Opportunity Title: AFIT Graduate Internship in Electromagnetic Research
Opportunity Reference Code: AFIT-2026-0014

Organization U.S. Department of Defense (DOD)

Reference Code AFIT-2026-0014

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

Description The Air Force Institute of Technology is offering a graduate (master's degree level) research internship opportunity in the Applied Research Center for Hypersonics (ARCH) at Wright Patterson Air Force Base, Ohio.

What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will join a community of scientists and researchers in their effort to explore, develop, implement, and test computational methods for generating electromagnetic (EM) field data of arbitrary objects of interest. ARCH have access to a variety of tools based on frequency and time-domain EM codes and a repository of basic vehicle shapes. These codes can be used to produce, for example, EM signature responses. The objective is to expand upon the ARCH multidisciplinary analysis & design framework to include EM effects for detecting and tracking objects across the hypersonic speed range.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- Gaining a fundamental understanding of the hypersonic flow regime – from compressible flow theory at high Mach numbers to the non-ideal thermodynamic effects of high-temperature flow and the impact on vehicle design.
- Learning to identify and select key parametric variables for rapid shape-exploration studies using Parametric geometry modeling with Engineering Sketch Pad (ESP).
- Training to use the available computational EM codes for both frequency & time-domain calculations. A basic understanding of EM theory will be discussed and enhanced as needed, with selected readings.
- Practicing integration of parametric geometry with EM analyses to explore vehicle designs
- Participating in an overview of hypersonic science and technology at the ARCH-AFRL Hypersonics Symposium

Where will I be located?

Dayton, Ohio

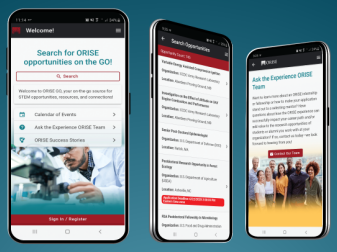
What is the anticipated start date?

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 fellowships will be filled as qualified candidates are identified.

What is the appointment length?

This appointment is a ten-week 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.

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What are the provisions?

You will receive a stipend to be determined by AFIT. 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 AFIT

The Air Force Institute of Technology, or AFIT, located at Wright-Patterson Air Force Base, Ohio, is the Air Force's graduate school of engineering and management as well as its institution for technical professional continuing education. A component of Air University and Air Education and Training Command, AFIT is committed to providing defense-focused graduate and professional continuing education and research to sustain the technological supremacy of America's air, space and cyber forces.

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 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 will be currently pursuing a master's degree in any of the disciplines in the eligibility section of the opportunity.

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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If you have questions, send an email to AIRFORCE@orise.orau.gov. Please list the reference code of this opportunity [AFIT-2026-0014] 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.

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!

Point of Contact Leslie

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Currently pursuing a Master's Degree.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (1 👁)
  - **Physics** (16 👁)