

JSU Student Research Symposium
Spring 2023

From its 1995 inception in the College of Arts and Sciences, the Symposium has served to highlight the creative activities of JSU students. Beginning in 2017, the Symposium was extended to include the entire university. It is the intent of the Symposium to provide a forum to publicly display and acknowledge the best work of our students.

The faculty members who have provided guidance and mentoring to the student presenters are to be commended for their dedication. By spending many hours both inside and outside the classroom introducing students to research activity, these professors are investing in the future.

These student participants, by choosing to go beyond the requirements and limits of the classroom, have demonstrated an understanding of the importance of expanding and adding value to their educational experience. We are proud of their initiative and accomplishments.

Thank you for attending the Symposium and supporting our faculty and students in this endeavor.

Dr. David Thornton, Symposium Chair

Cover design by Carlie Benefield

The Jacksonville State University, Colleges of Arts and Humanities, Business and Industry, Education and Professional Studies, Health Professions and Wellness, Science and Mathematics and Social and Behavioral Sciences will also be holding an awards ceremony for the 2023 Symposium. We invite you to join us for this ceremony, which will take place in the Merrill Hall Atrium at 5:00 p.m. on Tuesday, February 14, 2023.

Symposium Contributors:

David Thornton, Symposium Chair
Jan Case, Symposium Scheduling
Shannon Robertson, Proceedings
Chad Anderson, Student Cover Design
Christian Dunn, Student Cover Design
Sarah Donley, Judging Rubric and Tally
Mary Springer, Judging Rubric and Tally
Jennifer Green, Judge Scheduling
Chris Newsome, Online Submission
Angie Finley, Online Submission
Allison Boswell, Facebook/Social Media
Jason Cleveland, YouTube Videos
Cynthia Connor, Publicity
Tracy Casey, Program and Refreshments

Symposium Judges:

Michael Burns, Associate Professor of Biology
Sarah Burns, Assistant Professor of Music
Jan Case, Professor of Mathematics
Kathryn Catlin, Assistant Professor of Anthropology
Sean Chenoweth, Associate Professor of Geography
Sarah Donley, Associate Professor of Sociology
Eric Gamess, Associate Professor of Computer Science
Jeff Hooie, Research Analyst, Center for Economic Development
Jianping Huang, Associate Professor of Management and Marketing
Gina Mabrey, Associate Professor of Kinesiology
Allison McElroy, Professor of Painting and Drawing
Allison Newton, Assistant Professor of Public Administration
Mysti Nichols, Instructor of English
Bernice Robinson, Coordinator, Scientific Labs & Lab Safety
Mark Sculichetti, Assistant Professor of Geography
Falynn Turley, Assistant Professor of Finance, Economics and Accounting
Monica Trifas, Associate Professor of Computer Science

Cover Design Participants:

Brianna Bailey	Laney Oneal
*Charlie Benefield	Carla Stewart
Madison Cagle	Asia Wright
Kristina Elliott	Marina Young
Lauren Martin	*Contest Winner

Faculty Mentors:

Chad Anderson, Associate Professor of Graphic Design
Christian Dunn, Associate Professor of Graphic Design

Monday, February 13, 2023
11th Floor of Library

Morning Session (8:00-11:25) Room 1101C

8:00-8:10 Paper (UG)

Dakota Heathcock (Lori Owens – Mentor)

Religion, Race, and Rights: An Analysis of the Political and Economic Atmosphere of the Southeastern United States from 1776 to 2022

8:15-8:25 Poster (UG)

Tim Gaskins (Saeideh Gharehchahi – Mentor)

Air Pollution and Asthma Equity Index in Alabama

8:30-8:40 Paper (GR)

Tiffany O'Dell (Arup Ghosh – Mentor)

Online Threats vs. Mitigation Efforts: Keeping Children Safe in the Era of Online Learning

8:45-8:55 Paper (GR)

Gabrielle Davis and Sara Morris (Ashley Turner – Mentor)

An evolutionary comparative study of congenital stationary night blindness associated TRPM1 genetic variants of uncertain significance in humans and horses utilizing *Caenorhabditis elegans*

9:00-9:10 Paper (UG)

Vaderick Fowler (James Rayburn – Mentor)

The use of Xenopus embryos for determining the developmental toxicity of Acid fuchsin.

9:15-9:25 Demonstration (UG)

Montell Norman, Megan Kamholtz and Martell Norman (David Thornton – Mentor)

SCP-5999 (A VR horror game)

9:30-9:40 Demonstration (UG)

Tyler Gallahar (Falyynn Turley – Mentor)

Business Information: Excel Dashboard

9:45-9:55 Demonstration (GR)

Conner Gayda (Chad Anderson – Mentor)

Typography, Baseball, and the Fight for Civil Rights

10:00-10:10 Paper (GR)

Tamicha Ingram (Jennifer Savage and Christopher Clark – Mentors)

Attention Deficit Hyperactivity Disorder Management in Collegiate Athletes: A Critically Appraised Topic

10:15-10:25 Paper (GR)

Justin Files (Jennifer Savage and Christopher Clark – Mentors)

Blood Flow Restriction Improves the Rehabilitation Process in Anterior Cruciate Ligament Reconstruction Among Collegiate Athletes: A Critically Appraised Topic

10:30-10:40 Paper (GR)

Micah Glover (Jennifer Savage and Christopher Clark – Mentors)

Can Helmets Assist in the Reduction of Concussions in Football Athletes, when Compared to Patient Education and Tackling Techniques: A Critically Appraised Topic

10:45-10:55 Paper (GR)

Cole Ivey (Majid Koozehchian and Gina Mabrey – Mentors)

Impact of Probiotics on Exercise Performance

11:00-11:10 Paper (GR)

Gemini Sigler (Majid Koozehchian, Kory Hill and Gina Mabrey – Mentors)

Nutrient timing: An effective approach to enhanced athletic performance, recovery, and training adaptation

11:15-11:25 Paper (GR)

Kennedy Gavin (Majid Koozehchian, Kory Hill and Gina Mabrey – Mentors)

Protein & Exercise

11:30-1:15 BREAK

Afternoon Session (1:15–4:55) Room 1101C

1:15-1:25 Paper (UG)

Alexandria Quintero (Helen Kaibara – Mentor)

Pushing Perfection & Pain: How the 'Model Minority' Myth Harms Asian Americans

1:30-1:40 Paper (UG)

Chase Capes (Tanya Sasser – Mentor)

The Psychology of The Scarecrow: Looking at What Makes Scarecrow The Scarecrow

1:45-1:55 Paper (UG)

Sarah Yarbrough (Teresa Reed – Mentor)

Comparison of “Out Out--” and “Ballad of Birmingham”

2:00-2:10 Demonstration (GR)

Caycie Trotter (Seth Johnson – Mentor)

MoonBerry Farms

2:15-2:25 Paper (UG)

Sara Adkinson (Jianping Huang – Mentor)

The CBD Industry: A Silent Growing Giant

2:30-2:40 Paper (UG)

Christopher Vest (Mark Sciuchetti and Falynn Turley – Mentors)

The Decline of Retention at Jacksonville State University

2:45-2:55 Paper (UG)

Anthony Wapshott (Grover Brown – Mentor)

How an invasive Asiatic clam species effects the morphology of *sternotherus odoratus*

3:00-3:10 **Paper (UG)**

Matthew Glavosek (Monica Trifas – Mentor)

Image Processing in Python

3:15-3:25 **Poster (UG)**

Macee Glick (Jenna Ridlen – Mentor)

Expression of H284Y Variant of TCF4 in the Expression of Pitt-Hopkins Syndrome

3:30-3:40 **Poster (UG)**

Taylor Mabry, Jordan Peters, Marli Hanks and Auslyn Russell (Ashley Turner – Mentor)

Genetic assessment of systemic lupus erythematosus associated TREX1 variants of uncertain significance in *C. elegans*

3:45-3:55 **Poster (GR)**

Tanner Vandever, Alexis Petty and Elise Patrick (Ashley Turner – Mentor)

Investigation of BMAA modulation of A β -mediated neurodegeneration in transgenic *Caenorhabditis elegans*

4:00-4:10 **Paper (GR)**

Tabitha Rayburn (Vicki Tinnon-Brock – Mentor)

Genshin Impact: A Case Study of Virtual Biogeography

4:15-4:25 **Paper (GR)**

Jhanvi Patel, Josemanuel Mendez and Sajana Vangala (Monica Trifas and Arup Ghosh – Mentors)

Cloud Computing and its role in education during covid-19 pandemic

4:30-4:40 **Paper (GR)**

Hannah Davis (Jason Cleveland – Mentor)

Fastest Velocity: JSU Fastballs

4:45-4:55 **Poster (UG)**

Hannah Cornett (Cerilla Roe – Mentor)

Analysis of Student Learning Through Elegiac Writing

Tuesday, February 14, 2023
11th Floor of Library

Morning Session (8:30-11:00) Room 1101C

8:30-8:40 **Paper (GR)**

Edzer Mauger (Majid Koozehchian – Mentor)

Exercise and Fluid Replacement

8:45-8:55 **Paper (GR)**

Will Bernhardt (Majid Koozehchian, Gina Mabrey – Mentors)

β -Alanine Supplementation and its Effect on Sports Performance

9:00-9:10 **Paper (GR)**

Greta Romei (Majid Koozehchian, Gina Mabrey – Mentors)

The Effectiveness of Caffeine in Exercise Performance

9:15-9:25 **Paper (GR)**

Chandler Ingram (Christopher Clark and Jennifer Savage – Mentors)

Ankle Injuries & Athletic Training Coverage in Marching Band: A Critically Appraised Topic

9:30-9:40 **Paper (UG)**

Madalyn Stott (Jody Long – Mentor)

Barriers to Justice: the need for American prison reform

9:45-9:55 **Paper (UG)**

Gracie Dooley (Heidi Dempsey – Mentor)

How is Empathy Correlated with the Big 5 Personality Traits?

10:00-10:10 **Paper (UG)**

Charles Harrell (Teresa Reed – Mentor)

Restoration of Identity in “Anglikan Seraphym Subjugation of a Wild Indian Reservation”

10:15-10:25 **Demonstration (UG)**

Brianna Bailey (Chad Anderson – Mentor)

Glad Advertising Campaign

10:30-10:40 **Paper (UG)**

Brianna Bailey (Christian Dunn – Mentor)

Women in Type

10:45-10:55 **Poster (GR)**

Drew Watson (Teresa Reed – Mentor)

Wife of Bath: Multifaceted Feminist or Manufactured Misogynist?

Morning Session (8:30-11:30) Room 1103C

8:30-8:40 **Paper (UG)**

Sophia Ajemba (Falynn Turley and William Hankins – Mentors)

Impact of the COVID-19 Pandemic on the Government Sales Tax Revenue

8:45-8:55 **Paper (UG)**

Victoria Barkley (David Thornton – Mentor)

Gamification Marketplace

9:00-9:10 **Paper (UG)**

Sudeep Joshi (Arup Ghosh – Mentor)

Using Machine Learning to Predict Laptop Price

9:15-9:25 **Paper (UG)**

Kritika Maharian (James Rayburn – Mentor)

A preliminary comparison of Methylene Blue and Phloxine B's developmental toxicity using *Xenopus* embryos.

9:30-9:40 **Poster (GR)**

Matthew Reeves (Lori Tolley-Jordan – Mentor)

Trematode Diversity in Freshwater Snail, *Campeloma decisum*

9:45-9:55 **Paper (GR)**

Kindall Brown (Lori Tolley-Jordan – Mentor)

The relationship between changing land cover and macroinvertebrate diversity over twenty years in Choccolocco Creek, Northeast Alabama

10:00-10:10 **Poster (GR)**

Gabriella Gentry (Lori Tolley-Jordan – Mentor)

Detecting global declines of stoneflies at a local scale: measuring changes in stonefly diversity in a tributary of the Cahaba River of central Alabama

10:15-10:25 **Poster (GR)**

Margaret Walton (Mark Sciuchetti – Mentor)

Using ArcGIS Software and Applications for Community Mapping

10:30-10:40 **Poster (GR)**

Himani Patel (Ashley Turner – Mentor)

Genetic analysis of hereditary gingival fibromatosis associated SOS-1 missense variant of uncertain significance in *Caenorhabditis elegans*

10:45-10:55 **Paper (GR)**

Annie Kelly (Mark Sciuchetti and Jennifer Green – Mentors)

Economic Impact of the Forestry Industry in Alabama: Using Economic Geography to understand geographic impacts on business.

11:00-11:10 **Paper (GR)**

Shelby Wolfram (James Rayburn – Mentor)

A comparison of *Xenopus laevis* and *Ambystoma maculatum* embryos for determining the developmental toxicity of sodium fluoride and sodium selenate

11:15-11:25 **Poster (UG)**

Cassidy Bolt (Mark Sciuchetti – Mentor)

Toxic Air Pollution in Louisiana

11:30 – 1:15 BREAK

Afternoon Session (1:15–3:10) Room 1101C

1:15-1:25 **Paper (GR)**

Andrew Mitchell (Julie Staples – Mentor)

The Effect of Name, Image, and Likeness (NIL) Policies on the Role of College Sports Agents

1:30-1:40 Demonstration (UG)

Riley Abston (Christian Dunn – Mentor)

“The Sign of the Four” Book Design

1:45-1:55 Paper (GR)

Ashley Himmler (Riana Kostova – Mentor)

Krishna, Christ, and the Fullness of Human Life

2:00-2:10 Demonstration (GR)

Brittani Myers (Chad Anderson – Mentor)

Autumn Merchant – Augmented Reality as Illustrative Medium

2:15-2:25 Paper (UG)

Ariya DeVine (Majid Koozehchian, Gina Mabrey – Mentors)

Oral Creatine Supplementation and Athletic Performance

2:30-2:40 Paper (GR)

Rubyn Johnson (Majid Koozehchian, Gina Mabrey – Mentors)

Fluid Periodization: A New Approach to Sports Performance

2:45-2:55 Paper (GR)

Greta Romei (Jennifer L. Savage, Christopher M. Clark – Mentors)

Subthreshold Aerobic Exercise as a Strategy for Concussion Management: A Critically Appraised Topic

3:00-3:10 Paper (UG)

Anshika Mittal (Jianping Huang – Mentor)

Mittal Fruit Products

Afternoon Session (1:00–3:25) Room 1103C

1:00-1:10 Poster (UG)

Hunter Ballard and Alyssa Jones (Jenna Ridlen – Mentor)

Investigation of TCOF1 Variations: An Insight to Treacher Collins Syndrome

1:15-1:25 Paper (UG)

BriAnn Buford (Jenna Ridlen – Mentor)

Gene Variant KLHDC8B and its Phenotypic Expression in Classic Hodgkin's Lymphoma

1:30-1:40 Paper (UG)

Summer Kiker (Kathryn Catlin – Mentor)

Discoveries of Feature 904 at the Bains Gap Native American Village Site

1:45-1:55 Paper (UG)

Daythyn Price, Kris McAnally and Adam Parker (Kazi Rahman – Mentor)

Income inequality distribution of the residents of city of Jacksonville, Alabama using Gini index and Lorenz curve

2:00-2:10 **Paper (UG)**

Barbara Moore (Arup Ghosh – Mentor)

The What and How of QR Codes

2:15-2:25 **Demonstration (UG)**

Kevin Navarrete-Resendiz, Jakob Skipper and Adam Parker (David Thornton – Mentor)

Lockdown

2:30-2:40 **Demonstration (UG)**

Jamall James (David Thornton – Mentor)

Kyaku Zero (K-0)

2:45-2:55 **Demonstration (UG)**

Ryan Eubanks (Arup Ghosh – Mentor)

I Own a Self-Driving Car

3:00-3:10 **Paper (GR)**

Mausam Parajuli and Syed Shah (Arup Ghosh – Mentor)

Exploring Performance Evaluations of Docker and LXC Container Technologies – Are they good for Cloud Environments and IoT Devices?

3:15-3:25 **Demonstration (GR)**

Allie Field (Ross Martin – Mentor)

Flood Hazards on Trails

Awards Ceremony

Date: Feb 14, Time: 5:00, Location: Merrill Hall Atrium

Awards for Best of College

Best of College of Science and Mathematics (Undergraduate)

Best of College of Science and Mathematics (Graduate)

Best of College of Arts and Humanities (Undergraduate)

Best of College of Arts and Humanities (Graduate)

Best of College of Social and Behavioral Sciences (Undergraduate)

Best of College of Health Professions and Wellness (Graduate)

Best of College of Business and Industry (Undergraduate)

Awards for Best in Category

Best Paper (Undergraduate)

Best Poster (Undergraduate)

Best Paper (Graduate)

Best Poster (Graduate)

Best Demonstration (Undergraduate)

Best Demonstration (Graduate)

Best Cover Design

Houston Cole Library Award for Research Excellence

Award for Best of Showcase