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URSCO Newsletter

UNCG Undergraduate Research, Scholarship and
Creativity Office | Spring 2022



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Undergraduate
Research, Scholarship
and Creativity Office

16th Annual Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo

This year, the 16th Annual Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo was hosted virtually for the third year in a row, due to COVID-19. The Expo ran from April 18th, 2022 to April 22, 2022, during Undergraduate Research Week. We were thrilled to host 165 presentations by more than 206 students, working with 92 mentors, and representing 27 academic departments/programs.



The Virtual Expo Book is linked [here](#)

The Virtual Art Exhibit is linked [here](#)



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Undergraduate
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2022 Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo Award Winners

Business, Education, Social and Behavioral Sciences

1st Place:

Maegan Ferguson (Anthropology, Junior)

Mentor: Charles Egeland (Anthropology)

A Comparative Study of Agonistic and Affiliative Behavior in Captive and Wild Chimpanzees (*Pan troglodytes*)

2nd Place:

Kerry Cope (Consumer, Apparel, & Retail Studies, Junior)

Mentor: Jin Su (Consumer, Apparel, & Retail Studies)

Sustainability in Fashion in a Post-COVID World: Investigating Generation Z College Students' Knowledge, Perceptions, and Behavior toward Sustainable Fashion Apparel

3rd Place:

Logan Sprinkle (Kinesiology, Senior) and **Angelina Xiong** (Psychology, Junior)

Mentor: KyoungShin Park (Kinesiology)

Rhythmic Exercise with Music in Adults with Cognitive Decline and Caregivers

Honorable Mention:

Dana Whitehead (Psychology, Senior), **Cristina Nicole Angell** (Psychology, Post-Bac), **Amanda Richardson** (Psychology, Senior), **Malaysia Kenan** (Psychology), and **Autumn Frandock** (Psychology)

Mentor: Michaeline Jensen (Psychology)

Exploration of association between affective loneliness and physical isolation to alcohol consumption in adolescents

Humanities

1st Place:

Sophia Rosenberg (Religious Studies, Senior)

Mentors: Gregory P. Grieve (Religious Studies)

Video Games and The Problem of Evil: A "Xeno-Virtual-Ethnography" of the Videogame Valheim

2nd Place:

Rene Marzuk (English, Senior)

Mentor: Karen Kilcup (English)

Rescuing Environmental Children's Literature Created by Writers of Color and Child Authors in Nineteenth-Century America

3rd Place:

Krista Savage-White (Languages, Literatures and Cultures, Sophomore)

Mentor: Hewan Girma (African American Studies Program)

Race and Identity: Finding the North Star Podcast

Honorable Mention:

Cynth Torres (Religious Studies, Senior)

Mentor: Dana Logan (Religious Studies)

Feminist Witchcraft: Starhawk's Reclaiming Collective and the Synthesis of the Political Witch



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2022 Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo Award Winners

Mathematics, Life and Physical Sciences

1st Place:

Page Turner (Biology, Senior)
Mentor: Sally Koerner (Biology)

Impact of burn frequency on arthropod communities in North Carolina longleaf pine savannas

2nd Place:

Philip West (Chemistry, Senior)
Mentor: Mitch Croatt (Chemistry)

Towards the Total Synthesis of Ambuic Acid and Analogues

3rd Place:

Patrick Gallagher (Biology, Senior)
Mentor: Kasie Raymann (Biology)

Antibiotic Exposure is Lethal to Developing Male Honey Bees

Honorable Mention:

Jennifer Obike (Biochemistry, Senior)
Mentor: Nicholas Oberlies (Biochemistry)

Optimized Extraction of Alkaloids from Kratom and Semi-Synthetic Derivatives

Zachary Bunch (Biology, Senior)
Mentor: Sally Koerner (Biology)

Impacts of invasion on the insect communities of Montanan rangelands

Performing Arts

1st Place:

River Hedgepeth (Theatre, Senior)
Mentor: Natalie Sowell (Theatre)
The Gender Gallery

2nd Place:

Clare Haneberg (Music Education, Junior)
Mentor: Rebecca MacLeod (Music Education)

An Investigation of Composer Race/Ethnicity of Compositions Included in State Orchestra Adjudication Festivals

3rd Place:

Andrew Ralston (Music Education, Sophomore); Gracie Zielinski (Music, Sophomore); Kyra Totillo (Music, Junior) and Hanna Fishastion (Music, Sophomore)

Mentors: Rebecca MacLeod (Music Education) and Marjorie Bagley (Music)
String Quartet no. 5 in C Minor Movement 1 "Rosa Parks" by Daniel Bernard Roumain

Honorable Mention:

Raven Sizemore (Music Education, Sophomore)
Mentor: Randy Kohlenberg (Music Education)
Discovering Diversity in Music



2022 Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo Award Winners

Visual Arts Exhibition

1st Place:

Mary Nease (Consumer, Apparel, & Retail Studies, Senior)
Mentor: Haeun Bang (Consumer, Apparel, & Retail Studies)
Beverly Hillbilly

2nd Place:

Ashley Smith (Art, Junior)
Mentors: Lee Walton (Art) and Nikki Blair (Art)
Menagerie Du Macabre

3rd Place:

Kasey Condon (Consumer, Apparel, & Retail Studies)
Mentor: Haeun Bang (Consumer, Apparel, & Retail Studies)
Adaptive Clothing: Making Fashion Forward Clothes More Accessible to the Physically Disabled

Honorable Mention:

Gadisse Lee (Art, Senior)
Mentor: Walton Lee (Art) and Leah Sobsey (Art)
Intra

Emerging Scholars (UNCG Residential College Students)

1st Place:

Tiana Howard (Media Studies, Sophomore)
Mentor: Sara Littlejohn (Ashby College)
Disabling Barriers on Screen: The Fight for Representation and the End of Ableism

2nd Place:

Katherine Wyrick (English, Sophomore)
Mentor: Sara Littlejohn (Ashby College)
Can Reading Make You a Better Person?

3rd Place:

Selene Santiago-Lopez (International & Global Studies; Women's, Gender, and Sexuality Studies; Sophomore)
Mentor: John Sopper (Grogan College)
Indigenous Holistic Ways of Learning and Teaching within Educational Spaces

Honorable Mention:

Adeline Sallade (Psychology, Junior)
Mentor: Sara Littlejohn (Ashby College)
The Psychology of Sex Aggression: Inside the Criminal Mind

Alexa Villarreal (Public Health, Sophomore)
Mentor: Sara Littlejohn (Strong College)

What Is Critical Race Theory, Why Is It Banned in Schools, and Should It Be Taught in Schools?



2022 Thomas Undergraduate Research Mentor Awards

Tenured track: Dr. Asa Eger, Department of History

Associate Professor Asa Eger is a historian whose research interests include Islamic and Byzantine history and archaeology, the eastern Mediterranean, frontiers and borderlands, and environmental history. Since joining UNCG in 2009, Dr. Eger has mentored 12 undergraduates across 14 projects. With a collaborative approach to mentorship, Dr. Eger helps his students create individual projects that allow them to explore topics and real-world issues they are passionate about – while developing their research skills, in the process.

Dr. Eger has published four books, including the award-winning “The Islamic-Byzantine Frontier: Interaction and Exchange between Christian and Muslim Communities” and 2021’s “Antioch: A History,” which is through Routledge.

He currently has four other books in preparation, with topics ranging from the excavation he recently directed at a 10th-century frontier fortress in Turkey and reexaminations of materials from a 1930s Princeton excavation at Antioch and from a survey of the plain of Aleppo.

Undergraduates have worked with Eger both locally and internationally, with six receiving support from UNCG Undergraduate Research and Creativity – or URCA – Awards. “The funding brings students in and out of archives, on international research trips, and helps them to develop research innovatively through digital means at home.” Seth Rumbley, for example, traveled to Israel to examine the site of a destroyed Palestinian village, speak with local scholars, correct oral histories, and dive into the state archives in Jerusalem. More recently, when Gordan Cathcart couldn’t travel due to the pandemic, Eger helped him pivot to a digital project on a poorly known Bosnian community in Israel, which he pursued by examining British photography and connecting remotely with Israeli scholars and people whose grandparents and great grandparents lived in the region.



2022 Thomas Undergraduate Research Mentor Awards

For Dr. Eger, undergraduate research is about opening doors permanently. “Broadening the historical narrative across interdisciplinary fields like archeology and public history challenges students to be critical of any one perception or story,” he says. “I aim to prepare my students to become critical thinkers – empowered, better informed, intelligent, and independent humans.”

Seth Rumbley '17 on his work with Eger:

Dr. Eger and I collaborated to prepare a submission for a Globally-Engaged URCA, which involved data collection and archival research on Palestinians displaced from Al-Kabri. This experience was fundamental to my professional development ... I gained a deeper understanding of the complexities of global conflict and displacement, which became my primary field of interest in my graduate studies in social work. While pursuing my graduate degree, I interned at local refugee resettlement agencies, where I drew from my experience as Dr. Eger’s mentee to aid in the development of rapport with refugees from Syria and Iraq ... He is a role model, is dedicated to students’ education and success, and actively works to prepare students for their futures.”

Bret Dang '19 on his work with Eger:

“Beginning in the spring of 2017, Dr. Eger supervised me on an URCA research project concerning archaeological surveys of the Cilicia region of Turkey and its historical settlement-patterns from the Classical to Early Contemporary eras. His guidance was invaluable and I was able to hone a great variety of skills and experience needed in preparation for my future graduate school plans ... Outside of the URCA advisorship, Dr. Eger also counseled and facilitated nearly all of my honors works and independent studies, again seeking to encourage me as a student to pursue more rigorous and rewarding academic challenges beyond the scope of normal coursework, which ultimately culminated in his mentorship of my Senior Honors joint thesis in History and Religious Studies. His guidance was always with my long-term goal in mind – graduate studies in archaeological studies – and his support over the years made me more confident in my own abilities and readiness for continuing my education beyond undergraduate studies.”



2022 Thomas Undergraduate Research Mentor Awards

Pre-tenure track: Dr. Jaclyn Maher, Department of Kinesiology

Assistant Professor Jaclyn Maher is a kinesiologist with a research focus on motivational processes, the impact of physical activity and sedentary behavior on psychological well-being, and the use of technology to capture the dynamics of motivation, behavior, and feelings as well as to intervene in behavior. Since joining UNCG in 2017, Dr. Maher has mentored 21 undergraduates on independent studies in her Physical Activity and Lifetime Wellness lab, with three students continuing on in her lab beyond those initial independent studies.

Maher has over 50 publications and her work has received funding from institutions such as the American College of Sports Medicine and National Institutes of Health. Her most recent R15 grant, from the

National Institution on Aging looks at motivational processes in older adults that impact healthy behaviors. By design, the R15 grant integrates undergraduate students into the research process, with Maher's project supporting two undergraduates per summer across three years.

In Maher's lab, students gain in-depth, hands-on experience with the processes of physical activity research, including participant recruitment, pilot study procedures, monitoring compliance, and data analysis. To date, three have received internal grants from the School of Health and Human Sciences to conduct independent research projects. Work involving undergraduates in Maher's lab has resulted in publications in *Nutrients* and *Annals of Behavioral Medicine* over the last three years – both with undergraduates as second authors. Two other publications are currently under review at the *Journal of Aging and Physical Activity*, with a student as first author, and the *International Review of Sport and Exercise Psychology*, with four undergraduates as co-authors.



2022 Thomas Undergraduate Research Mentor Awards

Her students have also presented work at the Society of Behavioral Medicine Annual Meeting, National Conference on Undergraduate Research, the UNCG McNair Summer Research Symposium, and the UNCG Thomas Undergraduate Research and Creativity Expo.

Rebecca Rice '19 on her work with Maher:

“My first semester working with Dr. Maher, I was given responsibilities such as piloting questionnaires, downloading and inputting accelerometer data, and helping to create instructions for the participants who were in the study. I was allowed to lead some of the training sessions with the participants as well. All of these tasks helped me to grow in my ability to problem solve, think outside the box, and become comfortable giving out instruction ... Dr. Maher gave me the freedom to develop my own research question, which investigated athletic and exercise identities among student-athletes across the transition out of competitive sport. With her guidance I was able to conduct a literature review, create a scientific abstract, and present my findings. Dr. Maher instilled confidence in me, and no matter how many questions I asked, was always willing to help me, and taught me the skills to answer those questions myself.”

Meghan Harduk, '19

“Working in Dr. Maher’s lab was an amazing experience for me to see how research is collected and stored, and gave me the opportunity to have hands-on experience with concepts we discussed in class...The relationship I formed with Dr. Maher during this experience was a major part of my decision to continue working in the lab, even after my honors coursework had been completed ... This extra time in the lab turned into my senior honors project ... I was interested in the relationship between physical activity and dietary intake. This project quickly turned into an educational experience in research unparalleled to anything I would complete as a part of my undergraduate major ... Dr. Maher continued to challenge me to do something I had not thought was possible: publish my honor’s thesis findings in a scholarly journal ... I am so proud to have been involved in that work during my undergraduate career and have something so prestigious, as an undergraduate, to show for it. If it were not for Dr. Maher’s encouragement and support through my undergraduate career none of this would have been possible. ”



Undergraduate Research and Creativity Awards (URCA) Summer 2022

Student	Faculty Mentor	Department	Project Title
Shafaq Ahmed	Zhenquan Jia	Biology	Investigation of the effects of carbon nanodots on vascular inflammation in vivo
Logan Brown	Mitchell Croatt	Chemistry and Biochemistry	Substrate Study for Mechanistic Analysis: Role of Allylic Groups in the Claisen Rearrangement
James Cone Theresa Cole	Joanne Murphy	Classical Studies	Trade and Community Change in Kea, Greece: A Bronze Age and a Roman Case Study
Audrey Day	Janet Boseovski	Psychology	Effect of Parenting Status on Children's Perceptions of Women's Leadership in STEM Fields
Brendan Diaz	Brittany Cassidy	Psychology	Effects of Gaze Aversion on the Attractiveness Halo
Ata Erdogan	Jennifer Etnier	Kinesiology	Acute Effects of Aerobic Exercise on Episodic Memory Performance in Healthy Young Adults as a Function of Time of Day and Chronotype
Rory Hutchens	Jasmine DeJesus	Psychology	Examining the Role of Emotions and Motivation in Understanding Picky Eating
Jessica Jacob Maegan Ferguson	Charles Egeland	Anthropology	Reconstructing Early Human Behavior at Olduvai Gorge, Tanzania
Sean Jung	Min Jeong Kim	Computer Science	Developing A Novel Transformer-based Predictive Deep Learning Model using Medical Images



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Undergraduate Research and Creativity Awards (URCA)

Summer 2022

Student	Faculty Mentor	Department	Project Title
Devyani Patel	Nicholas Oberlies	Chemistry and Biochemistry	Strain and Growth Condition Studies to Enhance the Production of Verticillin A and Verticillin D
Nathan Pressley	Peter Delaney	Psychology	When and Why Does Retrieval Improve Memory? Investigating Strategy Change in Proactive Interference
Amarre Reid	Dayna Tournon	Psychology	Examining the Role of Subjective Age in Older Adults' Work Activity and Everyday Engagement
Catherine Ricci	Jennifer Coffman	Human Development and Family Studies	The Development of Children's Memory Skills: The Interplay of Home and School Language Environments
Ashley Smith Amabel Prisk	Leah Sobsey	School of Art	CVPA Pollinator Garden Project
Marcos Tapia	Shabnam Hematian	Chemistry and Biochemistry	Biomimetic Investigations of Copper-Dioxygen Adducts
Bailey Thompson	Maia Popova	Chemistry and Biochemistry	Investigating student visual processing behavior when translating between different representations of molecular structure
Kaysa Vaarre-Lamoureux	Sarah Koerner	Biology	Assessing the effect of cattle grazing and drought intensity on a mixed-grass prairie plant communities



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Bryan School of Business and Economics

Kerry Cope (Consumer, Apparel, and Retail Studies)

Mentor: Dr. Jin Su

Sustainability in Fashion in a Post-COVID World: Investigating Generation Z College Students' Knowledge, Perceptions, and Behavior toward Sustainable Fashion Apparel.

As the apparel industry works towards being more environmentally and socially responsible, it's important to involve consumers in the process and encourage ethical consumption of apparel products. Gen Z is emerging as the sustainability generation and will soon become the largest cohort of consumers. Thus, fashion apparel brands need to understand their tendencies and perceptions. Moreover, the pandemic has shaped the spending habits of Gen Z. This study aims to: (1) assess Gen Z college students' knowledge about sustainability in the fashion industry in a post-COVID world, and (2) investigate their perceptions and behavior toward sustainable apparel products.

College of Arts and Sciences

Mason Ibrahim (Biology)

Mentor: Akira Terui

Assessing the significance of stream-wetland complex as a foraging habitat of terrestrial predators.

Wetland restoration is a nationwide initiative, motivating ecologists to study how the restoration of this critical habitat benefits ecological communities in a landscape. One of the wetland's functions is to provide aquatically-derived food resources for terrestrial predators. Yet, previous work in this research area focused on the wetland's function alone despite the fact that they are embedded in complex landscapes with a diversity of aquatic habitats. In this project, we will assess how stream-wetland complex provides unique foraging opportunities for terrestrial predators (i.e., bats).



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School of Health and Human Sciences

Stefanie Vidal (Public Health Education)

Mentor: Sandra Echeverria

Use of public data to map built environment disparities for the design of community-based physical activity interventions.

A large body of evidence has demonstrated that built environment determinants such as access and quality of parks and green spaces, access to physical activity facilities, and neighborhood safety and walkability shape active living and community well-being. The goal of this project is for the undergraduate student to learn mapping skills using ARC GIS, a software tool freely available to students at UNCG. Using publicly available data and with support from UNCG librarians, the student will map access to parks and physical activity facilities across Greensboro. This data will form part of grants the PI will submit to design community-based physical activity interventions targeting physical activity promotion in marginalized communities.





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***URSCO is a unit within the
University Teaching and Learning Commons***



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**For more information about what UNCG's undergraduate
scholars are up to, visit the URSCO blog!**

THE URSCO BLOG



By Hope Voorhees / March 15, 2022

Rediscovering children's nature writing

We interviewed Rene Marzuk, a senior majoring in English, in the accelerated BA to MA program. Along with research mentor...

[Read More](#)





By Hope Voorhees / December 17, 2021


Class of 2021: Alyssa Cavalieri

Repost from UNCG News Alyssa Cavalieri '21 is a researcher with heart. The triple major in English, philosophy, and women's,...

[Read More](#)


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