

15th Annual

State of North Carolina

Undergraduate Research and Creativity Symposium



November 23, 2019

9 a.m. to 4:30 p.m.

Location: Duke University

Hosts: Duke University




**NC School of Science and
Mathematics**

sncurcs.org

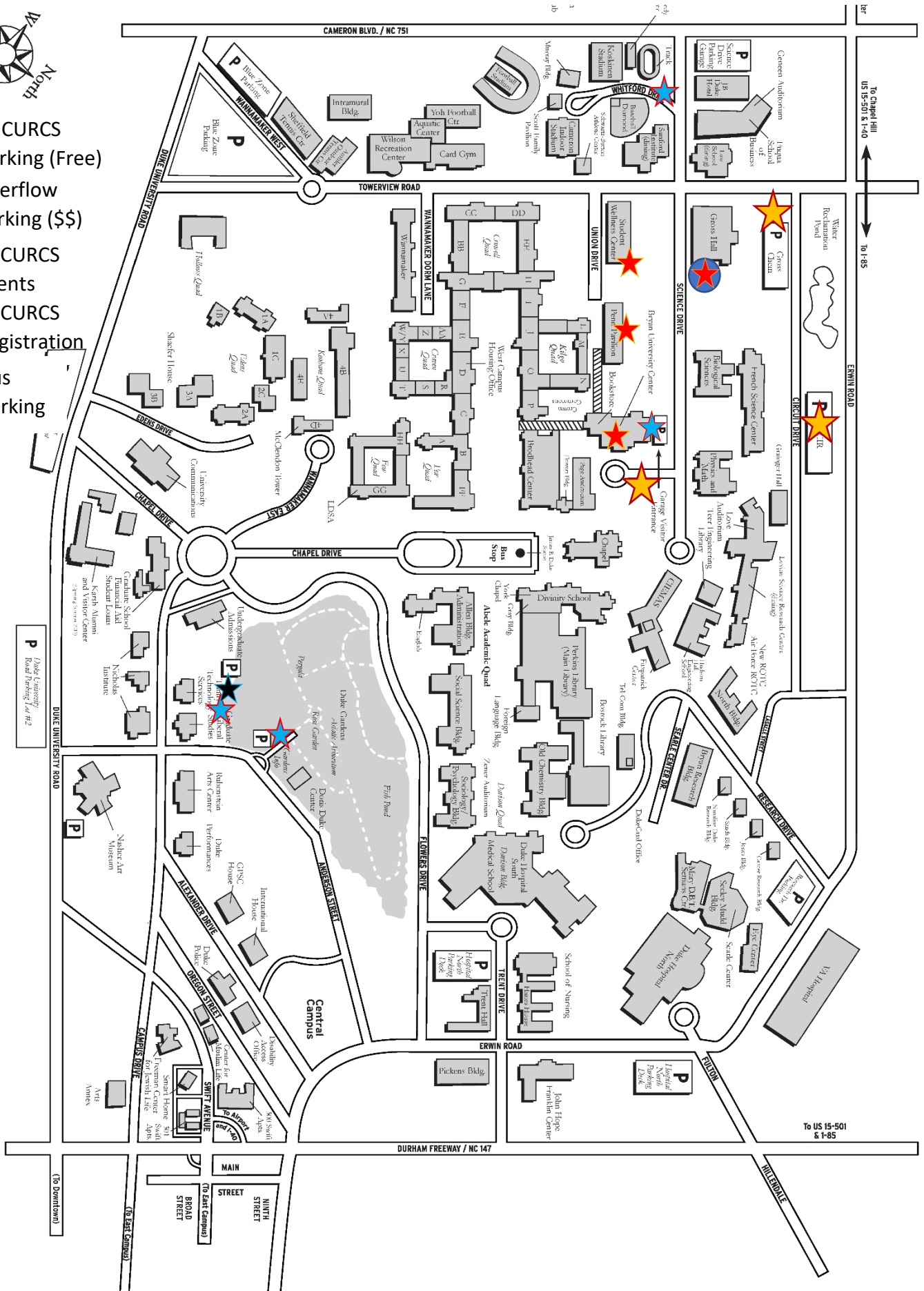
Duke West Campus Map

A SNCURCS Area map is on Page 8 of the Program



-  SNCURCS Parking (Free)
-  Overflow Parking (\$\$)
-  SNCURCS Events
-  SNCURCS Registration
-  Bus Parking

DUKE UNIVERSITY
West Campus





*State of North Carolina
Office of the Governor*

*Roy Cooper
Governor*

November 23, 2019

*20301 Mail Service Center
Raleigh, N. C. 27699-0301*

Dear Friends:

As Governor of North Carolina, I am pleased to welcome you to the 15th Annual State of North Carolina Undergraduate Research and Creativity Symposium.

North Carolina is proud to be the home of many outstanding colleges, universities and community colleges that encourage student research and creativity. This Symposium provides a great opportunity for posters, presentations, performances and art. I sincerely appreciate your hard work and dedication to your field of study.

My best wishes for continued success in all that you do in the future, and I know this will be an invaluable experience for everyone.

With warm personal regards, I am

Very truly yours,

A handwritten signature in black ink that reads "Roy Cooper".

Roy Cooper

RAC/sm

A handwritten note in black ink that reads "Thanks for your work!".



DR. J. TODD ROBERTS, CHANCELLOR

Nov. 23, 2019

Dear researchers, mentors and guests,

Welcome to Durham, and welcome to the 2019 State of North Carolina Undergraduate Research and Creativity Symposium, which North Carolina School of Science and Mathematics (NCSSM) is deeply honored to be co-hosting with Duke University.

NCSSM, headquartered here in Durham a short walk from Duke, is a unique constituent of the University of North Carolina System. We are a world-class public high school with statewide reach empowering students with the skills and knowledge to design their own future. Specializing in science, technology, engineering, and mathematics and deeply integrating the humanities and fine arts, we challenge talented high school juniors and seniors from across North Carolina through a residential program on our historic campus in Durham -- and beginning in 2021, on our second campus being built in Morganton -- as well as our dual-enrollment Online program. Our distance education courses and our summer offerings extend our impact to every corner of the state. Founded in 1980 as the first of its kind, NCSSM has become the model for 18 such specialized schools around the globe. Our 11,000-plus alumni include state and global leaders in medicine, technology, commerce, education, and the arts, a community of problem solvers who build a brighter future.

Our students have many opportunities to undertake original research, and we are proud that more than 50 of them from across our programs are presenting here at SNCURCS. We are grateful to be able to give them and all of the participating students from across North Carolina a presentation opportunity as well as the opportunity to interact with one another at this special gathering. All of us are indebted to the sponsors, faculty mentors, staff and many volunteers who have made this academic opportunity so very special -- thank you for your partnership and commitment.

Very best regards,

Todd Roberts, Ed.D.

Chancellor, North Carolina School of Science and Mathematics

Duke University
Durham
North Carolina 27708-0001

OFFICE OF THE PRESIDENT
BOX 90001

TELEPHONE (919) 684-2424
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November 23, 2019

Dear Undergraduate Researchers, Mentors, Faculty, and Guests:

On behalf of the entire Duke University community, I am delighted to welcome you to our campus. At Duke, we encourage our undergraduate students to pursue meaningful research because we know that they can make important contributions in their fields.

Duke is proud to host this year's SNCURCS in partnership with the NC School of Science and Math and to welcome more than 600 participants from over 40 NC institutions. This symposium recognizes the inquiry-based scholarship conducted by undergraduates throughout North Carolina and celebrates the dedication of mentors from higher education, industry and government. We are pleased to provide a setting where diverse students can meet, engage with, and learn from each other. Our hope is that your example will help inspire the next generation of critical researchers and problem-solvers for our communities.

I want to thank our dedicated mentors, scholars, faculty, and volunteers for supporting the hands-on experiences that build life-long learners and engaged citizens. I welcome all of you to Duke University and hope that you enjoy your time on our campus.

Sincerely,

A handwritten signature in black ink, appearing to read 'V. Price', with a stylized, flowing script.

Vincent E. Price

SNCURCS At-a-Glance Schedule: Morning

8:00 – 11:00 AM	Check-in	Gross Hall Lobby
8:00 - 10:00 AM	Light Continental Breakfast Available	Gross Hall Lobby
8:30 - 10:00 AM	Recruiter & Vendor Check-in	Bryan Center: The Landing
9:00 – 9:20 AM	Opening Session Welcome: Dr. Sarah Russell, Duke University and Dr. Sarah Shoemaker, NCSSM, SNCURCS Hosts Dr. Sheila Patek, Duke University	Gross Auditorium
10:00 AM - 4:00 PM	Graduate Recruitment and Vendor Fair	Bryan Center: The Landing
9:30 - 10:30 AM	Oral Presentations - Session 1	Gross Hall 1st and 3rd Floor
9:30 – 9:50 AM	Creative Performance - Session 1	Gross Auditorium
10:30 – 11:30 AM	Oral Presentation - Session 2	Gross Hall 1st and 3rd Floor
11:00 – 12:00 PM	Poster Presentation - Session 1	Penn Pavilion

Registered Participants can use the Duke Dining Card in your badge to eat at your convenience at Duke Dining Facilities. Please see Dining at Duke on Page 8 for more information.

SNCURCS At-a-Glance Schedule: Afternoon

10:00 AM - 4:00 PM	Graduate Recruitment and Vendor Fair	Bryan Center: The Landing
12:15 – 1:00 PM	Creative Exhibits	Bryan Center: The Landing
12:15 – 1:00 PM	Lunch. See Page 8 and 9 for details and suggestions	Bryan Center Brodhead Center
12:00 – 1:00 PM	Undergraduate Research Directors Lunch	Student Wellness Conference Room 147
1:00 – 2:00 PM	Oral Presentations - Session 3	Gross Hall, Student Wellness Center, Penn Garden Room
1:30 – 2:30 PM	Poster Presentations - Session 2	Penn Pavilion
2:30 – 3:30 PM	Oral Presentations - Session 4	Gross Hall, Student Wellness Center, Penn Garden Room
3:00– 4:00 PM	Poster Presentation – Session 3	Penn Pavilion
4:00 - 4:30 PM	Closing Session - Dr. Sarah Russell, Director, Duke Office of Undergraduate Research Support; Dr. Sarah Shoemaker, Director, NCSSM Mentorship and Research.	Gross Auditorium

Registered Participants can use the Duke Dining Card in your badge to eat at your convenience at Duke Dining Facilities. Please see Dining at Duke on Page 8 for more information.

Event Information

Information Desk. A SNCURCS information desk is available in Gross Hall lobby, Bryan Center, and Penn Pavilion.

Vendors/Recruiters. Vendors representing Graduate Schools and Employers are available in Bryan Center from 10 a.m. to 4 p.m.

Registration. Registration in Gross Hall lobby is open until 11 a.m.

Event Parking. SNCURCS provided parking is first come first serve in Chemistry Parking Lot, part of Circuit Drive Lot (accessed from Circuit Drive) and Bryan Center Parking Lot. Limited accessible parking is available in Bryan Center lot and Gross Parking lot.

Physical Accessibility. Access to Gross Chemistry Building include stairways or steep slopes. Towerview Drive provides level walkway connections between Gross Hall and other event spaces (Bryan, Penn Pavilion, Student Wellness Center). Limited accessible parking is available in Bryan Center and Gross Chemistry Parking lot. Walking distances between Gross Hall and Bryan Center/Penn Pavilion is 0.3 to 0.4 miles.

Overflow Parking. Other fee-based public parking spaces are listed at parking.duke.edu/visitor. Science Drive Visitors Lot and Science Drive garage are closest to the SNCURCS event.

Bus Drop Off. Buses can drop off on Science Drive across from the Bryan Surface/Garage lot. Bus parking is available at the Duke Gardens upper lot off Campus Drive.

Vendor/Exhibit Drop Off. Bryan Center has a circular driveway for participants or vendors needing to drop off materials at Bryan Center.

Meals. Light a la carte breakfast is provided at registration in Gross Hall. See page 8 for more details. Registered Participants will receive a Duke Dining card loaded with \$13 for lunch or snacks. You can select the food that meets their dietary needs from a variety of Duke Dining locations.

Minors. Participating high school students or other minors present are required to be chaperoned by a parent or guardian on the day of the event.

Poster Hanging. Each poster station includes pins; tape is available from the information desk.

Presentation Room Technology. Presenters should bring their presentation on a their own laptop. Please bring a connector for HDMI if you do not have a HDMI port.

WiFi Access. Instructions are printed on the back cover of the program.

Duke Campus Safety/Police. Emergency: 911 • Non-Emergency: (919) 684-2444

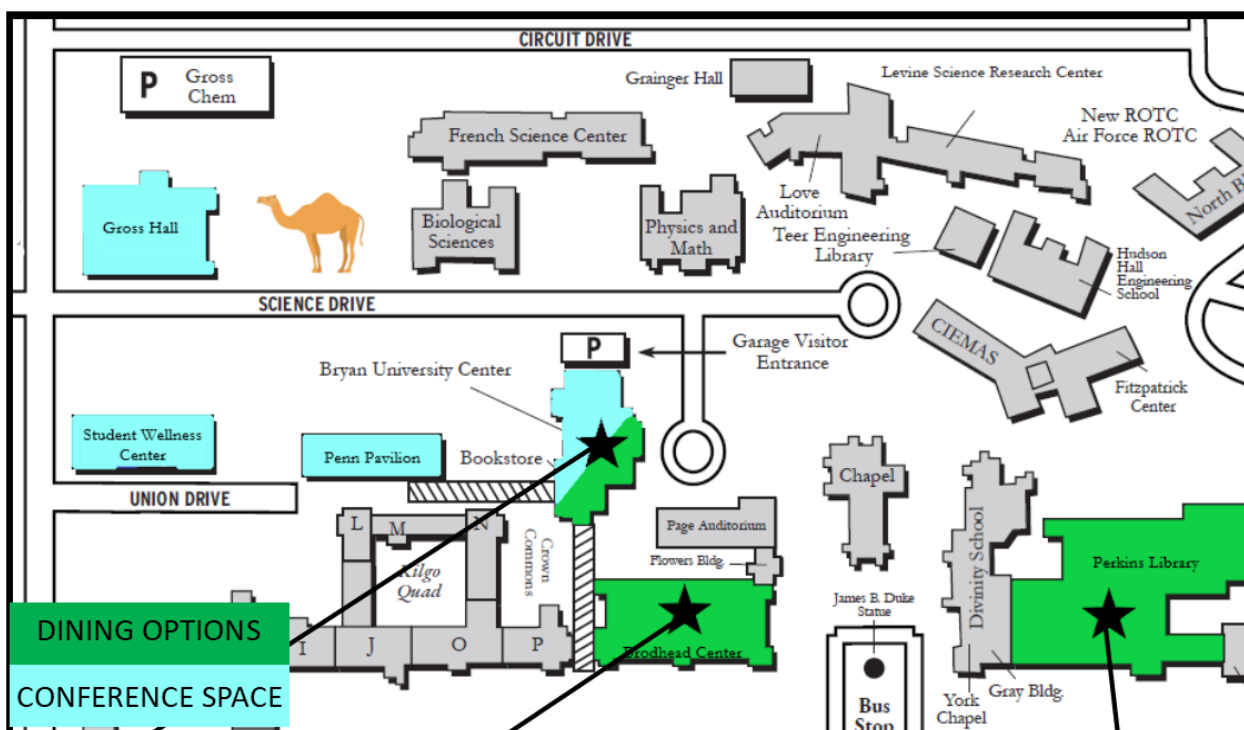
Dining at Duke



WHAT'S FOR LUNCH?

Registered participants have been provided with a Duke Card that has been pre-loaded with \$13. These cards are located within their name badges. This card may be used at any dining location on campus, at any time during the SNCURCS conference.

So, what's for lunch? You pick where! You pick when!



BRYAN CENTER
 -McDonald's
 -Panda Express
 -Loop Pizza Grill
 -Beyu Blue Coffee

BRODHEAD CENTER
 -Au Bon Pain
 (Pastries, Sandwiches)
 -CaFe
 (Crepes, Sandwiches)
 -The Devil's Krafthouse
 (American)
 -Ginger and Soy (Asian)

-Gyotaku (Asian)
 -Il Forno (Italian)
 -Sazon (Latin American)
 -Sprout (Vegan)
 -Tandor (Indian)
 -The Farmstead
 (American-Traditional)
 -The Skillet (Southern)

PERKINS LIBRARY OPTIONS
 -Saladelia Café
 (Grab and go) (Opens at noon)

SCAN HERE

For menus and other
 dining locations.



Things to See on Duke's West Campus

Duke Basketball Museum and Sports Hall of Fame

Scharf Hall. Open Monday -Saturday, 10 a.m. to 4 p.m.

Duke Chapel

Open from 8:00 a.m. to 10:00 p.m.

Duke Gardens

Open daily from 8:00 a.m. to dusk

Perkins Library Exhibitions

Senses of Venice

FOREVER HUMBOLDT - Michael and Karen Stone Family Gallery

Vaccination, 300 Years of Debate - The Josiah Charles Trent History of Medicine Room

The University Store and Gothic Bookshop

Bryan Center. Open from 9:00 a.m. to 6:00 p.m.

Map

Curious where to find these places? Utilize the Duke Campus Map associated with this QR code:



Special Sessions

Opening Session

Dr. Sheila Patek, Professor of Biology. Duke University.

The primary goal of the research in Patek laboratory is to probe the dynamic interplay between evolutionary processes and physics. Patek received her A.B. with honors in Biology from Harvard University followed by a Ph.D. in Biology from Duke University. She was then awarded a Miller Postdoctoral Fellowship at UC Berkeley. She has received several honors, including a Guggenheim Fellowship, the George A. Bartholomew Award for distinguished contributions to comparative physiology, a Radcliffe Fellowship, a NSF CAREER award, and the Brilliant 10 award from Popular Science magazine.

The Patek Lab involves high school students and undergraduate summer researchers from around the country through fellowship programs, such as the Army Educational Outreach Program. Patek regularly presents her research internationally, through both academic and public lectureships - including a mainstage TED talk. The lab's research has been featured in hundreds of media outlets, including the New York Times, National Public Radio (NPR), Canadian Broadcasting Corp (CBC), British Broadcasting Corp (BBC), National Geographic and others. www.thepateklab.org/



Closing Session

Recognition of Barthalmus Award Winners

Dr. Sarah Shoemaker of NCSSM and Dr. Sarah Russell of Duke University will thank our volunteers and recognize the Barthalmus Award Winners.

Creative Performance(s)

9:30 AM to 9:50 AM Gross Hall. **Room 107 Gross Hall**

Room	Time	Discipline	Presenter(s)	Institution	Title
107 Gross Hall	9:30 - 9:50 AM	Poetry	Otis Hunter	Chowan University	The Nothingness That Means Everything To Me

Oral Presentations

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
↓ Oral Presentation Session 1: 9:30 to 10:30 AM ↓ grouped by room locations					
100A Gross Hall	9:30 - 9:45 AM	Computer Science	Tyler Tripp, Kevin Kamto	Appalachian State University	Low Cost UFSOOK-Based OCC Link for IoT Applications
100A Gross Hall	9:50 - 10:05 AM	Computer Science	Joseph Graber	Appalachian State University	Effects of Resizing Bounding Boxes on Honey Bee Hive Traffic Analysis
100A Gross Hall	10:10 - 10:25 AM	Biomedical	Maria Henriquez	Duke University	Machine Learning Algorithms to Predict Lower Extremity Musculoskeletal Injury Risk For Student Athletes
100C Gross Hall	9:30 - 9:45 AM	Biochemistry	Venkat Vege	Duke University	Identification of Allosteric Nanobodies for the Carvedilol bound β -2 Adrenergic Receptor
100C Gross Hall	9:50 - 10:05 AM	Chemistry	Rebecca Komer	North Carolina State University	Regulating fiber diameters and mechanical properties using unconfined melt electrospinning
100C Gross Hall	10:10 - 10:25 AM	Chemistry	O. Ryan Durando	North Carolina School of Science and Math	Post-Synthetic Amine Modification of Metal-Organic Framework UiO-66-NH ₂ to Enhance the Adsorptive Capture of NO ₂ From the Atmosphere

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
103 Gross Hall	9:30 - 9:45 AM	Political	Shirley Garrett	High Point University	How Do African-American Millennials View Race-Based Affirmative Action in Higher Education?
103 Gross Hall	9:50 - 10:05 AM	Political	Jordan Thomas	North Carolina Central University	The Ongoing Genocide of Blacks in America.
103 Gross Hall	10:10 - 10:25 AM	Political	Akelo Agingu	North Carolina Central University	The Failure of Communism in the Soviet Union
105 Gross Hall	9:30 - 9:45 AM	Psychology	Jingxuan Liu	Duke University	Socio-emotional Predictors of Classroom Success in a Large, Lecture-Based Introductory Psychology Course
105 Gross Hall	9:50 - 10:05 AM	Psychology	Timothy Crowell	Greensboro College	Hollywood Therapy: The Portrayal of Mental Health Professionals in American Film from 2010 to 2017
105 Gross Hall	10:10 - 10:25 AM	Psychology	Emily Lewis	Greensboro College	Connections between Perfectionism and School Anxiety
107 Gross Hall	9:30 - 9:45 AM	Creative Performance. See page 11.			
111 Gross Hall	9:30 - 9:45 AM	Anthropology	Michael Bell	University of North Carolina at Greensboro	Cycladic Beekeeping in Context: Ceramic Beehives on the Island of Kea
111 Gross Hall	9:50 - 10:05 AM	Art History	Kerry Rork	Duke University	Women in Art History: Representation and Characterization
111 Gross Hall	10:10 - 10:25 AM	History	Morgan Dunham	High Point University	What was Excluded: Defining the Crime of Genocide in the modern world
304B Gross Hall	9:30 - 9:45 AM	Health Sciences & Public Health	Jackie Lanning	North Carolina State University	Understanding Chronic Disease Data for Women: Race, Representation, and Reliable Differences
304B Gross Hall	9:50 - 10:05 AM	Health	Manasa Tandri, Naveen Vridhachalam, Ashwin Gadiraju	North Carolina School of Science and Math	Correlation between arterial stiffness and aerobic fitness in adolescent boys and girls

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
304B Gross Hall	10:10 - 10:25 AM	Health Sciences & Public Health	Samuel Goldstein	University of North Carolina at Chapel Hill	Sleep Health and Psychological Distress: A Nationally Representative Study of the United States
318 Gross Hall	9:30 - 9:45 AM	Biology	Christopher Nguyen	North Carolina School of Science and Math	Using Vitamin C to Reduce Oxidative Stress from Doxorubicin Chemotherapeutic Treatment
318 Gross Hall	9:50 - 10:05 AM	Health	Zaira Jacome, Zabdiel Escalona, Carlos Corona, Brenda Montanez	Johnson C. Smith University	Tracking prevalence of resistance markers for the antimalarial treatment sulphadoxine-pyrimethamine.
318 Gross Hall	10:10 - 10:25 AM	Biology	Bailey Lankford	Summer Ventures in Science & Math- UNCC	Impacts of Spectracide® on the Photosynthesis of Egeria densa and the Surrounding Concentrations of Dissolved Oxygen
324 Gross Hall	9:30 - 9:45 AM	Biology	Barbara Teague	Meredith College	Crayfish and their microscopic critters: crayfish symbiont response to invasion within the Chetco River System southwestern Oregon
324 Gross Hall	9:50 - 10:05 AM	Biology	Jamie Cochran	North Carolina State University	Assessing the concept and thermal sensitivity of the Pcrit in the mayfly N. triangulifer
324 Gross Hall	10:10 - 10:25 AM	Biology	Lindsey Kinsella	Duke University	Behavior and Management Strategies of Red Colobus Monkeys (Piliocolobus kirkii) in Jozani-Chwaka Bay National Park, Zanzibar
330 Gross Hall	9:30 - 9:45 AM	Cell	Kayla Snare	University of North Carolina at Chapel Hill	Inhibition of WEE1 and ERK causes synergistic inhibition of pancreatic cancer growth
330 Gross Hall	9:50 - 10:05 AM	Cell	Taylor Nguyen	North Carolina School of Science and Math	Investigating the Relationship Between Histone Variants and Their Canonical Counterparts
330 Gross Hall	10:10 - 10:25 AM	Biology	Megan Zhao	Duke University	Inhibition of NUA2 induces lipotoxicity in prostate cancer cells in vitro
355 Gross Hall	9:30 - 9:45 AM	Cellular	Andrew Bahhouth	North Carolina School of Science and Math	The Impact of Optogenetics on Interval Timing and Action Initiation in Mice

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
355 Gross Hall	9:50 - 10:05 AM	Biochemistry	Suraj Rao	North Carolina School of Science and Math	Computational Analysis of Nonpeptide Small Molecules as Potent Inhibitors of Insulin-like Growth Factor Binding Protein 3
355 Gross Hall	10:10 - 10:25 AM	Ecology	Mattie Frazier	North Carolina State University	Effects of Biochar on Soil Enzyme Activities Associated with Carbon, Nitrogen, Phosphorus and Sulfur Mineralization
↓ Oral Presentation Session 2: 10:30 AM to 11:30 AM ↓ grouped by room locations					
100A Gross Hall	10:30 - 10:45 AM	Environmental	Alberto Borges	Catawba College	Athi River Expedition
100A Gross Hall	10:50 - 11:05 AM	Environmental	Joy Ward, Bridget Mielke, Sara Linton, Joseph Hines, Georgia DaCruz	Queens University of Charlotte	Monitoring Urban Lands Using UAV imagery in Charlotte, NC: A Pilot Study
100A Gross Hall	11:10 - 11:25 AM	Sustainability	Aurora Figueroa-Benetti	Appalachian State University	The Storm is Not Over: Food Insecurity in Puerto Rico Pre- & Post- Hurricane Maria
100C Gross Hall	10:30 - 10:45 AM	Computer	Ethan Wacker	Central Piedmont Community College	Secure Chat Room
100C Gross Hall	10:50 - 11:05 AM	Computer	David Han, Harrison Hess	Summer Ventures in Science & Math-AppState	Effectiveness of Using Machine Learning to Model Google's Website Rankings
100C Gross Hall	11:10 - 11:25 AM	Mathematics	Kimberly Mays	Gaston College	Season-long betting line efficiency in college football
103 Gross Hall	10:30 - 10:45 AM	Biomedical	Parker Sexton	Summer Ventures in Science & Math-ECU	Haptic Biofeedback: Improving the Accessible, 3D Printed Prosthetic Hand
103 Gross Hall	10:50 - 11:05 AM	Chemistry	Jessica Cui	North Carolina School of Science and Math	Core-Shell Structured Metallic Nanoparticles for Use in Dye-Sensitized Solar Cells

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
103 Gross Hall	11:10 – 11:25 AM	Environmental	Jackson Reckord	East Carolina University	Fourth Industrial Revolution and its Impact on Hazardous Waste Management.
105 Gross Hall	10:30 - 10:45 AM	Psychology	William Guiler	East Carolina University	Koru Mindfulness: Effects on Psychological Symptomatology and Mechanisms of Action
105 Gross Hall	10:50 – 11:05 AM	Psychology	Macie Eury	Pfeiffer University	Empathy and Political Ideology
105 Gross Hall	11:10 – 11:25 AM	Psychology	Jenna Curia	Meredith College	A Qualitative, Cross-Cultural Analysis of Gender and Identity within Religious Workspaces
111 Gross Hall	10:30 - 10:45 AM	Chemistry	James Fleming	Appalachian State University	EVALUATION OF TRACE ELEMENTS LEVELS IN COMMERCIALLY AVAILABLE KRATOM POWDER AND TEA IN NORTH CAROLINA USING ICP- OES
111 Gross Hall	10:50 – 11:05 AM	Chemistry	Alexis Turturici	North Carolina School of Science and Math	Modification of Polymeric Carbon Nitride Films for Increased Photoelectric Density
111 Gross Hall	11:10 – 11:25 AM		Open Slot		
304B Gross Hall	10:30 - 10:45 AM	Chemistry	Ashley White, Caroline Vieregge	University of North Carolina at Asheville	Glucuronidation of Mono(n- butyl)phthalate by UGT Isoenzymes and Potential Inhibition by Naproxen
304B Gross Hall	10:50 – 11:05 AM	Microbiology	Rachel Kramer	University of North Carolina at Wilmington	Fusidic Acid Resistance in Staphylococcus aureus Isolated from Healthy Carriers
304B Gross Hall	11:10 – 11:25 AM	Chemistry	Emma Steude	North Carolina School of Science and Math	Synthesis of a Tau Aggregation Inhibitor in Relation to Alzheimer's Disease
318 Gross Hall	10:30 - 10:45 AM	Health	Michael Schwartz, Sydney Dyer	Summer Ventures in Science & Math- UNCW	Differences in Physical Activity of Young North Carolinians Based on Perceived Versus Objective Neighborhood Walkability

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
318 Gross Hall	10:50 – 11:05 AM	Biology	Briany Santos-Villalobos	Central Piedmont Community College	Using Antimicrobial Filters to Reduce the Number of Bacteria Dispersed by Public Hand Dryers
318 Gross Hall	11:10 – 11:25 AM	Health	Matthew Arnold, Kasey McLamb, Kimberly Smith	Catawba College	Identification of Physiological Factors Associated with the ManU Fitness Test in Female Collegiate Soccer Players
324 Gross Hall	10:30 - 10:45 AM	Behavioral	Angelique Gouin	Chowan University	Intervention Strategies for Alcohol Use Disorder Tested in Rhesus Monkeys
324 Gross Hall	10:50 – 11:05 AM	Biology	Christine Mariskanish	University of North Carolina at Asheville	Genetic Assessment of Sochan (<i>Rudbeckia laciniata</i>) to Ensure Sustainable Harvest in National Parks
324 Gross Hall	11:10 – 11:25 AM	Anthropology	Michelle Lamas-Niño	Summer Ventures in Science & Math-ECU	Soil Analysis and Archaeology: Insights from the Pitt County Poor House
330 Gross Hall	10:30 - 10:45 AM	Biochemistry	Allison Tran, Kirill Afonin	University of North Carolina at Charlotte	Broccoli Fluorets: Split Aptamers as a User-Friendly Fluorescent Toolkit for Dynamic RNA Nanotechnology
330 Gross Hall	10:50 – 11:05 AM	Biology	Taylor Crawford	University of North Carolina at Greensboro	Molecular Effects of the Herbicide, Glyphosate, on Human Osteoblast Cells
330 Gross Hall	11:10 – 11:25 AM	Biology	Matthew Congiusta	North Carolina School of Science and Math	Plant Heat Stress Response: Investigating DNA Methylation through frg1/2 mutants of <i>Arabidopsis thaliana</i>
355 Gross Hall	10:30 - 10:45 AM	Dance	Vrinda Desai	North Carolina School of Science and Math	At Radha's Hips: The Exploration of Erotica, Sexualization, and Seductionism in Indian Dance Forms
355 Gross Hall	10:50 – 11:05 AM	Visual Arts	Tia Kuhns	University of North Carolina at Asheville	Cuteness: Countering the Objectification of an Aesthetic
355 Gross Hall	11:10 – 11:25 AM	Linguistics	Ryan Kennedy	Chowan University	Busted Etymology

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
<p style="text-align: center;">↓ Oral Presentation Session 3: 1:00 PM to 2:00 PM ↓ grouped by room locations</p>					
100A Gross Hall	1:00-1:15 PM	Environmental Studies and Sciences	Eleanor King	Catawba College	Bridging the Gap Between People and Parks: A Case Study of Ankarafantsika National Park
100A Gross Hall	1:20 - 1:35 PM	Environmental	Keegen Williams	Catawba College	Effects of Fire on Forest Cover in Ankarafantsika National Park, Madagascar
100A Gross Hall	1:40 – 1:55 PM	Ecology	Leonora Lee, Eli Fried, Jalyssa Hobbs	Summer Ventures in Science & Math-AppState	An Assessment of Water Chemistry and Macroinvertebrate Biodiversity at Ore Knob: EPA Superfund Project's Impact
100C Gross Hall	1:00-1:15 PM	Engineering	Timothy Redford	University of North Carolina at Charlotte	A benchmark study of using visual attention allocation to enhance adaptive image compression
100C Gross Hall	1:20 - 1:35 PM	Computer	Eli Handwerk	University of North Carolina at Chapel Hill	Ultrasound Ventricle Strain Analysis
100C Gross Hall	1:40 – 1:55 PM	Physics	Jose Cruz	Central Piedmont Community College	Track Selection In Drift Chambers Using Convolutional Neural Networks
103 Gross Hall	1:00-1:15 PM	Sociology	Katelin Smith	Appalachian State University	Exploring why women use #metoo to share personal experiences of sexual assault: a qualitative descriptive study
103 Gross Hall	1:20 - 1:35 PM	Linguistics and World Languages	Kayla Gates	Chowan University	The Evolution of the Word Justice
103 Gross Hall	1:40 – 1:55 PM	Criminology	Chasity Frazier	North Carolina Central University	Is there a Resurgences of Youth Gangs?
105 Gross Hall	1:00-1:15 PM	Psychology	Hannah Dean	Pfeiffer University	Is privilege fair? The relationship between belief in a just world and perception of privilege
105 Gross Hall	1:20 - 1:35 PM	Psychology	Madeline Rees	University of North Carolina at Greensboro	Factors Controlling the Mechanisms of Eating Behavior in Mammals

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
105 Gross Hall	1:40 – 1:55 PM	Psychology	Angel Koon	Pfeiffer University	The Effect Of Tempo on Recall Memory
107 Gross Hall	1:00-1:15 PM	Chemistry	Madison Houck	North Carolina School of Science and Math	Sesamol as a Novel Redox Mediator for the Electrochemical Separation of Carbon Dioxide from Flue Gas
107 Gross Hall	1:20 - 1:35 PM	Physics	Christopher Knotek, Akash Mullick	North Carolina School of Science and Math, Carrboro High School	Determining the recombination rates and mobility of photoexcited charge carriers in 2D transition metal dichalcogenides
107 Gross Hall	1:40 – 1:55 PM	Chemistry	Kirk John Arcena	University of North Carolina at Charlotte	First Telone Complexes of Silver and Mercury
111 Gross Hall	1:00-1:15 PM	History	Chasen Jeffries	High Point University	Spartan Austerity and Bribery
111 Gross Hall	1:20 - 1:35 PM	Literature	Tyler Maynard	Chowan University	The development of rock and roll as a music genre
111 Gross Hall	1:40 – 1:55 PM	Art History	Taylor Robinson	Queens University of Charlotte	Discrepancies in Hysteria: A Comparative Analysis of Depictions of 'Acute Hysteria' in British Women from 1838 to 1912
304B Gross Hall	1:00-1:15 PM	Biology	Akshra Paimagam	North Carolina School of Science and Math	Effect of Prolactin on Expression of Calcium Regulatory Genes in Porcine Kidneys
304B Gross Hall	1:20 - 1:35 PM	Health	M. Okonkwo	University of North Carolina at Charlotte	Estimating the Number of Adults with PrEP Indications in Mecklenburg County
304B Gross Hall	1:40 – 1:55 PM	Biology	Evan Steele	North Carolina School of Science and Math	Examining the Efficacy of a Bombyx mori Diabetic Model with Dietary Fiber
318 Gross Hall	1:00-1:15 PM	Biology	Aryeh Miller	University of North Carolina at Asheville	Phylogenomic Species Delimitation of West Indian Iguanas
318 Gross Hall	1:20 - 1:35 PM	Biology	Skadi Kylander	Chowan University	Breeding and Nesting Habits of Prothonotary Warblers in Hertford County and Dare County, North Carolina

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
318 Gross Hall	1:40 – 1:55 PM	Biology	Alden Carr	University of North Carolina at Wilmington	DEVELOPING A NOVEL METHODOLOGICAL APPROACH TO MAINTAIN SELECTIVE PRESSURE IN ANTIBIOTIC- PRODUCING SOIL MICROBES
324 Gross Hall	1:00- 1:15 PM	Biology	Cheryl Thomas	Chowan University	AQUEOUS EXPOSURE TO PLANT STEROID, BETA- SITOSTEROL, MASCULINIZES FEMALE GAMBUSIA HOLBROOKI
324 Gross Hall	1:20 - 1:35 PM	Biology	Katherine Reeves	North Carolina School of Science and Math	The Effect of Passionflower and Edelfosine on Apoptosis in <i>C. elegans</i>
324 Gross Hall	1:40 – 1:55 PM	Biochemistry	Nguyen Truong	University of North Carolina at Charlotte	Toll-Like Receptor-Mediated Recognition of Nucleic Acid Nanoparticles (NANPs) in Human Primary Blood Cells
330 Gross Hall	1:00- 1:15 PM	Ecology	Angelica Joshi, Annika Wells	Summer Ventures in Science & Math- UNCW	Removal of Marine Microplastics Using Various Polymers in a Ferrofluid
330 Gross Hall	1:20 - 1:35 PM	Biology	Riko Ramos	University of North Carolina at Pembroke	Study on Growth and Expressed Extracellular & Intracellular Proteins of <i>Photobacterium luminescens</i> in a 2L Bioreactor using different Carbohydrates
330 Gross Hall	1:40 – 1:55 PM	Biology	Preeti Nagalamadaka	North Carolina School of Science and Math	Synergistic Effects of Plant- Derived Hormones on Biofilm Formation in <i>Vibrio harveyi</i>
355 Gross Hall	1:00- 1:15 PM	Communications	Shane Berthoud	High Point University	Ceol: The Autism Spectrum Through Game Design
355 Gross Hall	1:20 - 1:35 PM	Communications	Treshim Johnson, Justin Reid, Chad Norfleet, Chukwuemeka Manning Jr, Olivia Andrews	North Carolina Central University	Street Legend to Social Advocate: Clifford "T.I." Harris
355 Gross Hall	1:40 – 1:55 PM	Communications	Kayla Johnson, Lamel Batts	North Carolina Central University	The Intellectual Soul Food Buffet: Curriculum Developed By Students for Students
147 Wellness Center	1:00- 1:15 PM	Economics	Pratyush Seshadri	North Carolina School of Science and Math	An Analysis of Global Economic Indicators

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
147 Wellness Center	1:20 - 1:35 PM	Computer Science	Gabriel Arellano	Appalachian State University	Estimating the ratio of drones to worker bees in a honey bee hive
147 Wellness Center	1:40 – 1:55 PM	Computer	Federico Borrego Higareda	Catawba College	Institutional Research and Effectiveness: Beginning College Survey of Student Engagement Analysis with SAS Studio
148 Wellness Center	1:00-1:15 PM	Linguistics	David Joyner	Chowan University	This is Awesome
148 Wellness Center	1:20 - 1:35 PM	Literature	Tah-Va'Nee Joseph-Burton	Chowan University	Poetry of World War 1: Changing Attitudes
148 Wellness Center	1:40 – 1:55 PM	Education	Breauna Johnson	Chowan University	The History Behind The Racial Word Spic
Penn Garden Room	1:00-1:15 PM	Religious	Jacob Lancaster	High Point University	The Importance of Formation in a Narrative: An Examination of NeoAristotelian Ethics and Its Correction of Kant
Penn Garden Room	1:20 - 1:35 PM	Education	Hannah Ficklin	University of North Carolina at Greensboro	Abstract
Penn Garden Room	1:40 – 1:55 PM	Religious	Caleb Cooke	Duke University	An Analysis of the Relationship Between John and the Synoptic Gospels Through Percival Gardner-Smith
↓ Oral Presentation Session 4: 2:30 PM to 3:30 PM ↓ grouped by room locations					
100A Gross Hall	2:30 - 2:45 PM	Environmental	Maya Hoon	North Carolina State University	Terrestrial Gastropods Accumulate Mercury in a St. Lawrence River Wetland
100A Gross Hall	2:50 - 3:05 PM	Environmental	Jillian Kuroolvech	Catawba College	Reptiles Disproportionally Fall Victim to Roadkill in Ankarafantsika National Park, Madagascar
100A Gross Hall	3:10 - 3:25 PM	Environmental Studies and Sciences	Dalia Segal-Miller	North Carolina School of Science and Math	Consequences of Heat Stress and Zinc Oxide Nanoparticle Exposure on Growth and Development of Manduca sexta Larvae

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
100C Gross Hall	2:30 - 2:45 PM	Chemistry	Payton Downey	North Carolina School of Science and Math	Nitrogen-doped Graphene Quantum Dots for Increased CO2 Reduction Efficiency and Hydrocarbon Selectivity
100C Gross Hall	2:50 - 3:05 PM	Mechanical	Jennifer Ye	North Carolina School of Science and Math	Acoustic hydrodynamic tweezers via spatial superposition of vortexes
100C Gross Hall	3:10 - 3:25 PM	Engineering	Owen VanRiper	East Carolina University	Alternate Energy Substitution Dynamics Using a Generalized Logistic Growth Model
103 Gross Hall	2:30 - 2:45 PM	History	Robert Klink	North Carolina School of Science and Math	Birth of the Cigarette Smoker: White Consumerism and Segregated Taste
103 Gross Hall	2:50 - 3:05 PM	Women,Gender	Lennon Lupton	North Carolina School of Science and Math	The Genealogy of Abortion Bans and Anti-feminist Rhetoric in the United States
103 Gross Hall	3:10 - 3:25 PM	Psychology	Brianna White	Pfeiffer University	Is There A Correlation Between Height and Temperament?
105 Gross Hall	2:30 - 2:45 PM	History	Caleb Kualii	Belmont Abbey College	The 20th of July Plot: Resistance and the Question of Divided Loyalty
105 Gross Hall	2:50 - 3:05 PM	Literature	Emily Lange	Elon University	"I'm Not Done. Not Yet": The Interplay of Gender and Age in Linda Nagata's "The Martian Obelisk"
105 Gross Hall	3:10 - 3:25 PM	Literature	Raegan Thomas	High Point University	Deconstructing the Peter Pan/Captain Hook Binary
107 Gross Hall	2:30 - 2:45 PM	Chemistry	Grace Deng	North Carolina School of Science and Math	Metal Organic Framework/Polyethylene Glycol-Coated Graphene Quantum Dots Used for Synergistic Chemo- and Photothermal Therapy
107 Gross Hall	2:50 - 3:05 PM	Chemistry	Ramkishore Annachi	North Carolina School of Science and Math	Photocatalytic Semiconductive Metal Oxides in Chitosan Membranes for Photodegradation of Toxic Dyes
107 Gross Hall	3:10 - 3:25 PM	Chemistry	Martha Garcia Cervantes	North Carolina Central University	Controlled synthesis and transfer of Ti ₃ C ₂ T _x MXene nanosheets with SERS performance

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
111 Gross Hall	2:30 - 2:45 PM	Political	Megan Bird	University of North Carolina at Charlotte	The Impact of Female Legislators on the Use of Torture
111 Gross Hall	2:50 - 3:05 PM	Psychology	Michelle Wong	Duke University	Metaphors to Teach and Learn by: Metaphorical Lay Theories in Education and Implications for Student Behaviors
Open slot	3:10 - 3:25 PM				
304B Gross Hall	2:30 - 2:45 PM	Biochemistry	Rachel Qu	North Carolina School of Science and Math	Modeling the effect of chemically modified non-antibiotic tetracyclines with β -amyloid fibrils to treat Alzheimer's Disease
304B Gross Hall	2:50 - 3:05 PM	Sociology	Tineshalee Rosado	University of North Carolina at Pembroke	Young women's attitudes towards hospital and out-of-hospital births
304B Gross Hall	3:10 - 3:25 PM	Physiology	Ashwin Gadiraju	Summer Ventures in Science & Math-AppState	Correlation between arterial stiffness and aerobic fitness in adolescent boys and girls
318 Gross Hall	2:30 - 2:45 PM	Biology	Macayla Upright	Catawba College	Subspecies status of a disjunct population of Black-throated Green Warbler (<i>Setophaga virens</i>)
318 Gross Hall	2:50 - 3:05 PM	Ecology and Organismal Biology	Haley Gambill	North Carolina State University	Do White grunt aggregations show positive density dependence?
318 Gross Hall	3:10 - 3:25 PM	Ecology	Laylah Welch	High Point University	A Survey of Parasites in the <i>Marmota monax</i> of Eastern North Carolina
324 Gross Hall	2:30 - 2:45 PM	Cell	Camille Campbell	North Carolina School of Science and Math	Genetic Modification of <i>Escherichia coli</i> with the Gene <i>alkB2</i> to Replicate <i>Alcanivorax borkumensis</i> Oil Degradation
324 Gross Hall	2:50 - 3:05 PM	Biology	Kasey Kiser	North Carolina School of Science and Math	Bacterial inhibition using ant-derived microbes
324 Gross Hall	3:10 - 3:25 PM	Biochemistry	Andrea Palos-Jasso	University of Mount Olive	Using Tumor-Suppressant α -TOS to Modify Expression of Electron Transport Chain Complexes

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
330 Gross Hall	2:30 - 2:45 PM	Cell	Ariba Huda	North Carolina School of Science and Math	Small Molecule Activation of Wnt/ β -Catenin Signaling Pathway on Neurodegeneration Rates of Dopaminergic Neurons in <i>C. elegans</i>
330 Gross Hall	2:50 - 3:05 PM	Biochemistry	Elayna Lei	North Carolina School of Science and Math	Polysaccharides from <i>Ganoderma lucidum</i> as Novel Antibacterial and Antibiofilm Agents Against the Growth of <i>Escherichia coli</i>
330 Gross Hall	3:10 - 3:25 PM	Biochemistry	Peter Robbins	Campbell University	Stereoselective synthesis of non-natural products by thiamine diphosphate-dependent enzymes
355 Gross Hall	2:30 - 2:45 PM	Communications	Dallas Clemons, Nia Tillery, Qasim Rashada, Jaylan Graham	North Carolina Central University	From the Black Buck to Barbecue Becky: An Examination of Media-Driven Stereotypes and the Policing of the Black Body
355 Gross Hall	2:50 - 3:05 PM	Communications	Kia Bennett, Maya Bell, Colby Gibson, Marika Daniel	North Carolina Central University	The Impact of BOT Generated News of 2016 Election in Retrospect to the Black Vote.
355 Gross Hall	3:10 - 3:25 PM	Communications	Malcolm Beamon, KeShaun Coleman, Christopher Amadasun	North Carolina Central University	Chicken Sandwich Mania: A Case Study of Crowdsourcing and Social Media Campaign
147 Wellness Center	2:30 - 2:45 PM	Physics	Riley McKeough	University of North Carolina at Charlotte	Investigating the Distribution of Trehalose and Water in LAD Processed Samples Using Confocal Raman Spectroscopy
147 Wellness Center	2:50 - 3:05 PM	Physics	Parsa Zareiesfandabadi	North Carolina State University	Laser Ablation of Microtubules in Fission Yeast Mitotic Spindles
147 Wellness Center	3:10 - 3:25 PM	Mathematics	Ijay Narang, Harrison Orlando	Summer Ventures in Science & Math-UNCW	Forecasting Stock Close Values and Generating Investment Strategies with a Mathematical Model
148 Wellness Center	2:30 - 2:45 PM	Linguistics	Zion Greene	Chowan University	The Transformation of the Word Boob
148 Wellness Center	2:50 - 3:05 PM	Linguistics	Ginger Jordan	Chowan University	History of Cool

Room	Time	Discipline	Presenter(s)	Institution	Abstract Title
148 Wellness Center	3:10 - 3:25 PM	Literature	Mackenzie Taggart	Chowan University	Don't "Date" Yourself
Penn Garden Room	2:30 - 2:45 PM	Mathematics	Harrison Ershadi, Zachary Lucas	Summer Ventures in Science & Math- UNCC	An Analysis of the Growing Empire of Amazon
Penn Garden Room	2:50 - 3:05 PM	Economics	Benjamin Thornburg, Terence Rollins	University of North Carolina at Greensboro	Estimating Joint and Single State Utilities in Alcohol Use Disorders
Penn Garden Room	3:10 - 3:25 PM	Mathematics	Dhruv Kaushal, Pranay Jain, Caleb Marsh	North Carolina School of Science and Math	Is College Worth it? A Closer Look at the Economic Payoffs of the Top 100 Universities in the United States

Poster Presentations

Poster Number	Presenter Name and Co-Presenter	Institution	Title
Session 1 Poster Presentation: 11:00 AM - 12:00 PM Penn Pavilion			
S1-1	Gina Giorgio	High Point University	The Correlation between Openness, Cognitive Flexibility, and Fluid Intelligence
S1-2	Alexis Tennant, Miranda Hoisington	Meredith College	Impact of School Dress Codes on Adolescent Identity Development
S1-3	Betsabe Graciela, Rojas Gonzalez	University of North Carolina at Charlotte	Investigating How Undocumented Immigrants Report and Pursue Legal Action for Domestic Violence
S1-4	Abigail Coffey	University of North Carolina at Charlotte	The Food Justice Project: Assessing the needs of food insecure Latinx individuals
S1-5	Mary Cooper	Western Carolina University	Researching Food Insecurity in the Jackson County, NC Area
S1-6	Irene Kuriakose	Queens University of Charlotte	The Isolation and Annotation of Bacteriophages "MCubed" and "Nucci"
S1-7	Hannah Styers	North Carolina State University	Extracellular Availability of Lactate and Glucose Scales with Electrical Stimulation of the Dopaminergic Midbrain
S1-8	Kolby Altabet	North Carolina State University	Richness and Composition of Bird Species along a Residential Gradient in Wake County, North Carolina
S1-9	Emma Frye, Elise Witwer, Amaron Craig, Samantha Lew, Emily Heier	Appalachian State University	THE EFFECTS OF INCREASED BODY WEIGHT ON CENTRAL AND PERIPHERAL BLOOD PRESSURES AND ARTERIAL STIFFNESS
S1-10	Rohit Ghotkar	North Carolina State University	Identification of Cyfip2 in the larval zebrafish acoustic startle circuit
S1-11	Hannah Coalson, Naimi Pothiwala	East Carolina University	Forced differentiation in HL-60 cells increases mitochondrial spare reserve capacity.
S1-12	Haley Hudson	Catawba College	Do today's young adults actually understand or care about climate science?
S1-13	Emma Halstead	Catawba College	Amphibians as Indicator Species on the Preserve

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-14	Mackenzie Martin	Catawba College	Recent Non-Native Arrival and Turtle Diversity in a Small NC Piedmont Ecological Preserve
S1-15	Nina MacKinnon	Catawba College	Socioecological disparities across a North Carolina campus community
S1-16	Jessica Kronz	North Carolina State University	An Analysis of Age-at-Death within the Promtin Tai Bioarchaeological Skeletal Collections
S1-17	Kyle Hoffpauir, Nathan Markle, Cameron Meadows	High Point University	Measuring Effectiveness of Dynamic Honeypots
S1-18	Sophie Troyer	University of North Carolina at Chapel Hill	Molecular and Mucin-Binding Characteristics of Innate Lung Protein LPLUNC1
S1-19	Christina Carilli	High Point University	Impact of a multidisciplinary educational training program (OverdosED) on knowledge and perceptions of depressant substance use on a college campus
S1-20	Nithya Sampath	North Carolina School of Science and Math	Differences in Reliability and Predictability of Harvested Energy from Battery-less Intermittently Powered Systems
S1-21	Sarah Bradshaw	East Carolina University	Sex Differences in the Resolution of Ozone Induced Lung Injury and Inflammation
S1-22	Caitlin Cassidy	North Carolina State University	Preliminary Association Between PFAS and Self-Reported Hypothyroid Disease in The GenX Exposure Study
S1-23	Nicolas Morales-Gagnon	North Carolina State University	Water-Borne Photodynamic Antimicrobial Polymeric Coatings
S1-24	Marjan Shahani, Naya Kayali	University of North Carolina at Charlotte	Synthesis and Characterization of New Silver Thione Complexes
S1-25	David Murray	East Carolina University	Development of unnatural tryptophan sidechains to study biological PCET
S1-26	Queonnah Coleman	Fayetteville State University	Gender Analysis of Higher Education in North Africa and the Middle East From 1920-2018
S1-27	Peter Engler, Stefanie Kraack	Queens University of Charlotte	Quantitative Analysis of the Relationship Between the Production of National Football League Wide Receivers and Their Pre-Draft Data
S1-28	Brennan Simon	Duke University	Identifying ABL-Dependent Transcriptional Networks in Lung Cancer Brain Metastasis

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-29	Caroline Lillie	Central Piedmont Community College	Survey of pet owners' perception of using cannabidiol (CBD) as alternative therapy for pets
S1-30	Oscar Chinchilla Lopez	Central Piedmont Community College	A Newly Developed 3D-Printed Resource For Facial Bone Trauma Reconstruction
S1-31	Alexandra Chan	Duke University	Rethinking the "Model Minority": Gender Differences in Asian American Student's Communication Styles
S1-32	Maria Kalogeromitros	University of North Carolina at Charlotte	Silver Thione Compounds with Potential Anticancer Activity
S1-33	Eric Carmichael	North Carolina A&T State University	Human Behavior: Using Technology to Design Efficient Living Environment for People with Visual Impairments
S1-34	Maxine Green, Cara Avery, Amanda Price	Meredith College	Using Echolocation to Determine Factors which Influence Bat Activity
S1-35	Tulsi Patel	North Carolina School of Science and Math	Comparison of the Immunogenicity of Bovine and Porcine Heparin
S1-36	Hunter Hipp	Catawba College	How Seasonal Flood Plains Effect The White-Tail Deer Population
S1-37	Matthew Pujals	Catawba College	Fish Species Diversity
S1-38	Harmony Mason	Catawba College	Bioaccumulation of mercury in fish stocks from the Catawba College campus
S1-39	Brenden Westbrook	Catawba College	Foraging Change depending on Water Levels
S1-40	Monika Mori	North Carolina State University	Explaining Retention After the First Year of New College Freshmen using Social Factors
S1-41	Natalie Watkins	North Carolina State University	Inactivation of Tulane Virus via Ultraviolet C Hand Sanitizing Device
S1-42	Jaime Calcagno	Chowan University	Snow Leopard High Altitude Adaptation

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-43	Yutika Aggarwal	North Carolina School of Science and Math	Perception Vs. Reality: Psychology and the Media and Their Effects on People's Understanding
S1-44	Giovanny Espinoza	Catawba College	Occupancy Analysis of Madagascar Carnivores
S1-45	Samantha Smith	Meredith College	Effectiveness of Insecticide Treated Nets in Preventing Malaria in Sub-Saharan Africa
S1-46	Kyle Benjamin Lorenzo, Bryan Worters, Erin Crowell, Ansley Jewell, Amber-Rose Charles	North Carolina State University	Evaluation of Children's Forgiveness in Response to Social Exclusion in Intergroup Context
S1-47	Jack Werner	North Carolina State University	Expeditionary Logistics Analysis for Decision Support
S1-48	Michael Lee	Duke University	Type-I Interferon signaling is a critical regulator of pain
S1-49	James Emerson, Robert Paynter, Eduardo Santana, Ahmad Odeh	North Carolina State University	Identification, localization, and quantification of TYLCV in Solanum lycopersicum variety Lanai
S1-50	Gargi Damle	North Carolina State University	Identifying candidate genes for trophic level adaptation in the African cichlid gut
S1-51	Paige Huguely	University of North Carolina at Chapel Hill	Examining the Association Between Increases in Parent Responsiveness and Improvements in Child Social Communication
S1-52	Alison Plumley	North Carolina State University	Evaluating the Feasibility of Inter-cropping Industrial Hemp in Loblolly Pine Plantations
S1-53	Amanda Andriessen	Duke University	The DNA sensor STING is a critical regulator of chronic pain and neuroinflammation
S1-54	Viktoriya Anissimova	Triangle Math and Science Academy	Grit, Resilience, and Perseverance among High Achieving High School Students: A Longitudinal Analysis of Constructs
S1-55	Julian Quintero, Caleb Barber, Quichawna Bryant, Alyssa King	East Carolina University	Acoustic Transmission Loss in Complex Outdoor Environments
S1-56	Laney Branch	Appalachian State University	Creating interiors to promote physical and mental health and readiness for civilian life for active duty and veteran servicewomen of the U.S. military

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-57	Matthew Slaughter	North Carolina State University	Modeling Health Impacts of O3 and PM2.5 using the BenMAP-CE Tool Under Future Climate and Emission Change Scenarios
S1-58	Isaiah Sanders	Chowan University	Characterizing Candidate Loci for Local Adaptation in Speckled Trout (<i>Cynoscion nebulosus</i>) Populations along the U.S. East Coast
S1-59	Patrick Hughes	North Carolina State University	Rapid Production of Fibers Using Film Electrospinning
S1-60	Madeline Anderson	North Carolina State University	Shifts in Arctic Microplankton Community Structure and Abundance
S1-61	Jailyn Smith	North Carolina Central University	Detection of Circulating Tumor Cells as They Correlate to the Extracellular Matrix of Triple Negative Breast Cancer Tumors
S1-62	Asia Brannon	University of North Carolina at Greensboro	Diagnostic Utility of CSF WBC Components in Identifying Neonatal Bacterial Meningitis
S1-63	Andrea Badillo-Perez	University of North Carolina at Charlotte	Effects of Perceived Stress Reactivity and Health Locus of Control on Reward Based Eating Drives
S1-64	Samantha Cothorn	North Carolina State University	Coquerel's sifakas (<i>Propithecus coquereli</i>) responses to a novel vs familiar person
S1-65	Ruthie Stokes, Soumya Bodavula	North Carolina Central University	Injectable Thermoresponsive Hydrogel Degradation Study
S1-66	LaMiah Tysinger	North Carolina A&T State University	Measurement of Working Memory Capability of People with Visual Impairments
S1-67	Jacob Dunn	High Point University	Cannabidiol (CBD) does not protect against an invitro model of hypoxia in rat neuronal cells
S1-68	Frances Brown	Appalachian State University	Heat Regulated Sample Chamber to Maintain Optimal Thermal Conditions for Cell Microscopy and Measurement
S1-69	Loujain Al Samara	North Carolina State University	Implications of Marble Burying Tests as a method to examine effects of developmental exposure to flame retardant components on Wistar rat behavior
S1-70	Ajah Haskell, Charmaine Randolph	University of North Carolina at Greensboro	"There Are Five Greensboros": Assessing Community Assets, Vulnerabilities, and Violence in Greensboro, North Carolina

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-71	Donovan Peterson, Dorian Miller, Brenna Pearson, Rishika Patel	Western Piedmont Community College	Comparison of Microbial Communities in Kombucha Tea and Black Tea
S1-72	Zane Frazier, Zach Reynolds	Appalachian State University	A novel Eu3+ complex as a dual sensor to detect V-type and G-type nerve agents
S1-73	Elizabeth Van Gorder	University of North Carolina at Chapel Hill	Oxidative Stress and Apoptosis in Neural Crest Cells: Implications for Bosma Arhinia Microphthalmia Syndrome
S1-74	Samantha Peterman	Duke University	Who's Better? Mom or Dad: Investigating the Impact of Parental Child-Directed Speech on Language Development
S1-75	Jordan Greene	Appalachian State University	Integration of NASA Micro-pulsed Lidar Network data products into the world-class NASA and NOAA aerosol datasets at Appalachian State University
S1-76	Judith Owens	Duke University	Toward the Development of a Membrane Protein Extraction Protocol for Energetics- and Mass Spectrometry-Based Methods for Protein Target Discovery
S1-77	Christopher Escobedo, Calloway Morgan	Western Carolina University	Nanoparticle Toxicity in HEK-293 Cell Lines
S1-78	Amber Pospistle	North Carolina School of Science and Math	Impact of the D1 Dopamine Receptor on Zebrafish Social Hierarchy and Motor Circuits
S1-79	Sade Ford	North Carolina A&T State University	Detection of the gene encoding programmed cell death-1 (PD-1) in cow genomic DNA isolated from FTA cards
S1-80	Samuel Guy	Appalachian State University	The Development of a Sensing System to Measure the Hydrolysis of B-lactam Antibiotics
S1-81	Polina Cherkez	University of North Carolina at Chapel Hill	Methods of Endocytic Entry Utilized by GCCNP
S1-82	Forrest Ward	Appalachian State University	Measurements of the Humidity Dependence of Atmospheric Aerosol Light Scattering from a Background SE U.S. Site
S1-83	McKayla Robinette	Brevard College	Bridging the Information Gap Between Beginning and Experienced Farmers

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-84	Sara Halstead	North Carolina State University	Captive Ring-tailed Lemur (<i>Lemur catta</i>) Vocalizations When Separated from Group
S1-85	Anjali Kumari	North Carolina A&T State University	Development of a Time-efficient and Cost-effective Luminescence Assay to Measure the Relative Activity of Protein Kinases
S1-86	Hongjian Yang	North Carolina State University	Quick Detection of Ineffective Student Behavior during Test
S1-87	Melika Osareh	University of North Carolina at Greensboro	Analysis of Gravitropism in <i>Arabidopsis thaliana</i> Plants
S1-88	Shuyun Xiao	Duke University	The role of extended amygdala neurons in mammalian vocalization
S1-89	Chloe Emehel	North Carolina School of Science and Math	Analyzing the Effects of Depression on the Severity of Chemobrain in Breast Cancer Survivors
S1-90	Carlin Ashford	Fayetteville State University	Energy Transfer in PFO: MEH-PPV polymer blends
S1-91	Megan Frick	Campbell University	Correlation of Wellness and Countermovement Jump in Collegiate Lacrosse Players
S1-92	Ravonda Taylor	North Carolina Central University	The Association between self-esteem and the type of sexual relationships one was involved in during adolescent and before marriage.
S1-93	Sara Willis	University of North Carolina at Wilmington	Innovative Culture Methods for Isolating Antibiotic-Producing Bacteria from Unique Environments in Southeastern North Carolina
S1-94	Jacob Skigen	North Carolina State University	Evaluation of Maximum Moments Generated about the Knee During Standing Squats for Cybathlon 2020 Competition
S1-95	Ankita Nandi	North Carolina School of Science and Math	Tunable Multifunctional Rooftop Radiative Heating and Cooling for Building Efficiency
S1-96	Alexandra Ingman	University of North Carolina at Wilmington	Identification of Triclosan Resistance Mechanisms in <i>Staphylococcus aureus</i> Isolated from Healthy Carriers
S1-97	Jayla Watson	Guilford Technical Community College	Stem Cell Therapy

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-98	Brandon Renteria-Rios	Guilford Technical Community College	Plastic in OUR Roads: Does it Work?
S1-99	Alexandra McCourt	University of North Carolina at Greensboro	#ChangeTheRhetoric: How Writing Centers Can Advocate Against Racist Rhetoric and Impact Outreach
S1-100	Lauryn Bethea	North Carolina A&T State University	Examining Dietary Patterns to Reduce Cognitive Decline
S1-101	Aditya Santoki	Duke University	How Does Loss of Huntingtin Lead to Striatal Neuron Cell Death?
S1-102	Lily Kovasckitz	North Carolina School of Science and Math	The Impacts of Racism and Sexism on Psychiatric Care in North Carolina Institutions in the 19th and 20th Centuries
S1-103	Abdul-khaliq Abdul-matin, Quincy McDuffie, Felix Harris	North Carolina State University	Developing 3D models as visual aids for visually impaired STEM students
S1-104	Cindy Zhu	North Carolina School of Science and Math	Emotional Processing and Working memory in Schizophrenia with Neutral and Negative stimulus: A fMRI study
S1-105	Aylin Duruman, Claudia Pollex, Anjella Poblete, Henry Scripps	North Carolina State University	Evaluation of the Check, Connect, and Respect Mentoring Program
S1-106	John Payne	Pfeiffer University	The Smithsonian: The Man, the Development, and the Importance
S1-107	Katherine Walker, Sarah Talton	North Carolina State University	Literature Review on the Effectiveness of VR Training for Laparoscopic Surgery
S1-108	Declan Cambey	North Carolina School of Science and Math	Designing and Fabricating a Novel Composite Material Artificial Muscle
S1-109	Caroline Brooks	Catawba College	Clinicians' Understanding of Health Information Technology
S1-110	Hannah Phykitt, Gabbi Montgomery	Queens University of Charlotte	Synthesis of Novel Benzyl Ammonium Ionic Liquids from Guaiacol

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S1-111	Sarah Brown	Catawba College	Legal and Professional Considerations of Athletic Trainers Using Health Information Technology
S1-112	Adrian Pavone, Khalaeb Richardson	North Carolina State University	Comparing Task Performance Between Audio and Text Instructions
S1-113	Forrest Myers	Appalachian State University	Optical trapping of varying numbers of gold nanoshells
S1-114	Cami Czejdó	University of North Carolina at Chapel Hill	A Deep Contextual Representation for Medical Case Studies
S1-115	Jordain Muller	Western Carolina University	Test of pH on the Phosphoglucose Isomerase Protein of Staphylococcus aureus, Francisella tularensis, and Vibrio cholerae
S1-116	Arianna Muller	Brevard College	Water quality in the tributaries of the French Broad River, North Carolina affecting the presence/ absence of Cryptobranchus alleganiensis.
S1-117	Dara Case, Hannah Bailey	Western Carolina University	Keratin Affects on Autophagy Vesicle Initiation in Nutrient Starved Human Embryonic Kidney Cells
S1-118	Tera Banks	Elizabeth City State University	Using Physiological Feedback Loops to Help Subjects Relax Before Psycho-Physiological Experiments
Session 2 Poster Presentation: 1:30 PM - 2:30 PM Penn Pavilion			
S2-1	Kimberly Savage	University of North Carolina at Charlotte	Government Sponsored Housing Rehabilitation in Historic Washington Heights
S2-2	Kaijone' Martinez	Barton College	Hemagglutinating Properties of Lipids
S2-3	Robert Wood	University of North Carolina at Charlotte	Crisis for the University Student: Changing Rents and Growing Campuses
S2-4	Aidan Lytle	University of North Carolina at Greensboro	Understanding Discrete Mathematical Methods for Non-Flow Analysis in Heavy Ion Collision
S2-5	Demetria Murphy	Fayetteville State University	Attitude, Perception and Knowledge Regarding prison Reform and the Systematic Design of Rehabilitation Among Social Work, Criminal justice, Sociology

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-6	Nayelli Guadarrama, Jordan Wright	Central Piedmont Community College	Green Materials
S2-7	Felix Steinruecke	Duke University	Regulation of SLC7A11 (System xCT) by Tyrosine Kinases
S2-8	Kate Butler	North Carolina State University	Attitudinal and Experiential Predictors of Proactive Coping
S2-9	Ross Huneycutt	Catawba College	Ducks and Decoys
S2-10	Natalie Kudlacz	Catawba College	Tracking the movement of the American toad Relative to the Global temperature
S2-11	Isobel Verbrugge	Catawba College	Human Impact on Soil Bacteria Biodiversity on Campus
S2-12	Katie Brown	Catawba College	Mineral Filtration by Water Filter Brands and Types
S2-13	Willow Gatewood	Catawba College	Levels of Methyl-mercury in Fish of the Dan River
S2-14	Wyatt Byrd	Catawba College	pH of Natural and Municipal Water Supplies in a Small North Carolina Piedmont Town
S2-15	Riley Tucker	Catawba College	Comparative distribution and abundance of squirrel nesting sites between large and small protected areas in the North Carolina Piedmont
S2-16	Andrea Wilson	Fayetteville State University	Characterization of Polymer Composites Fibers Using Biological Cellulose with Banana Slurry Feedstock
S2-17	Shaniqua Moore	Fayetteville State University	Exploring student's Self-Identity and Self-Awareness through Art-Making
S2-18	Nikhil Milind	North Carolina State University	Transcriptomic Meta-Analysis of Lung Response in the Collaborative Cross
S2-19	Marieli Roman	Barton College	Generation of Electricity From Wastewater Using Microbial Fuel Cells
S2-20	Cailin Warner	Montreat College	Ecology of an Insular Population of American Alligators on Seabrook Island, SC
S2-21	Michael Tran	Duke University	Elucidating the role of host Aquaporin-3 during apicomplexan infection
S2-22	Samuel Jones	Appalachian State University	Antimicrobial effect of UV-A irradiated gallic acid against biogenic amine producer <i>Lactobacillus hilgardii</i>

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-23	Yasemin Ozbek, Cooper Brooks	North Carolina State University	Investigating the Effects of Growth Conditions & Post Growth Treatment on Titanium Oxide to Tune the Structural Properties to Induce Superconductivity
S2-24	Annika Sharma	Duke University	Oxytocin's behavioral role and neuroanatomical correlates in monogamous and promiscuous Eulemur
S2-25	Bridget Pittman	North Carolina Central University	THE RELATIONSHIP BETWEEN GRADE POINT AVERAGE, BODY IMAGE, AND SELF-ESTEEM AMONG AFRICAN AMERICAN COLLEGE WOMEN
S2-26	Layla Rashad	Fayetteville State University	Peptide Binding Predictions Using Gaussian Process Regression, Linear Regression, and Support Vector Regression
S2-27	Kyle Fahey	North Carolina State University	Characterizing the Impact of Combined Sucrose and Iron Stress on Arabidopsis wrky21 Mutants
S2-28	Tyler Sprouse, Coby Hall, Haley Minier, Noah Murray, Jesus Moreno	Gaston College	Isolation and identification of environmental bacteria and hazards in the Catawba river basin
S2-29	Emanuel Barrera	University of North Carolina at Greensboro	Counting the Montagnards? Descriptive findings of the Montagnard Population Count Project
S2-30	Ja'Quasha Holloway	Central Piedmont Community College	Building a Functional Data Center: My Financial Buddy
S2-31	Roosevelt Pitts	Central Piedmont Community College	Building a Residential Dwelling
S2-32	Jennifer Williams	Fayetteville State University	The Psychological Effects of Minor Children with Incarcerated Parents
S2-33	David Luzader	North Carolina Central University	An Analysis of Straight-Line Boundaries and Conflict in the Mideast Region.
S2-34	Sherman Thomas	Catawba College	Roadkill in Ankarafantsika National Park, Madagascar
S2-35	Kareem Harrison	Pfeiffer University	To return or keep it, that is the question

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-36	Betsy Barron	Central Piedmont Community College	Efficacy of Flea Preventatives in Canines
S2-37	Amira Carter-Cyrus	Catawba College	Are Science Majors More Sustainable Than Other Majors?
S2-38	Adam Morrison	Catawba College	Turbidity in natural water supplies of the Fred Stanback Ecological Preserve
S2-39	Sandra Abbey	Catawba College	Effect of Proximity to Urban Environment on Mercury Levels in Grants Creek, Rowan County, North Carolina
S2-40	Sawyer Lyons	High Point University	The neuroprotective potential of Cannabidiol in an in vitro model of peroxidase injury
S2-41	Jack Suggs	North Carolina School of Science and Math	Impacts of Flooding on Wilson Creek at the Edgemont Fishing Club in the Southern Appalachians
S2-42	Claudia Sandoval	North Carolina School of Science and Math	Gulf of Mexico Ecosystem Service Logic Models & Socio-Economic Indicators
S2-43	Vince Varju	North Carolina State University	Analysis and Influence of Embedded Temperature Sensors on Thermal Profiles and Comfort on a Garment Platform
S2-44	Neena Robinson	Central Piedmont Community College	How evidence such as latent fingerprints, shoe prints, blood spatter and ink chromatography can help solve crimes?
S2-45	Thomas Albanese, Mariah Mook, Natalie Bell, Liam Pyle	East Carolina University	The Threshold of Human Hearing in Complex Outdoor Environments
S2-46	Jasmine Barnes	Meredith College	Examining the relationship between Gender, Belongingness, and Loneliness in Adolescents
S2-47	Tatianna Taylor	North Carolina Central University	Effects of BPA and its Analogues on ER α 36 Regulation of Mitochondria-Specific and Mitochondria-Related Gene Expression in Human Uterine Fibroid Cells
S2-48	Danielle Curran	North Carolina State University	Endosperm-Based Hybrid Inviability in Mimulus plants
S2-49	Jonathan Netherton	Brevard College	Physical properties in the tributaries of the French Broad, North Carolina affecting the presents/absence of <i>Cryptobranchus Alleganiensis</i>

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-50	Daphne Duckworth	North Carolina State University	Pancreatic Amylase Enzyme Activity in a Cichlid Fish That Segregates Two amy2 Alleles
S2-51	Meghana Mettu	North Carolina State University	Misperceptions of Age: A Proposed Pathway for Racial Bias in the Classroom
S2-52	Adam Clodfelter	University of North Carolina at Charlotte	Roles for the Sea Anemone Microbiome in Determining Behavioral Rhythmicity
S2-53	Kamara Culbreath	University of North Carolina at Greensboro	Composition and orbits of stars and gas in a tidally disrupted starburst galaxy
S2-54	Saathvik Boompelli	North Carolina School of Science and Math	A Telemetric Gait Analysis Insole and Mobile App to Track Postoperative Fracture Rehabilitation of Remote Patients via Polymer-Thick Film Sensors
S2-55	Abigail Ware	East Carolina University	Examining Types of Abuse as Risk Factors for Postpartum Depression
S2-56	Andy Dai, Cole Vulpis	North Carolina School of Science and Math	Dynamical Models on the Introduction of Malaria-Resistant Mosquitoes
S2-57	Mashal Ali	Duke University	Is it Storytime Yet?: Socialization Priorities between Black and White Mothers through Storytelling
S2-58	Annie Li	North Carolina School of Science and Math	Exploring low density lipoprotein receptor-related protein 1 (LRP1) levels in the brain after traumatic brain injury
S2-59	Claire Featherstone	Catawba College	The effects of BPA and BPA derivatives on <i>Daphnia pulex</i>
S2-60	Kiera Brusso, Spencer Rhodes	Western Carolina University	Method Testing of Cell Recovery from Oxidative Stress in Conjunction with Keratin Dosing
S2-61	Ana Ratanaphruks	North Carolina State University	Get a Grip: Creating Soft Robotic Grippers via Self-folding by Infrared Activation
S2-62	Stephanie Story	North Carolina State University	Responses of captive aye-aye lemurs (<i>Daubentonia madagascariensis</i>) to a blue object suggest nocturnal color vision
S2-63	Elaina Savage	North Carolina State University	Differences in Bold Personality Traits between Captive Male and Female Coquerel's Sifakas (<i>Propithecus coquereli</i>)

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-64	Furkan Kose	North Carolina State University	Electromechanical Optimization of Printable Circuit Boards for Textile-Electronic Applications
S2-65	Nailah Anderson, Tofunmi Olaleye, Brittney Hopkins	Wingate University	Great Expectations?: Personal Expectations and Perceived Parental Expectations as Predictors of Anxiety and Stress among Adolescent Girls
S2-66	Taylor Warnock, Kyle Gorczynski	Appalachian State University	Laser Tweezer Raman Spectroscopy (LTRS)
S2-67	Imani Anderson	North Carolina A&T State University	Identifying galectin-3 variants in the genome of sheep, goats, and cows
S2-68	Kyle Gorczynski, Taylor Warnock	Appalachian State University	Laser Tweezer Raman Spectroscopy (LTRS) System
S2-69	Meredith Welch, Hannah Elvington, Shreya Simha	Meredith College	Environmental Drivers of Infectious Disease Emergence in Brazil 2007-2017
S2-70	John Kihm	North Carolina State University	The effects of stress on emotional perception: Anger bias and implicit racial bias
S2-71	Taylor Hendrickson	Johnson C. Smith University	"I am a very neat monster": Depiction of a serial killer- Dexter Season One
S2-72	Laura Federline	North Carolina State University	Data Visualization Techniques for Communicating Long-Term Trends of Diabetes
S2-73	Audrey Cardwell	Brevard College	A preliminary study of Honey bees choices in food quality and path efficiency
S2-74	Virginia Brown	North Carolina State University	Evaluation of Chemical and Filtration Methods on Reducing Bacterial DNA Contamination Present in Pseudoperonospora cubensis DNA Extractions
S2-75	Brian Cox, Sofia Campuzano, Joshua Beane	University of North Carolina at Wilmington	Crystal structure of phosphoethanolamine methyltransferase from Eimeria tenella
S2-76	Chynna Teixeira	Johnson C. Smith University	Learning about sickle cell disease (SCD): A thematic analysis of popular SCD websites
S2-77	Anushka Deshmukh	North Carolina School of Science and Math	Modulating microparticle in microporous annealed particle (MAP) scaffolds

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-78	Jeremy Brown	Guilford College	Combined Ultrasonic/Antibiotic Treatment for Removal of Established, Complex Biofilms From Medical Implant Plastics
S2-79	Renata Ruiz Rabadan, Nicolas Arduh	North Carolina A&T State University	Food Consumption in Relationship with Family Type
S2-80	Kyle Kimbro, Dane Wagner	Western Carolina University	Small Group Socialization: The Key to Successful Group Projects?
S2-81	Megan Brickner	University of North Carolina at Chapel Hill	The Effect of Intra-NAc Administered D-Serine on the Inhibition of Cocaine Reinstatement
S2-82	Jessica Smith	North Carolina A&T State University	Differential Direct Microscopic Somatic Cell Counts in milk from dairy cows and St Croix Sheep
S2-83	Evan Shook	North Carolina State University	The Status Quo of Flow: AUTOMATION OF MICROFLUIDIC FLOW REACTORS FOR THE CHARACTERIZATION OF ORGANIC SYNTHESIS
S2-84	Abigail Cordiner	North Carolina State University	Development of an In Vitro Model for Extravillous Trophoblast Invasion Over a Gradient
S2-85	Joella Knopf	North Carolina State University	Size and Orientation of Porcine Menisci Vary with Sex and Age During Skeletal Growth
S2-86	Sabina Morgan	North Carolina Central University	Protein Structure Based Drug Discovery for Human Melatonin Receptors
S2-87	Aran Garnett-Deakin, Rachel Fuqua	University of North Carolina at Greensboro	Violence, Trauma, and Transition to Fatherhood: Examining How Community and Police Violence Informs Fathering for Young Black Men
S2-88	Sarah Sandate	Catawba College	Competene Levels in Novice Athletic Trainers when Using Health Information Technology
S2-89	Stephen Walser	High Point University	Updates from the EREBOS Project: the First Deeply-Eclipsing Hot Subdwarf Binary
S2-90	Elise Lyght	University of North Carolina at Charlotte	Integrating Human Rights Education into K-12 Classrooms
S2-91	Anastasia Kondrasov	North Carolina Central University	Are people with Mental Illness more likely to be Subjected to Crime and does this Contribute to the Ongoing Mass Incarceration and Recidivism Rates ?

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-92	Nicolas Arduh, Renata Ruiz Rabadan	North Carolina A&T State University	Income and Food Consumption Patterns
S2-93	Benjamin Huan	North Carolina School of Science and Math	Verifying the Safety of Alternative Forms of Bovine Heparin
S2-94	Kimia Bell	North Carolina Central University	Mental Health Disparities among Juveniles in the US Justice System
S2-95	Foluwa Agbebi, Hamza Ishaque, Emma Noonan	North Carolina School of Science and Math	Synthesis of Human γ D R36S Crystallin for Studying Congenital Cataracts
S2-96	Coty Bumgarner	Gaston College	Bone Density in Young Adults
S2-97	Abby Kluttz	Catawba College	Prairie Restoration and Bird Population Recovery
S2-98	Carmen Allison	North Carolina School of Science and Math	Testing a Portable Muon Detector and Determining Muon Flux
S2-99	Kayla Alston	North Carolina A&T State University	Effect of Exogenous Recombinant Galectins on Total Plasma Protein Concentration in Cow Blood
S2-100	Jasmine Flowers	North Carolina A&T State University	Holistic Cognitive Reserve Index (HCRI), Measuring Cognitive Reserve in African American Adults
S2-101	Margaret Monaco	North Carolina State University	Fabrication of a Bioresorbable Flexible Chemotherapeutic Drug-Releasing Textile Mesh
S2-102	Paloma Rodney	Duke University	Political History of Prisons: The Architecture of People in Raleigh's Central Penitentiary
S2-103	Gailyn Minchew	North Carolina Wesleyan College	Variability of <i>Eurycea guttolineata</i> (Three-lined Salamanders)
S2-104	Christina Rodriguez	Fayetteville State University	Improving Flood Prediction by Information Fusing
S2-105	Hailey Wallace	North Carolina State University	Characterizing DTT-induced BSA aggregate intermediates by atomic force microscopy.

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S2-106	Samantha Poppenfuse	East Carolina University	Analysis of Methadone and EDDP for Neonatal Exposure in utero using Liquid Chromatography/Mass Spectrometry
S2-107	Nicole Hall	Catawba College	Delimiting of Cryptic Species in the Anopheles crucians Complex in Salisbury, North Carolina
S2-108	Madeline Tripp	East Carolina University	Farm to Clinic: Connecting the Gap Between Food Waste and Food Insecurity in Eastern NC
S2-109	Shannon Houser	Duke University	The Effects of LRRK2 in Cell Cycle Regulation
S2-110	Aleah Hayes	High Point University	Women Politicians Social Media Influence
S2-111	Tonya McClendon	North Carolina A&T State University	Aggie Access Redesign
Session 3 Poster Presentation: 3:00 PM - 4:00 PM Penn Pavilion			
S3-1	Gabrielle Keaton	University of North Carolina at Charlotte	Conditions Responsible for Periods of Low Visibility along the West Coast of Greenland
S3-2	Daniel Amparo, Arunabh Saikia	North Carolina State University	Forest Interception of Airborne Ammonia/Ammonium From Hog Waste Lagoons in Eastern North Carolina
S3-3	Madison Harkay	Barton College	Synthesize of Biodiesel Fuel Through Cooking Oils
S3-4	Alyssa Oldham	Pfeiffer University	Sex Differences in Perceptions of Sexual Harassment
S3-5	Caroline Roddey	Davidson College	"Year(s) of the Woman": Gender Performance in Gender-Salient Election Years
S3-6	Rose Wang	North Carolina School of Science and Math	Race and Income Disparities in Pollution's Effect on Respiratory Disease Severity Using Aggregate ICEES Data
S3-7	Daniel Haller	North Carolina State University	Autonomous Inducible Directed Evolution for Complex Pathways
S3-8	Erin Elminowski	North Carolina State University	The Howl of Rancho La Brea
S3-9	Brooke Andrews	East Carolina University	Documentation of drug abuse in the family or household of children admitted to the hospital for non-accidental trauma

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-10	Kyle Donnelly	Catawba College	Morphological and Genetic Distinctions between Three Subspecies of Ring-Tailed Mongoose (<i>Galidia elegans</i>) from Madagascar
S3-11	Nico Scharinger	Catawba College	Morphological Differences of Feral and Domestic Cats in Madagascar
S3-12	Rachel Bentley	Catawba College	Croaks and Creeks: The Effect of pH Level on Anuran Amphibian Species
S3-13	Gunnar Hester	Catawba College	Lima Beans Don't Grow on Mars: The Effect of Mixtures of Topsoil and Pseudo-Martian Soil on <i>Phaseolus lunatus</i>
S3-14	Halden Levin	North Carolina School of Science and Math	Single and Multiple Talker Acoustic Variation in Relation to Object Presence
S3-15	Marcus McMurray	Catawba College	Parallels between climate-related opinion and behavior
S3-16	Brittany Doss	Fayetteville State University	African American Fathers' Perceptions of Fatherhood
S3-17	Maudeline Clervoix-Frank	Fayetteville State University	Effectiveness of Online Career Intervention on Psychology Students' Resume-Building
S3-18	Marviene Fulton	University of North Carolina at Charlotte	Joint Effects of Sense of Control, Job Control, and Dispositional Mindfulness as Relating to Work Engagement
S3-19	Princess Thompson	Middle College at UNCG	Possible Methods to Make Cost-Effective Algae Bio-fuel vs Low Cost Petroleum-Based Fuel
S3-20	Hanan Ali	North Carolina Central University	Uncovering Key Biomarker representative of Metabolic Syndrome's Disparate Health Outcomes using Machine Learning and Data Mining
S3-21	Stepan Malkov	North Carolina School of Science and Math	Canonical Principal Component Analysis of Stock Returns for Robust Risk Factor Identification
S3-22	Daniel Matute	Gaston College	Tiny Earth (TE) and Antibiotic Resistance
S3-23	Heather Mosesso, James Golden	East Carolina University	Post-Occupancy Evaluation on East Carolina University's Main Campus Student Center
S3-24	Yesh Doctor	Duke University	CRISPR-Cas9 Based Tools for Targeted Histone Modifications

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-25	Benjamin Armentrout	North Carolina School of Science and Math	Developing a Portable Detector for Background Radiation Measurement
S3-26	Kyra Holley	North Carolina Central University	Synthesis of Arene Tricarbonyl Chromium Complexes for "Subtle" Functionalization of Graphene
S3-27	Mackenzie Wheeler	East Carolina University	Mechanical Failure of Human Fetal Membrane Tissues in Premature Birth
S3-28	Valorie Chasten	North Carolina A&T State University	Developing a Screening System to Identifying Efficient Inhibitors of the Choline Kinase of Streptococcus pneumoniae
S3-29	Julianne Reas	North Carolina State University	Developing and Evaluating a Camera-trap Method for Visitor Use Monitoring in the Galapagos Islands
S3-30	Yasmine Zefri	University of North Carolina at Chapel Hill	Detecting Double Nuclei in Galaxies Using Convolutional Neural Networks
S3-31	Samuel Fox	North Carolina State University	Postural Control Strategies on Surfaces of Different Compliance: Implications for Unilateral Trans-Tibial Amputees
S3-32	Lia Phillips	Appalachian State University	Spectroscopic Characterization of Functionalized Graphene Nanoplatelets
S3-33	Laura Lowe	Chowan University	catching the Perfect Snowflake
S3-34	Faith Tucker	Catawba College	Fertilizers in Water Bodies on Catawba's Ecological Preserve
S3-35	Mihir Patel	Duke University	Spreading HoPE: Helping patients and families access information about hospice through a web-based app
S3-36	Kaitlyn Osworth	Catawba College	Do Invasive Bradford Pear (Pyrus calleryana) Impact The Composition of Secondary Growth Floodplain Forest within the Fred Stanback Ecological Prese
S3-37	Claudia Alvarado	North Carolina State University	A Closer Look at the Supply Chain of Engineered Tissue Fabrication
S3-38	Marcus Bailey	Catawba College	Native Wildlife Responses to a Meleagris gallopavo Decoy on the Stanback Ecological Preserve, Salisbury, North Carolina
S3-39	Jasmine Howard	North Carolina Central University	Analyzing Achievement Performance in First-Year African-American Students

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-40	Ryan Winz	North Carolina State University	Readiness Versus Cost Tradeoffs for Additive Manufacturing Within a Spare Part Supply Chain
S3-41	Briley Humphrey	North Carolina State University	Introducing Infrared Spectroscopy Using a Physical Model and Guided Inquiry Approach
S3-42	Jose Lora Pena	Central Piedmont Community College	The SPD19 Solar Powered Drone
S3-43	Aakriti Lakshmanan	University of North Carolina at Charlotte	First mercury and silver complexes of a bulky heterocyclic thione ligand
S3-44	Le'Hendria Phillips	North Carolina A&T State University	Observations on Dairy management practices and the need for cybersecurity
S3-45	Jasmine Kelly	University of North Carolina at Pembroke	Importance of Eastern Hemlock in Acadian Flycatcher Home Range Use
S3-46	Aishwarya Balaji	William G. Enloe Magnet High School	Adsorption of Acetic Acid on Commercial Activated Carbon
S3-47	Sydney Goertzen, Brooke Freeman	Catawba College	Investigating the Effect of JUUL Pod Extracts on Human Oral Microbiota
S3-48	Ketty Bai	Duke University	Study of the development and aging of the brain through metabolic, inflammation and quality control pathways
S3-49	Loren Johnson, Noah Leesnitzer	North Carolina State University	Survey of Cancer-Testis Antigen Expression in Canine Hematologic Malignancies for Immunotherapy Development
S3-50	Lindsey Aubuchon, Ross Gillan	University of North Carolina at Wilmington	Biochemical and Structural Characterization of UDP-glycosyltransferases (UGTs) in the Stevia Biosynthetic Pathway
S3-51	Aabir Sanyal	North Carolina School of Science and Math	Sneakers and the Art of Resale
S3-52	Jake Collins	North Carolina State University	Structure Determination of KSR Protein Complex
S3-53	Tristan Cochran	University of North Carolina at Charlotte	Computational Assurance of Infrastructural Design

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-54	Chloe Baumgardner, Kaitlin McNeill	Campbell University	Characterization and Optimization of Biosurfactants Produced by Marine Bacterial Isolates
S3-55	Emily Griffith	North Carolina State University	The Presence of Microcystin within Freshwater and Estuarine Systems in North Carolina
S3-56	Julia Johnson, Morgan Hendrix	Meredith College	Motivation and Leadership Development Among High-Performing High School Students
S3-57	Matthew Pierpoint	Duke University	Investigating the Effect of ATRX on STING Signaling in Soft Tissue Sarcoma
S3-58	Isabella Gamez	North Carolina School of Science and Math	Measuring the Impact of an Enhanced Strategy for Daily Disinfection in Acute Care Hospital Rooms
S3-59	Kimberly O'Brien	North Carolina State University	Responses of Crowned Lemurs (<i>Eulemur coronatus</i>) to a Novel Object Suggest that Females are Dominant
S3-60	Lindsey Gentry	North Carolina State University	Mapping convergent evolution: Identification of sex-limited 'blotch' color morph genes in East African cichlids
S3-61	Brittany Lee	North Carolina State University	Environmental Risk Factors for Antimicrobial Resistant <i>Campylobacter coli</i> in Conventional and Antibiotic Free Swine Farms
S3-62	Madeleine Edwards	North Carolina State University	Reflection on CALS Honors Equine-focused Study Abroad Experience In Ireland
S3-63	Jonathan Williams, Jesus Viña Moreno, Rhett Miller	Gaston College	How Variance in Soil pH and Calcium Composition Affects Biodiversity and Genetic Makeup of Mollusca Gastropoda (Land Snails).
S3-64	Iris Salswach Cadena	North Carolina State University	Developing Organoids from Primary Tissue to Screen for Hypospadias-Inducing Chemicals
S3-65	Jaden Miller	Appalachian State University	Laser-Based Position Detection in Our Optical Tweezer Set
S3-66	Marina Maddaloni	Campbell University	Developing Pedagogical Laboratory Experiments Illustrating Ceramic Glaze Chemistry
S3-67	Henri Vega-Bernal	Nash Community College	Insights into the Evolutionary History of the Seepage Salamanders (<i>Desmognathus aeneus</i>) : Comparing Genomic and Mitochondrial Data Sets
S3-68	Raegan Ferro-Gaskin, Albratha McClain, Francis Mensah	Queens University of Charlotte	Determination of Quinine Concentration in Tonic Waters using UV Spectroscopy

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-69	Daniel Allen	Johnson C. Smith University	"I am the ballet in your box and the bullet in your gun": The African American image-The Boondocks Season One
S3-70	Anna Winkler, Haley Minier, Daniel Matute	Gaston College	Earthworm Species Ratio and the Changing Environment
S3-71	Rohit Mantha, Micheal Gonzales	Queens University of Charlotte	Toxicity of Novel Lignin-Derived Ionic Liquids on E.coli strain 1A1
S3-72	Trina Phan	National Institute of Environmental Health Sciences	Developing a Toolkit to Assess Pregnancy-Related Hypertensive Disorders in Mice
S3-73	Carolyn Kasper	Catawba College	Differential Trapping Rates of Endemic Versus Non-Endemic Carnivores in Ankarafantsika National Park, Madagascar
S3-74	Taylor Chappell	East Carolina University	Media and Fraud - Accounting and Accountability
S3-75	Ebehiremhen Izokun	Duke University	What Does Your Blackness Communicate?: An Investigation of African-American Narrative and Gesture Style
S3-76	Amani Ambush	North Carolina A&T State University	Detection of Olfactomedin 4 in cow genomic DNA
S3-77	Amethyst Johnson	North Carolina A&T State University	Effect of essential oils on Galectin-3 protein concentration in cow blood Amethyst Johnson, Hamid Ismail, Mulumebet Worku
S3-78	Malli Fowler	University of North Carolina at Charlotte	COMPARISON OF CARDIOMETBOLIC RISK INDEXES IN ACTIVE OLDER AFRICAN AND EUROPEAN AMERICANS
S3-79	Aisha Cannon	University of North Carolina at Charlotte	The Impact of Assistive Technology in Multicultural Dance Education
S3-80	Brock McKenzie	North Carolina State University	The influence of driver experience on mind wandering frequency
S3-81	Rachel Heatherly	East Carolina University	Chronic Neuropathic Pain, Sleep Disturbance, and Fatigue in Lower Limb Amputees
S3-82	Jonathan Palmer	North Carolina State University	Thionated Perinone Chromophores as Visible-Light Absorbing Triplet Sensitizers

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-83	Catherine McDiarmid	Appalachian State University	Designing for Crisis - A New Approach to Appropriate Interior Design Solutions for Climate Migrants
S3-84	Will Robinson	Appalachian State University	Benefit-Cost Analysis of Rocky Knob Mountain Bike Park
S3-85	Jamilah Thomas	North Carolina Central University	The Epidemic of Mass Incarceration
S3-86	Jeremiah James	East Carolina University	Predicting Controlled Drug Release from Hydrogels
S3-87	Venkata Srikar Kavirayuni	North Carolina School of Science and Math	CORRELATION BETWEEN FATMAX AND VT1 IN ADOLESCENT BOYS AND GIRLS
S3-88	Louise Batta	North Carolina State University	Testing of Natural Compounds for Inhibition of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) In-Vitro Infection
S3-89	McKenzie Johnson	Catawba College	Water Qualities and Fishery Data
S3-90	Katelyn Bouthillier	William Peace University	Using Zebrafish Embryos and the NIEHS Environmental Polymorphisms Registry to Compare RMRP's Effects on Mitochondrial Respiration
S3-91	Viola Munos	University of North Carolina at Greensboro	Optimizing Graphene Transfers for Various Graphene Applications
S3-92	Semiyah Sams	East Carolina University	Making sense of the breast cancer screening process: Exploring imaging technologists' experiences
S3-93	Savoya Joyner	North Carolina Central University	Green synthesis of starch-stabilized silver nanoparticles for colorimetric detection of hydrogen peroxide
S3-94	Ethan Barber	Appalachian State University	Measuring and interpreting particulate mass concentration using the Tapered Element Oscillating Microbalance (TEOM) at Appalachian State University
S3-95	Melody Wen	North Carolina School of Science and Math	Tools for Decision Making in Baseball based on a Markov Chain Model
S3-96	David Axline	North Carolina State University	Evaluating the understory plant biomass in a greenhouse industrial hemp study

Poster Number	Presenter Name and Co-Presenter	Institution	Title
S3-97	Megan Planchock	North Carolina School of Science and Math	Verification of Artificial Intelligence Analyzing Nonlinear Fluids Using Proper Orthogonal Decomposition
S3-98	Khiliel Bullock	North Carolina A&T State University	Nutrition and Millennials
S3-99	Chyna Hines	North Carolina Central University	Women vs. Men: Gender Differences in Purchasing Behaviors
S3-100	Raymond Kimble, Frank Penhallego, Germaine Gregory, Elise Olivolo	Fayetteville State University	Enabling a Robot to Describe its Environment through Natural Language
S3-101	Noah Michaud	Duke University	Mapping Social and Spatial Encounters in Eighteenth-Century Venice
S3-102	Yeimi Reyna Romero	Catawba College	Ways Athletic Trainers Incorporate Health Information Technology in their Profession
S3-103	Katie Sherman	Catawba College	Health information Technology Abstract
S3-104	Jocelyn Ford	Catawba College	Health Information Technology
S3-105	Erica Alexander	Catawba College	The Benefits of Using Health Information Technology in Athletic Training

Exhibit Presentations

Exhibit Presentation: 12:15 PM to 1:00 PM. **Bryan Center at The Landing.**

Discipline	Presenter(s)	Institution	Title
Health	Victoria Augoustides, Adrianne Caudill, Sarah Baldwin	North Carolina State University	A Regional Analysis of Adverse Reactions to Antimalarials in Africa
Film	Neysa Wellington	Fayetteville State University	The Negro Element
Environmental	Nicholas Trovato, Brooke Applebaum	Catawba College	Dirofilaria in Mosquito Vectors: Is Catawba College Populace at Risk from Dirofilaria?
History	Corinne King, Dalton Lucas, Emily Yacuzzo	High Point University	Exploring the History of High Point's Congregational United Church of Christ
Computer	Benjamin Underwood	Appalachian State University	IoT-Based Temperature/Humidity Monitoring System Using ThingsBoard
Computer	Jacob Justice, Jackson Sippe, Andrew Thorp	Appalachian State University	Can Human Creative Processes Be Automated?
Biological Engineering	Lauren Mullis, Shannon Robertson, Jasmine Robinson, Johnny Smith, Hieu Hoang	North Carolina Central University	Convergence: A Model To Create New Pathways to Discovery and Invention using Drosophila Behavioural Genetics (DaBuGs) and Digital Fabrication

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Total Presenters with Abstract: 484

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Abbey, Sandra Catawba College	POSTER S2-39 Penn Pavilion 1:30-2:30	Effect of Proximity to Urban Environment on Mercury Levels in Grants Creek, Rowan County, North Carolina
Abdul-matin, Abdul-khaliq North Carolina State University	POSTER S1-103 Penn Pavilion 11:00-12:00	Developing 3D models as visual aids for visually impaired STEM students
Agbebi, Foluwa NC School of Science and Math	POSTER S2-95 Penn Pavilion 1:30-2:30	Synthesis of Human γ D R36S Crystallin for Studying Congenital Cataracts
Aggarwal, Yutika North Carolina School of Science and Math	POSTER S1-43 Penn Pavilion 11:00-12:00	Perception Vs. Reality: Psychology and the Media and Their Effects on People's Understanding
Agingu, Akelo North Carolina Central University	Oral Session 1 103 Gross Hall 10:10 - 10:25	The Failure of Communism in the Soviet Union
Al Samara, Loujain North Carolina State University	POSTER S1-69 Penn Pavilion 11:00-12:00	Implications of Marble Burying Tests as a method to examine effects of developmental exposure to flame retardant components on Wistar rat behavior
Albanese, Thomas East Carolina University	POSTER S2-45 Penn Pavilion 1:30-2:30	The Threshold of Human Hearing in Complex Outdoor Environments
Alexander, Erica Catawba College	POSTER S3-105 Penn Pavilion 3:00-4:00	The Benefits of Using Health Information Technology in Athletic Training
Ali, Hanan North Carolina Central University	POSTER S3-20 Penn Pavilion 3:00-4:00	Uncovering Key Biomarker representative of Metabolic Syndrome's Disparate Health Outcomes using Machine Learning and Data Mining
Ali, Mashal Duke University	POSTER S2-57 Penn Pavilion 1:30-2:30	Is it Storytime Yet?: Socialization Priorities between Black and White Mothers through Storytelling
Allen, Daniel Johnson C. Smith University	POSTER S3-69 Penn Pavilion 3:00-4:00	"I am the ballet in your box and the bullet in your gun": The African American image-The Boondocks Season One
Allison, Carmen NC School of Science and Math	POSTER S2-98 Penn Pavilion 1:30-2:30	Testing a Portable Muon Detector and Determining Muon Flux
Alston, Kayla North Carolina A&T State University	POSTER S2-99 Penn Pavilion 1:30-2:30	Effect of Exogenous Recombinant Galectins on Total Plasma Protein Concentration in Cow Blood
Altabet, Kolby North Carolina State University	POSTER S1-8 Penn Pavilion 11:00-12:00	Richness and Composition of Bird Species along a Residential Gradient in Wake County, North Carolina
Alvarado, Claudia North Carolina State University	POSTER S3-37 Penn Pavilion 3:00-4:00	A Closer Look at the Supply Chain of Engineered Tissue Fabrication
Ambush, Amani North Carolina A&T State University	POSTER S3-76 Penn Pavilion 3:00-4:00	Detection of Olfactomedin 4 in cow genomic DNA
Amparo, Daniel North Carolina State University	POSTER S3-2 Penn Pavilion 3:00-4:00	Forest Interception of Airborne Ammonia/Ammonium From Hog Waste Lagoons in Eastern North Carolina
Anderson, Madeline North Carolina State University	POSTER S1-60 Penn Pavilion 11:00-12:00	Shifts in Arctic Microplankton Community Structure and Abundance
Anderson, Nailah Wingate University	POSTER S2-65 Penn Pavilion 1:30-2:30	Great Expectations?: Personal Expectations and Perceived Parental Expectations as Predictors of Anxiety and Stress among Adolescent Girls
Anderson, Imani North Carolina A&T State University	POSTER S2-67 Penn Pavilion 1:30-2:30	Identifying galectin-3 variants in the genome of sheep, goats, and cows
Andrews, Brooke East Carolina University	POSTER S3-9 Penn Pavilion 3:00-4:00	Documentation of drug abuse in the family or household of children admitted to the hospital for non-accidental trauma
Andriessen, Amanda Duke University	POSTER S1-53 Penn Pavilion 11:00-12:00	The DNA sensor STING is a critical regulator of chronic pain and neuroinflammation

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Anissimova, Viktoriya Triangle Math and Science Academy	POSTER S1-54 Penn Pavilion 11:00-12:00	Grit, Resilience, and Perseverance among High Achieving High School Students: A Longitudinal Analysis of Constructs
Annachi, Ramkishore NC School of Science and Math	Oral Session 4 107 Gross Hall 2:50 - 3:05	Photocatalytic Semiconductive Metal Oxides in Chitosan Membranes for Photodegradation of Toxic Dyes
Arcena, Kirk John University of North Carolina at Charlotte	Oral Session 3 107 Gross Hall 1:40 – 1:55	First Telone Complexes of Silver and Mercury
Arduh, Nicolas North Carolina A&T State University	POSTER S2-92 Penn Pavilion 1:30-2:30	Income and Food Consumption Patterns
Arellano, Gabriel Appalachian State University	Oral Session 3 147 Wellness Ctr. 1:20 - 1:35	Estimating the ratio of drones to worker bees in a honey bee hive
Armentrout, Benjamin NC School of Science and Math	POSTER S3-25 Penn Pavilion 3:00-4:00	Developing a Portable Detector for Background Radiation Measurement
Arnold, Matthew Catawba College	Oral Session 2 318 Gross Hall 11:10 – 11:25	Identification of Physiological Factors Associated with the ManU Fitness Test in Female Collegiate Soccer Players
Ashford, Carlin Fayetteville State University	POSTER S1-90 Penn Pavilion 11:00-12:00	Energy Transfer in PFO: MEH-PPV polymer blends
Aubuchon, Lindsey University of North Carolina at Wilmington	POSTER S3-50 Penn Pavilion 3:00-4:00	Biochemical and Structural Characterization of UDP-glycosyltransferases (UGTs) in the Stevia Biosynthetic Pathway
Augoustides, Victoria North Carolina State University	Exhibit Session Bryan Center 12:15-1:00	A Regional Analysis of Adverse Reactions to Antimalarials in Africa
Axline, David North Carolina State University	POSTER S3-96 Penn Pavilion 3:00-4:00	Evaluating the understory plant biomass in a greenhouse industrial hemp study
Badillo-Perez, Andrea University of North Carolina at Charlotte	POSTER S1-63 Penn Pavilion 11:00-12:00	Effects of Perceived Stress Reactivity and Health Locus of Control on Reward Based Eating Drives
Bahhouth, Andrew NC School of Science and Math	Oral Session 1 355 Gross Hall 9:30 - 9:45	The Impact of Optogenetics on Interval Timing and Action Initiation in Mice
Bai, Ketty Duke University	POSTER S3-48 Penn Pavilion 3:00-4:00	Study of the development and aging of the brain through metabolic, inflammation and quality control pathways
Bailey, Marcus Catawba College	POSTER S3-38 Penn Pavilion 3:00-4:00	Native Wildlife Responses to a Meleagris gallopavo Decoy on the Stanback Ecological Preserve, Salisbury, North Carolina
Balaji, Aishwarya William G. Enloe Magnet High School	POSTER S3-46 Penn Pavilion 3:00-4:00	Adsorption of Acetic Acid on Commercial Activated Carbon
Banks, Tera Elizabeth City State University	POSTER S1-118 Penn Pavilion 11:00-12:00	Using Physiological Feedback Loops to Help Subjects Relax Before Psycho-Physiological Experiments
Barber, Ethan Appalachian State University	POSTER S3-94 Penn Pavilion 3:00-4:00	Measuring and interpreting particulate mass concentration using the Tapered Element Oscillating Microbalance (TEOM) at Appalachian State University
Barnes, Jasmine Meredith College	POSTER S2-46 Penn Pavilion 1:30-2:30	Examining the relationship between Gender, Belongingness, and Loneliness in Adolescents
Barrera, Emanuel University of North Carolina at Greensboro	POSTER S2-29 Penn Pavilion 1:30-2:30	Counting the Montagnards? Descriptive findings of the Montagnard Population Count Project
Barron, Betsy Central Piedmont Community College	POSTER S2-36 Penn Pavilion 1:30-2:30	Efficacy of Flea Preventatives in Canines
Batta, Louise North Carolina State University	POSTER S3-88 Penn Pavilion 3:00-4:00	Testing of Natural Compounds for Inhibition of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) In-Vitro Infection
Baumgardner, Chloe Campbell University	POSTER S3-54 Penn Pavilion 3:00-4:00	Characterization and Optimization of Biosurfactants Produced by Marine Bacterial Isolates
Beamon, Malcolm North Carolina Central University	Oral Session 4 355 Gross Hall 3:10 - 3:25	Chicken Sandwich Mania: A Case Study of Crowdsourcing and Social Media Campaign
Bell, Michael University of North Carolina at Greensboro	Oral Session 1 111 Gross Hall 9:30 - 9:45	Cycladic Beekeeping in Context: Ceramic Beehives on the Island of Kea

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Bell, Kimia North Carolina Central University	POSTER S2-94 Penn Pavilion 1:30-2:30	Mental Health Disparities among Juveniles in the US Justice System
Bennett, Kia North Carolina Central University	Oral Session 4 355 Gross Hall 2:50 - 3:05	The Impact of BOT Generated News of 2016 Election in Retrospect to the Black Vote.
Bentley, Rachel Catawba College	POSTER S3-12 Penn Pavilion 3:00-4:00	Croaks and Creeks: The Effect of pH Level on Anuran Amphibian Species
Berthoud, Shane High Point University	Oral Session 3 355 Gross Hall 1:00- 1:15	Ceol: The Autism Spectrum Through Game Design
Bethea, Lauryn North Carolina A&T State University	POSTER S1-100 Penn Pavilion 11:00-12:00	Examining Dietary Patterns to Reduce Cognitive Decline
Bird, Megan University of North Carolina at Charlotte	Oral Session 4 111 Gross Hall 2:30 - 2:45	The Impact of Female Legislators on the Use of Torture
Boompelli, Saathvik NC School of Science and Math	POSTER S2-54 Penn Pavilion 1:30-2:30	A Telemetric Gait Analysis Insole and Mobile App to Track Postoperative Fracture Rehabilitation of Remote Patients via Polymer-Thick Film Sensors
Borges, Alberto Catawba College	Oral Session 2 100A Gross Hall 10:30 - 10:45	Athi River Expedition
Borrego Higareda, Federico Catawba College	Oral Session 3 147 Wellness Ctr. 1:40 – 1:55	Institutional Research and Effectiveness: Beginning College Survey of Student Engagement Analysis with SAS Studio
Bouthillier, Katelyn William Peace University	POSTER S3-90 Penn Pavilion 3:00-4:00	Using Zebrafish Embryos and the NIEHS Environmental Polymorphisms Registry to Compare RMRP's Effects on Mitochondrial Respiration
Bradshaw, Sarah East Carolina University	POSTER S1-21 Penn Pavilion 11:00-12:00	Sex Differences in the Resolution of Ozone Induced Lung Injury and Inflammation
Branch, Laney Appalachian State University	POSTER S1-56 Penn Pavilion 11:00-12:00	Creating interiors to promote physical and mental health and readiness for civilian life for active duty and veteran servicewomen of the U.S. military
Brannon, Asia University of North Carolina at Greensboro	POSTER S1-62 Penn Pavilion 11:00-12:00	Diagnostic Utility of CSF WBC Components in Identifying Neonatal Bacterial Meningitis
Brickner, Megan University of North Carolina at Chapel Hill	POSTER S2-81 Penn Pavilion 1:30-2:30	The Effect of Intra-NAC Administered D-Serine on the Inhibition of Cocaine Reinstatement
Brooks, Caroline Catawba College	POSTER S1-109 Penn Pavilion 11:00-12:00	Clinicians' Understanding of Health Information Technology
Brown, Katie Catawba College	POSTER S2-12 Penn Pavilion 1:30-2:30	Mineral Filtration by Water Filter Brands and Types
Brown, Frances Appalachian State University	POSTER S1-68 Penn Pavilion 11:00-12:00	Heat Regulated Sample Chamber to Maintain Optimal Thermal Conditions for Cell Microscopy and Measurement
Brown, Virginia North Carolina State University	POSTER S2-74 Penn Pavilion 1:30-2:30	Evaluation of Chemical and Filtration Methods on Reducing Bacterial DNA Contamination Present in Pseudoperonospora cubensis DNA Extractions
Brown, Jeremy Guilford College	POSTER S2-78 Penn Pavilion 1:30-2:30	Combined Ultrasonic/Antibiotic Treatment for Removal of Established, Complex Biofilms From Medical Implant Plastics
Brown, Sarah Catawba College	POSTER S1-111 Penn Pavilion 11:00-12:00	Legal and Professional Considerations of Athletic Trainers Using Health Information Technology
Brusso, Kiera Western Carolina University	POSTER S2-60 Penn Pavilion 1:30-2:30	Method Testing of Cell Recovery from Oxidative Stress in Conjunction with Keratin Dosing
Bullock, Khiliel North Carolina A&T State University	POSTER S3-98 Penn Pavilion 3:00-4:00	Nutrition and Millennials
Bumgarner, Coty Gaston College	POSTER S2-96 Penn Pavilion 1:30-2:30	Bone Density in Young Adults
Butler, Kate North Carolina State University	POSTER S2-8 Penn Pavilion 1:30-2:30	Attitudinal and Experiential Predictors of Proactive Coping
Byrd, Wyatt Catawba College	POSTER S2-14 Penn Pavilion 1:30-2:30	pH of Natural and Municipal Water Supplies in a Small North Carolina Piedmont Town

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Calcagno, Jaime Chowan University	POSTER S1-42 Penn Pavilion 11:00-12:00	Snow Leopard High Altitude Adaptation
Cambey, Declan NC School of Science and Math	POSTER S1-108 Penn Pavilion 11:00-12:00	Designing and Fabricating a Novel Composite Material Artificial Muscle
Campbell, Camille NC School of Science and Math	Oral Session 4 324 Gross Hall 2:30 - 2:45	Genetic Modification of Escherichia coli with the Gene alkB2 to Replicate Alcanivorax borkumensis Oil Degradation
Cannon, Aisha University of North Carolina at Charlotte	POSTER S3-79 Penn Pavilion 3:00-4:00	The Impact of Assistive Technology in Multicultural Dance Education
Cardwell, Audrey Brevard College	POSTER S2-73 Penn Pavilion 1:30-2:30	A preliminary study of Honey bees choices in food quality and path efficiency
Carilli, Christina High Point University	POSTER S1-19 Penn Pavilion 11:00-12:00	Impact of a multidisciplinary educational training program (OverdosED) on knowledge and perceptions of depressant substance use on a college campus
Carmichael, Eric North Carolina A&T State University	POSTER S1-33 Penn Pavilion 11:00-12:00	Human Behavior: Using Technology to Design Efficient Living Environment for People with Visual Impairments
Carr, Alden University of North Carolina at Wilmington	Oral Session 3 318 Gross Hall 1:40 – 1:55	DEVELOPING A NOVEL METHODOLOGICAL APPROACH TO MAINTAIN SELECTIVE PRESSURE IN ANTIBIOTIC-PRODUCING SOIL MICROBES
Carter-Cyrus, Amira Catawba College	POSTER S2-37 Penn Pavilion 1:30-2:30	Are Science Majors More Sustainable Than Other Majors?
Case, Dara Western Carolina University	POSTER S1-117 Penn Pavilion 11:00-12:00	Keratin Affects on Autophagy Vesicle Initiation in Nutrient Starved Human Embryonic Kidney Cells
Cassidy, Caitlin North Carolina State University	POSTER S1-22 Penn Pavilion 11:00-12:00	Preliminary Association Between PFAS and Self-Reported Hypothyroid Disease in The GenX Exposure Study
Chan, Alexandra Duke University	POSTER S1-31 Penn Pavilion 11:00-12:00	Rethinking the "Model Minority": Gender Differences in Asian American Student's Communication Styles
Chappell, Taylor East Carolina University	POSTER S3-74 Penn Pavilion 3:00-4:00	Media and Fraud - Accounting and Accountability
Chasten, Valorie North Carolina A&T State University	POSTER S3-28 Penn Pavilion 3:00-4:00	Developing a Screening System to Identifying Efficient Inhibitors of the Choline Kinase of Streptococcus pneumoniae
Cherkez, Polina University of North Carolina at Chapel Hill	POSTER S1-81 Penn Pavilion 11:00-12:00	Methods of Endocytic Entry Utilized by GCCNP
Chinchilla Lopez, Oscar Central Piedmont Community College	POSTER S1-30 Penn Pavilion 11:00-12:00	A Newly Developed 3D-Printed Resource For Facial Bone Trauma Reconstruction
Clemons, Dallas North Carolina Central University	Oral Session 4 355 Gross Hall 2:30 - 2:45	From the Black Buck to Barbecue Becky: An Examination of Media-Driven Stereotypes and the Policing of the Black Body
Clervois-Frank, Maudeline Fayetteville State University	POSTER S3-17 Penn Pavilion 3:00-4:00	Effectiveness of Online Career Intervention on Psychology Students' Resume-Building
Clodfelter, Adam University of North Carolina at Charlotte	POSTER S2-52 Penn Pavilion 1:30-2:30	Roles for the Sea Anemone Microbiome in Determining Behavioral Rhythmicity
Coalson, Hannah East Carolina University	POSTER S1-11 Penn Pavilion 11:00-12:00	Forced differentiation in HL-60 cells increases mitochondrial spare reserve capacity.
Cochran, Jamie North Carolina State University	Oral Session 1 324 Gross Hall 9:50 - 10:05	Assessing the concept and thermal sensitivity of the Pcrit in the mayfly N. triangulifer
Cochran, Tristan University of North Carolina at Charlotte	POSTER S3-53 Penn Pavilion 3:00-4:00	Computational Assurance of Infrastructural Design
Coffey, Abigail University of North Carolina at Charlotte	POSTER S1-4 Penn Pavilion 11:00-12:00	The Food Justice Project: Assessing the needs of food insecure Latinx individuals
Coleman, Queonnah Fayetteville State University	POSTER S1-26 Penn Pavilion 11:00-12:00	Gender Analysis of Higher Education in North Africa and the Middle East From 1920-2018

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Collins, Jake North Carolina State University	POSTER S3-52 Penn Pavilion 3:00-4:00	Structure Determination of KSR Protein Complex
Congiusta, Matthew NC School of Science and Math	Oral Session 2 330 Gross Hall 11:10 – 11:25	Plant Heat Stress Response: Investigating DNA Methylation through frg1/2 mutants of Arabidopsis thaliana
Cooke, Caleb Duke University	Oral Session 3 Penn Garden Rm. 1:40 – 1:55	An Analysis of the Relationship Between John and the Synoptic Gospels Through Percival Gardner-Smith
Cooper, Mary Western Carolina University	POSTER S1-5 Penn Pavilion 11:00-12:00	Researching Food Insecurity in the Jackson County, NC Area
Cordiner, Abigail North Carolina State University	POSTER S2-84 Penn Pavilion 1:30-2:30	Development of an In Vitro Model for Extravillous Trophoblast Invasion Over a Gradient
Cothern, Samantha North Carolina State University	POSTER S1-64 Penn Pavilion 11:00-12:00	Coquerel's sifakas (<i>Propithecus coquereli</i>) responses to a novel vs familiar person
Cox, Brian University of North Carolina at Wilmington	POSTER S2-75 Penn Pavilion 1:30-2:30	Crystal structure of phosphoethanolamine methyltransferase from <i>Eimeria tenella</i>
Crawford, Taylor University of North Carolina at Greensboro	Oral Session 2 330 Gross Hall 10:50 – 11:05	Molecular Effects of the Herbicide, Glyphosate, on Human Osteoblast Cells
Crowell, Timothy Greensboro College	Oral Session 1 105 Gross Hall 9:50 - 10:05	Hollywood Therapy: The Portrayal of Mental Health Professionals in American Film from 2010 to 2017
Cruz, Jose Central Piedmont Community College	Oral Session 3 100C Gross Hall 1:40 – 1:55	Track Selection In Drift Chambers Using Convolutional Neural Networks
Cui, Jessica NC School of Science and Math	Oral Session 2 103 Gross Hall 10:50 – 11:05	Core-Shell Structured Metallic Nanoparticles for Use in Dye-Sensitized Solar Cells
Culbreath, Kamara University of North Carolina at Greensboro	POSTER S2-53 Penn Pavilion 1:30-2:30	Composition and orbits of stars and gas in a tidally disrupted starburst galaxy
Curia, Jenna Meredith College	Oral Session 2 105 Gross Hall 11:10 – 11:25	A Qualitative, Cross-Cultural Analysis of Gender and Identity within Religious Workspaces
Curran, Danielle North Carolina State University	POSTER S2-48 Penn Pavilion 1:30-2:30	Endosperm-Based Hybrid Inviability in <i>Mimulus</i> plants
Czejdo, Cami University of North Carolina at Chapel Hill	POSTER S1-114 Penn Pavilion 11:00-12:00	A Deep Contextual Representation for Medical Case Studies
Dai, Andy NC School of Science and Math	POSTER S2-56 Penn Pavilion 1:30-2:30	Dynamical Models on the Introduction of Malaria-Resistant Mosquitoes
Damle, Gargi North Carolina State University	POSTER S1-50 Penn Pavilion 11:00-12:00	Identifying candidate genes for trophic level adaptation in the African cichlid gut
Dean, Hannah Pfeiffer University	Oral Session 3 105 Gross Hall 1:00- 1:15	Is privilege fair? The relationship between belief in a just world and perception of privilege
Deng, Grace NC School of Science and Math	Oral Session 4 107 Gross Hall 2:30 - 2:45	Metal Organic Framework/Polyethylene Glycol-Coated Graphene Quantum Dots Used for Synergistic Chemo- and Photothermal Therapy
Desai, Vrinda NC School of Science and Math	Oral Session 2 355 Gross Hall 10:30 - 10:45	At Radha's Hips: The Exploration of Erotica, Sexualization, and Seductionism in Indian Dance Forms
Deshmukh, Anushka NC School of Science and Math	POSTER S2-77 Penn Pavilion 1:30-2:30	Modulating microparticle in microporous annealed particle (MAP) scaffolds
Doctor, Yesh Duke University	POSTER S3-24 Penn Pavilion 3:00-4:00	CRISPR-Cas9 Based Tools for Targeted Histone Modifications
Donnelly, Kyle Catawba College	POSTER S3-10 Penn Pavilion 3:00-4:00	Morphological and Genetic Distinctions between Three Subspecies of Ring-Tailed Mongoose (<i>Galidia elegans</i>) from Madagascar
Doss, Brittany Fayetteville State University	POSTER S3-16 Penn Pavilion 3:00-4:00	African American Fathers' Perceptions of Fatherhood
Downey, Payton NC School of Science and Math	Oral Session 4 100C Gross Hall 2:30 - 2:45	Nitrogen-doped Graphene Quantum Dots for Increased CO2 Reduction Efficiency and Hydrocarbon Selectivity

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Duckworth, Daphne North Carolina State University	POSTER S2-50 Penn Pavilion 1:30-2:30	Pancreatic Amylase Enzyme Activity in a Cichlid Fish That Segregates Two amy2 Alleles
Dunham, Morgan High Point University	Oral Session 1 111 Gross Hall 10:10 - 10:25	What was Excluded: Defining the Crime of Genocide in the modern world
Dunn, Jacob High Point University	POSTER S1-67 Penn Pavilion 11:00-12:00	Cannabidiol (CBD) does not protect against an invitro model of hypoxia in rat neuronal cells
Durando, O. Ryan NC School of Science and Math	Oral Session 1 100C Gross Hall 10:10 - 10:25	Post-Synthetic Amine Modification of Metal-Organic Framework UiO-66-NH ₂ to Enhance the Adsorptive Capture of NO ₂ From the Atmosphere
Duruman, Aylin North Carolina State University	POSTER S1-105 Penn Pavilion 11:00-12:00	Evaluation of the Check, Connect, and Respect Mentoring Program
Edwards, Madeleine North Carolina State University	POSTER S3-62 Penn Pavilion 3:00-4:00	Reflection on CALS Honors Equine-focused Study Abroad Experience In Ireland
Elminowski, Erin North Carolina State University	POSTER S3-8 Penn Pavilion 3:00-4:00	The Howl of Rancho La Brea
Emehel, Chloe NC School of Science and Math	POSTER S1-89 Penn Pavilion 11:00-12:00	Analyzing the Effects of Depression on the Severity of Chemobrain in Breast Cancer Survivors
Emerson, James North Carolina State University	POSTER S1-49 Penn Pavilion 11:00-12:00	Identification, localization, and quantification of TYLCV in Solanum lycopersicum variety Lanai
Engler, Peter Queens University of Charlotte	POSTER S1-27 Penn Pavilion 11:00-12:00	Quantitative Analysis of the Relationship Between the Production of National Football League Wide Receivers and Their Pre-Draft Data
Ershadi, Harrison Summer Ventures in Science & Math-UNCC	Oral Session 4 Penn Garden Rm. 2:30 - 2:45	An Analysis of the Growing Empire of Amazon
Escobedo, Christopher Western Carolina University	POSTER S1-77 Penn Pavilion 11:00-12:00	Nanoparticle Toxicity in HEK-293 Cell Lines
Espinoza, Giovanni Catawba College	POSTER S1-44 Penn Pavilion 11:00-12:00	Occupancy Analysis of Madagascar Carnivores
Eury, Macie Pfeiffer University	Oral Session 2 105 Gross Hall 10:50 – 11:05	Empathy and Political Ideology
Fahey, Kyle North Carolina State University	POSTER S2-27 Penn Pavilion 1:30-2:30	Characterizing the Impact of Combined Sucrose and Iron Stress on Arabidopsis wrky21 Mutants
Featherstone, Claire Catawba College	POSTER S2-59 Penn Pavilion 1:30-2:30	The effects of BPA and BPA derivatives on Daphnia pulex
Federline, Laura North Carolina State University	POSTER S2-72 Penn Pavilion 1:30-2:30	Data Visualization Techniques for Communicating Long-Term Trends of Diabetes
Ferro-Gaskin, Raegan Queens University of Charlotte	POSTER S3-68 Penn Pavilion 3:00-4:00	Determination of Quinine Concentration in Tonic Waters using UV Spectroscopy
Ficklin, Hannah University of North Carolina at Greensboro	Oral Session 3 Penn Garden Rm. 1:20 - 1:35	Abstract
Figuerola-Benetti, Aurora Appalachian State University	Oral Session 2 100A Gross Hall 11:10 – 11:25	The Storm is Not Over: Food Insecurity in Puerto Rico Pre- & Post-Hurricane Maria
Fleming, James Appalachian State University	Oral Session 2 111 Gross Hall 10:30 - 10:45	EVALUATION OF TRACE ELEMENTS LEVELS IN COMMERCIALY AVAILABLE KRATOM POWDER AND TEA IN NORTH CAROLINA USING ICP-OES
Flowers, Jasmine North Carolina A&T State University	POSTER S2-100 Penn Pavilion 1:30-2:30	Holistic Cognitive Reserve Index (HCRI), Measuring Cognitive Reserve in African American Adults
Ford, Sade North Carolina A&T State University	POSTER S1-79 Penn Pavilion 11:00-12:00	Detection of the gene encoding programmed cell death-1 (PD-1) in cow genomic DNA isolated from FTA cards
Ford, Jocelyn Catawba College	POSTER S3-104 Penn Pavilion 3:00-4:00	Health Information Technology
Fowler, Malli University of North Carolina at Charlotte	POSTER S3-78 Penn Pavilion 3:00-4:00	COMPARISON OF CARDIOMETBOLIC RISK INDEXES IN ACTIVE OLDER AFRICAN AND EUROPEAN AMERICANS

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Fox, Samuel North Carolina State University	POSTER S3-31 Penn Pavilion 3:00-4:00	Postural Control Strategies on Surfaces of Different Compliance: Implications for Unilateral Trans-Tibial Amputees
Frazier, Mattie North Carolina State University	Oral Session 1 355 Gross Hall 10:10 - 10:25	Effects of Biochar on Soil Enzyme Activities Associated with Carbon, Nitrogen, Phosphorus and Sulfur Mineralization
Frazier, Zane Appalachian State University	POSTER S1-72 Penn Pavilion 11:00-12:00	A novel Eu3+ complex as a dual sensor to detect V-type and G-type nerve agents
Frazier, Chasity North Carolina Central University	Oral Session 3 103 Gross Hall 1:40 – 1:55	Is there a Resurgences of Youth Gangs?
Frick, Megan Campbell University	POSTER S1-91 Penn Pavilion 11:00-12:00	Correlation of Wellness and Countermovement Jump in Collegiate Lacrosse Players
Frye, Emma Appalachian State University	POSTER S1-9 Penn Pavilion 11:00-12:00	THE EFFECTS OF INCREASED BODY WEIGHT ON CENTRAL AND PERIPHERAL BLOOD PRESSURES AND ARTERIAL STIFFNESS
Fulton, Marviene University of North Carolina at Charlotte	POSTER S3-18 Penn Pavilion 3:00-4:00	Joint Effects of Sense of Control, Job Control, and Dispositional Mindfulness as Relating to Work Engagement
Gadiraju, Ashwin Summer Ventures in Science & Math- AppState	Oral Session 4 304B Gross Hall 3:10 - 3:25	Correlation between arterial stiffness and aerobic fitness in adolescent boys and girls
Gambill, Haley North Carolina State University	Oral Session 4 318 Gross Hall 2:50 - 3:05	Do White grunt aggregations show positive density dependence?
Gamez, Isabella NC School of Science and Math	POSTER S3-58 Penn Pavilion 3:00-4:00	Measuring the Impact of an Enhanced Strategy for Daily Disinfection in Acute Care Hospital Rooms
Garcia Cervantes, Martha North Carolina Central University	Oral Session 4 107 Gross Hall 3:10 - 3:25	Controlled synthesis and transfer of Ti 3 C 2 T x MXene nanosheets with SERS performance
Garnett-Deakin, Aran University of North Carolina at Greensboro	POSTER S2-87 Penn Pavilion 1:30-2:30	Violence, Trauma, and Transition to Fatherhood: Examining How Community and Police Violence Informs Fathering for Young Black Men
Garrett, Shirley High Point University	Oral Session 1 103 Gross Hall 9:30 - 9:45	How Do African-American Millennials View Race-Based Affirmative Action in Higher Education?
Gates, Kayla Chowan University	Oral Session 3 103 Gross Hall 1:20 - 1:35	The Evolution of the Word Justice
Gatewood, Willow Catawba College	POSTER S2-13 Penn Pavilion 1:30-2:30	Levels of Methyl-mercury in Fish of the Dan River
Gentry, Lindsey North Carolina State University	POSTER S3-60 Penn Pavilion 3:00-4:00	Mapping convergent evolution: Identification of sex-limited 'blotch' color morph genes in East African cichlids
Ghotkar, Rohit North Carolina State University	POSTER S1-10 Penn Pavilion 11:00-12:00	Identification of Cyfip2 in the larval zebrafish acoustic startle circuit
Giorgio, Gina High Point University	POSTER S1-1 Penn Pavilion 11:00-12:00	The Correlation between Openness, Cognitive Flexibility, and Fluid Intelligence
Goertzen, Sydney Catawba College	POSTER S3-47 Penn Pavilion 3:00-4:00	Investigating the Effect of JUUL Pod Extracts on Human Oral Microbiota
Goldstein, Samuel University of North Carolina at Chapel Hill	Oral Session 1 304B Gross Hall 10:10 - 10:25	Sleep Health and Psychological Distress: A Nationally Representative Study of the United States
Gorczynski, Kyle Appalachian State University	POSTER S2-68 Penn Pavilion 1:30-2:30	Laser Tweezer Raman Spectroscopy (LTRS) System
Gouin, Angelique Chowan University	Oral Session 2 324 Gross Hall 10:30 - 10:45	Intervention Strategies for Alcohol Use Disorder Tested in Rhesus Monkeys
Graber, Joseph Appalachian State University	Oral Session 1 100A Gross Hall 9:50 - 10:05	Effects of Resizing Bounding Boxes on Honey Bee Hive Traffic Analysis
Green, Maxine Meredith College	POSTER S1-34 Penn Pavilion 11:00-12:00	Using Echolocation to Determine Factors which Influence Bat Activity
Greene, Zion Chowan University	Oral Session 4 148 Wellness Ctr. 2:30 - 2:45	The Transformation of the Word Boob

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Student Presenter	Location	Project Title
Greene, Jordan Appalachian State University	POSTER S1-75 Penn Pavilion 11:00-12:00	Integration of NASA Micro-pulsed Lidar Network data products into the world-class NASA and NOAA aerosol datasets at Appalachian State University
Griffith, Emily North Carolina State University	POSTER S3-55 Penn Pavilion 3:00-4:00	The Presence of Microcystin within Freshwater and Estuarine Systems in North Carolina
Guadarrama, Nayelli Central Piedmont Community College	POSTER S2-6 Penn Pavilion 1:30-2:30	Green Materials
Guiler, William East Carolina University	Oral Session 2 105 Gross Hall 10:30 - 10:45	Koru Mindfulness: Effects on Psychological Symptomatology and Mechanisms of Action
Guy, Samuel Appalachian State University	POSTER S1-80 Penn Pavilion 11:00-12:00	The Development of a Sensing System to Measure the Hydrolysis of B-lactam Antibiotics
Hall, Nicole Catawba College	POSTER S2-107 Penn Pavilion 1:30-2:30	Delimiting of Cryptic Species in the Anopheles crucians Complex in Salisbury, North Carolina
Haller, Daniel North Carolina State University	POSTER S3-7 Penn Pavilion 3:00-4:00	Autonomous Inducible Directed Evolution for Complex Pathways
Halstead, Emma Catawba College	POSTER S1-13 Penn Pavilion 11:00-12:00	Amphibians as Indicator Species on the Preserve
Halstead, Sara North Carolina State University	POSTER S1-84 Penn Pavilion 11:00-12:00	Captive Ring-tailed Lemur (Lemur catta) Vocalizations When Separated from Group
Han, David Summer Ventures in Science & Math-AppState	Oral Session 2 100C Gross Hall 10:50 – 11:05	Effectiveness of Using Machine Learning to Model Google’s Website Rankings
Handwerk, Eli University of North Carolina at Chapel Hill	Oral Session 3 100C Gross Hall 1:20 - 1:35	Ultrasound Ventricle Strain Analysis
Harkay, Madison Barton College	POSTER S3-3 Penn Pavilion 3:00-4:00	Synthesize of Biodiesel Fuel Through Cooking Oils
Harrison, Kareem Pfeiffer University	POSTER S2-35 Penn Pavilion 1:30-2:30	To return or keep it, that is the question
Haskell, Ajah University of North Carolina at Greensboro	POSTER S1-70 Penn Pavilion 11:00-12:00	“There Are Five Greensboros”: Assessing Community Assets, Vulnerabilities, and Violence in Greensboro, North Carolina
Hayes, Aleah High Point University	POSTER S2-110 Penn Pavilion 1:30-2:30	Women Politicians Social Media Influence
Heatherly, Rachel East Carolina University	POSTER S3-81 Penn Pavilion 3:00-4:00	Chronic Neuropathic Pain, Sleep Disturbance, and Fatigue in Lower Limb Amputees
Hendrickson, Taylor Johnson C. Smith University	POSTER S2-71 Penn Pavilion 1:30-2:30	“I am a very neat monster”: Depiction of a serial killer-Dexter Season One
Henriquez, Maria Duke University	Oral Session 1 100A Gross Hall 10:10 - 10:25	Machine Learning Algorithms to Predict Lower Extremity Musculoskeletal Injury Risk For Student Athletes
Hester, Gunnar Catawba College	POSTER S3-13 Penn Pavilion 3:00-4:00	Lima Beans Don’t Grow on Mars: The Effect of Mixtures of Topsoil and Pseudo-Martian Soil on Phaseolus lunatus
Hines, Chyna North Carolina Central University	POSTER S3-99 Penn Pavilion 3:00-4:00	Women vs. Men: Gender Differences in Purchasing Behaviors
Hipp, Hunter Catawba College	POSTER S1-36 Penn Pavilion 11:00-12:00	How Seasonal Flood Plains Effect The White-Tail Deer Population
Hoffpauir, Kyle High Point University	POSTER S1-17 Penn Pavilion 11:00-12:00	Measuring Effectiveness of Dynamic Honeydew
Holley, Kyra North Carolina Central University	POSTER S3-26 Penn Pavilion 3:00-4:00	Synthesis of Arene Tricarbonyl Chromium Complexes for “Subtle” Functionalization of Graphene
Holloway, Ja’Quasha Central Piedmont Community College	POSTER S2-30 Penn Pavilion 1:30-2:30	Building a Functional Data Center: My Financial Buddy
Hoon, Maya North Carolina State University	Oral Session 4 100A Gross Hall 2:30 - 2:45	Terrestrial Gastropods Accumulate Mercury in a St. Lawrence River Wetland

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Student Presenter	Location	Project Title
Houck, Madison NC School of Science and Math	Oral Session 3 107 Gross Hall 1:00- 1:15	Sesamol as a Novel Redox Mediator for the Electrochemical Separation of Carbon Dioxide from Flue Gas
Houser, Shannon Duke University	POSTER S2-109 Penn Pavilion 1:30-2:30	The Effects of LRRK2 in Cell Cycle Regulation
Howard, Jasmine North Carolina Central University	POSTER S3-39 Penn Pavilion 3:00-4:00	Analyzing Achievement Performance in First-Year African-American Students
Huan, Benjamin NC School of Science and Math	POSTER S2-93 Penn Pavilion 1:30-2:30	Verifying the Safety of Alternative Forms of Bovine Heparin
Huda, Ariba NC School of Science and Math	Oral Session 4 330 Gross Hall 2:30 - 2:45	Small Molecule Activation of Wnt/ β -Catenin Signaling Pathway on Neurodegeneration Rates of Dopaminergic Neurons in <i>C. elegans</i>
Hudson, Haley Catawba College	POSTER S1-12 Penn Pavilion 11:00-12:00	Do today's young adults actually understand or care about climate science?
Hughes, Patrick North Carolina State University	POSTER S1-59 Penn Pavilion 11:00-12:00	Rapid Production of Fibers Using Film Electrospinning
Huguely, Paige University of North Carolina at Chapel Hill	POSTER S1-51 Penn Pavilion 11:00-12:00	Examining the Association Between Increases in Parent Responsiveness and Improvements in Child Social Communication
Humphrey, Briley North Carolina State University	POSTER S3-41 Penn Pavilion 3:00-4:00	Introducing Infrared Spectroscopy Using a Physical Model and Guided Inquiry Approach
Huneycutt, Ross Catawba College	POSTER S2-9 Penn Pavilion 1:30-2:30	Ducks and Decoys
Hunter, Otis Chowan University	Creative Performance 107 Gross Hall 9:30-9:50	The Nothingness That Means Everything To Me
Ingman, Alexandra University of North Carolina at Wilmington	POSTER S1-96 Penn Pavilion 11:00-12:00	Identification of Triclosan Resistance Mechanisms in <i>Staphylococcus aureus</i> Isolated from Healthy Carriers
Izokun, Ebehiremhen Duke University	POSTER S3-75 Penn Pavilion 3:00-4:00	What Does Your Blackness Communicate?: An Investigation of African-American Narrative and Gesture Style
Jacome, Zaira Johnson C. Smith University	Oral Session 1 318 Gross Hall 9:50 - 10:05	Tracking prevalence of resistance markers for the antimalarial treatment sulphadoxine-pyrimethamine.
James, Jeremiah East Carolina University	POSTER S3-86 Penn Pavilion 3:00-4:00	Predicting Controlled Drug Release from Hydrogels
Jeffries, Chasen High Point University	Oral Session 3 111 Gross Hall 1:00- 1:15	Spartan Austerity and Bribery
Johnson, Treshim North Carolina Central University	Oral Session 3 355 Gross Hall 1:20 - 1:35	Street Legend to Social Advocate: Clifford "T.I." Harris
Johnson, Breana Chowan University	Oral Session 3 148 Wellness Ctr. 1:40 – 1:55	The History Behind The Racial Word Spic
Johnson, Loren North Carolina State University	POSTER S3-49 Penn Pavilion 3:00-4:00	Survey of Cancer-Testis Antigen Expression in Canine Hematologic Malignancies for Immunotherapy Development
Johnson, Julia Meredith College	POSTER S3-56 Penn Pavilion 3:00-4:00	Motivation and Leadership Development Among High-Performing High School Students
Johnson, Amethyst North Carolina A&T State University	POSTER S3-77 Penn Pavilion 3:00-4:00	Effect of essential oils on Galectin-3 protein concentration in cow blood Amethyst Johnson, Hamid Ismail, Mulumebet Worku
Johnson, McKenzie Catawba College	POSTER S3-89 Penn Pavilion 3:00-4:00	Water Qualities and Fishery Data
Johnson, Kayla North Carolina Central University	Oral Session 3 355 Gross Hall 1:40 – 1:55	The Intellectual Soul Food Buffet: Curriculum Developed By Students for Students
Jones, Samuel Appalachian State University	POSTER S2-22 Penn Pavilion 1:30-2:30	Antimicrobial effect of UV-A irradiated gallic acid against biogenic amine producer <i>Lactobacillus hilgardii</i>
Jordan, Ginger Chowan University	Oral Session 4 148 Wellness Ctr. 2:50 - 3:05	History of Cool
Joseph-Burton, Tah-Va'Nee Chowan University	Oral Session 3 148 Wellness Ctr. 1:20 - 1:35	Poetry of World War 1: Changing Attitudes

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Student Presenter	Location	Project Title
Joshi, Angelica Summer Ventures in Science & Math-UNCW	Oral Session 3 330 Gross Hall 1:00- 1:15	Removal of Marine Microplastics Using Various Polymers in a Ferrofluid
Joyner, David Chowan University	Oral Session 3 148 Wellness Ctr. 1:00- 1:15	This is Awesome
Joyner, Savoya North Carolina Central University	POSTER S3-93 Penn Pavilion 3:00-4:00	Green synthesis of starch-stabilized silver nanoparticles for colorimetric detection of hydrogen peroxide
Justice, Jacob Appalachian State University	Exhibit Session Bryan Center 12:15-1:00	Can Human Creative Processes Be Automated?
Kalogeromitros, Maria University of North Carolina at Charlotte	POSTER S1-32 Penn Pavilion 11:00-12:00	Silver Thione Compounds with Potential Anticancer Activity
Kasper, Carolyn Catawba College	POSTER S3-73 Penn Pavilion 3:00-4:00	Differential Trapping Rates of Endemic Versus Non-Endemic Carnivores in Ankarafantsika National Park, Madagascar
Kaushal, Dhruv NC School of Science and Math	Oral Session 4 Penn Garden Rm. 3:10 - 3:25	Is College Worth it? A Closer Look at the Economic Payoffs of the Top 100 Universities in the United States
Kavirayuni, Venkata Srikar NC School of Science and Math	POSTER S3-87 Penn Pavilion 3:00-4:00	CORRELATION BETWEEN FATMAX AND VT1 IN ADOLESCENT BOYS AND GIRLS
Keaton, Gabrielle University of North Carolina at Charlotte	POSTER S3-1 Penn Pavilion 3:00-4:00	Conditions Responsible for Periods of Low Visibility along the West Coast of Greenland
Kelly, Jasmine University of North Carolina at Pembroke	POSTER S3-45 Penn Pavilion 3:00-4:00	Importance of Eastern Hemlock in Acadian Flycatcher Home Range Use
Kennedy, Ryan Chowan University	Oral Session 2 355 Gross Hall 11:10 – 11:25	Busted Etymology
Kihm, John North Carolina State University	POSTER S2-70 Penn Pavilion 1:30-2:30	The effects of stress on emotional perception: Anger bias and implicit racial bias
Kimble, Raymond Fayetteville State University	POSTER S3-100 Penn Pavilion 3:00-4:00	Enabling a Robot to Describe its Environment through Natural Language
Kimbrow, Kyle Western Carolina University	POSTER S2-80 Penn Pavilion 1:30-2:30	Small Group Socialization: The Key to Successful Group Projects?
King, Corinne High Point University	Exhibit Session Bryan Center 12:15-1:00	Exploring the History of High Point's Congregational United Church of Christ
King, Eleanor Catawba College	Oral Session 3 100A Gross Hall 1:00- 1:15	Bridging the Gap Between People and Parks: A Case Study of Ankarafantsika National Park
Kinsella, Lindsey Duke University	Oral Session 1 324 Gross Hall 10:10 - 10:25	Behavior and Management Strategies of Red Colobus Monkeys (<i>Ptilocolobus kirkii</i>) in Jozani-Chwaka Bay National Park, Zanzibar
Kiser, Kasey NC School of Science and Math	Oral Session 4 324 Gross Hall 2:50 - 3:05	Bacterial inhibition using ant-derived microbes
Klink, Robert NC School of Science and Math	Oral Session 4 103 Gross Hall 2:30 - 2:45	Birth of the Cigarette Smoker: White Consumerism and Segregated Taste
Kluttz, Abby Catawba College	POSTER S2-97 Penn Pavilion 1:30-2:30	Prairie Restoration and Bird Population Recovery
Knopf, Joella North Carolina State University	POSTER S2-85 Penn Pavilion 1:30-2:30	Size and Orientation of Porcine Menisci Vary with Sex and Age During Skeletal Growth
Knotek, Christopher NC School of Science and Math	Oral Session 3 107 Gross Hall 1:20 - 1:35	Determining the recombination rates and mobility of photoexcited charge carriers in 2D transition metal dichalcogenides
Komer, Rebecca North Carolina State University	Oral Session 1 100C Gross Hall 9:50 - 10:05	Regulating fiber diameters and mechanical properties using unconfined melt electrospinning
Kondrasov, Anastasia North Carolina Central University	POSTER S2-91 Penn Pavilion 1:30-2:30	Are people with Mental Illness more likely to be Subjected to Crime and does this Contribute to the Ongoing Mass Incarceration and Recidivism Rates ?
Koon, Angel Pfeiffer University	Oral Session 3 105 Gross Hall 1:40 – 1:55	The Effect Of Tempo on Recall Memory

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Student Presenter	Location	Project Title
Kose, Furkan North Carolina State University	POSTER S2-64 Penn Pavilion 1:30-2:30	Electromechanical Optimization of Printable Circuit Boards for Textile-Electronic Applications
Kovasskitz, Lily NC School of Science and Math	POSTER S1-102 Penn Pavilion 11:00-12:00	The Impacts of Racism and Sexism on Psychiatric Care in North Carolina Institutions in the 19th and 20th Centuries
Kramer, Rachel University of North Carolina at Wilmington	Oral Session 2 304B Gross Hall 10:50 – 11:05	Fusidic Acid Resistance in Staphylococcus aureus Isolated from Healthy Carriers
Kronz, Jessica North Carolina State University	POSTER S1-16 Penn Pavilion 11:00-12:00	An Analysis of Age-at-Death within the Promptin Tai Bioarchaeological Skeletal Collections
Kualii, Caleb Belmont Abbey College	Oral Session 4 105 Gross Hall 2:30 - 2:45	The 20th of July Plot: Resistance and the Question of Divided Loyalty
Kudlacz, Natalie Catawba College	POSTER S2-10 Penn Pavilion 1:30-2:30	Tracking the movement of the American toad Relative to the Global temperature
Kuhns, Tia University of North Carolina at Asheville	Oral Session 2 355 Gross Hall 10:50 – 11:05	Cuteness: Countering the Objectification of an Aesthetic
Kumari, Anjali North Carolina A&T State University	POSTER S1-85 Penn Pavilion 11:00-12:00	Development of a Time-efficient and Cost-effective Luminescence Assay to Measure the Relative Activity of Protein Kinases
Kuriakose, Irene Queens University of Charlotte	POSTER S1-6 Penn Pavilion 11:00-12:00	The Isolation and Annotation of Bacteriophages “MCubed” and “Nucci”
Kurolvech, Jillian Catawba College	Oral Session 4 100A Gross Hall 2:50 - 3:05	Reptiles Disproportionally Fall Victim to Roadkill in Ankarafantsika National Park, Madagascar
Kylander, Skadi Chowan University	Oral Session 3 318 Gross Hall 1:20 - 1:35	Breeding and Nesting Habits of Prothonotary Warblers in Hertford County and Dare County, North Carolina
Lakshmanan, Aakriti University of North Carolina at Charlotte	POSTER S3-43 Penn Pavilion 3:00-4:00	First mercury and silver complexes of a bulky heterocyclic thione ligand
Lamas-Niño, Michelle Summer Ventures in Science & Math- ECU	Oral Session 2 324 Gross Hall 11:10 – 11:25	Soil Analysis and Archaeology: Insights from the Pitt County Poor House
Lancaster, Jacob High Point University	Oral Session 3 Penn Garden Rm. 1:00- 1:15	The Importance of Formation in a Narrative: An Examination of NeoAristotelian Ethics and Its Correction of Kant
Lange, Emily Elon University	Oral Session 4 105 Gross Hall 2:50 - 3:05	“I’m Not Done. Not Yet”: The Interplay of Gender and Age in Linda Nagata’s “The Martian Obelisk”
Lankford, Bailey Summer Ventures in Science & Math- UNCC	Oral Session 1 318 Gross Hall 10:10 - 10:25	Impacts of Spectracide® on the Photosynthesis of Egeria densa and the Surrounding Concentrations of Dissolved Oxygen
Lanning, Jackie North Carolina State University	Oral Session 1 304B Gross Hall 9:50 - 10:05	Understanding Chronic Disease Data for Women: Race, Representation, and Reliable Differences
Lee, Michael Duke University	POSTER S1-48 Penn Pavilion 11:00-12:00	Type-I Interferon signaling is a critical regulator of pain
Lee, Brittany North Carolina State University	POSTER S3-61 Penn Pavilion 3:00-4:00	Environmental Risk Factors for Antimicrobial Resistant Campylobacter coli in Conventional and Antibiotic Free Swine Farms
Lee, Leonora Summer Ventures in Science & Math- AppState	Oral Session 3 100A Gross Hall 1:40 – 1:55	An Assessment of Water Chemistry and Macroinvertebrate Biodiversity at Ore Knob: EPA Superfund Project’s Impact
Lei, Elayna NCSchool of Science and Math	Oral Session 4 330 Gross Hall 2:50 - 3:05	Polysaccharides from Ganoderma lucidum as Novel Antibacterial and Antibiofilm Agents Against the Growth of Escherichia coli
Levin, Halden NC School of Science and Math	POSTER S3-14 Penn Pavilion 3:00-4:00	Single and Multiple Talker Acoustic Variation in Relation to Object Presence
Lewis, Emily Greensboro College	Oral Session 1 105 Gross Hall 10:10 - 10:25	Connections between Perfectionism and School Anxiety
Li, Annie NC School of Science and Math	POSTER S2-48 Penn Pavilion 1:30-2:30	Exploring low density lipoprotein receptor-related protein 1 (LRP1) levels in the brain after traumatic brain injury
Lillie, Caroline Central Piedmont Community College	POSTER S1-29 Penn Pavilion 11:00-12:00	Survey of pet owners’ perception of using cannabidiol (CBD) as alternative therapy for pets

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Student Presenter	Location	Project Title
Liu, Jingxuan Duke University	Oral Session 1 105 Gross Hall 9:30 - 9:45	Socio-emotional Predictors of Classroom Success in a Large, Lecture-Based Introductory Psychology Course
Lora Pena, Jose Central Piedmont Community College	POSTER S3-42 Penn Pavilion 3:00-4:00	The SPD19 Solar Powered Drone
Lorenzo, Kyle Benjamin North Carolina State University	POSTER S1-46 Penn Pavilion 11:00-12:00	Evaluation of Children's Forgiveness in Response to Social Exclusion in Intergroup Context
Lowe, Laura Chowan University	POSTER S3-33 Penn Pavilion 3:00-4:00	catching the Perfect Snowflake
Lupton, Lennon NC School of Science and Math	Oral Session 4 103 Gross Hall 2:50 - 3:05	The Genealogy of Abortion Bans and Anti-feminist Rhetoric in the United States
Luzader, David North Carolina Central University	POSTER S2-33 Penn Pavilion 1:30-2:30	An Analysis of Straight-Line Boundaries and Conflict in the Mideast Region.
Lyght, Elise University of North Carolina at Charlotte	POSTER S2-90 Penn Pavilion 1:30-2:30	Integrating Human Rights Education into K-12 Classrooms
Lyons, Sawyer High Point University	POSTER S2-40 Penn Pavilion 1:30-2:30	The neuroprotective potential of Cannabidiol in an in vitro model of peroxidase injury
Lytle, Aidan University of North Carolina at Greensboro	POSTER S2-4 Penn Pavilion 1:30-2:30	Understanding Discrete Mathematical Methods for Non-Flow Analysis in Heavy Ion Collision
MacKinnon, Nina Catawba College	POSTER S1-15 Penn Pavilion 11:00-12:00	Socioecological disparities across a North Carolina campus community
Maddaloni, Marina Campbell University	POSTER S3-66 Penn Pavilion 3:00-4:00	Developing Pedagogical Laboratory Experiments Illustrating Ceramic Glaze Chemistry
Malkov, Stepan NC School of Science and Math	POSTER S3-21 Penn Pavilion 3:00-4:00	Canonical Principal Component Analysis of Stock Returns for Robust Risk Factor Identification
Mantha, Rohit Queens University of Charlotte	POSTER S3-71 Penn Pavilion 3:00-4:00	Toxicity of Novel Lignin-Derived Ionic Liquids on E.coli strain 1A1
Mariskanish, Christine University of North Carolina at Asheville	Oral Session 2 324 Gross Hall 10:50 – 11:05	Genetic Assessment of Sochan (<i>Rudbeckia laciniata</i>) to Ensure Sustainable Harvest in National Parks
Martin, Mackenzie Catawba College	POSTER S1-14 Penn Pavilion 11:00-12:00	Recent Non-Native Arrival and Turtle Diversity in a Small NC Piedmont Ecological Preserve
Martinez, Kaijone' Barton College	POSTER S2-2 Penn Pavilion 1:30-2:30	Hemagglutinating Properties of Lipids
Mason, Harmony Catawba College	POSTER S1-38 Penn Pavilion 11:00-12:00	Bioaccumulation of mercury in fish stocks from the Catawba College campus
Matute, Daniel Gaston College	POSTER S3-22 Penn Pavilion 3:00-4:00	Tiny Earth (TE) and Antibiotic Resistance
Maynard, Tyler Chowan University	Oral Session 3 111 Gross Hall 1:20 - 1:35	The development of rock and roll as a music genre
Mays, Kimberly Gaston College	Oral Session 2 100C Gross Hall 11:10 – 11:25	Season-long betting line efficiency in college football
McClendon, Tonya North Carolina A&T State University	POSTER S2-111 Penn Pavilion 1:30-2:30	Aggie Access Redesign
McCourt, Alexandra University of North Carolina at Greensboro	POSTER S1-99 Penn Pavilion 11:00-12:00	#ChangeTheRhetoric: How Writing Centers Can Advocate Against Racist Rhetoric and Impact Outreach
McDiarmid, Catherine Appalachian State University	POSTER S3-83 Penn Pavilion 3:00-4:00	Designing for Crisis - A New Approach to Appropriate Interior Design Solutions for Climate Migrants
McKenzie, Brock North Carolina State University	POSTER S3-80 Penn Pavilion 3:00-4:00	The influence of driver experience on mind wandering frequency
McKeough, Riley University of North Carolina at Charlotte	Oral Session 4 147 Wellness Ctr. 2:30 - 2:45	Investigating the Distribution of Trehalose and Water in LAD Processed Samples Using Confocal Raman Spectroscopy

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McMurray, Marcus Catawba College	POSTER S3-15 Penn Pavilion 3:00-4:00	Parallels between climate-related opinion and behavior
Mettu, Meghana North Carolina State University	POSTER S2-51 Penn Pavilion 1:30-2:30	Misperceptions of Age: A Proposed Pathway for Racial Bias in the Classroom
Michaud, Noah Duke University	POSTER S3-101 Penn Pavilion 3:00-4:00	Mapping Social and Spatial Encounters in Eighteenth-Century Venice
Milind, Nikhil North Carolina State University	POSTER S2-18 Penn Pavilion 1:30-2:30	Transcriptomic Meta-Analysis of Lung Response in the Collaborative Cross
Miller, Aryeh University of North Carolina at Asheville	Oral Session 3 318 Gross Hall 1:00- 1:15	Phylogenomic Species Delimitation of West Indian Iguanas
Miller, Jaden Appalachian State University	POSTER S3-65 Penn Pavilion 3:00-4:00	Laser-Based Position Detection in Our Optical Tweezer Set
Minchew, Gailyn North Carolina Wesleyan College	POSTER S2-103 Penn Pavilion 1:30-2:30	Variability of <i>Eurycea guttolineata</i> (Three-lined Salamanders)
Monaco, Margaret North Carolina State University	POSTER S2-101 Penn Pavilion 1:30-2:30	Fabrication of a Bioresorbable Flexible Chemotherapeutic Drug-Releasing Textile Mesh
Moore, Shaniqua Fayetteville State University	POSTER S2-17 Penn Pavilion 1:30-2:30	Exploring student's Self-Identity and Self-Awareness through Art-Making
Morales-Gagnon, Nicolas North Carolina State University	POSTER S1-23 Penn Pavilion 11:00-12:00	Water-Borne Photodynamic Antimicrobial Polymeric Coatings
Morgan, Sabina North Carolina Central University	POSTER S2-86 Penn Pavilion 1:30-2:30	Protein Structure Based Drug Discovery for Human Melatonin Receptors
Mori, Monika North Carolina State University	POSTER S1-40 Penn Pavilion 11:00-12:00	Explaining Retention After the First Year of New College Freshmen using Social Factors
Morrison, Adam Catawba College	POSTER S2-38 Penn Pavilion 1:30-2:30	Turbidity in natural water supplies of the Fred Stanback Ecological Preserve
Mosesso, Heather East Carolina University	POSTER S3-23 Penn Pavilion 3:00-4:00	Post-Occupancy Evaluation on East Carolina University's Main Campus Student Center
Muller, Arianna Brevard College	POSTER S1-116 Penn Pavilion 11:00-12:00	Water quality in the tributaries of the French Broad River, North Carolina affecting the presence/ absence of <i>Cryptobranchus alleganiensis</i> .
Muller, Jordain Western Carolina University	POSTER S1-115 Penn Pavilion 11:00-12:00	Test of pH on the Phosphoglucose Isomerase Protein of <i>Staphylococcus aureus</i> , <i>Francisella tularensis</i> , and <i>Vibrio cholerae</i>
Mullis, Lauren North Carolina Central University	Exhibit Session Bryan Center 12:15-1:00	Convergence: A Model To Create New Pathways to Discovery and Invention using <i>Drosophila</i> Behavioural Genetics (DaBuGs) and Digital Fabrication
Munos, Viola University of North Carolina at Greensboro	POSTER S3-91 Penn Pavilion 3:00-4:00	Optimizing Graphene Transfers for Various Graphene Applications
Murphy, Demetria Fayetteville State University	POSTER S2-5 Penn Pavilion 1:30-2:30	Attitude, Perception and Knowledge Regarding prison Reform and the Systematic Design of Rehabilitation Among Social Work, Criminal justice, Sociology
Murray, David East Carolina University	POSTER S1-25 Penn Pavilion 11:00-12:00	Development of unnatural tryptophan sidechains to study biological PCET
Myers, Forrest Appalachian State University	POSTER S1-113 Penn Pavilion 11:00-12:00	Optical trapping of varying numbers of gold nanoshells
Nagalamadaka, Preeti NC School of Science and Math	Oral Session 3 330 Gross Hall 1:40 – 1:55	Quorum Quenching: Synergistic Effects of Plant-Derived Hormones on Biofilm Formation in <i>Vibrio harveyi</i>
Nandi, Ankita NC School of Science and Math	POSTER S1-95 Penn Pavilion 11:00-12:00	Tunable Multifunctional Rooftop Radiative Heating and Cooling for Building Efficiency
Narang, Ijay Summer Ventures in Science & Math-UNCW	Oral Session 4 147 Wellness Ctr. 3:10 - 3:25	Forecasting Stock Close Values and Generating Investment Strategies with a Mathematical Model
Netherton, Jonathan Brevard College	POSTER S2-49 Penn Pavilion 1:30-2:30	Physical properties in the tributaries of the French Broad, North Carolina affecting the presence/absence of <i>Cryptobranchus Alleganiensis</i>

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Nguyen, Taylor NC School of Science and Math	Oral Session 1 330 Gross Hall 9:50 - 10:05	Investigating the Relationship Between Histone Variants and Their Canonical Counterparts
Nguyen, Christopher NC School of Science and Math	Oral Session 1 318 Gross Hall 9:30 - 9:45	Using Vitamin C to Reduce Oxidative Stress from Doxorubicin Chemotherapeutic Treatment
O'Brien, Kimberly North Carolina State University	POSTER S3-59 Penn Pavilion 3:00-4:00	Responses of Crowned Lemurs (<i>Eulemur coronatus</i>) to a Novel Object Suggest that Females are Dominant
Okonkwo, M. University of North Carolina at Charlotte	Oral Session 3 304B Gross Hall 1:20 - 1:35	Estimating the Number of Adults with PrEP Indications in Mecklenburg County
Oldham, Alyssa Pfeiffer University	POSTER S3-4 Penn Pavilion 3:00-4:00	Sex Differences in Perceptions of Sexual Harassment
Osareh, Melika University of North Carolina at Greensboro	POSTER S1-87 Penn Pavilion 11:00-12:00	Analysis of Gravitropism in <i>Arabidopsis thaliana</i> Plants
Osworth, Kaitlyn Catawba College	POSTER S3-36 Penn Pavilion 3:00-4:00	Do Invasive Bradford Pear (<i>Pyrus calleryana</i>) Impact The Composition of Secondary Growth Floodplain Forest within the Fred Stanback Ecological Preserve
Owens, Judith Duke University	POSTER S1-76 Penn Pavilion 11:00-12:00	Toward the Development of a Membrane Protein Extraction Protocol for Energetics- and Mass Spectrometry-Based Methods for Protein Target Discovery
Ozbek, Yasemin North Carolina State University	POSTER S2-23 Penn Pavilion 1:30-2:30	Investigating the Effects of Growth Conditions & Post Growth Treatment on Titanium Oxide to Tune the Structural Properties to Induce Superconductivity
Paimagam, Akshra NC School of Science and Math	Oral Session 3 304B Gross Hall 1:00- 1:15	Effect of Prolactin on Expression of Calcium Regulatory Genes in Porcine Kidneys
Palmer, Jonathan North Carolina State University	POSTER S3-82 Penn Pavilion 3:00-4:00	Thionated Perinone Chromophores as Visible-Light Absorbing Triplet Sensitizers
Palos-Jasso, Andrea University of Mount Olive	Oral Session 4 324 Gross Hall 3:10 - 3:25	Using Tumor-Suppressant α -TOS to Modify Expression of Electron Transport Chain Complexes
Patel, Tulsi NC School of Science and Math	POSTER S1-35 Penn Pavilion 11:00-12:00	Comparison of the Immunogenicity of Bovine and Porcine Heparin
Patel, Mihir Duke University	POSTER S3-35 Penn Pavilion 3:00-4:00	Spreading HoPE: Helping patients and families access information about hospice through a web-based app
Pavone, Adrian North Carolina State University	POSTER S1-112 Penn Pavilion 11:00-12:00	Comparing Task Performance Between Audio and Text Instructions
Payne, John Pfeiffer University	POSTER S1-106 Penn Pavilion 11:00-12:00	The Smithsonian: The Man, the Development, and the Importance
Peterman, Samantha Duke University	POSTER S1-74 Penn Pavilion 11:00-12:00	Who's Better? Mom or Dad: Investigating the Impact of Parental Child-Directed Speech on Language Development
Peterson, Donovan Western Piedmont Community College	POSTER S1-71 Penn Pavilion 11:00-12:00	Comparison of Microbial Communities in Kombucha Tea and Black Tea
Phan, Trina National Institute of Environmental Health Sciences	POSTER S3-72 Penn Pavilion 3:00-4:00	Developing a Toolkit to Assess Pregnancy-Related Hypertensive Disorders in Mice
Phillips, Lia Appalachian State University	POSTER S3-32 Penn Pavilion 3:00-4:00	Spectroscopic Characterization of Functionalized Graphene Nanoplatelets
Phillips, Le'Hendria North Carolina A&T State University	POSTER S3-44 Penn Pavilion 3:00-4:00	Observations on Dairy management practices and the need for cybersecurity
Phykitt, Hannah Queens University of Charlotte	POSTER S1-110 Penn Pavilion 11:00-12:00	Synthesis of Novel Benzyl Ammonium Ionic Liquids from Guaiacol
Pierpoint, Matthew Duke University	POSTER S3-57 Penn Pavilion 3:00-4:00	Investigating the Effect of ATRX on STING Signaling in Soft Tissue Sarcoma
Pittman, Bridget North Carolina Central University	POSTER S2-25 Penn Pavilion 1:30-2:30	THE RELATIONSHIP BETWEEN GRADE POINT AVERAGE, BODY IMAGE, AND SELF-ESTEEM AMONG AFRICAN AMERICAN COLLEGE WOMEN

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Student Presenter	Location	Project Title
Pitts, Roosevelt Central Piedmont Community College	POSTER S2-31 Penn Pavilion 1:30-2:30	Building a Residential Dwelling
Planchock, Megan NC School of Science and Math	POSTER S3-97 Penn Pavilion 3:00-4:00	Verification of Artificial Intelligence Analyzing Nonlinear Fluids Using Proper Orthogonal Decomposition
Plumley, Alison North Carolina State University	POSTER S1-52 Penn Pavilion 11:00-12:00	Evaluating the Feasibility of Inter-cropping Industrial Hemp in Loblolly Pine Plantations
Poppenfuss, Samantha East Carolina University	POSTER S2-106 Penn Pavilion 1:30-2:30	Analysis of Methadone and EDDP for Neonatal Exposure in utero using Liquid Chromatography/Mass Spectrometry
Pospistle, Amber NC School of Science and Math	POSTER S1-78 Penn Pavilion 11:00-12:00	Impact of the D1 Dopamine Receptor on Zebrafish Social Hierarchy and Motor Circuits
Pujals, Matthew Catawba College	POSTER S1-37 Penn Pavilion 11:00-12:00	Fish Species Diversity
Qu, Rachel NC School of Science and Math	Oral Session 4 304B Gross Hall 2:30 - 2:45	Modeling the effect of chemically modified non-antibiotic tetracyclines with β -amyloid fibrils to treat Alzheimer's Disease
Quintero, Julian East Carolina University	POSTER S1-55 Penn Pavilion 11:00-12:00	Acoustic Transmission Loss in Complex Outdoor Environments
Ramos, Riko University of North Carolina at Pembroke	Oral Session 3 330 Gross Hall 1:20 - 1:35	Study on Growth and Expressed Extracellular & Intracellular Proteins of <i>Photobacterium luminescens</i> in a 2L Bioreactor using different Carbohydrates
Rao, Suraj NC School of Science and Math	Oral Session 1 355 Gross Hall 9:50 - 10:05	Computational Analysis of Nonpeptide Small Molecules as Potent Inhibitors of Insulin-like Growth Factor Binding Protein 3
Rashad, Layla Fayetteville State University	POSTER S2-26 Penn Pavilion 1:30-2:30	Peptide Binding Predictions Using Gaussian Process Regression, Linear Regression, and Support Vector Regression
Ratanaphrucks, Ana North Carolina State University	POSTER S2-61 Penn Pavilion 1:30-2:30	Get a Grip: Creating Soft Robotic Grippers via Self-folding by Infrared Activation
Reas, Julianne North Carolina State University	POSTER S3-29 Penn Pavilion 3:00-4:00	Developing and Evaluating a Camera-trap Method for Visitor Use Monitoring in the Galapagos Islands
Reckord, Jackson East Carolina University	Oral Session 2 103 Gross Hall 11:10 - 11:25	Fourth Industrial Revolution and its Impact on Hazardous Waste Management.
Redford, Timothy University of North Carolina at Charlotte	Oral Session 3 100C Gross Hall 1:00- 1:15	A benchmark study of using visual attention allocation to enhance adaptive image compression
Rees, Madeline University of North Carolina at Greensboro	Oral Session 3 105 Gross Hall 1:20 - 1:35	Factors Controlling the Mechanisms of Eating Behavior in Mammals
Reeves, Katherine NC School of Science and Math	Oral Session 3 324 Gross Hall 1:20 - 1:35	The Effect of Passionflower and Edelfosine on Apoptosis in <i>C. elegans</i>
Renteria-Rios, Brandon Guilford Technical Community College	POSTER S1-98 Penn Pavilion 11:00-12:00	Plastic in Our Roads: Does it Work?
Reyna Romero, Yeimi Catawba College	POSTER S3-102 Penn Pavilion 3:00-4:00	Ways Athletic Trainers Incorporate Health Information Technology in their Profession
Robbins, Peter Campbell University	Oral Session 4 330 Gross Hall 3:10 - 3:25	Stereoselective synthesis of non-natural products by thiamine diphosphate-dependent enzymes
Robinette, McKayla Brevard College	POSTER S1-83 Penn Pavilion 11:00-12:00	Bridging the Information Gap Between Beginning and Experienced Farmers
Robinson, Taylor Queens University of Charlotte	Oral Session 3 111 Gross Hall 1:40 - 1:55	Discrepancies in Hysteria: A Comparative Analysis of Depictions of 'Acute Hysteria' in British Women from 1838 to 1912
Robinson, Neena Central Piedmont Community College	POSTER S2-44 Penn Pavilion 1:30-2:30	How evidence such as latent fingerprints, shoe prints, blood spatter and ink chromatography can help solve crimes?
Robinson, Will Appalachian State University	POSTER S3-84 Penn Pavilion 3:00-4:00	Benefit-Cost Analysis of Rocky Knob Mountain Bike Park
Roddey, Caroline Davidson College	POSTER S3-5 Penn Pavilion 3:00-4:00	"Year(s) of the Woman": Gender Performance in Gender-Salient Election Years

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Student Presenter	Location	Project Title
Rodney, Paloma Duke University	POSTER S2-102 Penn Pavilion 1:30-2:30	Political History of Prisons: The Architecture of People in Raleigh's Central Penitentiary
Rodriguez, Christina Fayetteville State University	POSTER S2-104 Penn Pavilion 1:30-2:30	Improving Flood Prediction by Information Fusing
Rojas Gonzalez, Betsabe Graciela University of North Carolina at Charlotte	POSTER S1-3 Penn Pavilion 11:00-12:00	Investigating How Undocumented Immigrants Report and Pursue Legal Action for Domestic Violence
Roman, Marieli Barton College	POSTER S2-19 Penn Pavilion 1:30-2:30	Generation of Electricity From Wastewater Using Microbial Fuel Cells
Rork, Kerry Duke University	Oral Session 1 111 Gross Hall 9:50 - 10:05	Women in Art History: Representation and Characterization
Rosado, TineshaLee University of North Carolina at Pembroke	Oral Session 4 304B Gross Hall 2:50 - 3:05	Young women's attitudes towards hospital and out-of-hospital births
Ruiz Rabadan, Renata North Carolina A&T State University	POSTER S2-79 Penn Pavilion 1:30-2:30	Food Consumption in Relationship with Family Type
Salswath Cadena, Iris North Carolina State University	POSTER S3-64 Penn Pavilion 3:00-4:00	Developing Organoids from Primary Tissue to Screen for Hypospadias-Inducing Chemicals
Sampath, Nithya NC School of Science and Math	POSTER S1-20 Penn Pavilion 11:00-12:00	Differences in Reliability and Predictability of Harvested Energy from Battery-less Intermittently Powered Systems
Sams, Semiyah East Carolina University	POSTER S3-92 Penn Pavilion 3:00-4:00	Making sense of the breast cancer screening process: Exploring imaging technologists' experiences
Sandate, Sarah Catawba College	POSTER S2-88 Penn Pavilion 1:30-2:30	Competene Levels in Novice Athletic Trainers when Using Health Information Technology
Sanders, Isaiah Chowan University	POSTER S1-58 Penn Pavilion 11:00-12:00	Characterizing Candidate Loci for Local Adaptation in Speckled Trout (Cynoscion Nebulosus) Populations along the U.S. East Coast
Sandoval, Claudia NC School of Science and Math	POSTER S2-42 Penn Pavilion 1:30-2:30	Gulf of Mexico Ecosystem Service Logic Models & Socio-Economic Indicators
Santoki, Aditya Duke University	POSTER S1-101 Penn Pavilion 11:00-12:00	How Does Loss of Huntingtin Lead to Striatal Neuron Cell Death?
Santos-Villalobos, Briany Central Piedmont Community College	Oral Session 2 318 Gross Hall 10:50 – 11:05	Using Antimicrobial Filters to Reduce the Number of Bacteria Dispersed by Public Hand Dryers
Sanyal, Aabir NC School of Science and Math	POSTER S3-51 Penn Pavilion 3:00-4:00	Sneakers and the Art of Resale
Savage, Kimberly University of North Carolina at Charlotte	POSTER S2-1 Penn Pavilion 1:30-2:30	Government Sponsored Housing Rehabilitation in Historic Washington Heights
Savage, Elaina North Carolina State University	POSTER S2-63 Penn Pavilion 1:30-2:30	Differences in Bold Personality Traits between Captive Male and Female Coquerel's Sifakas (Propithecus coquereli)
Scharinger, Nico Catawba College	POSTER S3-11 Penn Pavilion 3:00-4:00	Morphological Differences of Feral and Domestic Cats in Madagascar
Schwartz, Michael Summer Ventures in Science & Math-UNCW	Oral Session 2 318 Gross Hall 10:30 - 10:45	Differences in Physical Activity of Young North Carolinians Based on Perceived Versus Objective Neighborhood Walkability
Segal-Miller, Dalia North Carolina School of Science and Math	Oral Session 4 100A Gross Hall 3:10 - 3:25	Consequences of Heat Stress and Zinc Oxide Nanoparticle Exposure on Growth and Development of Manduca sexta Larvae
Seshadri, Pratyush NC School of Science and Math	Oral Session 3 147 Wellness Ctr. 1:00- 1:15	An Analysis of Global Economic Indicators
Sexton, Parker Summer Ventures in Science & Math-ECU	Oral Session 2 103 Gross Hall 10:30 - 10:45	Haptic Biofeedback: Improving the Accessible, 3D Printed Prosthetic Hand
Shahani, Marjan University of North Carolina at Charlotte	POSTER S1-24 Penn Pavilion 11:00-12:00	Synthesis and Characterization of New Silver Thione Complexes

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Student Presenter	Location	Project Title
Sharma, Annika Duke University	POSTER S2-24 Penn Pavilion 1:30-2:30	Oxytocin's behavioral role and neuroanatomical correlates in monogamous and promiscuous Eulemur
Sherman, Katie Catawba College	POSTER S3-103 Penn Pavilion 3:00-4:00	Health information Technology Abstract
Shook, Evan North Carolina State University	POSTER S2-83 Penn Pavilion 1:30-2:30	The Status Quo of Flow: AUTOMATION OF MICROFLUIDIC FLOW REACTORS FOR THE CHARACTERIZATION OF ORGANIC SYNTHESIS
Simon, Brennan Duke University	POSTER S1-28 Penn Pavilion 11:00-12:00	Identifying ABL-Dependent Transcriptional Networks in Lung Cancer Brain Metastasis
Skigen, Jacob North Carolina State University	POSTER S1-94 Penn Pavilion 11:00-12:00	Evaluation of Maximum Moments Generated about the Knee During Standing Squats for Cybathlon 2020 Competition
Slaughter, Matthew North Carolina State University	POSTER S1-57 Penn Pavilion 11:00-12:00	Modeling Health Impacts of O3 and PM2.5 using the BenMAP-CE Tool Under Future Climate and Emission Change Scenarios
Smith, Samantha Meredith College	POSTER S1-45 Penn Pavilion 11:00-12:00	Effectiveness of Insecticide Treated Nets in Preventing Malaria in Sub-Saharan Africa
Smith, Jaily North Carolina Central University	POSTER S1-61 Penn Pavilion 11:00-12:00	Detection of Circulating Tumor Cells as They Correlate to the Extracellular Matrix of Triple Negative Breast Cancer Tumors
Smith, Katelin Appalachian State University	Oral Session 3 103 Gross Hall 1:00- 1:15	Exploring why women use #metoo to share personal experiences of sexual assault: a qualitative descriptive study
Smith, Jessica North Carolina A&T State University	POSTER S2-82 Penn Pavilion 1:30-2:30	Differential Direct Microscopic Somatic Cell Counts in milk from dairy cows and St Croix Sheep
Snare, Kayla University of North Carolina at Chapel Hill	Oral Session 1 330 Gross Hall 9:30 - 9:45	Inhibition of WEE1 and ERK causes synergistic inhibition of pancreatic cancer growth
Sprouse, Tyler Gaston College	POSTER S2-28 Penn Pavilion 1:30-2:30	Isolation and identification of environmental bacteria and hazards in the Catawba river basin
Steele, Evan NC School of Science and Math	Oral Session 3 304B Gross Hall 1:40 – 1:55	Examining the Efficacy of a Bombyx mori Diabetic Model with Dietary Fiber
Steinruecke, Felix Duke University	POSTER S2-7 Penn Pavilion 1:30-2:30	Regulation of SLC7A11 (System xCT) by Tyrosine Kinases
Steude, Emma North Carolina School of Science and Math	Oral Session 2 304B Gross Hall 11:10 – 11:25	Synthesis of a Tau Aggregation Inhibitor in Relation to Alzheimer's Disease
Stokes, Ruthie North Carolina Central University	POSTER S1-65 Penn Pavilion 11:00-12:00	Injectable Thermoresponsive Hydrogel Degradation Study
Story, Stephanie North Carolina State University	POSTER S2-62 Penn Pavilion 1:30-2:30	Responses of captive aye-aye lemurs (Daubentonia madagascariensis) to a blue object suggest nocturnal color vision
Styers, Hannah North Carolina State University	POSTER S1-7 Penn Pavilion 11:00-12:00	Extracellular Availability of Lactate and Glucose Scales with Electrical Stimulation of the Dopaminergic Midbrain
Suggs, Jack NC School of Science and Math	POSTER S2-41 Penn Pavilion 1:30-2:30	Impacts of Flooding on Wilson Creek at the Edgemont Fishing Club in the Southern Appalachians
Taggart, Mackenzie Chowan University	Oral Session 4 148 Wellness Ctr. 3:10 - 3:25	Don't "Date" Yourself
Tandri, Manasa NC School of Science and Math	Oral Session 1 304B Gross Hall 9:50 - 10:05	Correlation between arterial stiffness and aerobic fitness in adolescent boys and girls
Taylor, Tatianna North Carolina Central University	POSTER S2-47 Penn Pavilion 1:30-2:30	Effects of BPA and its Analogues on ERα36 Regulation of Mitochondria-Specific and Mitochondria-Related Gene Expression in Human Uterine Fibroid Cells
Taylor, Ravonda North Carolina Central University	POSTER S1-92 Penn Pavilion 11:00-12:00	The Association between self-esteem and the type of sexual relationships one was involved in during adolescent and before marriage.
Teague, Barbara Meredith College	Oral Session 1 324 Gross Hall 9:30 - 9:45	Crayfish and their microscopic critters: crayfish symbiont response to invasion within the Chetco River System southwestern Oregon
Teixeira, Chynna Johnson C. Smith University	POSTER S2-76 Penn Pavilion 1:30-2:30	Learning about sickle cell disease (SCD): A thematic analysis of popular SCD websites
Tennant, Alexis Meredith College	POSTER S1-2 Penn Pavilion 11:00-12:00	Impact of School Dress Codes on Adolescent Identity Development

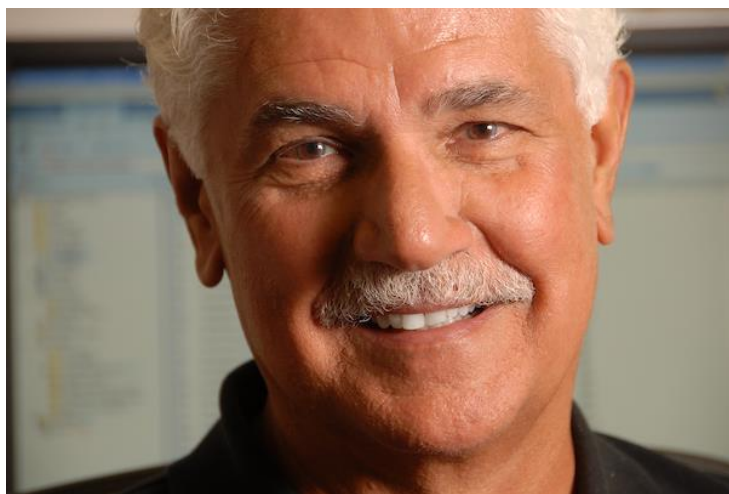
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Student Presenter	Location	Project Title
Thomas, Raegan High Point University	Oral Session 4 105 Gross Hall 3:10 - 3:25	Deconstructing the Peter Pan/Captain Hook Binary
Thomas, Sherman Catawba College	POSTER S2-34 Penn Pavilion 1:30-2:30	Roadkill in Ankarafantsika National Park, Madagascar
Thomas, Cheryl Chowan University	Oral Session 3 324 Gross Hall 1:00- 1:15	AQUEOUS EXPOSURE TO PLANT STEROID, BETA-SITOSTEROL, MASCULINIZES FEMALE GAMBUSIA HOLBROOKI
Thomas, Jamilah North Carolina Central University	POSTER S3-85 Penn Pavilion 3:00-4:00	The Epidemic of Mass Incarceration
Thomas, Jordan North Carolina Central University	Oral Session 1 103 Gross Hall 9:50 - 10:05	The Ongoing Genocide of Blacks in America.
Thompson, Princess Middle College at UNCG	POSTER S3-19 Penn Pavilion 3:00-4:00	Possible Methods to Make Cost-Effective Algae Bio-fuel vs Low Cost Petroleum-Based Fuel
Thornburg, Benjamin University of North Carolina at Greensboro	Oral Session 4 Penn Garden Rm. 2:50 - 3:05	Estimating Joint and Single State Utilities in Alcohol Use Disorders
Tran, Michael Duke University	POSTER S2-21 Penn Pavilion 1:30-2:30	Elucidating the role of host Aquaporin-3 during apicomplexan infection
Tran, Allison University of North Carolina at Charlotte	Oral Session 2 330 Gross Hall 10:30 - 10:45	Broccoli Fluorets: Split Aptamers as a User-Friendly Fluorescent Toolkit for Dynamic RNA Nanotechnology
Tripp, Tyler Appalachian State University	Oral Session 1 100A Gross Hall 9:50 - 10:05	Low Cost UFSOOK-Based OCC Link for IoT Applications
Tripp, Madeline East Carolina University	POSTER S2-108 Penn Pavilion 1:30-2:30	Farm to Clinic: Connecting the Gap Between Food Waste and Food Insecurity in Eastern NC
Trovato, Nicholas Catawba College	Exhibit Session Bryan Center 12:15-1:00	Dirofilaria in Mosquito Vectors: Is Catawba College Populace at Risk from Dirofilaria?
Troyer, Sophie University of North Carolina at Chapel Hill	POSTER S1-18 Penn Pavilion 11:00-12:00	Molecular and Mucin-Binding Characteristics of Innate Lung Protein LPLUNC1
Truong, Nguyen University of North Carolina at Charlotte	Oral Session 3 324 Gross Hall 1:40 – 1:55	Toll-Like Receptor-Mediated Recognition of Nucleic Acid Nanoparticles (NANPs) in Human Primary Blood Cells
Tucker, Riley Catawba College	POSTER S2-15 Penn Pavilion 1:30-2:30	Comparative distribution and abundance of squirrel nesting sites between large and small protected areas in the North Carolina Piedmont
Tucker, Faith Catawba College	POSTER S3-34 Penn Pavilion 3:00-4:00	Fertilizers in Water Bodies on Catawba's Ecological Preserve
Turturici, Alexis NC School of Science and Math	Oral Session 2 111 Gross Hall 10:50 – 11:05	Modification of Polymeric Carbon Nitride Films for Increased Photoelectric Density
Tysinger, LaMiah North Carolina A&T State University	POSTER S1-66 Penn Pavilion 11:00-12:00	Measurement of Working Memory Capability of People with Visual Impairments
Underwood, Benjamin Appalachian State University	Exhibit Session Bryan Center 12:15-1:00	IoT-Based Temperature/Humidity Monitoring System Using ThingsBoard
Upright, Macayla Catawba College	Oral Session 4 318 Gross Hall 2:30 - 2:45	Subspecies status of a disjunct population of Black-throated Green Warbler (<i>Setophaga virens</i>)
Van Gorder, Elizabeth University of North Carolina at Chapel Hill	POSTER S1-73 Penn Pavilion 11:00-12:00	Oxidative Stress and Apoptosis in Neural Crest Cells: Implications for Bosma Arhinia Microphthalmia Syndrome
VanRiper, Owen East Carolina University	Oral Session 4 100C Gross Hall 3:10 - 3:25	Alternate Energy Substitution Dynamics Using a Generalized Logistic Growth Model
Varju, Vince North Carolina State University	POSTER S2-43 Penn Pavilion 1:30-2:30	Analysis and Influence of Embedded Temperature Sensors on Thermal Profiles and Comfort on a Garment Platform
Vega-Bernal, Henri Nash Community College	POSTER S3-67 Penn Pavilion 3:00-4:00	Insights into the Evolutionary History of the Seepage Salamanders (<i>Desmognathus aeneus</i>) : Comparing Genomic and Mitochondrial Data Sets
Vege, Venkat Duke University	Oral Session 1 100C Gross Hall 9:30 - 9:45	Identification of Allosteric Nanobodies for the Carvedilol bound β -2 Adrenergic Receptor

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Student Presenter	Location	Project Title
Verbrugge, Isobel Catawba College	POSTER S2-11 Penn Pavilion 1:30-2:30	Human Impact on Soil Bacteria Biodiversity on Campus
Wacker, Ethan Central Piedmont Community College	Oral Session 2 100C Gross Hall 10:30 - 10:45	Secure Chat Room
Walker, Katherine North Carolina State University	POSTER S1-107 Penn Pavilion 11:00-12:00	Literature Review on the Effectiveness of VR Training for Laparoscopic Surgery
Wallace, Hailey North Carolina State University	POSTER S2-105 Penn Pavilion 1:30-2:30	Characterizing DTT-induced BSA aggregate intermediates by atomic force microscopy.
Walser, Stephen High Point University	POSTER S2-89 Penn Pavilion 1:30-2:30	Updates from the EREBOS Project: the First Deeply-Eclipsing Hot Subdwarf Binary
Wang, Rose NC School of Science and Math	POSTER S3-6 Penn Pavilion 3:00-4:00	Race and Income Disparities in Pollution's Effect on Respiratory Disease Severity Using Aggregate ICEES Data
Ward, Joy Queens University of Charlotte	Oral Session 2 100A Gross Hall 10:50 – 11:05	Monitoring Urban Lands Using UAV imagery in Charlotte, NC: A Pilot Study
Ward, Forrest Appalachian State University	POSTER S1-82 Penn Pavilion 11:00-12:00	Measurements of the Humidity Dependence of Atmospheric Aerosol Light Scattering from a Background SE U.S. Site
Ware, Abigail East Carolina University	POSTER S2-55 Penn Pavilion 1:30-2:30	Examining Types of Abuse as Risk Factors for Postpartum Depression
Warner, Cailin Montreat College	POSTER S2-20 Penn Pavilion 1:30-2:30	Ecology of an Insular Population of American Alligators on Seabrook Island, SC
Warnock, Taylor Appalachian State University	POSTER S2-66 Penn Pavilion 1:30-2:30	Laser Tweezer Raman Spectroscopy (LTRS)
Watkins, Natalie North Carolina State University	POSTER S1-41 Penn Pavilion 11:00-12:00	Inactivation of Tulane Virus via Ultraviolet C Hand Sanitizing Device
Watson, Jayla Guilford Technical Community College	POSTER S1-97 Penn Pavilion 11:00-12:00	Stem Cell Therapy
Welch, Meredith Meredith College	POSTER S2-69 Penn Pavilion 1:30-2:30	Environmental Drivers of Infectious Disease Emergence in Brazil 2007-2017
Welch, Laylah High Point University	Oral Session 4 318 Gross Hall 3:10 - 3:25	A Survey of Parasites in the Marmota monax of Eastern North Carolina
Wellington, Neysa Fayetteville State University	Exhibit Session Bryan Center 12:15-1:00	The Negro Element
Wen, Melody NC School of Science and Math	POSTER S3-95 Penn Pavilion 3:00-4:00	Tools for Decision Making in Baseball based on a Markov Chain Model
Werner, Jack North Carolina State University	POSTER S1-47 Penn Pavilion 11:00-12:00	Expeditionary Logistics Analysis for Decision Support
Westbrook, Brenden Catawba College	POSTER S1-39 Penn Pavilion 11:00-12:00	Foraging Change depending on Water Levels
Wheeler, Mackenzie East Carolina University	POSTER S3-27 Penn Pavilion 3:00-4:00	Mechanical Failure of Human Fetal Membrane Tissues in Premature Birth
White, Ashley University of North Carolina at Asheville	Oral Session 2 304B Gross Hall 10:30 - 10:45	Glucuronidation of Mono(n-butyl)phthalate by UGT Isoenzymes and Potential Inhibition by Naproxen
White, Brianna Pfeiffer University	Oral Session 4 103 Gross Hall 3:10 - 3:25	Is There A Correlation Between Height and Temperament?
Williams, Keegen Catawba College	Oral Session 3 100A Gross Hall 1:20 - 1:35	Effects of Fire on Forest Cover in Ankarafantsika National Park, Madagascar
Williams, Jennifer Fayetteville State University	POSTER S2-32 Penn Pavilion 1:30-2:30	The Psychological Effects of Minor Children with Incarcerated Parents
Williams, Jonathan Gaston College	POSTER S3-63 Penn Pavilion 3:00-4:00	How Variance in Soil pH and Calcium Composition Affects Biodiversity and Genetic Makeup of Mollusca Gastropoda (Land Snails).
Willis, Sara University of North Carolina at Wilmington	POSTER S1-93 Penn Pavilion 11:00-12:00	Innovative Culture Methods for Isolating Antibiotic-Producing Bacteria from Unique Environments in Southeastern North Carolina

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Student Presenter	Location	Project Title
Wilson, Andrea Fayetteville State University	POSTER S2-16 Penn Pavilion 1:30-2:30	Characterization of Polymer Composites Fibers Using Biological Cellulose with Banana Slurry Feedstock
Winkler, Anna Gaston College	POSTER S3-70 Penn Pavilion 3:00-4:00	Earthworm Species Ratio and the Changing Environment
Winz, Ryan North Carolina State University	POSTER S3-40 Penn Pavilion 3:00-4:00	Readiness Versus Cost Tradeoffs for Additive Manufacturing Within a Spare Part Supply Chain
Wong, Michelle Duke University	Oral Session 4 111 Gross Hall 2:50 - 3:05	Metaphors to Teach and Learn by: Metaphorical Lay Theories in Education and Implications for Student Behaviors
Wood, Robert University of North Carolina at Charlotte	POSTER S2-3 Penn Pavilion 1:30-2:30	Crisis for the University Student: Changing Rents and Growing Campuses
Xiao, Shuyun Duke University	POSTER S1-88 Penn Pavilion 11:00-12:00	The role of extended amygdala neurons in mammalian vocalization
Yang, Hongjian North Carolina State University	POSTER S1-86 Penn Pavilion 11:00-12:00	Quick Detection of Ineffective Student Behavior during Test
Ye, Jennifer NC School of Science and Math	Oral Session 4 100C Gross Hall 2:50 - 3:05	Acoustic hydrodynamic tweezers via spatial superposition of vortexes
Zareiesfandabadi, Parsa North Carolina State University	Oral Session 4 147 Wellness Ctr. 2:50 - 3:05	Laser Ablation of Microtubules in Fission Yeast Mitotic Spindles
Zefri, Yasmine University of North Carolina at Chapel Hill	POSTER S3-30 Penn Pavilion 3:00-4:00	Detecting Double Nuclei in Galaxies Using Convolutional Neural Networks
Zhao, Megan Duke University	Oral Session 1 330 Gross Hall 10:10 - 10:25	Inhibition of NUA2 induces lipotoxicity in prostate cancer cells in vitro
Zhu, Cindy NCSchool of Science and Math	POSTER S1-104 Penn Pavilion 11:00-12:00	Emotional Processing and Working memory in Schizophrenia with Neutral and Negative stimulus: A fMRI study

Barthalmus Award

Dr. George T. Barthalmus (1942-2011) was the driving force behind the creation of the State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS). In his 37 years at NC State, he had a passion for encouraging undergraduates to pursue their interests through the process of research, be it in the sciences, humanities, or through artistic expression. He was an advocate for early involvement of students in the research process as a way to engage and retain students in academics.



To this end the George Barthalmus Undergraduate Research Awards have been developed to promote early involvement in the research process through support of sophomores in a research project of their design. These awards are designed to assist students with development and engagement in undergraduate research. Students from all disciplines are invited to apply for the awards. The winners of the grant will present their research at the next Annual SNCURCS event in 2020.

Award Recipients

The following students received the 2019-20 George Barthalmus Undergraduate Research Award:

Name	Institution	Topic
Rishi Dasgupta	Duke University	Global Health Economics
Amaya Jackson	North Carolina Central University	Biology/Psychology
Lindsey Aubuchon	UNC Wilmington	Biochemistry
Alexis Williamson	Chowan University	Literature
Katherine Dezarn	UNC Greensboro	Chemistry

Multiple Abstract Submissions

Appalachian State University	24	Methodist University	4
Barton College	3	North Carolina A&T State University	17
Brevard College	4	North Carolina Central University	25
Campbell University	12	North Carolina School of Science And Math	59
Catawba College	49	North Carolina State University	73
Central Piedmont Community College	11	Other Institutions (listed below)	15
Chowan University	17	Pfeiffer University	7
Duke University	27	Queens University Of Charlotte	7
East Carolina University	18	Summer Ventures in Science and Math (App State, UNC-C, UNC-W, ECU)	10
North Carolina Central University	4	UNC Asheville	4
Fayetteville State University	12	UNC Chapel Hill	10
Gaston College	6	UNC Charlotte	23
Greensboro College	2	UNC Greensboro	14
Guilford Tech Community College	2	UNC Pembroke	3
High Point University	15	UNC Wilmington	6
Johnson C. Smith University	4	Western Carolina University	7
Meredith College	8		

Single Abstract Submissions

Carrboro High School, Davidson College, Elizabeth City State University, Elon University, Guilford College, Middle College at UNCG, Montreat College, Nash Community College, North Carolina Wesleyan College, Triangle Math and Science Academy, University of Mount Olive, Western Piedmont Community College, William G Enloe High School, William Peace University, Wingate University.

SNCURCS 2019 Hosts

SNCURCS is hosted by a different private or public campus each year. Learn how these institutions support students in their engagement in research and creative works.

Duke University

The mission of Duke University is to provide a superior liberal education to undergraduate students, attending not only to their intellectual growth but also to their development as adults committed to high ethical standards and full participation as leaders in their communities; to prepare future members of the learned professions for lives of skilled and ethical service by providing excellent graduate and professional education; to advance the frontiers of knowledge and contribute boldly to the international community of scholarship; to promote an intellectual environment built on a commitment to free and open inquiry; to help those who suffer, cure disease, and promote health, through sophisticated medical research and thoughtful patient care; to provide wide ranging educational opportunities, on and beyond our campuses, for traditional students, active professionals and life-long learners using the power of information technologies; and to promote a deep appreciation for the range of human difference and potential, a sense of the obligations and rewards of citizenship, and a commitment to learning, freedom and truth.

Duke University Undergraduate Research Support Office

The Undergraduate Research Support Office (URS) promotes and supports undergraduate research experiences at Duke, supporting Duke's mission as renowned research institution. URS facilitates these transformative experiences through providing semester and summer grants, assistantship funding, travel to research conferences, and it sponsors the Biological Summer Research Fellowship program. In addition, the URS office provides workshops and information sessions throughout the year and hosts the Visible Thinking Symposium showcasing undergraduate research projects to the larger Duke and Durham communities.

Duke University Global Health Initiative: Bass Connections Global Health

We seek to achieve health equity for vulnerable groups and individuals around the world through: **Education and Training:** We prepare global health leaders through world-leading interdisciplinary education, including programs for undergraduate, master's, medical and doctoral students, and postdoctoral researchers. **Research and Discovery:** We seek innovative solutions the world's most pressing global health challenges by conducting research, designing policies and implementing evidence-based interventions. **Global Partnership and Engagement:** We work for change by engaging international and local organizations in locally grounded, collaborative projects

Duke University Global Education Office

Duke's Global Education Office (GEO) offers international and U.S.-based study away opportunities that grant academic credit while expanding undergraduates' intercultural awareness and global engagement. GEO manages a portfolio of 43 Duke-administered semester and summer study away programs directly involving Duke faculty, and liaises with universities and providers for over 130 external programs approved for transfer credit. A proponent of high-impact educational practices, GEO has a growing catalogue of opportunities in which students can gain field-based, directed research experience during their time abroad.

North Carolina School of Science and Mathematics

North Carolina School of Science and Mathematics is a world-class public high school with statewide reach empowering students with the skills and knowledge to design their own future. Specializing in science, technology, engineering, and math, we challenge talented high school juniors and seniors from across North Carolina through a residential program on our historic campus in Durham -- and beginning in 2021, on our second campus being built in Morganton. Our extensive online program and summer offerings extend our impact to every corner of the state and to younger students. We give back to our communities through the time, talents, and resources of our world-class educators, dedicated staff, and students. Founded in 1980 as the first of its kind, NCSSM has become the model for 18 such specialized schools around the globe. Our 11,000-plus alumni include local and global leaders in medicine, technology, commerce, education, and the arts, a community of problem solvers who build a brighter future.

NCSSM Research and Innovation

North Carolina School of Science and Mathematics (NCSSM) engages students across North Carolina as Thinkers, Makers, and Doers in an experience that requires the application of knowledge and skills to address challenges in the world beyond the classroom. More than 80% of NCSSM graduates engage in research and innovation through a NCSSM course or program. The possibilities to engage in research abound in any field of interest from STEM to humanities and the range of opportunities beyond research continues to expand. Research courses at NCSSM provide students with a range of experiences working with faculty on campus, or as part of our Mentorship Program which connects students to opportunities with faculty and professionals at corporations or major research universities (Duke University, the University of North Carolina [UNC] Chapel Hill, North Carolina State University, North Carolina Central University).

Students have options to complete individual research with NCSSM faculty, complete research within courses, or as part of the Summer Research & Innovation Program which serves more than 175 rising seniors each year. Students continue to win prestigious research awards at the International Science and Engineering Fair, Regeneron Science Talent Search, and BioGENEius. NCSSM also supports 200 high school students from around the state each year completing a research experience at UNC-Charlotte, Appalachian State, East Carolina University, and UNC Wilmington through the Summer Ventures in Science and Mathematics Program.

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- NC School of Science and Mathematics

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- Dr. Sarah Russell, Director, Duke Office of Undergraduate Research Support Office
- McCall Calloway, Duke Office of Undergraduate Research Support Office
- Lysa MacKeen, Assistant Director of Experiential Learning, Bass Connections Global Health
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- Dr. Sarah Shoemaker, Director of Mentorship and Research
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Dynamic Map of Duke University

You can access a dynamic map of Duke University below or at maps.duke.edu. Gross Hall is at the intersection of Towerview Dr. and Science Drive. The Chemistry Parking Lot is at the intersection of Circuit Drive and Towerview Drive.

Google Maps Plus Codes are listed for each location. Enter at maps.google.com

- Gross Hall: Registration and Presentations | **2324+G4**
- Duke Student Wellness Center (adjacent to Penn Pavilion): Presentations | **X3X5+V9**
- Penn Pavilion: Poster Sessions | **2325+3M**
- Bryan Center: Dining, Vendors, and Creative Exhibits | **2325+CH**
- Brodhead Center: Dining | **2326+97**



Gross Hall Third Floor

★ = SNCURCS Presentation Rooms



Gross Hall First Floor

To Chemistry and Circuit Parking Lot

To Bryan Center and Bryan Lot



To Chemistry Parking Lot

★ = SNCURCS Presentation Rooms

To Penn Pavilion and Student Wellness Center

Towerview Drive



WiFi Access

Guest Network Connection

1. Open your network preferences and look for a network called "DukeVisitor," which should be available to you across campus. Select this network.
2. Open a browser. You should see the "welcome" message pertaining to the visitor network.
3. Click Continue to connect to your normal start page.
4. Note that the network cuts you off automatically after an hour of inactivity.

Eduroam Network Connection

Visitors to Duke from other Eduroam participating institutions can use their credentials from their home institution to log in to Eduroam while at Duke. You do not need to register as a guest or obtain any Duke credentials in order to use Eduroam.

Still have questions? Visit: launch.dukeblue.duke.edu/