Opportunity Title: Compiler Design and Optimization
Opportunity Reference Code: AFIT-2021-0082

Organization	U.S. Department of Defense (DOD)
Reference Code	AFIT-2021-0082
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 Master's degree level internships at Wright Patterson Air Force Base.

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What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers in an effort to conduct research in the area of compiler optimization. Our approach aims to port a popular compiler framework to a new modern chipset. You will have an opportunity to learn about compiler front ends, intermediate code, and back ends. There is an opportunity to learn and implement advanced optimizations in the resulting compiler system. Learning goals include a better understanding of techniques to implement and optimize code using a new novel computer architecture.

Where will I be located? Wright Patterson Air Force Base, 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 internships or fellowships will be filled as qualified candidates are identified.

What is the appointment length?

This appointment is a 4 month 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.
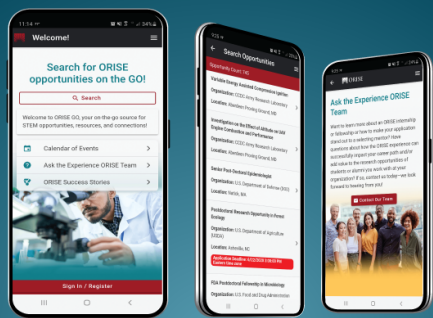
What are the benefits?

You will receive a stipend to be determined by AFIT. 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

- 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 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 will have a Master's degree or will have completed it by September 12, 2022.

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 - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click here for detailed information about acceptable transcripts.

- 1 Recommendation

If you have questions, send an email to AIRFORCE@orise.orau.gov. Please list the reference code of this opportunity AFIT-2021-0082 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

- **Citizenship:** U.S. Citizen Only

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Requirements
- **Degree:** Master's Degree received within the last 12 months or anticipated to be received by 9/12/2022 12:00:00 AM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Engineering** (2 👁)