

**APRIL 10, 2020**

**wrca**

UNDERGRADUATE RESEARCH &  
CREATIVE ACTIVITY CONFERENCE

**HOSTED BY  
THE OFFICE FOR  
UNDERGRADUATE  
RESEARCH**

# ON BEHALF OF THE OFFICE FOR UNDERGRADUATE RESEARCH, WELCOME TO THE 2020 UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY CONFERENCE!

**WHAT IS OUR?** The Office for Undergraduate Research offers resources that can enrich a student's undergraduate experience by offering an opportunity to actively engage in learning outside of the classroom. Undergraduate researchers gain hands-on experience with research in all majors, often working one-on-one with faculty mentors that challenge them intellectually and can become lifetime mentors. OUR can provide students with the information and resources necessary to engage in original inquiry, scholarship, and creative work during their undergraduate years at the Capstone. Likewise, OUR can connect faculty members to eager, innovative young researchers to assist in their labs.

**WHAT IS ESP?** The Emerging Scholars Program is an exciting opportunity for students at The University of Alabama to get involved in research with a faculty mentor in their chosen field. These research opportunities allow a student to gain experience that deepens his or her understanding in a field of study, to develop necessary professional skills, to interact with a diverse group of students and faculty members, and to learn appropriate methods and techniques for presenting professional research. ESP also benefits faculty by connecting them with students eager to learn and participate in research throughout their UA careers.



# SESSION BREAKDOWN

**SESSION 1  
HEALTH SCIENCE**

**SESSION 1A  
NATURAL SCIENCE,  
LIFE SCIENCE, ENGINEERING**

**SESSION 2  
SOCIAL SCIENCE**

**SESSION 2A  
FINE ARTS, HUMANITIES,  
BUSINESS, COMPUTER  
SCIENCE, EDUCATION**

# SESSION 1: HEALTH SCIENCE

## 1. Isabella Gladden

Enzymatic Digestion of Starch Inclusion Complexes with Alkyl Gallates  
*Lingyan Kong, Libo Tan*

## 2. Aly Gutierrez

Inhibitory Effect of Vitamin C on in vitro Enzymatic Digestion of Raw and Cooked Starch  
*Lingyan Kong*

## 3. Gracie Trulove, Steven Kelly

Milestones of Typical Feeding Development: An Evidence Based Systematic Review  
*Memorie Gosa*

## 4. Amanda Ferrito

Validation of Body Composition Estimates from a 2-Dimensional Digital Image Compared to a Rapid Four-Compartment Criterion Model  
*Michael Fedewa, Katherine Sullivan*

## 5. Sydney Miles

Vitamin A Supplementation during Suckling and Post-weaning Periods Reduces Systemic and Adipose Tissue Oxidative Stress in Offspring of Rats Consuming a High-Fat Diet  
*Libo Tan*

## 6. Kendall Kruchten

West Nile Virus Distribution in Harris County, Texas: A Case Study  
*Julia Cherry*

## 7. Bentley Spivak, Kyla Zaleski, Leah White

Appraisal of Guidelines for the Prevention of Arterial Catheter-Related Infections  
*Mark Parker*

## 8. Madison Clary, Summer Ensor, Olivia Rush, Anna Mauldin

Effect of Mixing Method on Infant Formulas Mixed to a Moderately Thick Consistency  
*Memorie Gosa*

## 9. Maegan Madden

Prevalence of the Metabolic Syndrome and Nonalcoholic Fatty Liver Disease in Non-cirrhotic Patients Presenting with Hepatocellular Carcinoma  
*Stevan Gonzalez*

## 10. Olivia Rush, Grace Dooley, Summer Ensor, Madison Clary

Effect of Mixing Method on Infant Formulas as Mixed to a Mildly Thick Consistency  
*Memorie Gosa*

## 11. Mary Caroline Yuk

A preliminary analysis of hearing loss and its association with mild cognitive impairment and alcohol use in a primary care geriatric population  
*Marcia Hay-McCutcheon, Rebecca Allen*

## 12. Christopher Froehlich

Myths and Realities of Medical Marijuana  
*Alan Blum*

## 13. Heleena Haberer

Repeated Retinoic Acid Treatments Modulate Adipose Tissue Development of Neonatal Rats Reared by Mothers Consuming a High Fat Diet  
*Libo Tan*

## 14. Austin Ward, Summer Ensor, Madison Clary

Dietary Variety of Children With Atypical Chewing Function  
*Memorie Gosa*

## 15. Karli Morris, Dakota McCurley, Mackenzie Kramer, and Baylor Belich

Dietary Variety of Children with Typical Chewing Function  
*Memorie Gosa*

## 16. Eva Curran, Caroline Dodson, Myles Wisdom, Noah Estroff, Morgan Stults, Sierra Keylor, Jenna Hoffmann

Intrapersonal Stress Management Abstract  
*Rebecca Larson*

# SESSION 1: HEALTH SCIENCE

## 17. Amelia McKee

Occupational Health, Safety, and Performance of Occupational Athletes

*Hayley MacDonald, Emily Colster*

## 18. Kyah Harris

Potential Cultural Competency Needs of Health Care Providers in the Management of Lupus

*Pamela Foster, Donovan Cousan*

## 19. Melissa Sharpe

Determining the Validity of Relative Fat Mass and Smartphone-Based Body Composition Estimates Using a 7-Site Skinfold Criterion

*Michael Fedewa, Katie Sullivan*

## 20. Laura Carrasquilla

Parent Perceptions and Influence on Sport Specialization as it Relates to Injury in Youth Baseball

*Elizabeth Hibberd*

## 21. Emma Anne McKinley

The Impact of a Free Health Care Clinic in Selma Alabama

*Todd Smith, Thomas English, Catayna Stager*

## 22. Jessica Bentley

Relative Accuracy of Fat Mass and Fat-Free Mass Derived from a Single Digital Image versus Skinfolds and Hydrodensitometry

*Michael Fedewa, Katie Sullivan*

## 23. Abigail Boucher

Validity of a 4-Compartment Body Composition Model Using Body Volume Derived from a Single Digital Image

*Michael Fedewa, Katie Sullivan*

## 24. Bianca Urness and Cameron Brown

Using Mangrove Rivulus Fish as a Model for Autism Research: The Role of Social Experience and Perception of Visual Cues

*Ryan Earley*

## 25. Kailyn Dean

What is the Relationship Between Burnout and Motivation Among Faculty, Staff, Residents and Nurses in a Family Medicine Clinic and Residency Program?

*Nathan Culmer*

## 26. Elizabeth Titshaw

Effect of Work-To-Rest Cycles on Cardiovascular Drift and Maximal Oxygen Uptake During Heat Stress

*Jonathan Wingo, Anne Mulholland, Hillary Yoder*

## 27. Justin Gaddis, Ariana Domencetti, Hailey Krauss

River Clean Up and Littering Analysis on the Environment

*Rebecca Larson*

## 28. Maggie Cushing, Makenzie Boshell, Anna Kidwell,

Levi Griffin, Jake Caffiero, Lia Williams

Infant Mortality

*Rebecca Larson*

## 29. Claire Brennan, Jake Caffiero, Lindsay Callahan,

Kristi Davison, Callie Kraushaar, Victoria McLemore,

Alex Pannell

Service and Sustainability: Educating Elementary Students on Sustainability and Its Environmental Effects

*Rebecca Larson*

## 30. Hannah Hamilton, Amber Agee, Tyler Jones,

Tajuan Williams

Improving Balance and Physical Activity Among the Senior Population

*Rebecca Larson*

## 31. Brenna Snow, Amber Agee, Maiyah Beck, Kat Jackson

Know Your Shelters Campaign

*Rebecca Larson*

## 32. Allyson James

Historical Examination of the Phenomena of Nursing Leadership: A Creative Research and Art Project

*Ann Graves, Teresa Welch*

## 33. Amanda Justice

Nursing Students Perceptions of End-of-Life Communication: A Simulation Study

*Megan Lippe*

# SESSION 1: HEALTH SCIENCE

## 34. Kaitlyn Haverty

“Saraswatharishtam” - an Ayurveda Preparation Rescue from Movement Disorder in Fly Model: A Search for Neuroprotective Compounds from a Polyherbal Medicine  
*Anathbandhu Chaudhuri*

## 35. Erin Bond

Rural Women’s Healthcare Reform: A Meta-analysis of Complications and Solutions  
*Darren Surman*

## 36. Mary Kate O’Connell, Emily Forsythe

A Hearing Health Care Needs Assessment in Rural Alabama  
*Marcia Hay-McCutcheon*

## 37. Devin Hall

Longitudinal Change in Child Disfluency  
*Anthony Buhr*

## 38. Morgan Renfroe

E-cigarette, or vaping, product use-associated lung injury: Vaping Tetrahydrocannabinol in U.S Hospitalized Patients  
*John Higginbotham*

## 39. Amber McCranie

Cortisol Levels in Children  
*Maria Hernandez-Reif, Nahide Gungordu*

## 40. Wheeler Bedwell

Relative Accuracy of Body Composition Estimates Derived from 2-Dimensional Digital Imaging  
*Michael Fedewa*

## 41. Candice Keogh

Selective Neuronal Vulnerability of Parkinson’s Disease in *C. elegans*  
*Kim Caldwell, Laura Berkowitz, Guy Caldwell*

## 42. Makayla Chalacoff, Morgan Renfroe, Shannon Ogrodzinski, Tajuan Williams, Navasha Dickens, Jessica Castro

Applying Health Psychology to Health Promotion: Analyzing Implementation of Informational Signage on Recycling Behavior  
*Rebecca Larson*

## 43. Emily Large, Maddie Hirt, Makayla Chalacoff, Lanie Overton, Shay Pradetto, Sophia Bellamah, Zach Duffy, Ainsley Baker

Combating Health Disparities: The Effect of Implementation of Health Programming on the Food Choice Behaviors of Disadvantaged Women and Children  
*Rebecca Larson*

## 44. Abby Emerson

Age Mediated Pharmacokinetics of Lutein in Rats: the APL Study  
*Libo Tan, Lingyan Kong*

## 45. Rylee Ritchey, Monica Malangone, Caylen Bray, Corey Wolborsky, Camarie Hawkins, Iyana Diaz, Landon Clinton

The Art of Relaxation  
*Rebecca Larson*

## 46. Danika Duffalo, Selena Ortega, Erin Zenker, Avery Boyce

Spirituality and Stress Workshop  
*Rebecca Larson*

## 47. Kristianna Davison, Camarie Hawkins, Allison Moore, Tiffany Robinson, Carnell Burden

Sensory in Gardening: Introducing Preschoolers to Things in the Garden Using Sensory  
*Rebecca Larson*

## 48. Emma Harper

Investigation of Animal-Assisted Therapy in Geriatric Communities  
*Ryan Earley*

## 49. Tyler Fowler, Morgan Patterson, Shakylah Caffee, Elise Willoughby, Lainey Timberman, Aaliyah Vester

Meditation and Mindfulness  
*Rebecca Larson*

## 50. Samuel Vielee, Parker Cullop

Spectracide, an Environmental Pollutant, Causes Parkinsonian Symptoms in Fly Model: Is Dopamine Pathway a Target for Spectracide?  
*Anathbandhu Chaudhuri*

# SESSION 1: HEALTH SCIENCE

**51. Rob Lockhart, Harrison Pyburn, Mack MacLean, Rebecca Cabrera**

Perception Interventions: Self-Esteem and Gratitude  
*Rebecca Larson*

**52. Avery Anderson**

Digital Image Assessment of Hydration Status  
*Michael Fedewa, Katherine Sullivan, Michael Esco*

**53. Hannah Marlow, Linsey Medlin, David Ford, Natalie Vaughn**

Digital Marketing Strategies in the Pharmaceutical Industry  
*Jeff Lucas*

**54. Kate Thompson**

Sexual Health Perceptions and Knowledge-Seeking Behaviors of Generation Z College-Aged Females  
*Sara Kaylor*

**55. Meisi Jacobs, Clare Johlie, Amber Wesoloski, Shannon Anderson**

Examining Virtual Reality's Ability to Minimize Pain and Distress in Children Receiving an Injection  
*Sherwood Burns-Nader*

**56. Hannah Slater**

Predicting Clinical Deterioration in Cancer Patients  
*Daniel France, Shilo Anders*

**57. Alex Pannell, Skyler Haynes, Reilly Moss, Emily Fajardo**

The Brunch Bunch  
*Rebecca Larson*

**58. G'mia McGlown**

Vaping and Tobacco Use among UA Students: Current Trends and Opinions about Campus Policy  
*Jen Nickelson, Swetha Allamreddy*

**59. Hannah Williams, Peyton Brantley, Harper Blount, Lanie Dean**

Analysis of Surface Electromyography Data from Healthy Swallows for Clinical Use  
*Memorie Gosa, Todd Freeborn, Julia Miller*

**60. Lexi Prizgint**

Tackling Low Back Pain One Step at a Time: A Literature Review  
*Michael Callihan*

**61. MacKenzie Robb, Paige Christenson**

Virtual Reality Treatment for Substance Use Disorders  
*Mercy Mumba*

**62. Josie Niedermeier**

The Relationship Between Physical Activity, Academic Achievement, Psychosocial Wellbeing Among College Students  
*Mercy Mumba*

**63. Ali Espevik, Brianna Ferriola, Michael Mays, Brady Nabors, Autumn Payne, Kathleen Scerra**

Using Yoga and Deep Breathing to Alleviate Stress  
*Rebecca Larson*

**64. Elizabeth McCabe**

The effect of a Gluten Free Diet on bone health in children and adolescents with Celiac Disease  
*Michael Fedewa, Katie Sullivan*

**65. Lucy Gideon**

The role of Inhibitory Control in Syntactic Ambiguity Processing  
*Jason Scofield, Kaitlyn May*

**66. Hannah Meyer, Carlos "Trey" Clark**

The Impact of Asynchronous Telemedicine on the Quadruple Aim of Medicine: A Systematic Literature Review  
*Nathan Culmer, Todd Smith, Catanya Stager*

**67. Katherine Grimm, Abby Fickel**

Implementation of Ambulance-based Telemedicine in Rural Alabama  
*Todd Smith, Nathan Culmer, Catanya Stager*

**68. Ben Hallihan**

Examining Resilience of Migrants Displaced by the 2011 Tornado in Tuscaloosa, Alabama  
*Gibran Mancus*

# SESSION 1: HEALTH SCIENCE

**69. Reeva Kedia, Madison Yasenchok, Hannah Worley, Ally Juratovac, Julia Shray, Julianna Sweeney, Grace Holcomb**

Recycling Reform in Tuscaloosa Apartment Complexes  
*Todd Hester, Tana Early*

**70. Carolina Kirwan, Maddie Hope Campbell**

The Effect of Mindfulness-based Intervention for Opioid Use Disorders  
*Mercy Mumba*

**71. Callie Kraushaar, Claire Brennan, Destiney Smith, Diamond Crawford, Ian Sweeney, Kaitlyn Modaff, and Kiara Bonham**

Reducing Hunger and Malnutrition in Tuscaloosa County  
*Rebecca Larson*

**72. E. Grace Dunbar**

Relative Accuracy of Fat Mass and Fat-Free Mass Derived from a Single Digital Image Versus Hydrodensitometry  
*Michael Fedewa, Katherine Sullivan*

**73. Blake Wright**

Analyzing Stress and Recovery Using Heart Rate Monitors and Heart Rate Variability with Tennis Players  
*Jenny Mainz*

**74. Kristianna Davison, Camarie Hawkins, Allison Moore, Tiffany Robinson, and Carnell Burden**

Sensory in Gardening: Introducing Preschoolers to Things in the Garden Using Sensory  
*Rebecca Larson*

**75. Camrine Southard, Caroline Galloway, Sara Lunsford, Destiney Smith, Fiona Conley, Tara Raskie, Bailey Preston, Nikia Jackson, Emily Skulick**

Upcycle Bama  
*Rebecca Larson*

**76. Clay Gaddis, Brooke Cole, Hailey Krauss, Lindsey Morris**

Combatting Mental Health in College Students with Animal Therapy  
*Rebecca Larson*



# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 77. Lauren McLoughlin, Bailey Bridgers

Ultra-Stretchable Conductive Polymer Complex as Strain Sensor with Excellent Linearity and Repeatable Autonomous Self-Healing Ability  
*Evan Wujcik*

## 78. Elizabeth Bury

Characterization of the Effects of Paraffinic Oil on the Mechanical Behavior of the Thermoplastic Elastomer, Styrene-Ethylene-Butylene-Styrene  
*Amanda Koh*

## 79. Nicole Angel

Photoactive Nanoparticles-Loaded Bio-Nanofibers for Solar Vapor Generation  
*Lingyan Kong, FengYan*

## 80. Tyler Lubbat

Fabrication of food biopolymers-based nanoparticles by electrostatic atomization  
*Lingyan Kong*

## 81. Isabelle Berry

Recent Developments in Electrospinning of Chitosan Nanofibers  
*Lingyan Kong*

## 82. Melanie Vines

Evaluating the Biodegradability of Fluorescent Dissolved Organic Matter Using Fluorescence Spectroscopy for Biofiltration Design in Water Utilities  
*Leigh Terry*

## 83. Hannah Smith, Melanie Vines, Madeline Grace Johnson, Drew Cheek

A Paleo Perspective of Florida's Interstate Rivers: The Choctawhatchee River and Apalachicola River  
*Glenn Tootle*

## 84. Jacob Wall

Low Temperature Processed Highly Efficient Hole-Transport-Layer Free Carbon-based Planar Perovskite Solar Cells with SnO<sub>2</sub> Quantum Dot Electron-Transport-Layer  
*Feng Yan, Vijay Sankaranarayanan, Liping Guo*

## 85. Katharine Conaway

Alternative Deicers for Winter Road Maintenance – A Review  
*Leigh Terry*

## 86. Nicole Serwinowski, Elizabeth McDonough, Christopher Popiolek

Sustainable Novel Bamboo-Based Membranes for Water Treatment Fabricated by Regeneration of Bamboo Waste Fibers  
*Milad Esfahani*

## 87. Kelsey Johnson

Probabilistic Analysis of Lean Direction Injection Spray based on DBI Imaging  
*Ajay Agrawal*

## 88. Nathan Silvey

Experimental Investigation of Rotor-Wing Interaction at Low Disk Loading and Low Reynolds Number at Partial Rotor Coverage  
*James Hubner, Mingtai Chen*

## 89. WooSeop Lee

Ultrawide Bandwidth, Low-Profile, Low-Cost, Monocone Antenna for Vehicle-to-Everything (V2X)  
*Nathan Jeong*

## 90. Michael Stokes

Effect of the Radial Beam Mode on Material Processing by Short-Pulse Lasers  
*Alexey Volkov, Omid Ranjbar*

## 91. Ethan Brooks

Simulating All-Perovskite Tandem Solar Cells  
*Dawen Li*

## 92. Barclay Jumet

Friction-based Infinitely Variable Transmission  
*Xuefeng Wang*

## 93. Halee Hudson

Bridging Information Gaps in Infrastructure  
*Darren Surman*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 94. Christopher McCarthy

Development of Luminescent Pressure and Strain Measurement Technique  
*Paul Hubner, Amruthkiran Hegde*

## 95. William McLeod

Thermochemistry of Phase-Changing Borane Containing Hydrogen Storage Materials  
*David Dixon*

## 96. Emma Scott, Chloe Flack

Semi-autonomous Modular Soft Robot  
*Vishesh Vikas*

## 97. Jonathan Platt, Leo Vanderburgh

Handheld RF Snow Layer Measurement System for UAV Platforms  
*Yang-Ki Hong*

## 98. Caroline Austin

Exploring the Effects of Stochastic Resonance on Perturbed Balance  
*Dario Martelli*

## 99. Jace Aldrich

Improving the Control of Functional Electrical Stimulation in Hybrid Exoskeletons  
*Christian Cousin*

## 100. Matthew DeBrunner

Property Changes in Liquid Metal Oxides After Annealing  
*Amanda Koh*

## 101. Savannah Olmstead

A Neural Network Approach to Human Gait Movement Classification Using FSRs  
*Nathan Jeong*

## 102. Zoe Baker

Simulation of Thin-Film Tandem Silicon-Perovskite Solar Cells  
*Dawen Li*

## 103. Nicholas Sahli

Get HIPE for Solvent Extraction!  
*Amanda Koh*

## 104. Gemma Truesdell

Creating a uniform density to increase stability in magnetorheological fluids  
*Amanda Koh*

## 105. Seth Chun

Characterization of Electrically Tunable Liquid Metal Dispersion Inks  
*Amanda Koh*

## 106. Zane J. Parkerson; Ryan J. Olson; Danielle M. Bretz

Fabrication of Thin Film Composite Hollow Fiber Membranes for Removal of Perflouralkyl Substances from Water  
*Milad Esfahani*

## 107. Jordan Evans

Using the Atomic Force Microscope (AFM) to Study the Mechanical Properties of Galinstan  
*Amanda Koh*

## 108. Jordan Walker

Effects of Continuous Phase on Droplet Size in Liquid Metal Dispersions  
*Amanda Koh*

## 109. Jessica Scheer

Roughness Effects on Skin Friction in an Adverse Pressure Gradient Boundary Layer  
*Amy Lang*

## 110. Luke Porter

Effect of Laser Surface Remelting on Mechanical Properties of Superalloys Produced by Direct Metal Laser Sintering  
*Keivan Davami*

## 111. Zachary Woodin, Jordan Tastad

Development of An Automated Wearable Light System Using Ambient Light Detection to Enhance Visibility and Safety of Construction Workers  
*Chukwuma Nnaji*

## 112. Grant Gabrielson

Slot-Die Coating Of Perovskite Solar Cells  
*Dawen Li*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 113. Sara Brunner

Processing, Microstructure, and Mechanical Properties  
Correlation in a Newly Developed Dual-Phase Steel  
*Nilesh Kumar, Monowar Hossain*

## 114. Alexis E. Longmire

Self-compatibility in a Self-fertilizing Fish  
*Ryan Earley*

## 115. C. Sumner Thomas

Formation Constants for Cr(III)-DNA Binary Adducts  
*John Vincent*

## 116. Madeline Plunkett

Trialkylphosphine Derived Palladacycles as Catalysts for  
the Cross-Dimerization of Terminal Aryl Acetylenes with  
Terminal Propargyl Alcohols and Amides: An Evaluation  
of the Ligand Effects  
*Kevin Shaughnessy*

## 117. Ashleigh-Marie Morgan Abercrombie

Host-guest complexation of cyclodextrins studied by  
isothermal titration calorimetry  
*Lingyan Kong*

## 118. Julian Giakas

Phenotypic and genetic correlations between life history  
traits in a self-fertilizing hermaphroditic fish  
*Ryan Earley*

## 119. Kelsey Hornbuckle

Thermodynamic Properties such as Fluoride Affinities of  
the Hydrofluorocarbon Epoxides  
*David Dixon, Monica Vasiliu*

## 120. Allison Beaty

Belize Wrack Line Debris Analysis & Implications  
*Julia Cherry*

## 121. David Furniss

Gas-Phase Acidities of Neutral and Deprotonated  
Phosphorylated Di- and Tripeptides  
*David Dixon*

## 122. Elizabeth Connick, Thomas Hill, Rebecca Kolling, Nick Sremac, John McManmon, Max Lush

A Paleo Perspective of Florida's Interstate Rivers: The  
Ochlockonee River and The Suwannee River  
*Glenn Tootle*

## 123. Jacob Smith

Spectracide® Causes Morphological Deformity and  
Reproductive Dysfunction in fruit fly: An in vivo and in  
vitro Study Using *Drosophila melanogaster* and *Drosophila*  
S2 Cell Lines  
*Anathbandhu Chaudhuri*

## 124. Alexandra Church

Are radioactivity levels in drinking water in east Alabama  
a case for worry? Investigations and comparisons with  
acceptable levels  
*Natasha Dimova*

## 125. Alyssa Caccamo

Hydrolysis reactions of the early actinide oxides and  
actinide oxo-hydroxides  
*David Dixon, Monica Vasiliu*

## 126. Brianna Pniak

Predicting the Gas Phase Acidities and pKa's of Early  
Actinides  
*David Dixon, Monica Vasiliu*

## 127. Jordan Pyatt

High temperature drives the expression of androgenic  
enzymes in the gonad of hermaphroditic mangrove rivulus  
fish: implications for sex change  
*Ryan Earley*

## 128. Nicholas Parsa

Enhanced Ionization of Peptides using Lanthanum (III) for  
Proteomics Applications  
*David Dixon, Rudradatt Persaud*

## 129. Sydney Cardoza

Crayfish Species and Phylogenetic Diversity in Successional  
Pond Metacommunity Mosaics  
*Jennifer Howeth, Jeffery Lozier*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 130. Frances Case

Quantitative Genetics of Rivulus  
*Ryan Earley, Jennifer Fortunato*

## 131. Alexis Clouser, Chloe McCrary, Hannah Briner

Evaluation of Microclimate Variation with Proximity to Water Source  
*Jason Senkbeil*

## 132. Lucas Edgren

Mussels Affect Leaf Litter Decomposition Rates in Stream Mesocosms  
*Carla Atkinson, Garret Hopper*

## 133. Ansley Hamid

Evaluating Microplastic Bioaccumulation in *Corbicula fluminea*  
*Carla Atkinson*

## 134. Carly Norden

The effects of body size on aggressive interactions between female parasitoid wasps, *Eupelmus vuilleti*  
*Ryan Earley*

## 135. Gabriella Dickinson

Characterization of unionid mussel shell chemistry and storage  
*Carla Atkinson*

## 136. Barbara Fickling

Determining the Lewis Acidities and Redox Properties of Representative MOF-2 Cluster Models and the Effects of Linker Substituents  
*David Dixon*

## 137. Abigail Ruesy, Abigail Myers

Influence of the parental microbiota on the metabolic phenotype of *Drosophila melanogaster* larvae  
*Laura Reed, Andrei Bombin*

## 138. Tomasz Gruchala

New Palladium Precatalysts for the Coupling of Sterically Demanding Aryl Bromides with Aniline Derivatives  
*Kevin Shaughnessy*

## 139. Nikhil Singh, Abigail Griffin Wood

Human Vs. Nature: Comparing Rooting Depth and Distribution in Constructed and Natural Marshes  
*Julia Cherry*

## 140. Ethan Gunn

Characterizing a Fosfomycin Resistance Protein from *Listeria monocytogenes*  
*Matthew Thompson, Skye Travis*

## 141. Kira Eickman, Rachael Cowan

The Effect of a Natural Diet on *Drosophila melanogaster* Metabolic Phenotype  
*Laura Reed, Andrei Bombin*

## 142. Owen Cunneely, Mengting Su

Determining the Influence of Gut Microbiota Composition on *D. melanogaster* Metabolic Phenotype  
*Laura Reed, Andrei Bombin*

## 143. Heather Chafe

Use of Self-Mediated Stem Cells on the Brain in Areas Atrophied by Drug Addictions  
*Kimberly Bissell*

## 144. Ethan Sij

Cell Signaling and Segment Elimination: The Intersection of Hox Proteins and Sex-Specific Transcription Factors.  
*John Yoder*

## 145. Melanie Mew

Mechanisms of Hox Protein Regulation: Exploring the Interactions Between Doublesex and Abdominal-B  
*John Yoder*

## 146. Jessica Parish

Deeply Conserved Transcription Factors and How They Coordinately Regulate Regional, Temporal, and Sex-Specific Gene Expression  
*John Yoder*

## 147. Cassandra Minne

Sponge Population Genetics: Significance on Deteriorating Coral Reefs  
*Julie Olson*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 148. Caitlin Connell

Investigating mechanism and restrictions on feedback regulation between the key *Drosophila* developmental genes Abdominal-B and Doublesex

*John Yoder*

## 149. Javier Michael

Synthesis of Emissive Lead-Free Inorganic Antimony Halide Quantum Dots

*Shanlin Pan*

## 150. Lauren Pan, Ward Pullen

Design and Construction of Modular Plasmid Library with Utilization in Mitigation of Chemotherapeutic Drug Resistance

*Ryan Summers*

## 151. Mark Pullen, Chris Raddatz

Elucidating Caffeine Metabolism in Bacteria

*Ryan Summers, Shelby Brooks*

## 152. Maryam Salame

Gas Phase Acidities of Mixed Amino Acid Dimers

*David Dixon*

## 153. Zeb Walker

Fouling Potential in Ultrafiltration Membranes

*Steven Weinman*

## 154. Emma Sanders

Investigating the Impact of Tenascin-C on the Drug Response of Brain Metastatic Breast Cancer Cells

*Shreyas Rao*

## 155. Madison Wilkins

PFAS Membrane Adsorbers

*Steven Weinman*

## 156. Ashley Jones

Discovery of Protein Arginine Methyl Transferase-1 (PRMT1) Inhibitors as Adjuvants for Hematological and Refractory Solid Tumor Cancer Treatments

*Timothy Snowden*

## 157. Michelle Tan

Investigating Three Equipment Models Designed to Test the Gene-by-environment Impact of Exercise on Metabolic Syndrome, as shown in *Drosophila melanogaster*.

*Laura Reed*

## 158. Michelle Tan, Cole Kiser, Anna Grace Price, Grace Keirn

An Analysis of the Tor Gene in the Insulin Signalling Pathway of *D. melanogaster* to Determine the Conservation of Genes

*Laura Reed, Chinmay Rele*

## 159. Tracie Dunn

Is the c-subunit of FoF1 ATP Synthase an Important Target in Circulating Cancer Cells?

*Han-A Park, Kim Yonghyun*

## 160. Zach Stratton

Vitamin E Enhances Mitochondrial Function in Primary Hippocampal Neurons

*Han-A Park, Kristi Crowe-White*

## 161. Molly Langston

Queen Conch: Poaching in Marine Reserves in Belizean Waters

*Michael Steinberg, Jordan Cissell*

## 162. John Holmquist

Identifying Amyloid Aggregates as Biomarkers of Breast Cancer

*Ayanjeet Ghosh, Sanghamitra Deb*

## 163. Sydney Ringold

Label-Free Imaging of Beta Sheets for Ovarian Cancer Diagnostics

*Ayanjeet Ghosh*

## 164. Ryan McMichael

Analyzing Trends and Impacts of Local Concentrations of Montreal Protocol Gases in the Los Angeles Metropolitan Area

*Jason Senkbeil, Jacqueline Morgan*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 165. Emilia Cytron

Role for Nckx30c ion exchanger in temperature-sensitive paralysis and neurodegeneration in *Drosophila*  
*Stanislava Chtarbanova*

## 166. Justin Adam

Isotope Fractionation Factors for Gas-Phase Neutral and Anionic Amino Acids  
*David Dixon*

## 167. McKenzie Chamberlain

Distinguishing Between Various Images Used for the Automatic Evaluation of Physical Activity and Sedentary Behaviors  
*Hayley MacDonald*

## 168. Thomas Cope

Redox Mediators for use in Dye-Sensitized Solar Cells  
*Elizabeth Papish*

## 169. Matthew Dean

Engineering Membrane Adsorbers for PFAS Mitigation from Water  
*Steven Weinman*

## 170. Isaac Younker

Jumbo Phages: Isolation and Characterization of Giant Viruses  
*Carol Duffy*

## 171. Jessica Helwig, Abby Aron

Investigating Chemical Heterogeneity of Amyloid Aggregates in Alzheimer's Disease with Label-Free Infrared Chemical Imaging  
*Ayanjeet Ghosh*

## 172. Veronica Shuger

The Synthesis and Structure of Nitrosobenzene Electron Donor-Acceptor Cocrystals  
*Silas Blackstock, Ariel Kelley*

## 173. Luke Rakers

Global Regression Modeling of Fresh Submarine Groundwater Discharge (FSGD)  
*Natasha Dimova, Mark Henry*

## 174. Madison LeRoy

An Anatomical and Phylogenetic Investigation of North Atlantic Paramphipinome jeffreysii  
*Kevin Kocot*

## 175. Jordan Beveridge

Characterizing physiological mechanisms of  $\alpha$ -amanitin toxin tolerance in mushroom-feeding *Drosophila*  
*Laura Reed*

## 176. Tyler Hale, Madison Sharp, Bailey Lose, McKenzie Chamberlain

Analyzing the evolutionary rate of chico relative to its position in the insulin signaling pathway  
*Laura Reed*

## 177. Tyler Hale, Madison Sharp

Investigating odorant-binding protein mediated host-microbiome interactions in *Drosophila melanogaster*  
*Laura Reed*

## 178. Alaina Makowski

Large Scale Land Acquisitions in Laos: the relationship between implementation lags and conflict  
*Nicholas Magliocca*

## 179. Dominic Schiano

Mechanistic Study of Hydrogenation of CO<sub>2</sub> with Cobaloxime catalysts  
*David Dixon*

## 180. Parker Lynch

Dynamical Stability in Galaxies with Three Spiral Arms  
*William Keel*

## 181. Corinne Baroni

Surfactants, Span, and Spectroscopy... Oh My!  
*Amanda Koh*

## 182. Aoife Kate Pitts

Human-Orangutan Pathogen Transmission: Identification of High Risk Areas in Indonesia  
*Nicholas Magliocca*

# SESSION 1A: NATURAL SCIENCE, LIFE SCIENCE, ENGINEERING

## 183. Garrett Cooper

The Encroachment of Large Scale Land Acquisitions into National Protected Areas in Laos PDR  
*Nicholas Magliocca*

## 184. Lauren Haynes

Characterizing the Impact of a Natural Toxin Mix in *Drosophila* Species  
*Laura Reed Clare, Scott Chialvo*

## 185. Caroline Bond

Determining the Biodiversity Around Iceland and Norway of *Wirenia argentea* (Mollusca, Solenogastres)  
*Kevin Kocot*

## 186. Madison Knapp

Mussels like to move it move it! Interspecific Differences in Mussel Burial and Movement  
*Carla Atkinson*

## 187. Elizabeth Batts

Biodiversity and Systematics of Icelandic Euphrosinidae  
*Kevin Kocot*

## 188. Rebecca Cleffi, Samantha Littman, Sydney Ryba, Emma Coomes

A Paleo Perspective of Florida's Interstate Rivers: The Perdido River and Escambia River  
*Glenn Tootle*

## 189. Austin Wayne

Exploring Self Awareness In "Lower" Animals  
*Ryan Earley, Trent Robinson*

## 190. Haylee Quertermous

Social Subordination and Sex Change in the Mangrove Rivulus Fish  
*Ryan Earley*

## 191. Lauren Widelski, Alina Faunce, Mary Michael Knight

Autism and illusions: the relationship between social experience and spatial learning  
*Ryan Earley*

## 192. Mitch Hungerpiller, Alex Laycock, Andrew Busby

Genetic variation in the clonal invasive species Johnsongrass (*Sorghum halepense*)  
*Michael McKain*

## 193. Bailey Lose, Cole Kiser, Anna Grace Price, Grace Keirn

The Effects of Sleep Deprivation on Metabolic Health Within *Drosophila melanogaster*  
*Laura Reed*

## 194. Chloe M. T. Keck

How Do Males Have Reproductive Success When Prospective Partners Prefer to Mate with Themselves?  
*Ryan Earley*

## 195. Ariana Rivera

Optimization of Electronic Chemical Sensors  
*Adam Hauser*

## 196. Cameron Lange

Halogenation of  $\alpha$ -Trialkylsilyl- $\alpha,\beta$ -Unsaturated Esters  
*Michael Jennings, Kristina Haney*

## 197. Amber Graybeal, Natalie Ring

Groundwork for a Citizen-Science Census of the Ultraviolet Sky  
*William Keel*

## 198. Sarah-Ashley Giambrone

Quantifying the Impact of the Gut Microbiome on Toxin Tolerance in Mushroom Feeding *Drosophila*  
*Laura Reed*

## 199. Greg Shank

Investigation of Ionic Liquid Relative Toxicities and Heat Capacities  
*Chris Brazel*

## 200. Sommer Spencer

Determining Holocene changes in seasonality in the eastern Aleutian Islands using sclerochronological analysis of Alaskan butter clams (*Saxidomus gigantea*)  
*Fred Andrus, Christine Bassett*

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## 201. Emily Baschab

Analysis of Chemical Sensors Utilizing Neural Networks  
*Adam Hauser*

## 202. Catherine Howard, Danielle Goduto

Characterization of salt tolerance in greater duckweed  
(*Spirodela polyrhiza*)  
*Michael McKain*

## 203. Mallory Maza, Mary Alice Crocker

Influence of ATL9 and FBS1 Protein Expression on Salt and Drought Tolerance in *Arabidopsis thaliana*  
*Katrina Ramonell*

## 204. Sierra Geer

Evolution of the Quality of Dissolved Organic Matter (DOM) Through Succession of Ponds  
*Yuehan Lu, Jennifer Howeth*

## 205. Joel Smith

Synthesis and Testing of a Dual Flexor Controlled Capture and Release Molecule  
*Silas Blackstock, Katie Keane*

## 206. Ryland (Jake) Beede

Phylogeny of Scaphopods: Tusk Shells in Tuscaloosa  
*Kevin Kocot*

## 207. Lauren Williams

Designing an Equitable Food Bank Network with Minimum Disruption Risk  
*Irem Orgut*

## 208. Rory Sharkey

Determination of Molecular Mechanism of Antibiotic Resistance in ErmE  
*Jack Dunkle*

## 209. Cameron Joyce

Shifting Sands: Quantifying shoreline change along the eastern end of Dauphin Island, Alabama.  
*Emily Elliot, Davin Wallace, Becky Minzoni*

## 210. Taylor Golden

Phylogenomic relationships of the genus *Croton* (Euphorbiaceae)  
*Michael McKain*

## 211. Liam Cook, Ryan McMichael

Climate Reclassification on the Basis of Human Climatic Comfort  
*Jason Senkbeil, David Keellings*

## 212. Kristin Fair

Using the analysis of lunar daily growth bands (LDGI) from *Saxidomus gigantea* as a proxy for Holocene changes in seasonality in the eastern Aleutian Islands  
*Fred Andrus, Christine Bassett*

## 213. Kerry Murr

Use of Zebrafish Model to Identify the Ability of Chronic Cadmium Exposure to Promote Non-Alcoholic Fatty Liver Disease (NAFLD)  
*Matthew Jenny, Youn Ji Nam*

## 214. Michaela Lynch

Comparing the Efficacy of Two Environmental DNA Extraction Methods for Alabama Crayfish in Subterranean Karst Ecosystems  
*Kevin Kocot, Nathaniel Sturm*

## 215. Courtney Diebold

Synthesis and Testing of a Photo-Electro-Stimulated Capture and Release Molecule  
*Silas Blackstock, Katie Keane*

## 216. Cheyenne Fugate

Carbon Polymer Crush Strength  
*Martin Bakker*

## 217. Carter Pruett

Creating an Effective Annotation Pipeline for Aculiferan Mollusc Genomes  
*Kevin Kocot*

## 218. Lael Verace

The Observable Properties of Simulated Galaxies  
*Jeremy Bailin*

## 219. Seongjune Han

Symmetry between area and diagonal inversion for q,t-Catalan numbers  
*Kyungyong Lee*



# SESSION 2: SOCIAL SCIENCES

## 1. Carli-Jo Kickert

Post It! The Influence of Instagram and Facebook on Organizational Involvement  
*Leah LeFebvre*

## 2. Emily McCulley, Emily Gibson

Investigating Bystander Intervention Methods Regarding Potentially Dangerous Physical or Sexual Scenarios  
*Deborah Casper, Tricia Witte*

## 3. Marlie Wells

Destabilizing Racial Ideologies in Classroom Interaction  
*Sonya Pritzker*

## 4. Haley Handshy, Grace Benevicz

Best Friends Come in All Breeds: The Role of Pets in Suicidality  
*Heather Love*

## 5. Christy Lynn Harrill

Collegiate Health Literacy  
*Leah LeFebvre*

## 6. Grace Walraven

The Effects of Media on Public Perception of Women in the Military  
*Michael Parrott*

## 7. Jason Castillo

Medicare For All as a Determinant of Economic Status and Health Outcomes  
*Richard Fording*

## 8. Cassie Thomason

The Effects of the #MeToo Movement on Rape Myth Acceptance and Likelihood to Report Sexual Assault  
*Ariane Prohaska*

## 9. Kayla Stinson

Infant Markers to Assess Social Development and Communication Skills in Toddlers and Preschool Age Children  
*Maria Hernandez-Reif, Nahide Gungordu*

## 10. Kayla Stinson

Parenting Style Influence on Discipline Response to Noncompliance and Children's Externalizing Behaviors  
*Maria Hernandez-Reif*

## 11. Eric Harrison

Raising Awareness Through Technology: The Effect on Students' Willingness to Utilize College Resources  
*Tricia Witte*

## 12. Molly Lukas, Gracie Avery, Emily Goldstein

Examining Child Life's Role in Pediatric SAFE Cases  
*Sherwood Burns-Nader*

## 13. Allison Cross

The Tapering Off Process of Pain Medication  
*Tricia Witte*

## 14. Nicoletta Valenzano

Family Composition and the Conformity to Masculinity Norms  
*Ariane Prohaska*

## 15. Alaina Wilson

Children's emotion knowledge: Explaining relations between child behavior problems and parental depression  
*Ansley Gilpin*

## 16. Abigail Sacco

The Relation Between Peer Victimization and Depressive Symptoms when Moderated by Bullying Role in Adolescence  
*Kristina McDonald*

## 17. Jessica Smith

To Adhere or Not to Adhere: The Importance of Standardized Confederate Behavior  
*Susan White, Grace Lee Simmons*

## 18. Morgan Pfiffner

Communication Initiation Barriers in Patient Doorknob Disclosures  
*Heather Carmack*

## 19. Sydney Ringold, Eva Curran

What's Trust Gotta Do With It: Investigating Trust in Patient-Provider Doorknob Disclosures  
*Heather Carmack*

## 20. Adilenne Maese, Grace Benevicz

You Can Tell Me Anything: Disclosure of Suicidality to Mental Health Professionals  
*Heather Love*

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## 21. Khloe Starling

Factors Affecting STEM Self-Efficacy in Female STEM Undergraduates  
*Joan Barth*

## 22. Christopher J. Fantin, Alexandra L. Pannell

Communication Strategies Employed by Patients During Doorknob Disclosures  
*Heather Carmack*

## 23. Megan Davis, Grace Benevicz

“I didn’t want to worry him.” Motivations for Disclosure and Non-disclosure of Suicidality to Romantic Partners  
*Heather Love*

## 24. Margaret Wood

Psychopathy and Cults: A Look Into Leadership, Brainwashing, and Victimization  
*Lauren Kois*

## 25. Riley M. O’Neill

Sleep as a Mediator of Relationships between Childhood Adversity and Depression  
*Jenny M. Cundiff, Matthew R. Cribbet*

## 26. Hunter Whann

From Outside the Beltway: Minorities in the early-20th Century Labor Movement  
*Stephen Katsinas*

## 27. Ricardo Wilhelm, Evelyn McIntyre

Neural and Attentional Correlates of Motivational Intensity During Task Autonomy  
*Philip Gable*

## 28. Hayden Hilkemeyer

Quantitative Analysis for Elemental Spectra of Archeological Glasses: Exploring the Feasibility of ED-XRF through Fundamental Parameters Calibrations  
*Elliot Blair*

## 29. Victoria Smitherman, Kara Acosta

Communication Satisfaction and Motivators to Join: Findings from a Survey of Participants in a Contact Registry Focused on Intellectual Disability  
*Eric Cooks, Frances Connors*

## 30. Ann Marie Young, Andrea Nicastro

Family Experience and Motivators for Study Participation: Findings from A Survey of Participants Enrolled in a Research Registry Focused on Intellectual Disability  
*Eric Cooks, Frances Connors*

## 31. Julia Sponholtz

Catching Stress: Can smelling stress cause stress?  
*Christopher Lynn*

## 32. Caroline Watson

The Empathy and Sibling Relationships Project: Sibling Relationship Quality in Emerging Adulthood Predicts Cognitive and Affective Empathy  
*Maria Hernandez-Reif, Nahide Gungordu*

## 33. Salena Lee

Residential Mobility, Risk, and Resilience in Communities Characterized by Poverty  
*Anneliese Bolland*

## 34. Brenton Bicknell, Kierra Irby

Cognitive and Adaptive Profiles of Children with Disruptive GRIN2B Mutations  
*Caitilin Hudac*

## 35. Adam Rogers, Chase Hebert

Developmental Stuttering On a Broad Scale  
*Anthony Buhr*

## 36. Tejas Dinesh

Utilizing Participatory Methods to Assess the Cumulative Health Impact of Hazardous Waste Landfills on Alabama’s Communities of Color  
*Darren Surman*

## 37. Krystina Berens

Vocal Turn-Taking Behaviors in Adult Conversations  
*Hyunjoo Yoo, Laura Morett*

## 38. Thomas Bugg, Haskins Jones

The Opioid Crisis and its Impact on the Prison Inmate Population  
*Darren Surman*

# SESSION 2: SOCIAL SCIENCES

## 39. Shaoey Chapman

The Effects of Foster Care on Mental Health and Child Development in Early Years  
*Darren Surman*

## 40. Nicole Reh

Examining Breast Cancer's Disproportional Mortality Rates: Product of Prevention and Treatment  
*Darren Surman*

## 41. Christopher McCarthy

STEM Education as an Engine for Social Mobility  
*Darren Surman*

## 42. Karli Morris

"You interrupt me all the time": An Analysis of Interruptions in the 2016 Presidential Debates  
*Anthony Buhr*

## 43. Anna Padula

Childhood Trauma and Sleep in a Sample of African American and Caucasian Young Adults  
*Matthew Cribbet, Andrea Decker*

## 44. Audrey Rollins

The Varying Effects of American Tax Policy on Different Income Classes  
*Darren Surman*

## 45. Alli Swann

Drawing the Line Between Juvenile and Adult Justice: The Disparities that Drive Juvenile Injustice and the Impact of Sentencing Adolescents as Adults  
*Darren Surman*

## 46. Jared Folden

Public Transit in the Motor City: The Effects of Detroit's Underdeveloped Public Transit System on Economic Inequality and Segregation in the Detroit Metropolitan Area  
*Darren Surman*

## 47. Emily Gibson, Emma Harper

Understanding the Relationship Between Rural Poverty and Antimicrobial Resistance  
*Darren Surman*

## 48. John Kappelman

White Nationalism and Radicalization to Violence  
*Darren Surman*

## 49. John Kappelman

The Effect of State Gun Laws on Youth Suicide by Firearm: 1979-2017  
*Richard Fording*

## 50. Lindsay Fincher, Parker Grogan

Religion in the Rural South: The Role of Christianity in Determining Individual Beliefs and Community Organization  
*Darren Surman*

## 51. Jillian Fields

Surviving the foster care system in the era of the opioid epidemic  
*Darren Surman*

## 52. Pike Briggs

Deterrence-Based Strategies for Reducing Adolescent Vice  
*Darren Surman*

## 53. Martha Glen Sease

The Role and Significance of Oral History and Oral Tradition in Rural Communities  
*Darren Surman*

## 54. Marissa Schubert and Emma Brown

Preliminary findings in the assessment of two social support surveys for adults with hearing loss in West Central and South Alabama  
*Marcia Hay-McCutcheon*

## 55. Samuel Hallam

Beyond the Locker Room: An Investigation into Mental Health Issues Faced By College Athletes in Profit-Sports  
*Darren Surman*

## 56. Hannah Rae Clayton

Understanding the Behavioral and Academic Ramifications of Deployment and Transience in Military Children  
*Darren Surman*

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## 57. Will Schramm

An Investigation Into Upward Social Mobility Through Collegiate Athletics  
*Darren Surman*

## 58. David Zell

Get Him to the Greek: How an Institutional Self-study Informed by Participatory Action Research Principals could Engender Positive Reforms of Greek Life at the University of Alabama  
*Darren Surman*

## 59. Brock M. Preston

Honesty in Social Support  
*Darrin Griffin*

## 60. Jackson Kerchis

Towards a Comprehensive Model of Happiness: An Interdisciplinary, Qualitative Review  
*Quoc Hoang*

## 61. Madison B. Hostetler

Intersectional Identity Stressors and the Effects on Brain Regions Associated with Alzheimer's and Other Dementia Diseases  
*Ian McDonough*

## 62. David Warren

From Behind the Veil of Ignorance: An Argument for Universal Free School Meals  
*Natalie Adams*

## 63. Morgan Carroll

A Zooarchaeological Analysis of the Invertebrate Fauna from the Bronson Strip Site (9Li163), St. Catherines Island, Georgia  
*Elliot Blair*

## 64. Shelton Owen

Helping Friends Versus Strangers in Dangerous Situations: Outcomes of Bystander Interventions  
*Tricia Witte, Deborah Casper, Sunmi Seo*

## 65. Alex Jo McDonough

Plea Bargaining and Psychopathy: The Influence of Psychopathic Traits on the Plea-Bargaining Process  
*Jennifer Cox, Elizabeth MacNeil*

## 66. Ariana Evans-Young

An analysis of automatic threat response and the conscious experience of fear in psychopathy  
*Andrea Glenn, Virginia Lamoureux*

## 67. Jordan Taylor

Sleep Valuation and Its Effects on Sleep in a College Sample: A Validation Study  
*Matthew Cribbet*

## 68. Rebecca Mueller

Analyzing Public Perception of Hurricane Michael Hazards  
*Jason Senkbeil*

## 69. Bryant Long, Courtney Diebold

How Distracted Are You?  
*Jessica Mendoza*

## 70. Sara Carmichael

Releasing the Incarcerated Elderly: Analysis of State Compassionate Release Policies  
*Jane Daquin*

## 71. Rebekah Brown

Prosecutor Perception of Psychopathy  
*Andrea Glenn, Jennifer Cox*

## 72. Alyssa Spencer

Neuroanatomical markers of the autistic brain: A closer look at cross-hemispheric connections during social communication  
*Rajesh Kana*

## 73. Amber Cargill

Gratitude Engagement and Well-Being  
*Kristina McDonald*

## 74. Raegan Thornton

Measure Success: Developing a Quantitative Scale for Event Evaluation  
*Shatina Chen*

## 75. Taylor Canfield

Sleep, Pain, and Depression Among Nursing Home Residents  
*Patricia Parmelee, Emily Behrens*

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**76. Alicia Gallo**

College Students' Perceptions of Peer Alcohol Use  
*Tricia Witte*

**77. Tara Tischer and Hanna Boge**

Cognitive Change in Teenagers and Young Adults with Down Syndrome  
*Fran Conners*

**78. James Donlevy**

Tuscaloosa County Birth Outcomes Before and After the 2011 Tornado  
*Christopher Lynn*

**79. Justin Levy**

Partisan Patterns and Electoral Shifts: Elections in the U.S., 1912 - 2018  
*Regina Wagner*

**80. Kylie Hopkins**

The Role of Nurses in Patient Education: Does Perception Affect Knowledge?  
*Jennifer Cox*

**81. Emily Beavon**

ADHD as a Moderator of Response to Anxiety Treatment in Children  
*Matthew Jarrett*

**82. Elizabeth Gunter**

Depression and Closeness in Female Same-Gender Couples  
*Casey Totenhagen*

**83. Ava Fisher, Lexi Eisenschenk**

Voter Mobilization and Advocacy: The Role of Civic Engagement in Rural Alabama  
*David Bolus*

**84. Ayesha Al-Akhdar**

Swiping Right  
*Christopher Lynn*

**85. Toni Sneed**

The Moderating Effect of Death Exposure: Exploring Chronological Age, Subjective Nearness to Death, and Death Anxiety  
*Rebecca Allen*

**86. Jessica Boyd**

Turn Down the Stereo(type): The Possible Association between Age and Implicit Stereotyping  
*Firat Soylu*

**87. Brynne Kuberski, Kaelyn Emblar, Jessica Rentz**

An Exploration on Developing Leadership through Intersectional Awareness  
*Shinae Choi*

**88. Emily Mack**

Do Children Who Stutter Have a Language Disability? A Review of Literature on Fluency and Stuttering  
*Anthony Buhr*

**89. Beatriz Torres Rios**

Geophysical Survey of the Summits of Mounds C, D, E, F, and V at Moundville (1TU500)  
*Elliot Blair*

**90. Maggie Owens**

The Effects of Adverse Childhood Experiences (ACEs) and Lifestyle Moderators on Functional Connectivity in Adults at Risk for Alzheimer's Disease  
*Ian McDonough, Matthew Cribbet*

**91. Lauren Duvall**

Altered Activity and Connectivity of the Theory of Mind Network and Mirror Neuron System during Emotion Processing in Autism  
*Rajesh Kana*

**92. Andrew Schmidt**

Broadening State Capacity  
*Traviss Cassidy*

**93. Luke Porter**

The Effect of Legalization and Decriminalization Drug Policy on Communities  
*Darren Surman*

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**94. Storm Steinke, Vannah Smalley**

Firebringer: the Musical  
*Natalie Adams, Angelica Gamboa*

**95. Kailyn Thomas**

“Fragment”  
*Brian Taylor*

**96. Noah Haynes**

Please Remain Seated: A Musical for Everyone  
*Tyler Walker, Fred Whiting*

**97. Daniel Lee**

A Narrative of Oppression: The Historical and Literary  
Presentation of the Omride Dynasty  
*Theodore Trost*

**98. Zach Smith**

The Taste of True Terror: Consumption in Stephen King  
*James Crank*

**99. Zach Smith**

unboxed: a collection  
*Heidi Staples*

**100. Taylor Nelson**

China-Africa Relations Through Cold War Propaganda  
*Wendy Castenell, Tanja Jones*

**101. Cecilia Barnard**

Legend Vs. Life: Demystifying Feminine Ireland During the  
Unionist Movement of the 1790s and the Rebellion of 1798  
*Daniel Riches*

**102. Elizabeth Duhon**

Trends of Institutional Affiliation of Research Posters  
Presented at American Music Therapy Association  
National Conferences from 2000 to 2018  
*Ellary Draper, Andrea Cevasco-Trotter*

**103. Philip Marini**

“Killed and cut off a whole Tribe!” Racialized Scalping and  
the Paxton Boys Genocide of the Conestoga.  
*Heather Kopelson*

**104. Jodi Vadinsky**

When Women Wage Law: Women in England’s Church  
Courts 1550-1650  
*Lucy Kaufman*

**105. Cheyenne Hayes**

Ideological Criticism of the “Billie Eilish Speaks Her Truth  
in #MyCalvins” Commercial  
*Jessy Ohl*

**106. Victoria Carl**

In So Many Words  
*Kari Frederickson*

**107. Madeline Gall**

Becoming Truly Multiplayer: Inclusive Video Gaming  
Equipment Changing the Game for Players of Different  
Abilities  
*Jessy Ohl*

**108. Elisabeth Burke**

“The Monsters Are Due on Maple Street”: McCarthyism  
and the Cold War in The Twilight Zone  
*Stacy Morgan*

**109. Jacob Powell**

Workplace Humor: The Good, The Bad, and The Ugly  
*Angela Billings Anneliese Bolland*

**110. Samantha Lupo**

Eye-Gaze Patterns to Disgust Faces among Adolescents  
with Social Anxiety Disorder  
*Susan White, Nicole Capriola-Hall*

**111. Lydia McCollum**

Women, Sin, and Vices along the Pilgrimage Routes to  
Santiago de Compostela  
*Jennifer Feltman*

**112. Cassidy Stewart**

Subjection in Society  
*Catherine Roach*

**113. Lacy Smith**

The Arts as a Catalyst for Empathy and Social Growth  
*Darren Surman*

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## 114. Elizabeth Tagg

Anthropomorphism, Deception and Human Morality  
*Darrin Griffin*

## 115. India Rose Cary, Sam Reece, Ellen Walton, Anna Kutbay

Civil Commotion: The Effects of War and Recession on U.S. Appeals Court Decisions 1925-2002  
*Joseph Smith*

## 116. Isabella Garrison

Mapping the Queer South  
*John Giggie*

## 117. Crystal Stone

The Execution of Charles Rhines: A Rhetorical Analysis  
*Jessy Ohl*

## 118. Chloe M. T. Keck

Evolution Education is not a (W)Rap: Creative Methods for Engaging the Public in Evolution Education Aren't Always Effective  
*Christopher Lynn*

## 119. Kenya Harris

Here to Disrupt  
*Sara Maria Sorentino*

## 120. Lena Brysacz, Ben McCool

Continued Strategic Marketing for Pickens County Medical Center  
*Jef Naidoo*

## 121. Veronica Douglas

A Literature Review: The Effects and Studies on Student-Athlete Transfers  
*Robert Hammond*

## 122. Ashton Royal

Turning Diversity Upside Down: The Impact of Employee Resource Groups (ERGs) on Growth  
*Theresa Welbourne*

## 123. Avery Perry

Application of Walt Disney World Training and On-boarding Techniques to the Automotive Manufacturing Industry  
*Russell Matthews*

## 124. Hays Hooten

Fake News In Social Media: Effects on Vaccine Usage and Developments  
*Susan Fant*

## 125. Abigail Gorbett

Developing versus Developed Country Foreign Direct Investment (FDI): A Comparison of Factors Affecting Multinational Enterprise (MNE) Entry and Exit  
*Paul Drnevich, Kris Irwin*

## 126. Martha Groninger, Erin Obrien

Shopping While Poor: The Impact of Government Assistance on Purchase Decisions and Consumer Emotions  
*Stacey Robinson*

## 127. Caneel van Nostrand, Bryan Gilliland

Putting Words in Their Mouths: The Effects of Providing Customers with Pre-Written Social Content  
*Clay Voorhees*

## 128. Nathan Brinkley

Self-Protection Under Compound Risk and Uncertainty  
*Paan Jindapon*

## 129. Nathanael Jones

How Employee Sentiment and Executive Commitment to Employees Effect Firm Performance  
*Theresa Welbourne, Joshua White*

## 130. Gretchen Johnson

BeatBox to Future Proof – How Twenty-something Year Old Entrepreneurs Created a Thriving, Multi-product Enterprise  
*Lou Marino*

## 131. Asaf Katzir

Anchoring and Overconfidence: Risk-Taking Behavior in Fund Managers  
*Christopher Whaley*

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## 132. Christian Townson

The Business of Social Media: How Companies Utilize Social Media  
*Amber Buck*

## 133. Tyler Trupke, Jed Henderson

A New Approach to Valuation of Fuel Economy  
*Alecia Cassidy, Traviss Cassidy*

## 134. Jonathan Oakley Prell

Investigation of Wildlife Trafficking Supply Chains  
*Burcu Keskin*

## 135. Riley Doyle

Reviewing New Venture Incubation & Acceleration: Implications for Research, Teaching, & Practice  
*Paul Drnevich, Kris Irwin, Craig Armstrong*

## 136. William Cope

Examining Administrations: Ability and Effort in Executive Systems of Government  
*Paan Jindapon*

## 137. Jacob Waggoner

Factor Analysis of United States Incarceration Rates  
*Junsoo Lee*

## 138. Amber Payne

Single Item Constructs in Industrial and Organizational Psychology  
*Russell Matthews*

## 139. Elise Batchev

Effects of Perspective on Donating Behavior  
*Carlos Bauer*

## 140. Nickolas Schwartz

Beyond average health: higher moments in health distributions  
*Chris Whaley*

## 141. Peyton Boucek

Cuban, Welch, & Aarnio's Dynamics of Persuasion Used for Monetary Business Success.  
*Sara Hartley*

## 142. Colton Lapp

The Economic Implications of School Closures in the United States  
*Peter Brummund*

## 143. Lance Rodriguez

Bankruptcy Commonalities  
*Josh Pierce, Rachel Li*

## 144. Cassandra Horkan

Gauging the Importance and Long Term Effects of Study Abroad on Professional Life  
*Diana Gomez*

## 145. Connor Best

Locus of Control and Charitable Giving  
*Laura Razzolini, Michael Price*

## 146. Michael O'Grady

Statistical Analysis of the Houston Astros Cheating Scandal  
*Erik Johnson*

## 147. Taylor Steen

Uniquely Alabama: Community Engagement across UA  
*Chapman Greer*

## 148. Sabrina Jung

The Value of Information in Sequential Contests  
*Paan Jindapon*

## 149. Matt Jung

Interest rate swaps: Floating vs Fixed.  
*Robert Brooks*

## 150. Isabella Cooley

Impact of Immigration Policy on Mexican Immigrant Wages: A Generational Analysis  
*Kimberly Stowers*

## 151. Cody Rivera

ISM2: Optimizing Irregular-Shape Matrix-Matrix Multiplication on GPUs  
*Tao Dingwen*



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## 152. Myles McLeroy

Using Convolutional Neural Networks for Parking Lot  
Occupancy Detection  
*Travis Atkison*

## 153. Philip Speegle

Using Multidimensional Prediction to Greatly Improve  
Lossy Compression Efficiency  
*Dingwen Tao*

## 154. Sydney DiNatale

The New Age of NCAA Sports and Player Ranking  
*Robert Brooks*

## 155. Jemarcus Pullins

Improving Patient Outcomes: Developing a Mobile  
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TO SEE YOU NEXT YEAR!**

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