MICHIGAN STATE
UNIVERSITY

A fully funded MS/PhD student position in Field and Watershed Scale Modeling at Michigan State University

Institution: Michigan State University

College: College of Agriculture and Natural Resources/ College of Engineering

Department: Biosystems and Agricultural Engineering

Location: East Lansing, Michigan, United States of America

Position Description: Hydrology and Water Quality Research Group (https://www.canr.msu.edu/hydro-water-quality/) at BAE department invites application from highly-motivated student having Undergraduate/Master's degree in Hydrology, Agricultural Engineering, Environmental Science/Engineering, Water Resources Engineering with emphasis on surface water hydrology, water quality assessment and modeling. Student will conduct research focused on developing and validating reliable models for nutrient fate and transport in agricultural system. Also, student will address the impact of management and conservation practices, strategies to increase nutrient retention and uptake for diversity of commodities produced in Michigan and help inform policy for nutrient application on farms in Michigan. Therefore, student should have published manuscripts using APEX and SWAT+ models. Students should have background in programing language such as Python and R to automate the model simulation process and processing large datasets. Additionally, student will visit the agricultural fields to install automatic water quality samplers and collect water quality samples.

This is a fully funded position through graduate assistantship for student who is interested to pursue MS/PhD degree. Additionally, student will receive world class health benefits throughout the year. Student should have published high quality manuscripts in high impact factor journals.

Required Qualifications:

1. BS or MS degree in Hydrology, Agricultural Engineering, Environmental Science/Engineering, Water Resources Engineering or other closely related disciplines.
2. Excellent written and oral communication skills.
3. Highly self-motivated.

Preferred Knowledge, Skills, and Abilities:

1. Experience in working in computer models such as APEX and SWAT+ on watershed and field scale assessments.

Department of Biosystems and Agricultural Engineering

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2. Knowledge of programing languages such as Python and R to process datasets.
3. Experience in working in geographic information systems.
4. Strong writing and communication skills.

Interested candidates are encouraged to contact Dr. Subhasis Giri (girisubh@msu.edu) via email with following information:

a) Detailed curriculum vitae with full list of published and submitted papers.
b) GRE test score (if available)
c) TOEFL or ILETS test score if the candidate's native language is not English.

Review of applications will begin immediately and continue until the position is filled.

About Michigan State University: Michigan State University is a public institution that was founded in 1855. It has a total undergraduate enrollment of 40,483 (fall 2023), and the campus size is 5,192 acres. It utilizes a semester-based academic calendar. Michigan State University's ranking in the 2025 edition of Best Colleges is National Universities, #63. Its in-state tuition and fees are $18,826; out-of-state tuition and fees are $45,178. Michigan State University has been advancing the common good with uncommon will for more than 160 years. One of the top research universities in the world, MSU pushes the boundaries of discovery and forges enduring partnerships to solve the most pressing global challenges while providing life-changing opportunities to a diverse and inclusive academic community through more than 200 programs of study in 17 degree-granting colleges.

About Biosystems and Agricultural Engineering Department: The Department of Biosystems and Agricultural Engineering (BAE) applies principles of engineering and biology to improve quality of life in the areas of food, energy, environment, and health. Since 1906, BAE has responded to the changing needs of society by integrating and applying principles of engineering and biology in a systems context. BAE faculty researchers span across the colleges of Engineering and Agriculture and Natural Resources with main focus areas of: i) Food safety and quality, ii) Sustainable ecosystems and resource conservation, iii) Bioenergy and bioproduct solutions, iv) Diagnostics, systems models and risk assessment tools to enhance public health.