Opportunity Title: ERDC-CHL: Robotics and Autonomy
Opportunity Reference Code: ERDC-CHL-2026-0012

Organization U.S. Department of Defense (DOD)

Reference Code ERDC-CHL-2026-0012

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

Application Deadline 12/31/2026 3:00:00 PM Eastern Time Zone

Description The U.S. Army Engineer Research and Development Center's Coastal & Hydraulics Laboratory (CHL) performs research on ocean, estuarine, riverine, and watershed systems in support of the U.S. Army Corps of Engineers (USACE) and the Department of Defense (DOD) Task Force in support of the Ocean Commission. A multi-disciplinary team of scientists, engineers, and support personnel work in CHL's internationally known, unique facilities. This team has developed state-of-the-art experimental and computational models for solving water resource problems worldwide. CHL research and development addresses water resource and navigation challenges in a variety of hydrodynamic systems including aquifers, watersheds, rivers, reservoirs, lakes, estuaries, harbors, coastal inlets, and wetlands. Project may take place in physical facilities of approximately 1.7 million square feet and high-performance computing facilities at the DOD Supercomputing Research Center.

Project

The project aims to develop “SandHound,” an autonomous environmental robot outfitted with GPS, a downward-facing camera to capture images of surficial sediment, and an onboard machine learning model for image processing. SandHound will be capable of autonomously sampling a specified coastal region with fine spatial resolution and at temporal spacing as needed. The processed data can be offloaded directly or remotely to benefit military and civil sectors.

What will I be doing?

Under the guidance of a mentor, you will gain hands-on experience with the instrumentation and operation of “SandHound,” an autonomous environmental robotic platform equipped with GPS, a downward-facing camera, and onboard machine learning capabilities for coastal sediment imaging and analysis. The experience will also provide an in-depth introduction to the Robotic Operating System (ROS), along with exposure to autonomous navigation, environmental sensing, image processing, and the application of robotics and AI technologies in coastal and environmental research.

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.

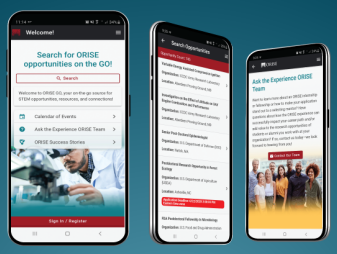
Where will I be located? Location Varies

What is the anticipated start date? September 2026

Exact start dates will be determined at the time of selection and in coordination with the selected candidate.

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What is the appointment length?

This appointment is a part-time twelve-month research appointment. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

What are the appointment provisions?

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

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

About ORISE

This program, administered by Oak Ridge Associated Universities (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 DoD. Participants do 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. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the ORISE Research Participation Program at the U.S. Department of Defense.

Qualifications

The ideal candidate will have basic exposure to Robotic Operating System (ROS) and must have completed or be currently pursuing with an expected completion date by 12/31/2028, a bachelor's, master's, or doctoral degree with a focus on robotics and autonomy.

Application Requirements

A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. Click here for detailed information about acceptable transcripts.
- One recommendation. 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.

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

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Point of Contact Debbie

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 12/29/2028 12:00:00 AM.
- **Minimum Overall GPA:** 3.00
- **Discipline(s):**
  - **Engineering** (27 👁)
- **Age:** Must be 18 years of age