



Full-Time • Internship

Disaster Resilience of Complex Systems Research Opportunity

Oak Ridge Institute for Science and Education
(/employers/113906)

(/employers/113906) Vicksburg, Mississippi, United States

About the role

Application deadline

November 19, 2021
5:15 PM

Posted date

October 8, 2021

Company division

Department of
Defense

US work authorization

Will sponsor a work
visa and accepts
OPT/CPT



Apply Externally

Role Description

The Environmental Laboratory (EL) is one of the seven laboratories of U.S. Army Engineer Research and Development Center (USACE-ERDC), which is the Army Corps of Engineers' integrated research and development (R&D) organization. EL provides solutions to environmental challenges for the U.S. Army, the Department of Defense and the Nation through environmental science and engineering research and development. Researchers in EL conduct research in ecosystem science and technology, environmental resiliency, environmental sensing, ecological modeling and forecasting, risk and decision science,

environmentally sustainable material, systems biology, climate change, computational chemistry, environmental chemistry and environmental security.



What will I be doing?

Under the guidance of a mentor, you will research projects related to the team's current and future portfolio of resilience research, as well as pandemic analytics with respect to the risk and resilience of disrupted systems due to pandemics, natural disasters and cyberattacks. Current projects are at intersection of physical and social science and engineering and require systems approaches to support policy decisions. The team is researching 1) how to build the business case for resilience in environmental systems with improved quantification and consideration of broad benefits, including methods that consider the economics of sustainability and resilience, 2) resilience of complex systems where interconnected domains require consideration of compounding threats and cascading failures, 3) energy and transportation networks where resilience and efficiency of critical functions need to be quantified and integrated in selection of management policies, and (4) data analytics and risk analysis for pandemic response. These projects provide a broad experience in efforts at different stages of execution, from project conception and scoping to report and manuscript publication. Information required for this research is knowledge of environmental management, complex systems, risk and resilience analytics to complete these projects.

Why should I apply?

This fellowship will provide you the opportunity to be part of a team to study invasive species and their management. As such, you will have numerous opportunities to observe and collaborate with scientists of varying backgrounds and expertise.

Where will I be located?

Vicksburg, Mississippi

What is the anticipated start date?

ERDC-EL is ready to make an appointment. Exact start date will be determined at the time of selection and in coordination with the selected candidate.

What are the benefits?

You will receive a stipend to be determined by ERDC-EL. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. Participants are eligible to purchase health insurance through ORISE.
- Relocation Allowance
- Training and Travel Allowance

This ORISE appointment is a full-time 12 month opportunity. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.⁵¹¹

Nature of the Appointment

You will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications

This research opportunity is open to STEM students and postgraduates. Experience in data science and technical writing preferred.

Eligibility Requirements

You match all of Oak Ridge Institute for Science and Education's candidate preferences

Employers are more likely to interview you if you match these preferences:

✓

GPA

✓

School Year

✓

Majors

✓

U.S. Work authorization

Employer will sponsor a work visa and accepts OPT/CPT.

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The Oak Ridge Institute for Science and Education connects the most talented and diverse college students, recent graduates, postdocs, and faculty to programs closely aligned with the interests of a variety of research and STEM or policy related facilities, including those managed for the U.S. Department of Energy and other federal agencies such as the U.S.

Department of Defense, Centers for Disease Control and Prevention, National Institutes of Health, U.S. Department of Agriculture, U.S. Department of Health and Human Services, U.S. Department of Homeland Security, U.S. Department of Transportation, U.S. Environmental Protection Agency, U.S. Food and Drug Administration, and the U.S. Forest Service. These internship and fellowship programs are key to the recruitment and preparation of the next generation of our nation's scientific workforce.

Find opportunities via Zintellect (www.zintellect.com), a searchable database of research and non-research STEM, STEM-support, and policy internships and fellowships administered by ORISE and its managing contractor, ORAU. Opportunities listed on Zintellect aim to strengthen the scientific and technical workforce in areas of science, transfer knowledge and technology to the academic community, and support to the national commitment to science education.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app (<https://orise.orau.gov/orisego/>) in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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