Open PhD Positions in Surface-Groundwater Interactions, Environmental Transport in Human Impacted Landscapes - Indiana University

Three funded positions for PhD students are available at Indiana University, for students to peruse their Ph.D. in Environmental Science. I am currently seeking motivated students for the following projects:

1. Implications of dynamic hydrological connectivity of landscape elements for the transport and fate of carbon and nitrogen in intensively managed landscapes. Connectivity between surface- and groundwaters, and dynamics of that connectivity through seasonal and storm event forcing, is of particular interest. This position is part of the NSF-funded by the Intensively Managed Landscapes Critical Zone Observatory.
2. Quantifying the exposure of aquatic ecosystems to contaminants of emerging concern, particularly synthetic testosterones described in a recent Science article. This student will work with a multi-disciplinary team including analytical chemists and environmental engineers focused on coupling laboratory and field observations. The position is funded by a USDA-AFRI grant.
3. Quantifying variability in water quality and quantity outcomes as a function of human land management decisions. This student will work with a team of social scientists, political scientists, hydrologists, and economists to understand the decision making process for land managers in the agricultural Midwest, and how governmental structures can be used to manage these resources. (very much in the spirit of IU's Ostrom Workshop). This project is funded by an award through the NSF Water Sustainability and Climate program.

Each of these projects blends hydrologic science with other disciplines, and have implications for how managed landscapes function in comparison to their more pristine (or less impacted) counterparts. Students in my group should expect to include both a field and numerical modeling component in their research, and be excited to work on interdisciplinary teams that bridge disciplines.

Students in these positions would be primarily affiliated with the School of Public and Environmental Affairs (SPEA) at Indiana University. SPEA is a unique school, with an emphasis on both disciplinary Environmental Science research as well as bridging public policy and environmental science disciplines. Details about my research group can be found here, and a summary of what PhD students can expect of me, and what I expect of them, are summarized here. For students who do not currently have an M.S., we have a mechanism by which you can earn your M.S. while on the path to your Ph.D.

For all positions, I expect students will take advantage of our established partnership with TU Delft (both PhD and MS students can participate in this partnership), spending one semester on the TU Delft campus in the Netherlands completing coursework in hydrology and/or water resources management. Additionally, my students commonly complete coursework outside of our discipline, whether that is another specialization within SPEA (e.g., public policy) or on campus (e.g., aquatic ecology, geography, geoscience).

Questions about these positions can be sent to adamward@indiana.edu, or by phone at 812-856-4820.

I look forward to hearing from exciting, energetic students who are interested in these topics.

Adam