Opportunity Title: Aerodynamics / Computational Fluid Dynamics Summer Intership
Opportunity Reference Code: ERDC-ITL-2023-0023

Organization U.S. Department of Defense (DOD)

Reference Code ERDC-ITL-2023-0023

How to Apply Click on *Apply* at the bottom of the opportunity to start your application.

Description The DEVCOM Army Research Laboratory conducts basic and applied research for the Army. Its mission is to operationalize science for transformational overmatch. The basic research conducted at the laboratory leads to capabilities for soldiers to fight and win on the battlefield. The Vehicle Applied Research Branch specifically conducts research in rotary-wing and other vertical lift technologies at both the manned and unmanned scales. The internship program gives interns the opportunity to conduct a research project that is relevant to the Army's mission. See more at https://www.arl.army.mil/who-we-are/

What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers in an effort to conduct computational fluid dynamics simulations of experiments being conducted in the new facility on propellers ranging from 8" to 28" diameters used on the TRV-80, CRC-3, and LiMuR aircraft. The purpose is to understand effects of rotor interactions with the ground, wings, and other rotors at these scales.

Why should I apply?

Under the guidance of a mentor, you will be given the opportunity to impact an Army-relevant program using state-of-the art computational tools and learn to use a number of government-owned computational tools. You will have an opportunity to learn and use the DoD CREATE products Capstone and Helios and participate in experiments in the interactional aerodynamics facility. You will collaborate with expert scientists who use these tools regularly for research.

Where will I be located? Aberdeen Proving Ground, Maryland

What is the anticipated start date? June 2023

Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and internships will be filled as qualified candidates are identified.

What is the appointment length?

This appointment is a summer research appointment, with the possibility to be renewed for additional research periods. Appointments 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 the sponsor. Stipends are typically based on a 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

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- 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 qualified candidate should be a graduate student in Aerospace Engineering.

Highly competitive applicants will have education and/or experience in:

- Aerodynamics and computational fluid dynamics
- Vertical lift aircraft and/or drones
- Scientific programming in languages such as Matlab or Python

Security Investigation: Applicants should be able to pass a National Agency Check and Inquiries (NACI) security investigation should they be selected and accept the internship offer.

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 an official 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. 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.

If you have questions, send an email to usace@orise.orau.gov. Please list the reference code of this opportunity ERDC-ITL-2023-0019 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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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
- **Overall GPA:** 3.00
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (27 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Physics** (16 👁)
- **Age:** Must be 18 years of age
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).