**Opportunity Title:** Civil/Geotechnical Engineering Research - Post-Doctoral
**Opportunity Reference Code:** ERDC-CHL-2022-0010

**Organization** U.S. Department of Defense (DOD)

**Reference Code** ERDC-CHL-2022-0010

**How to Apply** Click on *Apply* now to start your application.

**Description** The Geotechnical and Structures Laboratory (GSL) is one of the seven laboratories of the U.S. Army Corps of Engineers (USACE), Engineer Research and Development Center (ERDC), which is the research and development (R&D) organization of USACE. Geotechnical and Structures Laboratory (GSL). GSL comprises a multidisciplinary team of more than 440 engineers, scientists, technicians, and support staff, who develop innovative solutions to complex geotechnical and structural engineering challenges that address some of the world's toughest Civil Works and Military Engineering problems. More information can be found at https://www.erdc.usace.army.mil/Locations/GSL/.

**What will I be doing?**

Under the guidance of a mentor, you will collaborate with a team of engineers that will investigate backward erosion piping through numerical and physical scale modeling. You will gain experience conducting back-analysis comparisons of levee or dam breach case histories caused by backward erosion piping using novel geotechnical numerical models and you will have an opportunity to engage with senior engineers during this process to inform applicability of the models to predict erosion piping progression. The goal of this research is to provide new tools for assessing the risk of backward erosion piping for civil infrastructure.

**Why should I apply?**

This fellowship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward.

**Where will I be located?** Vicksburg, Mississippi

**What is the anticipated start date?**

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

**What is the length of the appointment?**

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

**What are the benefits?**

You will receive a stipend to be determined by ERDC-GSL. 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

**Nature of the Appointment**

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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

As a highly qualified candidate, you will have a PhD in Civil/ Geotechnical Engineering, or a closely related field, and ideally experience with (i) geotechnical numerical modeling, (ii) internal erosion processes, and (iii) geotechnical site characterization. You should have a background in professional publications, attendance and presentations at seminars, short courses, or workshops, and similar professional activities. Additional relevant technical skillsets in broader areas of geotechnical engineering and scientific programming are also desired. Additional skills are desired as follows: a self-starter, strong communication skills, ability to research within a team setting, and strong organizational skills.

A complete application consists of:

- Zintellect profile
- Essay Questions - The application includes questions specific to the opportunity
- Academic Records - An official transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted.
- One (1) recommendation - Your application will be considered incomplete and will not be reviewed until one recommendation is submitted. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application. The status will go from Started to Submitted and then to Completed once the required recommendations have been received.

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. If you have questions, send an email to usace@orise.orau.gov. Please list the reference code of this opportunity in the subject line of the email. All documents must be in English or include an official English translation. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the “Apply” button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

***Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!***

## Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)

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- **Life Health and Medical Sciences** (48 👁)
- **Mathematics and Statistics** (11 👁)
- **Physics** (16 👁)