Arkansas State University

**Graduate Research opportunity in Agricultural System Technology, MS student**

The College of Agriculture at Arkansas State University is seeking a motivated student to pursue a Master of Science in Agriculture in the Agricultural System Technology program. This position is a 24 month funded master's level research assistantship beginning July 1, 2019. The available degree options include either the MSA in Agriculture or the MS in Environmental Sciences. The successful candidate will have opportunities to pursue independent research in one or more of the following research projects:

1) Measurement, estimation, and validation of actual Evapotranspiration (ET) in agricultural landscapes in northeast Arkansas. Research activities include a) image processing including satellites and Unmanned Aircraft Systems (UAS), b) Measuring ET fluxes using Eddy Covariance (EC), c) Developing and validating Satellite based-ET algorithms using EC fluxes, d) Evaluating the Carbon Dioxide and Methane Fluxes with remotely sensed-ET, and e) multi-spectral vegetation index modeling.

2) Evaluating soil moisture sensor installation methods to improve water management in the Mississippi River delta region. Research activities include a) Install soil moisture sensors and telemetry units, b) Monitor the agricultural plots in the Arkansas State University farm, Jonesboro, AR, c) Work with cover crops to improve soil health, and d) Irrigation water management using weather station, soil moisture sensors, and ET gauge.

Successful applicants are expected to conduct high-quality research, present research findings at conferences, publish in peer-reviewed journals, and assist in teaching. A competitive stipend, and tuition waiver will be provided to qualified candidates.

Successful candidates will join a dynamic, interactive group of students and faculty at Arkansas State University, College of Agriculture and Environmental Science. Students will also have multiple opportunities for collaborative research with scientists at USDA ARS Delta Water Management Research Unit, Arkansas Biosciences Institute, University of Arkansas Division of Agriculture Cooperative Extension, and Biological and Agricultural Engineering, University of Arkansas.

**Qualifications:**

A BS degree in a science or engineering discipline (e.g., Agricultural engineering, Agronomy, Plant and Soil Science, Civil and Environmental Engineering, Environmental Sciences, Atmospheric Sciences, or related field) by May of 2019. Strong writing, quantitative, and analytical skills are essential. Successful candidates will be creative, motivated, and capable of working independently as well as collaboratively. Applying students must be a citizen or permanent resident of the U.S. Preferred candidates include field UAS experience, holders of FAA remote pilot's license, and/or experience with: ArcGIS Desktop, Microsoft Excel, Python scripting, Java, and Matlab.

**Application Instructions:**

Please email Dr. Ahmed Hashem (agst@astate.edu): 1) A letter of interest that briefly describes educational and research background, as well as research interests/goals (2-3 pages); 2) A curriculum vitae, 3) GRE scores, 4) Unofficial copies of transcripts; 5) a sample of your scientific writing, and 6) Contact information of three professional references (referees will not be contacted initially).

Please write "Graduate Research Position" in the subject line. Review of applications will begin immediately, until a suitable candidate is found.