GESTAR II MORGAN STATE UNIVERSITY UNDERGRADUATE FELLOWSHIP

In December 2021, GESTAR II partnered with NASA Goddard Space Flight Center's Earth Science Division to advance Earth science and Goddard's leadership by providing a competitive environment to hire and retain high-quality scientists who are on track to be leaders at NASA, in academia and in industry. GESTAR II exemplifies the power of mentorship, embracing a career development strategy that only a university research center can provide. In GESTAR II, early-career researchers and students can build outstanding resumes, launching them to become the Earth science leaders of tomorrow. GESTAR II has a strong commitment to supporting education, outreach, and fostering collaboration between our scientists and students at Morgan State University.

GESTAR II is in search of Morgan State University students to assist in extreme precipitation analysis and monitoring. Extreme precipitation causes significant socioeconomic impact due to floods, landslides and other rain-triggered natural hazards. Satellite precipitation measurements can help us understand the distribution and characteristics of extreme precipitation. Real-time satellite measurements allow us to monitor the extreme precipitation in real-time globally. This project seeks one student to work on a near-real-time Extreme Precipitation Monitoring System (ExPreS) using the state-of-art Integrated Multi-satellitE Retrievals for GPM (IMERG) data. The ExPreS monitors global extreme precipitation in near-real-time for extreme events with at least more than one Average Recurrence Interval (ARI), i.e., events appear only once every year, or even more rare events, for the purpose of disaster warning. The student is expected to test extreme precipitation modeling system written in R code and provides maps and validation analysis for selected regions.

Another student will be working on developing an extreme precipitation event database using software written in IDL. The student can continue with the IDL code or convert the code to python to generate multi-year tropical extreme precipitation events.

Required Qualifications: some background in meteorology/earth sciences, good statistical knowledge, good programming skills in or more language, preferred in R, IDL, or Python, or eager to learn experience with large amount of earth science data.

This fellowship is a paid opportunity to support the work at Goddard Space Flight Center in Greenbelt, Maryland alongside a GESTAR II researcher. This is a 40 hour per week hybrid opportunity.

Eligibility:

- Recent graduate or currently enrolled as a junior, senior, or graduate student in fall 2024
- Enrolled full-time in a degree-granting program at Morgan State University
- Must have and maintain a cumulative 2.5 GPA (on a 4.0 scale)

Application Information:

All eligible applicants are required to complete the required application and submit supporting documents for full consideration. The link to the application is: https://bit.ly/gestariiugrads.

QUESTIONS? CONTACT: DR XIAOWEN LI, DIRECTOR OF CLIMATE SCIENCE DIVISON AT MORGAN STATE UNIVERSITY AT XIAOWEN.LI@MSU.EDU