

# 2020 VIRTUAL UNDERGRADUATE RESEARCH SYMPOSIUM

Various Zoom sessions from April 6th at 3:35 pm to April 9th at 7:45 pm  
Visit the week-long event at [bit.ly/URSVIRTUAL](https://bit.ly/URSVIRTUAL).

You are invited to join us throughout the week of April 6 as current undergraduate researchers present their posters virtually for the **2020 Undergraduate Research Symposium!** Through the Facebook event page, we will share the time for each presentation session, Zoom event link, and the general area/topic of the presentations so you can watch and support your friends and peers.

Many of our presenters participate in the Undergraduate Research Opportunity Program (UROP), Garnet and Gold Scholar Society, Honors in the Major, and students wanting presentation experience. We will be sharing the Nourishing Creativity performative projects as videos shared in each session.

## Program of poster sharing events for Tuesday, April 7th

### Monday, April 6th sessions

- 3:30 - 4:35 pm, 1 poster sharing event
- 5:15 - 6:15 pm, 3 poster sharing events
- 6:45 - 7:45 pm, 4 poster sharing events

### Tuesday, April 7th sessions

- **3:30 - 4:35 pm, 1 poster sharing event**
- **5:15 - 6:15 pm, 4 poster sharing events**
- **6:45 - 7:45 pm, 3 poster sharing events**

### Wednesday, April 8th sessions

- 4:00 - 5:00 pm, 1 poster sharing event
- 5:15 - 6:15 pm, 3 poster sharing events
- 6:45 - 7:45 pm, 2 poster sharing events

### Thursday, April 9th sessions

- 10:30 - 11:45 am, 1 poster sharing event
- 12:00 - 1:15 pm, Nourishing Creativity presentations
- 1:30 - 2:45 pm, 1 poster sharing event
- 3:00 - 4:15 pm, 1 poster sharing event
- 3:35 - 4:25 pm, 1 poster sharing event
- 5:15 - 6:15 pm, 4 poster sharing events
- 6:45 - 7:45 pm, 2 poster sharing events

# Tuesday, April 7th

3:35 - 4:35 pm

Leaders Hana Grubb & Maria Quintana, Biochemistry

<https://fsu.zoom.us/j/970584076>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **Academic Development for Black Males in Higher Education**

Braidan O'Connor

Research Mentor: Mr. Jesse Ford

## **Pollination Success and Associational Effects in S. Carolinese**

Catherine Lehman

Research Mentor: Dr. Jacob Heiling

## **Promiscuity in a Marine Snail**

Charles Gannon

Research Mentor: Ms. Alexandra Hooks

## **High-pressure Raman spectroscopic study of 3.65 Å hydrous phase**

Christelle Fiorina Bucag

Research Mentor: Dr. Abhisek Basu

## **The Progress of Writing Composition Over a Year in ESL students Compared To Native English Speakers**

Gabriella Oliveira

Research Mentor: Dr. Carla Wood

## **Gender in Conlanging**

Joseph Vincent Hatton Lefler

Research Mentor: Dr. Carolina Gonzalez

## **The Effect of Compression Socks on Exercise Performance: A Literature Review**

Kerstin Castro

Research Mentor: Dr. Dohoun Kim

## **Utilizing Virtual Reality to Better Understand the Causes of Suicide**

Neketa Nesmith & Juliette Ruiz

Research Mentor: Ms. Irene Huang

## **Bigger Isn't Always Better. The Effect of Colony Size on the Probability of Coral Mortality Following Bleaching**

Nyla Johnson

Research Mentor: Dr. Scott Burgess

## **Understanding Tuberculosis's Membrane Protein**

Paul Carpentier

Research Mentor: Dr. Huanjun Qin

## **Reconstituting Dengue Virus NS2B3 Protease-mcGAS Interaction in Vitro**

Ramsey Fadlalla

Research Mentor: Ms. Madhurima Bhattacharya

## **Barriers and Facilitators to Faculty Grantsmanship: A Systematic Literature Review**

Sandhya Yerra

Research Mentor: Dr. Rachel Goff-Albritton

## **Identification of Sexually Dimorphic Genes in *Drosophila Melanogaster***

Tracy Pham

Research Mentor: Mr. Kevin Doheny

## **C84Y Mutation in Cardiac Troponin C Influence on Cardiomyocyte Nuclear Structure**

Tyler Reinoso

Research Mentor: Dr. P. Bryant Chase

# Tuesday, April 7th

5:15 - 6:15 pm

Leaders Sarah Sullivan & Morgan Morrow & Emma Masters, Environment & Ecology

<https://fsu.zoom.us/j/419115199>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **Climate Change Readiness in Lagos, Nigeria: Current Impacts and Prospects**

Abril Hunter

Research Mentor: Dr. Yana Bebieva

## **Effects of the "Leave No Trace" Ordinance on Sea Turtle Nesting Patterns in Northern Florida**

Alex Rebimbas

Research Mentor: Dr. Matthew Ware

## **Dendrochronological Analysis of Longleaf Pines in Florida**

Arianna Wittic

Research Mentor: Ms. Nicole Zampieri

## **Cataloging biopsy and blood samples of marine turtles from different areas in Florida**

Ashley Jackson

Research Mentor: Dr. Mariana Fuentes

## **The Effect of Hydraulic Fracturing on Oklahoma**

Hanna Franz

Research Mentor: Mr. Robert Powers

## **Mind(fulness) over Matter**

Jonathan Black

Research Mentor: Ms. Diana Carbonell

## **Hurricane Evacuation History**

Jordan Daly & Melissa Geiger

Research Mentor: Dr. Tinting Zhao

## **The Least Invasive Methods for Blood Collection on Florida Native Sea Turtle Species**

Maya Tiseth

Research Mentor: Dr. Mariana Fuentes

## **The Effects of Climate Change on *Karenia brevis***

Nolan Hartz

Research Mentor: Ms. Tristyn Bercel

## **Metal Silicides in Aluminum Flux**

Susan Morales

Research Mentor: Dr. Susan Lattuner

## **Hermit Crabs Personality, Size, and Habitat**

Yousi Español Rincón

Research Mentor: Dr. Emily DuVal

## **Acoustic Telemetry and Sex-specific movements of *Ariopsis felis***

Zoe Moore

Research Mentor: Mr. Barry Walton

# Tuesday, April 7th

5:15 - 6:15 pm

Leaders Grace Nystrom & Caroline Deyoe, Food and Nutrition  
Science/Dietetics

<https://fsu.zoom.us/j/998994493>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **Differential Vulnerability to Tornado Impacts in Communities of the Rural U.S. South**

Allison Keeling

Research Mentor: Dr. Tisha Holmes

## **Ending the Youth HIV Epidemic**

Alyson Urbaniak

Research Mentor: Dr. Meardith Pooler-Burgess

## **Student Disability Registration and Migration Data at Institutions with Autism Specific Programs**

Carly Fulcher

Research Mentor: Dr. Bradley Cox P  
roject MED

Madison Hedge

Research Mentor: Dr. Scott Pickett

## **SMILES: Statistical Modeling and Integration of Large-Scale Single-Cell RNA Sequencing Data**

Madison Layfield

Research Mentor: Dr. Julia Wang

## **Epistemic Empathy within Science and Mathematics Classrooms**

Mary Dixon Wigginton

Research Mentor: Dr. Lama Jaber

## **Optimization of Glycoprotein Staining and Stain-free Gel Preparation**

Megan Appelbaum

Research Mentor: Dr. Qinchun Rao

## **3D Photogrammetry for Coral Reef Reconstruction**

Monet Cisneros

Research Mentor: Ms. Abigail Engleman

## **Unmaking Plastics: Recyclable Rubbers through Depolymerization**

Olivia Binner

Research Mentor: Dr. Justin Kennemur

## **A Nutrition Related Serious Game for Children in Immigrant Families**

Ravza Cayir

Research Mentor: Dr. Jessica Wendorf Muhamad

## **Analyzing Blood Clam Images using ImageJ and Fast Fourier transform**

Rosangel Salazar

Research Mentor: Dr. P. Bryant Chase

## **Food Availability and Size-Specific Annual Growth Rates in Sea Urchins**

Sofia Perez

Research Mentor: Dr. Daniel Okamoto

## **Evaluating Taste- Evoked Activity in the Gustatory Cortex**

Sonal Hirani

Research Mentor: Dr. Roberto Vincis

## **Melatonin Protects Against Deafferentation-Induced Cell Death in Chick Cochlear Nucleus**

Tiana Pham

Research Mentor: Dr. Richard Hyson

# Tuesday, April 7th

5:15 - 6:15 pm

Leaders Elias Larralde & Sergio Carlos Tamez, Humanities

<https://fsu.zoom.us/j/472646649>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **Perspectives of SLPs on Friendship Maintenance and Development for Clients with Aphasia**

Alexa Flores

Research Mentor: Dr. Michelle Therrien

## **Social Media as a Parenting Support Tool: A Scoping review**

Amber Hedquist

Research Mentor: Dr. Vanessa Dennen

## **Better Dead Than Red: A Twentieth Century Crusade for Christ and Against Communism**

Cassidy Taylor

Research Mentor: Dr. Daniel Wells

## **Analyzing the Portrayal of Hitler and the Nazis in Media**

Cullen Bolkey

Research Mentor: Dr. Nathan Stoltzfus

## **Geomapping the John House Stereograph Collection**

Emily Oxford-Pickeral

Research Mentor: Mr. Chase van Tilburg

## **Archaeological Findings from the Cosa Bath House**

Jace Cookson & Angeles Urtubey

Research Mentor: Ms. Allison Smith



## **Homerica': A Digital Humanities Project in Python**

Nathan Lesser

Research Mentor: Dr. Allen Romano

## **"Fortress for Freedom: The American Ground Crew Experience During the Combined Bomber Offensive"**

Noah Silverstein

Research Mentor: Mr. (Major) John Prince

## **"Who's There?" Speaking First in Early British Drama**

Roxy Rico & Samantha Paradela Research

Mentor: Dr. Michael Wagoner

# Tuesday, April 7th

5:15 - 6:15 pm

Leaders Maegan Nation & Jennifer Poggio, Social Science & Psychology

<https://fsu.zoom.us/j/865286818>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **Application of Machine Learning Models on MRI Data in Assessment of Peripheral Arterial Disease**

Antoinette Gladney

Research Mentor: Ms. Anahid Ehtemami

## **Career Adaptability, Dysfunctional Career Thoughts, and Athletic Identity among college student Athletes**

Avery Knipfing

Research Mentor: Mr. Ryan Sides

## **College Affinity Groups and the Effects on Mental Health**

Bernadyne Thelemaque

Research Mentor: Dr. Karen Oehme, J.D.

## **The Role that Reward Value of Food Has on Size and Frequency of Binge-eating Episodes in Women**

Elizabeth Holton

Research Mentor: Dr. Pamela Keel

## **Gentrification in Atlanta's LGBTQ Community Joandy Vega Research Mentor: Ms. Rachael Cofield Analyzing the Relation Between Visual Food Cues and Decision Making**

Joseph Arnold

Research Mentor: Dr. Rachel Bailey

**The Interpersonal Core of Conscientiousness: Mechanisms And Partner Effects That Promote Healthier Cognitive Aging And Reduce Risk of Alzheimer's**

Judalyn Arthoro

Research Mentor: Hannah Lovett

**Developing an Understanding of how Couples Interact in the Context of Problem Solving**

Kara Brizendine

Research Mentor: Dr. Andrea Meltzer

**Effects of Nature Exposure on Perceptual-Cognitive-Motor Performance**

Karla Rivaflecha

Research Mentor: Ms. Stinne Soendergaard

**Direct Democracy and Social Policy Outcomes: Marijuana Legalization in the States**

Kendall

Roy Research Mentor: Ms. Kelley Doll

**City Council Turnover and Recycling Rate and How They Are Influenced by Sustainability**

Lillian Savage

Research Mentor: Dr. Richard Feiock

**Disproportionate Representation: Speech & Language Impairment Rates in Florida Schools**

Lindsey Wood

Research Mentor: Dr. Shannon Hall-Mills

**Leadership Learning Project**

Megan Black & Milagros Jerez Research

Mentor: Dr. Kathy Guthrie

# Tuesday, April 7th

6:45 - 7:45 pm

Leaders Kelly Kaps & Adrian Othon & Anastasia Stichter, Exercise Psychology

<https://fsu.zoom.us/j/197173659>

[bit.ly/ursabstract20](http://bit.ly/ursabstract20)

## **The Role of NADPH Oxidase in Endothelial Function**

Amber Dudek

Research Mentor: Dr. DoHoun Kim

## **Effect of Word Instruction on English-Learner Students**

Andrea Aguirre-Becerra

Research Mentor: Ms. Kristina Bustamante

## **A Systematic Review of the Literature on Social Stigma and Violence Against Transgender Sex Workers in Low- and Middle-Income Countries**

Andrew Brasington

Research Mentor: Dr. Seyram Butame

## **Supports and Constraints in Classroom Engagement: An Examination of the Discursive Moves of Two Girls' Sensemaking Endeavors in Science**

A'Rawni McPhee

Research Mentor: Dr. Jennifer Schellinger

## **Associations Between Social Determinants of Health, Perceived Discrimination, and Body Mass Index on Symptoms of Depression among Young African American Mothers**

Brenda Leon

Research Mentor: Ms. Rachel Harris

**Do Character Strengths Predict Long-term Survival in Patients after Open Heart Surgery?**

Caitlin Blanchard

Research Mentor: Dr. Amy Ai

**Measure Up: Size and Bleaching Severity in Pocillopora Corals?**

Chani Kotscher

Research Mentor: Dr. Scott Burgess

**Research Methods of the Gustatory System**

David Ackart

Research Mentor: Dr. Alan Spector

**Ergonomic Test Protocol**

Isabel Maya

Research Mentor: Dr. Meredith McQuerry

**Null Results: What Are We Missing and Where Do We Find Them?"**

Jacob Yap

Research Mentor: Dr. Nicholas Ruhs

**Health Benefits of Dried Plum Consumption**

Joseph Brunner

Research Mentor: Ms. Elizabeth Foley

**Effects of Bmal Gene on Circadian Rhythms Jun Ho Research Mentor:  
Dr. Choogon Lee Synthesis of Metal Silicides**

Kyle Findlay

Research Mentor: Dr. Susan Lattuner

**Spatial Relationships of French Monasteries in the 12th Century  
Through Chapters**

Lauren Becker

Research Mentor: Dr. Kyle Killian Depression

**Religious Coping, and Perfusion time Predicted Postoperative Functioning in Older Patients Undergoing Open-heart Surgery**

Morgan Neal

Research Mentor: Dr. Amy Ai

**Research and Trends in STEM Education in Preschool Setting: A Content Analysis of Publication in Selected Journals (2009-2018)**

Niang Dim

Research Mentor: Prof. Hye Ryung Won

**Implicit Suicidal Cognitions: A New Approach to the Death Implicit Association Test**

Sarah Ferguson

Research Mentor: Mr. Austin Gallyer

**Pilot Study: The Effect of Acute 5-Day Creatine Supplementation on Macrovascular Endothelial Function in Older Adults**

Thomas Dool

Research Mentor: Dr. Dohoun Kim

**Teleological Essentialism and Boundary Intensification**

Vanessa Welch

Research Mentor: Dr. David Rose

# Tuesday, April 7th

6:45 - 7:45 pm

Leaders Kemp Gonzalez-Xu & Justin Stow, Hard Sciences

<https://fsu.zoom.us/j/407378127>

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## **A Realistic Chandrasekhar Mass White Dwarf Model from a Binary Evolution**

Abelardo Riojas

Research Mentor: Dr. Tomasz Plewa

## **The Blockchain Network Caswell King Research Mentor: Dr. Michael Meth Bipedal Robot Slippage Prediction and Friction Test**

Chase Toepp

Research Mentor: Dr. Christian Hubicki

## **Peeking into the icy-giant planets: A high pressure-temperature study of hydrocarbons**

Christina Schiffert

Research Mentor: Dr. Abhisek Basu

## **How Torque and Minimum Control Effort affect Sit-to-Stand**

Dylan Ma

Research Mentor: Dr. Oscar Chuy Jr

## **Right-Angled Artin Groups and their Kernels**

Enrique Barquinero

Research Mentor: Dr. Lorenzo Ruffoni

## **Developing the High Granularity Calorimeter for CERN Large Hadron Collider**

Giovanni Good

Research Mentor: Dr. Ted Kolberg

## **Improving Sensitivity of High Frequency Electron Magnetic Resonance**

Harrison Santiago

Research Mentor: Dr. Johan van Tol

## **Qualitative Analysis of the Rock-Paper-Scissors Mathematical Model**

Jaclyn Pascual

Research Mentor: Dr. Nick Cogan

## **How has the location of the Bermuda High affected the path of major landfalling hurricanes in the United States across the past 30 years?**

Jordan Tweedie

Research Mentor: Dr. Mark Bourassa

## **Predicting Canopy Level Tropical Forest GPP with Thermal Imaging Using Deep Learning**

Kathryn Brill

Research Mentor: Dr. Trina Merrick

## **Reality Bytes**

Lucas Wilson

Research Mentor: Prof. Robert Curran

## **Monte Carlo Particle Detector Simulation of the Reaction Proton + Photon $\rightarrow$ Omega + Proton**

Ryan Goodrich

Research Mentor: Mr. Edmundo Barriga

## **Study on the Reaction Photon + Proton $\rightarrow$ eta' + Proton**

Shelby Arrigo

Research Mentor: Mr. Edmundo Barriga

## **Reverse Engineering with Ghidra**

Supriya Palli

Research Mentor: Dr. Charalambos Konstantinou



# Tuesday, April 7th

6:45 - 7:45 pm

Leaders Jon Peterson & Brittany Ernst, Pre-med & Athletic Training

<https://fsu.zoom.us/j/320216298>

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## **Review of the Development of Thermal Manikins**

Cary Wong

Research Mentor: Dr. Meredith McQuerry

## **Analysis of Benthos Survivability on Artificial Substrates in Carrie Bow Cave, Belize**

Chaitanya Vibhute

Research Mentor: Ms. Abigail Engleman

## **Implicit Language Bias: How To Unconsciously Learn a Second Language**

Darice Nicolas

Research Mentor: Dr. Shaofeng Li

## **The Too Soon Effects of Returning to Work Postpartum in African American Households**

Deidra Edouard

Research Mentor: Dr. Joseph Grzywacz

## **Obesity and Its Relationship to Medication and Dietary Supplement Use**

Elizabeth Steidley

Research Mentor: Dr. Zhe He

**Assessing Patterns of Seagrass Communities as Indicators of Carbon Storage Potential**

Jakob Barzak

Research Mentor: Ms. Jennifer McHenry

**Ending the Youth HIV Epidemics**

Jordan Jankowski

Research Mentor: Dr. Meardith Pooler-Burgess

**Research and Trends in STEM Education in Preschool Setting: A Content Analysis of Publication in Selected Journals (2009-2018)**

Kate Fitts

Research Mentor: Prof. Hye Ryung Won

**Promiscuity in a Marine Snail**

Madison DeWitt R

Research Mentor: Ms. Alexandra Hooks

**Exercising Mind-Body: Adopting a Healthy Lifestyle to Cope with Stress**

Nangelis Rivera

Research Mentor: Ms. Hilla Sharon-David

**The Relationship Between Depression, Anxiety, and Cognitive Functioning: A Cross-sectional and longitudinal study**

Niah Washington

Research Mentor: Dr. Julia Sheffler

**Examining the Factors that Affect Structural Repetition in Question Answering**

Nicole Coca

Research Mentor: Dr. Michael Kaschak

## **Racial Minorities at Colleges with Autism Specific Support Programs**

Olivia Griffing

Research Mentor: Dr. Bradley Cox

## **Mind(fulness) over Matter**

Preston Hall

Research Mentor: Ms. Diana Carbonell

## **Suicidal Ideation, Suicide Attempts, and Suicide Death among Veterans and Service Members: A Comprehensive Meta-Analysis of Risk Factors**

Summer Fulcher & Gabriela Herrerias

Research Mentor: Ms. Katherine Musacchio Schafer

## **Ontogenetic Diet Shifts within Northern Abalone**

Trevor Alspach

Research Mentor: Dr. Daniel Okamoto