

UNGTM

31st Annual Research Conference

FRIDAY, MARCH 20, 2026

MARTHA T. NESBITT BLDG, GAINESVILLE CAMPUS

9:00 AM - 2:00 PM

NCS DROP IN ADVISING | MARTHA T. NESBITT ACADEMIC BUILDING, ROOM 3202 | NCS TEAM
Drop in to chat about applying for Nationally Competitive Scholarships!

9:00 - 10:00 AM

PANEL A: HISTORY, MEMORY, & NATIONAL IDENTITY

Martha T. Nesbitt Academic Building, Room 3201 | Moderator: Julianne Reynolds

MAKING THE FOREIGNER- AN EXAMINATION OF PUBLIC OPINION TOWARD POLISH IMMIGRANTS

Thomas R. Floystrop, Mentors: Dr. Kristine Stilwell and Dr. Phillip Guerty

CONFEDERATE MEMORY AND IDENTITY AT THE UNIVERSITY OF NORTH GEORGIA

Sergio Monterroso-Ortega

REGULATING HOLINESS: FEMALE ASCETICISM AND ECCLESIASTICAL AUTHORITY IN EARLY CHRISTIANITY

Daniela Guedez, Mentor: Dr. Michael Proulx

9:00 - 10:00 AM



PANEL B: MICROBIOBIOLOGY & PUBLIC HEALTH

Martha T. Nesbitt Academic Building, Room 3204 | Moderator: Fernando Garcia

THE EFFICACY OF PROBIOTIC SUPPLEMENTS AND THEIR CLAIMED COUNTS

David Torres, Lydia Suplita, Paxton Byars, and Haiden Moburg, Mentor: Dr. Dobrosława Bialonska

ISOLATION AND CHARACTERIZATION OF ANTIBIOTIC-PRODUCING BACTERIA FROM SOIL

Madeline McCloskey, Mentor: Dr. Swapna Bhat

INVESTIGATING THE IMPACT OF SUBCHRONIC EXPOSURE TO E-CIGARETTE VAPOR ON OCCLUDIN EXPRESSION IN THE BLOOD-CSF BARRIER OF C57BL6/J MOUSE

Emily Reedy and Stephanie Trinh, Mentors: Dr. Hannah Fulenwider and Dr. Cathy Whiting

PANEL C: TECHNOLOGY, MEDIA, & HUMAN BEHAVIOR

Martha T. Nesbitt Academic Building, Room 3211 | Moderator: Taylor Graves

LATENT EXPOSURE TO VIOLENCE ON SHORT-FORM MEDIA APPS

Brianna Bowen

PRECRASTINATION IN THE TEAM SETTING

Isabelle Taiana, Mentor: Dr. Inchul Cho

THE EFFICIENCY OF STIGMERGY-BASED COLLABORATIVE TRANSPORT

Rodney Santana, Mentor: Dr. Tamirat Abegaz

10:00 - 11:00 AM

PANEL D: NATIONALISM IN THE MIDDLE EAST

Martha T. Nesbitt Academic Building, Room 3201 | Moderator: Victoria Hightower

JINEOLOGY IN EFFECT: THE YPJ AND KURDISH IDENTITY IN ROJAVA

Eli Polk

THE USE OF ANCIENT EGYPT: PHARAONISM AND EGYPTOMANIA

Sara Courtney, Mentor: Dr. Victoria Hightower

HEBREW VERSUS ARABIC: ISRAEL'S LINGUISTIC LANDSCAPE AND NATIONAL IDENTITY CONSTRUCTION

Ariana Mohr

10:00 - 11:00 AM



PANEL E: GLOBAL POLITICS & INTERNATIONAL RELATIONS

Martha T. Nesbitt Academic Building, Room 3204 | Moderator: Taylor Graves

SOFT POWER GOALS: HOSTING THE FIFA WORLD CUP AS A TOOL OF INTERNATIONAL IMAGE CRAFTING

Sofia Quirios, Mentor: Dr. Bibek Chand

RESISTING SECURITIZATION: INDIVIDUAL LEVEL FACTORS CONTRIBUTING TO THE TIKTOK REFUGEE MOVEMENT

Zachary Furbush

PANEL F: MATHEMATICS & COMPUTATIONAL SCIENCES

Martha T. Nesbitt Academic Building, Room 3211 | Moderator: Gabrielle Manley

LAGRANGIAN COHERENT STRUCTURES AND NETWORK APPROACHES ON INTERANNUAL TIMESCALES IN THE SUBPOLAR NORTH ATLANTIC

Micah Chandler, Mentor: Dr. Jeffrey Landgren

RELAXATION TIME, DAMPING, AND BLOWUP OF SOLUTIONS TO AN EQUATION FROM FLUID DYNAMICS

Shae Jolivette, Mentor: Dr. Alejandro Sarria

~~*MATHEMATICAL MODELS OF SOLID TUMOR GROWTH BY LOGISTIC GROWTH EQUATION*~~

~~**Gary Kang**~~

11:00 AM - 12:00 PM

PANEL G: CHEMISTRY, BIOCHEMISTRY & BIOMEDICAL RESEARCH

Martha T. Nesbitt Academic Building, Room 3201 | Moderator: Emily Reedy

CHEMOSELECTIVE GAS-PHASE INTERCEPTION OF A TRANSIENT ACYL-KETENE USING A GC-MS INJECTION-PORT MICROREACTOR

Fernando Garcia, Mentor: Dr. Isaac Agyekum

SYNTHESIS OF GUANIDINE AND QUINOLINE DERIVATIVES FOR THE SELECTIVE INHIBITION OF PEPTIDYLARGININE DEIMINASE 4 IN THE CONTEXT OF ACPA-POSITIVE RHEUMATOID ARTHRITIS

Hailey Pruitt, Mentors: Dr. Brynna Quarles and Dr. Rosi Gunasinghe

COLIFORM CONTAMINATION ON CILANTRO FROM LARGE GROCERY CHAINS

Hannah Cooper and Malarie Hirneisen, Mentor: Dr. Dobrosława Bialonska

11:00 AM - 12:00 PM



PANEL H: HUMANITIES, ETHICS, & LITERARY STUDIES

Martha T. Nesbitt Academic Building, Room 3204 | Moderator: Tram Nguyen

THE SILENT VICTIM OF A SONNET: ETHICALITY OF "LEDA AND THE SWAN"

Michaela Pennick, Mentor: Dr. Diana Edelman

BEHIND THE BELIEF: UNDERSTANDING ACADEMIC SELF-EFFICACY IN UNDERGRADUATES

Emily Gerhard, Mentor: Dr. Diane Cook

RELIGION, MODERNITY, THE MONOMYTH

Michael Emerson

PANEL I: ECONOMICS, TECHNOLOGY, & SOCIETY

Martha T. Nesbitt Academic Building, Room 3211 | Moderator: Brittany Barron

THE HIDDEN COST OF AI: FEDERAL AI INVESTMENT AND RISING ENERGY PRICES

Ngoc Anh Tho Nguyen, Mentors: Dr. Ruohan Wu

GAMIFICATION IN PERSONAL FINANCE: LEVERAGING RPG MECHANICS TO ENHANCE USER RETENTION IN ACHIEVING FINANCIAL GOALS

Samantha Morgan

ECONOMIC DISPARITY: THE ROOT OF SOCIAL INSUFFICIENCY WHEN ANALYZING SOCIO-ECONOMIC FACTORS AND HUMAN AGENCY

Jessica Nwachukwu

12:00 - 1:00 PM: POSTER SESSION #1

Martha T. Nesbitt Academic Building, Room 3110-AB

1. Immunofluorescence Microscopy of *Drosophila* Larvae in the Neuromuscular Junction and Segmental Muscles | **Brody Jenrette and Selma Music**. Mentor: Dr. Jo Qian
2. Tiny Heroes Beneath Our Feet: Antibiotic-Producing Soil Bacteria | **Heather Gibbons and Sebastian Scheid-Rivera**. Mentors: Dr. Swapna Bhat and Biology Lab Coordinator Nou Moua
3. Genetic Sampling of *Trillium sp.* | **Anabelle Etterling and Lucy Schlossmacher**. Mentor: Dr. Tom Diggs
4. Investigation of Headspace SPME Methodologies Coupled with GC-MS for Analysis of Floral Volatile Organic Compounds | **Lucy Schlossmacher**. Mentors: Dr. Joshua Driver and Dr. Tom Diggs
5. Investigating the role of MicroRNAs in the zygomorphic expression of flowers in the family Commelinaceae. | **Jason Ray and Emily Smyth**. Mentor: Dr. Tom Diggs
6. Predicted Impact of the 107G>A HFE Variant on Hereditary Hemochromatosis | **Madeline Deshong**. Mentor: Dr. Jeanelle Morgan
7. Detecting the Presence of Antibiotic Resistance Genes (ARGs) in Waterways in Proximity to Different Hospitals in North Georgia | **Adrian Fragozo Luna**. Mentors: Dr. Jeanelle Morgan, Dr. Swapna Bhat, and Associate Professor Margi Flood
8. Detection of the blaCTX-M Antibiotic Resistance Gene in Freshwater Streams near Cattle Farms in Northeast Georgia | **Ingrid Andrade**. Mentors: Dr. Jeanelle Morgan, Dr. Swapna Bhat, and Associate Professor Margi Flood
9. A Comparative Study of *Mycoplasma gallisepticum* in Select Passerines Relative to *Haemorhous mexicanus* (House Finch) | **Gracie Cooper**. Mentor: Dr. Linda Purvis
10. Infection Rate of *Mycoplasma gallisepticum* in Tennessee Warblers versus the background rate in order Passeriformes | **Olivia Milleman**. Mentor: Dr. Linda Purvis
11. Impacts of a 96-h imidacloprid challenge on ghost shrimp (*Palaemonetes paludosus*) survival and exploratory behavior. | **Melody Parker**. Mentor: Dr. Chris Leaphart
12. Restoration of Pollinators Using Native Flowers | **Abnur Samsonidze**. Mentor: Dr. Chris Leaphart
13. Impacts of Methylmercury Exposure on Host-parasite Size Relationships between Bluegill Sunfish (*Lepomis macrochirus*) and *Posthodiplostomum minimum* | **Madelyn Wells**. Mentors: Dr. Chris Leaphart and Dr. Xiaoyu Xu (UGA)
14. Gut Microbial Diversity in Brood XIX Periodical Cicadas Across Three Georgia Populations | **Haylee Truong, Aleena Khan, and Xiyue Zhang**. Mentor: Dr. Evan Lampert
15. Rocky Terrain: The Impacts of Substrate Type on Crayfish Escape Velocity and Physiological Fitness | **Miguel Vilchis Tinoco and Madeline McCloskey**. Mentor: Dr. Amanda Reynolds
16. The Cost of Comparison: Weight Stigma and Disordered Eating | **Magdalena Villalobos, Avery Wortel, and Jessica Kimari**. Mentor: Dr. Zachary Elison
17. Understanding Barriers and Pathways to Care: Gender Roles, Stigma, and Mental Health Literacy | **Abby Weimorts, Cindy Gonzalez, Olivia Herrington, and Blue Hammett**. Mentors: Dr. Zachary Elison

12:00 - 1:00 PM: POSTER SESSION #1

Martha T. Nesbitt Academic Building, Room 3110-AB

18. Examining the Relationship between Personality Traits, Attitudes towards Psychedelic Assisted Therapy, and Prior Psychedelic Use | **Melody Dobbs**. Mentor: Dr. David Chirinos
19. Luminance Contrast and JND Threshold Show Conscious and Unconscious Impact of Luminance on Illusory Color Spreading and Figure/Ground Organization | **Tiffany Little and Iris Wright**. Mentor: Dr. Ralph Hale
20. Impact of Luminance Gradients on Illusory Color Spreading and Figure/Ground Organization | **Iris R Wright and Tiffany Little**. Mentor: Dr. Ralph Hale
21. Sexting and Mental Health Among Emerging Adults: A Pre- and Post-COVID | **Lesly Zuniga and Steffani Pass**. Mentors: Dr. Efren Velazquez
22. Autism Stigma in Schools as Lived Experience | **Joshua Hopper**.
23. Examining the Effectiveness of a Social-Emotional Belonging Intervention on First-Year College Students | **H. Alex Reyes**. Mentor: Dr. Zachary Elison
24. The Freedmen's Bureau in Mississippi | **Aidan Kells**.
25. How Women Workers Started the Russian Revolution | **Isabel Kennison**.
26. Remembering Difficult History: The Holocaust in the Baltic Museums of Occupation | **Eli Polk**.
27. Timothy Dexter: Wealth, Eccentricity, and Influence in Early America | **William Hake**.
28. IR Analysis of a Global Fiscal Reset | **Piper Sheetz**.
29. Cloud Based Enterprise Analytics Pipeline with PostgreSQL, Python, and Power BI | **Kaylee Bautista**.
30. AI in Higher Education | **McKenzie Pilgrim and Ansley Carter**.
31. ~~Function: How knowledge in HCI and psychology advances application design~~ | **Brittney Meza**.

1:00 - 2:00 PM



PANEL J: RECIDIVISM & REHABILITATION

Martha T. Nesbitt Academic Building, Room 3201 | Moderator: Julianne Reynolds

THE EFFECTIVENESS OF DIFFERENT REHABILITATION PROGRAMS IN REDUCING RECIDIVISM

Daniela Melo

MITIGATING RECIDIVISM AMONG SEXUAL OFFENDERS: AN EMPIRICAL STUDY OF INTEGRATED PREVENTION STRATEGIES THROUGH EDUCATION, TREATMENT, AND SUPERVISION

Adeleine Davis

PANEL K: LAW, POLICY, & THE CRIMINAL JUSTICE SYSTEM

Martha T. Nesbitt Academic Building, Room 3204 | Moderator: Katie Anne Jones

FACTORS THAT BIND THE THREE COMPONENTS OF THE CRIMINAL JUSTICE SYSTEM: LAW ENFORCEMENT, THE COURTS, AND CORRECTIONS

Jesus Neyra

2025 REFORMED HUMAN TRAFFICKING GUIDELINES

Jessica Nwachukwu

PANEL L: THE ECONOMIC COSTS OF INCARCERATION & DRUG POLICY

Martha T. Nesbitt Academic Building, Room 3211 | Moderator: Violeta Rico-Gomez

A COSTLY CAMPAIGN: THE ECONOMIC TOLL OF THE WAR ON DRUGS

Merritt Busbee

THE LOSSES SUFFERED THROUGH INCARCERATION IN THE UNITED STATES: THE MONETARY AND SOCIAL COSTS OF INCARCERATION

Shayna Ty Patelczyk, Mentor: Dr. Stu Batchelder

DRUG USE, OVERDOSE, AND PUBLIC HEALTH

Mya Dittmar

2:00 - 3:00 PM: POSTER SESSION #2

Martha T. Nesbitt Academic Building, Room 3110-AB Student Volunteer: **Miguel Vilchis Tinoco**

1. Catalyst-Free Gas-Phase Aldol Condensation in a GC-MS Inlet: In Situ Formation of Pyrones, Spirotriones, and β -Diketones | **Alexandra Frusina, Fernando Garcia, and Stacie Rigli**. Mentor: Dr. Isaac Agyekum
2. Expanding the Synthetic Utility of Thermal Reactions: Catalyst-Free Access to Bioactive Scaffolds in a GC-MS Microreactor | **Stacie Rigli, Alexandra Frusina, and Fernando Garcia**. Mentor: Dr. Isaac Agyekum
3. Molecular Docking Analysis of Amphetamines at Sigma and Trace Amine-associated Receptors | **Zoe Byrne**. Mentor: Dr. Rosi Gunasinghe
4. Unlocking the Anticoagulant Potential of Fucosylated Chondroitin Sulfates: Molecular Docking Insights with Human Antithrombin III | **Angel Mendoza-Trujillo and Casey Torgesen**. Mentor: Dr. Rosi Gunasinghe
5. Structure-Activity Relationship of Coumarins as Antimicrobial Agents | **Luke Millaway, Aurora Shuster, and Lacey Nichols**. Mentor: Dr. Jeremy Olson
6. Synthesis and Characterization of Amylase-Modified Gold Nanoparticle | **Halle Pierce and Lydia Suplita**. Mentor: Dr. Greta Giles
7. Impact of E-cigarette Vapor Exposure on Renal Morphology and the Presence of Inflammatory Markers Using a Murine Model | **David Cholewinski**. Mentors: Dr. Cathy Whiting
8. Examining PrEP Awareness and Barriers to Uptake Amongst Young Adults | **Osmarie Tolentino Deleon and Elias Quintero**. Mentor: Dr. Neal Lin
9. Preliminary Data on how *Sarcophaga bullata* Nutritional Compositions can be an Influencer of Oviposition Decisions in *Nasonia vitripennis* | **Ashton Ray**.
10. Investigating the Effects of Short-Term E-Cigarette Exposure on Osseous Tissue in the House Mouse, *Mus musculus* | **Lindsey Malcolm**.
11. Comparison of Metabolic Diversity of Meadow and Chestnut Tree Soil Samples Collected at Hurricane Creek Field Station | **Hayden Fields, Kristin Tash, and Cory Keller**. Mentor: Dr. Dobrosława Bialonska
12. Antibiotic Resistance in Pathogenic *Vibrio* Found in Oysters | **Jada Dunbar and Matilee Rogers**. Mentors: Dr. Nancy Dalman and Dr. Dobrosława Bialonska
13. Daily Ratings of Energy and Sleep Across the Menstrual Cycle Phases (DREAM-CP) | **Brooke Karmilovich**. Mentor: Dr. Balea Schumacher
14. Menstrual Cycle Effects on Aerobic Performance | **Alma Morales**. Mentor: Dr. Balea Schumacher
15. Sleep Duration and its Impact on Cognitive Reaction Time | **Trevor Benslay**. Mentor: Dr. Balea Schumacher
16. From Tariffs to the Dinner Table: Beef Prices Under U.S. Tariff Policy | **Grant Hutchings**. Mentor: Dr. Ruohan Wu
17. Recent Changes in the Cost of Groceries in Georgia | **Mario Angel Montoya and Ansley Perschino**. Mentors: Dr. Kelly Manley and Dr. Yongseung Han

2:00 - 3:00 PM: POSTER SESSION #2

Martha T. Nesbitt Academic Building, Room 3110-AB

18. Foreign Bank Income Composition in Emerging and Developing Economies | **Mark Palakovich, Megan Sisler, and Kaden Westbrook**. Mentor: Dr. Kamilah Williams
19. Translating Policy into Practice: A Conceptual Model for Leveraging Student Organizations (Enactus) to Achieve UN Sustainable Development Goal Integration | **Brecklen Pavlich, Kenneth Lasomo, and Kaylee Bautista**. Mentor: Dr. Lu Xu
20. Resilience or Recession? Analyzing the Impact of the 2020 Global Supply Chain Crisis on Logistician Employment Stability and Real Wage Purchasing Power | **Brecklen Pavlich**. Mentor: Dr. Lu Xu
21. Improving the Synthesis of Vanadium Dioxide Films for Practical Applications | **Janelviz Tejada**. Mentors: Dr. Hoang Pham and Dr. Anota Ijadoula
22. Preparations for Confirmation of Candidate Hot Jupiters | **Josue Martinez**. Mentor: Dr. Gregory Feiden
23. Preliminary Results from Applying Machine Learning to Classical Barrovian Metamorphism: Advancing Petrographic Standardization | **Michael Manzanarez**. Mentors: Dr. Adrianna Rajkumar and Dr. Katty Mobasher
24. Girls Just Wanna Have Fun: Comparisons of Female Deception and Defiance in *Tartuffe* and *Hedda Gabler* | **Alexandra Soto**. Mentor: Dr. Shannon Gilstrap
25. Breaking up with My Idol: Imagined Intimacy and the Nature of Scandal in South Korean and Japanese Idol Industries | **Anna Shelley**. Mentor: Dr. Haelim Suh
26. The Oval Office as Visual Policy | **Sara Courtney**. Mentors: Dr. Erin Bush and Dr. Robert Rennie (Indiana University Bloomington; Center for the Study of the Presidency and Congress)
27. Cubic Nigel | **John-Michael Pate**.
28. Regional Governance and Rights Protection in Western Africa: Examining ECOWAS in Practice | **Desire O. Wonders**.
29. The Impact of Post Secondary Education on Land Use | **Daniel Greene**.
30. A Curriculum-Aligned Language Learning Companion Application | **Mackenzie Johnson-Tucker**.



CURCA would like to thank the following UNG students, faculty, and staff for making ARC 2026 possible:

The CURCA Administrative Team: Taylor Graves, Allison Grundel, Lauren Morris, and Diogo Pinheiro

Allison Galloup, Sarah Grace Glover, and the UNG libraries

ARC Planning Committee and Moderators:

Fernando Garcia, Taylor Graves, Katie Anne Jones, Gabrielle Manley, Lauren Morris, Tram Nguyen, Julianne Reynolds, Violeta Rico-Gomez, Emily Reedy and Miguel Vilchis Tinoco

ARC Best Paper and Best Poster Committee:

Alvaro Torres-Calderón, Thomas Greene, Matthew Horton, Berhanu Kidane, Michael Lanford, Anastasia Lin, David Patterson, and Balea Schumacher

ARC Reviewers:

Kendy Altizer, Erin Barding, Brittany Barron, Ryan Davis, Brittany Duncan, Zachary Elison, Rana Gautam, Ahmad Ghafarian, Victoria Hightower, Matthew Horton, Andrew Jakiel, Alison Kanak, Michael Lanford, Yelizaveta Moss, Amanda Reynolds, Carly Redding, Bhawani Sigdel Regmi, Wei-Lun Sun, MC Whitlock, and Margaret Williamson

