Opportunity Title: EPA Postgraduate Environmental Modeling Research Opportunity
Opportunity Reference Code: EPA-ORD-NERL-IO-2020-16

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-NERL-IO-2020-16

How to Apply A complete application 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. All transcripts must be in English or include an official English translation. 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 reocmmendations

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.

Application Deadline 5/6/2020 3:00:00 PM Eastern Time Zone

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

A research opportunity is currently available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurement and Modeling (CEMM), Ecosystem Processes Division (EPD)located in **Athens, Georgia.** EPA ORD recently reorganized and this is the newly named Center. This was formerly NERL/IO.

This research project is focused on applying quantitative analytical skills to evaluate and expand the ability of EPA environmental models, to accurately predict effects of water availability and quality, on indicators related to community resiliency and human well being. The EPA uses publicly available data and computer models to integrate core science exposure processes in multiple exposure media. Data and models are used to simulate hydrology and water quality across temporal and spatial scales (e.g., field, site, watershed, regional, national, global).

Under the guidance of a mentor, the research participant may be involved in the following activities:

- Developing and applying watershed models used by the EPA over a large geographical area at a relatively small contiguous watershed resolution with an emphasis on interoperability with other fate, transport, exposure and effect models
- Contributing to model development, application, documentation and utilization of models used by the Agency for assessing risks from chemicals
- Computer programming (Python, C#, Javascript, HTML, and GIS), numerical verification of model output, cloud-based software deployment, model execution, model Application Programming Interface (API) development and documentation
- Team programming skills in the context of modern scientific programming approaches and leveraging a web programming technology stack (Django, Leaflet, Celery, Flask, Docker) with a cloud computing implementation
- Participating in making models publicly available as web applications and evaluating the ability of these models to effectively assess environmental exposures and effects

zintellect
climb higher

Opportunity Title: EPA Postgraduate Environmental Modeling Research Opportunity
Opportunity Reference Code: EPA-ORD-NERL-IO-2020-16

The research participant will have the opportunity to gain knowledge from an interdisciplinary research team with expertise in hydrology, ecology, GIS, model development, and software engineering. Through regular interactions with this team, the research participant will gain insight into the process of developing, evaluating, and applying models and decision support tools to characterize fate and transport of pollutants in environmental media and living systems, and to use these models to inform potential human and ecosystem exposure to environmental stressors. The research participant will have an opportunity to communicate their findings through publication of manuscripts and participation in scientific conferences. The research participant is encouraged to collaborate on writing of manuscripts for publication and project reports.

The mentors for this opportunity are Kurt Wolfe (wolfe.kurt@epa.gov) and Rajbir Parmar (Parmar.rajbir@epa.gov).

Anticipated Appointment Start Date: Spring/Summer 2020

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 EPA. The initial appointment is for one year, but may be renewed upon recommendation of EPA and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at EPA in the Athens, Georgia, area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA. OPM can complete a background investigation only for individuals, including non-US citizens, who have resided in the US for the past three years.

Qualifications

The qualified candidate should have received a bachelor's degree in one of the relevant fields, or be currently pursuing the degree and will reach completion by June 1, 2020. Degree must have been received within five years of the appointment start date.

Skills/experience with programming languages (Python, C#, HTML, Javascript and related frameworks such as Leaflet, Angular, D3 and, GIS), cloud deployment, containers and DevOps, watershed modeling, and working with geospatial data are desired.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 6/1/2020 11:59:00 PM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (3 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Physics** (16 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).