Dear Students, Faculty, and Staff,

The Undergraduate Research & Creative Activity Exhibition is the most comprehensive annual showcase of undergraduate research at Lamar University covering all academic areas. This year we reached the eighth edition. EXPO 2021 had nineteen talks and seventeen poster presentations with interesting results presented by our talented undergraduate students. Their keen interest for discovery and understanding the world was revealed in every talk and poster presentation. Many projects have been researched into for more than one year, starting with extensive literature review, continued with the development of complicated theoretical or numerical algorithms and meaningful hands on experience in our academic labs. The presenters at EXPO 2021 have showed the great potential Lamar University has in offering research facilities and adequate support for running competitive research projects, including at undergraduate level.

Each year, O.U.R. sponsored projects should reach their maturity phase at the time when the results are disseminated at EXPO. Fourteen projects have started in early fall of 2020 with a competitive selection process ran by two dozen Lamar faculty who carefully reviewed and ranked proposals using rigorous scoring criteria available online. For each project, up to $1,000 was offered in research support, along with $500 student stipend. Over the last seven months, our students developed interesting projects which are reflected in high quality papers included in the book of the conference (it is an impressive collection of 70 pages of student papers), as well as informative and inspiring videos available on Lamar’s O.U.R. webpage. This is a legacy that our students leave behind for inspiring and motivating the next generation of peers.

The Center for History and Culture of Southeast Texas and the Upper Gulf Coast, and Director Dr. Judith Linsley, offered again this year awards and prizes to those students who presented valuable talks or posters that shed light about our region, about its history, as well as the present economic and political landscape.

The EXPO event, as well as the O.U.R. grant programs in general, would not have been possible without the strong support from President Kenneth Evans and Provost Brenda Nichols to whom I want to thank heartily. My special thanks go also to all academic Deans and Chairs for their constant support and encouragement to their faculty and students for following boldly the pathway of research and creativity.

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

In a great effort to go back to our normal academic environment, the Office of Undergraduate Research hosted EXPO 2021 conference in a hybrid format.

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

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University Advancement

Contact information:
O.U.R. office Chemistry 115 A/B
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Awardees at the Eighth Annual Undergraduate Research & Creative Activity Expo 2021

First Place in the Category
Best Presentation for O.U.R. Sponsored Research
And the Most Interactive Presenter

Talon Weaver
Major in Civil Engineering / Physics

“Identifying Solar Sources of the Most Geo-Effective Interplanetary Disturbances.”

Mentors: Dr. Evgeny Romashets and Dr. Cristian Bahrim
Department of Physics

Talon’s testimonial: “The Office of Undergraduate Research here at Lamar provided me with an opportunity to experience research and be involved in something much larger than myself. This experience has expanded my education and opened the door to career paths I did not believe were possible for me!”
EXPO 2021
SECOND PLACE IN THE CATEGORY
BEST PRESENTATION FOR O.U.R. SPONSORED RESEARCH
Rebekah Schilberg
Major in Chemistry – TALH student

“Rotational Signature of Perfluorooctanoic Acid (PFOA) as Revealed by Molecular Rotational Resonance Spectroscopy.”

Mentors: Dr. Suying Wei and Dr. Sylvestre Twigirayezu
Department of Chemistry and Biochemistry

Rebekah’s testimonial: “The Undergraduate Research program has allowed me to work on an important scientific problem that could have an impact on the public environment and beyond. As I progress through my academic and professional careers, I will use the lessons I learned from research to strengthen the decisions I make for my future.”
EXPO 2021

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

Katherine Correa
Major in Drawing and Biology

“The Babe Zaharias Medals: Exploring Methods of Replication for a Promising Non-Contact Based Approach.”

Mentor: Dr. Robert Kelley Bradley
Department of Industrial and Systems Engineering

Katherine’s testimonial: "I am truly honored to have been part of the OUR experience. The Office of Undergraduate Research has opened the doors of exploration for our interdisciplinary project, allowing us the opportunity to work with other universities and explore the use of technology for the replication of the historic Babe Zaharias’ medals."

(left) Katherine and Dr. James Kerwin from the Makerspace at Rice University SEA Cleanroom; (right) Dr. Bradley, Katherine, and Dr. Bahrim.
“Attitudes and Misconceptions of the Black Lives Matter Movement.”

Mentor: Dr. Stuart Wright
Department of Sociology, Social Work, and Criminal Justice

Kyra’s testimonial: "Thank you for awarding us the 'Best poster presentation' for the early-stage category. It further encourages us to test the assertion that significant progress has been made in racial equality and measure perceived effectiveness, awareness, and support for the Black Lives Matter movement."
EXPO 2021
CATEGORY “EARLY PHASE” RESEARCH LEVEL
SECOND PLACE

J esse  O dom
M ario  C isner os
N oah  M cG allion
M ajor  i n  C onstruction  M anagement

“Productivity, Cost, and Safety Benefits of Utilizing Concrete 3D Printing in the Construction Industry.”

M e n t o r s : Dr. Zhe Luo and Dr. Minkyum Kim
Reese Construction Management Program

Jesse’s testimonial: "Our senior paper research finds that utilizing concrete 3d printers in the construction industry can lead to faster production rates, cost savings, and safer work environments. The EXPO 2021, held by the Office of Undergraduate Research, allowed our team an avenue to present our work before a panel of judges and our peers, providing us great feedback on our research studies."
EXPO 2021

CATEGORY “IN-PROGRESS” RESEARCH LEVEL
FIRST PLACE

Sierra Hunnicutt
Major in Speech and Hearing Sciences

“Knowledge and Awareness about Hearing Health and Conservation among College Students: The Use of Technological Devices.”

Mentor: Dr. Lilian Felipe
Department of Speech and Hearing

Sierra’s testimonial: “I would like to thank the O.U.R., as well as SURF and Dr. Bahrim and Dr. Felipe for allowing me the opportunity to participate in academic work I didn’t know was possible. The experience I’ve gained from SURF has helped me to further pursue my studies within Audiology. My research was over the knowledge and awareness that college students possess over the use of technological devices and was conducted in hopes of early intervention to reduce the impact of music induced hearing loss from the misuse of technological devices.”

Great news! Sierra was accepted to join the Doctoral Audiology Program at Lamar University starting this fall.
EXPO 2021
CATEGORY “IN-PROGRESS” RESEARCH LEVEL
SECOND PLACE
Jill Culp
Major in Biology

“Fifty Year Temporal and Spatial Trends in Water Quality of Sabine Lake Estuary.”

 Mentor: Dr. Matt Hoch
Department of Biology

Jill’s testimonial: “It was an honor to present my research over 50 year temporal and spatial trends in water quality of Sabine Lake Estuary at this year’s research Expo, and I am very thankful to my mentor Dr. Matthew Hoch for all of his guidance. Analyzing data from the Texas Commission of Environmental Quality, I determined the long term trends in common water quality parameters throughout the estuary concluding that temperatures have increased by 2° in the northern Gulf of Mexico and into the Sabine Pass region, salinity levels have increased throughout the estuary, and levels of chlorophyll a, nutrients are all elevated near the Port Arthur landing.”
EXPO 2021

CATEGORY “IN-PROGRESS” RESEARCH LEVEL
THIRD PLACE

Tim Cohrs
Major in Communication, Journalism concentration

“Civic Engagement in a Small Texas City.”

Mentor: Dr. Stephan Malick
Department of Communication and Media

Tim’s testimonial: “I am very honored to be a winner and even to present at the Undergraduate Expo this year. Engaging with the student body once again and showing this presentation is aligned with our mission to engage the community and I am grateful for the opportunity to continue this mission.”
EXPO 2021
CATEGORY “ADVANCED” RESEARCH LEVEL
FIRST PLACE
Ashley Staggs
Major in Speech and Hearing Sciences

“Impact of Dizziness on the Quality of Life and Prevalence of Falls in the Elderly Population of Beaumont.”

Mentor: Dr. Lilian Felipe
Department of Speech and Hearing

Ashley’s testimonial: “I am so grateful for this opportunity that SURF has given me. I am also thankful to Dr. Bahrim and Dr. Felipe for their support during this experience. This research has shown how prevalent the need for fall intervention is within the elderly community of Beaumont and how we as a community can assist with helping to find solutions for this problem. The knowledge I have gained from this project will carry with me as I pursue a PhD in research.”
EXPO 2021

CATEGORY “ADVANCED” RESEARCH LEVEL SECOND PLACE

Jesus Torres
Major in Industrial Engineering

“Investigating Traffic Crashes Involving Autonomous Vehicles.”

Mentor: Dr. Yueqing Li
Department of Industrial Engineering

Jesus’ testimonial: "Autonomous vehicles are said to help prevent road traffic accidents and promote road traffic safety. Therefore, this study evaluated the safety performance of AVs and their related risk factors. For this study to have ranked second place in the advanced category highlights the significant social factor that AVs play today. With that said, we hope that our research will help AV manufacturers and the public to understand the safety performance behind AVs."
EXPO 2021

CATEGORY “ADVANCED” RESEARCH LEVEL
THIRD PLACE

Maissa Salibi
Major in Political Science

“Mail-In Voting."

Mentor: Dr. James Nelson
Department of Political Science

Maissa’s testimonial: "I presented research I had conducted over mail-in voting and addressed the concerns that were made against the practice. It was an honor to receive the Third Place “Best Presentation” Award in the Advanced Category; I am incredibly thankful for the Office of Undergraduate Research and Dr. Bahrim for giving me the opportunity to present my research."
Awards offered by the Center for History and Culture of Southeast Texas and the Upper Gulf Coast

Viviana Denova


Mentor: Dr. Gevorg Sargsyan
College of Business, Department of Finances and Economics

Katherine Correa

“The Babe Zaharias Medals: Exploring Methods of Replication for a Promising Non-Contact Based Approach.”

Mentor: Mr. Robert Kelley Bradley
Department of Industrial and System Engineering
Awards offered by the Center for History and Culture of Southeast Texas and the Upper Gulf Coast

Herman McElroy

"The Strange Case of Mooney Allen: Lynching in Jefferson County, Texas, 1900-1910."

Mentor: Dr. Jeff Forret
Department of History

Congratulations to all awardees at Expo 2021 for the job well done!

Plan to join the next Expo on April 15, 2022
Join our student organization: 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 their professors and mentors and facilitates 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 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. The Office of Undergraduate Research provides strong support and offers logistics to this student organization.” Please contact URALamar@gmail.com or visit the Office of Undergraduate Research.

In fall 2021, please consider applying to the following undergraduate conferences

THE NATIONAL CONFERENCE FOR UNDERGRADUATE RESEARCH POSTERS ON THE HILL IN WASHINGTON D.C.

GULF COAST UNDERGRADUATE RESEARCH SYMPOSIUM AT RICE UNIVERSITY

OCTOBER 16, 2021
Call for OUR grant proposals is September 2021

The O.U.R. is seeking competitive proposals from undergraduate students to support their research and creative activities. The O.U.R. grants are meant to encourage undergraduates from all academic areas to participate in scholarly work mentored by at least one faculty. Each grant has allocated $1,500, with $1,000 going in research support and $500 in student stipend.

Deadline for proposal submission is September 25

The 9th Texas STEM Conference

This conference is opened to undergraduate and graduate level research, including doctoral level done at Lamar University and outside. In the last three years we had among our presenters several Lamar alumni, now in prestigious graduate schools from Alabama, Louisiana, and Texas. Also, we have welcomed guests from various schools, such as The University of Texas at Rio Grande Valley, Louisiana Tech University, University of Houston, to list a few.

Abstracts and Registration are due by October 15
Conference date is October 29

The 8th HASBSEB Conference

The HASBSEB conference welcomes undergraduate and graduate students from all academic levels, doing research at Lamar University or elsewhere. Among presenters from other schools, who participated to HASBSEB in the recent past, we had guests from Indiana University, Kent State University, and as far as universities in Bangladesh.

Abstract and Registration are due by November 5
Conference date is November 20