Opportunity Title: Computational Fluid Dynamic Simulations Research
Opportunity Reference Code: AFIT-2019-0003SUM

Organization U.S. Department of Defense (DOD)

Reference Code AFIT-2019-0003SUM

How to Apply Components of the online application are as follows:

- Profile Information
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - Click here for detailed information about acceptable transcripts
- Recommendation

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 airforce@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.

Description The Air Force Institute of Technology is a graduate school and provider of professional and continuing education for the United States Armed Forces and is part of the United States Air Force. It is located in Ohio at Wright-Patterson Air Force Base, near Dayton. AFIT is a component of the Air University and Air Education and Training Command.

The participant will assist in running computational fluid dynamic simulations of a gas turbine combustor using a commercial code and comparing the results to experimental data. Additional experimental testing may be completed to compare additional test cases. This will instruct the participant how to model a physical system and compare to actual results. If additional testing is conducted, that effort will teach the participant how to execute a test plan and how to calibrate devices to reduce uncertainty and ensure high quality results are obtained. The participant will also aid in the design and manufacture of test pieces for subsequent use in the facilities. This will broaden their base of knowledge in the area of design and teach them skills in the manufacturing process. The participant will have an opportunity to continue to grow these skills throughout the internship. The participant will also assist in the reduction of data and the writing of reports to enhance his/her technical writing skills.

Appointment Length

This ORISE appointment period is for the summer (10-12 weeks). Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

Participant Benefits

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Participants will receive a stipend to be determined by AFIT. 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 Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications

A strong understanding of fluid mechanics, combustion, and CFD are required. Candidate should have an educational background in Mechanical/ Aerospace Engineering / Physics.

Desired Appointment Start Date: June 6, 2019.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (2)
  - **Computer, Information, and Data Sciences** (16)
  - **Earth and Geosciences** (21)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (45)
  - **Mathematics and Statistics** (10)
  - **Other Non-Science & Engineering** (2)
  - **Physics** (16)
  - **Science & Engineering-related** (1)
  - **Social and Behavioral Sciences** (27)