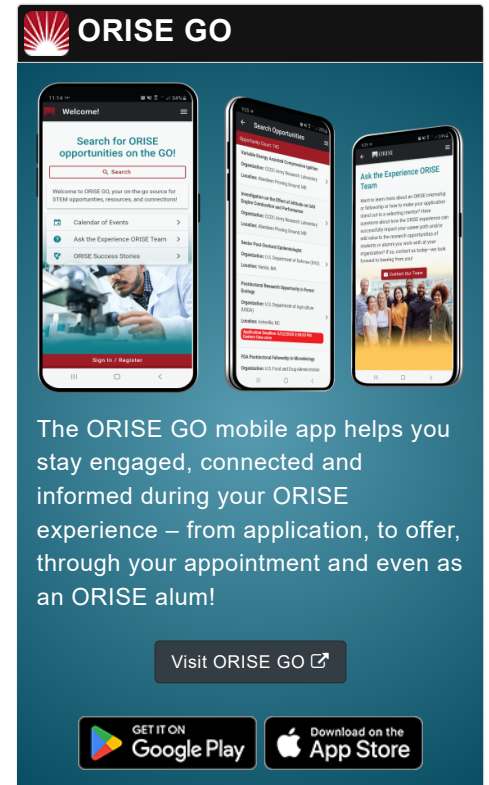


**Opportunity Title:** Engineering Postdoctoral Researcher: Resilient Facilities and Infrastructure

**Opportunity Reference Code:** AFIT-2020-0045



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**Organization** U.S. Department of Defense (DOD)

**Reference Code** AFIT-2020-0045

**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.ornl.gov](mailto:AIRFORCE@orise.ornl.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** This project directly supports the Tyndall AFB Program Management Office (PMO) which oversees the reconstruction of the installation in the wake of Hurricane Michael. The PMO has been tasked to rethink Tyndall as a power projection platform. The PMO is rebuilding its current facilities and infrastructure, but also new facilities in support of F-35 mission beddown, to be resilient to future extreme events. AFIT's role is to support the PMO by proposing novel frameworks to identify future climate risks to Tyndall's mission through facilities and infrastructure, and design optimized installation adaptation pathways that enable the installation to arrive at improved states of resilience prior to future destructive events.

While AFIT possesses some skills required to facilitate the partnership with Tyndall's PMO, the Engineering Management Program currently seeks to bolster its resilience engineering team knowledge to assess and model facility and infrastructure interdependencies, compute the probability and

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consequence of single and cascading failures of networked infrastructure systems, and develop and test the efficacy of asset portfolio adaptation pathways. To further this project, AFIT is seeking a post-doctoral candidate to participate in research that is needed at various spatial and temporal resolutions. Under the guidance of a mentor, the selected candidate will utilize optimization techniques currently not possessed by AFIT's Engineering Management faculty.

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.

### **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**

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.

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**Qualifications** PhD - Civil Engineering, Industrial Engineering, Facilities Engineering or similar with a focus in resilient facilities and infrastructure engineering

A strong background in optimization, analysis of interdependencies, and cascading failure of facilities and infrastructure is desired.

**Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Engineering** (7 )