

M.S. or Ph.D. student assistantship in digital soil mapping at the University of Georgia

The soil pedology lab at the University of Georgia seeks one M.S. or Ph.D. student interested in digital soil mapping, spatial modeling, and soil moisture at the field scale. The primary focus is to conduct field and laboratory analyses for quantifying physical soil properties and soil moisture to integrate with the precision agriculture community and provide much-needed inputs for optimizing variable rate irrigation scheduling in a row crop agriculture system.

The student will be based at the University of Georgia in the Department of Crop and Soil Sciences in Athens, GA <http://cropsoil.uga.edu/>. UGA is a Land/Sea Grant institution and is ranked 16th among public universities in the U.S. News & World Report's 2018 edition of America's Best Colleges. Athens is well known for its quality of life in regard to both outdoor and urban activities (<https://www.visitathensga.com/>). Ideal candidates would combine expertise in data analysis and modeling spatial datasets. Desired start is for January 2019, but August 2019 will be considered. We offer a competitive graduate student salary and waived/reduced tuition.

Keywords: Soil sampling, soil moisture; spatial modeling; digital soil mapping

Objective: Primary goals are 1) Develop detailed maps of soil physical and hydraulic properties for a moderately-sized crop field at fine spatial scales (e.g., 2 m pixel size). 2) Produce recommendations for variable rate irrigation schedules that account for the spatial variability of soil moisture conditions.

Required qualifications: Completed B.S. in soil science, landscape ecology, hydrology, agriculture, or similar field by start date. A positive attitude and willingness to collaborate with an interdisciplinary team of researchers is required. Ability and willingness to work in both indoor and outdoor environments with hand sampling equipment, vehicle-mounted soil probes, analytical laboratory equipment, etc. is required.

Desired qualifications: Experience with spatial modeling and proficiency with computer software such as R, ArcGIS, etc. is highly desirable. Familiarity with soil mapping, sensors, drones/UAVs, remote sensing, and machine learning is desirable, but not required.

To apply: If you are interested in pursuing graduate research in these areas, please contact Dr. Matt Levi at matthew.levi@uga.edu. Students with strong backgrounds in geographic information science, remote sensing, soil sampling, and laboratory experience are particularly encouraged to apply.

The UGA graduate college deadline for spring 2019 applications is November 15, 2018 for domestic applicants and October 15 for international applicants but applicants are encouraged to make contact prior to these dates (<http://grad.uga.edu/index.php/prospective-students/student-information/admissions-bulletin/deadlines/admissions-deadlines/>). Information specific to graduate degree programs offered through the UGA Department of Crop and Soil Sciences can be found here: <http://cropsoil.uga.edu/graduate.html>. The University of Georgia is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status.