PhD Position in Urban Food-Energy-Water Nexus at the University of Florida

**Position description:** We are seeking for a PhD student at the University of Florida (UF) to investigate the sustainability of urban food-energy-water (FEW) nexus in the Tri-cities in South Florida. This is a fully-supported graduate assistantship position through a National Science Foundation (NSF) funded project on optimizing FEW resources, mitigating tradeoffs among ecosystem services within the FEW nexus, and enhancing community resilience to stressors including climate change, population growth, and resource depletion.

The student will have the opportunities to actively participate in interdisciplinary (e.g., engineering, social science, energy, environmental sustainability, optimization, etc.) and international collaborations (with partners in Netherlands and France) to: (1) develop a multi-scale modeling framework to address intricate relationships among multiple stressors, FEW and their interactions, and ecosystem services; (2) examine tradeoff and balances between various drivers and their effects on each segment of the FEW nexus; (3) develop scenarios to optimize sustainable FEW nexus in cities. Findings will be used to address the role of interventions from different types of nexuses associated with urban planning scenarios in affecting the final sustainable solution; and how different social networks help evaluate acceptance of these potential solutions across different cultural contexts.

**Anticipated start date:** Fall semester, 2019 (Open until filled).

**Qualifications:** The ideal candidate should have the following qualifications and experiences:
- Interests and/or experience in research on ecosystem services, sustainability science, biophysical modeling and landscape ecology;
- MS degree in a related field (e.g., ecology, environmental science, environmental engineering, sustainability);
- Experience in biophysical modeling, ecosystem modeling or other process-based earth system models;
- Demonstrated quantitative (e.g., statistics, GIS, geospatial analysis) and programming skills (e.g., R, python, Matlab, C++, or other equivalent language);
- Creative and independent research abilities with teamwork spirit;
- Strong written and oral communication skills.

**Salary and benefits:** The selected candidate will be offered a competitive stipend per UF guidance, plus health insurance and full tuition waiver.

**How to apply?** Interested students are strongly encouraged to contact Dr. Jiangxiao Qiu (qiuj@ufl.edu) before application by sending a current CV with GPA, GRE and TOEFL (for non-native English speaker only), a list of three academic references, and a brief statement describing your research interests and experience as a single PDF. The interested student will be officially applying for the PhD program through the School of Natural Resources and Environment (SNRE) (http://snre.ifas.ufl.edu/) at UF. Applications are due February 1, 2019.

Research in the Qiu lab (http://jiangxiaoqiu.weebly.com) falls into landscape ecology, ecosystem service, global change ecology, and sustainability science. Current research focuses in the lab include: (1) climate and land-use change effects on multifunctional agricultural landscape; (2) biological invasion and biodiversity effects on ecosystem service; (3) urban sustainability and food-energy-water nexus; and (4) linkages between ecosystem service and human wellbeing. The Qiu Lab is also in the School of Forest Resources and Conservation, and based at Fort Lauderdale Research and Education Center, Institute of Food and Agricultural Sciences, University of Florida.
Please feel free to email if there are questions about the opportunities and applications. Thanks!

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