

THE SYMPOSIUM FOR

STUDENT

INNOVATION, RESEARCH,

and

CREATIVE ACTIVITIES



APRIL 25, 2025

UNIVERSITY CENTER



**RESEARCH &
INNOVATION**

Dear Students, Colleagues, and Friends,

Welcome to the 2025 Symposium for Student Innovation, Research, and Creative Activities! Today, we come together to celebrate curiosity, creativity, and the bold pursuit of new ideas. This symposium is more than just an event—it is a space for discovery, dialogue, and the exchange of knowledge that pushes boundaries and sparks innovation.

We extend our deepest gratitude to all who have contributed to the success of this symposium. Your support and dedication create opportunities for students to explore, challenge assumptions, and grow as scholars and creators.

To all participants—this is your platform to share your insights, connect with peers, and gain fresh perspectives. Dive into discussions, embrace new challenges, and make the most of this opportunity. We hope this experience ignites your passion and fuels your journey toward future discoveries!

Sincerely,
Members of the SSIRCA Organizing Committee

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Need help? Visit the Q&A Table in the Tejas Lounge for assistance.

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Michelle Eisenman	JinSun Kim	Aleena Roy	Guang Zeng
Luis Espinoza	Boram Lim	Chris Salazar	Liwen Zeng
			Lihua Zuo

SSIRCA KEYNOTE SPEAKER

April 25, 2025 | 3-4 p.m. | UC Lonestar Ballroom

Dr. Stuart Firestein **The Optimism of Scientific Uncertainty**

It may seem odd to pair the words optimism and uncertainty, but Dr. Stuart Firestein will show how in science they are perfect partners.

Dr. Stuart Firestein is the former Chair of Columbia University's Department of Biological Sciences where his laboratory studies the vertebrate olfactory system, showcasing research of the general principles and mechanisms of signaling and perception in the brain.

Firestein serves as an advisor for the Alfred P. Sloan Foundation's program for the Public Understanding of Science. In 2011 he received the Lenfest Distinguished Columbia Faculty Award for excellence in scholarship and teaching. He is a Fellow of the AAAS, an Alfred Sloan Fellow and a Guggenheim Fellow. He serves as a member of the (visiting) Fractal Faculty at the Santa Fe Institute. At Columbia he is on the Advisory boards of the Center for Science and Society (CSS) and the Presidential Scholars in Society and Neuroscience.

He has published two books on the workings of science for a general audience, *Ignorance, How it Drives Science* and *Failure: Why Science is So Successful*. He is a board member and regular contributor to Nautilus magazine.



SSIRCA Schedule

April 25, 2025

(All rooms are located in the University Center)

8 a.m. - 1 p.m.	CHECK-IN AND Q&A TABLE OPEN	Tejas Lounge
8:30 - 9:30 a.m.	ORAL PRESENTATIONS	
	AI, Machine Learning, and Data Science	Cayo 210
	Marine Biology, Coastal Ecosystems, and Environmental Health	Copano 216
	Biomedical Research and Human Health	Marlin 317
	Chemistry and Nanotechnology Innovations	Dolphin 306
9:45 - 10:45 a.m.	ORAL PRESENTATIONS & PERFORMANCES	
	Engineering and Technology Solutions	Cayo 210
	Marine Biology, Coastal Ecosystems, and Environmental Health	Copano 216
	Biomedical Research and Human Health	Marlin 317
	Artistic Expressions	Anchor 147 AB
11 a.m. - noon	ORAL PRESENTATIONS & PERFORMANCES	
	Environmental Technology and Monitoring	Cayo 210
	Robotics and Autonomous Systems	Copano 216
	Social Science and Policy	Marlin 317
	Artistic Expressions	Anchor 147 AB
1 - 2:30 p.m.	POSTER PRESENTATIONS & ART GALLERY	Anchor 147 CD
3 - 4 p.m.	SSIRCA KEYNOTE: DR. STUART FIRESTEIN "The Optimism of Scientific Uncertainty"	Lonestar 142
4:10 - 4:30 p.m.	STUDENT ORGANIZATION AWARDS & MIXER	Lonestar 142
4:30 - 5 p.m.	SSIRCA AWARDS CEREMONY	Lonestar 142

Oral Presentations and Performances

Session 1 - UC Cayo 210

AI, Machine Learning, and Data Science

Comparative Analysis of Mel Spectrograms and Short-Time Fourier Transform (STFT) Spectrograms for UAV Audio Detection and Identification Using Deep Learning Models

Sandeep Kumar Amgothu

8:30 - 8:40 a.m.

Identifying Key Drivers of *Enterococcus* Levels in Texas Coastal Waters Using Machine Learning Techniques

Laura Button; Quincy Walker; Ifeanyi Anyanwu

8:42 - 8:52 a.m.

Spatiotemporal Analysis of COVID-19 Booster Vaccination Patterns Using Graph Attention and Recurrent Neural Networks

Hossein Naderi

8:54 - 9:04 a.m.

Nurdle Count – A Solution to Detect Plastic Pellets Using Deep Learning

Khoi Nguyen

9:06 - 9:16 a.m.

A Time Series Study of the Microbial Community Assemblage at a Coastal Ocean Site Within the Gulf

Mahima Yogesh

9:18 - 9:28 a.m.

Session 2 - UC Copano 216

Marine Biology, Coastal Ecosystems, and Environmental Health

Evolutionary Changes in the Philippines Fishers Over the Past Century

Tykeedrien Burris

8:30 - 8:40 a.m.

Genetic Identification of Sex Determining Loci in the Red Lionfish, *Pterois volitans*

Katherine Lanoue

8:42 - 8:52 a.m.

Biodiversity Patterns Within the Epicenter: Predictive Mapping of Reef-Associated Fish Biodiversity in the Philippines Using Three Decades of Underwater Visual Census Data

Kevin Labrador

8:54 - 9:04 a.m.

Oral Presentations and Performances

Common Dolphin (*Delphinus delphis*) Swimming Speed Increases in Response to Swim-With-Dolphin Tourism Boat Approaches

Soleil DeLorge

9:06 - 9:16 a.m.

Effects of Proximity to Industrial Facilities and Depth on the Behavior of Bottlenose Dolphins (*Tursiops truncatus*)

Leala Punjabi

9:18 - 9:28 a.m.

Session 3 - UC Marlin 317

Biomedical Research and Human Health

WHODUNIT: Who Pooped in Baffin Bay? Sleuthing Out Fecal Pollution with Microbial Source Tracking

Nora Bleth

8:30 - 8:40 a.m.

Obesity Self-Awareness: Perceptions vs. Reality

Emily Brennan

8:42 - 8:52 a.m.

Harnessing the Power of Raman Spectroscopy for the Time- and Cost-Effective Detection of Counterfeit Aspirin

Nasanna Henley

8:54 - 9:04 a.m.

Are Over-the-Counter Antimicrobial Silver-Based Wound Dressings Safe and Reliable?

Kyra Kaiser

9:06 - 9:16 a.m.

Exploring Mechanisms of Epigenetic Modification by Benzo[A]Pyrene and its Metabolites

Remi Labeille

9:18 - 9:28 a.m.

Session 4 - UC Dolphin 306

Chemistry and Nanotechnology Innovations

The Stereoisomeric Effects of Diaminocyclohexane (DACH) Counterions on the Self-Assembly of Amino Acid-Based Surfactants (AABSs)

Saylor Blanco

8:30 - 8:40 a.m.

Oral Presentations and Performances

Solubility and Aggregation Behaviors of Dicarboxylic Mixed Micelle Amino Acid-Based Surfactant Systems

Xitlali Gallegos-Cruz

8:42 - 8:52 a.m.

Synthetic Procedure and Purification of Novel Bifurcated Amino Acid-Based Surfactants

Angelina Garcia

8:54 - 9:04 a.m.

Physical Characteristics of Commercially Produced Cationic Surfactants Mixed with Amino Acid-Based Anionic Surfactants

Rita Muniz

9:06 - 9:16 a.m.

Silt Happens: Diving into the Muddy Waters of the Effects Sediment has on *Orbicella faveolata*

Ryce Hailes

9:18 - 9:28 a.m.

Session 5 - UC Cayo 210

Engineering and Technology Solutions

Microplastic Detection in Images Using Image Processing Techniques

Muhammad Ibrar

9:45 - 9:55 a.m.

Optimizing Mosquito Trap Placement: A Review of Spatial Techniques and Emerging Technologies

Madhukar Kuchavaram

9:57 - 10:07 a.m.

Real-Time Eye Tracking for Enhanced Driver and Pedestrian Safety in Modern Vehicles

Zaheer Uddin Shaikh

10:09 - 10:19 a.m.

Single-Image Landscape Reconstruction Using Voxel-Based and Mesh Techniques

Arjun Damaraju

10:21 - 10:31 a.m.

IoT Smart Greenhouse

Jared Vieyra

10:32 - 10:42 a.m.

Oral Presentations and Performances

Session 6 - UC Copano 216

Marine Biology, Coastal Ecology, and Environmental Health

Tracing Contaminant Exposure in Bottlenose Dolphins

Makayla Guinn

9:45 - 9:55 a.m.

The Reef's Antacid: The Comparative Effects of Increased Alkalinity on the Calcification of Two Hawaiian Coral Species

Danielle Lisiecki

9:57 - 10:07 a.m.

Optimizing Ocean Alkalinity Enhancement: The Effects of Olivine on the Hawaiian Rice Coral

Alexander Oveisi

10:09 - 10:19 a.m.

DNA Profiling of Preserved Coral Skeletons: A Novel Approach to Biodiversity Assessment

Joseph Garza

10:21 - 10:31 a.m.

Developing Methods for Cyanobacterial Mat Restoration on Wind-Tidal Flats in South Texas

Zahra Hasan

10:32 - 10:42 a.m.

Session 7 - UC Marlin 317

Biomedical Research and Human Health

Tumor Progression and Pharmacological Intervention: Modeling Immunotherapeutic and Chemotherapy Strategies in Neuroblastoma

Yidong Liao; Kate Brockman; Brian Colburn

9:45 - 9:55 a.m.

Fabrication of a Nanogold-Based Carrier for a Novel Ferrocene-Derived Anticancer Drug

Lauren Reyna

9:57 - 10:07 a.m.

How Taking Part in a High-Risk Follow-up Program Impacts Caregiver Quality of Life, Attachment and Postpartum Depression Levels

Anllely Rodriguez-Rivera

10:09 - 10:19 a.m.

Oral Presentations and Performances

Development of Nanoparticles for Assessing Antimicrobial and Host Modulatory Effects of Bioactive Molecules

Paige Rogers

10:21 - 10:31 a.m.

Advanced Garment Solutions for Space: Regulating Fluid Shifts with Compression, Vibration, and Thermal Stimulus

Aleena Roy

10:32 - 10:42 a.m.

Session 8 - UC Anchor 147 AB

Artistic Expressions

My Loves

Jacqueline Brown

9:45 - 9:55 a.m.

As Time Passes By

Kailyn Nelson; Kailyn Nelson; Cameron Pina; Jonathan Donna

9:57 - 10:07 a.m.

Shed, a Dance Interpretation of a Sculpture Inspired by the Female Form

Caroline Ghiloni; Cassy Castillo; Doris Agard

10:09 - 10:19 a.m.

Us in the Rubble

Jude Rangel; Isaiah Nicholson; Cloey Hollar

10:21 - 10:31 a.m.

Session 9 - UC Cayo 210

Environmental Technology and Monitoring

Quantifying Human Disturbance on Texas Wind-Tidal Flats

Isabel Nykamp

11:00 - 11:10 a.m.

Monitoring Groundwater Levels in Different Texan Aquifers Using Satellite Data, Geologic Inputs and Machine Learning

Ahmed Omar

11:12 - 11:22 a.m.

Oral Presentations and Performances

Correlations Between Heavy Metal and Antibiotic Resistance in Marine Bacteria

Wendy Rangel

11:24 - 11:34 a.m.

Satellite-Based Monitoring and Mapping of Disaster Risk: A Case Study of the Southern Flood Plain in Pakistan

Mohammad Sohail

11:36 - 11:46 a.m.

Acoustics of Common Bottlenose Dolphins (*Tursiops truncatus*) Foraging with Trawlers and Along Seawalls

Emily McGhee

11:48 - 11:58 a.m.

Session 10 - UC Copano 216

Robotics and Autonomous Systems

Decoupled Architecture for Testing UAV Swarm Autonomy: A Simulation-Based Approach

Josh Boyd

11:00 - 11:10 a.m.

Autonomous Self-Maintaining Energy Harvesting Sensing Networks with a Dynamic Gateway for Coastal Monitoring

Ruben Dominguez

11:12 - 11:22 a.m.

3D Unmanned Traffic Management: Geofencing Airspace in Urban Environments with Orthogonal Vector Geometry

Joshua Garcia

11:24 - 11:34 a.m.

Predictive AI Models for Enhancing UAV Obstacle Avoidance in Uncertain Environments

Syed Izzat Ullah

11:36 - 11:46 a.m.

Integrating Cognitive Training in a Simulated Unmanned Aerial Systems (UAS) Pilot Training Course

Bailey Miller

11:48 - 11:58 a.m.

Oral Presentations and Performances

Session 11 - UC Marlin 317

Social Science and Policy

Public Opinion on Immigrants' Impact on Crime and Employment

Amy Chamberlain

11:00 - 11:10 a.m.

TikTok's Influence on Audience Perception of A24's "Midsommar"

Brittney Esqueda

11:12 - 11:22 a.m.

Voting and Wellbeing: A Test of Political Science Knowledge and Health

Jameson Tidwell

11:24 - 11:34 a.m.

Pews and Politics: A Study of Evangelical and Mainline Protestant Voting Differences

Zachary Watson

11:36 - 11:46 a.m.

Session 12 - UC Anchor 147 AB

Artistic Expressions

Fascination & The Delivery of Cow's Milk

Shameka Cobb; Ryan Perez-Castaneda; Angela Presser; Haley Sturgeon; JinSun Kim

11:00 - 11:10 a.m.

Poof

Justin Taylor; Angel Purl; Ben Domingue

11:12 - 11:22 a.m.

Reese's

Gideon Lancaster

11:24 - 11:34 a.m.

Moon Thief

Alexandria Ytuarte; Jennifer Zamora; Jonah Downs

11:36 - 11:46 a.m.

Poster Presentations and Art Gallery

Undergraduate Posters

UG_Poster_1 | Daily Time Series Analysis of Ambient O3 and PM2.5 levels in Corpus Christi, TX

Destini Sanchez-Warren

UG_Poster_2 | Leadership, Professional, and Creative Development with Youth at the Garcia Arts & Education Center

Carina Mejia-Guerrero and Bianca Shepherd

UG_Poster_3 | Tax Literacy Education through Community-Based Volunteer Income Tax Assistance

Jeremiah Sanchez; Haley Eli; Christina Horvath

UG_Poster_4 | A Community-Based Initiative to Address Adult Illiteracy in Corpus Christi

Mohammed Asad Khan

UG_Poster_5 | Cause for Paws: Helping the Stray Cat Populations of Corpus Christi

Madison Clickett

UG_Poster_6 | Acknowledging and Serving the Homeless in Corpus Christi

Ryan Wilks; Jacob Sides; Audrey Broussard; Victoria Godsey

UG_Poster_7 | Closing the Tech Gap: Serving Seniors in the Digital Age

John Emmanuel Lava

UG_Poster_8 | Creating Opportunities and Empowering Youth in our Community Through Soccer

Cilia Leal Cardona

UG_Poster_9 | Improving Reading Literacy at Gloria Hicks Elementary: A Service-Learning Project

Jewel Mitchell

UG_Poster_10 | Understanding the Role of Nonprofit Clinics in Providing Accessible and Affordable Healthcare to Uninsured Individuals: A Service-Learning Project

Kattarina Leal Rodero and Bryanna Ydrogo

Poster Presentations and Art Gallery

UG_Poster_11 | Understanding Light Pollution in the Flour Bluff Area: A Service-Learning Project

Lily Bhaskar and Kalyn Utenis

UG_Poster_12 | Stray Cat Rescue for a Safer Community: A Service-Learning Project

Christiana Salinas

UG_Poster_13 | Zooplankton Community Composition and Biomass in Copano Bay, Texas

Harvey Houlby

UG_Poster_14 | Setting-Up an IoT-Based Camera for Environmental Debris Monitoring

Omar Escudero

UG_Poster_15 | Gaining a New Perspective on Uninsured Patients: A Service-Learning Project

Mia Perez

UG_Poster_16 | Supporting Local Artists at K Space Contemporary for Career Growth and Community Development

Savannah Turner

UG_Poster_17 | Alleviating Food Insecurity Among College Students: A Service-Learning Project

Briana Parsons

UG_Poster_18 | Serving at Texas Sealife to Assist in Animal Rehabilitation and Learn About Animal Behavior

Madeline Foster

UG_Poster_19 | Serving with the Texas Sealife Center to Protect and Rehabilitate Coastal Bend Wildlife

Emily Burger and Emily Newsom

UG_Poster_20 | What Love Makes Us

Sullivan Blanco; Lucas Collins; Jude Rangel; Bell Voelkel; Nelson Thornton; Noah Bryant; Syd Urias; Mark Capuano

UG_Poster_21 | Voices Under Pressure: Assessing Trauma, Burnout, and Support Resources Among 911 Dispatchers in Corpus Christi, Texas

Miranda Rodriguez

Poster Presentations and Art Gallery

UG_Poster_22 | Developing eDNA qPCR Methods for Detecting Dulalas Luta (Rota Blue Damselfly, *Ischnura luta*)
Avery Richardson

UG_Poster_23 | Optimizing Heparin Extraction and Adsorption: A Comparative Study of Strong and Weak Anion Exchange Resins
Mousab Rehmani

UG_Poster_24 | Optimization of the Larval Rearing of Amano Shrimp
Ethan Smith

UG_Poster_25 | Identifying and Manipulating the Implicit Attitudes Towards Elderly Individuals among both Younger and Older Adults Through the IAT
Kaitlyn Woods

UG_Poster_26 | Smart Classrooms: The Future of Education with AI
Reagan Reed

UG_Poster_27 | Effects of Nutrient Amendments on Algal Growth in the Tidal Segment of Nueces River (Texas)
Nancy Ballard

UG_Poster_28 | Public Opinion Trends on Immigration
Alyssa Villegas

UG_Poster_29 | Rapid and Sensitive Detection of Dicholormethane vapor using a Colorimetric Square Planar Platinum(II) Salt
Katelyn Reid

UG_Poster_30 | Discovering the Evolutionary Origin of the Endangered Dulalas Luta (Rota Blue Damselfly, *Ischnura luta*)
Coralynn Coapland

UG_Poster_31 | The OCEANS Program and the Role It Has on Environmental Stewardship
Logan Younger; Jonas Jackson ; Jimmy Rodriguez

Poster Presentations and Art Gallery

UG_Poster_32 | Promoting Environmental Stewardship Through Cross-Generational and Place-Based Education

Kate Yniguez; Eneece Avila; Sarah Strickland; Lee Nichols

UG_Poster_33 | Evaluation of Dispersal-Related Phenotypes in Clownfish: How Does Larval Morphology and Movement Behavior Vary Within a Species?

Erica Anguiano

UG_Poster_34 | Does Creatine Use Influence Perceived Fatigue and Recovery in Physically Active College Students?

Katelynn Ferrell

UG_Poster_35 | Analyzing Dicarboxylic Amino Acid-Based Surfactants' Aggregation Behavior with Molecular Dynamic Simulations

Thea Kraft

UG_Poster_36 | Photophysical Characterization, Optical Density Modulation, and Photoinduced Charge Transfer of a Thiazolothiazole-Viologen Amphiphile in Crosslinked Polymer Films and Solution-Based Systems

Connor Duncan

UG_Poster_37 | Stable Isotope Analysis of Muscle from Fish in Hypoxic Waters

Sophia Ortegon

UG_Poster_38 | Real-Time Adaptive Multi-Modal Stock Prediction with Temporal Graph Attention and Dynamic Interaction Networks

Jamie Ehlers

UG_Poster_39 | The Effects of Clownfish Personality on the Likelihood of Cannibalism in Potential Settlers

Abigail Pirkle

UG_Poster_40 | Photochromic Behavior and UV-Responsive Optical Transitions of a Novel Thiazolothiazole-Viologen Derivative in Solution and Polymer Matrices

Sarah Yniguez

UG_Poster_41 | Circularly Polarized Luminescent Cruciform Dyes for Biomolecular Sensing

Charles Jackson

Poster Presentations and Art Gallery

UG_Poster_42 | Strawberries, Sushi, and Pickles: Preschool Children's Use of Directives and Interrogatives in Kitchen Play

Camila Avantes; Mia Kemp; Sofia Ibarra; Catherine Gether; Marina Salinas

UG_Poster_43 | Assessment of T-lymphocytes Development Under Flame Retardant Exposure in Japanese Medaka

Garrett Diehl

UG_Poster_44 | Tracking Atlantic Tarpon Movements with Isotopes from Archived Scales

Kellen Rushfeldt

UG_Poster_45 | Community Structures of Elasmobranch Populations Within and Between Coastal Estuaries

Videl Obenhin

UG_Poster_46 | Exploring Sex-Based Patterns in Shoplifting: Reassessing Shoplifting as a Pink-Collar Crime

Jonathan Baez and Raul Reyna

UG_Poster_47 | Heavy Metals in Common Bottlenose Dolphins (*Tursiops truncatus*) off Galveston, Texas

Madison Hallmark

UG_Poster_48 | Comparative Analysis of Dominant Fungal Communities on Texas Tortoise Shells with Varying Disease Status

Faith Runyon

UG_Poster_49 | Metabolic Signatures of Aging Across Muscle, Brain, and Liver in the (*Oryzias latipes*), a Human Skeletal Model Organism

Paige Hart

UG_Poster_50 | Treated Wastewater as a Sustainable Water Source

Harley Johnson

UG_Poster_51 | Whistle Contours of Common Bottlenose Dolphins (*Tursiops truncatus*) in Different Foraging Contexts

Michelle Hazard Rodriguez

UG_Poster_52 | Chiral Selectors Based on Reversible Disulfide-Bridged Cysteine Surfactants

Ciara Bohn

UG_Poster_53 | A Geospatial Analysis of Mental Health in Corpus Christi Post Covid-19

Thomas Kovar

Poster Presentations and Art Gallery

UG_Poster_54 | Untargeted Metabolic Analysis of Peripheral Blood Maintenance Across Age and Sex in *Oryzias latipes*, a Human Model Organism

Abigail Martinez

UG_Poster_55 | Amino Acid Nitrogen Isotope Analysis of Fish Muscle and Gut Contents

Dat Tran

UG_Poster_56 | Phylogenetic and Physiological Characterization of Amino Acid Nitrogen Isotopes in Phytoplankton

Colin Otubanjo

UG_Poster_57 | An Analysis Of Gendered Clothing Choices in Pretend Play of Preschool Children
Mia Kemp; Camila Avantes; Sofia Ibarra; Catherine Grether; Marina Salinas; Lisa Comparini

UG_Poster_58 | Cultural Effects in the Remote Work Environment

Hilliary Herrera

UG_Poster_59 | Nervous System Untargeted Metabolomic Study Across Sex and Age in *Oryzias latipes*, a Human Immune Model Organism

Kylli Widas

UG_Poster_60 | A High-Resolution Snapshot of Nutrient Transport in the San Marcos-Guadalupe River System

Allie Watson

UG_Poster_61 | From Beneath the Building: Excavation and Forensic Osteological Analysis of Human Skeletal Remains

Desiree' Eaglin

UG_Poster_62 | Analysis of Untargeted Metabolomics in Positive Mode for Head, Kidneys and Liver in *Oryzias latipes*

Layke Kinney

UG_Poster_63 | Synthesis of Highly Emissive Spiro-Cored Polyhydrazone Covalent Organic Frameworks

Leah Marr-Lyon

Poster Presentations and Art Gallery

UG_Poster_64 | Developing a Physicochemical Procedure for the Trace Metal Quantification in *Spartina spartinae* at Mustang Island State Park
Eduardo Amador

UG_Poster_65 | Metabolomic Profiling of Bone and Scale Aging: Establishing Baseline Metabolomes in *Oryzias latipes*, a Human Skeletal Model Organism
Breeonna Stimpson-Leavitt

UG_Poster_66 | Connecting the Culture of a Community to Music and Music Festivals: A Service-Learning Project
Javon Vela

UG_Poster_67 | Keeping Art Alive for the Next Generation: A Service-Learning Project
Raegan Koncaba

UG_Poster_68 | Peak Braking and Mediolateral Ground Reaction Forces are Reduced by Footwear, While Vertical and Propulsion GRF are Unchanged
Samantha Martinez

UG_Poster_69 | The Heart Beats to its Own Drum: No Relationship Between Heart Rate and Oxygen Demand During Bodyweight Circuit Training
Vincent Narvaez

UG_Poster_70 | "Aging Peacefully": The Relationship Between Age and Heart Rate During Walking and Running
Mya Gonzalez

UG_Poster_71 | Assessing the Impact of USMCA on U.S. Automotive Trade Flows: An Econometric Analysis
Angel Runkel

UG_Poster_72 | Is Your Beta Itching? The Itchier, The Beta: Beta-Alanine Supplementation Increases Time to Exhaustion in Competitive Distance Runners
Anna Liaromatis

UG_Poster_73 | Polyipoic Ester Acid Coacervates and Molecular Sponges for Uptake of Environmental Contaminates
Emily Hall

Poster Presentations and Art Gallery

UG_Poster_74 | The Stress of Salt: Fungal Endophyte Fitness in Various Saline Environments
Linzee Pacheco

UG_Poster_75 | Gravity Got you Down? The Relationship Between Oxygen Demand and Body Composition During Circuit Training
Joel Herring

UG_Poster_76 | Characterizing Shark Responses to Magnetic Deterrents in Gulf Commercial and Recreational Reef Fish Fisheries
Cindy Vaquero

UG_Poster_77 | Static Posture Anteroposterior COP DFA- α is Increased When Carrying a Loaded Backpack
Becca Henicke

UG_Poster_78 | Using Detrended Fluctuation Analysis to Determine the Effects of Footwear on Postural Dynamics in Children
Crystal Trevino

UG_Poster_79 | Don't Want to Feel Fat, Don't Do DEXA: A Comparison of Laboratory Methods for Estimating Body Fat Percentage
Miranda Gonzalez

UG_Poster_80 | BioSense Drive
Ethan Hughes

Poster Presentations and Art Gallery

Graduate Posters

GRD__81 | Attitudes Toward Abortion Rights Among Master's Students: A Cross-Disciplinary Examination
Yezenia Zoll

GRD__82 | Using *Vibrio alginolyticus* Isolates to Determine the Efficacy of Plant Tinctures to Inhibit *Vibrio* spp.
Marysa McAllister

GRD__83 | A Reinforcement Learning Approach to Preserve Privacy of Images in Connected Autonomous Vehicles
Abdolazim Rezaei

GRD__84 | Assessing Monitoring of Living Shoreline Projects
Narita Ramirez

GRD__85 | Land Use Change and Implications on Estuarine Health Utilizing GIS Application
Angelica Ovalle

GRD__86 | Evaluation of SfM-MVS Apple LiDAR Data for Coastal Monitoring
Sabin Pandey

GRD__87 | Drivers of Sessile Invertebrate Community Composition and Vulnerability to Invasion
Olivia Hughes

GRD__88 | Measuring Help-Negation
Michael Devotta

GRD__89 | Effectiveness of Sepsis Alert and Documentation in Reducing Sepsis-Related Mortality in the Emergency Room
Eryn Saunders

GRD__90 | An Ecological Characterization of Juvenile Tarpon and Snook Nursery Habitat
Isabel Tiller

GRD__91 | AI for Smart Water Management: Spatio-Temporal Message Passing Networks
Xingran Huang

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GRD__92 | Analysis of the Neurophysiological Effects of the Psychedelic Psilocin in Invertebrate Neurons
Hannah Yarbrough

GRD__93 Optimization of Heparin Adsorption Using Amberlite FPA98 Cl Resin: Influence of pH, Dosage, Temperature, and Interaction Time
Daisy Lopez

GRD__94 | Efficient Heparin Recovery from Porcine Intestinal Mucosa Using Green Adsorbent
Ritu Panta

GRD__95 | Enhanced Heparin Adsorption for Porcine Mucosa Using Beta Zeolites: Optimization and Kinetic Analysis
Laiba Iftikhar

GRD__96 | Contributions of Environmental and Genetic Variation in an Adaptive Tradeoff Between Thermal Stress and Predation Avoidance
Keenan Larriviere

GRD__97 | Development and Characterization of New Fluorescent Surfactant-Based Molecular Sensors for Melatonin Detection in Aqueous Solution
Victoire Delattre

GRD__98 | Hog Tide: Evaluating Feral Swine Fecal Pollution in Coastal Recreational and Oyster Harvesting Waters
Lydia Cates

GRD__99 | "I Apologize For Not Understanding Your Policy": Exploring the Specification, Evaluation, and Enforcement of Security Authorization Policies by Emerging AI-Based Virtual Assistants
Jennifer Mondragon

GRD__100 | Applications of Neural Networks to Estimate Parameter Coefficients of the Stochastic Frontier Model for Panel Data
Zakry Zapata

GRD__101 | Do Bilinguals Have Two Personalities?
Leticia Villarreal

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GRD__102 | Advanced TrafficGPT: Coordinated AI Agents for Urban Traffic Visualization & Analysis
Nabil Abdelaziz Ferhat Taleb and Raj Atulkumar Patel

GRD__103 | Factors Influencing Intrinsic Motivation Among High School Students
Sidney Siepert

GRD__104 | What is the Impact of Physical Education Programs on Mental Well-Being in Elementary School Kids?
Skye Fuentes

GRD__105 | The Impact of Template-Directed Amphiphile Assembly on the Time-Dependent Behavior of Boundary Tensions
Dante Morland

GRD__106 | The Solow-Swan Model and its Spatial Extensions
Anastasiia Golovatenko

GRD__107 | Image Denoising Using Nonlinear Diffusion Process
Alekssei Krasnikov

GRD__108 | The Power of Movement in Hispanic/Latino Communities
Dominique Cuellar

GRD__109 | Identifying to What Extent Dating Violence and Racial Predict Suicidality in American Youth
Elizabeth Okoye-Ezeoke

GRD__110 | The Role of the Madden-Julian Oscillation on the Central Tropical Indian Ocean Marine Heatwaves
Lillian Pedraza

GRD__111 | Sex, Safety, and Consent: A Comparison of Safe-Sex Behaviors Amongst LGBTQ+ Adolescents
Kevin Wong

GRD__112 | Is Anyone Home? The Interaction Between Ethnicity and Parental Monitoring on Youth Sexual Behaviors
Briana Rodriguez

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GRD__113 | Principal Component Analysis Shows No Differences in Muscle Activation Patterns Between Athletes and Non-Athletes When Landing From Height

Kaleb Luna

GRD__114 | You Don't Know Squat... or BURPEES... Assessing the Heart Health Differences Between Treadmill-Based Intervals and Circuit Training

Josh Monrad

GRD__115 | Development of a Rapid Method to Compare Algal Epiphyte Community Compositional Shifts in *Thalassia testudinum*

Samantha Maupin

GRD__116 | The Impact of Physical Fitness on Marijuana Usage Among Adolescents

David Schwab

GRD__117 | The Impact of Metformin and Vitamin B12 Co-Supplementation on Human Stomach Epithelial Cell Viability and Oxidative Stress

Subashini Baskar

GRD__118 | On Finite Element Implementation of a Spatially Adaptive Regularized Phase-Field Model for Quasi-Static Anti-Plane Fracture

Maria Pieo Fernando

GRD__119 | Understanding How Population-Level Genetic Processes Underpin Broader Biodiversity Patterns

Alessandra Aromin

GRD__120 | Real-Time Adaptive Multi-Modal Stock Prediction with Temporal Graph Attention and Dynamic Interaction Networks

Abhishek Joshi

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Undergraduate Artistic Displays

Table_1_UGRD | The Affect of Pollution
Amber Basaldu

Table_2_UGRD | Vandalized Support
Cameron Pina

Table_3_UGRD | Journey
Judy Metcalf

Table_4_UGRD | Exploring Intimacy and Organic Structures in Alternative Process
Photography
Caleb Terry

Table_5_UGRD | Echoes
Misty Gonzales

Table_5_UGRD | The Effects of Soda Fire
Rebekah Martinez

Table_6_UGRD | He Found You
Christian Padua

Table_6_UGRD | Art by Adelena
Adelena Vera

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Graduate Artistic Displays

Table_1_GRD | Metamorphosis
Emily Roberts

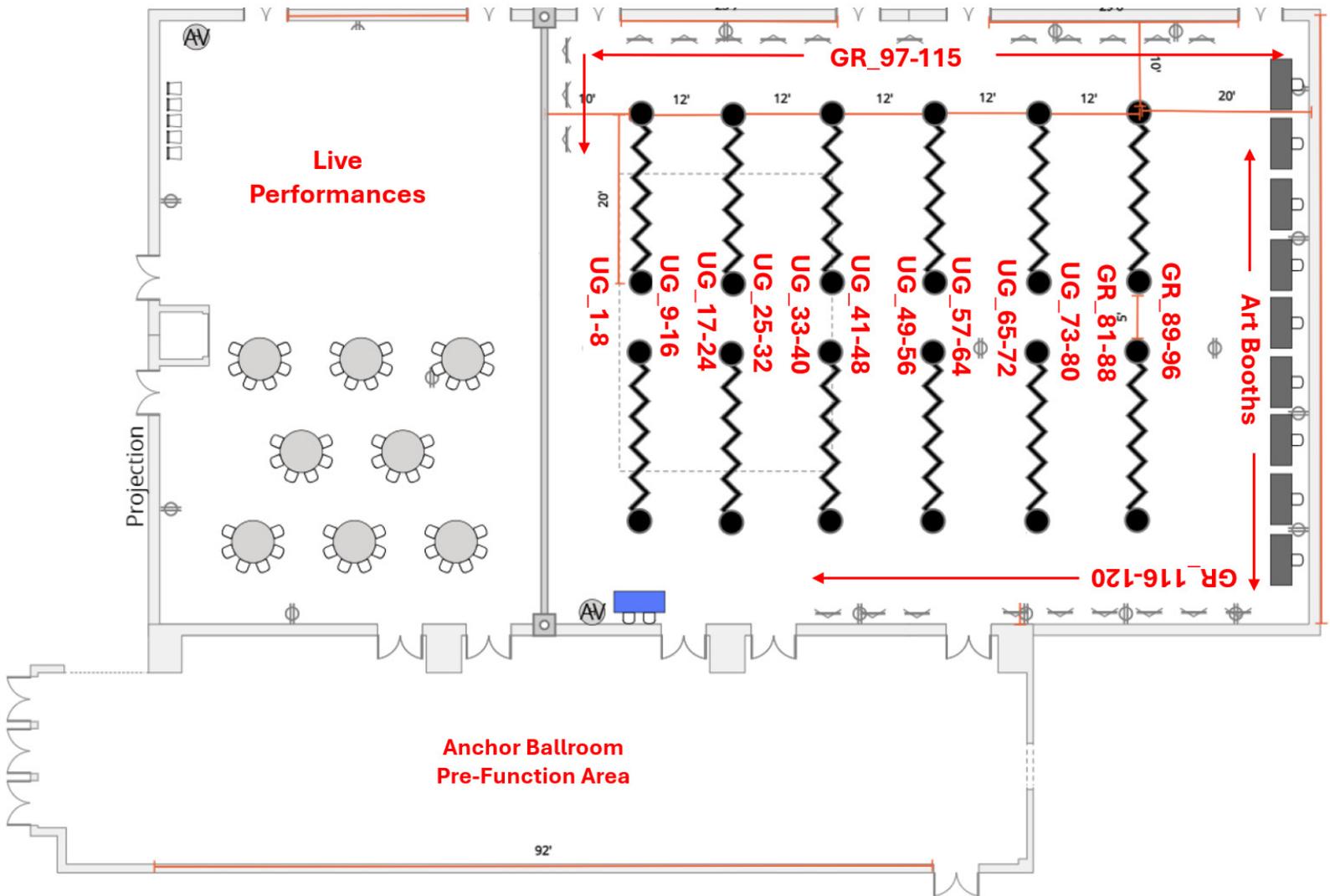
Table_7_GRD | A Grain of Sand
Ashley Burnett

Table_8_GRD | Regeneration
Jonathon Garza

Table_9_GRD | Altered Reality
Ian Manseau

Table_10_GRD | CRUSH: Exploring Performance of Intimacy Through Ceramics
and Printmaking
Saffron Williams

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