

## **MUREP Precollege Summer Institute (PSI) - (MUREP PSI)**

**Title: NASA MUREP PSI: Climate Change Impact on Agriculture and Ecosystem**

**Institution: Lincoln University**

**City/State: Jefferson City, MO**

**PI: Sougata Bardhan**

### **Summary:**

The proposed NASA MUREP PSI summer residential educational program aligns with NASA's Earth Science Program mission and is designed to provide keys for success to participating students to advance their career in STEM fields as undergraduate students and beyond. The intensive two-week summer residential camp will be hosted at Lincoln University, a historically black U.S. university, in collaboration with the University of Missouri.

The educational program will provide opportunities for underrepresented minority students to explore the water cycle, nutrient cycle, abiotic stress, emerging pests, water quality, digital agriculture technology, predictive modeling, and machine learning. Through an experiential learning curriculum provided by an interdisciplinary team of scientists, students will gain an understanding of the impacts of climate change on the agricultural production system and the ecosystem in general. Interaction and collaboration with STEM professionals and renowned scientists from their respective fields will act as catalysts for the students to appreciate critical environmental issues and other future environmental challenges that will need STEM professionals. Each evening the students will take part in sessions focused on college and professional development activities led by the state specialist on 4H and youth development at Lincoln University.