

**Opportunity Title:** Cognitive Systems Engineering Postgraduate Research  
**Opportunity Reference Code:** AFRL-711HPW-2020-0013

**Organization** U.S. Department of Defense (DOD)  
**Reference Code** AFRL-711HPW-2020-0013  
**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 is required

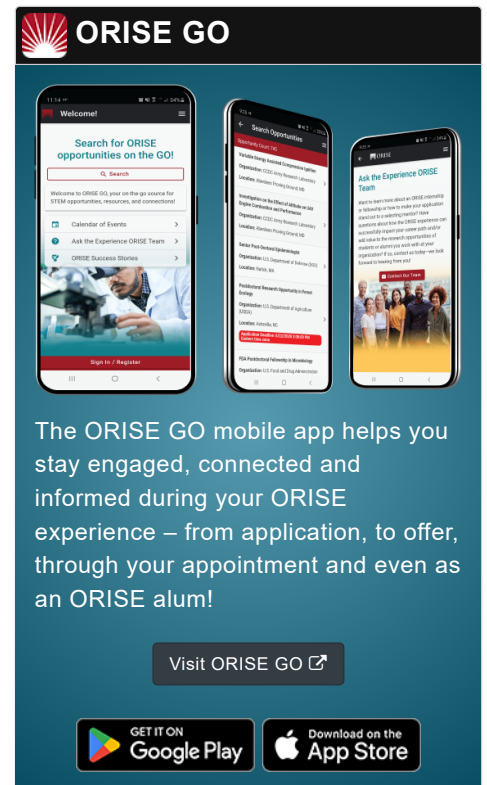
Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system.

If you have questions, send an email to [AIRFORCE@orise.ora.u.org](mailto:AIRFORCE@orise.ora.u.org). 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 Research Laboratory's Airman Systems Directorate is a key component of the 711th Human Performance Wing. The directorate is composed of a diverse group of scientists and engineers studying developing technologies specific to the human element of the warfighting capability. We are leading the discovery, evaluation, and transition of revolutionary auditory and communication technologies that optimize warfighters' tactical and strategic decision making, survivability, and lethality across the full range of battlespace environments. For more information about the Air Force Research Laboratory's Airman Systems Directorate (AFRL 711 HPW/RH), please visit: <https://www.wpafb.af.mil/afrl/711hpw/rh/>.

Multi-Modal Communication (MMC) is a suite of tools developed by RHCS to facilitate multichannel communication management in complex, distributed teaming environments. The utility of MMC has been demonstrated in several laboratory-based studies, which are, inherently, of limited fidelity and likely underestimate the true utility of the tool for real-world operations. As a result of recent technology transitions, a unique opportunity now exists to evaluate the interactions between MMC and real-world, dynamic operational environments. The participant will support field research in which scientists will team with early adopters of the MMC - first responders, local police and fire departments, WPAFB Security Forces - to examine how such tools are utilized for communication in complex situations. They will also determine how teamwork and organizational/mission effectiveness are impacted as team dynamics adjust to the newly-provided capabilities. This field research, which will involve cognitive systems engineering approaches as well as mission performance assessment, will take place during exercises involving critical incident response scenarios consistent with many Air Force mission sets (e.g., base defense, emergency response). This internship will provide a rare opportunity to follow an Air Force technology through early stages of integration, enabling us to observe the

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emergence of new teaming strategies, and will inform new technology enhancements and implementation strategies to employ across Air Force domains.

#### **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 USAFRL. 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. While participants will not enter into an employment relationship with DOD or any other agency, this opportunity will require a suitability investigation/background investigation. Any offer made is considered tentative pending favorable outcome of the investigation.

#### **Qualifications**

Candidate should have a M.S. or Ph.D. in Psychology with an emphasis on human factors and/or cognitive systems engineering.

#### **Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Social and Behavioral Sciences** (5 )