POST-DOCTORAL POSITION IN WATERSHED MODELLING

The Ohio State University
Dept. of Food, Agricultural and Biological Engineering – Ecological Engineering Program

Description: Drs. Jay F. Martin and Margaret M. Kalcic have 2 years of support for a Post-doctoral Scientist to contribute to ongoing biophysical modeling projects focused on Lake Erie and its watershed.

This position will lead a major modeling effort in support of multiple projects investigating linkages among climate change, ecology, and human behavior (e.g., farmers, decision-makers) in the largely agricultural watersheds that are the primary source of sediments and nutrients to western Lake Erie. These projects include one funded by NSF INFEWs that examines potential effects of deglobalization on the sustainability of Great Lakes' food-energy-water systems (FEWS), and another funded by NOAA using climate forecasts to reduce nutrient runoff and algal blooms. The Post-doc's primary responsibilities include: **1)** predicting how climate and land management interact to affect water quality and ecosystem attributes (flow, nutrients, harmful algal blooms) using an existing watershed model set up using the Soil and Water Assessment Tool (SWAT); and **2)** communicating these results to the scientific community and stakeholders via journal publications, presentations, and reports. Interdisciplinary results are desired and will be achieved using watershed models to analyze impacts of public policy, farmer behavior, and land management change. Because the SWAT model has been calibrated and validated, the successful candidate can immediately begin performing management and climate scenarios, as well as publishing results.

The post-doc will be co-supervised by Drs. Martin and Kalcic and work closely with an interdisciplinary team of Ohio State faculty, researchers, and students that includes social scientists, economists and communication specialists.

The post-doc is expected to write manuscripts, present scientific papers, and mentor students that are conducting related field, laboratory, and modeling research. If interested, the post-doc would have opportunities to participate in field and lab work, gain university teaching experience, attend training workshops, and write research grants. Support will be provided to attend scientific meetings.

Location: The incumbent would join a dynamic, interactive group of faculty, post-docs, and students in the department of Food, Agricultural & Biological Engineering (www.fabe.osu.edu/fabe/). Office space would be provided on Ohio State's main campus in Columbus, Ohio.

Qualifications: A successful applicant will be creative, motivated, and capable of working both independently and cooperatively within an interdisciplinary group. Minimum qualifications include a PhD in agricultural, environmental, or ecological engineering, or a related field. Strong quantitative and communication skills are required. Ideal candidates will have had extensive experience using the SWAT model and GIS to analyze watershed hydrology and nutrient transport.

How to apply: Electronically submit a cover letter, CV, and names/contact information of three references to Jay Martin at martin.1130@osu.edu and Margaret Kalcic at kalcic.4@osu.edu (please put "Watershed Modeling Post-Doc" in the subject line). We will begin reviewing applications on Oct. 12 and will continue until a suitable candidate is found. An ideal start date would be January 2018. Feel free to direct questions to Drs. Martin and Kalcic.