

## Graduate Research Assistant at the University of Florida

**Description:** The Department of Agricultural & Biological Engineering (ABE) at the University of Florida in Gainesville, FL (USA), is seeking candidates for a graduate research assistant position in hydrology/soil physics/contaminant fate and transport, preferably at the PhD level. The position begins in August 2016 and is supported by a federal grant from USDA-NIFA. The goal of the project is to determine the effect of subsurface preferential flow on the removal efficiency of surface runoff nutrients by vegetation buffers placed along the margins of streams and other water bodies.

The student's main research focus will be on conducting integrated laboratory and modeling experiments to identify the governing mechanisms of coupled colloid, nitrogen, and phosphorus transport in surface and subsurface flow paths. The student will combine the lab data with that collected by project collaborators, to test and refine state-of-the-art buffer (VFSmod) and preferential flow (source-responsive) mechanistic models for use in environmental management. The student will have the opportunity to participate in all facets of the project, including designing and conducting laboratory experiments; develop, test, and refine conceptual and numerical modeling components; working with faculty and peers; and disseminating results via papers and presentations.

**Background:** UF ABE is ranked consistently among the top 5 peer departments in the USA (<http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-engineering-schools/biological-agricultural-rankings>). Instilling excellence in research, leadership, innovation, and entrepreneurship are ABE's highest priorities. At ABE the graduate student will join a diverse and dynamic, cross-disciplinary group of researchers, and enjoy broad opportunities for collaborations with existing teams, including those studying biocomplexity engineering, biofilm systems and biosensors, biofuels, coupled natural and human ecosystems, nanotechnology and nanomaterials, climate variability and change, crop modeling, hydrology and water quality.

**Stipend:** This full assistantship comes with a competitive stipend and waiver of tuition. The assistantship will be available for the normal duration of the graduate student program through graduation.

**Contact:** Interested applicants should send a one page cover letter describing their research interests, CV, names and contact information of three references to Dr. Rafael Muñoz-Carpena ([carpena@ufl.edu](mailto:carpena@ufl.edu)) or Dr. Bin Gao ([bg55@ufl.edu](mailto:bg55@ufl.edu)).