



2025 Honors Research Symposium

November 21, 2025

1:15pm-2:00pm Check-in & Networking Event

2:00pm - 6:30 pm Speakers, Presentations, &
Reception

The Dubois Center



HONORS COLLEGE



**OFFICE OF
UNDERGRADUATE
RESEARCH**

Welcome to the 2025 Honors Research Symposium!

The Honors College, in collaboration with the Office of Undergraduate Research (OUR) hosts the Honors Research Symposium each Fall semester. This annual event is a unique opportunity for undergraduate honors students and OUR students to present the results of their inquiry or research to the UNC Charlotte community.

We encourage you to actively listen to the student presenters, learn, ask curious and insightful questions, and provide supportive feedback. Please enjoy this program to learn more about the poster, oral, roundtable, and virtual presentations.

Thank you for supporting the presenters!

Honors College

<https://honorscollege.charlotte.edu/honors-research-symposium/>

Office of Undergraduate Research (OUR)

<https://our.charlotte.edu/>

Virtual Platform

<https://symposium.foragerone.com/2025-honors-symposium/>



Event Schedule

1:15-2:00	Check in (<i>Lobby - 1st Floor</i>) Networking Event Research discussions with community partners and alumni (<i>Ideation Lab - 1st Floor</i>)
2:15-2:35	Opening Remarks Dr. Deborah S. K. Thomas (<i>Auditorium - 2nd floor</i>)
2:35-2:50	Transition
2:50-3:50	Student presentations - Concurrent Session 1 <i>Oral Presentations (8th/9th floor), Posters (9th floor), Roundtables (11th floor)</i>
3:50-4:00	Transition
4:00-5:00	Student presentations - Concurrent Session 2 <i>Oral Presentations (8th/9th floor), Posters (9th floor), Roundtables (11th floor)</i>
5:00-5:10	Transition
5:10-5:45	Keynote Speaker Dr. Susan Trammell (<i>Auditorium - 2nd floor</i>)
5:45-6:30	Networking Reception (<i>Atrium - 2nd floor</i>)



Guest Speakers ~ Auditorium

Opening Remarks (2:15 pm - 2:35 pm)



Dr. Deborah S.K. Thomas, Associate Vice Chancellor for Research and Professor of Geography at UNC Charlotte. In this role, she oversees operations and special initiatives for research and innovation across the university. Her research focuses on disasters and environmental health with more than 25 years of experience in the social science application of geographic information science & technology (GIS&T). She was a Fulbright Scholar to Middle East Technical University in Ankara, Turkey in 2005, and continues to work in global environmental health in Tanzania as part of a 15-year partnership with the School of Public Health at the Catholic University of Health and Allied Sciences in Mwanza, Tanzania.

Keynote Speaker (5:10 pm - 5:45 pm)

Dr. Susan Trammell, Professor in the Department of Physics and Optical Science at UNC Charlotte, will share her journey into the field of science, the importance of research, and the impact of her work. Dr. Trammell received her undergraduate degree in Physics with Highest Honors from the University of North Carolina at Chapel Hill and her MA and PhD in Astronomy/Astrophysics from the University of Texas at Austin. After completing her graduate work, she was awarded a Grainger Postdoctoral Research Fellowship in the Department of Physics at the University of Chicago. Most recently, Dr.



Trammell has applied her expertise in spectroscopy and imaging to the field of biomedical imaging. Her research group is developing a new technique called light-assisted drying to create amorphous sugar matrices for the preservation of temperature sensitive biologics such as vaccines and protein-based therapeutics. Her group has also developed an intraoperative imaging modality, enhanced thermal imaging, for cancer margin delineation and monitoring blood perfusion during and after microsurgery.



Networking Event

1:15-2:00 pm ~ Ideation Lab

Attention Student Attendees & Presenters!

*After you check in, stop by the **Ideation Lab** (1st floor behind the information desk in the lobby), for the networking and tabling event!*

***Ask the experts!** How will research help me in my future career? What can I do to get involved in research? How do I get funding for research or graduate school? How can I get published? What research did you conduct?*

Community Partners & Alumni

Doaha Awad ~ Class of 2021 & 2025, Biomedical Research

Jamie Beason ~ Class of 2008, Trane Technologies

Tamara Johnson ~ Director of urbanCore

Misty Morin ~ Class of 2019, Levine Scholars Program - Alumni Engagement and Communications Specialist

ETHEL Journal (OUR)

Eric Millard ~ ETHEL Faculty Director, Assistant Professor of Trumpet

Arnav Sareen ~ ETHEL Editor in Chief, Levine Scholars Program, Computer Science & Data Science

Ridhti Patel ~ ETHEL Podcast Director, Biology

HONR 2720: Competitive Scholarship Workshop

Andrew Keener ~ Assistant Director, Nationally Competitive Awards & Advising, Honors College

Undergraduate Research Conference (URC) at Charlotte

Mikayla King, Biology & Public Health

Shaina Bothra, Pre-Business Administration



Student Presentations

2:50-3:50 pm ~ Concurrent Session 1

Roundtables

A “**roundtable**” is an interactive type of conference presentation format where 1-3 presenters sit around a table (usually round, but rectangular works!) to discuss their projects with a small group of attendees. There may be one or more circles of chairs around the table for the attendees. Presenters share an overview of their inquiry project and actively engage with the audience through Q&A.

Session A - Room 1104

How Dangerous Can Procrastination Be?

Luke DeVries

Mentor: Cindy Gilson

Screens and Attention Spans

Taylor McHone

Mentor: Andrew Keener

Session B - Room 1102

Gifted But Not Equal: From Early Education to Honors Colleges

Morgan Funches

Mentor: Cindy Gilson

Mentorship Is Crucial: The Benefits of Structured Mentorship for Honors and Gifted Students Compared to Those Without

Khristian Woodard

Mentor: Cindy Gilson



Student Presentations

2:50-3:50 pm ~ Concurrent Session 1

Oral Presentations

Session A - Room 801

Emotional Interfaces: The Role of Memory, Emotion, and Perception in Web Design

Jhania Vitalis

Mentor: Marlon Mejias, Anita Blanchard

Emotional Overload on Social Media: Desensitization as Related to the Palestine Occupation

Zoha Ali

Mentor: Andrew Keener

Digital Consumer Power: How Eco-Conscious Youth are Redefining Corporate Social Responsibility in the Fashion Industry

Jadyn Malawski

Mentor: Melinda Adnot, Valerie Reynolds, Matthew Metzgar

Session B - Room 804

The Identification of Twice-Exceptionality and Examining Barriers to Identification

Kai Norris

Mentor: Melinda Adnot, Cindy Gilson, Kristi Godfrey-Hurrell

Aren't You Supposed to be a Genius? Representations of Autism Spectrum Disorder in TV and Film and Effects on Audience Perceptions

Audrey King

Mentor: Mindy Adnot, Vaughn Schmutz, Sidney Beeman

The Effects of Latino Misrepresentation in Film on Audience's Perceptions of Real-World Latinos

Cristina Juarez

Mentor: Mindy Adnot, Paloma Fernandez Sanchez, Will Davis

Session C - Room 805

The Impact of Growth Mindset for Honors and Gifted Learners

Wallace Love

Mentor: Cindy Gilson

What are the Impacts of Growing Up in Academically Gifted Programs? How do Accelerated Learning Programs Affect Motivation, Psychological Well Being and Creativity?

Zion Long

Mentor: Melinda Adnot, Cindy Gilson, Michael Matthews

Understanding the Variability of Total Response Techniques (TRTs): A Qualitative Study of Teachers' Perceptions of Their Practice

Livie Apple

Mentor: Hilary Dack, Mindy Adnot, Holly Johnson

Session D- Room 806

Developing a Global MITgcm Framework for Modeling Microplastic Transport

Sam Phillips

Mentor: Roger Tipton

A Reconstruction Journey: Life After a Natural Disaster

Laisa Mena Rivera

Mentor: Shen-En Chen, Tina Shull, Melinda Adnot

Geospatial Deep Learning Algorithm Utilizing High Human Activity Zones to Predict Malaria Transmission in Southern Africa

Natasha Kroll

Mentor: Yao Li

Session E - Room 905

Borders, Hybridity, and Third Space: How Ahmet Kaya's Exile Shapes Kurdish Advocacy in "Siz Yanmayın (Sürgün)"

Zara Ozer

Mentor: Rowney, Meneses

Doors of Light and Shadow: Spatial Liminality and Migration in Mohsin Hamid's *Exit West*

Amna Noyal

Mentor: Matthew Rowney

Re-evaluation Authorship in the Work of Alfonso Reyes

Genesis Dominguez, Cat Beck

Mentor: Donald Cross



Student Presentations

2:50-3:50 pm ~ Concurrent Session 1

Poster Presentations

Poster Session A, Room 901

Osteobiography and the Ethical Dilemmas of Skeletal Collections

Mayah Clark

Mentor: Sara Juengst

Integration of a Coaxial Nozzle and Fiber Feeding System for Multi-Component Direct Ink Writing (DIW) Printing

Neal Zalomek

Mentor: Erina Joyee

Designing and Programming Autonomous Fly4Future Drones through ROS2

Sujjay Karthikeyan

Mentor: Ran Zhang

Easing the Burden on Gifted/Honors Educators through Artificial Intelligence

Shanthi Pillai

Mentor: Cindy Gilson

Poster Session A, Room 901

Aging in the Correctional System: Challenges and Policy Solutions

Jada Clark

Mentor: Megan Smith

How Can Artificial Intelligence (AI) and Gifted Pedagogy Be Used to Personalize Learning for Honors Students

Pearl Patel

Mentor: Cindy Gilson

Influence of Undergraduate Education on Nursing Students' Knowledge, Attitudes, and Perceptions of Older Adults

Sean Nguyen

Mentor: Lufei Young, Jyotsana Parajuli, Susan Lynch

Synoptic Analysis of Heatwaves in the Charlotte Metropolitan Region

Victor Avila

Mentor: Matthew Eastin

Improving Health Outcomes for Black Women in Mecklenburg County

Saniya Young

Mentor: Nicole Peterson

Modeling Moretti: Architectural Analysis of Fascist Italy

Jordan Harrelson

Mentor: Jeffrey Balmer

Mapping Strengths: Addressing Maternal Health Disparities In Eight North Carolina Counties

Salina Khadka

Mentor: Allissa Desloge, Alicia Dahl

Path Planning of Autonomous Robots in Uncertain Environments

Gilberto Feliu

Mentor: Dipankar Maity

Poster Session A, Room 901

School Choice Policy and Students with Disabilities

Alyssa Fowler

Mentor: Jason Giersch

How Does the Structure and Prioritization of Gifted and Honors Education Differ in Developed and Developing Countries Around the World?

Isabella Mariani

Mentor: Cindy Gilson

Visualizing Congress: A Hands-On Approach to Learning Data Structures

Eric Fackelman

Mentor: Kalpathi Subramanian, Erik Saule

Poster Session B, Room 904

Gust Alleviation on Aircraft Wings

Nazim Sait

Mentor: Arun Babu

From Pixels to Prognosis: Using Deep Learning to Explore Placenta Pathology

Nithyashree Prabakaran

Mentor: Farah Deeba

Exploring the Effect of Interfaces upon Thermal and Ionic Transport in Superlattice Perovskites Using Atomistic Simulations

Nizam Sait

Mentor: Xiang Chen

How May Perfectionism Lead Gifted and Honors Students to Fail, and How May this be Prevented?

Jeevan Liu

Mentor: Cindy Gilson

Poster Session B, Room 904

Rewiring Through Trauma: Familial Abuse, Neural Development, and Psychiatric Outcomes in Adolescence

Abby Malembi

Mentor: Erika Montanaro

Student Food Security: An All-Encompassing Resource for UNC Charlotte Students

Rebecca Tirko

Mentor: Jessica DeMarco, Alicia Dahl

“They Just Don’t Understand” Exploring the Barriers to Effective Communication of Mental Health Issues Among Children of Displaced Families

Say Paw

Mentor: Alicia Dahl, Jessamyn Moxie

Childhood Trauma and Cognitive Function: Role of Optimism and Psychotropic Medication

Divya Agarwal

Mentor: Jeanette Bennett

Poster Session C, Room 906

How Does a Parent's Perception of Giftedness Affect Their Student's Placement in Both Honors and Gifted Programs?

Nathan Hobgood

Mentor: Cindy Gilson

SEM Characterization of Crushed Battery Electrode Surfaces

Bruno Salvi, Jake Kaupang

Mentor: Anthony Bombik

Poster Session C, Room 906

Evaluating the impacts of Bakers Mountain on the Structure and Strength of Storm Cells

Josiah Allen

Mentor: Matthew Eastin

Robot Path Planning Using Screw Linear Interpolation

Sean Devlin

Mentor: Srinivas Akella

The Habitat Preferences of Juvenile Northern Dusky Salamanders Along an Urban Gradient

Emma Miller

Mentor: Sara Gagné

Perfectionism within Honors and Gifted Students

Liv Bailey

Mentor: Cindy Gilson

Advancing the Labor Force Participation of Charlotte's Latino Mothers and Fathers: Examining Intersecting Employment & Child Care Sector Opportunities and Barriers

Daniela Rivera

Mentor: Stephanie Potochnick

Bridging the Gap: Training Correctional Officers to Support Aging Inmates

Kyler Osby

Mentor: Megan Smith



Student Presentations

4:00-5:00 pm ~ Concurrent Session 2

Roundtables

Session A - Room 1104

Political Economy of Policing

Akshara Sisodiya, Sarah Nti, Mariana Guzman

Mentor: Martin Shuster

Session B - Room 1102

AI Data Centers & Environmental Racism

Emsley Jackson

Mentor: Andrew Keener

Reality Television and the Effect of Restrictive Requirements

Kaylen Massey

Mentor: Andrew Keener



Student Presentations

4:00-5:00 pm ~ Concurrent Session 2

Oral Presentations

Session F - Room 801

Indigenous Inspirations: The Role of Alcohol and Western Notions of Indigeneity in Japanese Colonialism and Ainu Life in Hokkaido, 1869-1899

Foster Duckworth

Mentor: Maren Ehlers, Carol Higham, Steven Sabol

Lengua nicaragüense: Deterrence of audience as a rhetorical technique

Jeffrey Wang

Mentor: Ashli Stokes

Forming the Great Smoky Mountains National Park: Long-Term Economic and Social Impacts

Hunter Ball

Mentor: Mindy Adnot, Ashli Stokes, Mark Wilson

Session G - Room 804

Evaluating Social Isolation and Loneliness in the Charlotte Community with Love in Action Project Inc

Jahdoi Russell, Asya Crisp

Mentor: Tawanda Robbins

Shaping Families & Identities: Parenting Through the Lens of Race and Culture

Kennedy Frink

Mentor: Mindy Adnot, Kendra Jason, Victoria Rankin

How Do Early Gendered Messages in the Household and Broader Society Shape Women's Financial Literacy and Investment Behaviors Later in Life?

Gabriella Osorio, Malimi Fernando

Mentor: Jennifer Ames Stuart, Melinda Adnot, Stephanie Bradley, Gene Lai

Session H - Room 805

Solar-Powered Self-Sustainable UAV Communication Networks with Fixed-Wing UAVs

Mohammad Hasan

Mentor: Ran Zhang

Counting Symmetries: Criteria for Cyclic Groups

Patrick Ireland

Mentor: Evan Houston

Analysis and testing of a curve-fitting algorithm by a step function

Nour Al Deen El Hatto

Mentor: Sebastien Bossu

Session I - Room 806

Global Health Lessons from the Blue Zones

Amaya Clark

Mentor: Mindy Adnot, Tracy Bonoffski, and Shankari Somayaji

Does Chronic Stress From Adverse Childhood Experiences Influence the Risk of Developing Obesity in Adulthood?

Abby LaPolla

Mentor: Mindy Adnot, Tracy Bonoffski, Daheia Barr-Anderson

Role of Religious Morality in U.S. Democratic Governance

John Hand

Mentor: Mark Sanders, Stephen Cheyney, Melinda Adnot

Session J - Room 905

Cultural Capital and On-Time College Enrollment

Luis Tejada

Mentor: Vaughn Schmutz

The Impact of Redlining on Black Wealth

Morgan Hatcher

Mentor: Mindy Adnot, Chris Cameron, Kendra Jason

A Musical Time Capsule: How Music Triggers Nostalgia, Emotion, and Memory

Shykera Spencer

Mentor: Mindy Adnot, Dylan Savage, Kathleen Burke



Student Presentations

4:00-5:00 pm ~ Concurrent Session 2

Poster Presentations

Session D - Room 901

How Might AI Assess Academic Potential, Personalize Instruction, and Track Growth in Honors and Gifted Education

Neal Zalomek

Mentor: Cindy Gilson

A Novel, Modular, Gaging System for Teaching Geometric Dimensioning and Tolerancing

Zoette Francis

Mentor: Jaime Berez

Utilization of Lipid Anchor Analogue Probes to Study Bacterial Glycan Assembly

Morgan Barnette

Mentor: Jerry Troutman

TickBusters: Investigating tick-borne diseases in North Carolina

Wynn Oo

Mentor: Rafael Felipe Da Costa Vieira

Session D - Room 901

Investigation & Analysis of Workforce Development Programs in Rural Southeast America

Jordan Dunn

Mentor: Mentors: Cody M. Cocchi & Clarence Anthony, Jr.,

Investigation & Analysis of Workforce Development Programs in Rural Southeast America - The Economic Impact of "Brain Drain"

Lena Ayesha

Mentor: Sarah Powell, Cody Cocchi

Classical Computing Approaches to Solving Polyomino Sliding Puzzles

Batman Whiteside

Mentor: Mahmoud Dinar, Aileen Benedict, Li Yang

Examining employment & child care sector opportunities and barriers of Latino Parents

Yerang Cho

Mentor: Stephanie Potochnick

From Hunan to Taipei: Deconstructing General Tso's Chicken as Culinary Translation

Isaac Lainez

Mentor: Ashli Stokes

Intelligent Robot-Assisted Finishing System for Post-Processing of Metal Additive Manufactured Components

Patrick Guinan

Mentor: Jose Martins Do Outeiro, Ahmed Razin

An Observational Study of Physical Accessibility Issues at Three Campuses in the UNC System

Sneha Sannanarappar

Mentor: Alicia Dahl

Session D - Room 901

Gifted and Honors Students' Academic Success: Motivation and Underachievement

Alison Vang

Mentor: Cindy Gilson

Wearable Flexible Sensor for Performance Management

Shrushti Gandas

Mentor: Roger Tipton

Women Printers and Religious Domestic Publishing in Early Modern France and Europe

Abeer Saleem Naznin

Mentor: Amanda Pipkin

Inhibition of Oncogenic KRAS Decreases Vesicular Stomatitis Virus Replication in Pancreatic Ductal Adenocarcinoma

Irakli Mataradze

Mentor: Valery Grdzelishvili

Session E- Room 904

Examining Signal-Text Contrastive Alignment for mmWave-based Zero-shot Human Activity Recognition

Andrew Morgan

Mentor: Hongfei Xue, Pu Wang, Minwoo Lee

Stream Restoration and Genetic Connectivity of Dragonflies in Charlotte-Mecklenburg

Avery Taylor

Mentor: Sandra Clinton

Retrofitting Polymer 3D Printers for Fabrication of Ceramic Components

Mary Elizabeth Zifchak

Mentor: Lynnora Grant

Session E- Room 904

Strains to Strength: A Workshop Series on Workforce Emergency Preparedness in Health Systems

Eunice Okyere

Mentor: Alicia Dahl, George Shaw, Robert Fox, Faith Neale

Honors vs. Gifted Students: Personality Impact on Learning Preferences

Aryan Hira

Mentor: Cindy Gilson

Pho: Why it Can be Considered a Global Dish/Recipe

H-Muer Kpa

Mentor: Ashli Quesinberry Stokes

CFD analysis of Steady and Transient Analysis of NACA 0012 Airfoil using STARCCM+

Haryshwa Bipin

Mentor: Arun Vishnu Suresh Babu

Session F - Room 906

Macroinvertebrate Abundance and Diversity in Toby Creek, a Restored Urban Stream

Devin Estep

Mentor: Sandra Clinton

Locked Out Potential: Identifying and Remediating the Causes of the Underrepresentation of Hispanic Students in Gifted and Honors Education

Bruno Salvi

Mentor: Cindy Gilson

Session F - Room 906

2e in Gifted and Honors

Evan Santaniello

Mentor: Cindy Gilson

Decisions in Family Planning and Contraception With a Focus on Educating College Students

Lelana Truong

Mentor: Alicia Dahl, Lorenzo Hopper

Removing "Forever Chemicals" (PFAS) from Drinking Water by Filtration

Rokia Sissoko

Mentor: Mei Sun

Enhancing Classroom Speech Transcription with AI: Evaluating Large Language Models in the getOTR Project

Ritvik Manem

Mentor: Shawnee Wakeman

Simplifying Causal Extraction and Inference in Computational Social Science using Agentic AI Frameworks

Abhinav Biju

Mentor: Siddharth Krishnan

Revising for a Reason: Impacts from First Draft to Final

Haley Essen

Mentor: Madelyn Colonnese

Healing on Wheels – Analyzing the Impact of Delivering Care Through Mobile Health Units for Underserved Populations

Savannah Alexander

Mentor: Angela Lamb, Laura Magennis



Student Online Only Presentations

Virtual Platform

<https://symposium.foragerone.com/2025-honors-symposium/>

Barriers for Twice-Exceptional Students in Honors and Gifted Education

Siennah Greenawalt

Mentor: Cindy Gilson

Understanding the History of Planned Communities and the Impact of Post Hurricane Helene in Swannanoa

Kaylie Vong

Mentor: Emily Makas



HONORS COLLEGE



*OFFICE OF
UNDERGRADUATE
RESEARCH*

Keynote Speaker

5:10-5:45 pm

Auditorium

Reception

5:45-6:30 pm

Atrium



Thank You to Everyone Who Helped Organize and Support the 2025 Honors Research Symposium!

Honors Research Symposium Committee:

Dr. Cindy Gilson - Honors College

Dr. Mindy Adnot - Honors College

Ms. Denise Lynch - Honors College

Ms. Shannon Zurell - Honors College

Dr. Lance Barton - OUR

Dr. Sarah Powell - OUR

Abeer Saleem Naznin - Student Representative

Malin Pereira - Dean, Honors College

Networking Event Experts

Mentors

Honors Faculty Moderators

Student Volunteers

