November 2 - 3, 2018
University of North Georgia—Gainesville Campus

Keynote:

**Dr. Randal Abler**
Associate Director for the Vertically Integrated Projects (VIP) Program
Georgia Institute of Technology

11:30-1:00
Hugh Mills Educational Complex

If you need this document in an alternate format for accessibility purposes, please contact Elaine Walton at Elaine.Walton@ung.edu; 706-867-3013.
## Schedule at a Glance

### Friday, November 2, 2018

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>6:00—8:00 PM</td>
<td>Opening Reception</td>
<td>Student Center: Robinson Ballroom</td>
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### Saturday, November 3, 2018

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>7:30—8:00 AM</td>
<td>Check-in opens</td>
<td>Nesbitt Building Atrium</td>
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<tr>
<td>8:00—9:00 AM</td>
<td>Panel Session 1</td>
<td>Nesbitt: Refer to Detailed Schedule</td>
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<tr>
<td>9:00—11:30 AM</td>
<td>Resume Drop-In: Come get feedback on your resume or CV</td>
<td>Nesbitt 3101</td>
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<tr>
<td>9:10—10:10 AM</td>
<td>Panel Session 2</td>
<td>Nesbitt: Refer to Detailed Schedule</td>
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<tr>
<td>10:20—11:30 AM</td>
<td>Poster Session 1</td>
<td>Cleveland Ballroom, Nesbitt 3110</td>
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<tr>
<td>11:30 AM—1:00 PM</td>
<td>Keynote, Awards, and Lunch</td>
<td>Hugh Mills Complex</td>
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<tr>
<td>1:00—2:00 PM</td>
<td>Panel Session 3</td>
<td>Nesbitt: Refer to Detailed Schedule</td>
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<td>2:10—3:10 PM</td>
<td>Panel Session 4</td>
<td>Nesbitt: Refer to Detailed Schedule</td>
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<tr>
<td>3:20—4:30 PM</td>
<td>Poster Session 2</td>
<td>Cleveland Ballroom, Nesbitt 3110</td>
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### 2018 Georgia Undergraduate Research Collective Officers:
- President, Anastasia Lin, University of North Georgia
- Immediate Past-President, Doreen Sams, Georgia College & State University
- President-Elect, Kate Theobold, University of West Georgia
- Secretary, Kymberly Harris, Georgia Southern University

### 2018 GURC Local Planning Committee:
- Allison Galloup, Miriam Moore, Austina Jordan, Diogo Pinheiro, Troy Smith, Leigh Dillard,
- Merrill Morris, Jim Shimkus, Jennifer Mook, Neal Lin, Chris Andrews, Kristine Stillwell,
- Liz Moss, Elaine Walton, Thomas Hayes, Amanda Losito

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Wifi Information: Log in: gurcwifi Password: Research18!
Panel Session 1: 8:00-9:00 AM

**Multiculturalism in the Political Landscape** | NESBITT 2201 | Moderator: Jillian Jay

*Syrian Refugees: Boon or Bust?*

**John Blessing & Lana Goastra**, Faculty Mentors: Dr. Dwight Wilson, Dr. Douglas Young, UNIVERSITY OF NORTH GEORGIA

*Local Government’s Responsiveness: The Newton County Cemetery and Mosque Project*

**Lauren E. Kirk**, Faculty Mentor: Dr. Florian Pohl, EMORY UNIVERSITY

*Latinos and the Accessibility to Social Services*

**Rebecca Pool**, Faculty Mentor: Dr. Diogo Pinheiro, UNIVERSITY OF NORTH GEORGIA

**AI, AI, Oh!: Artificial Intelligence and Teleportation** | NESBITT 2211 | Moderator: Anthony Ponizhay

*eSense 2.0: Modeling Biomimetic Predation with Multi-agent Multi-team Distributed Artificial Intelligence*

**Derek Martin**, Faculty Mentor: Dr. D. Michael Franklin, KENNESAW STATE UNIVERSITY

* Becoming Human: The Dawnian Evolution of AI*

**Alexander Aviles**, Faculty Mentor: Dr. Ian Afflerbach, UNIVERSITY OF NORTH GEORGIA

*“Classical” Teleportation*

**Samuel Greenberg**, Faculty Mentor: Dr. Bryson Payne, UNIVERSITY OF NORTH GEORGIA

**Conservation at Home and Abroad** | NESBITT 1201 | Moderator: Alex Pham

*Localized environmental variables affecting southern Appalachian salamander populations*

**Jasmine Williamson**, Faculty Mentor: Dr. Jessica Patterson, UNIVERSITY OF NORTH GEORGIA

*Conservation Decision Support System Design for West Indian Manatee Habitat Suitability and Protection*

**Ashleigh Nicole Wilson & Jeffery Lee Robertson**, Faculty Mentor: Dr. Sudhanshu Panda, UNIVERSITY OF NORTH GEORGIA

*On the Phylogeography of the Southeastern species of the genus Dalea l. (fabaceae) using a phylogenetic approach*

**Joshua B. Fuller, Destiny E. Moore**, Faculty Mentors: Dr. Clarke Miller, Dr. James T. Diggs, UNIVERSITY OF NORTH GEORGIA

**Reason and Revolution** | NESBITT 1211 | Moderator: Samantha Cragg

*Reason vs. truth: How the enlightenment and romanticism effected the Victorian Occult*

**Jessica Brazinski**, Faculty Mentor: Dr. Phillip Guerty, UNIVERSITY OF NORTH GEORGIA

*100 Kilometers to Freedom: Women’s Stories of Escape During the 1956 Hungarian Revolution*

**Cameron Mitchell**, Faculty Mentor: Dr. Katharine Kennedy, AGNES SCOTT COLLEGE

**Student Success in Education** | NESBITT 3104 | Moderator: Shaelyn Comiskey

*SPARK Mentoring Program*

**Chika Nwosu & Hailey Suarez**, GORDON STATE COLLEGE

*Critical School Policy Review*

**Amber Leggett**, Faculty Mentor: Dr. Kymberly Harris, GEORGIA SOUTHERN UNIVERSITY

*The Hybrid Newsroom: Using Online Platforms to Improve Student Learning*

**Jennifer Harris**, Faculty Mentor: Prof. Holly J. Morris, UNIVERSITY OF NORTH GEORGIA

**Resume/CV Drop in**: 9:00—11:30 AM

Dr. Edward Lai, Associate Director, Career Services, UNG

Nesbitt 3101

Wifi Information: Log in: gurcwifi Password: Research18!
Panel Session 2: 9:10-10:10 AM

Exploring Realities in Fiction | NESBITT 2201 | Moderator: Jennifer Harris

- Faulkner & McCullers
  - Murphy Ledbetter, Faculty Mentor: Dr. Rebecca Harrison, UNIVERSITY OF WEST GEORGIA
  - Learning to Read: Reality, Fiction, and Reading in the Female Quixote
  - Zachary McCollum, Faculty Mentor: Dr. Leigh Dillard, UNIVERSITY OF NORTH GEORGIA
  - Naturalism Marred by Idealism: The Literary Failures of Hamlin Garland
  - William Hollis, Faculty Mentor: Dr. Terry Easton, UNIVERSITY OF NORTH GEORGIA

You Give Me Fever: Thermal Transport and Heat Transfer | NESBITT 2211 | Moderator: Thomas Hayes

- Thermal Transport in Actinide Oxides with Interstitial Defects
  - Katherine Mitchell & Alex Resnick, Faculty Mentors: Dr. Jungkyu Park, Dr. Tien Yee, Dr. Andrew Hummel, Dr. Eduardo B. Farfan, KENNESAW STATE UNIVERSITY
  - Heat Transfer Comparison of Varied Pebble Sizes and Packing Arrangements in a Pebble-Bed Reactor
  - Julian Spangler, Faculty Mentor: Dr. Tien Yee, KENNESAW STATE UNIVERSITY
  - Thermal Transport in Actinide Oxides using Phonon Density of States Calculation
  - Alex Resnick & Katherine Mitchell, Faculty Mentors: Dr. Jungkyu Park, Dr. Tien Yee, Dr. Andrew Hummel, Dr. Eduardo B. Farfan, KENNESAW STATE UNIVERSITY

Social Influences on Development | NESBITT 1201 | Moderator: John Blessing

- Institutional Deprivation and the Effects of Development
  - Elena Mayfield, Faculty Mentor: Dr. Jim Dillon, UNIVERSITY OF WEST GEORGIA
  - Girls Education Around the World: Exploring Intervention Methods of Nonprofits in Israel, Thailand, Cambodia, and Sri Lanka used to increase Girls Education
  - Jillian E. Jay & Kiera Y. Chan, Faculty Mentor: Dr. Jenny Vermilya, UNIVERSITY OF NORTH GEORGIA
  - Parental Gender Beliefs and Attitudes Involving Child’s Toy Play
  - Madeline Drives, Amelia Dubose, Melanie Gillespie, & Taylor Maddox, Faculty Mentor: Dr. Tsu-Ming Chiang, GEORGIA COLLEGE AND STATE UNIVERSITY

We Dig Science: Ecosystem and Soil Science | NESBITT 1211 | Moderator: Alex Pham

- Assessing Soil Redox Conditions Using IRIS Tubes in a Central Georgia Wetland
  - Cameron Skinner, Faculty Mentors: Dr. Allison Rick VandeVoort, Dr. Christine Mutiti, Dr. Samuel Mutiti, GEORGIA COLLEGE AND STATE UNIVERSITY
  - Phosphate Desorption Across Particle Size After Sustainable Agriculture Practices
  - Zachary Davis, Faculty Mentors: Drs. Allison Rick VandeVoort, Samuel Mutiti, GEORGIA COLLEGE AND STATE UNIVERSITY
  - Imaging the Subsurface: The Effect of Logjams on Groundwater-Surface Water Exchange
  - Teodora Mitroi, Megan Doughty, & Jackie Randall, Faculty Mentor: Dr. Kamini Singha, GEORGIA STATE UNIVERSITY & COLORADO SCHOOL OF MINES

Education and Development | NESBITT 1217 | Moderator: Samantha Cragg

- Do Teacher and Student Interactions Affect Class Climate?
  - Angela Norris, Faculty Mentor: Dr. Kymberly Harris, GEORGIA SOUTHERN UNIVERSITY
  - Impact of American Sign Language on Early Development
  - Haley W. Gilreath, Faculty Mentor: Dr. Donna Gessell, UNIVERSITY OF NORTH GEORGIA
  - Behavior Specific Praise and a Student on the Autism Spectrum
  - Gabrielle Brueck, Faculty Mentor: Dr. Kymberly Harris, GEORGIA SOUTHERN UNIVERSITY

Wifi Information: Log in: gurcwifi Password: Research18!
Panel Session 2: 9:10-10:10 AM

Self-Efficacy and Self Esteem | NESBITT 3104 | Moderator: Lana Goitia

The Effects of Dog Ownership on Self-Efficacy Levels
Juliana Oleksy, Faculty Mentor: Dr. Diogo Pinheiro, UNIVERSITY OF NORTH GEORGIA

Social Media Representation and Self-Esteem
Charlton Lyons & Sevon Baxley, Faculty Mentor: Dr. Diane Byrd, FORT VALLEY STATE UNIVERSITY

Technology and Human Well-Being
Charles E. Bartlett, III, Tiona Doctor, & Aubrey L. Moore II, Faculty Mentor: Dr. Diane Byrd, FORT VALLEY STATE UNIVERSITY

POSTER SESSION 1

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 10:20—11:30 AM

1. A Comprehensive Study of Motor Imagery EEG-Based Classification Using Computational Analysis
   Justin McCorkle & Andrew Kalaani, Faculty Mentor: Dr. Rami Haddad, GEORGIA SOUTHERN UNIVERSITY

2. Bioinformatic analysis of Insect Iridescent Virus (IIV6) proposes novel open reading frames and supports previously described putative protein products
   Amanda D. Mileham, Faculty Mentor: Dr. Amanda L.J. Duffus, GORDON STATE COLLEGE

3. The Zeeman Effect and Its Potential in Molecular Spectroscopy
   Megan L. Climer, Faculty Mentor: Dr. Dereth J Drake, VALDOSTA STATE UNIVERSITY

4. Soccer Ball Trajectory Optimization
   Andrew Rezendez & Shafat Mubin, Faculty Mentor: Dr. Shafat Mubin, VALDOSTA STATE UNIVERSITY

5. Sustainability of an Established CURE Curriculum at Primarily Undergraduate Institutions
   Nicole Scheuermann & Sue Ellen DeChenne-Peters, Faculty Mentor: Dr. Sue Ellen DeChenne-Peters, GEORGIA SOUTHERN UNIVERSITY

6. Influence of human disturbance and marsh vegetation on fiddler crab retreat behavior
   Forrest Collins, Faculty Mentor: Dr. Michele Guidone, GEORGIA SOUTHERN UNIVERSITY

7. Cross-seasonal survey of reptile diversity and distribution between varying environments in Smithgall Woods State Park, White County, Georgia
   Cory E. Duckworth, Faculty Mentor: Dr. Jessica Patterson, UNIVERSITY OF NORTH GEORGIA

8. The Mechanism of Protein Kinase C in relation to ATPase family AAA-domain Containing Protein 3A in Head and Neck Squamous Cell Carcinoma
   Ron Chemmalakuzhy, Faculty Mentor: Dr. Yong Teng, AUGUSTA UNIVERSITY

9. Behavior Responses in the Inclusion Setting
   Alexandrea Kesselring & Casey Carroll, Faculty Mentor: Dr. Kymberly Harris, GEORGIA SOUTHERN UNIVERSITY

10. Dimensioning and Modeling of a Molten Salt Reactor
    Theron Crockett, Faculty Mentors: Dr. Tien Mun Yee, Dr. Jungkyu Park, Dr. Andrew Hummel, Dr. Eduardo B. Farfán, KENNESAW STATE UNIVERSITY

11. Jungle Slang
    Andres Osorio, Faculty Mentor: Prof. Heather Foster, UNIVERSITY OF NORTH GEORGIA

12. Empathy and Sympathy in Response to Social and Physical Pain
    Alexandra Withrow, Faculty Mentor: Dr. Stephen Smith, UNIVERSITY OF NORTH GEORGIA

13. Politicking Homelessness in Atlanta: How does Atlanta Responds to its Homeless Population?
    Aliyah Winfrey, Faculty Mentor: Dr. Faidra Papavasiliou, GEORGIA STATE UNIVERSITY
POSTER SESSION 1, continued

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 10:20—11:30 AM

   Hannah Turner & Mary Harrell, Faculty Mentor: Dr. Lydia Ray, COLUMBUS STATE UNIVERSITY

15. The Effectiveness of “Instructional Conversation” Pedagogy in Education for Multilingual Students
   Lauryn Waters. Faculty Mentor: Dr. Paula J. Mellom, UNIVERSITY OF GEORGIA

   Tinaye Gibbons, Faculty Mentor: Prof. Keri Adams, UNIVERSITY OF WEST GEORGIA

17. Divergent Gene Expression of Hoxb3b in Teleost Fishes is Due to Divergence of Upstream Cis-Regulatory Elements
   Erin Povolny, Faculty Mentor: Dr. Adam Davis, UNIVERSITY OF NORTH GEORGIA

18. Extended-Spectrum Beta-Lactamase Producing Enterobacteriaceae in North Georgia Waters
   Nou Moua, Faculty Mentor: Dr. Swapna Bhat, Dr. Jeanelle Morgan, UNIVERSITY OF NORTH GEORGIA

19. Hierarchy of Medicine in Elder Cambodian Refugees
   Johanna Mercurio, Faculty Mentor: Dr. Denise C. Lewis, UNIVERSITY OF GEORGIA

20. Falling Down, Falling Apart, and Finding Home in Reservation Blues
    Castiel Dixon, Faculty Mentor: Dr. Terry Easton, UNIVERSITY OF NORTH GEORGIA

21. Cigarette Smoke Exposure Upregulation of PGE2 Expression in the Bladder
    Jessica Nix, Faculty Mentor: Dr. Shannon Kispert, UNIVERSITY OF NORTH GEORGIA

22. “Make Me a Sandwich” - “Poof, You’re a Sandwich!”: Ditransitive Syntax in the Brain
    Haley Shea J. Barfield, Faculty Mentor: Dr. Troy Smith, UNIVERSITY OF NORTH GEORGIA

23. The Effects of Poverty and Lack of Resources on Educational Attainment
    Elizabeth Bingham, Faculty Mentors: Dr. Anne Price, Dr. Carl Hand, VALDOSTA STATE UNIVERSITY

24. Using 3D Printing to Optimize Research in X-ray Fluorescence Spectroscopy
    Mark Leggiero, Faculty Mentor: Dr. Sarah Formica, UNIVERSITY OF NORTH GEORGIA

25. Identification of Scn1a, Scn2a, and Scn8a in Mammalian Sexual Structures
    Garis A. Grant & Rhea A. Thomas, Faculty Mentor: Dr. Stacey BB Dutton, AGNES SCOTT COLLEGE

26. Using Cryptocurrencies to Hide Assets: Special Considerations in Divorce, Tax Evasion, and Money Laundering
    Shaelyn Comiskey, Faculty Mentor: Dr. Bryson R. Payne, UNIVERSITY OF NORTH GEORGIA

27. Monte Carlo Simulation of a Geiger Counter, Gamma-Ray Sources and Shielding
    Luke Appling, Mayur Menon, & David Wall, Faculty Mentors: Dr. Andrew Hummel, Dr. Jungkyu Park, Dr. Tien Mun Yee, Dr. Eduardo B. Farfán, KENNESAW STATE UNIVERSITY

28. Unravelling the evolutionary history and future prospects in a biodiversity hotspot: An integrated approach to species delimitation in the ringneck snake Diadophis punctatus
    Emily Miles & Polly Strott, Faculty Mentor: Dr. Frank Fontanella, UNIVERSITY OF WEST GEORGIA

29. Are the elf2-α Homologue and Putative Tyrosine Kinase Proteins of Ranaviruses Suitable Targets for Phylogenetic Reconstruction?
    Ami J. Davis, Faculty Mentor: Dr. Amanda L.J. Duffus, GORDON STATE COLLEGE

30. Identifying the presence of Scn4a, Scn5a, and Scn9a in the Mammalian Clitoris
    Rhea Thomas & Garis Grant, Faculty Mentor: Dr. Stacey BB Dutton, AGNES SCOTT COLLEGE

31. Improving Shelf-Life of Fruits Using Thermography
    Fahad Fahad & Adam Kumar Hudlow, Faculty Mentor: Dr. Sathish Kumar Gurupatham, KENNESAW STATE UNIVERSITY

32. Bugs in Bugs: Analysis of microbiota of Trichnoplusia ni Larvae
    Susan Ha, Faculty Mentors: Dr. Swapna Bhat, Dr. Evan Lampert, Dr. Jeanelle Morgan, UNIVERSITY OF NORTH GEORGIA

Wifi Information: Log in: gurcwifi Password: Research18!
POSTER SESSION 1, continued

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 10:20—11:30 AM

33. On The Existence Of An Arbitrarily Large Number Of Generators For The Presentation Ideal Of a Semigroup Ring
    Arun Suresh, Faculty Mentor: Dr. Florian Enescu, GEORGIA STATE UNIVERSITY

34. Fraud and Frill: Women and Spiritualism in Victorian America
    Lesley Jones, Faculty Mentor: Dr. Phillip Guerty, UNIVERSITY OF NORTH GEORGIA

35. Changes in Female Humpback Whale (Megaptera novaeangliae) Surface Feeding Behavior Through Stages of Maternal Care and Reproduction
    Eman Khwaja, Faculty Mentor: Dr. Stacey BB Dutton, AGNES SCOTT COLLEGE

36. Media and the Sexualization of Young Girls
    Corey Marshall, Faculty Mentor: Dr. Diane Byrd, FORT VALLEY STATE UNIVERSITY

37. Does the Quality or Quantity of Friendships Improve Emotions?
    Cassidy Hannah, Faculty Mentors: Dr. Matthew Stapleton, Dr. Hui Zhang, UNIVERSITY OF NORTH GEORGIA

38. Stereochemical synthesis of Lugdunin – An antimicrobial cyclic peptide
    Shivam Patel, Faculty Mentors: Dr. Shailiesh Ambre, Patricia Todebush, UNIVERSITY OF NORTH GEORGIA

39. Mars Environmental Module- The Aura of The Red Planet
    Nisha Kurian, Faculty Mentors: Dr. Tae Lee, Dr. Sairam Tangirala, GEORGIA GWINNETT COLLEGE

40. Programming a TeachMover Robot Arm
    Joel Garcia, Faculty Mentors: Dr. Sairm Tangirala, Dr. Sae Tong Lee, GEORGIA GWINNETT COLLEGE

41. Finding The Binding Site of Adenovirus E4 11K and P-body Component DDX6
    Katherine Elizabeth Moen, Faculty Mentor: Dr. Kasey Karen, GEORGIA COLLEGE AND STATE UNIVERSITY

42. Evaluating ERK inhibitor sensitivity in HRAS-mutant head and neck squamous cell carcinoma
    Da’Jhnae Gambrell-Sanders, Faculty Mentor: Dr. Adrienne Cox, CLARK ATLANTA UNIVERSITY

11:30 AM—12:30 PM: Keynote & Luncheon, Hugh Mills Physical Education Complex

Panel Session 3: 1:00 PM-2:00 PM

Race, Religion, and Language in the Americas | NESBITT 2201 | Moderator: Castiel Dixon

The Racialization of Muslims in America and Its Impact on Young American Muslims
    Mariam Hassoun, Faculty Mentor: Florian Pohl, EMORY UNIVERSITY

Racial Injustice in Writing Instruction
    Amanda Smith, Faculty Mentor: Dr. Mollie Barnes, Dr. Sarah Swofford, UNIVERSITY OF SOUTH CAROLINA BEAUFORT

Indigenous Languages of Mexico, Now and to the Future
    Emily Werner, Faculty Mentor: Dr. Maria Calatayud, UNIVERSITY OF NORTH GEORGIA

Pursuing Resistance: Ranavirus Research and Thymic Cell Reprogramming | NESBITT 2211 | Moderator: Alaina Whitmore

Analyzing Phylogenetic Relationships Among Ranaviruses: Myristilated Membrane Protein And Other Potential Alternative to Major Capsid Protein
    Riley B. Fuller, Faculty Mentor: Dr. Amanda L. J. Duffus, GORDON STATE COLLEGE

Alternative genes for exploring Ranavirus phylogenetics: Four core genes compared to the major capsid protein and the whole genome.
    Abigale Garner, Faculty Mentor: Dr. Amanda L. J. Duffus, GORDON STATE COLLEGE

Thymic Epithelial Cell Reprogramming and Co-Culture with T-Cell Progenitors
    Isabelle Riddle, Faculty Mentor: Dr. Nancy Manley, UNIVERSITY OF GEORGIA

Wifi Information: Log in: gurcwifi Password: Research18!
Panel Session 3: 1:00 PM-2:00 PM, continued

Disseminating Science | NESBITT 1201 | Moderator: Mark Leggiero

An Overview of Molten Salt Reactors – History, Design, and Future Prospect,
Duncan Bohannon & Chase Casher, Faculty Mentor: Dr. Andrew Hummel, Dr. Jungkyu Park, Dr. Tien Mun Yee, Dr. Eduardo B. Farfán, KENNESAW STATE UNIVERSITY

Engaging the Public through Science Festivals,
Anthony Sacchitello & Macey Jarrard, Faculty Mentor: Dr. Gina Childers, UNIVERSITY OF NORTH GEORGIA

An Experimental Examination on Techniques to Mitigate the Spread of Misinformation on Social Media Net
Thomas Hayes, Faculty Mentor: Dr. Richelle Oakley, UNIVERSITY OF NORTH GEORGIA

Intersections of Business, Computing, and Manufacturing | NESBITT 1211 | Moderator: Woody Depew

The State of the Video Game Industry and Potential Implications of Current Business Practices
Stephen Friend, Faculty Mentor: Dr. Frank Holiwski, SOUTH GEORGIA STATE UNIVERSITY

Artificial Intelligence, Personal Identity, and Self-awareness
Caryn Vandergriff, Faculty Mentor: Dr. Aristotel Santas, VALDOSTA STATE UNIVERSITY

Strategies for Small U.S. Manufacturers to Defend Home Markets from International Competition
Gabrielle Chan, Faculty Mentor: Dr. Edward O’Donnell, COLUMBUS STATE UNIVERSITY


Mixing Studies with Tracer of a Water Treatment Storage Tank Using Computational Fluid Dynamics
Pete Daniel Williams, Faculty Mentor: Dr. Tien Yee, KENNESAW STATE UNIVERSITY

Study of Differential Diffusion Using Backward Trajectories in Turbulence,
Adyasha Mohanty, Faculty Mentor: Dr. P.K. Yeung, GEORGIA INSTITUTE OF TECHNOLOGY

Novel, Portable and Low-cost Cosmic Ray Muon Telescope,
Jessica Eskew & Sawaiz Syed, Faculty Mentor: Xiaochun He, GEORGIA STATE UNIVERSITY

GURC's Artist Panel | NESBITT 3104 | Moderator: Lesley Jones

The New Lens of Normality: An Exploration of Queer Representation in Fairytales,
Dylan C. Carter, Faculty Mentor: Dr. Angela Farr-Schiller, KENNESAW STATE UNIVERSITY

UNG Tuba-Euphonium Quartet
Kevin Flanagan, Jarad Graham, Brittany Thomas, & Lauren Brack, Faculty Mentor: Dr. Adam Frey, UNIVERSITY OF NORTH GEORGIA

Art Inspired by Eastern Box Research for UNG Gainesville’s Sciences, Engineering, and Technology Building
Aida Alarcon & Kati Hornick, Faculty Mentor: Prof. Heather M. Foster, UNIVERSITY OF NORTH GEORGIA

Panel Session 4: 2:10 PM-3:10 PM

New Research to Combat Parkinson's, Heart Defects, and Pancreatitis | NESBITT 2201 | Moderator: Shea Barfield

Nox1-evoked ROS causes Fibrosis in Caerulein-Induced Chronic Pancreatitis through the p38/AKT pathway,
Ananya Chakraborty, Faculty Mentor: Dr. Maria Sabbatini, AUGUSTA UNIVERSITY

Identification of New Genes in Congenital Heart Defects
Naomi Siddiquee, Faculty Mentor: Brian Cummings, UNIVERSITY OF GEORGIA

Rapid Visuomotor Integration as a Window into Multisensory Processing
Margaret Schrayer, Faculty Mentor: Dr. Tarkeshwar Singh, UNIVERSITY OF GEORGIA

Wifi Information: Log in: gurcwifi Password: Research18!
Panel Session 4: 2:10 PM-3:10 PM  continued

Innovations in Conservation and Disease Research | NESBITT 2211 | Moderator: Alexis O’Neal

Determining Illegal Activity Hotspots to Better Manage Conservation Strategies
Taylor Kirby, Faculty Mentor: Dr. Jessica Hartel, UNIVERSITY OF NORTH GEORGIA

The effect of natural products like ginger, garlic, blueberries, turmeric, grapefruit and ashwagandha (herb) on the growth of triple negative breast cancer cells,
Sidhika Sharma, Faculty Mentor: Ramneet Kaur, UNIVERSITY OF NORTH GEORGIA

Mechanisms mediating the pro-fibrotic effects of estradiol
Haley Fulton, Faculty Mentor: Carol Feghali Bostwick, MEDICAL UNIVERSITY OF SOUTH CAROLINA

Influencing Attitude and Efficacy | NESBITT 1201 | Moderator: Lana Goitia

A Cross Cultural Examination of Attitudes about Ancestry and Culture between Georgia USA and Scotland
Samantha Leelyn Richey & Natalie Anne Macy, Faculty Mentor: Dr. Stephen M. Smith, UNIVERSITY OF NORTH GEORGIA

Follow the Leader: Edward R. Murrow’s See It Now and Contemporary Influencer Marketing
Sean Eagan, Faculty Mentor: Dr. David Resha, EMORY UNIVERSITY

Effectiveness of Socratic Seminar as a Teaching Method for Undergraduate Students
David Brown & Ian Matthew, Faculty Mentor: Dr. Jessica Traylor, GORDON STATE COLLEGE

Exploring Nuclear Reactors | NESBITT 1211 | Moderator: Alaina Whitmore

Numerical Modeling of Fluid Flow in a Molten Salt Reactor
Alisa Machiwalla & Carnell Tate, Faculty Mentors: Dr. Tien Yee, Dr. Jungkyu Park, Dr. Andrew Hummel, and Dr. Eduardo B. Farfan, KENNESAW STATE UNIVERSITY

An Overview of Pebble-Bed Reactors
Paul Schwan, Julian Spangler, & Isaac Naupa, Faculty Mentors: Dr. Andrew Hummel, Dr. Jungkyu Park, Dr. Tien Yee, and Dr. Eduardo B. Farfan, KENNESAW STATE UNIVERSITY

MCNP Modeling of a Molten Salt Reactor
David Wall, Faculty Mentor: Dr. Eduardo Farfan, KENNESAW STATE UNIVERSITY

Seeking Justice | NESBITT 1217 | Moderator: Woody Depew

The Use of Electronic Monitoring as an Alternative to Incarceration
Gillian Shea Baker, Faculty Mentor: Dr. Stuart Batchelder, UNIVERSITY OF NORTH GEORGIA

Approaches to Justice
Katie Pleiss, Faculty Mentor: Sarah Higinbotham, EMORY UNIVERSITY

Lexical harm reduction: Language perpetuates stigma related to substance use disorder
Erica Darragh, Faculty Mentor: Dr. Clayton Teem, UNIVERSITY OF NORTH GEORGIA

What’s Next? Preparing for Publication | NESBITT 3104 |

Dr. Leigh Dillard, Editor-In-Chief, Papers & Publications, UNIVERSITY OF NORTH GEORGIA

Ms. Allison Galloup, Digital Content Editor, Papers & Publications, UNIVERSITY OF NORTH GEORGIA

Dr. Anastasia Lin, Director, Center for Undergraduate Research and Creative Activities, UNIVERSITY OF NORTH GEORGIA
POSTER SESSION 2

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 3:20 pm– 4:30 pm

1. The Effects of Position and Length on Cue Saliency in Article-Noun Agreement of an Artificial Language
   Niah Thomas & Brittany Scanameo, Faculty Mentor: Dr. Daniel Walter, EMORY UNIVERSITY

2. Honey Bee Pollen Packing Mechanics
   Oliver Howington & Marguerite Matherne, Faculty Mentor: Dr. David Hu, UNIVERSITY OF NORTH GEORGIA & GEORGIA INSTITUTE OF TECHNOLOGY

3. Child Maltreatment and Substance Use: A Systematic Review and Meta-Analysis
   Jessica Thompson, Faculty Mentor: Dr. Assaf Oshri, UNIVERSITY OF GEORGIA

4. A Flexible Model for Investigating the Properties of Starspots: Comparison of Model Predictions to Observed Data
   Amanda Ash, Faculty Mentor: Dr. Gregory Feiden, UNIVERSITY OF NORTH GEORGIA

5. Irregularities in Young Stellar Models: Are Starspots to Blame?
   Jessica Hamilton, Faculty Mentor: Dr. Gregory Feiden, UNIVERSITY OF NORTH GEORGIA

6. Evaluating the Effects of Microenvironment Pro-inflammatory Cytokines on Breast Cancer Metastasis
   Megan Williams, Faculty Mentor: Dr. Cheryl Gomillion, UNIVERSITY OF GEORGIA

7. Transient Conductive Heat Transfer Analysis of Materials Subjected to Rapid Heating or Cooling
   Aidan Burleson & Spencer Shortt, Faculty Mentor: Dr. Hasitha Mahabaduge, GEORGIA COLLEGE AND STATE UNIVERSITY

8. Precision Top Quark Mass Extraction at the Large Hadron Collider
   Henry Sanders & Seth Iwan, Faculty Mentor: Dr. Sonny Mantry, UNIVERSITY OF NORTH GEORGIA

9. Gas Kinetic Model for Argon in a Commercial Plasm System
   Zachary Barton, Faculty Mentor: Dr. Kymberly Harris, GEORGIA SOUTHERN UNIVERSITY

10. Embodied Composition Pedagogy
    Amanda Ayers, Faculty Mentor: Dr. Molly Daniel, UNIVERSITY OF NORTH GEORGIA

11. The Impact of Obesity on Ingestion-induced Hippocampal Arc Expression in Male Rats
    Karan Sharma, Faculty Mentor: Dr. Marise Parent, GEORGIA STATE UNIVERSITY

12. Empathy and Sympathy in Response to Social and Physical Pain
    Adriana Amyette, Faculty Mentors: Dr. Sairm Tangirala, Dr. Sae Tong Lee, GEORGIA GWINETT COLLEGE

    Faith M. Rankin & Brendyn L. Melugin, Faculty Mentor: Dr. Tyler L. Harrison, UNIVERSITY OF NORTH GEORGIA

14. Characteristics of Bonding between Genders in Same-Sex Friendships
    Nombeko Marshall, Faculty Mentor: Dr. Medha Talpade, CLARK ATLANTA UNIVERSITY

15. Identifying Ancient River Channels and Faces using Ground Penetrating Radar: Brunswick, Georgia, USA
    Ken Taylor, Faculty Mentor: Dr. Christopher Seminack, UNIVERSITY OF NORTH GEORGIA

16. Assessment of Efficacy and Effectiveness of Antiseptic Mouthwash Products against Oral Microbiota
    Angel Shue & Elizabeth G. Miranda-ayala, Faculty Mentor: Dr. Davison T. Sangweme, UNIVERSITY OF NORTH GEORGIA

17. Stability Analysis of Stochastically Switching Kuramoto Networks
    Ratislav Krylov, Faculty Mentor: Dr. Igor Belykh, GEORGIA STATE UNIVERSITY

18. How College Student’s View Three Strikes Laws
    Danielle Gregoire, UNIVERSITY OF NORTH GEORGIA

19. The Role of Chunk Strength and Grammaticality in Affecting Learning of an Artificial Grammar
    Tamika Crane, Faculty Mentor: Dr. Christopher Conway, GEORGIA STATE UNIVERSITY

20. Putative Targets of the PP2A Serine/Threonine Phosphatase Complex In Regulating Dendritic Morphology
    Andre Golshir, Faculty Mentor: Dr. Daniel N. Cox, GEORGIA STATE UNIVERSITY

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POSTER SESSION 2, continued

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 3:20 pm – 4:30 pm

21. Antibiotic-Producing Bacteria Associated with Sharks of St. Helena and Port Royal Sound
   
   **Daniel Conrad**, Faculty Mentors: Dr. Diego L. Gil-Agudelo and Dr. Kim B. Ritchie,
   UNIVERSITY OF SOUTH CAROLINA BEAUFORT

22. Bugs in Bugs
   
   **Josemaria Garcia**, Faculty Mentor: Dr. Evan Lampert, UNIVERSITY OF NORTH GEORGIA

23. An Introduction to Systematic Reviews: Effects of Green Tea Polyphenols on Diet-Induced Obesity and Intestinal Microbiota
   
   **Allison Georgescu**, Faculty Mentor: Dr. Roberta Attanasio, GEORGIA STATE UNIVERSITY

24. Influences of native culture on Southeast Asian adolescent refugees and its accuracy in diagnosing trauma
   
   **Vidisha Gangidi**, Faculty Mentor: Dr. Denise C. Lewis, UNIVERSITY OF GEORGIA

25. Older Adults’ Perceptions of Science and Engineering in Appalachia
   
   **Hannah Harris**, Faculty Mentors: Dr. Gina Childers, UNIVERSITY OF NORTH GEORGIA

26. Diversity and Abundance of Invasive Aedes albopictus, Other Mosquitoes (Diptera: Culicidae), and Arthropods in North Georgia
   
   **Mason Carlisle & Madison Embrick**, Faculty Mentor: Dr. Evan Lampert and Dr. Davison Sangweme,
   UNIVERSITY OF NORTH GEORGIA

27. Effects of temperature during non-breeding months on size of three species of sparrow
   
   **Harley N. Hunt**, Faculty Mentor: Dr. Katie Stumpf, GEORGIA COLLEGE AND STATE UNIVERSITY

28. Terminal die-back, the result of a new Neofusicoccum species
   
   **Courtney Cameron**, Faculty Mentor: Dr. Marin Brewer, UNIVERSITY OF GEORGIA

29. Perceptions and Performance of Students
   
   **Jake Lovvorn, Bianey Serrano, & Tyler Washington**, Faculty Mentor: Julie Delose, YOUNG HARRIS COLLEGE

30. Let Me Down Easy
   
   **Heather Dotson**, Faculty Mentors: Dr. Diane Cook, UNIVERSITY OF NORTH GEORGIA

31. The critical role of ATAD3A in the estrogen signaling pathway in breast cancer cells
   
   **Parth Thakkar**, Faculty Mentor: Dr. Yong Teng, AUGUSTA UNIVERSITY

32. Introducing Renewable Energy Through Community-based Engaged Learning
   
   **Nick Palmer, Faculty Mentor**: Dr. Hasitha Mahabaduge, GEORGIA COLLEGE AND STATE UNIVERSITY

33. Identification of Proteins that Regulate CRISPR DNA Uptake of Pyrocococcus furiosus
   
   **Landon Clark**, Faculty Mentor: Dr. Michael Terns, UNIVERSITY OF GEORGIA

34. Using Atomic Force Microscopy to Image Metal Sulfide Nanoparticles
   
   **Martin Driggers & Tatiana Mendoza**, Faculty Mentor: Dr. George Chumanov, CLEMSON UNIVERSITY

35. Synthesis of Tumor-Associated Carbohydrates (TACs) using Lewis Acid Catalysts
   
   **Rania Saleb, Faculty Mentors**: Dr. Shailesh Ambre & Dr. Patricia Todebush, UNIVERSITY OF NORTH GEORGIA

36. Urban and Rural Chinese Children’s Anticipated Moral Emotions
   
   **Dalia Cuevas**, Faculty Mentors: Dr. Matthew Stapleton & Dr. Hui Zhang, UNIVERSITY OF NORTH GEORGIA

37. Degradation of Cellulose through Hydrogen Metabolism and Electron Bifurcation
   
   **Madison Prchal**, Faculty Mentor: Prof. Eleanor Schut, UNIVERSITY OF NORTH GEORGIA

38. A Survey of Aquatic Macro- and Micro-invertebrates of Vernal Granite Outcrop Pools in North Georgia
   
   **Joshua B. Fuller, Ana G. Ferreira, & Cruz Mejia-Rodriguez**, Faculty Mentor: Prof. Margi Flood, UNIVERSITY OF NORTH GEORGIA

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POSTER SESSION 2, continued

CLEVELAND BALLROOM - MARTHA T. NESBITT 3110 - 3:20 pm– 4:30 pm

39. Effects of Vitamin D Receptor Knockout, Vitamin D Deficiency, and Diabetes on Corneal Epithelial Nerve Density
   Sarah Vick, Faculty Mentor: Dr. Mitchell Watsky, Dr. Xiaowen Lu, AUGUSTA UNIVERSITY

39. Home Range and Habitat Use of the Eastern Box Turtle
   Amber Rittgers, Samantha Shea, & Kayla Bonadie, Faculty Mentor: Dr. Natalie Hyslop & Dr. Jennifer Mook, UNIVERSITY OF NORTH GEORGIA

41. Data Exploration and Analysis for the Hemingway Measure of Adult Connectedness
   Gildardo Bautista-May, Faculty Mentor: Dr. Ping Ye, Dr. Diane Cook, UNIVERSITY OF NORTH GEORGIA

42. A Comparison of Two Automated Bat-Call Classifying Software Programs
   Sara Robertson, Faculty Mentor: Dr. Michael Bender, UNIVERSITY OF NORTH GEORGIA

43. Library Synthesis of antimicrobial peptide targeting Staphylococcus aureus
   Jonathan Bridges, Faculty Mentor: Dr. Shailes Ambre & Dr. Patricia Todebush, UNIVERSITY OF NORTH GEORGIA

44. Computational Techniques to Analyze the Nitrogen Second Positive System
   Bakari Bethea, Faculty Mentor: Dr. Dereth J Drake, VALDOSTA STATE UNIVERSITY

45. The Sublethal Effects and Bioaccumulation of 17a-Ethinyl Estradiol in Lumbriculus variegatus
   Kikelomo Ogunsemore, Faculty Mentor: Dr. Faith Wiley, AUGUSTA UNIVERSITY

46. Radio Astronomy and Its Use in Molecular Spectroscopy
   Savanna Burks, Faculty Mentor: Dereth Drake, VALDOSTA STATE UNIVERSITY

Special thanks to Elaine Walton, Mandy Losito, Thomas Hayes, and Allison Galloup, along with the UNG Libraries, the UNG Office of Research and Engagement and the entire UNG-GURC Planning Committee. We also wish to acknowledge and thank the tireless work of our reviewers as well as the entire General Council of the Georgia Undergraduate Research Collective.

See you at GURC 2019!

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