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Opportunity Title: Modelling and Visualizing Indicators of Cyanobacteria Blooms
in Lakes and Ponds
Opportunity Reference Code: EPA-ORD-NHEERL-AED-2016-10

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-ORD-NHEERL-AED-2016-10
How to Apply	A complete application consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional references

All documents must be in English or include an official English translation.

If you have questions, send an email to EPArpp@orau.org. Please include the reference code for this opportunity in your email.

Description

A research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Health and Environmental Effects Research Laboratory (NHEERL). This appointment will be served with the Atlantic Ecology Division (AED) in Narragansett, RI.

This project will focus on the use of eco-informatics tools to conduct innovative research into the modelling and visualization of indicators of cyanobacteria blooms. AED's current modelling efforts have focused on using data on recent conditions in lakes of the conterminous United States to model proxies of cyanobacteria abundance. With this project the division hopes to expand on these models and build new models (e.g. including temperature) and interactive visualization tools to convey this information to a diverse range of potential users. The participant will gain experience using data science tools to advance knowledge around a pressing environmental/human health issue (Harmful Algal Blooms (HABs)), will get to join a computational ecology team, gain experience working in federal research, and expand their record of publication.

Activities for the participant may include:

- Data analysis and modelling
- Data management and manipulation
- Developing R packages or other software libraries (e.g. Python)
- Developing interactive visualization tools
- Result interpretation and visualization
- Manuscript preparation and publication
- Presentation at scientific meetings

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and EPA.

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Qualifications	Applicants must be pursuing or have received a master's or doctoral degree in ecology, environmental science, biology, computer science or a closely related field of study within five years of the desired start date. Students will be required to provide proof of enrollment each semester. Experience in ecology, static data visualization, reproducible research, version control with git, R, Python, C++, or Julia is desired.

The appointment is for twelve months and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee**.

The mentor for this project is Jeff Hollister (hollister.jeff@epa.gov). The desired start date is December 15, 2016.

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (2 👁)
  - **Environmental and Marine Sciences** (2 👁)
  - **Life Health and Medical Sciences** (5 👁)