



EXPO is the annual showcase of undergraduate research. More than 60 graduate and undergraduate students from Lamar and other schools from Texas, such as UT Arlington, UT Austin and Tarleton University presented this year. In addition to 15 talks offered by OUR grant winners, EXPO showcased research done in Aerospace Engineering, Audiology, Biology, Chemistry, Communication & Media, History, Construction Management, Industrial & Environmental Engineering, Mechanical Engineering, Nursing, Physics and Political Science presented in 24 posters and 33 talks. We warmly welcomed our guest speakers: Dr. Wei Chen from UT Arlington, Dr. William Miller from Baker University, Dr. Paul Rizk from University of Florida, and Dr. Lauren Richardson from UTMB – Galveston.



Plenary speaker – Dr. Lauren Richardson, from UTMB



Poster session with non-O.U.R. sponsored research



Poster session with O.U.R. sponsored research

O.U.R. ADVISORY COMMITTEE 2021-22

Dr. Robert Kelley Bradley
College of Engineering

Dr. Bianca Easterly
College of Arts & Sciences

Dr. Gina Hale
College of Arts & Sciences

Dr. Matthew Hoch
College of Arts & Sciences

Dr. Alyse Jordan
Mary and John Gray Library

Dr. Xiangyang (Sunny) Lei
College of Arts & Sciences

Dr. Lekeitha Morris
College of Fine Arts & Communication

Dr. Nicki Michalski
College of Fine Arts & Communication

Dr. Gevorg Sargsyan
College of Business

Dr. Thinesh Selvaratnam
College of Engineering

Dr. Mamta Singh
College of Education & Human Development

Dr. Dorothy Sisk
College of Education & Human Development

Dr. Robert Worley
College of Arts & Sciences

Mr. Juan Zabala
University Advancement

Office: Chemistry Suite 115
P.O. Box 10052

Dr. Cristian Bahrim
Director of O.U.R.

Office in Chemistry 115B / Archer 100D
Ext: 8290 Email: cbahrim@lamar.edu

Ms. Jenna Erwin
Administrative Specialist
Office in Chemistry 115A
Ext: 8430 Email: jerwin6@lamar.edu



OFFICE OF UNDERGRADUATE RESEARCH **LAMAR UNIVERSITY**

*This event is streamed on Zoom – User ID: **879-918-4160** and password **88888***



WELCOME to

The O.U.R. Spring Awards Ceremony

May 3rd, 2022

Landes Auditorium of Galloway bldg.

Today, we will recognize the 16 O.U.R. teams which completed their research journey and developed interesting research projects during the 2021-22 O.U.R. grant program. Congratulations to all O.U.R. grant recipients and their mentors for their generous effort in offering fine quality research in their presentations! O.U.R. grant recipients are expected to present at the Annual Undergraduate Research Exhibition, which is always scheduled in mid-April. This year, on April 13, each O.U.R. student has offered 15 minutes talk to a large audience formed by their peers, faculty, staff, and guests from other schools in Texas, in a four-hour back-to-back plenary session. Four O.U.R. participants further developed a more in-depth conversation during the poster session, with wonderful posters displayed in the Ballroom of the Setzer Center. Congratulations to all O.U.R. grant recipients, the cohort of 2021-22, for their excellent work and presentations offered at The Ninth Annual Exhibition of Undergraduate Research and Creative Activity – EXPO 2022! Four O.U.R. grant recipients have received awards for their outstanding presentations at EXPO 2022 and will be recognized at this awards ceremony. Congratulations to Angel, Kalen, Damaris, and Callan, for your nice achievements!

This year, Lamar's annual showcase of undergraduate research, EXPO 2022, has offered 24 posters and 33 talks. Twenty-three faculty judged the presentations using a rigorous rubric validated by the Advisory Board of O.U.R. At today's ceremony, twelve EXPO presenters will receive awards for their outstanding talks or poster presentations in three categories: early-stage, in-progress, and advanced levels of research. O.U.R. will recognize our winners with a diploma and a cash prize. Kudos to our winners at EXPO 2022!

In today's ceremony, the Summer Undergraduate Research Fellowship (SURF) program of O.U.R. will recognize thirteen fellows who will start their research journey with the SURF Kick-off Day, on May 31st, 2022 in the Landes Auditorium of Galloway bldg.



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

11:00 AM Opening Remarks by Dr. Cristian Bahrim, Director of O.U.R., Professor of Physics
Recognition of the Advisory Board of O.U.R. and OUR liaisons.

11:10 AM Welcoming remarks by Dr. Brenda Nichols, the Provost of Lamar University.

11:15 AM Presentation of the sixteen OUR grant recipients, cohort 2021-22, and their mentors.

11:45 AM Presentation of the thirteen SURF fellows, cohort 2022, and their mentors.

12:05 PM Remarks by Dr. Jaime Taylor, the President of Lamar University.

12:10 PM Recognition of Dr. Dorothy Sisk, Professor of Educational Leadership and Endowed
Chair in Education of Gifted Students, with a *Lifetime Achievement Award for mentoring and
inspiring generations of students at Lamar University*.

Introduction of the awardee by Dean Bob Spina of the College of Education and Human
Development and Dr. Mamta Singh, Associate Professor of Teacher Education.

12:20 PM The Center for History and Culture of Southeast Texas and the Greater Gulf Coast
recognizes with the Dr. Mary Scheer prize (of \$200), the best projects related to Southeast Texas
and the Greater Gulf Coast presented at the EXPO 2022. The awards will be offered by Dr. Jimmy
Bryan, the Director of the Center.

12:30 PM The recognition of the sixteen awardees for their presentations at EXPO 2022.
Best Presentations in the O.U.R. research category

Best Talks in non-O.U.R. research category
in *Early-phase*, *In-progress*, and *Advanced* levels of research

Best Poster Presentations
in *Early-phase*, *In-progress*, and *Advanced* levels of research

1:20 PM Closing remarks



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

2021-22 O.U.R. Grant Winners

College of Business



1

Taliah Belcher | Accounting & Finance |

Mentor: **Dr. Gevorg Sargsyan**

Research in Finances and Economics

Project: *"Impact of militarization on financial & economic growth of developing and highly militarized countries."*

College of Arts and Sciences



2

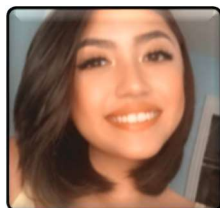
Angel Flowers | Biology |

Mentors: **Dr. Matt Hoch (Lamar Univ.)**

Dr. William R. Miller (Baker Univ.)

Research in Ecology

Project: *"Population distribution analysis of tardigrades found on Quercus virginiana."*



3

Arizbeth Lopez Garcia | Biology |

Mentor: **Dr. Maryam Vasefi**

Research in Neurobiology

Project: *"CBD and Alzheimer's disease; Neuroprotection and Desensitization."*



4

Caroline LeBlanc | Biology |

Mentor: **Dr. Maryam Vasefi**

Research in Neurobiology

Project: *"Glutamate receptor crosstalk in Alzheimer's disease."*



5

David Matherne | Biology |

Mentor: **Dr. Ashwini Kucknoor**

Research in Molecular Biology

Project: *"Characterization of drug resistance genes in cattle pathogen, Tritrichomonas foetus."*



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY



6

Callan Noak | Computer Science |

Mentor: **Dr. Sujing Wang**

Research in Data Science and Analysis

Project: *"Analyze COVID-19 Data using Advance Machine Learning Techniques."*



7

Silvana Ochoa | Computer Science |

Mentor: **Dr. Sujing Wang**

Research in Computer Science

Project: *"COVID-19 Pandemic's Impact on Education and Students."*

College of Education and Human Behavior

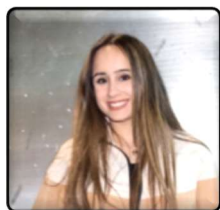
8

Tiya Davi | Humanities and Arts |

Mentor: **Dr. Mamta Singh**

Research in Pre-service Teachers

Project: *"Assessing Preservice Teachers' Understanding of Disease and its Spread using Scientific Illustrations and Virtual Labs."*



9

Margo Eugenio | Interdisciplinary Studies |

Mentor: **Dr. Mamta Singh**

Research in Private Education

Project: *"Impact of Schools of Choice on Standardized Test Scores & the Achievement Gap."*



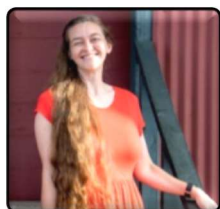
10

Damaris Thrash | Exercise Science |

Mentor: **Dr. Shannon Jordan**

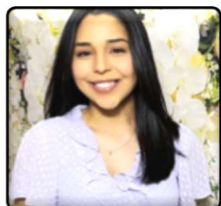
Research in Exercise Science (Health & Kinesiology)

Project: *"Effects of Motivational Music on Post-Exercise Recovery."*





OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY



College of Engineering

11

Jennifer Arredondo | Industrial and System Engineering |

Mentor: **Dr. Robert Kelley Bradley**

Research in Silicone Nanocomposites Ferroelectrets

Project: *"Exploration of Parameters for Developing a Silicone Nanocomposite Ferroelectrets."*



12

Kalen Baker | Mechanical Engineering and Mathematics |

Mentor: **Dr. Ping He**

Research in Mechanical Engineering

Project: *"Molecular Dynamics Research of Sintering Americium-241 for Compact Nuclear Power Supplies."*



13

Lac Nguyen | Industrial Engineering |

Mentor: **Dr. Robert Kelley Bradley**

Research in Nanocomposites

Project: *"An Investigation of Environmentally Friendly Filler for Polymer Nanocomposites."*



14

Tyler Stuck | Electrical Engineering and Mathematics |

Mentor: **Dr. Yueqing Li**

Research in Driving Safety

Project: *"The Visual Behavior and Performance of Young Drivers in Construction Zones and Nighttime Driving."*



College of Fine Arts and Communication

15

Corina Mena | American Sign Language Interpretation |

Mentor: **Dr. Zanthia Smith**

Research in Deaf Studies & Deaf Education

Project: *"Hispanic/Latinx Students Perceptions of Diversity in Interpreting."*



16

Ashley Staggs | Speech and Hearing |

Mentor: **Dr. Lilian Felipe**

Research in Neurosciences and Auditory Abilities

Project: *"Auditory Evaluation of Student Musicians"*



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

SURF 2022 Grant Winners

COLLEGE OF ARTS AND SCIENCES

1



Reese Bonin | Physics / Mathematics |

Mentor: **Dr. Cristian Bahrim**

Research in Atomic Collisions and Interactions

Project: *"Interference Between Matter Waves in Atomic Collisions
Using an Optics Approach"*

2



Rafael Gutierrez | Physics / Mechanical Engineering |

Mentor: **Dr. Rafael de la Madrid**

Research in Tribology

Project: *"Dynamical Wetting and Dewetting in Non-Uniform Solid"*

3



David Matherne | Biology |

Mentors: **Dr. Evgeny Romashets and Dr. Cristian Bahrim**

Research in Space Physics

Project: *"Heliospheric Storms"*

4



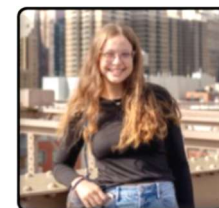
Ian Sisson | Chemistry |

Mentor: **Dr. Paul Bernazzani**

Research in Sustainable Materials Chemistry

Project: *"Developing Cellulose Based Nanocomposite as a Potential Substitute
for High Strength Plastics"*

5



Lily Yoder | Psychology |

Mentor: **Dr. Edithe Kirk**

Research in Human Behavior

Project: *"The Effects of Positive Mood and Stereotype Threat on Memory Recall"*



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

COLLEGE OF ENGINEERING



6

Kiley Radley | Mechanical Engineering |

Mentors: **Dr. Evgeny Romashets and Dr. Cristian Bahrin**

Research in Solar Physics

Project: *"The Physics of Active Longitudes and Their Impact on Earth Through the Interplanetary Coronal Ejection They Produce"*



7

Melissa Tan | Civil Engineering |

Mentor: **Dr. Thinesh Selvaratnam**

Research in Bioremediation and Resource Recovery

Project: *"Removal of Heavy Metals from Municipal Landfill Leachate using Galdieria Sulphuraria"*



8

Jacob William Smith | Mechanical Engineering |

Mentors: **Dr. Sushil Doranga**

Research in Mechanical Vibrations

Project: *"Evaluation of Pin Fretting in the Electronic Connectors Using the Vibration Shake"*

COLLEGE OF FINE ARTS AND COMMUNICATION



9

Madeline Doughty | Speech and Hearing Sciences |

Mentor: **Dr. Lilian Felipe**

Research in Hearing Conservation

Project: *"Awareness of Noise-Induced Hearing Loss Among College Band Students"*



10

Chloe Smith | Speech and Hearing Sciences |

Mentor: **Dr. Lekeitha Morris**

Research in Childhood Speech Sound Disorders

Project: *"Intervention for Child Speech Sound Disorders in YouTube Videos: Parent Perception and Clinical Utility"*



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT



11

Chaley Cleckley | Education |

Mentor: **Dr. Mamta Singh**

Research in Teacher Education

Project: *"Preservice Teachers & Understanding of Genetic Technology"*



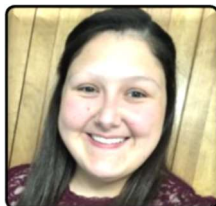
12

Margo Eugenio | Education |

Mentor: **Dr. Mamta Singh**

Research in Student Achievement

Project: *"Social-Emotional Learning, Culturally Responsive Learning, & Linguistically Responsive Learning: Do Preservice Teachers have the Skills, Knowledge & Awareness to Support Student Achievement? An Exploratory Study"*



13

Ally Tywater | Health and Kinesiology |

Mentor: **Dr. Shannon Jordan**

Research in Injuries to Rodeo Athletes

Project: *"Rodeo Athletes: A Survey of Injuries and Accessibility to Strength & Conditioning Specialists and Athletic Trainers"*

O.U.R. wishes you good of luck and inspiration in
developing your SURF research project!
The SURF Symposium
will be on August 5, from 1:30 p.m.
in the Landes Auditorium of the Galloway bldg.



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

The Center for History and Culture of Southeast Texas and the Greater Gulf Coast recognizes with the Dr. Mary Scheer prize (of \$200), the best projects related to Southeast Texas and the Greater Gulf Coast presented at the EXPO 2022. The awards will be offered by Dr. Jimmy Bryan, the Director of the Center.

Winner: Nayana Muppavarapu
(MS in Computer Science)

Water Knows No Geopolitical Boundaries

Mentor: Dr. Liv Haselbach
Department of Computer Science (Lamar)

Winner: Angel Flowers
(major in Biology)

“Population Distribution Analysis of Tardigrades Found on *Quercus Virginiana*. (Southern Live Oak).”

Mentors: Dr. Matt Hoch (Lamar) and Dr. William Miller (Baker Univ.)
Department of Biology

Winner: Alyssa Broussard
Co-author: Angel Flowers

Single Tardigrade DNA Barcoding Using COI and 18S rRNA Genes on Six Morphotypes from the Upper Coast of Texas, USA

Mentor: Dr. Matt Hoch
Department of Biology (Lamar)



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

FIRST PLACE FOR BEST PRESENTATION IN O.U.R. SPONSORED RESEARCH

Angel Flowers
Major in Biology



*Population Distribution Analysis of Tardigrades Found on Quercus Virginiana.
(Southern Live Oak). "*

Mentors: Dr. Matthew Hoch¹ and Dr. William R. Miller²

¹Department of Biology, Lamar University

²Department of Biology, Baker University

Angel's testimonial: "The O.U.R. grant has provided me with an amazing opportunity to learn research techniques and practical applications of laboratory methods. The skills that I developed by doing this research as an undergraduate will only serve to prepare me for future endeavors. I plan to build upon the foundation of assets that my research has provided in order to become a better scientist and to build a career from scientific research."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Matt Hoch's testimonial: *"Every so often a research student comes along and fulfills all expectations, and more than a mentor can wish. Angel Flowers is one of those research students. She had a genuine interest in her topic, which was outside of my expertise, so she found herself an expert, Dr Miller. We all have enjoyed a productive professional collaboration because of her initiative and independence, and there is more to follow folks!"*

Dr. William Miller's testimonial: *"Angel Flowers is an extraordinary student to work with. She can translate primary literature on others work into her application. She identified a unique substrate and habitat location for study then set about designing a sampling plan. She mastered the tools, overcame challenges, and quickly became productive. In the process, she may have discovered a new tardigrade species, found a species known only from South America, and added to the biodiversity list for the state of Texas. Her ability to think critically and test her own ideas are signs of a creative scientist. Angel is more like a colleague than a student, we can exchange ideas and solve problems."*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

SECOND PLACE FOR BEST PRESENTATION IN O.U.R. SPONSORED RESEARCH

Kalen Baker

Major in Mechanical Engineering and Mathematics



*"Evaluation of Americium's Molecular Dynamics Pair Potential
for use in Alphaostatic Modeling."*

Mentor: Dr. Ping He
Department of Mechanical Engineering

Kalen's testimonial: "The Office of Undergraduate Research has greatly assisted me in advancing my research, much faster than I ever could have by myself and honed skills that can only be used through practice and critical thinking. More importantly, working and presenting with my peers has enriched my education more than my class work ever could. And allowed me to consider new ideas and that I would not have encountered otherwise. The opportunity afforded me was made even more rewarding by being allowed to share what we've accomplished with the public."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. He's testimonial: *"In the OUR project, Evaluation of Americium's Molecular Dynamics Pair Potential for use in Alphavoltaic Modeling, Kalen has explored several force-field models for two actinide metals, i.e., Uranium and Americium, as well as Titanium for comparison. The motivation is trying to establish a molecular dynamics (MD) model to help the design of alphavoltaic power supply devices. After performing more than 100 MD simulations of 650 computational hours in total to study the self-diffusion and heat conduction of these metals, Kalen has found that the embedded atom method (EAM) model predicts the best results to the reference data in the literature."*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

THIRD PLACE FOR BEST PRESENTATION IN O.U.R. SPONSORED RESEARCH

Damaris Thrash
Major in Exercise Science



"Effects of Motivational Music on Post-Exercise Recovery."

Mentor: Dr. Shannon Jordan
Department of Health and Kinesiology

Damaris's testimonial: " Thank you, Dr. Bahrim, for this incredible experience! I had a wonderful time at the OUR EXPO and am humbled to be a recipient of an award. Ever since I was a child, music and exercise have been two things I hold close to my heart. When my mentor told me she was considering conducting an experiment analyzing music's physiological impacts on exercise, it seemed like an opportunity to study my interests. It is an experience that has not disappointed me – I've observed different aspects of exercise, to which all previous exposure was taught inside a classroom and have become confident in skills such as taking blood pressure or using a metabolic cart. My involvement in this study has also made my love for research grow tremendously."



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

SPECIAL MENTION FOR BEST PRESENTATION IN O.U.R. SPONSORED RESEARCH

Callan Noak
Major in Computer Science



Analyze COVID-19 Data using Advance Machine Learning Techniques."

Mentor: Dr. Sujing Wang
Department of Computer Science

Callan's testimonial: "I am honored to have been able to present at the EXPO 2022 Conference. I would like to thank the Office of Undergraduate Research and my mentor Dr. Sujing Wang for giving me the opportunity to research an important topic. Doing research has opened a great number of doors for my future career and has given me multiple skills that I would not have gained otherwise. I look forward to what the future will bring."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Sujing Wang's testimonial: *"Callan is a star student at the department of computer science. He has an outstanding academic record and has published two papers as first author at international conferences. I am very proud of Callan's achievement based on his O.U.R. project. I am confident that he will be very successful in the future!"*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

WINNER OF BEST TALK IN NON-O.U.R. SPONSORED RESEARCH

"EARLY-STAGE" LEVEL

Hallie Svir
Major in Communication Studies



"The Detrimental Effect of Appearance-Based Discrimination on the Professional Development of Women's Careers."

Mentor: Dr. Sheila Springer
Department of Communication and Media Studies

Hallie's testimonial: "I am so grateful for the opportunity to present my research at HASBSEB conference. I am humbled and honored to be among the winners of this years EXPO. Thank you to the Office of Undergraduate Research, Dr. Bahrim, and my incredible mentor Dr. Sheila Springer. My goal with this research project is share the stories of current female leaders and inspire the next generation of young professionals. I am excited for the next phase of my research project and to continue working with Dr. Springer. I will treasure this experience for years to come. Thank you!"



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Sheila Springer's testimonial: *"I first encountered Hallie in the Communication Capstone course. I was impressed with the passion and dedication she exhibited toward her project and, upon seeing the work she presented after 8-weeks, I asked if she would like to perform a full research study. I am in awe of how deeply dedicated she is to her research interests and how much she has accomplished in such a short time. Hallie is self-driven, highly motivated, and open to feedback. She is a joy to work with and I cannot wait to see what she accomplishes in her future research."*

Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

RUNNER-UP OF BEST TALK IN NON-O.U.R. SPONSORED RESEARCH

"EARLY-STAGE" LEVEL

Madeline Doughty
Major in Speech & Hearing Sciences



"Awareness of Noise-Induced Hearing Loss Among College Band Students."

Mentor: Dr. Lilian Felipe
Department of Speech & Hearing Sciences

Madeline's testimonial: "I am honored to receive runner-up for best oral presentation (non-O.U.R sponsored/early-stage research) at EXPO 2022. It was my first time presenting my research so receiving an award for my hard work thus far was extremely encouraging! I am excited to see how much I will improve after I begin the S.U.R.F program this summer. I want to thank my mentor, Dr. Lillian Felipe, for her support because I would have struggled to craft and present the presentation without her help and feedback. I also want to thank Dr. Bahrim, the O.U.R, and the judges who each



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

showed me a great deal of kindness after my presentation. Presenting at EXPO 2022 was such a wonderful experience, and I am looking forward to presenting my research in its later stage in the future!”

Dr. Lilian Felipe’s testimonial: *“Ms. Doughty demonstrated great perseverance, initiative, and motivation to learn about the research process and was confident to present during the EXPO 2022 about her project related to the awareness of noise-induced hearing loss among college band students. I am very pleased to act as Ms. Doughty’s mentor and I am sure she will shine, and present soon very interesting aspects related to this project.”*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

FIRST PLACE FOR BEST TALK IN NON-O.U.R. SPONSORED RESEARCH

"IN PROGRESS" LEVEL

Rachel Hellums
Major in Communication Studies



"Let's Talk About Sex: Power Dynamics in Evangelical Purity Culture."

Mentors: Dr. Nicki Michalski
Department of Communication and Media Studies

Rachel's Testimonial: "My time here at Lamar was enhanced so much by the Office of Undergraduate Research. The EXPO was a wonderful opportunity to explore what others were working on and how the university was enriching the lives of other students. These research conferences are something I will not only have fond memories of but they propelled me to achieve a higher level of professionalism some of my peers do not have, setting me apart from other applicants and associates. I am forever grateful to the Office of Undergraduate Research and Dr. Bahrim for his unwavering dedication to the students and the university."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Nicki Michalski's testimonial: *"When I read Rachel's original paper in my class, I thought "what an interesting research topic," so I included a note telling her I would love to help her submit it for the Expo. Much to my delight, she took me up on the offer. It quickly became evident this is a passion project for her, and I am excited to say she is planning to continue to develop it further. I look forward to seeing her final product!"*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

SECOND PLACE FOR BEST TALK IN NON-O.U.R. SPONSORED RESEARCH

"IN PROGRESS" LEVEL

Lindsey Chirafis
Major in Political Science



"The Controversial Right to Die: An Analysis Between the Court's Rulings on Passive Assisted and Active Assisted Suicide."

Mentor: Terri Davis
Department of Political Science

Lindsey's testimonial: "I greatly enjoyed researching my topic, the right to die. I am very grateful for Dr. Davis' mentorship. She helped to guide me in the right direction and focus my research. I hope to further my research on this topic in the future and perhaps present in more research conferences."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Terri Davis's testimonial: *"It has been my honor to serve as undergraduate research mentor to Lindsey Chirafis for both the research she presented on gender disparities in criminal sentencing at the Fall 2021 HASBSEB Conference and her research on the Supreme Court's rulings on passive and active assisted suicide at the Spring 2022 Research Expo in which she earned second place Best Presentation. I look very forward to watching Lindsey continue her research and participate in future conferences sponsored by Lamar and professional organizations in our discipline. Students like Lindsey reinforce my decision to become an active research mentor to Lamar's amazing undergraduate scholars."*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

THIRD PLACE FOR BEST TALK IN NON-OUR SPONSORED RESEARCH

"IN PROGRESS" LEVEL

Shelby Graham
Major in English



*Board of Education, Island Trees Union Free School District v Pico:
Constitutional Analysis of Literary Censorship."*

Mentor: Dr. Terri Davis
Department of Political Science

Shelby's testimonial: "I feel honored having had the opportunity to participate in the 9th annual HASEBSEB conference for the first time and present my research. I would like to thank Dr. Bahrim and the Office of Undergraduate Research for hosting this prestigious event and Dr. Davis for guiding and mentoring me through my research over the constitutional analysis of literary censorship. As an English major, the cross study between literature and legal studies has presented me the opportunity to challenge myself as well as pursue a topic of great interest to me. I look forward to continuing my research!"



OFFICE OF UNDERGRADUATE RESEARCH **LAMAR UNIVERSITY**

Dr. Terri Davis's testimonial: *"The research I mentored with Shelby Graham demonstrates the importance of interdisciplinary research and collaboration between faculty and students. Shelby, an English major, held an interest in constitutional law and took my advanced course on the topic in Spring 2022. We sought to combine our respective disciplines, interests, and knowledge to produce her work on constitutionalism and censorship of literature in the U. S. I am extremely proud of her intellectual curiosity, interdisciplinary pursuit of knowledge, and third place award for Best Presentation at the Spring 2022 Expo."*

Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

WINNER OF BEST TALK IN NON-OUR SPONSORED RESEARCH "ADVANCED" LEVEL

Taryn Gibbs
Major in Physics and Chemistry



"Measurement of 1-Octanol/Water Partition Coefficients and Abraham Hydrogen Bonding Acidities (A) for the Catechol Flavones."

Mentor: Dr. William L. Whaley
Department of Chemistry, Geosciences, and Physics
Tarleton State University

Taryn's testimonial: "I'm proud to say that I've been involved in research since my freshmen year at Tarleton, including work in environmental engineering, physical-medicinal chemistry, and microbiology. For me, research is the driving force behind innovation and societal change, it is the un-biased pursuit of knowledge which has been innate in man since we descended from the African canopy and began our journey into the unknown. I look forward to continuing a lifetime of research and discovery as I take the next step in my academic journey to Oregon State University to obtain a PhD in Nuclear Science & Engineering."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. William Whaley's testimonial: *"Taryn is a very independent undergraduate student, and she has been working on a medicinal chemistry project related to flavonoid compounds. These are natural compounds in fruits and vegetables that have anti-cancer, anti-atherosclerosis and neuroprotective activities. I believe she made a very nice contribution to EXPO with her presentation."*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

WINNER OF BEST POSTER PRESENTATION – “EARLY-STAGE” LEVEL

Brandyn Wagstaff
Major in Construction Management



Modular Construction: Benefits, Advantages, and a Case Study.”

Mentor: Dr. Zhe Luo
Department of Construction Management

Brandyn’s’s testimonial: *“It was an honor to present my research on modular construction at the 2022 expo. It was gratifying to be able to share the passion I have concerning the construction industry, through my research, with my fellow academics of varying backgrounds. Thank you to Lamar University for hosting this great event.”*

Dr. Zhe Luo’s testimonial: *“Although Brandyn has been so busy with his coursework and his construction management job, he was able to successfully lead and complete this early-concept student research work in three months. He is a great example of our hardworking students who will soon become the leaders in our construction management industry. I am so proud of Brandyn and our construction management students.”*



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

**AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE
FIRST PLACE FOR BEST POSTER PRESENTATION – “IN-PROGRESS” LEVEL**

Jesus Esquivel
Major in Chemistry



*Quantitative Determination of the Remediation of Oil
Contaminants in Dredged Material. ”*

Mentor: Dr. Paul Bernazzani
Department of Chemistry and Biochemistry

Jesus’s testimonial: “Firstly, I want to thank my mentor Dr. Paul Bernazzani for his guidance and insight during my time conducting research. Even though I constantly had multiple questions during my research, Dr. Bernazzani made sure he answered anything that troubled me. I am grateful for the many doors he has opened up for me. In addition, this opportunity that the Office of Undergraduate Research provided me has led to my increase of knowledge in working in the laboratory and my confidence in presenting my research in front of people. They have gifted me the tools to help further my career goals.”



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Paul Bernazzani's testimonial: *"Jesus is one of our senior Forensic Chemistry very interested in a career in the Forensic sciences. He approached me in Spring 2021 with an interest in starting a research project in Summer. We designed a project that would help him understand and develop skills using instrumentation very common in the analysis of chemicals. He enthusiastically jumped into the project and made great strides towards developing a methodology using available instruments. He is so diligent and eager to learn that he continues the project until now. I am extremely pleased that through this award, we can recognize his efforts and personal development. Well-deserved."*



Congratulations!

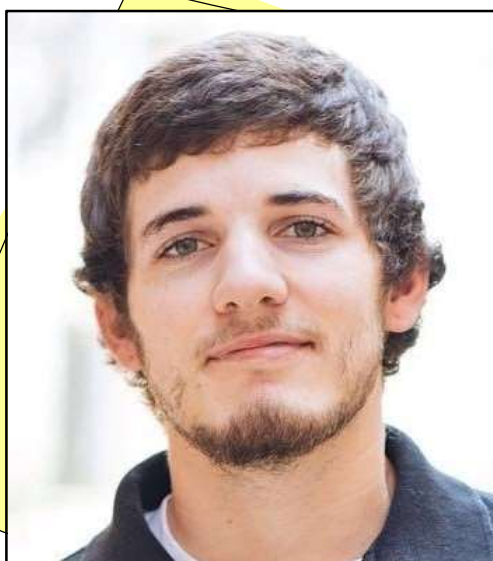


OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

SECOND PLACE FOR BEST POSTER PRESENTATION - "IN-PROGRESS" LEVEL

Joshua Smith
Major in Biology and Chemistry



*Synchrotron-Based Attenuated Total Reflection Infrared
Spectroscopy of Artificial Gasoline Blend."*

Mentor: Dr. Sylvestre Twagirayezu
Department of Chemistry and Biochemistry

Joshua's testimonial: "Working on my research here at Lamar University with Dr. Twagirayezu has been a great honor. The fascinating science I have been able to study and come to understand follows second only to the amazing connections I have been fortunate enough to make within the scientific community through being involved in this project. The 2022 Expo, hosted by Dr. Bahrim, is the perfect example of an environment that encourages the formation of these outstanding connections, and it was a wonderful privilege of mine to be involved."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Twagirayezu's testimonial: *"Mr. Joshua Smith is an able student and by far one of the few self-motivated students. He is currently contributing to our research efforts toward understanding "The roles of small polar impurities in petroleum mixtures and development of spectroscopic tools for analyzing complex mixtures." Joshua is a careful and creative thinker with an eye for details and a devotion to logic, which serve him well on this project and beyond. Joshua, congratulation for the recent award! I am proud of you"*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEES AT THE NINTH ANNUAL EXPO CONFERENCE

THIRD PLACE FOR BEST POSTER PRESENTATION - "IN-PROGRESS" LEVEL

Daniel Nicks

Team partners

Kalen Baker, Destiny Lett, Luke Nelson, Arin Preston, Jose Wong

Major in Mechanical Engineering



Mechanical Design and Testing of Event Recorder used in Locomotives."

Mentor: Dr. Sushil Doranga and Dr. Jenny Zhou
Department of Mechanical Engineering

Daniel's testimonial: "I am honored to have been a part of the Undergraduate Research Expo and have my efforts recognized by the judges. I am extremely grateful to my two mentors, Dr. Doranga and Dr. Zhou, who have guided me to this success. I am also thankful for my fantastic team members who helped shape this project into what it is now. This opportunity will open doors for me in the future and has helped me direct where I want to take my career."



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. Sushil Doranga's testimonial: *"The idea of this project is to remove the phase change materials that are used in the existing event recorder and develop the new generation of environmentally friendly event recorders. This group has been successful in developing the event recorder that can survive when the ambient temperature is 500°C, which is an exciting outcome. The results obtained from this preliminary design demonstrate that the idea of phasing out phase-change material can be successfully achieved by examining the different design concepts of the insulation system."*

Dr. Jenny Zhou's testimonial: *"For the first time, our students get involved in the research project for their senior design project and they perform extremely well. I expect that more students will be involved in the same research project in the future."*



Congratulations!

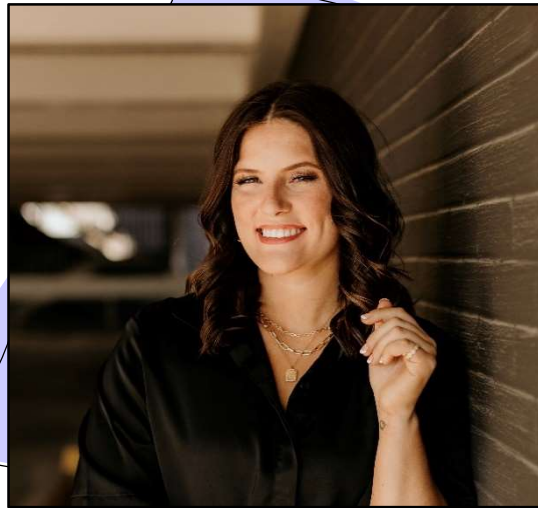


OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

WINNER OF BEST POSTER PRESENTATION – “ADVANCED” LEVEL

Bethany Edwards
Major in Nursing



“Effect of COVID-19 on the Nursing Profession in Texas.”

Mentor: Lori Wenner, MSN, RN
JoAnne Gay Dishman School of Nursing

Bethany’s testimonial: *“It has been an honor to present my research about the effects of COVID-19 on nurses in Texas. I am very grateful for the opportunity to spread awareness about the current reality of the nursing profession. This research has led me to think more about the importance of patient and self-advocacy, self-care, and personal reflection in the healthcare field. I have learned so much that I will carry into my practice as a future Registered Nurse. Thank you to Lori Wenner for mentoring me throughout my research and to the Office of Undergraduate Research for organizing such an amazing event.”*



OFFICE OF UNDERGRADUATE RESEARCH **LAMAR UNIVERSITY**

Lori Wenner, MSN, RN: *“Bethany Edwards’ research, Effect of COVID-19 on the Nursing Profession in Texas, has produced evidence that nurses have shared anecdotally as the COVID-19 pandemic has hit our country and Texas for the past two years. Ms. Edwards’s determination to focus on Texas nurses and the pandemic’s impact on their mental health, coping mechanisms, concerns about patient safety, and ethical issues have not only produced essential data but have given voice to nurses who often remain voiceless. Knowledge of the struggles nurses face as they endeavor to render safe, effective patient care is vital to stemming the tide of the nursing shortage and maintaining the health of nursing professionals.”*

Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

AWARDEE AT THE NINTH ANNUAL EXPO CONFERENCE

RUNNER-UP FOR BEST POSTER PRESENTATION – “ADVANCED” LEVEL

Taryn Gibbs
Major in Physics and Chemistry



*“Abraham Summation Solute Hydrogen Bonding Acidity Values
Determined for Catechol-flavones by ^1H -NMR Spectroscopy.”*

Mentor: Dr. William L. Whaley
Department of Chemistry, Geosciences, and Physics
Tarleton State University

Taryn’s testimonial: “I’m proud to say that I’ve been involved in research since my freshmen year at Tarleton, including work in environmental engineering, physical-medicinal chemistry, and microbiology. For me, research is the driving force behind innovation and societal change, it is the un-biased pursuit of knowledge which has been innate in man since we descended from the African canopy and began our journey into the unknown. I look forward to continuing a lifetime of research and discovery as I take the next step in my academic journey to Oregon State University to obtain a Ph.D. in Nuclear Science & Engineering.”



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

Dr. William Whaley's testimonial: *"Taryn is a very independent undergraduate student, and she has been working on a medicinal chemistry project related to flavonoid compounds. These are natural compounds in fruits and vegetables that have anti-cancer, anti-atherosclerosis and neuroprotective activities. I believe she make a very nice contribution to EXPO with her presentation."*



Congratulations!



OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY

MOMENTS FROM A GREAT EVENT – EXPO 2022



Opening EXPO 2022 -
Dr. Bahrim, Director of O.U.R.



Plenary speaker Dr. Lauren Richardson from
UTMB – Galveston is recognized with a plaque
by Dr. Ian Lian (left) and Dr. Cristian Bahrim



The Live Oak Ballroom of
the Setzer Center hosted
the EXPO 2022 event.



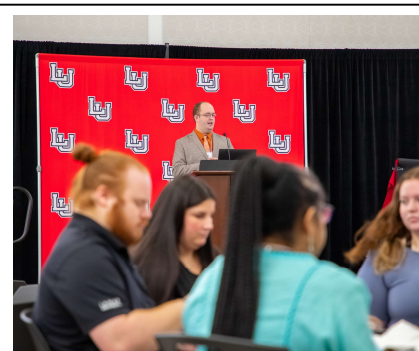
David Matherne an OUR grant
recipient giving his talk



Poster Session



Dr. Golden Wright and
Serinity Schmidt performing
“In This Together”



Kalen Baker presenting in front of
students from the Deaf Education
program with Dr. Zanthia Smith

Event hosted in the Live Oak
Ballroom of the
Setzer Student Center

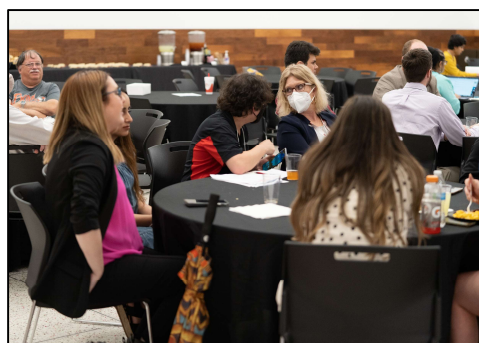




OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY



**Dr. Sujing Wang's
Faculty Mentor
Award (FMA)
Acceptance Speech**



Attendees at the EXPO 2022



**Dr. Wei Chen, from
UT Arlington during
Q & A session**



**Dr. Stefan Andrei on his
FMA nomination for
Dr. Sujing Wang**



**Dr. Bahrim (center) applauding dancers after
the performance: Dr. Golden Wright, Serinity
Schmidt, Ashley Hawkin, and Mia Paul**



**Taryn Gibbs, from Tarleton
University, accepting the
award for Best Talk in the
"Advanced" research
category.**



**Mr. and Mrs. Rizk are presented an award on
behalf of their son, Dr. Paul Rizk (in the back)**





OFFICE OF UNDERGRADUATE RESEARCH LAMAR UNIVERSITY



**Dr. Sujing Wang and students
from Computer Science**



**Kalen Baker - Second Place O.U.R.
Sponsored Research**



**Daniel Nicks from
Mechanical Engineering**



Attendees at EXPO 2022



**Madeline Doughty from
Speech & Hearing**



**Lindsey Chirafis from
Political Science**



**Eric Amador, PhD Candidate in Physics
from UT Arlington**



OFFICE OF UNDERGRADUATE RESEARCH **LAMAR UNIVERSITY**

See you, all SURF grant winners at the Kick-off Day



on May 31, 2022

in Landes Auditorium of Galloway bldg.

The event will be in-person and mandatory for both students and their mentors and is scheduled from 10 to 11:30 a.m. Each team will present their research objectives in 5 minutes using 2-3 slides.

Join Lamar University Undergraduate Research Association (LURA)

“LURA was founded in fall 2019 to fulfill the need for a community *by* and *for* undergraduate students to discuss, collaborate, and learn how effectively one can conduct research. The consistent quality and volume of research conducted by undergraduate students at Lamar University has made it clear that there is a need for an organization to act as a vital resource for building young researchers. Thus, LURA provides an academic forum that connects all level students from freshmen to seniors with faculty. LURA tries to facilitate better communication between Lamar undergraduates and their peers around the nation.

LURA is a platform for offering panel discussions about

- Research opportunities inside and outside Lamar,
- Better ways to deliver undergraduate research results in poster and oral presentations,
- Ways to perform peer-mentoring,
- Organizing workshops and panel discussions on various topics, including how to successfully apply to graduate schools.

LURA is the premier student organization at Lamar University for any undergraduate student interested in doing research. Contact URALamar@gmail.com or visit the Office of Undergraduate Research—Chemistry 115D

LURA Officers: ELECTION DAY – May 3rd, 2022