

Opportunity Title: Nuclear Physics/Nuclear Engineer Researcher

Opportunity Reference Code: AFIT-2020-0027

Organization U.S. Department of Defense (DOD)

Reference Code AFIT-2020-0027

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 - 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(s)

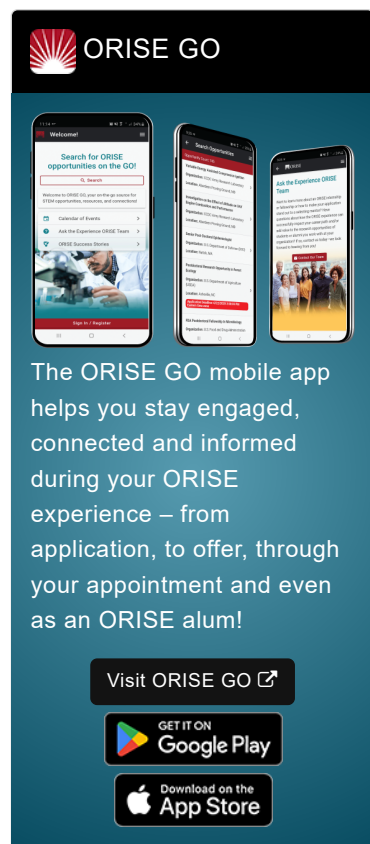
Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system.

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.


Letter of Recommendation: While a letter of recommendation is not required to be considered, applicants are required to provide contact information for one recommendation in order to submit the application. Applicants are encouraged to request a letter of recommendation before submission as this may help reviewers have a better understanding of the applicant's qualifications and interests. If selected, a letter recommendation must be submitted on your behalf upon acceptance of the appointment.


Description AFIT's mission is to help build America's airpower, by educating military and civilian Airmen to innovatively accomplish the Air Force's core missions, in support of joint operations, more effectively, efficiently, sustainably and affordably. We provide unique defense-focused, research-enabled, multi-disciplinary advanced academic education, as well as globally delivering career-long, action-based, functional professional continuing education, over a continuum of learning, on-command and on-demand. Our success is measured by the career-long contributions of our graduates, faculty and staff. AFIT accomplishes this mission through four schools: the Graduate School of Engineering and Management, the School of Systems and Logistics, the Civil Engineer School, and the School of Strategic Force




ORISE GO

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO 

GET IT ON
 **Google Play**

Download on the
 **App Store**

Opportunity Title: Nuclear Physics/Nuclear Engineer Researcher

Opportunity Reference Code: AFIT-2020-0027

Studies. To learn more about the research performed at AFIT, please visit www.afit.edu.

The Nuclear Expertise for Advancing Technologies (NEAT) center was formed in response to long-term strategic needs laid out by the Secretary of Defense in the 2018 Nuclear Posture Review. The primary focus is providing the Air Force with strong technical expertise, and the ability to develop that expertise, to support the workforce required for current and future nuclear modernization and deterrence operations. Members of the center come from a broad background in science and technology and have experience in nuclear operations and defense applications, which enables NEAT to tackle difficult, multi-disciplinary research and human capital challenges facing the nuclear enterprise. The NEAT center seeks to be the first place organizations will turn when they require intellectual capital, knowledge, or assistance in solving technical nuclear acquisition and warfighting challenges.

This research opportunity is offered through the NEAT center, which is positioned at the Air Force Institute of Technology (AFIT). Under the guidance of a mentor, participants will gain a broad experience in relevant nuclear technologies and engineering at the graduate level as it applies to the U.S. Air Force and Department of Defense. The researcher may be involved in support of coursework, laboratory practice, application of computer technologies, and interact with government (Military and National Laboratory) and civilian university collaborators. Areas of interests are broad, and may include the fields of proliferation of nuclear weapons, nuclear detection, nuclear weapon effects, the nuclear fuel cycle, and/or nuclear power.

Researchers will be expected to contribute to research in one of several existing technical areas including, but not limited to, high-fidelity hydrodynamic analysis of shock formation from radiation interactions with matter, applications of machine learning to nuclear signatures, exploration of fundamental nuclear data and physics, design and testing of new radiation sources and diagnostics, and assessing radiation effects on electronics.

The candidate selected for this opportunity will develop knowledge by conducting measurements and experiments, evaluating data, interpreting the results, and documenting the findings. There will be opportunities to present the research to their peers, mentors, and other DoD Scientists and Engineers at meetings and conferences.

Appointment Length

This appointment is a twelve 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.

Participant Benefits

Opportunity Title: Nuclear Physics/Nuclear Engineer Researcher

Opportunity Reference Code: AFIT-2020-0027

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 Participants should be current undergraduate or graduate students pursuing degrees or having received their degree in the past two years in a science, engineering, mathematics, or other highly quantitative field. Applicants must have demonstrated exceptional academic performance as well as strong analytical and communication (oral and written) skills. The ability to think creatively and perform research at the graduate level is highly desired. In addition, the applicant should be interested in being part of a fast-paced environment focused on nuclear engineering research, mentoring, and student development.

- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree or Master'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](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).