



Sam Houston State University

**Undergraduate Research  
Symposium**

---

**THE NINETEENTH ANNUAL  
UNDERGRADUATE  
RESEARCH  
SYMPOSIUM**

**APRIL 18, 2026**

MEMBER THE TEXAS STATE UNIVERSITY SYSTEM.



Sam Houston State University  
**Undergraduate Research Symposium**  
Honors College



---

## HONORS AMBASSADORS

Honors Ambassadors are the face of the Elliott T. Bowers Honors College. During special Honors events, the Ambassadors play important roles as hosts and greeters, table leaders, or panel participants.

Being an Ambassador involves taking on certain responsibilities - the willingness to give up time, often in the evenings or weekends - in the interest of supporting Honors College events. Ambassadors need to be able to represent the college and the university well, both in deed and word. There are 24 ambassadors representing every class and every academic college at the University.



## **TABLE OF CONTENTS**

<b>Sponsor Recognition</b>	<b>5</b>
<b>About URS and the Elliott T. Bowers Honors College</b>	<b>6</b>
<b>A Message from Our Co-Chairs</b>	<b>7</b>
<b>A Message from Our Faculty Advisor</b>	<b>8</b>
<b>Sessions:</b>	<b>10</b>
A - Oral-Media-Panel Presentations	
A - Poster Presentations	
B - Oral-Media-Panel Presentations	
B - Poster Presentations	
C - Oral-Media-Panel Presentations	
C - Poster Presentations	

**ALL ORAL-MEDIA SESSIONS WILL BE HELD ON THE FIRST AND SECOND FLOORS OF THE LSC.**

**ALL POSTER SESSIONS WILL BE HELD IN THE WHITE BALLROOM, LOCATED ON THE GROUND FLOOR OF THE LSC.**



Sam Houston State University

## Undergraduate Research Symposium

Honors College

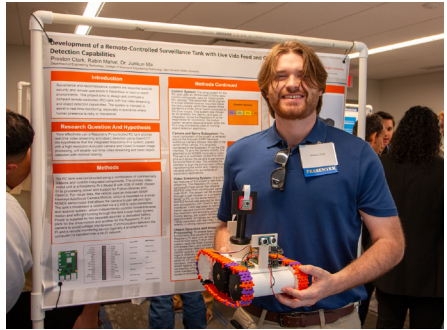
### SCHEDULE AT A GLANCE

- |                         |  |
|-------------------------|--|
| <b>8:00 - 8:45 AM</b>   | Registration & Breakfast<br>LSC: Orange Ballroom                       |
| <b>8:45 - 8:55 AM</b>   | Welcome and Opening Remarks<br>LSC: Orange Ballroom                    |
| <b>9:00 - 10:20 AM</b>  | Session A, Oral-Media Presentations<br>Session A, Poster Presentations |
| <b>10:30 - 11:50 AM</b> | Session B, Oral-Media Presentations<br>Session B, Poster Presentations |
| <b>12:00 - 1:45 PM</b>  | Lunch<br>LSC: Orange Ballroom  |
| <b>2:00 - 3:20 PM</b>   | Session C, Oral-Media Presentations<br>Session C, Poster Presentations |
| <b>3:30 - 4:30 PM</b>   | Closing and Awards Ceremony<br>LSC: Orange Ballroom                    |

ALL ORAL-MEDIA SESSIONS WILL BE HELD ON THE FIRST AND SECOND FLOORS OF THE LSC.

ALL POSTER SESSIONS WILL BE HELD IN THE WHITE BALLROOM, LOCATED ON THE GROUND

FLOOR OF THE LSC.



## THE UNDERGRADUATE RESEARCH SYMPOSIUM IS SPONSORED BY:

Elliott T. Bowers Honors College

Sam Houston State University

The URS especially thanks Dr. Hiranya Nath  
for his generous Assam Scholarship.

Sam Houston State University  
**SH** Undergraduate Research Symposium  
 Honors College

**THE TEXAS STATE UNIVERSITY SYSTEM BOARD OF REGENTS**

Stephen Lee, Chairman | Bastrop  
 Charlie Amato, Regent | San Antonio  
 Duke Austin, Regent | Houston  
 Sheila Faske, Regent | Rose City  
 Russell Gordy, Regent | Houston  
 Tom Long, Regent | Dallas  
 William F. Scott, Regent | Nederland  
 Alan L. Tinsley, Regent | Madisonville  
 John "Johnny" Weisman, Regent | New Braunfels  
 Donovan Brown, Student Regent | San Marcos  
 Brian McCall, PhD, Chancellor | Austin

**HONORS COUNCIL**

Kimberly Bell ----- Dean, Honors College  
 Maria Botero ----- Humanities & Social Sciences  
 Kevin Clifton ----- Arts & Media  
 Ronald Daigle ----- Business Administration  
 Berna Abed El Satar ----- Health Sciences  
 Praphul Joshi ----- Health Sciences  
 Victoria Lantz ----- Arts & Media  
 Kenneth McIntyre ----- Humanities & Social Sciences  
 Jessica McQueston ----- Education  
 M.J. Norris ----- Newton Gresham Library  
 Ashton Mouton ----- Business Administration  
 Javier Ramos ----- Criminal Justice  
 Kathleen Ratajczak ----- Criminal Justice  
 Van Vung Pham ----- Science & Engineering Technology  
 Jeffrey Wozniak ----- Science & Engineering Technology  
 Kelly Zinn ----- Health Sciences

**URS HISTORY AND MISSION STATEMENT**

In 2008, the Honors College Student Ambassadors began the Undergraduate Research Symposium (URS). The goal was two-fold: to share research with fellow students and to gain experience in preparation for future conferences. Today, the URS continues to provide a forum where all SHSU undergraduate students can present their research to others in a professional environment while giving students the opportunity to gain expertise in their field and to receive feedback from other scholars and members of the academic community. Additionally, the URS offers six \$500 awards: The Assam Scholarship for Honors Research Awards, The Honors College Awards for Best Overall Oral-Media Presentation, and the Honors College Award for Best Overall Poster. Other awards include honorable mention awards, the E.U.R.E.C.A. Award for Best FAST Oral Media Presentation, and the E.U.R.E.C.A. Award for Best FAST Poster. The URS is supported by the faculty and staff of the Elliott T. Bowers Honors College.

## A MESSAGE FROM OUR CO-CHAIRS

Welcome to the Nineteenth Annual Undergraduate Research Symposium! We would like to thank everyone for your continuous sponsorship and participation in this year's event. Because of your support, we can create an environment for students to build a foundation of excellence in a professional setting. Along with our fellow Honors Ambassadors, we are excited to share with you the astounding achievements of our students. We would also like to recognize staff, faculty, and audience members.

Developing the professional skills of undergraduate students is one of the forefront goals of the symposium. For many, this is the first step into the domain of research and the professional world. We sincerely hope that the symposium serves as a springboard for students into the world of research-based academia as well as an opportunity to cultivate experience that can serve as a strong foundation for students' future endeavors. We also anticipate that the students who present improve public speaking skills, network with peers and faculty, and then emerge as professionals at the university and in the field.

Over the past 19 years, we have seen the number of presenters at this conference skyrocket. It is truly incredible to see our numbers grow so much, especially within the past few years, and it fills us with delight to see the interest in research bloom at a university-wide level. By presenting both ongoing and completed research while at Sam Houston State University, students take pride in and show their passion for the work they have accomplished over the course of their college career.

This year's symposium would not have succeeded without the help of every single person who contributed their time and effort. From new and returning presenters, volunteers, Honors Ambassadors, faculty members, advisors, administrators, respondents, or supporting audience members, each person plays an integral role in the creation of a unique, exciting atmosphere for the event each year. On behalf of the entire team, the Co-Chairs would like to thank each and every one of you for your countless contributions to the Nineteenth Undergraduate Research Symposium, and we greatly look forward to seeing both students and the conference thrive for many years ahead.



**Adelle Cannon**  
URS Co-Chair



**Natalia Pinell**  
URS Co-Chair



**Courtney Toppen**  
URS Co-Chair

## A MESSAGE FROM OUR FACULTY ADVISOR

Welcome to the Nineteenth Annual Undergraduate Research Symposium, hosted by the Ambassadors of the Elliott T. Bowers Honors College! This conference provides a professional environment in which student scholars can share their past, current, and ongoing research. Several of our past participants have gone on to experience inspiring professional endeavors which have had their foundation at this conference. For those faculty who have worked closely with their students during preparation for the URS, this accomplishment is a source of enormous gratification. The URS also underscores Sam Houston State University's designation as an R2 institution, one which is dedicated to research.

The current co-chairs Adelle Cannon, Natalia Pinell, and Courtney Toppen, and the Honors Ambassadors have spent this past year hard at work organizing workshop sessions and practice sessions, encouraging participation, and making sure this live event marks a celebration of SHSU undergraduate research. Their passion for this event, their dedication to research, and their hard work stands as a hallmark for future Ambassador co-chairs. I thank them for their continuing support and guidance.

Our motto reads: The intricate path to discovery begins with research. If you look closely at the image of the URS maze, you will recognize that there is one consistent path to the

center, no matter how convoluted it might seem at first glance. Consider that this image represents both the research process as well as the attendant self-discovery within that process. Through research we not only question, discover, and create scholarship, but we also come to understand our own potential within scholarly communities. Symbolically we enter the maze, make the turns, and work our way to the center, to discovery.

These students are not the only ones who have dedicated themselves to furthering what is a nation-wide effort to promote undergraduate research. Others have been just as vigorous in their support, including faculty advisors who have helped students with their research, family and friends who have come to show their support, faculty and graduate student volunteers who have devoted their Saturday to giving presenters feedback, and staff members who have been working overtime to ensure that everyone is fed, given gift bags, directed to the right rooms, and checked in properly. The Honors College and generous support from SHSU fund this event because promoting and participating in undergraduate research is powerful and affirming. We recognize and deeply appreciate their active support of this endeavor. Finally, we would like to thank Dr. Hiranya Nath, Professor of Economics, for his very generous Annual Assam Scholarship Award.

*Tracy E. Bilsing*

**Dr. Tracy Bilsing**  
URS Faculty Co-Chair

Associate Dean of the Elliott T. Bowers Honors College



## HONORS FACULTY AND STAFF

Dean  
Associate Dean  
Associate Dean  
Assistant Dean  
Associate Director  
Administrative Coordinator  
Specialist IV  
Graduate Assistant  
Student Assistant  
Student Assistant  
Student Assistant  
Student Assistant  
Student Assistant  
Student Assistant  
Student Assistant  
Student Assistant

Kimberly Bell, Ph.D.  
Patrick Lewis, Ph.D.  
Tracy Bilsing, Ph.D.  
Justin Williams, Ph.D.  
Kendall Gragert  
Connie Rodriguez  
Ashlee Fuller  
Lindsey Rowley  
Gabriel Ramos  
Jesika Miller  
Kade Brackin  
Olivia Casas  
Alexander Sailor  
Elizabeth Hernandez Guerrero  
Emma Turner  
Theanna Manganti

---

## THE UNDERGRADUATE RESEARCH SYMPOSIUM FACULTY COMMITTEE

Dr. Tracy Bilsing  
Dr. Patrick Lewis  
Dr. Kimberly Bell  
Dr. Justin Williams

---

## HONORS COLLEGE AMBASSADORS

Hanna Northway - President	Sarah Aguilera	Makenna McDaniel
Gabriel Ramos - Vice President	Trista Alvarado	Garrett Miller
Eva Zohne - Secretary	Layla Behrens	Kailea Oliver
Jesika Miller - Historian	Adelle Cannon	Nikhil Patel
Olivia Casas - Public Relations Chair	Hudson Chapman	Abigail Padron
Kade Brackin - Social Chair	Ashlyn Garza	Natalia Pinell
	Jonnie Hart	Paige Ross
	John Hendrickson	Courtney Toppen
	Emma Le	Joselyn Victor

# SESSION A: ORAL-MEDIA

## 9:00 - 10:20 AM

### ROOM

**115** Health

---

**Establishing the importance of cytoskeleton proteins vital for microtubule remodeling in muscle wasting**

**Chrislynn Harris**

Faculty Advisor: Dr. Mardelle Atkins

**The Psychopharmacological and Emotional Effects of Alcohol Intoxication: A Preliminary Investigation**

**Ella Winkler**

Faculty Advisor: Kendall Gragert

**Rising Stroke Incidence Among Young Adults: A Review of Contributing Risk Factors**

**Selest Scott**

Faculty Advisor: Dr. Kiran Sapkota

**Food Insecurity and Hypertension in the U.S.**

**Alexis Johse**

Faculty Advisor: Dr. Kiran Sapkota

### ROOM

**116** Wonders of the World

---

**Illuminating the Limits: How Observation Constraints Shape Our Understanding of Bioluminescence**

**Alexia Piche'**

Faculty Advisor: Dr. Jerry Cook

**Exploring thermal selectivity for portable SERS-based methamphetamine detection in soil**

**Michaela Henson, Alicia Cortez, Samantha Martinez, Chizzy Obietikponah**

Faculty Advisor: Dr. David E. Thompson

**Urban Expansion and Environmental Conflict: Legal Responses to Human and Wildlife Interaction**

**Tyler Bobo**

Faculty Advisor: Katherine Parsley, JD

**Nella Larsen's Passing: Exploring the Effects of Oppression in an Antiracist World**

**Kelly Hampton**

Faculty Advisor: Dr. Thomas Meagher

# SESSION A: ORAL-MEDIA

## 9:00 - 10:20 AM

### ROOM

**117** Philosophy

---

**Women in Philosophy: Lady Mary Shepard on Causation**

**Rhaenys Balter**

Faculty Advisor: Dr. Thomas Brommage

**The Impossible Severance of Grief**

**Brooklyn Lozano**

Faculty Advisor: Dr. Jessica Elkayam

**White Guilt: Nietzsche and the Counterproductive Path of Performative Victimhood**

**Max Lane**

Faculty Advisor: Dr. Thomas Meagher

**Phenomenology of Nationalism**

**Dominic Brandolini**

Faculty Advisor: Dr. Thomas Meagher

### ROOM

**230A** Women's Health

---

**Understanding Postpartum Psychosis: What It Is and Why It Matters**

**Hope Bloecher**

Faculty Advisor: Dr. Tracy Bilsing

**Lack of Access to Prenatal Care in Rural Texas**

**Kimberly Magana**

Faculty Advisor: Dr. Kiran Sapkota

**Racial Bias in Obstetric Pain Management Among African American women in the United States**

**Precious Adaramola**

Faculty Advisor: Dr. Kiran Sapkota

**Teen Pregnancy in the U.S. and Texas: Trends, Health Systems Barriers and Disparities**

**Whitney Vera**

Faculty Advisor: Dr. Kiran Sapkota

**Racial Disparities in Maternal Mortality Among Women of Color in Southern States**

**Ashley Guerrero**

Faculty Advisor: Dr. Kiran Sapkota

# SESSION A: ORAL-MEDIA

## 9:00 - 10:20 AM

### ROOM

## 230B Examining Community

---

**The Need for FASD Research in the School System: Advancing Evidence-Based Learning Practices for Students with FASD**

**Anastasia Strauss**

Faculty Advisor: Julie Albert

**Barriers To Accommodations For People With Mental Disabilities**

**Reagan Galloway**

Faculty Advisor: Dr. Mary Wood

**Bearkat Buddies: Building Community Through Student-Led Service and Mentorship**

**Hannah Bolin**

Faculty Advisor: Chris Thompson, JD

**How can a child's diet affect their chances of developing depression or anxiety**

**Brayden Zaragoza**

Faculty Advisor: Dr. Kiran Sapkota

**Technology's Impact on Neurodivergency**

**Ajeé Demmings**

Faculty Advisor: Dr. Tracy Bilsing

### ROOM

## 241A AI in the Field

---

**Detecting Moisture Damage in Asphalt Pavements Using Artificial Intelligence**

**Egehan Koyuncu**

Faculty Advisor: Dr. Momen Mousa & Dr. Qingzhong Liu

**Using AI to quantify the Carbon Sequestration Potential of different plant species.**

**Warda Binte Zahid, Lydia Greer, Egehan Koyuncu**

Faculty Advisor: Dr. Momen Mousa

**Using machine learning and Artificial Intelligence (AI) tools to Analyze Behavioral Risk Factors and Health Outcome Using Publicly Available Big data.**

**Sajan Thakuri, Chirag Lamsal**

Faculty Advisor: Dr. Kiran Sapkota

**Reasoning Manipulation Dataset for Robotic Arms (RMD-RA): A Multi-Task Benchmark for Cognitive and Physical Skill Learning in Robots**

**Ethan Wingfield, Mohammed Amin**

Faculty Advisor: Dr. Syed Faruqui

# SESSION A: ORAL-MEDIA

## 9:00 - 10:20 AM

### ROOM

## 241B Baeyer-Villiger Reaction

---

Exploring Oxidation Pathways in Diketone Molecules

**Kylee Bush**

Faculty Advisor: Dr. Meagan Hinze

Expression and Reactivity of Baeyer-Villiger Monooxygenases from *Thermothelomyces thermophilus* and *Pseudomonas fluorescens*

**Natalie Salmeron**

Faculty Advisor: Dr. Meagan Hinze

Expression and reactivity of the Baeyer-Villiger monooxygenases TfPAMO and BVMOAFL838

**Sarah Walbridge**

Faculty Advisor: Dr. Meagan Hinze

Prochiral Substrate Synthesis and Biocatalytic Oxidations to Access Acyloin Scaffolds and Natural Products

**Reagan Carter**

Faculty Advisor: Dr. Meagan Hinze

### ROOM

## 242 Honors Scholars

---

Culture and Community on an American Island: The Resilience of Native Hawaiians

**John Hendrickson**

Faculty Advisor: Ava Fujimoto Strait

Music Education in Title I Schools: Supporting a Disadvantaged Program

**Beckett Guthrie**

Faculty Advisor: Kendall Gragert

Study Abroad: Comparative Healthcare

**Rachel Barker**

Faculty Advisor: Dr. Kirnan Snapkota

Engaging with Art: Honors CAM Sessions

**Amanda Parry**

Faculty Advisor: Kendall Gragert

Scan for Abstracts



# SESSION A: POSTER

## 9:00 - 10:20 AM

### Biological Sciences

---

#### A Review of Informal STEM Education for K-12 Girl Scouts

**Isabella Byrd, Kendall Kinsey, Ellena Bruhn**

Faculty Advisor: Dr. Diane Neudorf & Dr. Steven Koether

#### Accelerating Texas State Conservation Assessment Using Deep Learning

**Emilia Gonzalez, Anna F. Maloney, Brooke Byerley Best, Kayla R. Hankins**

Faculty Advisor: Dr. Christopher Randle

#### Assessing the Role of Red Queen in the Regulation of Wingless Expression in *Drosophila* Eye and Head Development

**Shandelyn Poulsen, Molly Casas, Cody Griffin**

Faculty Advisor: Dr. Mardelle Atkins

#### Assessing the Use of Pulsed Electric Field in an Animal Model to Counteract Psychosis

**Alexandria Shaw**

Faculty Advisor: Dr. Danielle Goodspeed

#### Autosomal Genetic Links in Parkinson's Disease

**Ryan Hill, Jesus Ortega Alvarez, Emrys Acosta, Lesly Vega**

Faculty Advisor: Dr. Mardelle Atkins

#### Bees of East Texas Keyence Digital Microscope Imaging

**Kasandra Mendoza, Matthew Barr, Marco Ortega**

Faculty Advisor: Dr. John Pascarell & Dr. Daniel Doucet

#### Census of *Yucca louisianensis* Determines Survival and Recruitment in Two Microclimates at Pineywoods Educational Research Laboratory in Huntsville, Texas

**Jennifer Folsom**

Faculty Advisor: Dr. Aaron Lynne & Dr. John Pascarella

#### Comparative Genomic Analysis of *Salmonella* in Retail Chicken Liver

**Layla Behrens, Marcos A. Montelongo, Madison M. Schultz**

Faculty Advisor: Dr. Anand Karki & Dr. Todd Primm

#### Comparison of Human and Chicken Skeletons

**Eloisa Rodriguez**

Faculty Advisor: Dr. Juan Daza

#### Critical Review of The Rise of Performance-Enhancing Peptides

**Isabella Melin**

Faculty Advisor: Dr. Jordan Clark

#### Dental Tissue Engineering as an Alternative to Implants in Adult Tooth Loss

**Cassandra Lupo**

Faculty Advisor: Kendall Gragert

#### Effect of mucin on *Campylobacter* growth in vitro and in vivo

**Brianna Smith, Killian S. Makin**

Faculty Advisor: Dr. Anand Karki & Dr. Todd Primm

#### Examining the *Galleria mellonella* gut microbiome to model *Campylobacter* infection

**Nikhil Patel, Madison M. Schultz**

Faculty Advisor: Dr. Todd Primm

# SESSION A: POSTER

## 9:00 - 10:20 AM

### Biological Sciences

---

**Formin Binding Protein 1l (fmbp1l) plays an important role during embryonic development**

**Michael La Fontaine, Ty Franklin, Alicia Mendoza**

Faculty Advisor: Dr. Sharmin Hasan

**Functional Characterization of DENN Domain-Containing Protein 5b (dennd5b) in Early Embryonic Development of Zebrafish**

**Alicia Mendoza, Khaled Mohamed Nassar, Magdalen Marston, Andre Gil**

Faculty Advisor: Dr. Sharmin Hasan

**Tracking Eye Development in Relation to Mitochondrial ATP Synthesis and the HIPPO Pathway**

**Molly Casas**

Faculty Advisor: Dr. Mardelle Atkins

**Giants from the treetop. The skeletal anatomy of Anolis cuvieri (Anolis: Iguania)**

**Kylie Bojorquez**

Faculty Advisor: Dr. Juan Daza

**How to Make a Salad in Space**

**Minji Kim, Nishika Avineni**

Faculty Advisor: Dr. Mardelle Atkins

**Hyperdontia in Captive Leopard Gecko (Eublepharis macularius)**

**Eva Alvarado**

Faculty Advisor: Dr. Juan Daza

**Influence of Simulated Microgravity on the Polymicrobial Relationship Between Campylobacter jejuni and Enterococcus faecalis**

**Marwa Hemri, Joselyn Vazquez-Sanchez**

Faculty Advisor: Dr. Madhusudan Choudhary & Dr. Anand Karki

**Microbiology for EMS Providers: Bridging the Education Gap**

**Sam Mendelow**

Faculty Advisor: Dr. Todd Primm

**Microgravity: Influence on Growth, Physiology, and Genomic Expression of Campylobacter**

**Roberta Garces, Alexis Ho**

Faculty Advisor: Dr. Anand Karki, Dr. Madhusudan Choudhary, & Dr. Todd Primm

**Morphological Diversity of Melissodes (Long-Horned Bees)**

**Austin Haire**

Faculty Advisor: Dr. John Pascarella

**Pellet Composition as a Measure of Owl Digestion and Feeding Patterns**

**Morgan Richardson**

Faculty Advisor: Dr. Carly Hoffman

**Polymicrobial Interactions Among Foodborne Pathogens: Coexistence or Competition**

**Esmeralda Mendoza Lara**

Faculty Advisor: Dr. Anand Karki & Dr. Todd Primm

# SESSION A: POSTER

## 9:00 - 10:20 AM

### Biological Sciences

---

**Reevaluating the Decoy Seed Hypothesis in the Yucca–Yucca Moth Mutualism**

**Carlos Rea**

Faculty Advisor: Dr. John Pascarella

**Requirement of Hippo signaling for larval crawling muscle development in *Drosophila***

**Kevin Hernandez**

Faculty Advisor: Dr. Mardelle Atkins

**Science Education of Girl Scouts Through Field Work Engagement**

**Ellena Bruhn, Kendall Kinsey, Isabella Byrd**

Faculty Advisor: Dr. Steven Koether & Dr. Diane Neudorf

**Studying Neuroinflammation via Lipopolysaccharide-Induced Inflammation Model using PC12 with Treatments of Curcumin, Narangenin, and Betanin.**

**Danielle Garbarino**

Faculty Advisor: Dr. Jim Harper

**The Additive Effect of Bisphenols on 3T3 Cell Death**

**Sadie Gylling, Katie Paris**

Faculty Advisor: Dr. Aaron Lynne

**The Battle Against Superbugs: Fought by Locally Discovered Antibiotics**

**Isabella Howard, Adam Bruton**

Faculty Advisor: Dr. Aaron Lynne

**The Herpetological Collection of the SHSU NHC**

**Caleb Shoemaker**

Faculty Advisor: Dr. Juan Daza

**The Morphology of Small Bee Genera: A Digital Imaging Study**

**Emily Machac**

Faculty Advisor: Dr. John Pascarella

**The Taiga-A diverse and Important Habitat for Many**

**Stephanos Pavlis**

Faculty Advisor: Dr. Jeffrey Wozniak

**Twins Gone Wrong: the cause and costs of Freemartinism in cattle ranching**

**Abigail Cron, Jessica Gower, Cadence Chapman, Crystal Mclean**

Faculty Advisor: Dr. Mardelle Atkins

**You need guts to climb: liver volume as a proxy of locomotor strategy in glider and non-glider geckos**

**Sydney Schulte**

Faculty Advisor: Dr. Juan Daza

**Effect of mucin on *Campylobacter* growth in vitro and in vivo**

**Brianna Smith, Killian S. Makin**

Faculty Advisor: Dr. Anand Karki & Dr. Todd Primm

# SESSION A: POSTER

## 9:00 - 10:20 AM

### Chemistry

---

**A study on beta-lactamase inhibitors and their ability to restore the antibiotic activity of beta-lactams**

**Sonya Ortiz**

Faculty Advisor: Dr. Ilona Petrikovics

**Containment of Toxic and Explosive Volatiles by Human Remains**

**Containment Units for Use in Space**

**Kennedy Willoughby, Sarah Davis**

Faculty Advisor: Dr. Donovan Haines **Developing reliable temperature**

**control techniques for UV-vis spectroscopical analysis of myoglobin oxidation kinetics**

**Eva Zohne, Nwankwo U. Dickson, Zechariah Hall, Destini Eidman**

Faculty Advisor: Dr. David Thompson

**Synthesis of a Tetradecyl Carbazole Linking Unit for Benzodiazaborole-based Macrocycles**

**Kylie Bartusek, Bernard Mensah**

Faculty Advisor: Dr. Dustin Gross

**Synthesis of Amino and Hydroxyl Modified Polymers using Ring-Opening Metathesis Polymerization (ROMP)**

**Monique Boodram**

Faculty Advisor: Dr. Christopher Hobbs

### Geography and Geology

---

**Do Megalodon Teeth Change as they Age?**

**Brittany Rebeles**

Faculty Advisor: Dr. David Moss

**How to get away with murder; An investigation into gastropod predation of Chione cancellata**

**Ciara Carnes, Luca Rocha-Trevino, Damion Courville**

Faculty Advisor: Dr. David Moss

**Lifespans of Mercenaria campechiensis from the Caloosahatchee Formation**

**Alaura Grimes, Olive McCrary, Jon Pokorny**

Faculty Advisor: Dr. David Moss

**Paleoecology of the Caloosahatchee Formation**

**Mian Sterling, Jaris Salazar, Madison Sacco**

Faculty Advisor: Dr. David Moss

**Secret Life of Clams: Investigating lifespans of Pliocene Glycymeris subovata from the Jackson Bluff Formation**

**Logan Harrison, Marissa McMinn, Lily Terflinger**

Faculty Advisor: Dr. David Moss

**The Paleocology of the Lisbon Formation (Eocene) of Southern Alabama**

**Natalee Cormier, Lindsay Hollis, Sarah Cunningham**

Faculty Advisor: Dr. David Moss

# SESSION A: POSTER

## 9:00 - 10:20 AM

### Geography and Geology

---

Using Mid-Infrared Spectroscopy to Analyze Effects of Urbanization on Soil Health

[Lily Terflinger](#)

Faculty Advisor: Dr. Shyam Sivankutty Nair

### Mathematics and Statistics

---

Ideal Wild Numbers in Graphs

[Brenna Price](#)

Faculty Advisor: Dr. Naomi Krawzik

Loops, Stitches, and Sequences: Crochet as a Lens for Recurrence Relations

[Yasmine Mohammed](#)

Faculty Advisor: Dr. Martin Malandro



Scan for  
Abstracts



# SESSION B: ORAL-MEDIA

## 10:30 - 11:50 AM

### ROOM

#### **115** Flora, Fauna, and Humans

---

**Pollination Biology of Cross Vine (*Bignonia capreolata*) Wild and Cultivar species at PERL**

**Elise LeBlanc, Kaitlyn Davis, Matthew (Jackie) Barr, Alexia Piche, Cassandra Mendoza, Lucas Boykin**

Faculty Advisor: Dr. John Pascarella

**The Influence of Abiotic Factors on Human Decomposition and the Assignment of a TBS in Southeast Texas**

**William Villarreal**

Faculty Advisor: Dr. Sibyl Bucheli

**Insect Succession and Interactions During Cadaver Decomposition in Indoor and Outdoor Environments**

**Sarah Davis**

Faculty Advisor: Dr. Sibyl Bucheli

**Shortened longevity of the bivalve *Arctica islandica* during the mid-Pliocene warm period**

**Skylin Bromonsky**

Faculty Advisor: Dr. David Moss

**Eastern Bluebird (*Sialia sialis*) clutch size, eggshell coloration, and egg size as predictors of female health: an urban and rural comparison**

**Adelle Cannon**

Faculty Advisor: Dr. Tracy Bilsing

### ROOM

#### **116** Understanding Ourselves

---

**Stalking Among Latino Culture**

**Esmeralda Equihua Sanchez, Valerie Vidana**

Faculty Advisor: Dr. Kathleen Ratajczak

**False Memory and Real Consequences**

**Kiana Rodriguez**

Faculty Advisor: Dr. Jeffrey Anastasi

**Musics Effects on Emotions While Driving**

**Makenna Leet**

Faculty Advisor: Dr. Susan Duncan

**Understanding Stigma Through Student Parent Perspectives**

**Layla Behrens**

Faculty Advisor: Dr. Bart Stykes

# SESSION B: ORAL-MEDIA

## 10:30 - 11:50 AM

### ROOM

**117** AI + AR

---

**Artificial Intelligence and Bitcoin Facilities Affecting Rural Communities**

**Ingrid Guerrero**

Faculty Advisor: Dr. Rosanne Keathley

**P-Enhancing Public Awareness of Invasive Species Through an AR-Enabled Dodecahedron Exhibit**

**Ozan Akbulut**

Faculty Advisor: Dr. Michael Dakeev

**The Sound of Failure: What is the Impact of an Algorithm?**

**Xarlet Hernandez**

Faculty Advisor: Dr. Tracy Bilsing

**A Structured Insect Knowledge Base and Lightweight LLM Framework for Agricultural Decision Support**

**Yagizhan Durak**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqui

### ROOM

**230A** Tracking Bad Actors: Human & Machine

---

**Data-Driven Crime Forecasting: Effects and Application of Predictive Policing**

**William Fudge**

Faculty Advisor: Dr. Heejin Lee

**The Mind Behind the Crime**

**Bailey Frey**

Faculty Advisor: Dr. Susan Duncan

**Hacking via Direct Memory Allocation - A Feasibility Report**

**Yannis Lagrosa**

Faculty Advisor: Dr. Tracy Bilsing

**Automated Home Defense System**

**Ty Marthiljohni, Joseph Adams, David Mendoza**

Faculty Advisor: Dr. Junkun Ma

Scan for Abstracts



# SESSION B: ORAL-MEDIA

## 10:30 - 11:50 AM

### ROOM

**230B** Math, Stats, & Engineering

---

**Application and Analysis of Finite Difference and Element Schemes in Physics**

**Maximo Matanzo Breton**

Faculty Advisor: Dr. Tiffany Fruge Jones

**Irreducible representations of crystallographic space groups**

**Wildaniel Cortes**

Faculty Advisor: Dr. Ellen Weld & Dr. Samuel Lippert

**SEGF Groups of Complex-Valued Sequences**

**Nathan Collins**

Faculty Advisor: Dr. Timothy Trujillo

### ROOM

**241A** Social Communities

---

**Whether Taylor's theory still works in modern workplaces**

**Nicholas Medina, Victor Estrada**

Faculty Advisor: Dr. Ebrahim Karan

**Social Contract Philosophy and Constitutional Legitimacy: A Case Study on the United States and South African Constitutions**

**Makenna McDaniel**

Faculty Advisor: Dr. Thomas Meagher

**Gatekeeping as communal protection**

**Leif Myers**

Faculty Advisor: Dr. Christopher Toula

**Battleship: Connecting Military Disciplines to Social Survivorship**

**Abigail Dittman**

Faculty Advisor: Dr. Vinu Simon

**The Total Institution Theory: An Inside Look at De-individualism and Socialization of Police Cadets**

**Ryan Snow**

Faculty Advisor: Dr. Tracy Bilsing

# SESSION B: ORAL-MEDIA

## 10:30 - 11:50 AM

ROOM

**241B** Managing Volatility

---

**Prevention Over Detention: What We Can Do When It Comes to Sexual Offending**

**Abigail Padron**

Faculty Advisor: Dr. John Navarro

**A Comprehensive Analysis of Nuclear Energy as a Matter of Public Policy**

**Kyle Trochesset**

Faculty Advisor: Dr. Sungdae Lim

**Hurricane Risk & Scientific Uncertainty: The Influence of Non-Epistemic Values.**

**Zoe Phillips**

Faculty Advisor: Dr. Janela Baxter

**Traumatic Brain Injury as a Factor in Intimate Partner Violence: Victim and Offender Perspectives**

**Haleigh Geiger**

Faculty Advisor: Dr. Eric Connolly

ROOM

**242** Honors Scholars

---

**Honors College Peer Mentor Program**

**Jessica Gower**

Faculty Advisor: Kendall Gragert

**Honors Scholar Leadership Track**

**Hudson Chapman**

Faculty Advisor: Kendall Gragert

**Exploring the Mississippi Delta; A Physical Experience as a Form of Cultural Exchange**

**Ciara Carnes**

Faculty Advisor: Dr. John Strait

**Beeson's BSN HHS Broadcasting Collaboration**

**Brady Beeson**

Faculty Advisor: Jason Barfield & Kendall Gragert

**Music Space Matters**

**Kylie Burke**

Faculty Advisor: Kendall Gragert

Scan for Abstracts



# SESSION B: POSTER

## 10:30 - 11:50 AM

### Criminal Justice and Criminology

---

**Applying Social Disorganization Theory to Mexico's Organized Crime Networks**

**Elizabeth Franco**

Faculty Advisor: Dr. Laura Iesue

**Coerced into Guilt: Understanding False Confessions**

**Sydney Walters**

Faculty Advisor: Dr. John Navarro

**Effects of Interrogation Length and Miranda Invocations on Guilt Perceptions**

**Krista Carter, Fei Wang, Kayla Spenard, Monica Paez, Megan Papesh**

Faculty Advisor: Dr. Daniella Cash

**Femicide in Mexico**

**Maria Ramirez Remond**

Faculty Advisor: Dr. Kathleen Ratajczak

**Gender-Based Violence Across the Migration Journey: Evidence from Ukraine on Violence and Mental Health Outcomes**

**Mackenzie Zander, Isabella Ortiz**

Faculty Advisor: Dr. Laura Iesue

**Inside & Outside the Prison Walls: A Study of Abuse Within the Texas Penal System**

**Zackery Isaacks**

Faculty Advisor: Dr. Tracy Bilsing

**Language, Law, and Rape Culture: Barriers to Justice in Campus Sexual Assault Policy**

**Kassidy Reynolds**

Faculty Advisor: Dr. Kathleen Ratajczak

**Media Portrayals Of Dark Romance and Its Affect on Violence against Women.**

**Valeria Maldonado**

Faculty Advisor: Dr. Kathleen Ratajczak

**Child Sexual Abuse and the Cycle of Revictimization Among Women: Psychological and Behavioral Pathways**

**Hannah Coronado**

Faculty Advisor: Dr. Kathleen Ratajczak

**Violence Against Undocumented Immigrant Women: Risks and Realities**

**Melanie Villalobos**

Faculty Advisor: Dr. Kathleen Ratajczak

**Violence Against Women in the Military**

**Victoria Medrano**

Faculty Advisor: Dr. Kathleen Ratajczak

# SESSION B: POSTER

## 10:30 - 11:50 AM

### English

---

#### **Academic Community Engagement with Trinity River Authority**

**Esther Miller, Peyton Lunberg, Kayleigh Cordier**

Faculty Advisor: Dr. April O'Brien

#### **'Gorget' in Context: A study on Middle English Terminology of Textiles, Gender, and Symbolism in Sir Gawain and the Green Knight**

**Jamie Albert**

Faculty Advisor: Dr. Kimberly Bell

#### **My Body and I: an Application of Gothic Body Horror**

**Laura Julich**

Faculty Advisor: Dr. Kimberly Bell

#### **Performance in the Literacy Classroom: Using Reader's Theater to Improve Reading Fluency**

**Blessing Milburn**

Faculty Advisor: Dr. Kerry McArthur

### Forensic Science

---

#### **Dehydration and Recovery: Will DNA survive the GenTegra Test?**

**Ava Harris**

Faculty Advisor: Dr. Mayra Mayr-Eduardoff

### History

---

#### **Perseverance through Forced Christianization: An Examination of Enslaved Africans**

**Aubrey Jordan**

Faculty Advisor: Dr. Tracy Bilsing

### Kinesiology

---

#### **Exercise programming and job satisfaction stress adaptation**

**Daniel Peacock**

Faculty Advisor: Dr. Erica Pasquini

#### **Examining the Relationship Between Lower Extremity Skeletal Muscle Mass and Y-Balance Test Performance in Healthy Young Adults**

**Lucero Rodriguez, Kenny Quach**

Faculty Advisor: Dr. Mary Williams & Dr. Micheil Spillane

#### **Knee Osteoarthritis Interventions**

**Zoe Campbell**

Faculty Advisor: Dr. Mary Williams

#### **Medical PTSD from Knee Arthroplasties**

**Morgan Smith-Yetter**

Faculty Advisor: Dr. Mary Williams

# SESSION B: POSTER

## 10:30 - 11:50 AM

### Kinesiology

---

**Early Identification and Prevention of Osteoporosis: A Review of Risk Factors and Intervention Strategies**

**Julian Villanueva**

Faculty Advisor: Dr. Elaine George

### Mass Communication

---

**Vikos Research, Analysis, and PR Campaign Strategy**

**Tatiana Stamoulis**

Faculty Advisor: Dr. Nicole Hendricks

### Nursing

---

**Mental Health in Adolescents and Social Media**

**Carolina Holguin**

Faculty Advisor: Dr. Hope Jackson & Kendall Gragert

**Mental Health Impacts of Sleep Deprivation**

**Jennifer Iacoban**

Faculty Advisor: Kendall Gragert

**What is the relationship between limited English proficient mothers and prenatal care, delivery/birth, and postpartum outcomes**

**Wura Alade**

Faculty Advisor: Dr. George Randall

### Political Science

---

**Religion in U.S. Politics: Catholic Church Influence**

**Martin Rojas**

Faculty Advisor: Dr. Robin Bittick

**Transitional Justice and Refugee Testimony**

**Sarah Aguilera**

Faculty Advisor: Dr. Robin Bittick

### Population Health

---

**Association Between Maternal Metal Exposure During Pregnancy and Postpartum Depression in Rural Populations**

**Parker Freeman, Gabriella Akaba**

Faculty Advisor: Dr. Khalid Khan

**Barriers to Menstrual Health and Hygiene Access in Santa Cruz de la Sierra, Bolivia: A Public Health Perspective – Natalia Pinell, Shaminul Shakib**

**Natalia Pinell**

Faculty Advisor: Dr. Shaminul Shakib

# SESSION B: POSTER

## 10:30 - 11:50 AM

### Population Health

---

#### **Cancer Misinformation & Disinformation.**

**Hannah Hendricks**

Faculty Advisor: Dr. Christine Cardinal

#### **Do Language Barriers Affect Healthcare? A Statistical Look at Spanish-Speaking LEP Populations**

**Carmen Bearden**

Faculty Advisor: Dr. Christine Cardinal

#### **Effects of an Educational Intervention on Energy Drink Use and Cardiovascular Awareness in College Students**

**Rachel Barker**

Faculty Advisor: Dr. Praphul Joshi

#### **How does undergraduate/non-healthcare profession experience create transferable skills for healthcare career workers?**

**Alex Frenzel**

Faculty Advisor: Dr. Christine Cardinal

#### **Maternal Age and Preterm Birth Risk in Harris County: An Analysis Across Age**

**Aniya Booker**

Faculty Advisor: Dr. Amanda Scarbrough

#### **Reproductive Health and Self Efficacy**

**Sofia Morales**

Faculty Advisor: Dr. Christine Cardinal

#### **Structural Determinants of Low Health Literacy and Their Influence on Health Outcomes in a Carceral Setting.**

**Ashlyn Caddell**

Faculty Advisor: Dr. Christine Cardinal

### Psychology

---

#### **A scoping review examining the impacts of estradiol on stress-related or affective behavior**

**Rebeka Garcia**

Faculty Advisor: Tara Clover

#### **Cannabis and Eating Disorders: A Messy Mix of Risks and Benefits**

**Hope Bloecher**

Faculty Advisor: Dr. Tracy Bilzing

#### **Examining How Facial Expressions Influence Perceptions of Sexual Consent**

**Mariella Cruz, Ajax Nguyen, Kayla Spenard, Tiffany Russel**

Faculty Advisor: Dr. Daniella Cash

#### **Examining Personality Shifts Following Social or Familial Rejection in Sexual Orientation Minority Groups Using the AMPD Framework**

**Kimberly Martinez**

Faculty Advisor: Dr. Jamie L. Anderson

# SESSION B: POSTER

## 10:30 - 11:50 AM

### Psychology

---

**Examining the Relationship Between Mental Imagery Ability and Susceptibility to False Memories**

**Samuel Harrison, Bobbie Jo Hurt, Sunday Stewart, Jocelyn Herring**

Faculty Advisor: Dr. Jeffery Anastasi & Jessica Lee

**Examining the relationship between OCD symptom dimensions and disordered eating behaviors.**

**Emma Elliott**

Faculty Advisor: Dr. Ryan Marek

**Exploring the Impact of Environmental Factors on Psychological Well-Being in Black Women**

**Leah Griffin**

Faculty Advisor: Haley Cook

**Gambling in the Pokemon Trading Card World: Understanding how Social Influences Create Addictive Behavior**

**Ayme Mendoza**

Faculty Advisor: Dr. Mary M. Tomkins

**Gender Studies in Physical Fitness Centers**

**Rowan Perrotta**

Faculty Advisor: Kendall Gragert

**Impact of Reality TV**

**Hannah Cruz**

Faculty Advisor: Dr. Tracy Bilsing

**Insecure Childhood Attachment and the Vulnerability Paradox in Adult Relationship Satisfaction**

**Kristen Zeman**

Faculty Advisor: Dr. Susan Duncan

**Psychopathic Traits and Risk-Taking Behavior: Examining the Triarchic Model in an Undergraduate Sample**

**Yadira Vaca-Araujo**

Faculty Advisor: Dr. Jamie L. Anderson

**Sports Psychology in Recovering Collegiate Athletes**

**Kari Nance**

Faculty Advisor: Dr. Christine Cardinal

**The Developmental Origins of Leatherface and his Violent Behavior: Integrating Trauma, Attachment, and Social Learning**

**Andrea Medrano**

Faculty Advisor: Tara Clover

**The Effects of Classical and Operant Conditioning on Habit Formation**

**Desiree Brown**

Faculty Advisor: Dr. Tracy Bilsing

**The Effects of Religious Bullying on Students in US Public Schools: An Exploratory Research**

**Ashley Harb**

Faculty Advisor: Dr. Nicholas Scheel

# SESSION B: POSTER

## 10:30 - 11:50 AM

### Psychology

---

**The Role of Sleep in Memory Consolidation and Cognitive Performance in Undergraduate Students**

**Jaydah Smith**

Faculty Advisor: Dr. Tracy Bilsing

**Trashed Insecurities**

**Aleena Telaroli, Crystal McLean, Eric Samuel, Henry Roper**

Faculty Advisor: Dr. Gulden Esat

**What Do You Find Important in a Romantic Relationship?**

**Jade Sinnott**

Faculty Advisor: Dr. Mary Tomkins

**When Parents Part Ways: How Childhood Divorce Shapes Attachment and Relationships in Adulthood**

**Kennedi Lockhart**

Faculty Advisor: Dr. Hillary Langley & Dr. Jeffrey Wozniak

### Sociology

---

**Why Society Should Adopt a Cap on Wealth ?**

**Mubashir Ansari**

Faculty Advisor: Adam Norris



**Scan for  
Abstracts**

# SESSION C: ORAL-MEDIA

## 2:00 - 3:20 PM

### ROOM

**115** The Arts

---

**Once Upon An Opera: Stage Management Casebook**

**Mackenzie Lee, Maegan Jimenez, Roman Crandell, Dr. Rebecca**

**Renfro**

Faculty Advisor: Patrick Pearson

**The Power of Storytelling and the Cowboy myth in Cormac McCarthy's Border Trilogy**

**Bryan Litchford**

Faculty Advisor: Dr. Michael Demson

**Modernism in Billy Collins' "Forgetfulness"**

**Allie Plunk**

Faculty Advisor: Dr. Robert Donahoo

**Folk Music & Production in Today's Music Industry**

**Brennan Aston**

Faculty Advisor: Michael Shanks

### ROOM

**116** Education

---

**Social Inequality: TAPR Applied Analysis**

**Laticia Scholwinski**

Faculty Advisor: Dr. Karen Douglas

**The motive behind personal growth in college students**

**Sandra Madrid**

Faculty Advisor: Dr. Hillary Langley, Dr. Dena Horne

**Personality Dynamics in Group Problem Solving: Exploring MBTI Interactions in AP Classrooms**

**Sydney Brooks**

Faculty Advisor: Dr. Kimberly Bell

**Student Teachers' Perceptions & Reflections on Reflective Journal-Writing Exercises**

**Olivia Casas**

Faculty Advisor: Dr. Mark Hainline & Dr. Maureen Victoria

# SESSION C: ORAL-MEDIA

## 2:00 - 3:20 PM

### ROOM

**117** Religion and Philosophy

---

**He Gets Us**

**Olivia Wiley**

Faculty Advisor: Dr. Tracy Bilsing

**Death to Life Row: The Transition From Death Row Condemnation to Spiritual Preparation in Texas's Death Row**

**Zackery Isaacks**

Faculty Advisor: Dr. Sarah Chapman

**New Suns, Old Shadows: A Nietzschean Diagnosis of the Contemporary Cultural Moment**

**Hailey Whiteman**

Faculty Advisor: Dr. Jessica Elkayam

**An Epicurean Diagnosis for the U.S. Army's Mental Health Crisis**

**Alicia Mendoza**

Faculty Advisor: Dr. Janella Baxter

### ROOM

**230A** Adult Health & Aging

---

**Oral Health and Chronic Disease in Aging Populations: A Preventive Public Health Perspective**

**Keshar Budha**

Faculty Advisor: Dr. Kirnan Sapkota

**Adult ADHD in the United States: Diagnosis, Treatment Patterns, and Barriers to Healthcare Access**

**Shunia Young**

Faculty Advisor: Dr. Kirnan Sapkota

**Combating Muscle Atrophy in the ICU: A Literature Review of NMES and Physical Therapy Interventions**

**Julian Villanueva**

Faculty Advisor: Dr. Mario Muñoz

**Effects of walking speed on intersegmental foot range of motion in older adults**

**Carter Pacovsky**

Faculty Advisor: Dr. Harsh Buddhadev

Scan for Abstracts



# SESSION C: ORAL-MEDIA

## 2:00 - 3:20 PM

### ROOM

#### **230B** Population Health

---

**Examining the Public Health Curriculum Through an Autism Lens: A Needs Assessment at Sam Houston State University**

**Migabo Rango**

Faculty Advisor: Dr. David E. Thompson

**Digital consumption, Dietary Consequences: Intersections of doomscrolling and UPF consumption**

**Lauren-Ashley Miller**

Faculty Advisor: Christine Cardinal, JD

**Population Health**

**Nicole Arreola**

Faculty Advisor: Dr. Kiran Sapkota

### ROOM

#### **241A** Sociology in Action

---

**Stay-at-Home Father and Provider Mothers: The Effects on Income and Division of Labor**

**Camilla Lopez**

Faculty Advisor: Dr. TzeLi Hsu & Dr. Christopher Patane

**Homelessness among Single Mothers**

**Amyria Barrera**

Faculty Advisor: Dr. TzeLi Hsu

**Educating Veterans**

**Donald Hutchcraft**

Faculty Advisor: Dr. Peiyao Li

**DACA Recipients & Higher Education: Hope or an Empty Promise?**

**Kayla Boyd**

Faculty Advisor: Dr. Karen Douglas

# SESSION C: ORAL-MEDIA

## 2:00 - 3:20 PM

### ROOM

## 241B Authenticity Represented

---

**Dancer Authenticity: How Authenticity is Perceived and Performed Within Dance**

**Daniela Diaz**

Faculty Advisor: Jacob Regan

**A Man and a Cookie: The Simple Treat That Changed How I See Food**

**William Pokorny**

Faculty Advisor: Dr. Judith Clemens-Smucker

**Barbeque in the American Western**

**Morgan Botha**

Faculty Advisor: Dr. Michael Demson

**UP: Storytelling Through Color**

**Jill Rosenbaum**

Faculty Advisor: Dr. Melissa Mednicov

### ROOM

## 242 Ancient + Medieval Literature

---

**Intertextuality: Ovid, Homer, and Virgil**

**Jamie Albert**

Faculty Advisor: Dr. Kimberly Bell

**Games of Farce and Fate: The Literary Portrayal of Fortuna as a Faerie and an Evaluation of the Rules of the Otherworld in Somer Soneday**

**Matt Bolden**

Faculty Advisor: Dr. Kimberly Bell

**The Knight of the Cart: Examining Courtly Love as Performance through Lancelot and Guenevere**

**Catherine Blevins**

Faculty Advisor: Dr. Kimberly Bell

**Analyzing "The Defense of Guenevere" By William Morris**

**Ashtyn Haggard**

Faculty Advisor: Dr. Audrey Murfin

Scan for Abstracts



# SESSION C: POSTER

## 2:00 - 3:20 PM

### Agricultural Science

---

**Assessing Soil Erosion Rates in Red Imported Fire Ant Mounds and Bioturbation in Various Urban Soil Types**

**Silvana Ribeiro, S'vani Campos, Cassidy Bastilla, Dr. Felipe Aburto**

Faculty Advisor: Dr. Shyam Nair

**Factors influencing the US Consumer Expenditure on Beef, Seafood, and Fresh Vegetables**

**Nicholas Ramirez, Carter Craig, Mallory Majors, Sydney Folks**

Faculty Advisor: Dr. Shyam Nair

**Injection Site Lesions in Meat Production Livestock**

**Loganne Mason**

Faculty Advisor: Dr. Kristin Nicholson

**Live Crop Library: An Active Learning Tool**

**Noah Griggs, Kaitlin Williams, Cody Cavness, Megan Herring, Ignacio Zumelzu**

Faculty Advisor: Dr. Shyam Nair

**Mapping *Solenopsis invicta* Distribution Across College Station Parks**

**Cassidy Bastilla, Silvana R. Thompson, S'vani Campos, Dr. Felipe Aburto**

Faculty Advisor: Dr. Shyam Nair

**The Effect of POGIL on Student Understanding**

**Madison Tomasek, Landon Smith, Jonathan McCaleb, Taylor Mize, Braden Glipin**

Faculty Advisor: Dr. Shyam Nair

**What defines a great teacher?**

**William Harris, Chase Willard, Alana Miles, Isabel Henson**

Faculty Advisor: Dr. Shyam Nair

### Art

---

**Roc Grotesk: A Typeface Exploration**

**Juwairya Gharib**

Faculty Advisor: Dr. Tracy Bilsing

# SESSION C: POSTER

## 2:00 - 3:20 PM

### Computer Science

---

#### IoT Vulnerability Research

**Chase Cooper**

Faculty Advisor: Dr. Amar Rasheed

#### Uncovering Digital Deceptions: Methods of Altered-Image Detection

**Carina Roque, Anthony Rodriguez**

Faculty Advisor: Dr. Narasimha Shashidhar

### Dance

---

#### Dance and Its Importance in Early Childhood Education

**Ashley Atkinson**

Faculty Advisor: Jacob Regan

#### How do the Qualitative and Quantitative Components of Dance Movement Change Over Time?

**Asiah Wooten**

Faculty Advisor: Dr. Jennifer Didier

### Economics and International Business

---

#### The Economic Impact of World War 2 on the United States

**Jack Martin**

Faculty Advisor: Dr. Mark Frank

#### The Likelihood of a Business to Franchise Based on External and Internal Factors

**Cecilia Rider**

Faculty Advisor: Dr. Nazanin Sedaghatkish

### Educational Leadership

---

#### Operationalizing Equity Through Parent Communication Design in Kindergarten

**Laura King**

Faculty Advisor: Dr. Hatice Inan

#### The Need for FASD Research in the School System: Advancing Evidence-Based Learning Practices for Students with FASD

**Anastasia Strauss**

Faculty Advisor: Julie Albert

#### What effect does hands-on, inquiry-based instruction have on student retention and application of academic science vocabulary in grades 4-8?

**Elizabeth Miller**

Faculty Advisor: Dr. Tracey Hodges

# SESSION C: POSTER

## 2:00 - 3:20 PM

### Engineering Technology

---

#### **33.6 kW Solar PV-based EV Charging Station Data Collection**

**Nathan Ciyombo, Jemarcus Smith**

Faculty Advisor: Dr. Reg Pecen

#### **Augmented Reality for Sighted–Blind Interaction**

**Reyhan Simsek**

Faculty Advisor: Michael Dakeev

#### **Automated defense system**

**Jaden Giordano, Thomas Anderson, Fernando Vargas, Joshua Ijeh**

Faculty Advisor: Dr. Junkun Ma

#### **Automated Home Defense System**

**David Mendoza, Ty Marthiljohni, Joseph Adams**

Faculty Advisor: Dr. Junkun Ma

#### **Building AI model for Detecting Harmful Insects in Agriculture**

**Yaquelin Saenz, Rhianna Mares, Nelly Okotie**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqui

#### **Community Library**

**Emaline DiCaro**

Faculty Advisor: Shelby Brock

#### **Design and Demonstration of a Scaled Oleo Strut System**

**Mikaela Bustos, Nicholas Millunzi, Mohammed Amin, William Peters**

Faculty Advisor: Dr. Derli Amaral Jr.

#### **Designing an Audio Responsive Orientation and Rotation Apparatus – Cylinder (Aurora-C)**

**Jazmin Ortiz, Sebastian Patterson**

Faculty Advisor: Dr. Reg Pecen & Rahagir Ridwan Anik

#### **Development of a Prototype Weatherproof Self Sustainable Station for Remote Deployment of an UAV**

**Jacob Herron, Gabriel Cartagena, Jacob Nichols, Quang "Jack" Lac**

Faculty Advisor: Dr. Ma Junkun

#### **Drone Container**

**Bryce Davis, Saul Medina, Pedro Junior**

Faculty Advisor: Dr. Ma Junkun

#### **Dual Function Wash System**

**Emiliano Cruz, Marcelo Santamaria, Rainie Mott**

Faculty Advisor: Michael Dakeev

#### **Electric Dump Trailer with Weight Measurement System**

**Macario Aleman Jr., Blaine Knight, Anahi Aguiluz, Monzerat Solorio**

Faculty Advisor: Dr. Derli Amaral Jr.

#### **EV Dirt Bike**

**James Kinser, Cole MacMillan, Matthew Wimberley**

Faculty Advisor: Dr. Reg Pecen

# SESSION C: POSTER

## 2:00 - 3:20 PM

### Engineering Technology

---

#### Flange Bolt Cleaning System

**Aaron York, Hector Landa, Ingrid Gonzalez**

Faculty Advisor: Dr. Reg Pecen

#### GALE system Drone Station

**John Ogden, Jacob Peterson, Cristian Sanchez**

Faculty Advisor: Dr. Junkun Ma

#### Hydrogen/Solar powered Golf Cart

**Mykal Gilson, Ezequiel Flores, Nathan Ciyombo Mayombo**

Faculty Advisor: Dr. Reg Pecen & Dr. Faruk Yildiz

#### Hydraulic automatic mainulfold

**Anthony Garza, Khassoum Savane, Earston James**

Faculty Advisor: Dr. Reg Pecen

#### Indoor Security Monitoring Drone

**Joshua Bragg, Luz Ramos, Nicholas Galanis, Cadence Kramer**

Faculty Advisor: Dr. Ali Dinc & Dr. Reg Pecen

#### Luxuray Achitectoral Eco Village

**Blake Shultz, Taylor Bailey**

Faculty Advisor: Shelby Brock

#### Mobile AED Command Unit

**Gavin Lea, Chidi Iwe, Isaac Connelly, Jonas Cruz**

Faculty Advisor: Dr. Reg Pecen

#### Modern Townhouse

**Aniya Jackson**

Faculty Advisor: Mahasen Abdelhafez & Shelby Brock

#### Motorized Beam Clamp

**Russel Hasselmeier, Cheighson English, Ethan Eberhardt, Corinthian Cormier**

Faculty Advisor: Dr. Reg Pecen

#### Pressure and Thermocouple Mechanism

**Sophie Himelstein, Jacob Martin, Alvaro De La Mora Valle**

Faculty Advisor: Dr. Reg Pecen

#### Real-Time monitoring system for 3D printers using Multi-Model Sensors

**Edgar Gonzalez, Andre Higgins, Owen Lyford**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqui

#### Reasoning Manipulation Dataset for Robotic Arms (RMD-RA): A Multi-Task Benchmark for Cognitive and Physical Skill Learning in Robots

**Mohammed Amin, Ethan Wingfield**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqui

#### Smart Classroom Robot

**Mark Bailly, Evan Payne, Richard Serrill**

Faculty Advisor: Dr. Reg Pecen

# SESSION C: POSTER

## 2:00 - 3:20 PM

### Engineering Technology

---

#### **S.M.A.R.T. House Project**

**Gavin Lea, Sabastian Lower**

Faculty Advisor: Dr. Reg Pecen

#### **Smart Safety Helmet with Heat Exhaustion Detection**

**Rashid Elabor, Whbet Woldegebriel, Deandre Mayon, Christopher Fix**

Faculty Advisor: Dr. Junkun Ma

#### **Solar-Electric Hybrid Propulsion System for a Micro Airplane with 24-Hour Endurance**

**Gabriel Smith, Tanner Stevens, Fletcher Plank**

Faculty Advisor: Dr. Ali Dinc

#### **UAV Propeller Optimization Analysis**

**Michael Pascual, Sebastian Nunez**

Faculty Advisor: Dr. Ali Dinc

#### **Weatherproof Self-Sustainable Station for Remote Deployment of an Unmanned Aerial Vehicle (UAV)**

**Isiah White, Nathan Edenojie, Re'mani Sigers**

Faculty Advisor: Dr. Junkun Ma

### Management Information Systems

---

#### **Follet vs Taylor Comparing Management and Leadership approaches.**

**Dallin Turner, Aaron Aguilar, Ashton Lozano**

Faculty Advisor: Dr. Terry Waugh

#### **How to apply ERG theory in management**

**Brendan Metcalf, Austin Clift**

Faculty Advisor: Dr. Terry Waugh

# SPECIAL THANKS TO OUR FACULTY & GRAD STUDENT MODERATORS

Abbas Aboohamidi  
Rahagir Ridwan Anik  
Mardelle Atkins  
Abu Bari  
Maria Barker  
Thomas Brommage  
Harsh Buddhadev  
Kari Bush  
Kiana Cano  
Christine Cardinal  
Alexia Cassman  
Jennifer Child  
Marilyn Comer  
Ali Dinc  
Diane Dowdey  
Bryan Duncan  
Susan Duncan  
Gulden Esat  
Alyssa Espinoza  
Syed Hasib Akhter Faruqui  
Sylvia Flores  
Tiffany Frugé Jones  
Josh Green  
Lu Guo  
Christina Gushanas  
Donovan Haines  
Samantha Hansen  
Sharmin Hasan  
Devyn Hayes  
Hannah Hennessey  
Kesong Hu  
Robyn Johnson  
Anand Karki  
Khalid Khan  
Pari Khawaja  
Sara Kuberski  
Vicky Lantz  
Gunner Law  
Raynie Leard

Peter Lehmann  
Olena Leipnik  
Li-Jen Lester  
Peiyao Li  
Aaron Lynne  
Junkun Ma  
Rayyan Manwar  
Seth McAdow  
Kerry McArthur  
Kayla McCarns  
Zoe McDonald  
Thomas Meagher  
David Moss  
Momen Mousa  
Swathi Murali  
Shyam Nair  
Carroll Nardone  
Erin Owens  
Lauren Owens  
Reg Pecen  
Heather Pereyra  
Christopher Pilkington  
Bryce Powers  
Todd Primm  
Kevin Randall  
Chloe Rodriguez  
Mona Saadeldin  
Khassoum Savane  
Mary Scherer  
Shaminul Shakib  
Rhonda Slater  
Austin Smith  
Treston Smith  
Rasheda Sultana  
David Thompson  
Katrina Thornton  
Michael Vaughn  
Russell Willerton



SCAN HERE  
FOR ABSTRACTS

