

Opportunity Title: Biological Computational Modeling at EPA

Opportunity Reference Code: EPA-NSSC-0009-36-10-24-23

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply Click [HERE](#) to Apply

Description The EPA National Student Services Contract has an immediate opening for a full time Biological Computational Modeling position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

The Center for Computational Toxicology & Exposure (CCTE) is a scientific organization working to support Agency decisions by providing solutions-driven research to rapidly evaluate the potential human health and environmental risks due to exposures to environmental chemicals and ensure the integrity of the freshwater environment and its capacity to support human well-being.

What experience and skills will you gain?

As a team member, you will work within a multi-disciplinary research team and will provide technical support using existing literature data and data generated in laboratories at EPA to develop biologically based computational models. Mathematical and computer skills will be employed to develop these models based on biological understanding of toxicological mechanisms. The developed biologically based models will be used to relate chemical exposure to predict tissues levels of environmental chemicals in view of their toxicological impact on human health.

Data Development and Analysis responsibilities shall include:

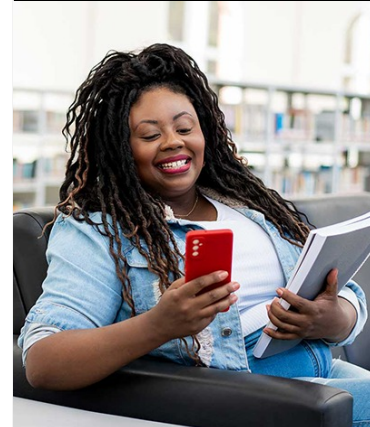
- Develop mathematical descriptions of biological processes;
- Use commercial programming software to code biologically based computational models;
- Conduct internet and literature searches to compile datasets to calibrate mathematical models;
- Participate in experimental research design and data interpretation;
- Actively participate in meetings of the project team;
- Help prepare reports, presentations, and summaries of the data;
- Present at professional meetings; and
- Coauthor manuscripts for publication in peer-reviewed journals.

Communications-related responsibilities shall include:

- Compilation and summarization of data and literature references into



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organized computer files;

- Participation in team discussions on progress and planned activities;
- Interaction with other members of the development team as well as EPA scientists;
- Preparation of graphs and charts to display data and modeling results;
- Communication of results via presentation(s) and/or written reports; and
- Thorough documentation of all work as directed by EPA mentor to comply with EPA quality assurance procedures for transparency and reproducibility of work.

Required Knowledge, Skills, Work Experience, and Education

- Proven experience in coding mathematical models in MATLAB, python, or R for a minimum of 1 year. Experience with MATLAB is preferred;
- Demonstrated education and/or experience using spreadsheets and/or statistical software (e.g. SAS, R, SPSS, etc.) to analyze data;
- Demonstrated ability to collaborate with others as part of a team; and
- Experience applying knowledge of computing and mathematical modeling of chemical, physical, or biological systems.

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$30.16 for hours worked.

Hours: Full-time.

Travel: No overnight travel will be required.

Expected start date: The position is full time and expected to begin January 2022. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The initial project is through May 14, 2022, with up to 3 additional option periods.

For more information, contact EPAjobs@orau.org. Do not contact EPA directly.





- Qualifications**
- Be at least 18 years of age **and**
 - Have earned at least a Master's degree in applied mathematics, physics, engineering, computer sciences, or a related discipline from an accredited university or college within the last 24 months **and**
 - Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Master's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**

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- **Computer, Information, and Data Sciences** ([17](#) )
- **Engineering** ([27](#) )
- **Mathematics and Statistics** ([10](#) )
- **Physics** ([16](#) )

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in applied mathematics, physics, engineering, computer sciences, or a related discipline from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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