



UNIVERSITY *of*
LOUISIANA
L A F A Y E T T E ®

**REU & Summer Undergraduate
Research Symposium**

July 26, 2019

10:30 am to 12 pm

UL Lafayette Alumni Center

600 E. Saint Mary Blvd.

Lafayette, LA 70503

Student Poster Presentations

Advanced Infrastructure Materials REU

Heavy metal removal from water using Graphene Oxide and CS₂ Modified Graphene Oxide, Authors: Nicholas Ciacca, Qiyu Lian, Xiaobo Lei, Daniel D. Gang, Affiliations: Dept. of Mechanical Engineering, SUNY Maritime College, New York; Dept. of Civil Engineering, UL Lafayette.

A Regional Approach to Assess the Hydraulic Failure Potential of Roadway Drainage Structures Based on Extreme Event Criteria Using Publicly-Available FIS Data, Authors: Janasia L. Cuney, Christian J. Moreira, Robert L. Miller, Affiliations: Dept. of Civil Engineering, Prairie View A&M University; Dept. of Civil & Environmental Engineering, University of Maryland – College Park; Dept. of Civil Engineering, UL Lafayette

The Effects of PVA Fibers and Crumb Rubber in Hot Mix Asphalt Mixtures, Authors: Andrea Hernandez, Elena Youngdale, Mohammad Reza Bhuyan, Mohammad Jamal Khattak, Affiliations: California State Polytechnic University Pomona; Macalester College; Dept. of Civil Engineering, UL Lafayette

Praseodymium Nickel Oxide Thin-film for Oxygen Sensors, Authors: Gerardo Mena-Fernández, Yu-Dong Wang, Andrew Brocato, Xiao-Dong Zhou, Affiliations: Dept. of Chemical Engineering, University of Puerto Rico at Mayaguez; Dept. of Chemical Engineering, UL Lafayette.

A Regional Approach to Assess the Hydraulic Failure Potential of Roadway Drainage Structures Based on Design Event Criteria Using Publicly-Available FIS Data, Authors: Christian J. Moreira, Janasia L. Cuney, Robert L. Miller, Affiliations: Dept. of Civil & Environmental Engineering, University of Maryland – College Park; Dept. of Civil Engineering, Prairie View A&M University; Dept. of Civil Engineering, UL Lafayette

Prototyping and Testing of Reverse Osmosis Membranes from Additive Manufacturing Using a Novel Injection Method, Authors: Allison Riegel, Samuel Anderson, Affiliations: Liberty University; Dept. of Mechanical Engineering, UL Lafayette

Tensile Bending Behavior of Hot Mixture Asphalt Modified with PVA Fiber and Crumb Rubber, Authors: Elena Youngdale, Andrea Hernandez, Mohammad Reza Bhuyan, Affiliations: Macalester College; California State Polytechnic University Pomona; Dept. of Civil Engineering, UL Lafayette

Effect of Temperature on Supercritical CO₂ foams stabilized by nanoparticles with the presence of surfactants, Authors: David Zhang, Chunkai Fu, Ning Liu, Affiliations: University of Oklahoma; Dept. of Chemical Engineering, UL Lafayette

Healthy Streams, Healthy Coasts REU

Environmental effects on the spatial distribution of hydromedusae in Terrebonne Bay, Louisiana, Authors: Julia Belke, Christin Selle, Kelly Robinson, Affiliations: University of Michigan; Dept. of Biology, UL Lafayette

Mapping newly created marshes using drone imagery, Authors: Margaret Deahn, J. Mason Harris, James A. Nelson, Affiliations: SUNY Geneseo; Dept. of Biology, UL Lafayette

The effects of *Quadrula apiculata* bioturbation on zinc distribution in a microcosm, Authors: Meagan Froeba, Paul Klerks, Affiliations: Dept. of Biology, UL Lafayette

Modeling the effects of catastrophic flooding to improve water quality dynamics in a coastal Louisiana watershed, Authors: Lucas Goodman, Robert Miller, Affiliations: Dept. of Natural Resources Ecology and Management, Iowa State University; Dept. of Civil Engineering, UL Lafayette

Ability of *Daphnia magna* to Acclimate to Zinc, Authors: Samuel Guzman, Paul Klerks, Affiliations: University of Massachusetts Boston; Dept. of Biology, UL Lafayette

Classification of mesophotic green algae in the NW Gulf of Mexico, Authors: Carly Mansfeldt, Joe Richards, William Schmidt, Suzanne Fredericq, Affiliations: California Polytechnic State University at San Luis Obispo; Dept. of Biology, UL Lafayette

Surface cores from Baton Rouge lakes: investigating spatial and temporal distribution of pollution, Authors: Alyssa Mulford, Aubrey Hillman, Affiliations: Lake Superior State University; School of Geosciences, UL Lafayette

Grow it Like it's Hot: How Warming and Freshening Estuaries Support Growth of Cyanobacteria, Authors: Eliot Pell, Andrea Jaegge, Gulce Kurtay, Bryce Lavergne, Beth A. Stauffer, Affiliations: Ball State University; Dept. of Biology, UL Lafayette

The Impacts on Wetland Sediment of Nitrogen-rich Effluent Addition, Authors: Mia K. Sinha, Skylar R. Flaska, James A. Nelson, Affiliations: Dept. of Environment and Sustainability, Barnard College of Columbia University; Dept. of Biology, UL Lafayette

Other Undergraduate Research

Foraging preferences of native bees in the Cajun Prairie, Authors: Ryan Fontenot, Andrew Buder, Mark Genung, Affiliations: Dept. of Biology, UL Lafayette

Detection and Classification of Gulf of Mexico Bryde's Whales: big data challenges, Authors: Conner Lemaire, Natalia Sidorovskaia, Affiliations: Dept. of Physics, UL Lafayette

Identification of Endolithic Cells During Exploration of Rhodoliths' Endolithic-microenvironment, Authors: Samantha Ritter, Sarah Bush, Patrick Fontenot, Affiliations: Dept. of Biology, UL Lafayette

Thank you for a great summer!

School of Geosciences

611 McKinley St.

Hamilton Hall, Room 323

(337) 482-6647 | geology@louisiana.edu

Department of Biology

410 E. St. Mary Blvd.

Billeaud Hall, Room 108

(337) 482 6748 | biology@louisiana.edu

College of Engineering

131 Rex Street Lafayette

Madison Hall, Room 106

(337) 482-6685 | engineering@louisiana.edu

Ray P. Authement College of Sciences

1289 Girard Park Circle

Oliver Hall, Room 201

(337) 482-6986 | sciences@louisiana.edu

**Office of the Vice President for Research,
Innovation, and Economic Development**



LAFAYETTE

University of Louisiana at Lafayette

104 E. University Circle

Lafayette, LA 70503