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### Student Research Symposium Schedule 2024

Texas A&M University-San Antonio

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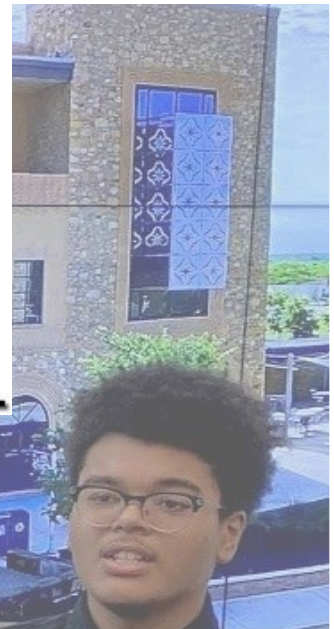
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TEXAS A&M UNIVERSITY  
SAN ANTONIO



# STUDENT RESEARCH SYMPOSIUM



Julian Spindola

Faculty Sponsors: Heather Diagne and Rebekah Piper

**Background, cont.**

In 1988, the San Antonio Housing Trust (SAHT) was established by the City of San Antonio and grew from 100 units to over 1,000 units. SAHT would create (Home Guide and use the limited income generated with those investments to grow the trust fund or invest in affordable housing development. In 1990, the San Antonio Housing Trust Foundation (SAHTF) was formed as a not-for-profit organization. The purpose of SAHTF is to manage the activities of SAHT and offer low-interest loans to affordable housing developers.

In 1997, the city established the San Antonio Housing Trust Finance Corporation (SAHTFC), managed by SAHTF. The creation of this finance corporation allowed SAHT to distribute tax-credit bonds. Over the years, in 2001, the city established the San Antonio Housing Trust Public Facility Corporation (SAHTPFC) to produce affordable housing developments and public housing facilities.

While these systems operated as intended and provided critical affordable housing, there were some limitations. SAHT and SAHTF had a separate board of directors from SAHTFC and SAHTPFC, making coordinating policy difficult. This future would eventually be resolved with the creation of Mission Trails Mobile Home Park in 2014.

In 2014, over 500 moderate were forced to move out of Mission Trails Mobile Home Park to make room for an upscale mixed-use housing development. City leaders presented the displacement, describing it as "gentrification" and "predatory behavior" (Lopez). This got a lot of press and attention on housing development for San Antonio, leading to the creation of Housing Forward policies in the state.

In 2016, the Mayor of San Antonio, Ron Nirenberg, approved the creation of the San Antonio Housing Policy Framework (SAHPF), which is based on the needs to change to address demand for affordable housing in San Antonio. "Housing Policy Framework" (SAHPF) was the result of the Strategic Housing Implementation Plan (SHIP) in 2016, which is a 10-year plan that details how to implement findings in SAHPF.

**Solutions**

San Antonio is making thoughtful strides in increasing the production, preservation, and rehabilitation of affordable housing due to SHIP, which sets plans and targets for the city to achieve. According to the 2023 Housing Collaborative Annual Report, only affordable housing developments were completed in the last fiscal year, 117 of which are between 50-60% AMI. Furthermore, 4,400 homes are listed "in progress." Together, this is 6% of SHIP's 10-year goal, which is excellent progress for one year (San Antonio, "Annual Report").

**Solutions, cont.**

While the progress in addressing housing that slow and more affordable housing development are present. Factors including its interest rates, construction costs, regulatory restrictions, and high rates make it difficult to provide affordable housing for the vulnerable San Antonio. To alleviate this problem, the state government must allocate more funds and priority to provide affordable housing, especially at the 0-30% AMI (area median income) level.

As for the preservation of affordable housing, a popular way to help and maintain affordability in neighborhoods is by using community land trusts (CLTs). CLTs provide affordable housing and land as a collective social sector (Schwartz et al.). CLT in San Antonio, Esperanza Power & Justice Center, was first created through a \$500,000 grant from the SAHT (Diagne).

**Conclusion**

It is crucial that we, the people of San Antonio, recognize that housing construction helps our community. Affordable housing policy is critical to ensuring equity for those born by generations of our affordable housing policy. We must improve education and increase affordability, leading to achieve meaningful change in affordability. Getting involved in your local community (neighborhood associations, city council, advocacy groups) and voting on policy reform are great ways to become an advocate for housing. Many people believe affordable housing is their responsibility, but this perspective is flawed. Affordable housing is to universal and equity the needs of everybody.

**References**

Diagne, Heather. "The Role of Community Land Trusts in Affordable Housing." *Journal of Affordable Housing*, 2023.

Lopez, Rebekah. "Gentrification and Predatory Behavior in San Antonio." *Urban Affairs Review*, 2022.

Schwartz, J. et al. "Community Land Trusts: A Review of the Literature." *Journal of Affordable Housing*, 2021.

San Antonio Housing Policy Framework (SAHPF). San Antonio, 2016.

Strategic Housing Implementation Plan (SHIP). San Antonio, 2016.

San Antonio Housing Trust (SAHT). *Annual Report*, 2023.



# 2024 Annual Symposium Program

Texas A&M University-San Antonio  
Business & Library Hall

April 19, 2024

# 10th Annual Student Research Symposium

## Program Committee

### Co-Chairs

**Bill Bush**

*Professor of History & Honors Director*

**Weixing Ford**

*Associate Professor of Management & Marketing*

**John Smith**

*Professor of Kinesiology*

### Committee Members

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Mary Kay Cooper

*Director, Alumni Affairs*

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**Mohamed Abdelrahman**

*Provost & Senior Vice-President for Academic Affairs*

**Vijay Golla**

*Vice Provost for Research & Health Sciences*

# Symposium Schedule at a Glance

8:30-9:00am: Attendee Check-in (BLH Lobby)

9:00am: Symposium Opening (BLH Multipurpose Room)

9:30-10:45am: Morning Concurrent Oral Presentation Sessions (BLH Classrooms)

9:30-10:30am: Morning Poster Session (BLH Lobby)

11:00-11:45am: Three-Minute Thesis Winners Session (BLH Multipurpose Room)

12:00-1:00pm: Luncheon & Keynote Speaker (BLH Multipurpose Room)

1:15-2:30pm: Afternoon Concurrent Oral Presentation Sessions I (BLH Classrooms)

2:15-3:15pm: Afternoon Poster Session (BLH Lobby)

3:15-4:30pm: Afternoon Concurrent Oral Presentation Sessions II (BLH Classrooms)

4:30-5:00pm: Symposium Closing / Pickup Posters



# Featured Speakers

## Laurie Ann Guerrero

**Associate Professor / Writer-in-Residence  
Texas A&M University-San Antonio**

Laurie Ann Guerrero, born and raised in the Southside of San Antonio, is the author of *Babies Under the Skin* (Panhandler 2007), *A Tongue in the Mouth of the Dying* (University of Notre Dame Press 2013), *A Crown for Gumecindo* (Aztlán Libre Press 2015), and *I Have Eaten the Rattlesnake: New & Selected Poems* (TCU Press 2021). Guerrero has held consecutive positions of Poet Laureate of the city of San Antonio (2014-2016) and the State of Texas (2016-2017). She holds a B.A. in English Language & Literature from Smith College, an MFA in poetry from Drew University, and is an associate professor and the Writer-in-Residence at Texas A&M-San Antonio.



## Rodney E. Rohde

**Regents & University Distinguished  
Professor of  
Medical Laboratory Science  
Texas State University**

Rodney E. Rohde, PhD, SM(ASCP)<sup>CM</sup>, SV<sup>CM</sup>, MB<sup>CM</sup>, is Regent's and University Distinguished Professor and Chair of the Medical Laboratory Science Program, College of Health Professions, and Associate Director, Translational Health Research Center at Texas State University in San Marcos and an associate adjunct professor of biology at Austin Community College in Texas and is a board-certified specialist in virology, microbiology, and molecular biology with the American Society for Clinical Pathology.



8:30-9:00am

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## Symposium Check-In

BLH Lobby

9:00-9:30am

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## Symposium Opening

BLH Multipurpose Room

**Salvador Hector Ochoa**

President, Texas A&M University-San Antonio

“Ars Politica”

**Laurie Ann Guerrero**

Associate Professor & Writer-in-Residence, Texas A&M University-San Antonio

9:30-10:45am: Morning Concurrent Oral Presentation Sessions

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## Studies in Biology & Water Resources

BLH 262

Impact of Management Strategies of the San Antonio River on Mosquito

Diversity and Abundance

Kailynn Wells, *Biology*

Target Macrophytes: Increasing Water Quality Through Optimized Vegetation Considerations for Constructed Wetlands

Kimia Ahmadiyah, *Water Resources*

Desalination of Synthetic Produced Water by Directional Solvent Extraction in a Semi-Continuous System

Pablo Vicaria, *Water Resources*

Moderator: Rodolfo Valdez, *Biology*

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**Scan the QR code to view full-text abstracts of student projects presented at the symposium!**

## Studies in Ecology

BLH 266

Understanding Amphibian Life Cycle Ecology and Evolution via Agent-Based Modeling  
Jesus Lopez, *Biology*

Insights into Subterranean Connectivity Within the Aquifer of the Yucatán Peninsula:  
Population Genetics and Distribution of *Typhlatya* Species  
Gabrielle Vaughn, *Biology*

Discovering New Phytoplasma Strains in Texas: A Study on Insects and Wild Grasses  
Danielle Rios, *Biology*

Moderator: Ashley Teufel, *Biology*

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## Learning and Living

BLH 362

The World on Women's Shoulders: A Quantitative Analysis of the Relationship Between  
Gender and the Environment  
Renate Fort, *Sociology*

Analyzing the Performance and Cost-Efficiency of Deploying Machine Learning Models  
in Cloud  
Hongyu Wang, *Computer Science*

Nurturing Student's Academic Belongingness and Success Within a Hispanic Majority Institution  
Arianna Acosta & Jasmyne Thomas, *Psychology*

Blast Off: The Comic Format as a Launchpad for Meaning-Making in Tillie Walden's  
*On a Sunbeam*  
Krystyn Stacy & Marissa Cook, *English*

Moderator: Sarah Pollock, *Sociology*

9:30-10:45am: Morning Concurrent Oral Presentation Sessions

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## Investigations in Psychology

BLH 366

Going Gray Too Early: Color (Grayscale) Effects on Correct Facial Identification

Roman Pardo, Mikael Gabriel Ona, & Arleth Morquecho, *Psychology*

Two Wrong Decisions are Worse Than One: Dual-Task Performance on an ID Screening Task

Nathan Wieters, Arleth Morquecho, & Mikael Gabriel Ona, *Psychology*

Age-Based Stereotype Threat in Older Witness: A Cultural Investigation

Maria Santillan Ibarra, Steven Matias, & Jorge Santillan Ibarra, *Psychology*

Moderator: Dawn Weatherford, *Psychology*

9:30-10:30am: Morning Poster Session

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## Morning Poster Session

BLH Lobby

Social Characteristics of Water Conservation

Korina Alcantara, *Sociology*

Forms of Social Comparison in Different Socioeconomic and First-Generation Statuses

Juliana Arguello, Alena Raya, Isabella Castellanos, Jasmyne Thomas, & Anisa Halperin, *Psychology*

Reproductive Natural History of the American Grass Mantid, *Thesprotia graminis*

Bridget Battaglia, *Biology*

Creating a New Measure of Traditional (Toxic) Masculinity: The TM Survey

Miranda Bernal, *Psychology*

Academic Self-Concept Differs by Type of Social Comparison at a Hispanic Majority Institution

Isabella Castellanos, Alena Raya, & Anastacia Wicks, *Psychology*

Navigating the Future: Communication Skills and Employability in Accounting Students

MaryAnn Cumpian, *Accounting*

It's Not Me, It's You: Attachment, Love Styles, and Breakup Distress

Katelynn Flores, *Psychology*



Determining the Causal Effects and Moderating Role of Social Comparison Among Hispanic Undergraduate Students at a Minority Serving University

Anisa Halperin, Juliana Arguello, Alena Raya, & Isabella Castellanos, *Psychology*

Bingocize®: Enhancing Physical and Cognitive Health for Nursing Home Residents

Jordan Kappmeyer & Maria Santillan Ibarra, *Psychology*

Breast Cancer and Hopelessness

Aimee Kling & Angelica Ramirez, *Psychology*

The Greatest of These is Love-- Or is it Secure Attachment?

Kayla Lopez & Jarad Reiss, *Psychology*

Economic Sanction and International Migration

Angie Martinez, *Political Science*

Ecological Use of AI for Invertebrate Zoology

Ana Flores, *Biology*

Unveiling Hidden Factors: Spatial-Temporal Roadway Accident Visualization and Analysis in San Antonio

Cristian Moran, *Computer Science*

JagCoach: AI-Assisted Coaching Platform to Enhance Oral Communication Skills for College Students

Rudy Ramos, *Computer Science*

'Whatcha' lookin' at: Using Eye-Tracking Technology for ID Verification

Chloe Sullivan, Steven Matias, Kaitlyn Acierno, Laritza Garcia, & Juliana Arguello, *Psychology*

It's All About Me: How Narcissism Impedes Facial Recognition

Adriana Rodriguez, Edith Escamilla, Ana Zavala, & Stephanie Gooding, *Psychology*

Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder Predicting Prospective and Retrospective Memory

Julianna Valencia, Chelsea Schwartz, & Ocktavius Palomares, *Psychology*

Gender Differences Emotions Regulations in Work vs Relationship Situations

Marilyn Garcia & Abby Moriarty, *Psychology*

11:00-11:45am: Plenary Workshop Session

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## Three-Minute Thesis Winners Session

BLH Multipurpose Room

Three A&M-SA graduate students will present their winning speeches for the Three-Minute Thesis competition.

Moderator: Ting Liu, *Dean of Graduate Studies*

12:00-1:00pm: Lunch & Keynote Speaker

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## Lunch & Keynote Speaker

BLH Multipurpose Room

### **Globalization and Infectious Disease: The New World**

Rodney E. Rohde, *Regents Professor of Medical Laboratory Science, Texas State University*

1:15-2:30pm: Afternoon Concurrent Oral Presentation Session I

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## Studies in Biology

BLH 262

Impact of Land Development on Soil Microdiversity

Dennis Guillen Castro, *Biology*

A Computational Systems Biology Approach for the Identification of Antimicrobial Resistance Genes in *Staphylococcus aureus*

Md Imran Hasan, *Biology*

Seasonal Changes in Groundwater Chemistry of the Edwards Aquifer

Alisha Martinez, *Water Resources*

Agent-Based Modeling to Assess Optimal Conditions for Reducing Air Transmission

Lyndsy Stacy, *Biology*

Moderator: Pride Abongwa, *Geology*

## **Studies in Social Psychology**

BLH 266

Relationship Satisfaction Predicted by Childhood Trauma, Attachment Styles, and Religiosity  
Jazette Tellez & Gerardo Bocanegra, *Psychology*

Convergent Evolution of Signaling Mechanisms in Pain and Stress  
Citlalli Guadarrama, *Psychology*

Relationship Satisfaction: Stress and Resilience  
Brittany McCoslin, Stephanie Cruz, Carissa Farley, & Alicia Ramirez, *Psychology*

Moderator: Amy Bohmann, *Psychology*

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## **Studies in History**

BLH 362

The Cost of Christianity for Samurai from 1549-1620  
Hunter Harrison, *History*

The African Settlement of San Mateo de Cangrejos and its Historical and Cultural Influence on Puerto Rican Society  
Diego Feliciano, *History*

From Jackie Robinson to Today  
Deshaun Borders, *History*

Cattle in Our Local Area  
Evan Lambert, *History*

Moderator: Zhaojin Zeng, *History*

## Afternoon Poster Session

BLH Lobby

Techno-Economic and Environmental Assessments of Produced Water Treatment for Beneficial Reuse

Elora Afrin, *Water Resources*

Thermal Physiology of a Warm-Adapted Temperate Lizard, the Texas Spotted Whiptail  
Infinity Alvarez & Hailey Cruz, *Biology*

Electrocoagulation of Synthetic Produced Water Using a Continuous-Flow Reactor  
Benjamin Arellano & Chloé Casuga, *Water Resources*

The Effects of Movement Planning on Ground Reaction Force During a Single-Leg Landing  
Jaelynn Barrera, *Kinesiology*

Electrical Coagulation of Synthetic Produced Water Using a Continuous Flow Reactor  
Chloé Casuga, *Computer Science*

Mosquito Abundance Within the San Antonio Zoo  
Laura Cruz, *Biology*

Studying the Indoor Air Transmission of *Staphylococcus aureus*  
Lauren Esp, *Biology*

Where are the Latinas? An Analytical Analysis of the Media and the DOD  
Layla Hernandez, *Sociology*

The Activity and Origin of Chitinases in the Gut of the Mediterranean Gecko  
Alec John, *Biology*

Dating Attitudes  
Brittany McCoslin, *Psychology*

An Invertebrate Model Using *Galleria mellonella* to Study the Innate Immune Response to  
*Staphylococcus haemolyticus*  
Rebecca McGehee, Shedeur Keener, & Skyler Sallee, *Biology*

Job Satisfaction, Stress, and Verbal Praise  
Jacquelynne Rios, Linda Castillo, & Amparo Luna, *Psychology*

Allometric Growth in *Gambusia Affinis*  
Andrea Rodriguez, *Biology*

2:15-3:15pm: Afternoon Poster Session (continued)

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Optimizing Omnivory: Quantifying Digestive Efficiency in Response to Different Diets in the Day Gecko, *Phelsuma grandis*

Angela Roth & Haley Johnson, *Biology*

Comparative Thermal Ecology of a Recently Urbanized and a Wild Population of *Sceloporus olivaceous* in San Antonio

Claudia Salazar & Aisha Abdirahman, *Biology*

Effect of Probiotics and Lime Water on Body Weight and Body Composition

Francis Sanchez, *Kinesiology*

3:15-4:30pm: Afternoon Concurrent Oral Presentation Session II

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## **Borderlands Rhetorics and Histories**

BLH 262

The Lucha of Lucha Libre

Gabriel Luna, *History*

Recuperative Rhetorics: A Novel Framework for Rhetorical Analysis

Nicolas Palumbo, *English*

Professional Development in Spanish for Dual Language Teachers: Communities of Practice in the Target Language of Instruction

Shelem Morales, *Bilingual Education*

Moderator: Amy Porter, *History*

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## **Studies in Biology**

BLH 266

Thermal Physiology of The Giant Day Gecko, *Phelsuma grandis*

Infinity Alvarez, *Biology*

Characterizing the Metazoan Community of an Undisturbed Cenote of the Yucatan Peninsula, Mexico

Muntadher Mashaan, *Biology*

Transcriptomics of Typhlatya

Danielle Bragg, *Biology*

Moderator: Elizabeth Borda, *Biology*