with Synthetic Data Generation for Reinforcement Learning-Based Schedulers by Monish Soundar Raj; Mentor: Dong Dai, College of Computing and Informatics

Abstract #232 - Learning History: Hearing from a Real Freedom Rider by Genitia Johnson; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #233 - The Effect of Methyl Methanesulfonate (MMS)-Induced DNA Damage on DNA Damage Response Signaling by Jade Lyttle; Mentor: Shan Yan, College of Science

Abstract #234 - Upcycling of Common Household Wastes by Ysabelle Blaine; Mentor: Michael Benjamin, William States Lee College of Engineering

Abstract #235 - Comparison of Fluorescent and Antibacterial Properties of Silver Nanoclusters Templated on Single-Stranded DNAs with Various Number of Cytosines. by Regina Dula, Sarmistha Ghosh, Elizabeth Skelly, Kirill Afonin; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #236 - Bio-characterization of Thiazolothiazoles: Cell Staining, Antibacterial and Bacterial Sensing Applications by Simone Walkowe Borden, Gabriela Chamorro, Elizabeth Skelly-Miles; Mentor: Kirill Afonin, College of Science

Abstract #237 - Walking, Writing Archives in Charlotte by Breonna Tuitt; Mentor: Janaka Lewis, College of Humanities & Earth and Social Sciences

Abstract #238 - A Comparative Study of Differential Privacy Factors in Generative AI Research by Pritika Bugga; Mentor: Liyue Fan, College of Computing and Informatics

Abstract #239 - Ligand Functionalization and Bioapplication of Metallic-Coated Magnetic Nanoparticles Against Antibiotic-Resistant Bacteria by Laura Scala; Mentor: Juan Vivero-Escoto, College of Science

Abstract #240 - Modeling Energy Transition: Simulating the Adoption of Smart Energy Devices in a Neighborhood by Jonathan Machado; Mentor: John Hall, William States Lee College of Engineering

Abstract #241 - Assessing the Permissiveness of Pancreatic Ductal Adenocarcinoma Cell Lines to VSV- Δ M51-GFP by Molly Andrews; Mentor: Valery Grdzlishvili, College of Science

Abstract #242 - A Socio-technical Strategy for Engaging Undergraduate Computer Science Students in Informal Learning. by Jonathan Smith; Mentor: Marlon Mejias, College of Computing and Informatics

Abstract #243 - Correlation between Bully Victimization and Generalized Anxiety Disorder: A Focus on Sex, Race, and Ethnicity by Cici Houser, Ellie Hyde, Alayna Przybys, Anna Tovchigrechko; Mentor: Michael Turner, College of Humanities & Earth and Social Sciences

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Third Session of Poster Presentations 12:00-1:00PM

Abstract #108 - Burnout: Contributing Factors of Nurse Portrayal in Social Media and Public Perception by Allie Theisen; Mentor: Margaret Quinlan, College of Humanities & Earth and Social Sciences

Abstract #301 - Collaborative Interactions and Content Expertise of General Education and Special Education Candidates by Khadija Ouedraogo; Mentor: Shawnee Wakeman and Holly Johnson, Cato College of Education

Abstract #302 - Resolving the Microbiota in Radiation Survival Using Functional Metagenomics by Joshua Hensley; Mentor: Richard Allen White III, Ph.D., College of Computing and Informatics

Abstract #303 - Visualizing Patterns of Environmental Injustice Across Mecklenburg County by Maya Fleagle; Mentor: Michael Ewers, College of Humanities & Earth and Social Sciences

Abstract #304 - The Civil Rights Movement: Our Fight For Freedom and the Historical Interpretation by Shyrese Robinson Johnson; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #305 - Synthesis of Bridged and Sulfone-modified [3]Radialenes for Redox Flow Batteries by Chris Landes; Mentor: Christopher Bejger, College of Science

Abstract #306 - Assessing the Relationships between Green Infrastructure and Health Indicators by Nia Spears; Mentor: Nicole Roberts, William States Lee College of Engineering

Abstract #307 - Evaluation of our BRIDGE for KIDS II by Emilia Olivera; Mentor: Lan Kolano, Cato College of Education

Abstract #308 - Evaluating watermarking techniques in Deep Fake images by Aryaman Kachroo; Mentor: Liyue Fan, College of Computing and Informatics

Abstract #309 - Human emotion and Passion from a difficult time in US History CTI Civil Rights Trip June 2024 by May Winiarski; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #310 - The Effects of Dipyrindinium Thiazolo[5,4-d]thiazole on Charge Mobility for OLED and OPV Applications by Ryan Kolaitis; Mentor: Michael Walter, College of Science

Abstract #311 - Evaluating the Influence of Socio-Economic Factors on the Distribution of Green Stormwater Infrastructure and Urban Stream Water Quality within the City of Charlotte, North Carolina by Brandon Vorst; Mentor: Nicole Roberts, William States Lee College of Engineering

Abstract #312 - RL4Sys, a Framework for RL-Based Optimization by Jackson Redman; Mentor: Dong Dai, College of Computing and Informatics

Abstract #313 - The State, Organized Crime, & Jim Crow The Last Gasp of American Apartheid by Julio Campos; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #314 - Measuring Volunteer Participation and Retention in Rural and Urban Areas for Environmental Conservation by Nathan Young; Mentor: Sharon Watson, & Timothy Murtha, College of Humanities & Earth and Social Sciences

Abstract #315 - Investigations of Voltage Sensitive Asymmetric Thiazolo[5,4-d]thiazole Dyes by Lillian Hicks; Mentor: Michael Walter, College of Science

Abstract #316 - Surface Finishing of Metal Additive Manufactured Components: Real-Time Force Acquisition From a Robot-Assisted Abrasive Process by Riley Ferrar; Mentor: Jose C. M. Outeiro, William States Lee College of Engineering

Abstract #317 - Education Through Storytelling in A Visit for a Week by Lucy Peacock by Hollie Rode; Mentor: Alan Rauch, College of Humanities & Earth and Social Sciences

Abstract #318 - Make ML cheaper with this one easy trick: Targeted Rank Regularisation by Ethan Nguyen; Mentor: Christian Kümmerle, College of Computing and Informatics

Abstract #319 - Characterizing *E.Coli* and *Vibrio Cholera* Proteins to determine UDP-MaNAC_A Synthesis. by Jennifer Lopez; Mentor: Manoj Dooda, College of Science

Abstract #320 - Evaluating the Adsorption and Fate of Dissolved Osmium onto Clay Minerals During Salinity Transitions Between Riverine, Brackish, and Seawater Environments by Jackson Williams; Mentor: Drew Syverson, College of Humanities & Earth and Social Sciences

Abstract #321 - A Better America?: Reflecting on The 2024 Civil Rights Trip by Andrew Bartkowiak; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #322 - Investigating if Fat-Tissue Specific Hsp90 Overexpression Delays the onset of Neurodegenerative Diseases by Bija Babb; Mentor: Patricija van Oosten-Hawle, College of Science

Abstract #323 - Automating Sustainable Design through Analysis of Scrap Metal by Will Cowan; Mentor: Mahmoud Dinar, William States Lee College of Engineering

Abstract #324 - Environmental scan of UNC Charlotte vending machines by Cheyenne Jennings; Mentor: Alicia Dahl, College of Health and Human Services

Abstract #325 - Influx of Rainwater on BDAs in a Natural Stream by Yaritza Galvez; Mentor: Sandra Clinton, College of Humanities & Earth and Social Sciences

Abstract #326 - Ghosts of the Past: How They Haunt Our Present by Tam Hawk; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #327 - Labeling kinetics of amino acids using 5-carboxyfluorescein succinimidyl ester by Chloe Tan; Mentor: Laura Casto-Bogges, College of Science

Abstract #328 - Battery Failure Mechanisms Analysis by Ryan Guthrey; Mentor: Lin Ma, William States Lee College of Engineering

Abstract #329 - Being the Light: Overcoming Fear and Control in American History by Elizabeth Abel; Mentor: Scott Gartlin, College of Humanities & Earth and Social Sciences

Abstract #330 - Assessing University Food Environments: Healthfulness, Protocols, and Nutritional Impact by Jessica Mathew; Mentor: Alicia Dahl, College of Health and Human Services

Abstract #331 - From Legacy Museum to Living Museum: Taking Lessons from a Civil Rights Trip to the Classroom by Jwantina Williams; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #332 - Determining the Regenerative Potential of Zeolite Nano Resins for Purification of Water by Adrian Rodriguez; Mentor: Jordan Poler, College of Science

Abstract #333 - Synthesis, Growth Mechanism Study, and Property Measurement of Metalloid Tellurium Nano/microstructures by William Franklin; Mentor: HaiTao Zhang, William States Lee College of Engineering

Abstract #334 - Thursday June 13th - Sunday June 16th, 2024 The South Civil Rights Trail: The Journey to Freedom by Le'Quanza Johnson; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #335 - Comparing infection of two human pancreatic cancer cell lines with vesicular stomatitis virus by Irakli Mataradze; Mentor: Valery Grdzlishvili, College of Science

Abstract #336 - Computational Methods in Renewable Energy: Wind Energy Aerodynamics by Ben Janke; Mentor: John Hall, William States Lee College of Engineering

Abstract #337 - Developing a GIS Framework for a Stormwater Pipe System in an Urban Micro-Watershed by Heather Corton; Mentor: Craig Allan, College of Humanities & Earth and Social Sciences

Abstract #338 - Imaging Poliovirus Vaccine With Scanning Electron Microscopy by Sean Campbell; Mentor: Susan Trammell, University College

Abstract #339 - An Analysis of AXI Interconnects by William Miller; Mentor: Ronald Sass, William States Lee College of Engineering

Abstract #340 - Educating an Educator by Jackie Smith; Mentor: Scott Gartlan, College of Humanities & Earth and Social Sciences

Abstract #341 - What Was I Made For: The Study of Girlhood through Time Utilizing Materiality of Books by Isabella Di Biasi; Mentor: Randi Beem, University College

Abstract #342 - Optimizing Growth and Storage of Mycetohabitans spp. by Taylor Yonemura; Mentor: Morgan Carter, College of Science

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Questions?

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