

Opportunity Title: Postdoctoral Fellowship in Harmful Algal Bloom Database

Curation and Data Analytics

Opportunity Reference Code: NOAA-NCCOS-2022-01

Organization National Oceanic and Atmospheric Administration (NOAA)

Reference Code NOAA-NCCOS-2022-01

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A complete application package consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- One educational or professional recommendation

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

Application Deadline 1/26/2022 3:00:00 PM Eastern Time Zone

Description **Applications will be reviewed on a rolling-basis.*

NOAA Office/Lab and Location: A research opportunity is currently available with the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Centers for Coastal Ocean Science (NCCOS), Stressor Detection and Impacts Division (SDI), Harmful Algal Bloom (HAB) Forecasting Branch located at the University of Florida in Davie, Florida.

The National Oceanic and Atmospheric Administration (NOAA) formed the National Centers for Coastal Ocean Science (NCCOS) in 1999 as the focal point for NOAA's coastal ocean science efforts. NCCOS uses cutting-edge research and high-tech instrumentation to provide citizens, coastal managers, public health officials, and other decision makers with reliable information needed to determine how best to protect environmental resources and public health, preserve valued habitats, and improve the way communities interact with coastal ecosystems. The NCCOS is headquartered in Silver Spring, MD but also has research labs across the nation. The NCCOS also has many assets including research programs, vessels, satellites, science centers, laboratories, and a vast pool of distinguished scientists and experts.

The HAB-F Branch delivers near real-time forecasting products for predicting the intensity/severity, location, and the potential health risk HABs pose in the Great Lakes and coastal regions of the U.S. While national in scope, forecasting efforts and products address regional needs and specific HAB species. The product sets are intended to support coastal resource managers, public health officials, researchers, and the public.

Research Project: Under the guidance of a technical mentor, the selected participant will gain experience in various research activities



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including ecological monitoring and modeling development and validation techniques, satellite data processing, historical data curation and calibration, data analytics, stakeholder engagement, as well as generating outreach materials and technical documentation.

The specific project includes establishing a historical database for Lake Okeechobee as well as an intercalibration of measurement methods used in the database to ensure the data are comparable across space and time. Lake Okeechobee has been plagued with cyanobacteria blooms for decades. In the last few years, these blooms have had substantial impacts on the South Florida ecosystems (lake, estuaries, and Everglades) and economies, with significant public and political attention. We have been using satellite data to monitor these blooms for four years, and we are expanding our efforts to model and forecast the occurrence of these blooms. A key part of this effort is understanding the current knowledge and data resources related to these blooms. The selected fellow will synthesize the current understanding of algal blooms and data in Florida that pertain to cyanobacteria in Lake Okeechobee through literature reviews and engagement with the scientific and management communities. Understanding the current knowledge will allow us to develop a more robust ecological model, and assure that we understand and can access the key data needed for model development.

Learning Objectives: The fellow will

1. Develop an understanding of cyanobacterial blooms in Florida
2. Gain familiarity with ecological modeling approaches
3. Develop ways to synthesize complex information into useful forms for implementation into ecological models
4. Learn about HAB-F capabilities in monitoring and modeling, including exposure to satellite data products and models
5. Develop skills in multivariate statistics using PRIMER, R, and other software tools

Mentor: The mentors for this opportunity are Richard Stumpf (Richard.stumpf@noaa.gov) and Dail Laughinghouse (hlaughinghouse@ufl.edu). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: January 2022. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of NOAA and is contingent on the availability of funds.

Level of Participation: The appointment is part-time (24 hours per week).

Participant Stipend: The participant will receive a monthly stipend of \$3,750 and a travel allowance of \$3,000.

Citizenship Requirements: This opportunity is available to U.S. citizens and legal permanent residents (LPRs).

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ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and NOAA. Participants do not become employees of NOAA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: If you have questions about the application process please email NOAA@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in Oceanography, Aquatic Sciences, Marine Sciences, Limnology, Biological Sciences, or a related field.

Preferred skills:

- Research experience
- Demonstrated ability to work independently and part of a team
- Working knowledge of how to process and organize big data associated with open ocean and coastal systems.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Earth and Geosciences** ([2](#))
 - **Environmental and Marine Sciences** ([14](#))
 - **Life Health and Medical Sciences** ([6](#))