PRESENTED BY THE DIVISION OF STUDENT LEARNING AND ACADEMIC SUCCESS
AND THE COLLEGE OF GRADUATE STUDIES

STUDENT RESEARCH WEEK

CELEBRATING RESEARCH AND CREATIVITY ACROSS THE CURRICULUM

CANCELED BECAUSE OF CORONAVIRUS

KICK-OFF EVENT
SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE
GRADUATE RESEARCH FORUM
Each year, the University of Central Florida celebrates the research and creative scholarship of undergraduate and graduate students across all disciplines at a variety of events throughout Student Research Week.

These events provide hundreds of students the opportunity to present their work through posters or oral presentations and receive valuable feedback. Novice students can also find ideas for their own projects working alongside UCF faculty. The best projects in each category are also recognized with scholarship awards.

Join us and explore how our students’ research and creative scholarship enrich their learning experience, our university community, and make a difference in the world.

To learn more, please 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 30
Student Research Week Kick-Off Event
(Student Union: Cape Florida Ballroom) ............................... 10 - 11:30 a.m.

Tuesday, March 31
Graduate Research Forum – Poster Presentations
(Student Union: Pegasus Ballroom) ....................................... 11 a.m. - 2 p.m.

Wednesday, April 1
Graduate Research Forum – Oral Presentations
(Student Union: Cape Florida Ballroom) ............................... 10 a.m. - 3 p.m.

Thursday, April 2
Showcase of Undergraduate Research Excellence
(Student Union: Pegasus Ballroom and Cape Florida Ballroom) 9:30 a.m. - 5 p.m.
The College of Graduate Studies, the Division of Student Learning and Academic Success, 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.
Monday, March 30
Student Research Week Kick-Off Event
Student Union: Cape Florida Ballroom

10 – 11:30 a.m.

Tuesday, March 31
Graduate Research Forum – Poster Presentations
Student Union: Pegasus Ballroom

Poster Judging: 11 a.m. – 1 p.m.
Open Viewing: 11 a.m. – 2 p.m.
Awards Ceremony: 2 p.m.

Wednesday, April 1
Graduate Research Forum – Oral Presentations
Student Union: Cape Florida Ballroom

Session I: 10 – 11 a.m.
Session II: 11:10 a.m. – 12:10 p.m.
Session III: 12:20 – 1:20 p.m.
Session IV: 1:30 – 2:30 p.m.
Awards Ceremony: 2:30 p.m.

Thursday, April 2
Showcase of Undergraduate Research Excellence
Student Union: Pegasus Ballroom

Research Intensive Course Presentations: 9:30 – 11 a.m.

Independent Project Presentations:
Poster Session I: 9:30 – 11 a.m.
Poster Session II: 12 – 1:30 p.m.
Poster Session III: 2:30 – 4 p.m.
Award Ceremony: 4:30 – 5 p.m. (Cape Florida Ballroom)
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Monday, March 30, 2020 | 10 - 11:30 a.m.
Student Union Cape Florida Ballroom

WELCOME AND AWARDS

Dr. Elizabeth 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*

POSTDOCTORAL SCHOLAR POSTER PRESENTATIONS

RECEPTION
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 will launch in 2020.
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Undergraduate Research Faculty Mentor of the Year

Dr. Chase Mason
*Biology*
*Nominated by Mari Irving*

Champion of Undergraduate Research Faculty Award

Dr. Michael Rovito
*Health Sciences*

Dr. Valerie Sims
*Psychology*

Award for Excellence in Undergraduate Research Publishing

Katherine Harris
*Mentor: Dr. Linda Walters*
**POSTER PRESENTATIONS**

**11 A.M. - 2 P.M.**

### EDUCATION

**Focusing on the Progression of Mathematical Topics in K-12 Teacher Education Content Courses**

Shahabeddin Abbaspour Tazehkand
Education PhD - Mathematics Education

**Universal Design for Learning in Kindergarten Mathematics Curriculum: A Novel Approach**

Kiera Anderson
Education PhD - Exceptional Education

**Examining the Pedagogical Underpinnings of Medical Education Commercial-off-the-Shelf (MedEd-COTS) Resources**

Ziana Bagot
Education PhD - Instructional Design and Technology

**Community Hunger Outreach**

Caitlin Browder
Early Childhood Development and Education MS

**Preparing Educators to Support Social-Emotional Learning for Students with Cognitive Disabilities**

Sacha Cartagena
Education PhD - Exceptional Education

**Research Trends in Mathematics Education Doctoral Dissertations at University of Central Florida**

Siddhi Desai
Education PhD - Mathematics Education

**Developing an Enhanced Teacher Preparation Model: Lessons and Learnings in Supporting Pre-Service Teachers in High Needs Schools**

Christine DeStefano
Education PhD - Methodology, Measurement and Analysis

**A Case Study of the Impact of the DPLC Model of Professional Learning on Collective Teacher Efficacy and Organizational Trust in a Middle School**

Maria Gaspar
Educational Leadership EdD

**A Literature Review on The Effects of Metacognitive Strategies Used During Mathematics Instruction for Students with Learning Disabilities in Mathematics**

Molly Green
Education PhD - Exceptional Education

**Examining Graduate Student Use and Perspectives of Web Resources and Tools for Academic Support**

Kelly Grieneisen Tillotson
Curriculum and Instruction EdD

**Innovation in Case-Based Learning Through Integration of Commercial-Off-The-Shelf Software Developed for Medical Education (MedEd-COTS)**

Luke Horger
Instructional Design and Technology MA

**Exploring Preservice Elementary Teachers’ Integration of Socioscientific Issues in Their 5E Science Written Lesson Plan**

Lisa Le
Education PhD - Science Education

**An Examination of the Quality and Development of Educational Plans for Gifted Students**

David Maddock
Educational Leadership EdD - Executive

**Exploring the Development of Preservice Teachers’ Science Teaching Identity**

Regina McCurdy
Education PhD - Science Education

**Predicting the Instructional Practices of Introductory Physics Faculty**

Claudine McLaren Turner
Education PhD - Higher Education

**The Position of an Instructional Literacy Coach: A Case Study of the Perceptions of High School Administrators, Classroom Teachers, and Coaches in One Florida School District**

Rachel Miracolo
Educational Leadership EdD - Executive

**Using the UDL Framework to Support Teachers of Culturally Diverse Learners**

Keri Lynn Nass
Education PhD - Exceptional Education

**Literature Review: Examining Medical Providers’ Levels of Confidence in Making a Diagnosis of Autism Spectrum Disorder (ASD)**

Chelsea Pierce
Education PhD - Exceptional Education

**Academic Outcomes of Students Born Late-Preterm in Kindergarten and First Grade**

Annette Romualdo
Education PhD - Exceptional Education

**The Impact of Perceived Contextual Factors on Departmental Climate for Teaching Quality Improvement in STEM Across Institutional Types and Faculty’s Institutional Roles in Higher Education**

Eman Saqr
Education PhD - Instructional Design and Technology

**Investigating the Impact of Pre-Service Teachers’ Attitudes Toward Inclusion and Metacognitive Processes When Identifying Classroom Accommodations in a Simulated Teaching Environment**

Lynn Scott
Education PhD - Exceptional Education

**Considerations When Working with BDS\* Practitioners: Dispelling the Myths**

Ana Songer
Counselor Education MA - Clinical Mental Health Counseling

**Effects of Post-Exercise Recovery Drinks on Metabolic Demand During High-Intensity Intervals**

Tristan Starling-Smith
Education PhD - Exercise Physiology PhD Trk

**An Analysis of Teacher Decision-Making in Grading 10th Grade Student Writing in English Language Arts**

Guy Swenson
Educational Leadership EdD - Executive

**Using UDL to Enhance Science Instruction for Students with Executive Function Deficits**

Rohana Swihart
Education PhD - Exceptional Education
The Effect of Microstructure and Annealing on the Protrusion of Through-Glass Via
Vishnu Shukla
Materials Science & Engineering PhD

Shock Tube Investigation of Aerothermodynamics Relevant to Hypersonic Vehicles
Clayton Sigler
Aerospace Engineering MSAE - Thermofluid Aerodynamic Systems Design and Engineering

Exploiting Dynamic Magnetic Fields for New Magnetorheological Fluid Damping Capability
Christian Vazquez
Aerospace Engineering PhD

Data-Driven Predictive Modeling of Tensile Behavior of Parts Fabricated by Cooperative 3D Printing
Ziyang Zhang
Mechanical Engineering PhD

Why Women Writers are Taken Less Seriously than Men: A Feminist Viewpoint
Dolores Batten
Texts and Technology PhD

If Found
Hannah Huffman
Emerging Media MFA - Animation and Visual Effects

Portal Problem!
Ira Klages
Emerging Media MFA - Animation and Visual Effects

Hungry like a Wolf: Cyberstalking in the 21st Century
Alexandra Minnick
Gender Studies Certificate

Somerville College Novelists: Visualizing Author Networks in Early 20th Century Oxford
Abigail Moreshead
Texts and Technology PhD

Is Echo Intensity Associated with Age or Muscle Strength
Akash Bali
Physical Therapy DPT

The Effect of Metformin and Probiotics in Slowing the Progression of Huntington's Disease
Taylor Blum
Nanotechnology MS

Parkinsonian Rats Show Sparing of CD68, an M2 Microglial Marker, After Aerobic Exercise
Alexandra Bunea
Anatomical Sciences Certificate

A Longitudinal Comparison of Concussion & Musculoskeletal Injury Incidence in Recreationally Competitive College Sports - A Retrospective Study
Chandler Collins
Physical Therapy DPT

Targeting Polyamine Metabolism in Human Pancreatic Cancers
Aiste Dobrovolskaite
Biomedical Sciences PhD

Functional Characterization of mir-299-3p that Target Androgen Receptor in Prostate Cancer
Kavya Ganapathy
Biomedical Sciences PhD

Skeletal Muscle Echo Intensity: Indicative of Voluntary or Involuntary Strength?
Ryan Girts
Education PhD - Exercise Physiology PhD

The Effectiveness of the Core Muscle Activation on Increase Performance and Endurance in Individuals with Low Back Pain
Aracelis Guzman
Master of Athletic Training
Changes in Motor Unit Recruitment Thresholds as a Compensatory Strategy During Neuromuscular Fatigue
Kylie Harmon
Education PhD - Exercise Physiology PhD Trk

Strain-Level Analysis of the IBD-Associated Fecal Microbiome
Sayf Al-Deen Hassouneh
Biomedical Sciences PhD

Isometric Mid-Thigh Pull and Power-Force-Velocity Profiles During Jumping and Sprinting in Resistance-Trained Men and Women
Chad Herring
Education PhD - Exercise Physiology PhD Trk

First Impressions of the Bedside Nurse: A Pilot Study
Sharon Imes
Nursing PhD

Asymptomatic Nephrolithiasis in Children: How Often Should Patients Receive Follow-up Ultrasound Imaging?
John Jayman
Medicine

A Retrospective Analysis of Group-Based Boxing Exercise On Measures of Physical Mobility in Parkinsonian Subjects
Kyle Joslyn
Physical Therapy DPT

Angela Keith
Nursing PhD

Efficacy of Traditional Physical Therapy vs Otago-Based Exercise in Fall Prevention for ALF-Residing Older Adults
Sky Knott
Physical Therapy DPT

Form Does Not Equal Function: Fast Gait Speed in Older Adults is Best Predicted by Functional Performance
Daniel Komforti
Physical Therapy DPT

Impact of an Intergenerational Physical Activity Program on Children 6 to 12 Years Old
Kelly LaMaster
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

Role of Selenium Nanoparticles in Preventing Ferroptotic-Induced Neuronal Cell Death After Stroke
Ernesto Navarro Garcia
Nanotechnology MS

Validity and Reliability of NIH Toolbox* Compared to the Biodex Balance System SD M-CTSIB
Alexander Peller
Physical Therapy DPT

Early Screening and the Recognition of Scapular Dyskinesis
Julia Phillips
Master of Athletic Training

Association of Student Interprofessional Practice Experience with Interprofessional Attitudes
Bridget Presnell
Physical Therapy DPT

Investigating the Effects of Trigeminal Neuralgia on Oral Health and Potential Treatment Options
Idean Rezaei
Graduate Non Degree Seeking

Role of Klotho Beta in Colorectal Cancer Tumorigenesis
Michael Rohr
Biomedical Sciences PhD - MD/PhD

Is How We Group Data Important? Statistical Differences in Analyzing Independent Variables for Categorizing Fall Groups
Andrea Sarto
Physical Therapy DPT

Investigating the Role of Membrane Nanotubes in Preserving Neuronal Density in Strokes
Stephen Scheller
Nanotechnology MS

The Effects of Pain Neuroscience Education (PNE) on Pain Tolerance in a Healthy Population
Jeffrey Schmidt
Physical Therapy DPT

The Immediate Effects of Mobilization with Movement Versus Passive Stretch on Hip Range of Motion
Daniel Torres
Physical Therapy DPT

Correlation in Achieving Work-Life Balance and Satisfactory: Perspectives of Athletic Training
Emily Tran
Master of Athletic Training

18 Years of Service: A Study of Patient Care, Comfort, and Safety at the Saint Thomas Aquinas Free Medical Clinic
Rachel Truong
Medicine

The Effects of Lumbopelvic Hip Strength on a Golfer’s Swing Performance
Brittney Webb
Master of Athletic Training

Using CRISPR/Cas9 to Control Genes in Parkinson’s Disease: Epigenetic Writers
Levi Adams
Biomedical Sciences PhD

Excess Cholesterol in a High Fat Diet Enhances Severity of NAFLD and Promotes Insulin Resistance
Jordan Beardsley
Biomedical Sciences PhD

E-cigarette Vape Exposure Potentially Increases Epithelial Inflammatory Response, DNA Damage and S. Aureus Oral Colonization
Alma Catala-Valentin
Biomedical Sciences PhD

Microplastic Cycling: Are Eastern Oysters, Crassostrea virginica, Capable of Excreting Microplastics?
Casey Craig
Biology MS

Dietary Peroxidized Lipids Could Alter Gene Expression Profile in Intestinal Epithelial Cells
Nisreen Faizo
Biomedical Sciences PhD

Doxorubicin-Induced Muscle Toxicity: A Novel Mechanism Involving Inflammation-Mediated Pyroptosis in Soleus Muscle
Fatima Bianca Dessouki
Biotechnology MS

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Dietary Peroxidized Lipids Could Alter Gene Expression Profile in Intestinal Epithelial Cells
Nisreen Faizo
Biomedical Sciences PhD
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Cheyanne Fedder
Biomedical Sciences PhD

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Erica Goldstein
Education PhD - Exercise Physiology PhD

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Haley Hardin
Biotechnology MS

Patient Attitudes, Experiences Toward Health Care and the Frequency of Office Visits Among Medicare Beneficiaries with Type 2 Diabetes
Qing He
Big Data Analytics PhD

Gelsolin-Mediated Actin Filament Severing in Crowded Environments
James Heidings
Biotechnology MS

A Nested PCR Strategy for Recovering Highly Discriminatory Y-STR DNA Profiles from Trace Male DNA Samples
Anna Kimball
Forensic Science MS

Physiological Response to Varying Salinity Levels by Coastal and Inland Juvenile American Alligators (Alligator mississippiensis)
John Konvalina
Conservation Biology PhD

A Comparison of Sleep and Physical Activity Patterns Between Typically Developing Adolescents and Adolescents with Developmental Disorders
Nicholas Leahy
Education PhD - Exercise Physiology PhD

Bacteria Consortia Networks of The Healthy Human Gut Microbiome
Mark Loftus
Biomedical Sciences PhD

Development of an OWL2 Sensor to Detect Single Nucleotide Polymorphisms in Folded Analyte
Brittany Mueller-Mabry
Chemistry PhD

The Effects of a 10-Week Judo Program on Cortisol and Stress in Children with Autism Spectrum Disorder
Justine Renziehausen
Education PhD - Exercise Physiology PhD

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Faisal Abedin
Physics PhD

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Dave Austin
Physics PhD

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Chance Barrett
Electrical Engineering PhD

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John Beetar
Physics PhD

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Michael Himes
Physics PhD - Planetary Sciences PhD

High Throughput Exfoliation of Large Area Atomically Thin Two-Dimensional Semiconductors Through Sacrificial Copper, Nickel, or Aluminum Layer
Ammon Johnston
Physics PhD

Fourier Analysis of Simulated Plasma Induced Electrostatic Discharge Events for Spacecraft Materials
Eric Markowitz
Physics MS

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Majid Noroozi
Mathematics PhD

Study of Doping of Sodium Azide on MoS2-FET and its Effects on Biosensors
Gregory Shinaberry
Physics PhD

Exploring the Photochemical Properties of Defect-Laden Hexagonal Boron Nitride
Fernand Torres-Davila
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The Effects of Airborne Organic Particles on Cloud Microphysics
Brett Young
Chemistry PhD

Jahn-Teller Effect in Three-Body Recombination of Hydrogen Atoms
Chi Hong Yuen
Physics PhD

Trends in Unpaid Family Caregiving: A Study of Shifting Household Composition in Florida
Aliya Anjarwalla
Public Affairs PhD - Health Services Management and Research

Understanding Red Tide Through Lenses of Hospitality Employees
Frida Bahja
Hospitality Management PhD

Stakeholder Engagement for Sustainability: Partnerships for U.N. Sustainable Development Goals (SDGs) Implementation
Sean Beaudet
Public Administration MPA

“Waiting on Dorian”: A Content Analysis of Memes Related to Hurricane Dorian Posted on Social Media Platforms
Laura Boutemen
Strategic Communication PhD
Bringing Home To Work: The Effects of Eldercare Demands on Work Related Strain
Hillary Chandler
Industrial and Organizational Psychology MS

Be a Champion at Home and at Work: Examining the Moderating Effects of Segmentation and Sleep on Eldercare Demands and Time Theft
Kinjal Chheda
Industrial and Organizational Psychology MS

Analysis of Larger Sized Housing Redevelopment within College Park
Heather Croney
Urban & Regional Planning MS

Newspaper Stories About Hurricanes
Rebecca Dupont
Communication MA

Exploring the Impact of 360 Enabled Imagery in Meeting Planner Site Selection Inspection
Jeremy Fairley
Hospitality Management PhD

Preliminary Investigations for Documenting Human Skeletal Remains in Obstructed Wooded Environments
Morgan Ferrell
Anthropology MA

Entering New Lands: Exploring International Students’ Perception of Therapy and Mental Health Before and After Arriving to the United States
Hanifah Griffith
Applied Sociology MA

The Journey to Berlin: Identifying Migrant Routes
Jane Holmstrom
Integrative Anthro Science PhD

Generations Gap in Value Perception and Intention to Use Online Reviews in Travel Decision Making
Linh Le
Hospitality Management PhD

Reading the Mind Through the Lonely Eye: Social Cognition and Loneliness
Fernando Montalvo
Psychology PhD - Applied Experimental and Human Factors Psychology

Cognitive Challenge: How Students’ Mental Models and Implicit Theories Impact Cognitive Load and Learning
Ecem Olcum
Psychology PhD - Applied Experimental and Human Factors Psychology

Chronicling Colonial Armies: An Analysis of American Newspaper Coverage of the Tirailleurs Sénégalais During World War I
Matthew Patsis
History MA

“But Were They Asking For It?”: An Analysis of the Public’s Empathy and Perception Towards Differentiating Levels of Victimization
Claia Peebles
Applied Sociology MA

Covert Language: How Common Law Coverture Created the Legal Tradition of Disbelieving Women in the Face of the #MeToo Movement
Jax Rogero
Gender Studies Certificate

Gastrointestinal Health Mediates the Impact of Self-Reported Depression and Anxiety Symptoms on Health-Related Quality of Life in the Emerging Adult Population
Emily Ross
Psychology PhD - Clinical Psychology

Communicating the #Vape Crisis with Hashtags
Marissa Salas
Texts and Technology PhD

My Choice or Their Life
Aaron Scott
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Miroslav Shapovalov
Security Studies PhD

“I have faith in you young people”: Measuring Racial Tolerance in Millennials Through the Color Blind Racism Lens
Andrea Smith
Applied Sociology MA

Police Officers’ Perceptions of the New Frontier: Smart CCTV
Matthew Stephenson
Criminal Justice PhD

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

Meeting in The Middle: The Role of Cultural Diversity in Spaceflight Exploration
Kristztina Szabo
Industrial and Organizational Psychology MS

Intimate Partner Homicide and Access to Services at the County Level
Kayla Toohy
Sociology PhD

A Quantitative Analysis of Casual Dining Sales Trends by Day of Week
Jonathan Van Dyke
Hospitality & Tourism Management MS

Reaching Young Voters: Do Young Voters use Social Media more than TV News?
Craig Wilding
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Leader-Follower Controls in Systems with Two Controllers
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Jeane Camelo
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Using Self-Paced Treadmills: Controller Sensitivities can Increase Gait Variability
Cesar Castano
Mechanical Engineering PhD

A Real-World Biomechanics Measurement and Analysis Suit
Surendar Devasundaram
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Observation of Topological Surface State in a Superconducting Material
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Physics PhD

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Rodrigo Duran
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Allen Eyler
Materials Science & Engineering PhD

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Corbin Feit
Materials Science & Engineering PhD

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Lin Hu
Materials Science & Engineering PhD

High-Pressure Laminar Burning Velocity Measurements of Ethanol/Air Mixtures
Gihun Kim
Mechanical Engineering PhD

Additive Manufacturing of Copper-Based Alloy
Binghao Lu
Materials Science & Engineering PhD

Data-Driven Compound Flooding Analysis in Sabine Lake, Texas
Victor Malagon Santos
Civil Engineering PhD

Macromolecular Crowding Modulates the Organization and Mechanics of Actin Bundles Crosslinked by Regulatory Proteins
Jinho Park
Materials Science & Engineering PhD

Tracking the Ultrafast Photoinduced Reaction Dynamics of CD3I on CeO2 Thin Films
Md Afjal Khan Pathan
Chemistry PhD

Low Cost, Calibration-Free Ionophore-Based Ion-Selective Electrodes for Determination of Na, K and Heavy Metals
Mohammad Rostampour Kakroudi
Chemistry PhD

SLIM-ADC: Spin-Based Logic-In-Memory Analog to Digital Converter Leveraging SHE-Enabled Domain Wall Motion Devices
Soheil Salehi Mobarakeh
Computer Engineering PhD

DeepMalaria: Artificial Intelligence for Drug Discovery
Milad Salem
Computer Engineering PhD

“Tug-of-War” of a DNA in the Three-Dimensional Double Nano-Pore System
Swarnadeep Seth
Physics PhD

Molecular Encapsulation Selectivity of Polyelectrolyte Complex Micelles
Sachit Shah
Materials Science & Engineering PhD

Brain Dynamics and Movement Responses to Perturbations are not Coupled
Seyed Yahya Shirazi
Mechanical Engineering PhD

Sequence Patterning of Peptides with Increased Hydrophobic Content for Drug Delivery
Sara Tabandeh
Materials Science & Engineering PhD

Two-Level Multi-Objective Optimal Transactive Control for Commercial Buildings’ Day-Ahead HVAC Scheduling
Guanyu Tian
Electrical Engineering PhD

A Numerical Method Study of Momentum Losses From Rough Surfaces
Jose Urcia
Aerospace Engineering MSAE - Thermofluid Aerodynamic Systems Design and Engineering

Evaluation of Chitosan-Hyaluronic Acid Scaffold Processing Parameters to Produce an Enhanced Breast Cancer Tumor Microenvironment
Zi Wang
Materials Science & Engineering PhD

Effect of Growth Conditions on the Electrical Properties of Large Area CVD Grown MoS2 Thin Films
Sajeevi Withanage
Physics PhD

3D Porous Chitosan-Chondroitin Sulfate Scaffolds Promote Epithelial to Mesenchymal Transition in Prostate Cancer Cells
Kailei Xu
Materials Science & Engineering PhD
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<td>Clinically Immersive Experiences Among Health Professional Students and Interprofessional Attitudes: Are We Staying Afloat, In Stagnant Waters, or Drowning in Immersion?</td>
<td>Ermangiliz Gonzalez Luna</td>
<td>Physical Therapy DPT</td>
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<tr>
<td>Rule Space Clustering</td>
<td>Charles Harrison</td>
<td>Big Data Analytics PhD</td>
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<tr>
<td>Soil Biogeochemistry and Microbial Activity Along the Marsh-to-Mangrove Transition</td>
<td>Sarah Harttung</td>
<td>Conservation Biology PhD</td>
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<td>TNF-a Inhibitors Through Notch-1 Signaling Modulate Immune Defense and Exacerbate Bacterial Infection in Autoimmune Disease</td>
<td>Esra’a Keewan</td>
<td>Biomedical Sciences PhD</td>
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<td>Predicting the Effects of Disturbance Related Fish Kills on Fish Communities Along Florida’s Coast</td>
<td>Dakota Lewis</td>
<td>Biology MS</td>
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<td>Assessing the Response of Mangrove Snapper (Lutjanus griseus) Trophic Dynamics to Oyster Reef Restoration in the Indian River Lagoon</td>
<td>Jennifer Loch</td>
<td>Conservation Biology PhD</td>
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<td>Exploring Student Reflection After Virtual Simulation</td>
<td>Valorie MacKenna</td>
<td>Nursing PhD</td>
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<td>Quantifying the Effects on Fish and Mobile Decapod Communities Following Habitat Restoration in a Dynamic Coastal Estuary</td>
<td>Richard Mahoney</td>
<td>Biology MS</td>
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<td>The Use of Cerium Oxide Nanoparticles as an Antibacterial Agent in Orthopedic Implants</td>
<td>Kari Martyniak</td>
<td>Biomedical Sciences PhD</td>
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<td>Osmolarity Affects Sodium Transport Across Mouse Lingual Tissue</td>
<td>Angela Mohrman</td>
<td>Biomedical Sciences PhD</td>
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<td>Change Detection of Hydrologically Restored Subtropical Freshwater Wetlands Using Remote Sensing</td>
<td>Sarah Parker</td>
<td>Biology MS</td>
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<td>A Mystery Solved: Why Smoke Extract Worsens Symptoms in Smokers with Crohn’s Disease and not Ulcerative Colitis? Gut MAP!</td>
<td>Dania Qasrawi</td>
<td>Biomedical Sciences PhD</td>
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<tr>
<td>A Database for 20th Century Global Storm Surges</td>
<td>Michael Getachew Tadesse</td>
<td>Civil Engineering PhD</td>
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<tr>
<td>Genetic Underpinnings of Host Manipulation by Ophiocordyceps as Revealed by Comparative Transcriptomics</td>
<td>Ian Will</td>
<td>Integrative Consrv Biology PhD</td>
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<tr>
<td>Early Prediction to Identify At-Risk Student with High Level of Precision</td>
<td>Jianbin Zhu</td>
<td>Big Data Analytics PhD</td>
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</tbody>
</table>
Dual Language Teachers’ Beliefs and Practices Regarding Effective Second Language Instruction: A Qualitative Study
Deddy Amrand
Education PhD - Teaching English to Speakers of Other Languages

Steady Hand at the Wheel: How Perceived Movement Influences Consumer Responses to Service Failures
Lam An
Business Administration PhD - Marketing

Testing the Factor Structure of the College Success Factors Index 2.0
Suat Babayigit
Education PhD - Methodology, Measurement and Analysis

Strength-Based Influences on the Efficacy of Rest-Redistribution During Barbell Squats
Ariel Boffey
Education PhD - Exercise Physiology PhD Trk

The Elite Meroitic Experience on Sai Island, Sudan: Using Stable Isotope Analysis to Identify Patterns Related to Sex and Age for the Interpretation of Social Identity
Alexandria Brock
Integrative Anthro Science PhD

Yuting Chen
Education PhD - Methodology, Measurement and Analysis

Autonomic Nervous System Response and Behavior During Exercise and Short-Term Recovery Following Energy Drink Consumption
Nicolas Clark
Education PhD - Exercise Physiology PhD Trk

Are Eye-Gaze Behaviors Related to Scientific-Reasoning Actions? Quantifying 21st Century Skills Using Eye Tracking During Game-Based Learning
Elizabeth Cloude
Instructional Design and Technology MA

Changes to Muscle Strength and Function Following Repeated Bouts of Eccentric Exercise on Dominant and Non-Dominant Elbow Flexors
Nicholas Coker
Education PhD - Exercise Physiology PhD Trk

Determinants of Burnout in Certified Athletic Trainers
Peter Dawry
Master of Athletic Training

The Influence of Autonomy on Learners’ Affective States During Reading within a Narrative-Centered Game-Based Learning Environment
Daryn Dever
Instructional Design and Technology MA

Addressing Patient-Provider Communication Needs in Rural Settings: Acknowledging the Growth and Diversity Within the Latino Population
Cristina Figueroa
Graduate Non Degree Seeking - Grd Stdt seeking Pre Reqs

Narrowing English Learner (EL) Achievement Gaps: A Multilevel Analysis of an EL-Infused Teacher Preparation Model
Nirmal Ghimire
Education PhD - Teaching English to Speakers of Other Languages

The LEFT, Standing Long Jump, and Single Leg Hop as Predictors of Lower Extremity Injury in Collegiate Athletics: A Critically Appraised Topic
Jessica Harris
Master of Athletic Training

Watch and Learn: Examining Bilingual Children’s Language Acquisition Through Television
Patricia Jaramillo
Early Childhood Devel&Educ MS

The Parent Trap: How Oversharenting Impacts Observer Perceptions of Parents
Sona Klucarova
Business Administration PhD - Marketing

Dynamic Customer Churn Prediction in Banking Industry
Hoiyin Leung
SAS Data Mining Certificate

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

Life Partners’ Perceptions of Affective, Behavioral and Cognitive Reactions Experienced by their Partner Who Stutters
Randy Panzarino
Communication Sciences and Disorders MA

Effects of Neurophysiological Pain Education in Patients with Kinesiophobia Linked to Chronic Low Back Pain: A Critically Appraised Topic
Mollie Przybocki
Master of Athletic Training

The Sinkhole “Problem” in Central Florida: Geotechnical Investigation Tools to Discern Between Sinkhole Vulnerability or Gullibility
Ryan Shamer
Civil Engineering PhD

Engineer Surface Redox-Acid Pair Sites for Efficient Removal of NOx
Ge Song
Environmental Engineering PhD

Large-Scale Algal Cultivation Strategies for Carbon Capture
Ruth Spierling
Environmental Engineering PhD

Aging Moderates the Impact of Disclosure Forms on Financial Decision Making
Xiaqing Wan
Psychology PhD

Modeling Metacomprehension Monitoring Accuracy with Eye Gaze on Informational Content in a Multimedia Learning Environment
Megan Wiedbusch
Instructional Design and Technology MA
ORAL PRESENTATIONS
SESSION IV: 1:30 – 2:30 P.M.

The French Far-Right and Immigration
Alexander Aders
Political Science MA

Enhancing Students’ Behaviors in the City of Taif, Saudi Arabia Using the Modified Positive Behavior Intervention and Support (Modified PBIS)
Sami Algethami
Education PhD - Exceptional Education

Held in the Grip of the Local and Federal Governments: Why Puerto Rico Has Faced an Inappropriate and Uncoordinated Emergency Response to Hurricane Maria
Sara Belligoni
Security Studies PhD

Spectral Silence: Communicative Failings and Repressed Trauma in The Turn of the Screw
Jonathan Burnette
English MA - Literary, Cultural, and Textual Studies

Barriers of Health Access in Pine Hills Area, Orlando, Florida and Policies Addressing Them
Xian Cao
Public Affairs PhD - Health Services Management and Research

Why Do Teachers Stay? A Reverse Look into the Teacher Shortage
Timara Davis
Education PhD - Exceptional Education

The Influence of Tourism on Real Estate Prices in the Great Orlando Area
Marcos de Medeiros
Hospitality & Tourism Management MS

Discrimination Against Muslims, Religious Networks and Terrorist Attacks in Western Europe: The Cases of United Kingdom, France, Germany and Italy
Davide Dell’Isola
Security Studies PhD

Hidden in Plain Sight: Assessing the Spatial Distribution of Illicit Massage Businesses in the State of Florida
Madelyn Diaz
Sociology PhD

A Phenomenological Inquiry of Mass Shooting Survivors’ Experiences of Loss and Growth
Amanda DiLorenzo
Education PhD - Counselor Education

Instructional Communication as a Primary Function of Communities of Practice During Crises
America Edwards
Communication MA

Emerging Methodology in Tourism and Hospitality Research: Applying Moment-Based Methods for Measuring Visitor Experience
Maksim Godovych
Hospitality Management PhD

Freud, Feminism, and Ghosts: Liminality Within Henry James’s The Turn of the Screw
Kendall Hall
English MA - Literary, Cultural, and Textual Studies

Climate, Security and Survival of Women and Households in the Nigerian North-East
Jennifer Joel
Security Studies PhD

Postcolonial Hauntings: Ghosts as Historical Metaphors in Henry James’s ‘The Turn of the Screw’
John Lancaster
English MA - Literary, Cultural, and Textual Studies

Adult, International Students’ Shared Speaking and Listening Experiences with the Utilization of Pecha Kucha Presentations in a US EAP Program
Courtney Lopas
Education PhD

F2F or Online? A Pilot Study of Preservice Teachers’ Learning Preferences and Outcomes
Van Thi Hong Le
Education PhD

E-Government and its Implications for Accessibility, Transparency, and Government Performance
Jeannetta Maxena
Public Administration MPA

David Moran
Texts and Technology PhD

Zephaniah Kingsley v. Thomas Jefferson: The Legal and Social Case of Kinship and Legitimacy in Interracial Families
Samuel Ortiz
History MA

Predicting the Persistence of Traditional and Nontraditional Undergraduate University Students Using the Psychosociocultural Model
Lauren Remenick Maroon
Education PhD - Higher Education

Casting Youth Performers: An Educational Take on a Professional Practice
Scott Savage
Theatre MFA - Theatre for Young Audiences MFA

Pregnant Killers: A Five-State Analysis of Pregnancy-Associated Intimate Partner Homicides
Sonya Spence
Applied Sociology MA - Domestic Violence

Territorial Salience: A Better Predictor for Territorial War and Peace
Karthikeyan Thiagarajan
Security Studies PhD

Participating in 12-step Support Groups While Using Medication for Opioid Use Disorder (MOUD): Individuals’ Experiences With Stigma
Rachel Totaram
Public Affairs PhD - Health Services Management and Research

David Moran
Texts and Technology PhD

Zephaniah Kingsley v. Thomas Jefferson: The Legal and Social Case of Kinship and Legitimacy in Interracial Families
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Rachel Totaram
Public Affairs PhD - Health Services Management and Research
RESEARCH INTENSIVE COURSE PRESENTATIONS
SESSION I: 9:30 – 11 A.M.

The Effects of Plant Based Diets on Symptoms of Stage 1 Dementia
Mae Abukhadrah, Mostafa Diab, Tillie Schumann, Sumeen Sajid, Meredith Sauceda, Nicole Parsels
Mentor: Dr. Michael J. Rovito (Health Sciences)

The Association Between Vitamin Deficiencies and Insomnia in American College Students
Genesis Brador, Jazmin Alvarez, Gisselle Halabi Molli, Juan Reyes, Emily Kukielka, Nidhi Patel
Mentor: Dr. Michael Rovito (Health Sciences)

Comparison of Water Quality Parameters between Lacustrine and Palustrine UCF Campus Wetlands
Melanie Buziak, Janet O’Leary, Ashley Boggs, Kira Allen, Steven Steiniger
Mentor: Dr. Lisa Chambers (Biology)

Effects of Marijuana Use through Peer Influence on Anxiety in College Freshmen
Katrina Claydon, Iyat Neimat, Anthony
Mentor: Dr. Michael J. Rovito (Health Sciences)

Burning Rubber while Torching Ecosystems: Microplastics Associated with Car Tires in our Waterways
Grace Clayton, Nathaniel Abernathy, Veronica Ospina, Chase Paquette, Matthew Myers
Mentor: Dr. Lisa Chambers (Biology)

Investigating the Abundance and Diversity of Microplastics between Stormwater Ponds and Lakes on the Campus of the University of Central Florida
Megan Witt, Lindsey Relue, Laurens Vermeulen, Tessa Brant
Mentor: Dr. Linda Walters (Biology)

How’d You Get Here? Methods of Invasive Plant Species Introduction to the State of Florida
Mayerlin Fischbach, Mari Irving
Mentor: Dr. Chase Mason (Biology)

Crystallization of the Fusion Protein GST-EGFP
Nancy Flynn
Mentor: Dr. Robert Borgon, Nicole Verity (Biomedical Sciences)

Microplastics, It’s What’s for Lunch!
William Giles, Julia DeMayo, Miranda Mcclanahan, Abigail Traver, Nicole Rivera
Mentor: Dr. Linda Walters (Biology)

Tracking the Movement of Invasive Species Entering Florida via E-commerce
Jason Litwak, Lyndsey Chute, S. Elizabeth Auricchio, John Buzby, Aspen Oudshoorn
Mentor: Dr. Linda Walters (Biology)

Identifying Bacterial Contaminants in UCF Food Court Restaurants
Martina Radwanski, Sarah Welter
Mentor: Dr. Robert Borgon, Nicole Verity (Biomedical Sciences)

Comparing the Biodiversity of Birds in Emergent and Forested Wetlands
Shurooq Saryoul, Matthew Blow, Madison Schmidt, Taylor Toro, David Yannick
Mentor: Dr. Lisa Chambers (Biology)

Comparing the Influence of Vegetation Coverage and Water Depth on Organic Matter Accumulation in a Central Florida Basin Marsh
Jessica Scales, Karyssa Kemp, Trevor Sweeney, Steven Elsaid
Mentor: Dr. Lisa Chambers (Biology)

THE “DISNEY LOOK”: How Disney Utilizes Cast Member Appearances to Maintain The Disney Brand
Katharine Smith
Mentor: Dr. Christian Ravela (Psychology)

Comparing the Influence of Vegetation Coverage and Water Depth on Organic Matter Accumulation in a Central Florida Basin Marsh
Jessica Scales, Karyssa Kemp, Trevor Sweeney, Steven Elsaid
Mentor: Dr. Lisa Chambers (Biology)
INDEPENDENT PROJECT PRESENTATIONS
POSTER SESSION I: 9:30 – 11 A.M.

ARTS AND HUMANITES

The Study of Free Will in the East and the West
Nicholas Colecio
Mentor: Dr. Louise Kane (English)

Allen Ginsberg’s “Kaddish”: A Definitive American Mid-Twentieth-Century Poem
Teddy Duncan
Mentor: Dr. William Fogarty (English)

Devotional Authorship and Literary Sponsorship: Analyzing Religious Devotional Literature as a Reaction to Societal Values and Issues
Nathanael Ettel
Mentor: Dr. Jeanine Viau (Philosophy)

A Transnational Look at the Modern Woman
Isabella Hardesty
Mentor: Dr. Louise Kane (English)

Macho Remixes: A Collection of Writings
Daniel Hernandez
Mentor: Dr. Cecilia Rodriguez Milanes (English)

Essential Prerequisites for the Professional Musician
Theodore Jackson
Mentor: Dr. Thad Anderson (Performing Arts)

Enhancement of Critical Foreign Language Curricula through Technology
Taylor Jenko
Mentor: Dr. Alla Kourova (Modern Languages and Literatures)

Mapping Flu Mortality in Florida, 1918-1919
Andrew Kishuni
Mentor: Dr. Connie Lester (History)

Motion Without Movement
Jamie Lachnicht
Mentor: Michael Cabrera (Visual Arts and Design)

Theatre for the Gods: the Overlap of Theatre and Ritual
Susan Liss
Mentor: Dr. Chloe Rae Edmonson (Theatre)

ENGINEERING, OPTICS AND PHOTONICS, AND COMPUTER SCIENCE

Connecting Capabilities Responsibly: A Report of a Student-Run Global Health Cooperation in Mare-Brignol, Haiti
Shreya Rao
Mentor: Dr. Luciana Garbayo (Philosophy)

Understanding the Challenges Case Managers Face Regarding Foster Teens’ Online Safety
Dennielle Abaquita
Mentor: Dr. Pamela Wisniewski (Computer Science)

Implementation of Compressive Sensing Using AMP for Probabilistic Inference Simulation
Adedoyin Adepegba
Mentor: Dr. Ronald DeMara (Electrical and Computer Engineering)

Sintering Behavior, Structural, And Catalytic Properties of Ytterbium Oxide (Yb2O3)
Alina Aftab
Mentor: Dr. Nina Orlovskaya (Mechanical and Aerospace Engineering), Dr. Richard Blair (Florida Space Institute)

A Novel Ca2+ Detection Sensor for Direct Monitoring of Membrane Fouling in Nanofiltration
Amaya Bajorek
Mentor: Dr. Subith Vasu (Mechanical and Aerospace Engineering)

Ignition Delay Time Measurements of Highly Diluted Oxy-Methane Mixtures
Jessica Baker
Mentor: Dr. Subith Vasu (Mechanical and Aerospace Engineering)

Landing Kinematics of Ae. aegypti Mosquitoes
Jasmine Balsalorbe
Mentor: Dr. Andrew K. Dickerson (Mechanical and Aerospace Engineering)

A Better Way to Cool Your Phone: The Design
Jordon Bennett
Mentor: Dr. Shawn Putnam (Mechanical and Aerospace Engineering)

Exploration of Nozzle Circumferential Flow Attenuation in Rotating Detonation Engines
Karena Boyd
Mentor: Dr. Kareem Ahmed (Mechanical and Aerospace Engineering)

Comparative Study on Clock Structures for Nanomagnetic Logic
Precious Grace Brazil
Mentor: Dr. Deliang Fan (Arizona State University)

Microbe-resistant Hybrid Membranes for Healing Burns, Wounds and Scars
Jodie Chen, Kasey Rigby
Mentor: Dr. Kausik Mukhopadhyay, Dr. Kaitlyn Crawford (Materials Science and Engineering)

Synthesis and Characterization of Water-Dispersible Super-Paramagnetic Iron Oxide
Nicole Clark
Mentor: Dr. Swadeshmukul Santra (Materials Science and Engineering)

Flame-Vortex Dynamics in a Model Ramjet Combustor
Chandler Crimmins
Mentor: Dr. Kareem Ahmed (Mechanical and Aerospace Engineering)

Effect of Platform Oscillations on the Flow Field of an Off-Shore Wind Turbine using Particle Image Velocimetry
Juan Escudero
Mentor: Dr. Samik Bhattacharya (Mechanical and Aerospace Engineering)

Using Machine Learning to Identify Access Patterns in Optimized Data Storage Implementations
Shaneal Findley
Mentor: Dr. Jun Wang (Electrical and Computer Engineering)

New Conditional Lower Bounds for Edit Distance on K Strings
Gary Hoppenworth
Mentor: Dr. Sharma Thankachan (Computer Science)
Developing a Stress Sensing Alumina Paint that can be Applied to Aircraft for Nondestructive Evaluation
Perla Latorre, Ryan Hoover
Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)

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

Evaluating Ecosystem Services of Intact Shorelines and Oyster Reefs in Indian River Lagoon: A Meta-Analysis of Hydrodynamics and Sediment Carbon Storage
Ola Toyin Olasimbo, Jordyn Washington, Christopher Hagglund
Mentor: Dr. Kelly Kibler (Civil, Environmental, and Construction Engineering)

Numerical Simulation of a Nickel-Based Superalloy Under Creep-Fatigue, Thermomechanical Fatigue, and Creep-Thermomechanical Fatigue
Devin O’Neal
Mentor: Dr. Ali Gordon (Mechanical and Aerospace Engineering)

Rapid Orbital Motion Emulator (ROME)
Hunter Quebedeaux, Ryan Ketzner
Mentor: Dr. Tarek Elgohary (Mechanical and Aerospace Engineering)

The Effect of Cardiopulmonary Functions in Measuring Respiratory Sinus Arrhythmia and Heart Rate Variation by Utilizing Various Breathing Exercises
Ankur Ravikanth, Seren Ozoglu, Brinna Desai
Mentor: Dr. Hansen Mansy (Mechanical and Aerospace Engineering)

Florida Electricity Prediction Using Machine Learning
Lily Schleider
Mentor: Dr. Qi Peng Phil Zheng (Industrial Engineering and Management Systems)

Thermal Performance of a Novel Flexible Cooling System
Tulio Tavares
Mentor: Dr. Shawn Putnam (Mechanical and Aerospace Engineering)

The Perception, Usage, and Knowledge of Moringa Oleifera in Mare-Brignol, Haiti after Increased Education and Access
Preethashree Anbukkarasu, Phillip Saad, Nichika Holdrum, Chinelo Germain, Leticia Emi Ebihara, Archi Patel
Mentor: Dr. Mary Schmidt-Owens (Biomedical Sciences)

Factors Associated with Diet Quality Scores Among Adult Cancer Survivors: Results from NHANES 2005-2016
Rachael Bernardo, Julia Velazquez
Mentor: Dr. Eunkyung Lee (Health Sciences)

Inter-Rater Reliability and Intra-Rater Reliability of Synchronous Ultrasound Imaging and Electromyography Measures of Lumbopelvic-Hip Muscle Complex
Courtney Caputo, Sarah Akbarpour
Mentor: Dr. L. Colby Mangum, Dr. Kristen Schellhase (Kinesiology and Physical Therapy)

The Effect of Interventions on Radiotherapy-induced Skin Toxicity in Breast Cancer Patients: A Systematic Review
Claudia Figueroa, Rose Gelin
Mentor: Dr. Eunkyung Lee (Health Sciences)

Hospital Footwear as a Vector for Organism Transmission
David Frederick
Mentor: Dr. Brian Peach (Health Sciences)

The Perception and Knowledge of E-Cigarette use among College Students
Kayla Garcia
Mentor: Dr. Katia Ferdowsi (Health Sciences)

Caring for Dying Infants: Health Care Provider Attitudes and Experiences with Neonatal Palliative Care
Marie Hamel
Mentor: Dr. Susanny Beltran (Social Work)

Grammatical Errors in Early Sentence Productions of 5-Year Olds Using Augmentative and Alternative Communication
Kasandra Hernandez
Mentor: Dr. Jennifer Kent-Walsh, Carolyn Buchanan (Communication Sciences and Disorders)

Understanding Medical Error in Surgical Stapler Use: A Philosophical and Scientific Analysis
Jacob Howard
Mentor: Dr. Luciana Garbayo (Philosophy)

The Effect of Estrogen on Diet Induced Obesity
Anna Jurlina
Mentor: Dr. Timothy Gilbertson (Biomedical Sciences)

The Relationship Between Community Health Worker Supply and the Rate of Preventable Hospitalizations of Rural Latinos with Diabetes
Danielle Mapp
Mentor: Dr. Judith Ortiz (Health Sciences)
Dr. Richard Hofler (Economics)

Effect of Short-term Vitamin D Supplementation on Blood Pressure in Vitamin D-deficient Hypertensive African American Adults
Anika Saxena King
Mentor: Dr. Keith Brazendale (Health Sciences)

Tobacco Control Policies at Ten Largest Public Universities in Florida and UCF Students’ Support for Smoke-Free Policy
Nour Tanbargi
Mentor: Dr. Julia N. Soulakova (Biomedical Sciences)

Identification of Wnt7a, Dkk2, Mixi1, and Rtl1 Genes as a Target of Alcohol-Induced Gene Repression in the Embryonic Heart: Implications for Congenital Defects Due to Maternal Binge Drinking
Shani Abraham, Chad Linda, Erika Lytle, Thuy Tien Nguyen
Mentor: Dr. Steven Ebert (Biomedical Sciences)

A Study of the Interaction Between Microplastics and Vibrio Parahaemolyticus in Coastal Aquatic Environments
Valentina Acosta Borreros, Stephanny Rodriguez Cordero
Mentor: Dr. Melanie J. Beazley (Chemistry)
Investigating the Relationship Between Hypothyroidism and Migraines and Potential Treatments
Alexandra Adair
Mentor: Dr. Camilla Ambivero (Biomedical Sciences)

Beer-o-Matics: A Bioinformatics Study of Biofilms and Microbes in Beer Lines
Laurie Agosto
Mentor: Dr. Sean Moore (Biomedical Sciences)

Identification of Druggable Targets and Efficacy for Treatment of Schwannomatosis
Abdulrahman Allaf
Mentor: Dr. Cristina Fernandez-Valle (Biomedical Sciences)

Beetle Babies: Investigating Effects of Polystyrene Consumption on Gut Microbiome Composition in Mealworms and Superworms
Victoria Allanson
Mentor: Dr. Anna Forsman (Biology)

What Factors Cause Congenital Heart Diseases in Fetuses During Pregnancy?
Ashante Antenor
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

The Effects of Agrochemical 2,4-D on Aedes aegypti Life History Traits
Alexandra Aybar, Muhammad Parupia
Mentor: Dr. Kenneth Fedorka (Biology)

Investigation of Planetesimal Formation through Granular Cohesion Experiments in Microgravity
Yeniz Azconovieta
Mentor: Dr. Joshua Colwell, Dr. Adrienne Dove (Physics)

Characterization of a Label-Free Fluorescent Assay for Point Mutation Discrimination based on Split Aptamers
Shannon Beaton
Mentor: Dr. Yulia Gerasimova (Chemistry)

Investigating the Effects of Green Light as an Alternative Treatment of Photophobia for Migraineurs
Jonathan Benjamin
Mentor: Dr. Camilla Ambivero (Biomedical Sciences)

In Situ Cultivation of Potential PAH Degrading Bacteria from Coastal Sediment
Kyle Benkel
Mentor: Dr. Melanie Beazley (Chemistry), Dr. Anna Forsman (Biomedical Sciences)

Sensing Symbiosis: Investigating a Link Between Magnetoattracted Bacteria and Cartilaginous Fishes using Genomics
Elizabeth Boggs, Anthony Hevia
Mentor: Dr. Robert Fitak (Biology)

Isolation and Characterization of Embryonic Stem Cell-Derived Exosomes as a Cell-Free Therapy
Salma Bouchibi
Mentor: Dr. Dinender Singla (Biomedical Sciences)

Nanoparticle Impact on Oogenesis using the Drosophila Model
Kirsten Bouck
Mentor: Dr. Laurence von Kalm (Biology)

Understanding the Molecular Effects of Polyamine Blockade Therapy in PDAC
Jasmine Brown
Mentor: Dr. Deborah Altomare (Biomedical Sciences)

Effect of Multiple Sclerosis on Cognition and the Positive Influence of a Cognitive-Occupation Based Program
Grace Bundz
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Investigating the Effects of Docosahexaenoic acid and Leptin Receptor Upregulation in Pediatric Leukemia
Jacqueline Conyers
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

The Role the Gut Microbiome Can Play in Amyotrophic Lateral Sclerosis
Kiera De Arellano
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Side effects of Cushing’s Syndrome on Pregnancy in Pregnant Female and Fetal Development
Camelia Del Valle
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Computational Methods Used in Preliminary Drug Design: Predicting Peptide Interactions with RNA Motifs
Laurence Dugan
Mentor: Dr. Kersten Schroeder (Biomedical Sciences)

The Effects of Sleep Deprivation on Mental Health and Neurological Disorders
Gabriella Fernandez
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Cross-Talk between PAINT-1 and the Tumor Suppressor Cluster miRNA 17-92a in Prostate Cancer
Elizabeth Fernandez Paz, Ayman Khatib
Mentor: Dr. Ratna Chakrabarti (Biomedical Sciences)

Investigating the Need for Gender-Based Treatment Protocols for Concussion in the Emergency Department
Destiny Fillmer
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Capabilities of Metal Extraction Along Florida Roads by the Sunflower Helianthus debilis
Mayerlin Fischbach
Mentor: Dr. Eric Goolsby, Dr. Chase Mason (Biology)

Investigating the Use of Gold Nanoparticles in Muscle Regeneration
Marco Foreman, Connor Harmon
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

How can it Live there? Ecological Niche Modeling of Helianthus using R
Maxwell Gebhart
Mentor: Dr. Chase Mason, Dr. Erik Goolsby (Biology)

Save the Bracts for Last
Kaley Haff
Mentor: Dr. Eric Goolsby (Biology)

The Role of 5-Alpha Reductase Inhibitors in the Chemoprevention of Prostatic Adenocarcinoma
Kevin Healey
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

The Mechanism of Pyroptosis: An Inflammation-Mediated Cell Death
Bruno Kallas
Mentor: Dr. Dinender K. Singla (Biomedical Sciences)
Frabin, a RhoGEF, Promotes Pancreatic Cancer Progression
Ayman Khatib
Mentor: Dr. Ratna Chakrabarti (Biomedical Sciences)

Psychedelic Medicine and the Attenuation of Depressive Symptoms
Andrew Laino
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Constitutively Active Rheb-mCherry Cloning Strategy for Co-Transfection in Neuronal Neuro2a and F11 Cell Lines
Leticia Lenkiu, Alex Balfour, Linda Gavric, David Engel
Mentor: Dr. Alicia Hawthorne (Biomedical Sciences)

Overcoming Plants Blindness: Tropisms
Caroline Luce, Logan McCaskill
Mentor: Dr. Rani Vajravelu (Biology)

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

Investigating the Potential Role of Dopaminergic Agonists in the Treatment of Uterine Fibroids
Mukonyo B, Valere L, Worley M Barb ar Mukonyo, Lynn-Caelle Valere
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Samantha Totty, Marissa Dyer, Nicole Hancock, Jillian Mezo
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Breishka Gomez
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Ashley Greindl
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Central Florida Farmers: Climate Change, Disaster Preparedness and Resilience
Maria Fernanda Grisales
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Swiping and Satisfaction: The Connection Between Relationship Origin and Relationship Satisfaction
Tanner Hess
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The Role of Grey Literature in the Successful Management of Cultural Heritage Resources on Federal Lands
Marilyn Hilton
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Caroline King, Jodi Lewis, Krupali Patel, Camille Robinson, Nefertari Elshiekh
Mentor: Dr. Alisa Smith (Legal Studies)

Working Memory Capacity in Trauma-Exposed Versus Trauma Unexposed Individuals
Isabella McLaughlin, Michaela Schaal
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Gabrielle Morales
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Charlotte Robinson, Simone Tripoli
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| **An Assessment of the Impacts of EPA Superfund Sites on Central Florida Residents**  
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Courtney Verna-Brown  
Mentor: Dr. Lori Walters (Simulation and Technology) |
| **Functional Fables and Fabulous Failures: Tradition, Definition, and Innovation**  
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Assessing Nutrient Removal Performance of Vegetated Filter Strips Using Water Quality Parameters
Andrew Corrado
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Co-Designing “Teenovate:” An Intergenerational Online Safety Design Team
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New Design for Shock Tube End Wall to Simultaneously Measure Pressure and Spectroscopic Emissions During Combustion of Fuels
Daniel Dyson
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Noninvasive Quantification of Muscle Health Using Dual EMG and MMG
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Rachel Hytovick
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Developing Arduino Code to Enhance Low-Level Sensing and Control of Agricultural Robotics
Jean Jerome
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Improved Mutation for Evolved Actor-Critic Based-Models in Deep Reinforcement Learning
Alec Kerrigan
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A Sustainable New Process for the Catalytic Removal of Toxic Mercury from Flue Emission
Zachary Loeb
Mentor: Dr. Anwar Sadmani (Civil, Environmental, and Construction Engineering)

Postmortem Hydrogen Cyanide Molarity Determination through Thiocyanate Detection Utilizing Silver Nanosensors via Colorimetric Analysis
Christian Lovell
Mentor: Debashis Chanda, Dr. Pablo Manuel Cencillo Abad (Physics)

Photo Induced Synaptic Behaviors Emulated in Monolayer MoS2 Devices for Neuromorphic Computing
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Quantifying Left Ventricular Strains During Late Filling to Understand Heart Failure
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Pinak Radeo, Oleksandra Myronenko
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Vibration vs Audio Cues Improving Reaction Time and Accuracy in Decision Making
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Sensor Integrated Novel Electric Portable Instrument [S.I.N.E(P.I)]; Trombone
Brian Smith, Narjess Husainy, Arnaldo Barreto
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Phosphor Thermometry for Measurements in Extreme Turbine Environments
Christopher Williamson, Khanh Vo
Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)
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Mentor: Dr. Cassie Lewis Odahowski, Dr. Kyle Riding (Health Sciences)

Factors Associated with Anosognosia in People with Comorbid Mental Health Conditions: An Integrative Literature Review
Tiffany Baula
Mentor: Dr. Leslee Damato-Kubiet, Dr. Angeline Bushy (Nursing)

How does Dehydration and Rapid Weight Loss Effect Cognition in Combat Sports Athletes During Competition
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Perceptions of Electronic Cigarette Usage and Vaping Among College Students
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Evaluating the Nutritional Status of Peruvian Born Children
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Jessica Jonas
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Factors Associated With Serum Phytoestrogen Levels Among Women With Breast Cancer
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Which Exercise is Better to Reduce Fatigue in Prostate Cancer: Aerobic or Resistance Training?
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Aerobic Exercise and Its Promising Therapeutic Effects on Parkinson’s Disease Pathogenesis
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The Effect of Obesity on the Mortality Rate of Coronary Heart Disease in Florida
Claire Maher
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Exploring the Effect of Performing Testicular Self-Examination on Tumor Stage Diagnosis
Michael Maresca
Mentor: Dr. Michael Rovito (Health Sciences)

Health Literacy and Health Information Seeking Behaviors of Students at the University of Central Florida
Abigail McWhorter
Mentor: Dr. Suha Saleh (Health Sciences)

Omar Ragab, Vanessa Kady
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Millennial Attitudes Toward Telehealth: An Integrative Literature Review
Hannah Gwyneth Tabora
Mentor: Dr. Leslee A. D’Amato-Kubiet (Nursing)

Creative Approaches to Meeting Diabetes-Related Needs in Florida Anudeep Udumula
Mentor: Dr. Judith Ortiz (Health Sciences)

Impact of Work-Life Balance on Health-Related Quality of Life Among College Students
Emily Vernet
Mentor: Dr. Suha Saleh (Health Sciences)

LIFE SCIENCES

The Role Circadian Rhythm Plays in Incidence of Myocardial Infarction
Samanta Abbott
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Behavioral Analysis of the Cryptoprocta ferox in an Ex-Situ Condition
Emilie Alfonso
Mentor: Frank Logiudice (Biology)

The Effect of Vitamin D and Changes in Short-Chain Fatty Acids on Multiple Sclerosis (MS)
Ariej Alkowni
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Investigating the Role Altered Circadian Rhythm Play in an Astronaut’s Gut Microbiome
Brianna Ariza, Kirsten Scheller
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Probing the Secondary Structure of Intrinsically Disordered Squid Reflectin Protein Through ssNMR
Harriet Austin
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E-cigarette Vapor Exposure Promotes Streptococcus Mutans Biofilm Formation
Matthew Caldwell
Mentor: Dr. Claudia Andl (Biomedical Sciences)

High Rates of Misdiagnosis of Pediatric Acute-Onset Neuropsychiatric Syndrome and How to Reduce Them: A Meta-Analysis
Aliya Centner
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Analysis and Classification of Lubricants using Fourier Transform Infrared Spectroscopy
Sharon Dale
Mentor: Dr. Candice Bridge (Chemistry)

Anthropogenic Changes: Impact on Wildlife Living in Florida Marshes
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Mentor: Dr. Linda Walters (Biology)

siRNA Knockdown of the Boris Protein utilizing Receptor-Mediated Endocytosis
Christina DeBarro, Brandon Kaye
Mentor: Dr. Robert Borgon, Nicole Verity (Biomedical Sciences)

Look & Smell Pretty? Correlates of Petal Carotenoid Content & Terpenoid Variation in Cultivated Helianthus
Bree-Alexandra Donley
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SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE | THURSDAY, APRIL 2

The Interactions Between Microplastic and Inorganic Biogeochemical Nutrients
Evan Duga
Mentor: Dr. Lisa Chambers (Biology)

Assessing Density and Diversity of Oyster Reef Resident Fishes Following Habitat Restoration
Katie Durham
Mentor: Dr. Geoffrey Cook (Biology)

Evaluating Green Turtle (Chelonia mydas) Differential White Blood Cell Counts in the Indian River Lagoon
Gianna Fanelli
Mentor: Dr. Kate Mansfield (Biology)

Extraterrestrial Plant Growth: Why Climate Change Is More Important Than the Colonization of Mars
Savanna Freeman, Hannady Halaby
Mentor: Dr. Rani Vajravelu (Biology)

Utilizing Potato Chip Waste for Intertidal Oyster Reef Restoration
William Giles
Mentor: Dr. Linda Walters (Biology)

Potential Benefits of CXL Treatment for Thinning Corneas Due to Contact Lenses
Nicole Hancock, Marissa Dyer, Jillian Mezo, Samantha Totty
Mentor: Dr. Camilla Ambivero (Biomedical Sciences)

Investigating the Potential Role of Dopamine in Regulating Growth of Gliomas
Connor Harmon, Marco Foreman
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

From Dwarfs to Giants: A Genome-Wide Association Study on the Growth Rate of Cultivated Sunflower (Helianthus annuus)
Austin Hart
Mentor: Dr. Chase Mason (Biology)

Exploring Alternative Therapies in the Treatment of Huntington’s Disease
Kenneth Hawkins
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Maternal Thyroid Dysfunction Effect on Brain Development During Pregnancy: Links to Autism Spectrum Disorder
Caroline Hobson
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Pollinator Populations: Impacts of Various Urban Landscapes on Pollinator Diversity
Elli Howard, Brooke Saitta, Shannon Murphy, Andrew Geml, Sophia Vermeulen
Mentor: Jennifer Elliott, Kelsie Johnson (Biology)

Developmental Effects of Terpenes on Vanessa Cardui at Varying Temperatures
Mari Irving
Mentor: Dr. Chase Mason (Biology)

Identifying Microplastic Abundances and Hotspots in the Guana, Tolomato, and Matanzas Rivers in northeast Florida
McKenna Keplinger
Mentor: Dr. Linda Walters (Biology)

Comparative Analysis of Creative Therapy for Opioid Addiction
Daniella King, Richard Shao, Jason Young
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Protein Disulfide Isomerase’s Role in the Inhibition of Amyloid Beta Aggregation
Jasmina Kovacevic
Mentor: Dr. Kenneth Teter (Biomedical Sciences)

Hoot for the Root - Urban Sandhill Tree Canopy Restoration
Nicole Kraemer, Tracy Alt, Savannah Leduc, Mariah Aponte, Sophia Hutton
Mentor: Jennifer Elliott (Biology)

The Combinatorial Effect of Constitutively Active Rheb and Taxol on Axon Outgrowth in Vitro on Inhibitory and Growth-Promoting Substrates
Cathy Le
Mentor: Dr. Alicia Hawthorne (Biomedical Sciences)

Investigating the Effects of Autonomous Sensory Meridian Response on Neurotransmitter Levels in Mental Health Patients
Elennie Lopez, John Nicho
Mentor: Melissa Worley (Biomedical Sciences)

The Transstadial Effects of Roundup on the Life History, Stress Response, and Immune Function of Aedes aegypti, the Yellow Fever Mosquito
Lindsay Martin
Mentor: Dr. Kenneth Fedorka (Biology)

Investigating Cerebrovascular Hemodynamics in Clinical Development of Alzheimer’s Disease
Ana Martins
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Role of Genetic Factors in Generalized Anxiety Disorder and Treatment Response
Sara Matiz
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Non-Coding RNAs in Lung Tumor Initiation and Progression
Ruben Mercado, Cerena Moreno
Mentor: Dr. Wencai Zhang (Biomedical Sciences)

The Role of dSLC12A8 in Polyamine Transport
Victoria Millington
Mentor: Dr. Laurence von Kalm (Biology)

Salmonella Smugglers: Investigating the Role that Migratory Birds Play in The Spread of Salmonella
Julia Nadeau Gneckow
Mentor: Dr. Anna Forsman (Biology)

Investigating the Role of ChREBP in Alcohol-Induced Congenital Heart Defects
Thuy Tien Nguyen
Mentor: Dr. Steven N. Ebert (Biomedical Sciences)

Clinical Efficacy of Novel Antibiotic Formulation-X is Demonstrated by Reduction in Crohn’s Disease Activity Index Score
Tarek Obeid
Mentor: Dr. Saleh Naser, Dr. Ahmad Qasem (Biomedical Sciences)

The Effect of Pesticides on the Foraging Behavior of Hymenoptera: A Systematic Review
Veronica Ospina, Whitney S. Stephen
Mentor: Dr. Chase Mason (Biology)

Investigating the Effects of an Altered Gut Microbiome in Diabetes
Pruthvi Patel
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)
Genetic Structure of Green Turtle (Chelonia mydas) Foraging Aggregations on the East Coast of Florida (USA)
Monica Reusche
Mentor: Dr. Kate Mansfield, Dr. Eric Hoffman (Biology)

Observational Study of Two Ex Situ North American River Otters (Lontra canadensis)
Julia Rifenberg
Mentor: Frank Logiudice (Biology)

The Effects of Roundup® on Disease Transferability Probability of Aedes aegypti
Jennifer Rote, Michele Crowhurst
Mentor: Dr. Kenneth Fedorka (Biology)

Population Dynamics of Microbial Communities Among Cystic Fibrosis Patients Receiving CFTR Modulator
Anita Samadabadi
Mentor: Dr. Taj Azarian (Biomedical Sciences)

De Novo Discovery of Pathogens in American Alligators
Jessica Scales
Mentor: Dr. Robert Fitak (Biology)

Involvement of RIP2 in ALOX5 Activation and Specialized Pro-Resolving Lipid Mediator (SPM) Production
Roopin Singh
Mentor: Dr. Justine Tigno-Aranjuez (Biomedical Sciences)

The Genetic Control of Mycorrhizal Colonization in Sunflower
Katherine Stahlhut
Mentor: Dr. Chase Mason (Biology)

Dried Whole-Leaf Tissue VS Homogenized Ground-Leaf Tissue: A Comparative Analysis of Predictive Reflectance-Based Models for Determining Nutrient Content
Milton Valdiviezo
Mentor: Dr. Chase Mason, Dr. Eric Goolsby (Biology)

Investigating the Role of Vitamin D in Alopecia Patients
Lynn-Caelle Valere, Barbara Mukonyo
Mentor: Melissa Worley (Biomedical Sciences)

Tracking the Lionfish Invasion Across the Indian River Lagoon using Environmental DNA
Katherine Viehl
Mentor: Dr. Michelle Gaither (Biology)

Exploring the Driving Factors Behind Mangrove Colonization of Oyster Reefs within Mosquito Lagoon
Megan Witt
Mentor: Dr. Linda Walters (Biology)

Physical Sciences and Mathematics

Understanding the Photoisomerization reaction of Tricyanofuran-type Metastable-state Photoacids
Mohamed Abdelrahim
Mentor: Dr. Karin Chumbimuni-Torres (Chemistry)

Sodium Analysis in Blood using Ion-Selective Electrodes
Cody Autrey
Mentor: Dr. Karin Chumbimuni-Torres (Chemistry)

Environmental Analysis for Further Economic Prosperity of St. Kitts and Nevis Dual-Island Nation
Morgan Baranek, Morgan Longieliere
Mentor: Dr. Michael Hampton (Chemistry)

Design and Characterization of a Portable Mini-CO2/VOC Sensor and Gas Chromatograph for Field Research
Rishi Basdeo
Mentor: Dr. Michael Hampton (Chemistry)

Reagentless Amplification of the Electrochemical Signal of a Biosensor for a cancer Biomarker in Serum Sample
Maria Boza
Mentor: Dr. Karin Chumbimuni-Torres (Chemistry)

Factors Contributing to Nucleic Acid Binding Dye Interactions with Single-Stranded DNA
Colin Campbell
Mentor: Dr. Yulia Gerasimova (Chemistry)

Algebraic and Combinatorial Approaches for Counting Cycles Arising in Population Biology
Brian Chau
Mentor: Dr. Zhisheng Shuai (Mathematics)

Novel Non-Precious Metal Catalyst for Vehicle Emission Control
Samantha Collier
Mentor: Dr. Shaohua Xia, Dr. Fudong Liu (Civil, Environmental, and Construction Engineering)

Development of Nonlocal Green Kubo Formalism with Applications to Heat and Mass Transport
Kevin Fernando
Mentor: Dr. Patrick Schelling (Physics)

Cell Design for Inclusion with IRAS of Thin-Film Aluminosilicate Model Regolith for Space-Weathering Studies
Jillian Gloria
Mentor: Dr. William Kaden (Physics)

Hybridization Light-Up Probes for Prediction of Nucleic Acid Base-Pairing
Mary Gomez
Mentor: Dr. Yulia Gerasimova (Chemistry)

Experimental Characterization of Hafnium Boride (HfB2), Zirconium Boride(ZrB2) and Hafnium-Zirconium Boride Samples
Daniel Harrison
Mentor: Dr. William Kaden (Physics)

Predicting h-BCN Geometric Structures using Clustering and Regression Methods
Sonali Joshi
Mentor: Dr. Talat Rahman (Physics)

Tuning the Dielectric Constant of Substitutional Solid State Materials
Kyle Langlois
Mentor: Dr. Fernando Uribe-Romo (Chemistry)

Predicting Diffusion Barriers of Ag Clusters on the Ag(111) Surface Using Machine Learning
Connor Malley
Mentor: Dr. Talat Rahman, Dr. Duy Le (Physics)
Numerical Investigation of Particle Physics and its Implications for Planetesimal Formation
Jeb Massaro
Mentor: Dr. Joshua Colwell (Physics)

Investigating the Effect of Caffeine Coated Quantum Dots of Cell Uptake
Ava Milani
Mentor: Dr. Swadeshmukul Santra (Chemistry)

DNA Nanorobots for Cancer Therapeutics
Caitlyn Niccum
Mentor: Dr. Dmitry Kolpashchikov (Chemistry)

How Unique is Almahata Sitta and How Relevant is it to Bennu?
Jennifer Nolau
Mentor: Dr. Humberto Campins (Physics)

Versatile Metallic Nanostructure for Enhanced Full Angle Independent Colorization
Juan Sebastian Perilla
Mentor: Dr. Debashis Chanda (Physics)

Impact of Information and Communication Technology Use on Loneliness among Older Adults
Taila Ben-Iulu, Nikia Crews
Mentor: Dr. Janan A. Smither, Dr. Daniel McConnell (Psychology)

Differences in Language Processing Between Monolinguals and Bilinguals as Determined by Biobehavioral Responses and Electrophysiology
Aaron Canafe
Mentor: Dr. Mustapha Mouloua (Psychology)

An Examination of Oppression Via Anti-Abortion Legislation
Saphronia Carson
Mentor: Dr. Kecenia Wright (Political Science), Dr. Anne Bubriski (Women’s and Gender Studies)

Loneliness and Parasocial Relationships with Video Game Characters
Radha Chebolu
Mentor: Dr. Janan Smither, Dr. Daniel McConnell (Psychology)

Assessing Risk Factors, Warning Signs, and Protective Factors Among Suicidal Youth by Race
Michael Cosare
Mentor: Dr. Kimberly Gryglewicz (Social Work)

Difficulties Sleeping and Loneliness: Qualitative Analysis
Nikia Crews, Taila Ben-Iulu
Mentor: Dr. Daniel McConnell (Psychology)

None of Your Business: Situational Antecedents of Knowledge Sharing and Warmth
Clayton Culbreth, Camila Velez De Jesus, Richelle Cruz Quetell
Mentor: Dr. Mark Ehrhart (Psychology)

Can Underdog Stories Help Students to Overcome Perceived College Barriers? A study on Gender and Ethnicity Differences
Daniela Gonzalez
Mentor: Dr. Alvin Wang (Psychology)

History of Combat Sports Involvement and Severity of Subtypes of Psychopathy
Allen Hagen
Mentor: Dr. Jeffrey Bedwell, Dr. Daniel McConnell (Psychology)

Voter Suppression and its Effects on Voter Participation
Corina Hajj
Mentor: Dr. Amy Reckdenwald (Sociology)

Effects of Stress on Prefrontal Cortex (PFC) Activity: Emotion Versus Pressure Based Stress on Top-Down Functioning During Attention Based Tasks
Dalaia Hernandez
Mentor: Dr. Joseph Schmidt (Psychology)

Mosquito Lagoon from a Bird’s-Eye View: Engaging Hospitalized Children in Citizen-Science to Investigate Threatened/Endangered Aquatic Bird Diversity and Abundance
Jacob Hromyak
Mentor: Dr. Linda Walters (Biology)

Competence and Warmth: Investigating the Relationships Between Perceived Traits and Perceiver Emotions and Behaviors During the Evaluation of Professionals
Tori Jansen
Mentor: Dr. Grace White (Psychology)

“I Got Your Back”: The Role of Social Support on Black Students’ Mental Health.
Chelsea Johnson
Mentor: Dr. Grace White (Psychology)

Positive Connections to Nature
Fatima Khan
Mentor: Dr. Daniel S. McConnell, Dr. Janan Smither (Psychology)

Ancient Gaming: Patolli Game Boards in Pre-Columbian Mesoamerica
Nicholas Kopp
Mentor: Dr. Brigitte Kovacevich (Anthropology)

Emotion Expression Suppression Relates to Lower Empathy
Chloe LaRochelle
Mentor: Dr. Jeffrey Bedwell (Psychology)

Too Worried to Sleep: The Effect of Present and Future Workload on Employee Sleep Quality
Angela Le, Zoe Politis
Mentor: Dr. Steve Jex (Psychology)

Examining the Relationship Between Relative Gender Composition of Peer Study Groups and Mathematics Self-Efficacy
Gustavo Lemos Moure
Mentor: Dr. Amy Reckdenwald (Sociology)

Prevalence Effects are not Driving Hazard Detection on the Road
Priscilla Louis, Minh Pham, Alexandra Figueroa Rodriguez, Bryan Medina
Mentor: Dr. Ben Sawyer, Dr. Katherine Rahill (Industrial Engineering and Management Systems)

Content Analysis of Community Doulas’ Impact on Women of Color with Low Incomes
Emely Matos
Mentor: Dr. Angela Vergara (Sociology)

An Analysis of “Lucky’s” Lake Cane
Jaire McNichols
Mentor: Dr. Peter Jacques (Political Science)

Profiles in Political Ideology: Why Are Women More Religious but Not More Conservative?
Keira Monaghan, Ceeara Carlos
Mentor: Jason Chesnut (Psychology)
Using Spatial Technology to Capture Cape Canaveral’s Past
Alexander Nalewaik, Summer Warren, Hannah JeanLouis
Mentor: Dr. Sarah Barber (Anthropology)

Event-Related Potentials Following Rare Visual Targets and Working Memory Ability in a Transdiagnostic Psychiatric Sample
Samuel Naranjo Rincon
Mentor: Dr. Jeffrey Bedwell (Psychology)

The Fungus Among Us: An Anthropological Analysis of Psilocybin-Assisted Retreats in Jamaica
Maria Orozco
Mentor: Dr. Shana Harris (Anthropology)

Intersectional Analysis; Effects of Active Shooter Drills on Students
Angelica Powell
Mentor: Dr. Anne Bubriski (Women’s and Gender Studies)

21st Century Engagement among UCF Students: Exploring Metrics & Platforms
Daniel Robles
Mentor: Dr. Aubrey Jewett (Political Science) Dr. Carolyn Massiah (Marketing)

Enhancing Learning Outcomes with Gamification
Dishanki Savla
Mentor: Dr. Kristin Horan, Dr. Steve Jex (Psychology)

Religiosity and Mental Illness
Eileen Stremming
Mentor: Dr. Shahram Ghiasinejad (Psychology)

Mistreatment on the Mind: The Impact of Mistreatment Characteristics on Deliberate and Intrusive Rumination.
Eram Syed, Magali Scotto Lavina
Mentor: Dr. Steve Jex (Psychology)
INDEPENDENT PROJECT PRESENTATIONS
POSTER SESSION III: 2:30 – 4 P.M.

ARTS AND HUMANITIES

Crafting Fables for the 21st Century
Sean Glatch
Mentor: Dr. Tyler Fisher (Modern Languages and Literatures)

Daughters of Lesbos: Exploring the Historical and Modern Impact of Hellenic Texts on Lesbian Neopagan Practitioners
Madeline Judy
Mentor: Dr. Jeanine Viau (Philosophy)

The Shoe Fits: The Cinderella Cycle and Women’s Voice
Farrah Kurronen
Mentor: Dr. Charlotte Tinquet du Lys (Modern Languages and Literatures)

Social Stigma and Substance Use Disorder in Albania
Eidiola Malkouari
Mentor: Dr. Yovanna Pineda (History)

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

Australian and New Zealand ANZACs of World War I: Public Memory and the Making of National Identity
Simran Pawar
Mentor: Dr. Amelia Lyons (History)

Exploring Creative Rigging Solutions for Non-Humanoid Skeletons
Alycia Robb
Mentor: Michael Cabrera (Visual Arts and Design)

An Ethical Study of the Modern Western Adolescent Transition of Care Model
Samuel Schepps
Mentor: Dr. Luciana Garbayo (Philosophy)

Examining Video Conversion and the Integration of 2D animation
Larisa Toledo-Delgado
Mentor: Michael Cabrera (Visual Arts and Design)

ENGINEERING, OPTICS AND PHOTONICS, AND COMPUTER SCIENCE

Ergonomics and Architecture in a Well-Designed Hospital Environment
Natalie Verdiguier
Mentor: Tommy James (Visual Arts and Design)

Evaluation of Lift with Wing Icing
Patricia Baker
Mentor: Dr. Michael Kinzel (Mechanical and Aerospace Engineering)

Single Sensor Fiber-Based High-Speed Tomographic 4D Particle Image Velocimetry
Alexander Bazzi
Mentor: Dr. Kareem Ahmed (Mechanical and Aerospace Engineering)

Validation of Prism Layer Design in 2-D Incompressible Flow Modeling
Joshua Bentley
Mentor: Dr. Michael Kinzel (Mechanical and Aerospace Engineering)

Chalcogenide Fiber Bundle for Large Field of View Thermal Imaging
Austin Brigham
Mentor: Dr. Kyle Renshaw

Intelligent, Interactive and Intuitive Autonomous Robotic Cart (I3ARC)
Joao Pedro Cilento Lopes
Mentor: Dr. Joon-Hyuk Park (Mechanical and Aerospace Engineering)

Virtual Brain Tingles: Exploring Augmented Reality Induced Autonomous Sensory Meridian Response
Alyssa Feagans
Mentor: Dr. Gregory Welch (Computer Science)

Characteristics of a Reacting Jet-in-Crossflow at Elevated Pressures
Max Fortin
Mentor: Dr. Kareem Ahmed, Dr. Nina Orlovskaya (Mechanical and Aerospace Engineering)

Examining Potentially Harmful Viral Social Media Challenges on Reddit
Amy Godfrey, Maria Lopez
Mentor: Dr. Pamela Wisniewski (Computer Science)

Laser Speciation Measurements During Shock Tube Ignition of Cyclic Jet and Rocket Fuel Components
Robert Greene
Mentor: Dr. Subith Vasu

Probing the Effects of Substrate Stiffness on Endothelial Cell Adhesion and Spreading Mechanics
Jovani Gutierrez
Mentor: Dr. Robert Steward Jr. (Mechanical and Aerospace Engineering)

The Effect of Altering PDMS Solutions on Hemiwicking
Manuel Hernandez
Mentor: Dr. Shawn Putnam (Mechanical and Aerospace Engineering)

Exploring Airfoil Designs for Flight Efficiency Optimization of a Subsonic Cruise Missile
Hannah Jarrett
Mentor: Dr. Michael Kinzel (Mechanical and Aerospace Engineering)

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

Evaluating the Importance of Domain Knowledge in Extractive Meeting Summarization Systems
Jia Jin Koay
Mentor: Dr. Fei Liu (Computer Science)

Using Weather Predictions and MODBUS Microcontroller for Energy Distribution in a Small Community Net Zero Grid
Lynn Komarek, Francis Olearczyk
Mentor: Dr. Qun Zhou (Electrical and Computer Engineering)

Fabrication of Metal Biopolymer Composite Electrochemical Sensor for Heavy Metal Detection in Water
Hew-Tun Li
Mentor: Dr. Hyoung Jin Cho, Dr. Pawan Pathak (Mechanical and Aerospace Engineering)
Evaluating a Space Vehicle User Interface with UX Methodologies
Thomas Lukas, Timothy Dinh
Mentor: Dr. Pamela Wisniewski (Computer Science)

A Comparison Of Virtual Reality and Augmented Reality as Educational Tools
Matthew MacKinnon, Kevin Galeano
Mentor: Dr. Joseph J. LaViola Jr. (Computer Science)

A Qualitative Examination on Adolescents’ Support Seeking for Online Sexual Experiences
Madison Maynard
Mentor: Dr. Pamela Wisniewski (Computer Science)

Applications of Machine Learning Bias Correction Algorithms for Predictions of Hurricane Storm Surge Risk
Joel Montano
Mentor: Dr. Talea Mayo (Civil, Environmental, and Construction Engineering)

Manufacturing and Optimization of Self-assembled Metallic Nanoparticles Using Thin-Film Deposition Techniques
Leidy Moreno, Ilina Sunkara
Mentor: Dr. Debasish Chanda (Optics and Photonics)

Online Peer Support for Adolescent Online Sexual Experiences: An Analysis of Digital Trace Data
Pia Nelson, Gabriel Laaroussi, Gabriela Mariz
Mentor: Dr. Pamela Wisniewski (Computer Science)

Performance of Ultra-High Performance Concrete Shells for Use in Concrete Beams and Columns
Bolivar Perez
Mentor: Dr. Kevin Mackie (Civil, Environmental, and Construction Engineering)

Impacts of Climate Change on Wave Energy Conversion and Coastal Erosion
Kelsey Perez
Mentor: Dr. Talea Mayo (Civil, Environmental, and Construction Engineering)

Heart Modeling and Identification of Scar Tissue based on Cardiac Diffusion Tensor Imaging
Munish Persaud, Maria Bower
Mentor: Dr. Luigi Perotti (Mechanical and Aerospace Engineering)

Sample Generating Apparatus for the Chemical Profiling of Tire Traces
Kestrel Pournchat
Mentor: Dr. Luigi Perotti (Mechanical and Aerospace Engineering)

Assessment of Correlation between Learning Diagnostics and Performance in Simulated Tasks through Machine Learning-Based Techniques
Geela Margo Ramos
Mentor: Dr. Stephen Fiore (Philosophy), Dr. Gita Sukthankar (Computer Science)

Optimizing a Parabolic Solar Trough’s Receiver
Adil Riahi
Mentor: Dr. Shawn Putnam (Mechanical and Aerospace Engineering)

Defining an Effective Heat Transferring Metamaterial via Van der Waals Forces
Bianca Rosendahl
Mentor: Dr. Shawn A. Putnam (Mechanical and Aerospace Engineering)

Applications of Augmented Cognition in Cyber Security
Andres Rosero, Corey Walton
Mentor: Dr. Ryan Wohleber, Samantha Napier (Simulation and Technology)

Improving the Range Performance of Infrared Imagers
Jasper Rowe
Mentor: Dr. Ronald Driggers (Optics and Photonics)

Tech Talk: Examining Factors that Influence How Teens and Parents Perceive Their Communication about Teen Internet Use
Tara Rutkowski
Mentor: Dr. Pamela Wisniewski (Computer Science)

Statistical and Lifetime Characterization of PTFE Materials for Extreme Environments
Sannmit Shinde
Mentor: Dr. Ali Gordon (Mechanical and Aerospace Engineering)

Characterization of Coal Ash: Identifying the Constituents of Ash Samples
Nino Stea, Alexandra Lobanova
Mentor: Dr. Debra Reinhart (Civil, Environmental, and Construction Engineering)

Direct-Contact Biocompatibility Analysis of Additive Manufactured WE-43 Magnesium Alloy
Taylor Toth
Mentor: Dr. Stephen J. Florczyk (Materials Science and Engineering)

Understanding Urban Traffic Congestion through Uber Movement Using Non-parametric Regression Approach
Jorge Ugan
Mentor: Dr. Mohamed Abdel-Aty, Dr. Samiul Hasan (Civil, Environmental, and Construction Engineering)

A look at the Role in Temperature in Wicking Performance on a Microstructured Surface
Anthony Villegas
Mentor: Dr. Shawn Putnam (Mechanical and Aerospace Engineering)

Long-Term Outcomes of Neonatal Herpes Simplex Virus Infection and Treatment
Genesis Brador
Mentor: Dr. Humberto López Castillo, Dr. Michael Rovito (Health Sciences)

Effectiveness of a Mindfulness Meditation App on Those with Intellectual Disabilities Enrolled in a Post-Secondary Education Program
Michele Guillard, Madelyn Maschhoff, Kaylan Kelly, Taylor Duffy, Audley Ridley, Cristal Rivera
Mentor: Dr. Keith Brazendale (Health Sciences)

A Quantitative Analysis of Loneliness and Somatic Symptoms
Luciana Jones
Mentor: Dr. Janan Smither, Dr. Daniel McConnell (Psychology)

Possible Misdiagnosis of Deep Vein Thrombosis After Acute Achilles Tendon Rupture in a Collegiate Recreational Athlete
Stephen LeStrange
Mentor: Dr. L. Colby Mangum, Dr. Kristen Couper Schellhase (Kinesiology and Physical Therapy)

Reported Exercise Enjoyment of Upper-Body and Lower-Body Cycling Exercise
Shanelle Osorio
Mentor: Dr. David Fukuda (Kinesiology and Physical Therapy)

Optimizing Transcranial Magnetic Stimulation Research Methodology: How Many Pulses are Necessary to Minimize Interpulse Variability in Corticospinal Excitability?
Jason Pagan
Mentor: Dr. Matt Stock (Kinesiology and Physical Therapy)
Tobacco Use Disparities by Sexual and Gender Minority Status Among UCF Students
Parth Patel
Mentor: Dr. Julia N Soulakova (Biomedical Sciences)

The Fighting Journey of the Premature Baby: A Systemic Review
Dana Patel
Mentor: Dr. Katia Ferdowsi (Health Sciences)

Exploring the Impact of Pre-Exposure Prophylaxis Related to Sexual Behavior in College Men
Dalton Poe
Mentor: Dr. Christa Cook (Nursing)

Blood Pressure Responses to Lower And Upper Cycling Exercises
Hillary Porto
Mentor: Dr. David Fukuda (Kinesiology and Physical Therapy)

Association Between Central Motor Conduction Time and Rapid and Absolute Grip Strength in Older Adults
Gabriela Rodriguez
Mentor: Dr. Matt Stock, Dr. Nicole Dawson (Kinesiology and Physical Therapy)

Cold Water Immersion Yielded Decreased Perception of Delayed Onset Muscle Soreness within Elite Athletes Over Contrast Therapy Immersion: A Critically Appraised Topic
Danielle Scognamiglio, Andrew Schewitzer, Kameelah Jade Belgrave, Amaris McLendon
Mentor: Dr. Lauren Colby Mangum (Kinesiology and Physical Therapy)

The Impact of Food Insecurity in Puerto Rico After Hurricane Maria
Valeria Sostre
Mentor: Dr. Humberto López Castillo (Health Sciences)

Relationship Between Executive Function and Postural Control
Lara Suarez
Mentor: Dr. Nicole Dawson (Kinesiology and Physical Therapy)

The Impact of Virtual Reality on Chronic Pain Management
Alexis Whitehead
Mentor: Dr. Kelly Allred (Nursing)

Using eDNA to Test Whether Cuban Tree Frogs (Osteopilus septentrionalis) Can Amplify the Amphibian Pathogen Perkinsea
Matthew Blow
Mentor: Dr. Anna Savage (Biology)

The Effects of Salinity on Kidney Histology in Coastal vs. Inland Alligators
Sara Brunner
Mentor: Dr. Eric Hoffman (Biology)

Defining the Role of a SenX3-RegX3 Orthologous Two-Component System in Mycobacterium Abscessus
Christian Castano
Mentor: Dr. Kyle Rohde (Biomedical Sciences)

Systematic Genetic Analysis of L,D-Transpeptidases in M. Abscessus and M. Smegmatis as Synergistic Targets for Beta-Lactam Antibiotics
Isabella Castellano, Nivas Patel
Mentor: Dr. Kyle Rohde (Biomedical Sciences)

Tinnitus’s Effect on Mental Health
Farzon Danesh
Mentor: Dr. Kersten Schroeder (Biomedical Sciences)

A Plant-Based Diet and its Effects on Cardiovascular Diseases
Seena Darwish, Sara Darwish
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Screening Temperate Woody Plants for Aluminum Hyperaccumulation and Exclusion
Dashiel Desravines
Mentor: Dr. Chase Mason (Biology)

Acknowledging Conservative Options to Knee Arthritis Surgery in Elderly Patients
Mostafa Diab, Eric Singh
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Role of Antioxidant Therapies in the Prevention and Treatment of Diabetic Retinopathy
Carlos Diaz
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

The Effects of the Gut Microbiome in Hypothyroid Patients
Safa El-Ali
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Quantifying the Mutagenic Potential of BPA Analogs on Mouse L-Fibrolast Cell Lines in vitro
Eric Neil Emperio, William Hudson Shaw, Joseph Sullivan
Mentor: Dr. Alicia Hawthorne, Dr. Emily Bradshaw (Biomedical Sciences)

Using Genetics to Understand Hybridization and Immunogenetic Variation in Cyclura Iguanas
Noah Fabiano
Mentor: Dr. Anna Savage (Biology)

Developing an eDNA Tool for Monitoring the of Dwindling Dwarf Seahorse (Hippocampus zosterae)
Tara Fellows
Mentor: Dr. Michelle Gaither (Biology)

Using DNA Barcoding to Understand the Evolution of Plant Physiology Through a National Survey of Mycorrhizae and Wild Sunflower Associations
Gillian Gomer
Mentor: Dr. Chase Mason (Biology)

Integrative Taxonomy Reveals Cryptic Amphibian Diversity in the Tropical Andes of Ecuador
Brittney Gray
Mentor: Dr. Anna Savage (Biology)

Investigating the Persistence of Stress and its Relationship to the Development of Chronic Migraine
Collin Harris
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Role of Monoclonal Antibodies in Treating Migraine
Amin Kordian
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Elucidating the Value Of Skin, Blood, and Fibropapilloma Samples For Detecting Herpesvirus In Chelonia mydas
Tamara Lee
Mentor: Dr. Anna Savage, Dr. Kate Mansfield (Biology)

Utilizing Wildlife Cameras to Identify Vertebrate Behaviors and Abundance on a Living Shoreline in Canaveral National Seashore
Jason Litwak, Julià Rifenberg
Mentor: Dr. Linda J. Walters (Biology)

The Search for Groundcover
Katlyn McCoy, Colin Kelley, Karyssa Kemp, Desdemona Kurowski, Kristi Malanga
Mentor: Jennifer Elliott (Biology)
Tissue-Specific Regulation of Pnmt by Intron Retention During Neural Development
Meeti Mehta
Mentor: Dr. Steven Ebert (Biomedical Sciences)

Potential Role of SSRI Usage by Mothers Leading to Increasing Risk of Autism in Children
Jillian Mezo, Marissa Dyer, Nicole Hancock, Samantha Totty
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Synthesis of IL-6/gp130 Protein-Protein Interface Small Molecule Inhibitors
Alyssa Mickle
Mentor: Dr. Chenglong Li (University of Florida)

Therapeutic Strategies Targeting Immunological Factors to Reduce Multiple Sclerosis Progression and Relapse Rate Occurrence
Selena Miranda
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Identification of the region in protein disulfide isomerase that is responsible for the disassembly of cholera toxin
Daisy Mora, Elizabeth Torres, Elisabeth Emory, David M Caraballo Delgado, Antonio Mele, Antonio Torres
Mentor: Dr. Kenneth Teter (Biomedical Sciences)

Memory T Cell Regulation of Innate Lymphoid Cell Repair Proteins Following Influenza A Virus Vaccination and Infection
Mate Nagy
Mentor: Dr. Tara M. Strutt (Biomedical Sciences)

Effect of Vitamin D and Beta Interferon in Multiple Sclerosis Patients
Anvita Nath
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Terpenoid Diversity of Rhododendron
Lindsay Plyler
Mentor: Dr. Eric Goolsby (Biology)

Sea Turtle Nesting Behavior and Incubation Duration in Response to Increasing Storm Severity
Jessica Provenzano
Mentor: Dr. Kate Mansfield (Biology)

The Catbird Climate Conundrum: Is Climate Change Affecting the Gray Catbird?
Lauren Puleo
Mentor: Dr. Anna Forsman (Biology)

Synthesis of IL-6/gp130 Protein-Protein Interface Small Molecule Inhibitors
Alyssa Mickle
Mentor: Dr. Chenglong Li (University of Florida)

Role of Polyplody in Leaf Functional Traits and Secondary Metabolite Evolution Across Wild Helianthus
Anestacia Robinson
Mentor: Dr. Chase Mason (Biology)

Prospecting for Pathogens: De Novo Pathogen Discovery in Burrowing Owls
Coral Robson
Mentor: Dr. Robert Fitak (Biology)

Biomedical Applications of Quantum Dot Nanoparticles in Breast Carcinoma
Alexa Rodriguez
Mentor: Melissa Worley (Biomedical Sciences)

Investigating the Role of Alpha-Lipoic Acid Supplementation in Glioblastoma Multiforme
Thalia Romero
Mentor: Dr. Camilla Ambivero (Biomedical Sciences)

Optimization of Western Blots
Briana Marie Rosado, Ruben Mercado
Mentor: Nicole Verity, Dr. Robert Borgon (Biomedical Sciences)

Synergistic Effect of PI3K Inhibitors on Neurofibromatosis Type-2 Schwannomas
Elie Ruiz
Mentor: Dr. Cristina Fernandez-Valle (Biomedical Sciences)

Surgical Interventions in the Treatment of Laryngeal-Esophageal Clefts
Sumeen Sajid
Mentor: Dr. Raheleh Ahangari (Biomedical Sciences)

Retinal Sensitivity of Hormonally Modulated Hyla cinerea Using Electrophysiological Techniques
Ashley Santana
Mentor: Dr. Hamilton Farris (Louisiana State University)

Investigating the Role of Gut Microbiome in Post-traumatic Stress Disorder
Kirsten Scheller, Brianna Ariza
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

The Hunt for Novel Antimalarials: 2-Styrylquinoline Derivatives as Plasmodium Parasite Inhibitors
Justin Shaw
Mentor: Dr. Debopam Chakrabarti (Biomedical Sciences)

Use Of Brn3a-Lacz Reporter Mice to Study Sensory Neuron Innervation in Familial Dystautonomia Model
Isabel Silva
Mentor: Dr. Ioannis Dragatsis (University of Tennessee)

Identifying Pathways Affected by an RNA Helicase Using a Synthetic Lethal Screen
Brandon Simons
Mentor: Dr. Sean Moore (Biomedical Sciences)

Surveying Endogenous Regions for Varying Epigenetic Regulation via a Novel Suntag-dCas9 System
Anishaa Sivakumar
Mentor: Dr. Yoon-Seong Kim (Biomedical Sciences)

Effects of Vitamin E Vapor on Cell Growth/Death Patterns
Valorie Smith, Brian Brady
Mentor: Nicole Verity, Dr. Robert Borgon (Biomedical Sciences)

Understanding Crohn’s Disease: Treatment Efficacy and Comparison of Stress Induced Crohn’s Disease
Jaynlynn Sosa
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

Investigating the Effects of Vitamin D Supplementation on Testosterone Levels in Males
Isabella Stamas, Michaela Carson
Mentor: Dr. Camilla Ambivero (Biomedical Sciences)

Analysis of Auranofin’s Antimicrobial Activity Against Clostridioides Difficile
Noah Stoeckel
Mentor: Dr. William Self (Biomedical Sciences)
Utilizing Cinnamon Aldehyde to treat the associated comorbidities of Obesity and Obesity-Independent Type 2 Diabetes among Asian Indian Population
Holiyan Suresh
Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

A Comparative Study on Varying Varroa Destructor Sampling and Monitoring Methods on Our Locally Adapted Apis mellifera Population
Ghada Swissi
Mentor: Dr. Patrick Bohlen (Biology)

Investigating the Effects of UV Filters in Sunscreens on Human and Environmental Health
Brittany Thompson
Mentor: Dr. Melinda Donnelly, Dr. Linda Walters (Biology)

Relationship Between Rising Atmospheric CO2 Levels, Environmental Conditions, and Tree Productivity
Alyssa Uebele
Mentor: Dr. Oleksandra Hararuk (Biology)

Discovering Novel Fast-Acting Cytocidal Antimalarial Compounds by Incorporating Fluorescence-Activated Cell Sorting into Rate-of-Killing Assays
Joshua Welden
Mentor: Dr. Debopam Chakrabarti (Biomedical Sciences)

Evaluation of Human Platelet Lysate as a substitute for Fetal Bovine Serum in NK Cell culture
Elizabeth Williamson
Mentor: Dr. Alicja Copik (Biomedical Sciences)

Characterization of B-field Effects on Late-Time Rayleigh-Taylor Growth
Zoe Barbeau
Mentor: Dr. Kumar Raman (Lawrence Livermore National Laboratory)

The Effects of Vacuum Conditions in the Mechanical Properties of Regoliths
Dennis Corraliza
Mentor: Dr. Julie Brisset (Florida Space Institute)

Self-Healing Polymer Composition and Associated Uses US-2020-0040184-A1
Ezat El-Said
Mentor: Dr. Gang Chen (Chemistry)

Searching for Gentamycin Resistance Using a Split-G4 Probe in Escherichia coli
Michael Greenberg
Mentor: Dr. Yulia Gerasimova (Chemistry)

The Extraction of Glitter and Shimmer from Cosmetics for the Analysis of Particles Transferred during Close Personal Attacks
Velda Iskandar
Mentor: Dr. Candice Bridge (Chemistry)

Study of Molecular Aggregation of Curcumin in Solution using UV-vis, Fluorescence Emission, and Lifetime Spectroscopy
Miranda Londono
Mentor: Dr. Florencio Eloy Hernández (Chemistry)

Thermal Extraction of Water Ice from the Lunar Surface - A 3D Numerical Model
Thomas Miletich
Mentor: Dr. Julie Brisset (Florida Space Institute)

Determining the Variance of Human Hair Features for Forensic Examination
Jillian Morgan
Mentor: Dr. Candice Bridge (Chemistry)

Understanding Lunar and Asteroid Surfaces using SLOPE, a Parabolic Flight Experiment
Alexander Nicola, Austin Rothermich
Mentor: Dr. Adrienne Dove (Physics)

Is Water-ice Subsisting Inside Certain Asteroids?
Aracelis Partida
Mentor: Dr. Julie Brisset (Physics)

Applications of Edge Detection Techniques to Spectroscopic Data Analysis
Luis Persaud
Mentor: Madhab Neupane (Physics)

Determination of Formaldehyde Derivative in Embalming Fluid using Direct Analysis in Real Time-Mass Spectrometry and Solid Phase Microextraction
Lauktona Rimpel
Mentor: Dr. Candice Bridge (Chemistry)

Designing an Interstellar Dust Cloud Simulator
Courtney Scalf
Mentor: Dr. Julie Brisset (Florida Space Institute)

Precise Measurement of Transmission and Phase Transitions in Stimuli-Responsive Polymers
Austin Schrader
Mentor: Dr. Alfons Schulte (Physics)

Attosecond X-rays Beyond Oxygen K-edge for Probing Charge Motions in Condensed Matter
David Smerina
Mentor: Dr. Zenghu Chang (Physics)

Pulling a DNA through a Double-Nanopore system: A Brownian Dynamics Study
Peter Smucz
Mentor: Dr. Aniket Bhattacharya (Physics)

Theoretical Calculations of Infrared Intensities and Raman Activities of NxOy (x=1-2, y = 1-5) Compounds
Sarah Swiersz
Mentor: Dr. Christopher Bennett (Physics)

Functional Decision Theory in an Evolutionary Environment
Noah Topper
Mentor: Dr. Eric Schmidbauer (Economics)
**SOCIAL SCIENCES**

- **Social Anxiety and Sexual Victimization: The Roles of Assertiveness, Gender, and Race?**
  - Samantha Berg
  - Mentor: Dr. Amie Newins (Psychology)

- **Deindustrialization and Voting Behavior in Ohio Rust Belt Counties**
  - Casey Craig
  - Mentor: Dr. Barbara Kinsey (Political Science)

- **Reaction Time Analysis of Emotional Perception in Lonely and Socially Isolated Individuals**
  - Joel Davies
  - Mentor: Dr. Janan Smither, Dr. Daniel McConnell (Psychology)

- **Analyzing Arabs versus Western Political Speeches on Terrorism**
  - Ranya Eid
  - Mentor: Dr. Gunes Murat Tezcur, Dr. Bruce Farcau (Political Science)

- **Elaboration in the Bi-cultural Identity Narratives of Emerging Adults: Relations to Identity Development, Perceived Academic Competence and Psychological Well-Being**
  - Betsy Gallardo
  - Mentor: Dr. Widaad Zaman (Psychology)

- **Interviewer Gender Effects in the Afrobarometer Survey**
  - Carla Garcia
  - Mentor: Dr. Cristina Bodea (Michigan State University)

- **Determining Patterns of Diet Domestication through Trace Element Analysis**
  - Stefani Hammond
  - Mentor: Dr. Lana Williams (Anthropology)

- **Past and Present: The Level of Childhood Trauma and its Possible Effects on Adult Romantic Relationships**
  - Kathleen Hassanpur
  - Mentor: Dr. Grace White (Psychology)

- **Loneliness and its Effects on the Interpretation of Emojis**
  - Kaitlin Higby
  - Mentor: Dr. Janan Smither (Psychology)

- **Implementation of Social Presence Evaluation within HRI: An Intersubjective Approach**
  - Sean Hinkle
  - Mentor: Dr. Janan Smither, Dr. Daniel McConnell (Psychology)

- **Using Survey Research Methods to Examine the Relationship Between Education Level and Motivations to Volunteer**
  - Jenna Jacobs
  - Mentor: Dr. Maritza Concha (Public Administration)

- **Factors Mediating Millennial Ethical Fashion Consumption**
  - Sheldine Louisjuste
  - Mentor: Dr. Amy Reckdenwald (Sociology)

- **Domestic Migrant Workers in Lebanon: Factors Influencing a Precarious Position**
  - Jasmine Masri
  - Mentor: Dr. Gunes Murat Tezcur, Dr. Konstantin Ash (Political Science)

- **An Analysis of Factors Present in the Obstruction of Energy Transition in the United States**
  - Nathaniel Miller
  - Mentor: Dr. Peter Jacques (Political Science)

- **Lived Experiences and Concomitant Somatic Symptoms of Loneliness**
  - Bahia Mohd
  - Mentor: Dr. Janan Smither and Dr. Daniel McConnell (Psychology)

- **Adverse Childhood Experiences, Sensation Seeking, and Substance Abuse Among College Students**
  - Javier Molina, Rachel Fidel, Jenna Russo
  - Mentor: Dr. Kimberly Renk (Psychology)

- **Are You Interested in Graduate School? You May Want to Know About Coping Stress Mechanism**
  - Sandra Montenegro
  - Mentor: Dr. Steve Jex (Psychology)

- **Examining Momentary Emotional Functioning on Drinking and Non-Drinking Days**
  - Katie Moskal
  - Mentor: Dr. Robert Dvorak (Psychology)

- **Psychological Distress Patterns in Second-Generation Immigrants**
  - Nicole Palmeri
  - Mentor: Dr. Grace White (Psychology)

- **Meaning Making in Migration Experiences of Hispanic-American Students: Effects on Psychological Health**
  - Kristina Parras, Aaron Geril
  - Mentor: Dr. Widaad Zaman (Psychology)

- **The Effectiveness of U.S. Military Aid to Non-State Actors**
  - Alexi Sadaka
  - Mentor: Dr. Andrew Boulton (Political Science)

- **A Comparison in the Health of Puerto Ricans Before and After Hurricane María**
  - Rebecca L. Sanchez, Adriana K. Solla
  - Mentor: Dr. Fernando Rivera (Sociology)

- **Centrality to Identity in the Identity Narratives of Hispanic-American Emerging Adults: Relations to Psychological Well-Being**
  - Piper Schroeder, Tayana Rich, Destiny Fillmer
  - Mentor: Dr. Widaad Zaman (Psychology)

- **An Updated Examination of the Psychometric Properties of the Post-Event Processing Inventory (PEPI)**
  - Tiara Smith, Christian Clevenger
  - Mentor: Dr. Brian Fisak (Psychology)

- **The Hunt for Nathan Penny: The Unsolved Mystery of the Penny Family Cemetery in Cape Canaveral, Florida**
  - Lauren Sweat, Brittney Panzone, Emma Delis
  - Mentor: Dr. Amanda Groff (Anthropology)
Sexual Minorities’ Motives for Prescription Drug Misuse
Caralyn Tenney, Kelsey Boyd
Mentor: Dr. Jason Ford (Sociology)

How Free is Free?: Restrictive Agency and Optimism
Mel Tornin
Mentor: Dr. Grace White (Psychology), Dr. Karina Cespedes (Philosophy)

Feeling Accepted in the LGBTQ+ Community and the Influence on Your Authenticity of Oneself
Tammy Van
Mentor: Dr. Grace White (Psychology)

The Connection Between YouTube and The Alt-Right Pipeline: The Use of Humor as a Mechanism to Mainstream White Supremacy Ideology
Alexis Williams
Mentor: Dr. J. Scott Carter (Sociology)

Adapting Accessible Narratives
Olivia Damm
Mentor: Dr. Brenda Peynado (English)

A New Experimental Setup for In-Plane Torsion Testing of Lightweight Metal Sheets
Connor Hack
Mentor: Dr. Yuanli Bai (Mechanical and Aerospace Engineering)

Using eDNA to Determine Distribution of the Non-native Charybdis hellerii in the Indian River Lagoon
Karin Shull
Mentor: Dr. Michelle Gaither (Biology)