STUDENT RESEARCH WEEK

CELEBRATING RESEARCH AND CREATIVITY ACROSS THE CURRICULUM

MARCH 29–APRIL 2
2021

KICK-OFF EVENT

STUDENT SCHOLAR SYMPOSIUM

AWARDS CEREMONY
UCF’s Student Research Week celebrates the work of our students at all stages of their research journey. Hundreds of undergraduate and graduate students will demonstrate their work through poster presentations all accessible via a UCF Webcourse. The best projects are recognized with scholarships.

A university contributes to the very fiber of our society in many ways from educating our next generation of doctors and artists to solving big challenges facing the human race. The research UCF’s faculty and students conduct, the discoveries that turn into technology and the creative works that illuminate the human condition are all key to creating communities we all want to live in.

This is the first year the celebration is virtual. We didn’t want our students or the UCF community to miss out on the opportunity to see all their work. We invite you to join us and see for yourself how our students’ research and creative scholarship enrich their learning experience and impact the world.

To learn more and for a full schedule of events visit researchweek.ucf.edu.

*The Division of Student Learning and Academic Success, the College of Graduate Studies, and the Office of Undergraduate Research*
SCHEDULE OF EVENTS

To see a full list of Student Research Week events, please visit researchweek.ucf.edu

Monday, March 29
Student Research Week Kickoff: ................................................ 10:00 - 11:30 a.m.

Tuesday, March 30
Poster Session I: ........................................................................ 11:30 a.m. - 12:30 p.m.
Poster Session II: .................................................................... 2:30 - 3:30 p.m.

Wednesday, March 31
Poster Session III: ................................................................. 10:30 - 11:30 a.m.
Poster Session IV: ............................................................... 12:30 - 1:30 p.m.

Thursday, April 1
Poster Session V: ...................................................................... 11:30 a.m. - 12:30 p.m.
Poster Session VI: ............................................................... 2:30 - 3:30 p.m.

Friday, April 2
Awards Ceremony: .............................................................. 2:00 - 3:30 p.m.
SPONSORS

Through the generosity of the following organizations and individuals, substantial scholarships will be awarded to students judged to have the best projects presented. The Division of Student Learning and Academic Success, the College of Graduate Studies, and the Office of Undergraduate Research are grateful to those benefactors for their encouragement and support of student research at UCF.

Student Government Association
Burnett Honors College
College of Arts & Humanities
College of Community Innovation and Education
College of Medicine
College of Nursing
Richard Harrison II

STUDENT RESEARCH WEEK PLANNING TEAM

Michael Aldarondo-Jeffries
Nathalia Bauer
Tyler Campbell
Wendy Cartier
Zenaida Kotala
Carreen Krapf
Aubrey Kuperman
Kelli Marini
Jennifer Parham
Simone Rousseau
Kimberly Schneider
Barbara Smith

SPECIAL THANKS

The Division of Student Learning and Academic Success, the College of Graduate Studies, and the Office of Undergraduate Research thank the student presenters for sharing their scholarly work and demonstrating the outstanding research conducted at UCF. The events of Student Research Week would not be possible without the support of the entire UCF community.
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WELCOME AND AWARDS

Dr. Michael Johnson
_Interim Provost and Vice President for Academic Affairs_

Dr. Elizabeth A. Klonoff
_Vice President for Research and Dean of the College of Graduate Studies_

Dr. Theodorea Regina Berry
_Vice Provost for the Division of Student Learning and Academic Success and Dean of the College of Undergraduate Studies_

KEYNOTE SPEAKER

Dr. Joshua Colwell
_Planetary Scientist and Pegasus Professor of Physics_
Dr. Joshua Colwell is a Planetary Scientist and Pegasus Professor of Physics at the University of Central Florida. He came to UCF in 2006 from the Laboratory for Atmospheric and Space Physics at the University of Colorado where he earned his Ph.D. in Astrophysical, Planetary and Atmospheric Sciences. Since 2011 he has held the positions of Associate Chair of the Department of Physics, Assistant Director of the Florida Space Institute, and Director of the Center for Microgravity Research.

His research interests are in the origin and evolution of the solar system with a particular emphasis on planet formation, asteroids, planetary rings, comets, and interplanetary dust. As a Co-Investigator on the international Cassini mission to Saturn that orbited the ringed planet from 2004–2017 he designed and analyzed observations of Saturn’s rings. He studies the structure and dynamics of Saturn’s rings with data from Cassini. He has led experiments that have flown on the Space Shuttle, the International Space Station, suborbital rockets, parabolic airplane flights, and is the Principal Investigator of a CubeSat that launched in 2021.
GRADUATE AWARDS OF EXCELLENCE

Award for Excellence in Graduate Student Teaching

Anshare Antoine  
*Texts and Technology PhD*  
College of Arts and Humanities

David Boffey*  
*Education PhD, Exercise Physiology Track*  
College of Health Professions and Sciences

Sahar Hooshmand  
*Computer Science PhD*  
College of Engineering and Computer Science

Tutku Ayhan  
*Security Studies PhD*  
College of Sciences

Daniel Edelen  
*Elementary Education PhD*  
College of Community Innovation and Education

Award for Excellence by a Graduate Teaching Assistant

Kelli Dauphinais  
*Applied Sociology MA*  
College of Sciences

Nicholas Kostakis  
*Teaching English to Speakers of Other Languages, TESOL MA*  
College of Arts and Humanities

Brandy King*  
*Computer Science MS*  
College of Engineering and Computer Science

Olga Pysmenna  
*Public Affairs PhD*  
College of Community Innovation and Education

*University-level awardee*
UNDERGRADUATE RESEARCH AWARDS

Distinguished Undergraduate Research Award

Ezat El-Said  
*Dr. Gang Chen*  

Meeti Mehta  
*Dr. Steven Ebert*  

Michael Greenberg  
*Dr. Yulia Gerasimova*

Teddy Duncan  
*Dr. William Fogarty*  

Mariana Kellis  
*Dr. Barbara Gannon*  

Alyssa Church  
*Dr. Michael Rovito*

Zachary Stein  
*Dr. Seetha Raghavan*  

Amy Lebanoff  
*Dr. Andrew Dickerson*  

Cesar Lopez-Zelaya  
*Dr. C. Kyle Renshaw*

Gary Hoppenworth  
*Dr. Sharma Thankachan*  

Salim Mouloua  
*Dr. Daniel McConnell*
Undergraduate Research Faculty Mentor of the Year

Dr. Damla Turgut  
*Computer Science*  
*Nominated by: Nafisa Mostofa*

Champion of Undergraduate Research Faculty Award

Dr. Aubrey Jewett  
*School of Politics, Security, and International Affairs*

Dr. Seetha Raghavan  
*Mechanical and Aerospace Engineering*
Graduate Presentations

Business Administration and Hospitality Management

Facial Prominence and Its Impact on Effectiveness of Marketing Communications
Lam An
Business Administration PhD, Marketing Track

Efficient Practices of Training, Technology, Goal and Consequence Interventions in Warehouse Management
Mia Cleary
Management MSM

The Impacts of Tourism
Maksim Godovych
Hospitality Management PhD

For Goodness’ Sake? Integrating Sustainability Performance into Management Control Systems
Jacob Lennard
Business Administration PhD, Accounting Track

Customers’ Behavioral Immune System Responses to the COVID-19 Pandemic
Julia Marquez
Hospitality and Tourism Management MS

Balancing Trade-offs in Designing the CMO Job: A Financial Accountability Perspective
Ashutosh Singh
Business Administration PhD, Marketing Track

Service Robots in Food and Beverage Settings: The Impact of Automation on Consumer Experiences in Traditionally High-Contact Environments
Sydney Tefft
Hospitality and Tourism Management MS

Adopting Gamification to Access Hotel Guests’ Environmental Sustainability Perception
Aili Wu
Hospitality and Tourism Management MS

Engineering, Computer Science, Modeling and Simulation

Graduate Presentations

Nidal Alsayyed
Digital Forensics MS

IoT Augmented Physical Scale Model of a Suburban Home
Saliha Safa Bacanli
Computer Science PhD

An Online Reinforcement Learning Approach for Cable-Driven Upper Body Exosuit, CUBE
Jirui Fu
Mechanical Engineering PhD

Dependence Between Drivers of Compound Flooding Around the Contiguous United States Coastline
Ahmed Nasr
Civil Engineering PhD

Short-Term Load Forecasting for Smart Home Appliances With Sequence to Sequence Learning
Mina Razghandi
Computer Science PhD

Coalition Formation of Directional Radios in Adversarial Presence
Sayanta Seth
Electrical Engineering PhD

Sequence Patternning of Peptides with Increased Hydrophobic Content for Therapeutic Encapsulation
Sara Tabandeh
Materials Science and Engineering PhD

A Database of Global Storm Surge Reconstructions, GSSR
Michael Tadesse
Civil Engineering PhD

How Gelsolin-Mediated Actin Filament Severing and Mechanics Respond to Crowding and Changes in pH
Claire Toland
Nanotechnology MS

Effects of Various Speed Management Countermeasures on Bicycle Crashes for Urban Roads in Central Florida
Jorge Ugan
Civil Engineering MS, Transportation Systems Engineering Track

Undergraduate Presentations

What Are You Trying to Tell Me? The Influence of Individual Differences of Perceived Emotion Utility on Attention Towards Shared Metacognition Between Humans and Agents in a Multimedia Learning Environment
Megan Wiedbusch
Education PhD, Learning Sciences Track

Viscoelastic Modeling of High Strain Thin Ply Composites
Milinda Madhusanka Yapa Yapa
Hamillage
Mechanical Engineering PhD

Improving AR/VR Experiences with Deep Learning
Sharare Zehtabian
Computer Science PhD

Teen as Research-Apprentice: Creating a Participatory Action Research Program for the Design and Development of Adolescent Online Safety Solutions
Arianna Davis
Mentor: Dr. Pamela Wisniewski, Computer Science, Dr. Elizabeth Marie Bonsignore, University of Maryland

Characterization of Contact Resistance Properties of Different TLM Structure Designs
Nicole Karam
Mentor: Dr. Kristopher Davis, Dr. Mengjie Li, Materials Science and Engineering

Matrix Decompositions and Applications to Digital Ownership Protection
David Melendez
Mentor: Dr. Minah Oh, James Madison University, Dr. Akil Narayan, Mathematics

Finite Element Analysis of Thermal Strain in Multi-Layered Ceramic Composite for Hypersonic Applications
Felix Morales
Mentor: Dr. Seetha Raghavan, Mechanical and Aerospace Engineering

Investigation of Tablet LiDAR and Its Application to Structural Health Monitoring
Kaile’a Moseley
Mentor: Dr. F. Necati Catbas, Civil, Environmental, and Construction Engineering
Carebit: A Mobile App for Remote Informal Caregiving via Fitbit API
Huy Pham, Ann Binus, Joseph Kocis, Kensal Ramos
Mentor: Dr. Pamela Wisniewski, Computer Science

Family Communication: Examining the Differing Perceptions of Parents and Teens Regarding Online Safety Communication
Tara Rutkowski
Mentor: Dr. Pamela Wisniewski, Computer Science

Models for AP Composite Propellant Combustion
Emma Shafer
Mentor: Dr. Subith Vasu, Mechanical and Aerospace Engineering

De-occluding Faces Using Novel Deep Learning Techniques for Increased Performance of Facial Expression Recognition Networks
Sachin Shah
Mentor: Dr. Charles Hughes, Computer Science

Adolescent Online Safety: Expanding the Knowledge Base and Developing Machine Learning Algorithms
Carlson Sharpless, Avery Reyna, Christian Loanzo, Komila Khamidova, Pallavi Dacre, Abdulrahman Al Sumaih
Mentor: Dr. Pamela Wisniewski, Computer Science

Using Simulation and Brainwave Equipment to Test Leadership Among Engineers
Paul Stuckey
Mentor: Dr. Luis Rabelo, Industrial Engineering and Management Systems

Dramatic Form and Narratives of Abuse
Taylor Wikoff
Mentor: Dr. Chloe Edmonson, School of Performing Arts

FINE ARTS AND HUMANITIES

Undergraduate Presentations

Gaudi’s Perfected Gothic
Dena Bader
Mentor: Dr. Ilenia Colón Mendoza, School of Visual Arts and Design

French Imperial Politics and Anglo-French Relations During the Third Republic and Vichy Regime
Brandon Kirk
Mentor: Dr. Amelia Lyons, Dr. Barbara Gannon, History

James Joyce’s Ulysses and the Avoidance of the Reality Principle
Jack Scheidhauer
Mentor: Dr. Louise Kane, English

Making a Queer Game Informed by Queer Games Research
Amy Schwinge
Mentor: Dr. Emily Johnson, English

HEALTH SCIENCES

Graduate Presentations

Chemotoxic Effect of AICAR on Lung Cancer Cell Lines
Fareesa Aftab
Biotechnology MS

Influence of Surface on the Prone Bridge Plank Exercise
Luk Devorski
Exercise Physiology, Education PhD

Cristina Figueroa
Nondegree or Transient

High Intensity Gait Training in Anoxic Brain Injury: A Case Study
Ashley Gadelha
Nondegree or Transient

The Use of Tensiomyography in Evaluating the Effectiveness of Sequential Quadriceps Contractions for Neuromuscular Activation of the Rectus Femoris 0-5 Weeks Post Anterior Cruciate Ligament Construction
Jesse Gaudin
Physical Therapy DPT

Chaperonin-Containing TCP1 Complex, CCT Promotes Breast Cancer Growth Through Correlations With Key Cell Cycle Regulators
Heba Ghozlan
Biomedical Sciences PhD

Single Squat and Single Leg Squat Jump Assessment in Elite Figure Skaters
Jessica Harris
Athletic Training MAT

The Impact of Skeletal Muscle Disuse on Distinct Echo Intensity Bands: A Retrospective Analysis
Zachary Logeson
Physical Therapy DPT

Is There a Correlation Between Rate of Handgrip Force Production and Comfortable Gait Speed?
Emily Montecalvo
Physical Therapy DPT

Chaperonin-Containing TCP1 Complex, CCT Promotes Breast Cancer Growth Through Correlations With Key Cell Cycle Regulators
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Is There a Correlation Between Rate of Handgrip Force Production and Comfortable Gait Speed?
Emily Montecalvo
Physical Therapy DPT

School Participation and Physical Activity in Children with JIA: A Review of the Literature
Alexis Myers
Physical Therapy DPT

Effectiveness of Novel Therapeutics Targeting Polyamine Biosynthesis and Transport in Pancreatic Tumor Progression and Anti-Tumor Immune Modulation
Sai Preethi Nakkina
Biomedical Sciences PhD

Four Methods for Detecting Outliers: Applications in Animal Study
Albert Osom
Statistics and Data Science MS

Investigating Key Molecular Events Underlying Early Neoplastic Progression of Colorectal Cancer Using Integrative Meta-Transcriptomics
Michael Rohr
Biomedical Sciences MD/PhD Track

Effects of Pain Neuroscience Education on Healthcare Students’ Understanding and Attitudes About Chronic Pain
Kimberly Singh
Physical Therapy DPT
**MATHEMATICS, OPTICS, AND PHYSICAL SCIENCES**

### Undergraduate Presentations

**Can the Presence of Water Ice Explain Cometary Activity on Asteroids?**
Olivia Bitcon  
Mentor: Dr. Julie Brisset, Physics

**Deterministic Compartmental Model for Herpes Simplex Virus Type-2 and the Effect of a Possible Prevention Method to Protect Women**
Jacob Braun  
Mentor: Dr. Zhisheng Shuai, Mathematics

**Exogenous Material on Asteroids**
Remington Cantelas  
Mentor: Dr. Humberto Campins, Physics

**Are Fine Grains Responsible for Asteroids Shedding Surface Material?**
Christopher Cox  
Mentor: Dr. Julie Brisset, Physics

**Quantum Charge Migration in Light-Harvesting Chromophores**
Ruben Fernandez Carbon  
Mentor: Dr. Luca Argenti, Optics and Photonics

**Theoretical Calculations of Measurable Properties of Astrochemically Relevant Molecules**
Riley Havel  
Mentor: Dr. Christopher Bennett, Physics

**ACTIVE Asteroids: Role of Grain Size and Surface Properties on the Regolith Strength**
Active Asteroids Partida  
Mentor: Dr. Julie Brisset, Physics

**SocIal sciences**

### Undergraduate Presentations

**Examining the Archaeology of Native American Boarding Schools: A Story of Childhood Agency**
Adriana Almunte  
Mentor: Dr. Brigitte Kovacevich, Anthropology

**Politics and Parenting: How Parenting Style Can Affect Ideology**
Olujie Antoine, Amber Wuorio, Claudia Urbina  
Mentor: Dr. Jason Chesnut, Psychology

**Aviation Unexpected Event Card Sort for Judgment Expertise**
Hannah Arias  
Mentor: Dr. Jessica Cruit, School of Modeling, Simulation and Training

**COVID Couples: How the Pandemic has Impacted Couples**
Victor Blocker  
Mentor: Dr. Grace White, Psychology

**Effects of Media Literacy on Perceptions of Skepticism and Realism in Popular Music Among Undergraduate Students**
Reilly Branch  
Mentor: Dr. Chrysalis Wright, Psychology

**Misinformation in the Media and Its Influence on Racism**
Jared Champa  
Mentor: Dr. Chrysalis Wright, Dr. Daniel Mcconnell, Psychology

**Exploring Factors of Acceptance of Chip Implants in the Human Body**
Radha Chebolu  
Mentor: Dr. Daniel McConnell, Dr. Jana Smither, Psychology

**Conflicts and Communication in Virtual Education for Gifted Students**
Sarah Finley  
Mentor: Dr. James McCafferty, Dr. Adam Parrish, Nicholson School of Communication and Media
Graduate Presentations

Proportional Power Sharing Control of Distributed Generators in Microgrids
Farzad Aalipour
Mechanical Engineering PhD

Highly Integrated Grid-Tied Multi-Port Power Module for PV and Storage With Advanced Control Algorithm
Sumana Ghosh
Electrical Engineering PhD

Exchangeable Bayesian Matrix-Variate Hierarchical Clustering With Parallel Computation
Charles Harrison
Big Data Analytics PhD

Variability of Seismocardiographic Signals During Regular Breathing and Breath Holding
Tanvir Hassan
Mechanical Engineering PhD

TRMM Microwave Imager Emissive Reflector Correction for GPM V07 Reprocessing
Alamgir Hossan
Electrical Engineering PhD

Simulation Repurposing for Law Enforcement
Julie Kent
Modeling and Simulation PhD

Parameter Calibration and Optimization in Smart Grid for Synchronous Generators and Converters
Seyyed Rashid Khazeiynasab
Electrical Engineering PhD

Viral Inactivation Using Localized UV Emission and Application in Self-Cleaning PPE
Udit Kumar
Materials Science and Engineering PhD

Nanoindentation and Photoluminescence Studies of Hydrogenated Boron Carbon Nitride Thin Films
Shraddha Nehate
Electrical Engineering PhD

Cation Interactions Modulate α-actinin-crosslinked Bundle Formation by Stabilizing α-actinin Binding to Actin Filaments
Jinho Park
Materials Science and Engineering PhD

Keep It Cool: A Flexible Cooling Device
Khan Mohammad Rabbi
Mechanical Engineering PhD

A Novel Concept for Cryogenic Hydrogen Energy Storage
Adil Riahi
Mechanical Engineering PhD

Climatic And Landscape Controls on Long-Term Baseflow
Lili Yao
Civil Engineering PhD

Undergraduate Presentations

Understanding the Challenges Child Welfare Workers Encounter Related to Promoting the Online Safety of Foster Youth
Denielle Abaquita
Mentor: Dr. Pamela Wisniewski, Computer Science

Developing a Surrogate Model for Optimizing Number of HEC-RAS Simulations Required for Flood Risk Assessment
Lauren Doebele
Mentor: Dr. Mamunur Rashid, Dr. Thomas Wahl, Civil, Environmental, and Construction Engineering

Adding Insult to Injury: How Reddit Users Shame People Who Participate in Harmful Social Media Challenges
Amy Godfrey, Maria Lopez
Mentor: Dr. Pamela Wisniewski, Computer Science

From Parental Control to Family Oversight: A Case Study of Parents and Teens Co-Monitoring Mobile Online Safety
Amy Godfrey
Mentor: Dr. Pamela Wisniewski, Computer Science

GRIT: Gesture Recognition in Technology
Seth Horwitz, Robin Perlman
Mentor: Dr. Joon-Hyuk Park, Mechanical and Aerospace Engineering
30 Days: Understanding Teens’ Digital Lives and Online Relationships
Max Huebler, Julia Silva, Aime Yelvington, Nafisa Chowdhury
Mentor: Dr. Karla Badillo-Urquiola, Dr. Pamela Wisniewski, Computer Science

Encapsulating Doxorubicin Using Polyelectrolyte Complexes
Cristina Lemus
Mentor: Dr. Lorraine Leon, Materials Science and Engineering

Using Dual miRNA Delivery Using Cerium Oxide Nanoparticles to Enhance the Diabetic Wound Healing
Aadith Menon
Mentor: Dr. Elayaraja Kolanthai, Dr. Sudipta Seal, Materials Science and Engineering

Exploring Online Risk Exposure of Adolescents in USA
Zachary Miller, Gabriela Rivera
Mentor: Dr. Pamela Wisniewski, Computer Science

Planning a Long-Term Participatory Design Program for Adolescent Online Safety
Quyhn Nguyen, Naulsberry Jean Baptiste, Timothy Golio, Nicholas Kershaw
Mentor: Dr. Pamela Wisniewski, Computer Science

The Utility of Sonospectrography for Detection of Developmental Dysplasia of the Hip
Pinak Raodeo, Lauren Brown, Maya Hartig
Mentor: Dr. Hansen Mansy, Mechanical and Aerospace Engineering

Heart Rate Variability in Terms of Demographic Information and Activity Being Conducted
Ankur Ravikanth
Mentor: Dr. Hansen Mansy, Mechanical and Aerospace Engineering

Examining Suicide Prevention Safety Apps for the Online Safety of Teens
Marcus Seigman, Sairam Nalla
Mentor: Dr. Pamela Wisniewski, Computer Science

Investigation in Engineering Leadership Using Systems Engineering and Virtual Reality
Whitney Stucky
Mentor: Dr. Luis Rabelo, Industrial Engineering and Management Systems

The Role of Social Media in Globalizing K-Pop Music
Erika Clippinger
Music MA

Just Wear the Damn Mask: Insights into the Influence of Political Events on the Hashtag #WearTheDamnMask During the COVID-19 Pandemic
Bonnie Cross
Texts and Technology PhD

Star Keeper
Kayla Etienne
Emerging Media MFA, Animation and Visual Effects Track

Spaced Out
Alyssa Klapka
Emerging Media MFA, Animation and Visual Effects Track

Civil War Performance, the Confederate Flag, and Patriotic Ideology in the American South: A Cultural Studies Approach
John Lancaster
English MA, Literary, Cultural, and Textual Studies Track

The Spoon Theory
Sanne Methorst
Emerging Media MFA, Animation and Visual Effects Track

Easy Prey
Annika Norris
Emerging Media MFA, Animation and Visual Effects Track

The Visual Bridge of Fargo’s the Law of Vacant Spaces: A Non-Linguistic Analysis
Marissa Salas
Texts and Technology PhD

Facilitation of Environmental Factors to Reduce Sound Decibels in the Neonatal Intensive Care Unit: A Literature Review
Cassandra Hanlon
Mentor: Dr. Leslee D’Amato-Kubiet, Dr. Angeline Bushy, College of Nursing

Literature Review: Sociodemographic Factors of Phytoestrogen Levels in Breast Cancer Survivors
Jongeon Kim
Mentor: Dr. Eunkyung Lee, Health Sciences

Schizophrenia and the Pineal Gland: a Literature Review
Kathryn Margretta
Mentor: Dr. Angeline Bushy, Dr. Leslee D’Amato-Kubiet, College of Nursing

Impact of Systemic Pathologies on Increased Risk of Endodontic Disorders
Jayla Mercer
Mentor: Dr. Suha Saleh, Health Sciences

Optimizing Transcranial Magnetic Stimulation Research Methodology: How Many Pulses are Necessary to Minimize Interepulse Variability in Corticospinal Excitability?
Jason Pagan
Mentor: Dr. Matt S. Stock, School of Kinesiology and Physical Therapy

Exploring the Effects Service Dogs Have on Veterans With PTSD
Shelby Reeves
Mentor: Dr. Jean Davis, Dr. Victoria Loerzel, College of Nursing

Racial Disparities Among Black Women in Maternal Health: A Literature Review
Tatiyana Rich
Mentor: Dr. Leslee D’Amato-Kubiet, Dr. Angeline Bushy, College of Nursing

Rapid Grip Strength Predicts Reaction Time
Gabriela Rodriguez
Mentor: Dr. Matt S. Stock, Dr. Nicole Dawson, Dr. Colby Mangum, School of Kinesiology and Physical Therapy

Feasibility and Acceptability of a Remote-Based Wellness Program in Young Adults With Autism Spectrum Disorder, ASD During COVID-19
Riley Shurack
Mentor: Dr. Jeanette Garcia, Health Sciences
Studying Effects of Career Termination on the Collegiate Athletes’ Self-Identity With the Transition Out of Sport Through the Grief and Loss Cycle
Dylan Street
Mentor: Dr. Thomas Fisher, Health Sciences

Interim Nurse Management Roles: An Integrative Literature Review
Leah Utt
Mentor: Dr. Sandra Galura, College of Nursing

Undergraduate Presentations

The Perception, Usage, and Knowledge of Moringa oleifera in Mare-Brignol, Haiti after Increased Education and Access
Preethashree Anbukkarasu, Archi Patel, Nichika Holdrum, Brandon Kaye, Leticia Ebihara
Mentor: Dr. Mary Schmidt-Owens, Dr. Michael Deichen, Burnett School of Biomedical Sciences

Natural History and Ecological Underpinnings of Zombie Ant Graveyards in Central Florida
Sara Linehan
Mentor: Dr. Charissa de Bekker, Biology

Do Ranavirus Infections Impact Disease Dynamics in Juvenile Marine Turtles?
Sydney Morton
Mentor: Dr. Anna Savage, Biology

Convalescent Plasma Therapy Uses, Indications, and Contraindications
Anh Nguyen
Mentor: Dr. Kyle Riding, Burnett School of Biomedical Sciences

The Effects of Redox Potential on the Gas Production in Clostridioides difficile
Mansi Patel
Mentor: Dr. William Self, Burnett School of Biomedical Sciences

Is the Zombie Ant Phenomenon in Part a Product of a More Generalized Stress Response?
Zaynah Shahab
Mentor: Dr. Charissa de Bekker, Biology

Effects of Vaping Additive: Determining Impact of Vitamin E on Cell Growth and Death Patterns
Valorie Smith, Brian Brady
Mentor: Ms. Nicole Verity, Dr. Robert Borgon, Burnett School of Biomedical Sciences

Factors Affecting Tree Productivity
Alyssa Uebele
Mentor: Dr. Sasha Hararuk, Biology

Long-Term Responses of Infaunal Communities to Oyster Reef Restoration
Lyndsey Chute
Mentor: Dr. Linda Walters, Biology

Ruffled Feathers: Influences of Restoration and Motorized Boating Activities on Wading Bird Biodiversity and Behaviors on Intertidal Oyster Reefs
Melanie Dalla Valle
Mentor: Dr. Linda Walters, Biology

Clay and Copper Algaecide Impacts on Freshwater Wetland Biogeochemistry
Ashley Boggs
Mentor: Dr. Lisa Chambers, Biology

Factors Affecting Tree Productivity
Alyssa Uebele
Mentor: Dr. Sasha Hararuk, Biology

CONSEQUENCES OF STRESS-INDUCED TRAIT PLASTICITY ON FITNESS WITHIN CULTIVATED SUNFLOWER
Gillian Gomer
Mentor: Dr. Chase Mason, Dr. Eric Goolsby, Biology

Controlling the Hemiwicking of Gold Microstructures Using Photoreactive Compounds
Ali Haghighat Mesbah
Chemistry PhD

Machine Learning Surrogate Models for Fast Bayesian Inference: Application to Exoplanet Atmospheric Retrieval
Michael Himes
Physics PhD, Planetary Sciences Track

Mathematical Models for Animal Population Persistence on Symmetrical and Asymmetrical Fragmented Landscapes
Allyson Jones
Mathematical Science MS

Holographic Phase Masks – Versatile Beam Shaping Optical Elements for High and Low Power Laser Applications
Nafiseh Mohammad
Optics and Photonics PhD

Nodal Line to Weyl Fermion Transition Across the Magnetic Phase of EuB6
Christopher Sims
Physics PhD

Investigation of Cloud Condensation Nuclei Activity of Maleic Acid Aerosol Particles and Its Atmospheric Ageing Products
Brett Young
Chemistry PhD

HUMAN-BUILT ORGANIC MATERIALS — THEIR EFFECT ON THE NATURAL HISTORY OF ANTHROPOLOGICAL RESIDUALS
Shayna Small
Mentor: Dr. Charissa de Bekker, Biology

Analyzing the Microbiome of the Modern Human Gut
Lucas Alward
Mentor: Dr. Anna Savage, Biology

Graduate Presentations

From Field to Failure: Toward Extreme Solar Photovoltaic Module Durability
Dylan Colvin
Materials Science and Engineering PhD

Stephanie Eckert
Physics PhD, Planetary Sciences Track

“I Am A Human”: Reducing the Stigma Associated With the Correctional System
April Chase
Criminal Justice PhD

From Field to Failure: Toward Extreme Solar Photovoltaic Module Durability
Dylan Colvin
Materials Science and Engineering PhD

Stephanie Eckert
Physics PhD, Planetary Sciences Track

“I Am A Human”: Reducing the Stigma Associated With the Correctional System
April Chase
Criminal Justice PhD
Investigating the Spatial Relationship Between Sense of Place and Community-Based Organizations: Do Community-Based Organizations Influence Volunteering in the Indian River Lagoon, Florida?
Erica Edmonston
Sociology, Applied MA

Identity Development Among Disadvantaged Students
Emalee Kerr
Clinical Psychology MA, Research Thesis Track

Forensic Implications for Diagenetic Alteration of the Stable Isotopic Composition of Pig Ribs Following Exposure to Aqueous Conditions
Erin Martin
Anthropology MA

The Construction and Validation of a New Measure of Collective Effervescence
Christopher Nelson
Clinical Psychology MA, Applied Pre-Licensure Non-Thesis Track

Pandemic Related Identity Distress In College Students With Health Conditions
Bailey Wagaman
Clinical Psychology MA, Research Thesis Track

Couples with Infertility: The Influence of Quality of Life, Relationship Satisfaction, Resilience, Depression and Shame
Niko Wilson
Education PhD, Counselor Education Track

Undergraduate Presentations
The Effects of Evangelical Religion on Latin America: A Case Study on Brazil and Venezuela
Isabella Castro
Mentor: Dr. Bruce Wilson, Dr. Barbara Kinsey, School of Politics, Security, and International Affairs

“To Love or To Loathe”: The Impact of Childhood Bullying on The Quality of Adult Romantic Relationships
Richelle Cruz Quetell
Mentor: Dr. Grace White, Dr. Karen Mottarella, Psychology

Training Resilience in Aviation Systems: A Literature Review
Yazmin Diaz
Mentor: Dr. Peter Hancock, Dr. Jessica Cruijt, Psychology

News on Social Media and Attitudes among Consumers
Hang Duong
Mentor: Dr. Chrysalis Wright, Psychology

Capacity and Change in Climate Migrant-Receiving Communities in Central Florida
Maria Grisales, Veronica Arroyo, Sophia Chapelaine, Katina Negron
Mentor: Dr. Fernando Rivera, Sociology

Effects of Death Anxiety on Learning Performance
Umaima Haseeb
Mentor: Dr. Corey Bohil, Psychology

Floxed: Case Studies in the Lived Experiences of Individuals with Fluoroquinolone Poisoning
Luciana Jones
Mentor: Dr. Janan Smither, Dr. Daniel McConnell, Psychology

Fake News and Women: Fake and Real Media’s Impact on Sexism in Consumer Attitudes
Alexandra Oropallo
Mentor: Dr. Chrysalis Wright, Dr. Jason Chesnut, Psychology

Hemispheric Positionality: Body, Race, and Disposition
Micah Parker
Mentor: Dr. Nessette Falu, Anthropology, Dr. Paul Joseph López Oro, Smith College

The Effect of Relaxation on Employee Well-Being After Experiencing Job Stressors
Zoe Politis, Angela Le, James Lai
Mentor: Dr. Mindy Shoss, Psychology

Fake News: The Impact of Misinformation on Prejudice
Stephania Restrepo
Mentor: Dr. Chrysalis Wright, Psychology

Compounding Harm: Climate Justice, Hurricane Harvey, and Urban Planning in Houston
Sarah Royer
Mentor: Dr. Peter Jacques, School of Politics, Security, and International Affairs
**Undergraduate Presentations**

Investigating the Effects of Alternative Assignments on Student Attitudes in a Remote Teaching Environment
Cameron Bechard  
Mentor: Dr. Nicole Lapeyrouse, Chemistry

Exploring the Variation in COVID-19 Response Strategies in Community Corrections Agencies Across the United States
Nicole Niego, Priscilla Louis  
Mentor: Dr. Jill Viglione, Criminal Justice

An Exploration of the PedsAcademy Internship’s Influence on Aspiring Educators’ Preparation to Teach Children with Chronic Illnesses
Karla Sanabria  
Mentor: Dr. Michelle Kelley, Dr. Rebeca Grysko, School of Teacher Education, Dr. Haiyan Bai, Learning Sciences and Educational Research

**Engineering, Computer Science, Modeling and Simulation**

Undergraduate Presentations

A Comparative Study on Reliability of Heart Rate, Blood Oxygen Saturation, and Respiration Rate using Photoplethysmography at Lower and Upper limbs  
Sonia Alvarez, Rachael Sak, Carlos Acosta  
Mentor: Dr. Joon-Hyuk Park, Electrical and Computer Engineering

Development Of A Computationally Inexpensive Method Of Simulating Primary Droplet Breakup
Brendon Cavinoló  
Mentor: Dr. Michael Kinzel, Dr. Andrew Dickerson, Mechanical and Aerospace Engineering

Elucidation of the Role of an Anti-Epileptic Drug on Astrocyte Mechanics
Priyanka Chandrashekhar  
Mentor: Dr. Robert Steward, Mechanical and Aerospace Engineering

Effects of CMAS Infiltration on Thermal Barrier Coatings Analyzed by Confocal Raman Spectroscopy and Synchrotron High-Energy X-Rays
Vanessa D’Esposito  
Mentor: Dr. Seetha Raghavan, Mechanical and Aerospace Engineering

Developing a 3D Printing Method to Print Stress Sensing Sensors for Structural Health Monitoring
Perla Latorre-Suarez, Rohan Madathil, Vanessa D’Esposito, Nya Segura-Watson, Felix Morales  
Mentor: Dr. Seetha Raghavan, Mechanical and Aerospace Engineering

Cameron Lucas  
Mentor: Dr. Yongho Sohn, Materials Science and Engineering

Pitch Representations Emerge in Artificial Neural Networks Optimized for Everyday Auditory Tasks
Bryan Medina  
Mentor: Dr. Josh McDermott, Massachusetts Institute of Technology

How Adolescents in the Child Welfare System Seek Support Online
Taylor Moraguez  
Mentor: Dr. Pamela Wisniewski, Computer Science

IoT-Enabled Smart Mobility Devices for Aging and Rehabilitation
Nafisa Mostofa  
Mentor: Dr. Damla Turgut, Computer Science

Multi-Modal Sensory Feedback for Enhanced Rowing Motor Learning
Magdalena Pasternak, Megan Contte  
Mentor: Dr. Joon-Hyuk Park, Mechanical and Aerospace Engineering

Left Ventricular Strains During Late Filling in a Preclinical Model
Saar Peles, Sarah Villamil  
Mentor: Dr. Luigi Perotti, Mechanical and Aerospace Engineering

Ambient-Assisted Living Framework for Generalized Anxiety Disorder Staging and Real-Time Monitoring
Geela Margo Ramos  
Mentor: Dr. Joon-Hyuk Park, Mechanical and Aerospace Engineering, Dr. Daniel Paulson, Psychology

Brynn Reph  
Mentor: Dr. Yongho Sohn, Materials Science and Engineering

Using Agarose to Deliver miRNA 146-a Conjugated Cerium Oxide Nanoparticles
Architha Venkatesan  
Mentor: Dr. Elayaraja Kolanthai, Materials Science and Engineering

Perspectives on Young Children’s Autonomy and Privacy on Social Media
Aneka Williams, Madeline Alverez  
Mentor: Dr. Mary Jean Amon, School of Modeling, Simulation and Training

**Fine Arts and Humanities**

Graduate Presentations

An Examination of the Visual and Textual Rhetoric Uses in the #Block_famous_campaign in Saudi Arabia
Ream Al-ghamdi  
Texts and Technology PhD

Nursing Narratives: Mapping Nurses’ Convalescent Homes and Rest Clubs from the First World War
Kayla Campana  
History MA

The Damage We Do: A 3D Exhibit on Looted Artifacts
Trevor Colaneri  
History MA, Public History Track

The Study of Free Will in the East and the West
Nicholas Colecio  
English MA, Literary, Cultural, and Textual Studies Track

How Twitter Exposes Daily Whiteness Practices in Mexico and Argentina
Erika Heredia  
Texts and Technology PhD
The Queer Ringmaster: Chick Austin and the Circus Museum
David Matteson
Texts and Technology PhD

Music Concrète, Italian Futurism, and Visual Music Animation
Daniel McCabe
Emerging Media MFA, Animation and Visual Effects Track

Between Socialism and Empire: The Social Democratic Party of Germany and the Herero Wars
Taylor Rayfield
History MA

Graduate Presentations

Florida Court Staff Perceptions Regarding Barriers to Medications for Opioid Use Disorder
Fatema Ahmed
Public Affairs PhD, Health Services Management and Research Track

Force/Load-Velocity Profiling Methods and Army Combat Fitness Test Performance in ROTC Cadets
David Boffey
Exercise Physiology, Education PhD

An Ethical Analysis on the View of Cadavers in Medical Education Through the Lens of Flexner II
Alexandra Bunea
Biomedical Sciences MS, Integrated Medical Sciences Track

Early Onset of Fatigue Thresholds as an indication of Impaired Aerobic Capacity of the Arm Muscles
Nicolas Clark
Education PhD

The Efficacy and Potential Benefits of Moderate Intensity Exercise for Community-Dwelling Older Adults with Dementia or Mild Cognitive Impairment: A Systematic Review
Alec Davis
Physical Therapy DPT

Optimizing CD4 T Cell Responses to Influenza Virus through Transcriptional Programming
Caroline Finn
Biomedical Sciences PhD

Influenza A Virus-Specific CD4 T Cell Subset Polarization Is Retained Following Treatment With 17ß-Estradiol
Valeria Flores Malavet
Biomedical Sciences PhD

What Patient Population Utilizes Cash Based Physical Therapy Services?
Melinda Geisel
Physical Therapy DPT

Optimizing B-Mode Ultrasonography Research Methodology: Does Image Depth Influence Echo Intensity?
Ryan Girts
Exercise Physiology, Education PhD

Carbohydrate-Protein Co-ingestion Effectively Promotes Recovery Between Bouts of Exhaustive Intermittent Exercise
Erica Goldstein
Exercise Physiology, Education PhD

Reliability and Validity of TMG, a Systematic Review
Daniel Hampton
Physical Therapy DPT

Test-Retest Reliability of Corticospinal Excitability and Inhibition of an Agonist-Antagonist Pair
Kylie Harmon
Exercise Physiology, Education PhD

3D Printing an Osteochondral Implant
Kari Martyniak
Biomedical Sciences PhD

Examining the Effects of Amplitude-Based Training in Individuals with Parkinson’s Plus Syndromes and Secondary Parkinsonism: A Case Series
Emily Morrell
Physical Therapy DPT

Musculoskeletal Pain Interference Due to Remote Working in Response to COVID-19
Mollie Przybocki
Athletic Training MAT

Effects of Interrupted Routine Due to COVID-19 on Circadian Chronotype and Leisure Time Physical Activity
Justine Renziehausen
Exercise Physiology, Education PhD

A Retrospective Data Analysis on Mechanism of Injury, Method of Entry, and Amount of Money Spent on Cash Based Physical Therapy
Justin Richmond
Physical Therapy DPT

Challenges and Barriers on the Implementation of Rehabilitation Exercises for Scapular Dyskinesis via Telemedicine: A Clinician’s Perspective
Zamaris Rivera
Athletic Training MAT

Local Versus Systemic Hypoxia: Differences in Neuromuscular Function During Exercise
Paola Rivera
Exercise Physiology, Education PhD

Exploring the Knowledge, Perceptions and Attitudes of Typical Middle and High School Students Towards Individuals With Disabilities
Nicole Russell
Physical Therapy DPT

Spermidine Rescued PTPN2/22 Function in CRISPR-Cas9-edited T-cells with PTPN2/22 SNPs Linked to Crohn’s Disease and Rheumatoid Arthritis
Ameera Shaw
Biotechnology MS

Examining the Reliability of the Upper Body 3-Minute Critical Power Test
Tristan Starling-Smith
Exercise Physiology, Education PhD

Medications for Opioid Use Disorder and Naloxone in News Media from 2005-2019
Rachel Totaram
Public Affairs PhD, Health Services Management and Research Track

Retention of Athletic Trainers in the Secondary School Setting
Emily Tran
Athletic Training MAT

Stress and Coping Among Pregnant Black Women during the COVID-19 Pandemic
Jenna Wheeler
Nursing PhD, BSN to PhD Track
**LIFE SCIENCES**

### Undergraduate Presentations

**Can Lifespan be Extended with a Drug? Analysis of a Novel Compound that Mimics Dietary Methionine Restriction**  
Natali Barakat  
Mentor: Dr. Laurence von Kalm, Biology

**Targeting Arginine Biosynthesis to Control and Reverse Small Cell Transformation in Lung Cancer**  
Robert Burns  
Mentor: Dr. Wencai Zhang, Burnett School of Biomedical Sciences

**Development of Transgenic Cordyceps bassiana for the Verification of Putative Behavioral-Manipulation Genes in Ophiocordyceps Camponenti-floridan!**  
Devin Burris  
Mentor: Dr. Charissa de Bekker, Biology

**The Effects of Roundup on Disease Transferability Probability of Aedes aegypti**  
Michele Crowhurst  
Mentor: Dr. Kenneth Fedorka, Biology

**Pollinator Abundance and Diversity in Natural Lands Versus Urban Landscapes**  
Kaili Gruwell, Alannah Callaghan, Lauren Betza, Ian Schwartzberg, Lauren Hankes  
Mentor: Ms. Jennifer Elliott, Biology

**Single-Cell Metabolic Profiling of Immune Response During Severe COVID-19 Reveals Multiple Potential Therapeutic Targets**  
Sanjeev Gurshaney  
Mentor: Dr. Hung Nguyen, Burnett School of Biomedical Sciences

**Designing A Restoration Plan for the UCF Arboretum Boardwalk To Enhance Biological Functionality and Community Engagement With Nature**  
Alexandra Holiday, Veronica Renzette, Juliana Ser, Emma Roehrig, Lily Jaczko  
Mentor: Ms. Jennifer Elliott, Biology

**Investigating Microplastic Abundance and Hotspots in the Guana River**  
McKenna Keplinger  
Mentor: Dr. Linda Walters, Biology

**LncRNA PAINT Promotes Prostate Cancer Progression Through Modulation of Genes Involved In Epithelial-mesenchymal Transition and Apoptosis**  
Ayman Khatib  
Mentor: Dr. Ratna Chakrabarti, Burnett School of Biomedical Sciences

**Luminescence Stabilization in Gaussia Luciferase Assay**  
Alesia Lokshina  
Mentor: Dr. Thomas Kean, Burnett School of Biomedical Sciences

**Development of a SOX9 Reporter Cell for High-Throughput Chondrogenic Assessment**  
Alyssa Mickle  
Mentor: Dr. Thomas Kean, Burnett School of Biomedical Sciences

**Understanding the Genetic Control of Secondary Metabolism Within Sunflowers**  
Emir Saffar  
Mentor: Dr. Chase Mason, Biology

**Carbon Sequestration of Longleaf Pines Across Three Ecosystems**  
Danielle Vincent, Chere’ Erickson, Thomas Jordan Evans, James Ray Bardo Jr., Alec Santiago  
Mentor: Ms. Jennifer Elliott, Biology

**The Role of Acculturative Stress on Immigrant Mental Health**  
Daaman Lall  
Mentor: Dr. Shahrman Ghiasinejad, Psychology

**Penny and Its People: An Archaeological and Holistic Approach to Settlements in Cape Canaveral, Florida**  
Lauren Lehman, Amara Williams, Jennifer Moreno, Lydia Kiernicki  
Mentor: Dr. Amanda Groff, Dr. Sarah Stacy, Barber, Dr. Neil Duncan, Anthropology

**The Effects of Cellphone Use on Working Memory**  
Amanda Gonzalez, Argelis Milian Robles  
Mentor: Dr. Marisol Parra-Tatge, Psychology

**Predicting Objective Career Success: An Examination of Leadership and Proactive Personality**  
Isabella Guerrero  
Mentor: Dr. Victoria Pace, Dr. Marisol Parra-Tatge, Psychology

**Individual Variation in Causal Learning**  
Laila Johnston  
Mentor: Dr. David Danks, Carnegie Mellon University

**Penny and Its People: An Archaeological and Holistic Approach to Settlements in Cape Canaveral, Florida**  
Lauren Lehman, Amara Williams, Jennifer Moreno, Lydia Kiernicki  
Mentor: Dr. Amanda Groff, Dr. Sarah Stacy, Barber, Dr. Neil Duncan, Anthropology

**Coping Mechanisms in Graduate School Discipline Specific Comparison**  
Sandra Montenegro  
Mentor: Dr. Steve Jex, Dr. Kristin Horan, Psychology

**Examining the Relationship Between Mood Disorders and Risk Perception in Determining COVID-19 Preventative Behaviors**  
Krupali Patel  
Mentor: Dr. Nichole Lighthall, Psychology

**Elaboration in Narratives of Covid-19: Relations to Mental Health**  
Julliana Stalbaum  
Mentor: Dr. Widaad Zaman, Psychology

**Everything is Under Control: The Types of Autonomy and Their Effect on Job and Life Satisfaction**  
Eram Syed, Magali Scotto-Lavina, Nathaly Rayo, Malek Kalai  
Mentor: Dr. Mindy Shoss, Psychology
EDUCATION

Undergraduate Presentations

Analysis of Spatial Hierarchy of Real and Ideal Chemistry Learning Spaces
Bethany Arcaya, Brianna Ewing
Mentor: Dr. Julie Donnelly, Dr. Nicole Lapeyrrouse, Chemistry

Designing an ELA Thematic Unit with Students with ASD in Mind: The Synthesis of Social-Emotional Learning and Writing Strategy Instruction
Maya Govea Calderon
Mentor: Dr. Norine Blanch, Dr. Mary Little, School of Teacher Education

The Relationship Between Campus Involvement and Civic Engagement
Sheina Koolik
Mentor: Dr. Gregg Buckingham, Dr. Daniel Seigler, School of Public Administration

Internalized Argot Roles on Perception of Fear and Manipulation in Jail
Keily Mena
Mentor: Dr. Frances Abderhalden, California State University, Los Angeles

Racial Biases in Early Childhood Classrooms Among Pre-Service and In-Service Teachers
Tiffany Tan
Mentor: Dr. Marisa Macy, Dr. Judith Levin, School of Teacher Education

FINE ARTS AND HUMANITIES

Undergraduate Presentations

Understanding Africa in the 21st Century: The Past, Present, and the Prospect for the Future
Sengo Pauline Kabambi
Mentor: Dr. Obi Nwakanma, English

Tales of Sunshine: Short Film Series Documenting Diverse Florida Conservationists and Their Lives During COVID-19
Vincent Marcucci, Christopher Shick
Mentor: Ms. Lisa Peterson, Nicholson School of Communication and Media

HEALTH SCIENCES

Undergraduate Presentations

A Literature Review on The Potential Impact of COVID-19 on The Future of Human Subject Research
Sarah Akbarpour
Mentor: Dr. L. Colby Mangum, Health Sciences

Contralateral Repeated Bout Effect of the Elbow Flexors in Untrained Males
Ariel Alberto
Mentor: Dr. Nicholas Coker, Springfield College

Talk and Play with Me: Facilitated Playgroups to Promote Communication Skills
Kasey Allen
Mentor: Dr. Jacqueline Towson, School of Communication Sciences and Disorders

The Relationship Between Rapid Weight Loss and Physical Performance in Combat Sports
Sean Cavey
Mentor: Dr. Anna Valdes, Dr. Thomas Fisher, School of Kinesiology and Physical Therapy

Using Physical Exercise Interventions to Reduce Depression and Anxiety in People with Lung Cancer
Jordan Dubocq
Mentor: Dr. Victoria Loerzel, Dr. Jean Davis, College of Nursing

Home-Based Interventions to Lower Neonatal Mortality Rates in Developing Countries
Josee Etienne
Mentor: Prof. Donna Breit, Dr. Dawn Turnage, Dr. Desiree Diaz, College of Nursing

The Effects of Maternal Alcohol Consumption on Risk of TDS Development in Their Sons
Alexa Gallelli, Janet Guelmes
Mentor: Dr. Michael Rovito, Health Sciences

The Effects of Martial Arts Training on Social Interaction in Children with Autism Spectrum Disorder, ASD
Serenity Jackson
Mentor: Dr. Jeanette Garcia, School of Kinesiology and Physical Therapy

The Effects of Martial Arts Training on Social Interaction in Children with Autism Spectrum Disorder, ASD
Serenity Jackson
Mentor: Dr. Jeanette Garcia, School of Kinesiology and Physical Therapy

Readability of Cochlear Implant Brochures: A Potential Factor in Parent Choice
Jennifer La Scala
Mentor: Dr. Janel L. Cosby, Dr. Linda I. Rosa-Lugo, Dr. Richard I. Zraick, School of Communication Sciences and Disorders

Evaluating the Negative Influences of COVID-19 on the Aphasic Community and Related Healthcare Providers
Maireni Nunez
Mentor: Dr. Antony Pak-Hin Kong, School of Communication Sciences and Disorders

The Fighting Journey of the Premature Baby: A Systemic Review
Dana Patel
Mentor: Dr. Katia Ferdowski, Health Sciences, Dr. Jacqueline Towson, School of Communication Sciences and Disorders

Food Insecurity After Hurricane Maria: Perceptions and Psychological Effects Among Puerto Ricans
Valeria Sostre
Mentor: Dr. Humberto Lopez Castillo, Health Sciences

LIFE SCIENCES

Graduate Presentations

Surface Flow Constructed Wetland Organic Matter Reduction Via Periodic Water Level Draw-Down
Paul Boudreau
Biology MS
Counteractive Effects of Electrostatics and Macromolecular Crowding on Actin Bundle Mechanics and Secondary Structure
Nicholas Castaneda
Biomedical Sciences PhD

E-cigarette Vape Enhances S. Aureus Oral Colonization and the Epithelial Immune Response
Alma Catala Valentin
Biomedical Sciences PhD

Crowder Size Influences Actin Assembly Dynamics and Kinetics
Bryan Demosthene
Nanotechnology MS

Inhibition of Polyamine Transport in Human Pancreatic Cancer Cells by an Indole Compound GW5074
Aiste Dobrovolskaite
Biomedical Sciences PhD

Anti-MAP Triple Therapy Supports Immunomodulatory Therapeutic Response in Crohn’s Disease
Erij Elkamel
Biotechnology MS

DosRS Mediated Adaptation of Mycobacterium abscessus to Hypoxic and Nitrosative Stress
Breven Gaines
Biomedical Sciences PhD

Monitoring Competition Jump Load in Division I Female Collegiate Volleyball Athletes
Chad Herring
Exercise Physiology, Education PhD

The Recovery of Single Source DNA Profiles from Contributors to Complex Mixtures by Direct Single Cell Subsampling, DSCS
Kaitlin Huffman
Chemistry PhD

Endocytosis of the CdtA Subunit from Haemophilus ducreyi Cytotoxic Distending Toxin
George Huhn
Biomedical Sciences PhD

Small Organic Osmolytes Accelerate Actin Filament Assembly
Pavlo Kravchuk
Nanotechnology MS, Non-Thesis Track

Using Codon Frequencies to Classify Gene Sequences to Biochemical Pathways Using Machine-Learning
Sambadi Majumder
Integrative and Conservation Biology PhD

Methods to Quantify Mineral Associated Organic Matter in Subtropical Wetlands
Anthony Mirabito
Biology MS

Targeting the Succinate Dehydrogenase Enzyme In Non-Small Cell Lung Cancers
Nicholas Skiados
Biomedical Sciences MS

Defining MprF Mediated Lipid Modifications in Actinobacteria and Examining Their Role in Antimicrobial Resistance
Danielle Worrell
Biomedical Sciences PhD

Engineered Iridium Nanoparticles for Bio-Sensing and Disease Biomarker Detection
Tamar Yishay
Nanotechnology MS

Using Codon Frequencies to Classify Gene Sequences to Biochemical Pathways Using Machine-Learning
Sambadi Majumder
Integrative and Conservation Biology PhD

Methods to Quantify Mineral Associated Organic Matter in Subtropical Wetlands
Anthony Mirabito
Biology MS

Targeting the Succinate Dehydrogenase Enzyme In Non-Small Cell Lung Cancers
Nicholas Skiados
Biomedical Sciences MS

Defining MprF Mediated Lipid Modifications in Actinobacteria and Examining Their Role in Antimicrobial Resistance
Danielle Worrell
Biomedical Sciences PhD

Engineered Iridium Nanoparticles for Bio-Sensing and Disease Biomarker Detection
Tamar Yishay
Nanotechnology MS

Clostridioides difficile Motility in Defined Culture Media and Its Response to Nutrients
Mary Ishak
Mentor: Dr. William Self, Burnett School of Biomedical Sciences

Delineating the Five Subspecies of Native Beach Sunflower, H. debilis
Nathan Leemis
Mentor: Dr. Chase Mason, Biology

Conservation in Palm Beach County: Using GIS Mapping to Improve Shoreline Management Efforts
Cristina Lingvay
Mentor: Dr. Melinda Donnelly, Biology

Mapping Stress Hormone Synthesis: Pnmt Localization and Expression in the Cerebellum
Meeti Mehta
Mentor: Dr. Steven Ebert, Burnett School of Biomedical Sciences

The Two N-terminal Thioredoxin Domains of Protein Disulfide Isomerase are Sufficient for Cholera Toxin Disassembly
Antonio Mele
Mentor: Dr. Ken Teter, Burnett School of Biomedical Sciences

Effects of Cosmic Radiation Exposure to Bone Regeneration Mechanisms and P53 Activation
Idael Ortiz
Mentor: Dr. Melanie Coathup, Dr. Raj Sawh-Martinez, Burnett School of Biomedical Sciences

Multifactorial Media Optimization via Design of Experiment Strategy Results in Increased Type 2 Collagen Expression in Cartilage Tissue
Javier Velez Toro
Mentor: Dr. Thomas Kean, Burnett School of Biomedical Sciences
MATHEMATICS, OPTICS, AND PHYSICAL SCIENCES

Undergraduate Presentations

Analysis of SONORA Substellar Atmosphere Models and Spectra Dataset Using Machine Learning
Alex Cingoranelli
Mentor: Dr. Joseph Harrington, Physics

Model Creation and Analysis for COVID-19
Matthew Crespo
Mentor: Dr. Zhisheng Shuai, Mathematics

Developing a DNA Machine for Biomarker-Activated Cleavage of a Housekeeping Gene mRNA
Jocelyn Evins
Mentor: Dr. Dmitry Kolpashchikov, Chemistry

On the Molecular Basis of Alzheimer's Disease
Bryan Garcia
Mentor: Dr. Suren A. Tatulian, Physics

Modeling and Analysis of COVID-19 and Dynamical Systems in Biology and Physics
Vladimir Grbic
Mentor: Dr. Costas Efthimiou, Physics

Asymptotics of Greedy Energy Sequences
Ryan McCleary
Mentor: Dr. Abey Lopez-Garcia, Mathematics

Application of Edge Detection Techniques to Angle Resolved Photoemission Spectroscopy Data
Luis Persaud
Mentor: Dr. Madhab Neupane, Physics

Electrostatics and Riemann Surfaces
Spencer Tamagni
Mentor: Dr. Costas Efthimiou, Physics

Simulating Systematic Errors and Exoplanet Transits for the James Webb Space Telescope
David Wright
Mentor: Dr. Joseph Harrington, Physics

SOCIAL SCIENCES

Graduate Presentations

Cybersecurity: The Problematic of Constructing an Interdisciplinary Methodology to Theorize and Analyze the Emerging Discipline in the Digital Domain
Hajer Albalawi
Texts and Technology PhD

Macro-Level Factors Impacting Colorectal Cancer Screening Behavior Among Church-Going Chinese Immigrants: A Convergent Mixed-Method Study
Xian Cao
Public Affairs PhD, Health Services Management and Research Track

Leveraging Digital Platforms to Capture Multimodal Data on Diagnostic Reasoning
Elizabeth Cloude
Education PhD, Learning Sciences Track

Surrounded By The Dead: A Spatial Analysis Of Kuelap’s Mortuary Practices, Peru
Hannah Haynes
Anthropology MA

Bayesian Nearest Neighbor Matrix-Normal Gaussian Process Model
Qing He
Big Data Analytics PhD

The Direct and Indirect Effects of Strategic Civilian Displacement on Territorial Control in Conventional Civil War
Jennifer Hudson
Security Studies PhD

Climate, Violent Conflict and Women's Economic Empowerment in the Nigerian North East
Jennifer Joel
Security Studies PhD

How Incarceration History Affects Opioid Use
Laura Lightfoot
Sociology, Applied MA

Juvenile Probation and COVID-19: Examining the Challenges and Implementation of New Strategies
Ashley Lockwood
Criminal Justice PhD

Companionship Matters: User-Desired Qualities in Human-Robot Social Companionship
Fernando Montalvo
Human Factors and Cognitive Psychology PhD

Contextualizing Self-Abandonment Through Identity in Romantic, Social, and Family Relationships
Rawad Nahhas
Communication MA

Read All About It: The D-Day Inspired Shift in British World War II Journalism
Jessica Oldham
History MA

A Body In Focus: Examining Ancient Maya Life and Death Through Osteobiography
Horvey Palacios
Anthropology MA

The Internal Heterogeneity of Terrorist Organizations
Erika Ricci
Security Studies PhD

Towards a Definition of Transactional Sex in the Scientific Literature a Systematic Narrative Literature Review
Daniel Serrano
Kinesiology MS

From Waves to Huacas Stable Isotope Analysis of Ancient Social Elite Diet at Túcume Peru
Dylan Smith
Anthropology MA

Hispanic Serving Institutions: Exploring the Depth of a Designation
Ashley Stone
Sociology PhD

Meeting in the Middle: The Role of Cultural Diversity in Spaceflight
Krisztina Szabo
Industrial and Organizational Psychology PhD

Systematic & Theoretical Analysis of Research: Habitation-Moon Xeona Villegas
Nondegree or Transient

Florida Campaign Money: Are Constituents being Represented?
Craig Wilding
Political Science MA

Averting School Mass Shootings
Ashley Winch
Clinical Psychology PhD
Undergraduate Presentations

An Investigation Into Provider Communication at UCF and the Impact of Health Literacy on Teach-Back Outcomes
Shreya Atmakuri
Mentor: Dr. Ann Miller, Nicholson School of Communication and Media, Dr. Richard Zraick, School of Communication Sciences and Disorders

The Role of Conscientiousness on the Relationship between Information Processing, Job Satisfaction, and Cognitive Engagement
Ignacio Azcarate, Jeff Emile
Mentor: Dr. Mindy Shoss, Psychology

The Role of Work-Family Conflict on the Relationship Between Job Autonomy and Organizational Commitment
Giselle Chaviano, Rishika Sharma
Mentor: Dr. Mindy Shoss, Psychology

The Feasibility of Recruiting the Elderly in Minority Groups for Research During a Global Pandemic
Oscar Garcia
Mentor: Dr. Ladda Thiamwong, College of Nursing

Awareness of Suicide Risk Factors and Warning Signs Differ Based on Demographics
Fatima Hussain
Mentor: Dr. Kimberley Gryglewicz, School of Social Work

A Study Exploring the Factors that Influence Abortion Related Opinions in the US
Calissa Jones
Mentor: Dr. Kenicia Wright, Dr. Anca Turcu, School of Politics, Security, and International Affairs

Aftermath: The Impact of an OB/GYN Appointment on the Mental Health of Queer Assigned-Female-At-Birth Sexual Assault Survivors with AFAB Perpetrators
Madeline Judy
Mentor: Dr. Jason Chesnut, Psychology

Working Memory and Executive Functioning in Older Adult Cannabis Users
Madison Maynard
Mentor: Dr. Daniel Paulson, Dr. Michael Dunn, Psychology

Craving for Attention: Examining Mood and Attention Bias In The Moment as Predictors of Alcohol Craving
Katie Moskal
Mentor: Dr. Robert Dvorak, Psychology

The Effects of Health Crises on Democracy in sub-Saharan Africa
Abigail Reynolds
Mentor: Dr. Jonathan Powell, School of Politics, Security, and International Affairs

Gender Ideology, Gender Consciousness, and Identity Among Conservative Baptist Women: An Intersectional Perspective
Marina Rivera Ramos
Mentor: Dr. Michael Armato, Sociology

Narrative Elaboration of Adverse Experiences and Mental Health
Serena Somberg
Mentor: Dr. Widaad Zaman, Psychology
FINE ARTS AND HUMANITIES

Undergraduate Presentations

Cultural Norms of Russian and American Women in the 21st Century
Emma Bancroft
Mentor: Dr. Alla Kourova, Modern Languages and Literatures

Look Out, Here Comes Fraud!: A Multimodal Analysis of Retail Scammers
DiGray Olcima
Mentor: Melissa Pompos Mansfield, Writing and Rhetoric

Systemic Inequalities for Afro-Brazilians
Teya De Oliveira
Mentor: Dr. Sandra Sousa, Modern Languages and Literatures

How Some Registered Student Organizations, RSOs Have Organized During the COVID-19 Pandemic
Kurt Ramos
Mentor: Dr. Kevin Roozen, Writing and Rhetoric, Dr. Peter Telep, English

HEALTH SCIENCES

Undergraduate Presentations

Perceptions and Health Effects of Electronic Cigarettes among College Students
Safia Centner
Mentor: Dr. Suha Saleh, Health Sciences

Complementary and Alternative Treatments for Individuals with Epilepsy
April Detrick
Mentor: Dr. Leslee D’Amato-Kubiet, Dr. Angelene Bushy, College of Nursing

Evaluating the Nutritional Adequacy of Peruvian-American Children
Delainey Dietz
Mentor: Dr. Desiree Diaz, College of Nursing

Influence of Body Composition on Army Combat Fitness Test Performance
Joseph DiPrima, Amanda Straus, Carson McAbbee, Bianka Monis, Hannah Bauta
Mentor: Dr. David Fukuda, School of Kinesiology and Physical Therapy

Exploring the Relationship between Disordered Eating, Internalized Homophobia, and Self-Esteem in Men Who have Sex with Men
Gabriel Garces
Mentor: Dr. Humberto López Castillo, Health Sciences

The Psychological Benefits of a Remote Physical Activity Intervention in Young Adults with Autism Spectrum Disorder
Madsyn Pelchat
Mentor: Dr. Jeanette Garcia, Health Sciences

Association Between Plasma Genistein and Health-related Quality of Life In Breast Cancer Survivors
Tran Pham
Mentor: Dr. Eunkyung Lee, Dr. Mohammadali Amirhosravi, Health Sciences

Readability and Quality of Internet Information on Dysphagia
Sarah Steiner
Mentor: Dr. Richard Zraick, Dr. Bonnie Slavych, School of Communication Sciences and Disorders

LIFE SCIENCES

Undergraduate Presentations

Dietary Variation in Gut Microbiome among Vegans and Omnivores
Rachel Adamson
Mentor: Dr. Taj Azarian, Burnett School of Biomedical Sciences, Dr. Swadeshmukul Santra, Chemistry

Sink or Swim: Comparing Emergent vs. Free-Floating Aquatic Plants and Their Ability to Remove Nutrients from Stormwater
Luciana Banquero, Lyndsey Chute, Maximillian Meader, May Lam
Mentor: Ms. Jennifer Elliott, Amanda Lindsay, Biology

Mice Expressing a Human CMT Mutation Have Defects in Cerebellar Development
Isabel Carvalho
Mentor: Dr. Stephen King, Burnett School of Biomedical Sciences

Genetic Diversity in Coastal and Inland Populations of Rana Sphenoccephala Facing Sea-Level Rise
Rachel Gutner
Mentor: Dr. Anna Savage, Biology

Using Genetics in a Model Organism to Understand Polyamine Transport
Victoria Millington
Mentor: Dr. Laurence Von Kalm, Biology

Spatial Analysis of Sea Turtle Nest Predation by Coyotes and Raccoons
Jennifer Rote
Mentor: Dr. Erin Seney, Dr. Kristy Lewis, Dr. Eric Goolsby, Biology
Graduate Presentations

Segmental Aggregation and Structural Propensities of Amyloid β Peptide
Faisal Abedin
Physics PhD

Predicting Final Size of a Cholera Outbreak on a River Network
Christopher Botelho
Mathematics PhD

Characterization and Catalytic Study of Valorized Downstream ZrS2 CVD Waste
Taylor Currie
Chemistry PhD

Observation of Multi-Fermionic States in Ti2Te2P
Gyanendra Dhakal
Physics PhD

Traffic Flow Model and Its Implementation to Realistic Vehicle Interactions
Oluwaseun Farotimi
Mathematics PhD

Raman Microspectroscopy of a Silicon Solar Cell
Jeya Prakash Ganesan
Materials Science and Engineering PhD

Computation of Effective Properties of Multi-Laminated Composites
David Guinovart Sanjuan
Mathematics PhD

Effect of Dilute Magnetism in a Topological Insulator
Firoza Kabir
Physics PhD

Developing an Efficient Co3O4Ni Catalyst for the Oxygen Evolution Reaction
Zackary Parsons
Physics PhD

A Mathematical Model For COVID-19
Hanna Reed
Mathematics PhD

Temperature-dependent Electronic Structure in a Higher-Order Topological Insulator Candidate EuIn2As2
Sabin Regmi
Physics PhD

Decoding DNA Barcodes using Nanopore Translocation
Swarnadeep Seth
Physics PhD

Introduction of Local Strain in Hexagonal Boron Nitride with Light-Assisted Atomic Force Microscopy
Fernand Torres-Davila
Physics PhD

Spectral Broadening of One- and Two-Color Pulses from a Femtosecond Yb Laser Amplifier
Chau Truong
Physics PhD

Mathematical Measurements for the Spread and Control of Infectious Diseases
Poroshat Yazdanbakhshghahyazi
Mathematics PhD

The Adsorption of Oxygen on Bimetallic Pd3M2 Clusters, M= Ag, Au, Co, Cu, Mn, Ni, Pt and Ru with and without Alumina Support by Density Functional Theory
Nusaiba Zaman
Physics PhD

Undergraduate Presentations

Experimental Investigation of Planetesimal Accretion
Yeniz Azconovieta
Mentor: Dr. Joshua Colwell, Physics

Design and Creation of a Miniaturized Gas Chromatograph for Field Research
Rishi Basdeo
Mentor: Dr. Michael Hampton, Chemistry

Predicted Chemical Synthesis through Genetic Algorithms and Neural Networking
Jonah Halili
Mentor: Dr. Richard Blair, Physics

Bimetallic Cluster Structure Optimization Search Aided by Machine Learning and Genetic Algorithm
Carson Kelly
Mentor: Dr. Abdelkader Kara, Physics

How Common Is It for Exogenous Material to be Found on Asteroids?
Daniela McCarty, Jennifer Nolau, Alicia Allen
Mentor: Dr. Humberto Campins, Physics

Precise Measurement of Pressure-Temperature Phase Diagrams of Responsive Polymers in Aqueous Solution.
Austin Schrader
Mentor: Dr. Alfons Schulte, Physics, Dr. Lorraine Leon, Materials Science and Engineering

Undergraduate Presentations

Capturing Diagnostic Reasoning Using Multimodal Data From Digital Platforms to Enhance Medical Education and Training
Nikki Anne Ballelos
Mentor: Dr. Roger Azevedo, Learning Sciences and Educational Research

The Girlhood Double-Standard: Girls’ Perceptions of Gendered Classroom Expectations
Juliet Cahow
Mentor: Dr. Anne Bubriski, Women’s and Gender Studies, Dr. Angela Vergara, Sociology

SOCIAL SCIENCES
The Politics of Kindness: Ideology, Empathy, and Entitlement
Fernando Elizarraras, Gabrielle Scott, Roberto Martinez-Espinosa
Mentor: Dr. Jason Chesnut, Psychology

Physical Activity Moderates the Relationship Between Apoe4 Status and Working Memory: The Health and Retirement Study
Dalia El-Shafie
Mentor: Dr. Daniel Paulson, Dr. Nichole Lighthall, Psychology

Examining Mental Health Symptoms Among English and Spanish-Speaking Populations
Tirzah Fernandes
Mentor: Dr. Kimberley Gryglewicz, School of Social Work

A Look Into Virtual Reality Depth Perception: Comparing the HTC Vive and Oculus Rift for Immersion and Workload
Jacey Koo
Mentor: Dr. Crystal Maraj, School of Modeling, Simulation and Training

Domestic Migrant Workers in Lebanon: Factors Influencing a Precarious Position
Jasmine Masri
Mentor: Dr. Güneş Murat Tezcür, Dr. Konstantin Ash, School of Politics, Security, and International Affairs

Using Gramsci’s Theory of Cultural Hegemony to Examine Obstructions to Energy Transition
Nathaniel Miller
Mentor: Dr. Peter Jacques, School of Politics, Security, and International Affairs

Experiences of Breastfeeding Support in Healthcare Settings Among African American Mothers
Hanna Nour
Mentor: Dr. Shannon K. Carter, Sociology

Informal Systems of Health Care: How Grassroots Organizations and Health Care Practitioners Perceive Farmworker Health
Andrea Ocasio Cruz
Mentor: Dr. Beatriz Reyes-Foster, Anthropology

Relating the Big Five Personality Factors and the Method of Dog Obtainment in Dog Owners
Julia Rifenberg
Mentor: Dr. Valerie Sims, Psychology

Understanding the Link Between Perception and Action: An Examination of Conflicting Theories
Faith Sauber
Mentor: Dr. Mary Jean Amon, Dr. Joseph T. Kider Jr., School of Modeling, Simulation and Training, Dr. Daniel S. Mcconnell, Psychology
Graduate Presentations

**Equity in Early Literacy Instruction**  
Monica Berns-Conner  
Education PhD, Exceptional Education Track

**Enhancing Middle School Science Instruction for Students with Disabilities Using The Principles of Universal Design for Learning and Technology**  
Jacob Brewer  
Education PhD, Exceptional Education Track

**Evaluation of an Online Module Enhanced with Universal Design for Learning for use in Special Education Teacher Preparation**  
Sacha Cartagena  
Education PhD, Exceptional Education Track

**Predicting Students’ Academic Performance with Machine Learning Techniques**  
Yuting Chen  
Education PhD, Methodology, Measurement and Analysis Track

**The Perceptions of Clinical Instructors: How Virtual Learning Impacts the Clinical Education Experience of Physical Therapy Students on Their First Clinical Education Experience**  
Ashleigh-Jo Darby  
Physical Therapy DPT

**The Effects of Distance Learning on Students from Lower Socioeconomic Statuses During State and National Emergencies**  
Miranda Eddy  
Applied Learning and Instruction MA

**Intersectionality As a Lens to Explore How Black Male College Students’ Science Identities and the Relevance of Their Science Learning Influence Their Decisions to Pursue Science Professions**  
Regina McCurdy  
Education PhD, Science Education Track

**An Examination of Secondary English Language Arts and Social Studies Teachers’ Perceptions and Implementation of Effective Literacy Instruction Practices in Their Content Area Classrooms: A Correlation Study**  
Melissa Mitchell  
Education PhD, Reading Education Track

**Understanding Hearing Loss Through Digital Media**  
Jesslyn Parrish  
Texts and Technology PhD

**Comparison of the NIH Toolbox-CB Assessment for Executive Function with a Novel Virtual Reality Executive Function Assessment**  
Christine Parsons  
Interdisciplinary Studies MS, Thesis Track

**Does Methodology Matter? A Corpus Study of Authorial Risks in TESOL Dissertations**  
Michelle Verbitskaya  
Teaching English to Speakers of Other Languages, TESOL MA

**Teacher Effectiveness in Underserved, Underfunded, and Under-Resourced Elementary Schools**  
Anais Placencia  
Mentor: Dr. Martha Lue Stewart, Dr. Joyce Nutta, Dr. Sherron Roberts, School of Teacher Education

**Are All Relationships The Same? A Comparison of Intimate Partner Victimization within Heterosexual and Same-Sex Couples**  
Nicole Rosenzvaig  
Mentor: Dr. Erica Fissel, Criminal Justice

**Undergraduate Presentations**

**Catalytic Performance of Porous Yb2O3 Sesquioxide**  
Alina Aftab  
Mentor: Dr. Nina Orlovskaya, Mechanical and Aerospace Engineering, Dr. Richard Blair, Physics

**High-Density Cobalt Single Site Catalyst on Ceria for Carbon Monoxide Oxidation and Carbon Dioxide Hydrogenation**  
Jennifer Akinpelu  
Mentor: Dr. Fudong Liu, Civil, Environmental, and Construction Engineering

**Ignition Studies of LOx Methane Rocket Propulsion System**  
Marley Albright  
Mentor: Dr. Subith Vasu, Mechanical and Aerospace Engineering

**Dynamic Automaton-Guided Reward Shaping for Monte Carlo Tree Search**  
Lior Barak, Brett Bissey  
Mentor: Dr. George Atia, Computer Science

**Development of a Self-Sanitizing Mask to Combat the Spread of Infectious Disease**  
Matthew Crawford  
Mentor: Dr. Hwan Choi, Mechanical and Aerospace Engineering

**Nitric Oxide Release for ECMO Devices in COVID-19 Patients**  
Austin Eason  
Mentor: Dr. Elizabeth Brisbois, Materials Science and Engineering
Pinpointing Power Outages in Real-Time by Monitoring Severe Weather
Robert Ferrand
Mentor: Dr. Adan E. Vela, Industrial Engineering and Management Systems

Deriving Muscle Pathway of the Gastrocnemius Using Motion Capture and Ultrasound for Musculoskeletal Modeling
Eric Imani
Mentor: Dr. Hwan Choi, Mechanical and Aerospace Engineering

Relation Between Heart Sounds and Seismocardiographic Signals
Daniella King, Anna Voyatzoglou
Mentor: Dr. Hansen Mansy, Mechanical and Aerospace Engineering

Help Not Found: An Analysis of Precursors to Teen Suicide Attempts on Online Posts
Maria Lopez
Mentor: Dr. Pamela J. Wisniewski, Computer Science

Visible to UV Upconversion Nanomaterials Based Outer Coating to Combat Mold Growth
Erik Marcelo
Mentor: Dr. Sudipta Seal, Materials Science and Engineering

Infrared Spectroscopy of Defects in Structural Materials and its Effects on Energy Efficiency
Garrett Mastantuono
Mentor: Dr. Necati Catbas, Civil, Environmental, and Construction Engineering

Rapid Orbital Motion Emulator, ROME
Hunter Quebedeaux, Ryan Ketzner, Celeste Ozimek-Newman
Mentor: Dr. Tarek Elgohary, Mechanical and Aerospace Engineering

SafePlan: Co-designing for Suicide Prevention of At-Risk Youth
Luke Shirley
Mentor: Dr. Pamela Wisniewski, Computer Science

Visualizing a Pandemic: Mapping Flu Mortality in Florida, 1918-1919
Andrew Kishuni
Mentor: Dr. Connie Lester, History

Documenting the Undocumented: Understanding Identity and Displacement Through Undocumented U.S. Latinx Experiences
Thelma Quintanilla
Mentor: Dr. Sandra Sousa, Dr. Tyler Fisher, Modern Languages and Literatures

Runic Mentions in Medieval Icelandic Sagas and Poems
Jordan Williams
Mentor: Dr. Stephen Hopkins, Dr. Beth Young, English

The Making of Malachite
Sebastian Wittig
Mentor: Ms. Jo Anne Adams, School of Visual Arts and Design

The Roots of Homophobia in Modern Day Chinese Society
Angela Yen
Mentor: Dr. Luis Martinez Fernandez, History

Graduate Presentations

Invasive Xenopus Tropicalis Alter Disease Dynamics in Florida Amphibian Communities
Matthew Atkinson
Biomedical Sciences PhD

The Application of HiPSC-Cortical Neurons to Drug Evaluation in a Body-On-A-Chip System
Kaveena Autar
Chemistry PhD

Behavioral Division of Labor in Carpenter Ants Camponotus Floridanus is Associated with Plasticity in Clock-Controlled Gene Expression in Brains
Biplabendu Das
Integrative and Conservation Biology PhD

Multifaceted Function of MicroRNA-299-3p Fosters an Antitumor Environment Through Modulation of Androgen Receptor and VEGFA Signaling Pathways in Prostate Cancer Cells
Kavya Ganapathy
Biomedical Sciences PhD

Characterizing the Sialin Gene Family Expansion in Cephalopoda: Neurogenomic Insights Into Octopus Intelligence
Taryn Gustafson
Integrative and Conservation Biology PhD, Integrative Biology Track

Boring Sponges on Oyster Reefs: Distance From Boating Channels and Impact on Boring Damage
Katherine Harris
Biology MS

Assessing the Response of Mangrove Snapper, Lutjanus griseus Trophic Dynamics to Oyster Reef Restoration in the Indian River Lagoon
Jennifer Loch
Integrative and Conservation Biology PhD, Conservation Biology Track

Molecular Elements of Osmotic Taste Cell Response
Angela Mohrman
Biomedical Sciences PhD

Undergraduate Presentations

Identifying Population Structure of the Gulf Pipefish, Syngnathus covelli, across Florida
Gillian Baez Colon, Malia Boudreau
Mentor: Dr. Michelle Gaither, Biology

DNA Biosensors: Selective Determination of SARS-CoV-2 Using a Universal DNA-Hairpin Probe
Andrew Carlson
Mentor: Dr. Karin Chumbimuni-Torres, Chemistry

The Effects of Forced Diurnal Activity on the Nocturnal Clouded Leopard: Neofelis nebulosa
Steven Elsaid
Mentor: Mr. Frank Logiudice, Biology

Next Generation Protein Sequencing, NGPS for Determining Complete Sequences for Unknown Proteins and Antibodies
Alexis Howard
Mentor: Dr. Kersten Schroeder, Burnett School of Biomedical Sciences

Psychedelic Medicine and the Attenuation of Depressive Symptoms
Andrew Laino
Mentor: Dr. Mohtashem Samsam, Advent Health University

FINE ARTS AND HUMANITIES

Undergraduate Presentations

Abolitionist Perspectives on Russian Serfdom During the Antebellum Era
Mariana Kellis
Mentor: Dr. Barbara Gannon, History
Linking Magnetoreception to CACNA1D Homolog Protein Insertions in Vertebrates
Annabelle Levin
Mentor: Dr. Robert Fitak, Biology

Stable Isotope Analysis of an Invasive Crab Species, Charybdis hellerii, in the Indian River Lagoon
Justin Meyer
Mentor: Dr. Geoffrey Cook, Biology

The Effects of Agriculture Herbicide Pendimethalin on the Immune Function of Aedes aegypti and its Ability to Vector Diseases
Kassady Perkinson
Mentor: Dr. Kenneth Fedorka, Biology

A Novel Ultrasound-Mediated Gene Delivery Nanosystem for Osteoporosis Treatment
Angela Shar
Mentor: Dr. Mehdi Razavi, Burnett School of Biomedical Sciences

Acid-Mediated Dissociation of Haemophilus ducreyi Cytotoxethal Distending Toxin Subunits Upon Cell Entry
Isabel Silva, Carla Reyes, Ashley Fragoso, Celine Sparkes, Gisselle Perez, Michelle Alvarez
Mentor: Dr. Ken Teter, Burnett School of Biomedical Sciences

Quantifying the Amount of Microplastics in UCF Wetlands
Sophia Stahl, Melanie Buziak, Steven DeGarmo
Mentor: Dr. Lisa Chambers, Biology

Sulfide: The Result of Toxic Relationships in Freshwater Wetlands
David Yannick
Mentor: Dr. Lisa Chambers, Biology

Mechanistic Understanding of Ozone Assisted Combustion
Nath-Eddy Moody, Skylar Gootkin
Mentor: Dr. Denisia Popolan-Vaida, Chemistry

Microbe-Resistant Hybrid Membranes for Healing Burns and Wounds
Kasey Rigby, Jodie Chen
Mentor: Dr. Kausik Mukhopadhyay, Dr. Kaitlyn E. Crawford, Dr. Elizabeth Brisbois, Materials Science and Engineering

Myelination and Node of Ranvier Formation in a Human Motoneuron–Schwann Cell Serum-Free Coculture
Marnie Williams
Mentor: Dr. James Hickman, Chemistry

Graduate Presentations

The Green Morocco Plan: A Case Study of the Unintended Consequences of Sustainable Development
Sofiyya Aseedrem
Political Science MA

Stratification on the Shelves: A Grounded Theory Analysis of Social Hierarchies in Everyday Consumption
Caroline Austin
Sociology PhD

Moral To The Story: The Effects of Public Policy on Public Opinion in the Context of Abortion
Marin Deevers
Political Science MA

Examination of the Role of Trait Mindfulness and Driving-Related Cognitive Failures in Aggressive Driving Behavior
John Duany
Human Factors and Cognitive Psychology PhD

Black Fathers Having the “Talk” Conversation With Their Sons
Vernon Headley
Sociology PhD

The Correlates of Regional Cooperation in a Dyadic Perspective
Ozgur Kayaalp
Security Studies PhD

Undergraduate Presentations

Can Creative Hobbies Improve Spatial Ability?
Victoria Alexander
Mentor: Dr. Shannon Whitten, Dr. Karen Mottarella, Psychology

The Message or the Messenger: The Effects of Social Identity on Foreign Policy Decision Making
Joseph Aromando
Mentor: Dr. Mark Schafer, School of Politics, Security, and International Affairs

In-Situ Space Resource Utilization: A Review of Economics, Geology, and Policy
Samuel Baker
Mentor: Dr. Christopher Bennett, Physics

Past Suicidal Ideation Among Transgender and Nonbinary Young Adults Seeking Healthcare: An Analysis of Qualitative Data
Sabrina Beckwith
Mentor: Dr. Lindsay Taliaferro, Population Health Studies, Dr. Shannon Carter, Sociology

Shift or Stagnation?: Changing Japanese Attitudes Toward Minorities
Aicha Camara
Mentor: Dr. Myunghee Kim, School of Politics, Security, and International Affairs

Identity Consequences of Holding Collectivistic Values in an Individualistic Culture
Madison Cooper
Mentor: Dr. Steven L. Berman, Dr. Daniel McConnell, Psychology

Does Age and Race Impact Risk Factors, Warning Signs, and Protective Factors for Those At-Risk of Suicide?
Michael Cosare
Mentor: Dr. Kimberley Gryglewicz, School of Social Work

Structural Equation Analysis of the Three-Step Theory of Suicidality
Ana Garcia
Mentor: Dr. Jeffrey Bedwell, Psychology

Meaning-Making in Narratives of COVID-19 Experiences: Relations to Identity Development
Maha Halabi
Mentor: Dr. Widaad Zaman, Psychology

Mathematics, Optics, and Physical Sciences

Sequence-Independent Assay for the Quantitation of HIV Viral Loads
Omar El Merhebi
Mentor: Dr. Karin Chumbimuni-Torres, Dr. Yulia Gerasimova, Chemistry

Analysis of Co-Cultured Bacteria Using Split Deoxyribozyme Probes
Nicholas Mandel
Mentor: Dr. Yulia Gerasimova, Chemistry
Utilizing Fitts’ Law to Examine Motor Imagery of Self, Other, and Objects
Sean Hinkle
Mentor: Dr. Daniel McConnell, Psychology, Dr. Luis H. Favela, Philosophy

The Role of Identity in Eating Problems
Stephanie Kaine
Mentor: Dr. Steven L. Berman, Psychology

Keepers of The Cape: Re-examining the Quarterman Archaeological Site, Cape Canaveral Air Force Station
Audrey McGill, Megan McCauley
Mentor: Dr. Sandra Wheeler, Dr. Sarah S. Barber, Dr. Neil Duncan, Anthropology

Proficiency in English: Spanish-English Differences in Language Processing
Trucvy Nguyen, Daniela Velez
Mentor: Dr. Mustapha Mouloua, Psychology

ADHD Children’s Susceptibility to Interference in Memory Rehearsal
Cameron Pothoven
Mentor: Dr. Mark Rapport, Psychology

What are the Factors that Influence the Adoption of Data Analytics and Artificial Intelligence in Auditing?
Grace Tsao
Mentor: Dr. Steven Hornik, Kenneth G. Dixon School of Accounting

Prevalence Rates of Antisocial Behaviors in Generation Z
Adrianna Valencia
Mentor: Dr. W. Steven Saunders, Psychology
Friday, April 2, 2021 | 2:00 - 3:30 p.m.  
*Virtually via Zoom*

**WELCOME AND AWARDS**

Mr. Kenneth W. Bradley  
*Former UCF Trustee*

Dr. Alexander N. Cartwright  
*President*

Dr. Elizabeth A. Klonoff  
*Vice President for Research and Dean of the College of Graduate Studies*

Dr. Theodorea Regina Berry  
*Vice Provost for the Division of Student Learning and Academic Success and Dean of the College of Undergraduate Studies*