

Two Postdoctoral Fellowships: Modeling of Harmful Algal Blooms
Cooperative Institute for Great Lakes Research
School for Environment and Sustainability
University of Michigan

Two postdoctoral fellowships are available for highly qualified individuals to join the Cooperative Institute for Great Lakes Research (CIGLR, <https://ciglr.seas.umich.edu/>) to develop models that help forecast HAB development, transport, and impacts on human health in the Great Lakes. The two postdoctoral fellows will focus on complementary aspects of HAB modeling:

- a. The Biophysical Modeler will improve model elements related to algal vertical migration, growth, and toxicity within the FVCOM 3-D forecasting model that drives the Lake Erie HAB-Tracker tool. This position requires a Ph.D. in physical science, biological science, or engineering and a minimum of two years of experience in physical computer modeling, including simulation and analysis of hydrodynamic processes (e.g., FORTRAN-based simulation of currents, water temperature, waves, etc.) and familiarity with a linux/unix parallel modeling environment. Preference will be given to candidates who have a demonstrated ability to perform complex data analysis in a scripting environment using software such as R, Python, IDL, or Matlab, and to quantify uncertainty.
- b. The Statistical Modeler will develop new probabilistic models that help predict relationships between nutrient inputs and HAB growth and toxicity, and incorporate approaches for model skill assessment and uncertainty analysis. This position requires a Ph.D. in physical science, biological science, or engineering and experience and experience with data analysis and visualization in a scripting environment using R, Python, or similar software. Preference will be given to candidates that have experience with contemporary statistical modeling approaches (Bayesian networks, causal analysis, hierarchical models, random forests, model averaging), including experience with water quality modeling and nutrient load estimation.

In addition to model development, postdoctoral fellows will assist with field planning, experimental design, and the development and transition of research products to real-time application. Postdocs will be expected to maintain strong records of scholarly publication, as records of presentation at scientific conferences and public meetings.

CIGLR is one of 16 Cooperative Institutes in the United States that represent partnerships between NOAA and academic institutions. Since 1989, CIGLR has been hosted by the University of Michigan in Ann Arbor, Michigan, where it is collocated with its sponsor, NOAA GLERL. CIGLR's mission is to help government researchers at NOAA GLERL accomplish their research in the Great Lakes by enhancing collaborations with academic scientists at U of M, as well as other institutions throughout the Great Lakes.

The postdoctoral fellowships offer a highly competitive salary with benefits, and the positions will be physically located at NOAA GLERL (<https://www.glerl.noaa.gov/>) in Ann Arbor, MI, which is

routinely ranked as one of the best places to live in the U.S. due to its affordability, natural beauty, preservation of wooded areas, vibrant arts program, and lively downtown landscape.

To apply, applicants should prepare the following materials:

- Cover letter specifying the position to which you are applying (Biophysical or Statistical Modeler), qualifications related to that position, and research accomplishments.
- Curriculum vitae
- Contact information for three professional references
- Two representative publications

The deadline for applications is September 1, 2017.

Email your application to:

Mary Ogdahl
Program Manager, Cooperative Institute for Great Lakes Research
School for Environment and Sustainability
University of Michigan
ogdahlm@umich.edu

*The University of Michigan is a Non-Discriminatory/ Affirmative Action Employer.
Individuals from underrepresented groups are especially encouraged to apply.*