

University of Mississippi

eGrove

University of Mississippi News

5-30-2019

Researchers Working to Improve State's Disaster Resilience

Shea Stewart

Follow this and additional works at: <https://egrove.olemiss.edu/umnews>

Recommended Citation

Stewart, Shea, "Researchers Working to Improve State's Disaster Resilience" (2019). *University of Mississippi News*. 4369.

<https://egrove.olemiss.edu/umnews/4369>

This Article is brought to you for free and open access by eGrove. It has been accepted for inclusion in University of Mississippi News by an authorized administrator of eGrove. For more information, please contact egrove@olemiss.edu.

Researchers Working to Improve State’s Disaster Resilience

New seed grants from Flagship Constellations initiative total nearly \$40,000

MAY 30, 2019 BY SHEA STEWART



The Disaster Resilience Flagship Constellation at the University of Mississippi has awarded \$39,598 in its first round of seed grants to researchers examining a number of resiliency issues. Photo by Kevin Bain/Ole Miss Digital Imaging Services

OXFORD, Miss. – The Disaster Resilience Flagship Constellation at the **University of Mississippi** has awarded its first round of seed grants to researchers examining a number of issues, from improving general resilience in the Mississippi Delta to the use of green infrastructure in urban flood control.

The six grants, totaling \$39,598, were awarded through the university’s **Flagship Constellations** initiative, which was **unveiled in November 2017**.

The initiative is a collaborative effort among faculty, staff and students from the Oxford campus and the **University of Mississippi Medical Center** to explore and solve complex issues through the diversity of ideas. The initiative includes multidisciplinary teams working to find solutions to grand challenges in the areas of brain wellness, community well-being and disaster resilience.

Ole Miss researchers are studying a multifaceted methodology – prevention, mitigation, preparedness, response and recovery – to help reduce the impact of disasters on communities both in the state and around the world.

“UM researchers are working to develop a variety of tools and programs to help communities prepare and recover from disasters,” said Stephanie Showalter Otts, director of the **National Sea Grant Law Center** at the School of Law and constellation co-team leader. “It is very exciting to be able to provide funding support to these six innovative projects, and I look forward to seeing the results.”

The **Disaster Resilience Flagship Constellation** combines insight and research from engineering, psychology, sociology, political science and legal disciplines with material sciences, information technology, emergency management and public health. The goal is to develop technologies and inform policies to mitigate disasters and increase the resilience and sustainability of communities.

The constellation’s other team leader is Greg Easson, associate dean for research and graduate programs for the **School of Engineering** and professor of geology and geological engineering.

“The wide range of topics in the funded seed grants show the breadth of research needed to improve community disaster resilience,” said Easson, who also is director of the Mississippi Mineral Resources Institute at UM.

The grants are supported by a \$1 million donation to the Flagship Constellations initiative by Thomas

Follow us on social



Campus Briefs

Students Learn ‘Real Politics’ in Washington, D.C., Winter Session

OXFORD, Miss. – Eleven University of Mississippi students spent their winter break learning about the people who work behind the scenes of the American government in Washington, D.C. Lead by Jonathan Klingler, assistant professor of political science, the students of Pol 391: Applied Politics met not with candidates, but with the people who make candidates’

[Read the story ...](#)

[More Posts from this Category](#)

Thank You To Our Donors

Young Alumna Gives Back to School of Accountancy

OXFORD, Miss. – Stephanie Jennings Teague, of Chicago, sees her commitment of \$100,000 to the Patterson School of Accountancy’s new building at the University of Mississippi as a means of saying “thank you.” “It is a way to show a small token of my appreciation to Ole Miss, the faculty and staff, and the accounting

[Read the story ...](#)

[More Posts from this Category](#)

Ole Miss In the News

Reuters: Keep an Eye on the Money Supply

U.S. inflation roller coaster prompts fresh look at long-ignored money supply By Michael S. Derby NEW YORK – The amount of money sloshing around the U.S. economy shrank last year for the first time on record, a development that some economists believe bolsters the case for U.S. inflation pressures continuing to abate. The Federal Reserve’s

and Jim Duff, **who created the Ernest R. Duff Flagship Constellation Fund in honor of their father.**

The funded proposals, bringing together researchers from more than 10 academic units, are:

[Read the story ...](#)

[More Posts from this Category](#)

- **An Analysis of Regulatory, Technical and Cost Barriers for Green Infrastructure in Urban Flood Control:** With cities suffering from flooding partly due to increasing hard surfaces from construction and development, installing green storm water infrastructure is one way to curb flooding and maintain the quality of local bodies of water. City ordinances, technical uncertainty and cost are three main barriers preventing the installation of these infrastructures. Partnering with the city of Oxford, this research team will examine at what point city ordinances pose an economic barrier to building and using green storm water infrastructure. Lessons learned from this project can apply to cities nationwide.
- **Communicating about Carbon Capture and Storage Innovations to Policymakers and the Public:** This project will explore how research innovations about carbon capture and storage, or CCS, are communicated from the scientific community to the public and policymakers in the United States. The project also will identify critical gaps in public understanding and policymaking about CCS technologies. This project could help increase the resilience and sustainability of communities and infrastructure, and reduce vulnerability to future climate change by identifying specific CCS innovations that have been invisible to the public and policymakers, and identifying CCS research that could help policymakers with critical climate change policy decisions.
- **Drone-Enhanced Rapid Visual Assessment for Disaster Resilience Indexing of Select UM Campus Buildings:** With a number of historic buildings, the Ole Miss campus provides an excellent case study for examining disaster resilience on a local level. Researchers with this project propose an evaluation of these buildings using a variety of tools. The proposed project will focus on the gathering and use of aerial images for the purpose of evaluating the disaster resilience of buildings in the Circle and Grove areas. Researchers will acquire visual, multispectral and thermal-infrared images to create both a visual record and 3D volumetric data. The assessment should enhance the current campus natural hazard mitigation plan framework.
- **Problem-Solving for Better Resilience Outcomes: Empirical Data-Informed Strategic Planning in the Mississippi Delta:** Focused in Quitman County, this research aims to build diverse organizational and social networks using the Communities Advancing Resilience Toolkit, or CART, a community intervention process informed by disaster resilience theory and evidence. The tools and processes used in CART are field-tested, but designed primarily for preparing communities for large natural or acute disasters, or “mass casualty incidents.” The investigators plan to use these methods to move beyond disaster preparedness and build networks to improve general resilience in the Mississippi Delta. The primary objective is to engage community stakeholders to boost community resilience.
- **Researching the Effectiveness of a Community-Based Psychological First Aid Model at the University of Mississippi:** The mission of the **UM Clinical-Disaster Research Center** is to develop evidence-based disaster preparedness, mitigation and response practices to meet the needs of the university, community and region. The community-based psychological first aid program focuses on training non-mental health professionals and community members to reduce and manage both traumatic stress and everyday stressors in the self, family members, neighbors, friends and fellow community members through the use of basic psychological support techniques. There is a need to study the program’s effectiveness, particularly in a university setting. This research will allow researchers to identify ways to improve the program and find ways to make it self-sustaining and transferable to other educational and institutional settings.
- **Testing New Innovations in Ground-Penetrating Radar Technology: Implications for Characterizations of Levees, Transportation Corridors, Building Infrastructure and Disaster Mitigation Planning:** This proposal will test whether a new innovation in ground-penetrating radar, or GPR, known as hyperstacking can be used to quickly gather relatively deep, high-resolution subsurface data over large areas. Researchers have partnered with the Mississippi Department of Transportation, which provided them with data from throughout the state. Researchers will use a hyperstacking GPR system owned by the UM Department of Geology and Geological Engineering to collect GPR data in areas that have existing geotechnical data and then use the reports to calibrate and evaluate the GPR data. Improved GPR data has the potential to reduce the time required for infrastructure planning, urban growth and development, and disaster response planning and mitigation.

For additional information about the Disaster Resilience Flagship Constellation, visit <http://flagshipconstellations.olemiss.edu/disaster-resilience/>.

 FILED UNDER: [NEWS RELEASES](#), [RESEARCH AND SPONSORED PROGRAMS](#)