



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

7th Texas STEM Conference – November 2, 2019
Lamar University – Archer – Physics bldg.

**Awardees for oral and poster presentation
at undergraduate and graduate levels**

There were three faculty judges per oral or poster presentation

1. Undergraduate Oral Awards:

First place: Kyle Delk

“Effects of Vitamin D on Human Meibomian Gland Epithelial Cells”

Kyle Delk / Biology / Lamar University / 2019 Presidential Fellow

Co-Author: Carolina Lema / University of Houston, Houston, TX

Mentor: Rachel Redfern / University of Houston / College of Optometry / The Ocular Surface Institute (TOSI)

Second place: Katherine Harmon

“siRNA Silencing of VPS32 in Trichomonas foetus”

Katherine Harmon / Biology / Lamar University

Co-Authors: Peter Connolly, Guadalupe Cisneros, Diana Dang, Khushi Malani, Emily McCall, and Duy Vo

Mentor: Dr. Ashwini Kucknoor / Department of Biology / Lamar University

Third place: Matthew Johnson

“A Study of Current Data on Fast Radio Bursts. “

Matthew Johnson / Physics / Major in Electrical Engineering / Lamar University

Mentor: Dr. Cengiz Sen / Department of Physics / Lamar University



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2. Undergraduate Poster Presentation Awards:

First place: Emily Ingram

“Analysis of the Catalyst Effect on Bulk Ammonia Borane-Polyethylene Oxide Hydrogen Storage Composites”

Emily Ingram / Chemistry and Biochemistry / Lamar University

Co-Authors: Caitlyn Clark, Krishna Karel, Riqiang Fu and Dr. Ozge Gunaydin-Sen

Mentor: Dr. Ozge Gunaydin-Sen / Department of Chemistry and Biochemistry / Lamar

Second place: Donna Fleming

“Theoretical Calculations of Epoxyketene to Lactone Thermal Rearrangement Transition States and Kinetics”

Donna Fleming / Chemistry and Biochemistry / Lamar University

Mentor: Dr. Christopher B. Martin / Department of Chemistry and Bio-chemistry / Lamar

Third place: Kyleigh Dixon

“Development of an Algal-based Landfill Leachate Treatment System”

Kyleigh L Dixon / Civil and Environmental Engineering / Lamar University

Mentor: Dr. Thinesh Selvaratnam / Department of Civil and Environmental Engineering / Lamar

3. Graduate Oral Presentation Awards:

First place: Mukunda Khanal

“An Analysis of Baking Schedules for Highly Moisture Sensitive Electronic Components”

Mukunda Khanal / Mechanical Engineering / Lamar University

Mentors: Dr. Xuejun Fan and Dr. Jenny Zhou / Department of Mechanical Engineering / Lamar

Second place: Divine Sebastian

“Multiscale investigation of corrosion on super-hydrophobic aluminum alloy using electrochemical techniques and in-situ AFM”

Divine Sebastian / Mechanical Engineering / Lamar University

Mentor: Dr. Chun-Wei Yao / Department of Mechanical Engineering / Lamar University



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Third place: Ashiqur Rahman

“Biosynthetic Conversion of Ag⁺ to Colloidally Stable Ag⁰ nanoparticles by Chlamydomonas Reinhardtii: A Mechanistic View of the Light-Induced, Extracellular Polymeric Substances-Mediated Synthesis Process”

Ashiqur Rahman / Ph.D. candidate in Chemical Engineering / Lamar University

Co-authors: Shishir Kumar¹, Adarsh Bafana¹, Julia Lin¹, and Si Amar Dahoumane²

Mentor: Clayton Jeffryes^{1,3}

¹Nanobiomaterials and Bioprocessing Laboratory (NABLAB), Dan F. Smith Department of Chemical Engineering / Lamar University

²School of Biological Sciences and Engineering, Yachay Tech University, Hacienda San José s/n, San Miguel de Urucuquí 100119, Ecuador

³Center for Advances in Water & Air Quality, Lamar University

4. Graduate Poster Presentation Awards:

First place: Seyedsaeid Hosseini

“Influence of Pulverized Bottom Ash on Nano-Mechanical Properties of Interfacial Transition Zone and Bulk Matrix”

Seyedsaeid Hosseini / Civil and Environmental Engineering / Lamar University

Mentor: Dr. Nicholas A. Brake / Department of Civil and Environmental Engineering / Lamar

Second place: Shanglei Pan

“Evaluation of a thermo-tolerant acidophilic alga, Galdieria sulphuraria, for landfill leachate treatment”

Shanglei Pan / Civil and Environmental Engineering / Lamar University

Mentor: Dr. Thinesh Selvaratnam / Department of Civil and Environmental Engineering / Lamar

Third place: Anton Gribovskiy

“RF Spectroscopy with Nonlinear Si Integrated Microring Resonators”

Anton Gribovskiy / Physics / Department of Physics and Astronomy / University of Texas Rio Grande Valley, 1 W University Blvd., Brownsville, TX 78520

Mentor: Dr. Malik Rakhmanov / Department of Physics and Astronomy / University of Texas Rio Grande Valley, Brownsville