Opportunity Title: Control Systems Engineer - Naval Medical Research Unit
Opportunity Reference Code: NAMRU-Dayton-2023-0002

Organization U.S. Department of Defense (DOD)

Reference Code NAMRU-Dayton-2023-0002

How to Apply Click on *Apply* now to start your application.

Description Naval Medical Research Unit Dayton conducts research on environmental health effects and aerospace medicine, addressing health and performance challenges faced by service members in operational military environments.

What will I be doing?

Your project will support aeromedical and human performance research in areas of pilot spatial disorientation, motion environments, and the modeling and simulation of flight systems and spacecraft. Under the guidance, you will develop and apply mathematical models to support the operation of research devices, simulating environmental conditions of interest (e.g., dynamic acceleration exposures) while accounting for human perception and biomechanics, in coordination with researchers, principal investigators, and engineering staff. This includes the development of experimental control solutions and the integration of experimental findings into operational acceleration research devices and systems. These experiences will enable you to gain significant insight into applied mathematical techniques, the design and troubleshooting of custom motion control algorithms, and Command Control System computations, including real-time hardware/software modifications to Command Control Systems.

Why should I apply?

This fellowship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward.

Where will I be located?

Wright Patterson Air Force Base, Dayton, Ohio

What is the anticipated start date?

Exact start date will be determined at the time of selection and in coordination with the selected candidate.

What is the appointment length?

This appointment is a full-time twelve-month research appointment. 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 NAMRU-Dayton. 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 ORISE

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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

Preferred Qualifications:

- MA/MS in Control System Engineering, Applied Mathematics or Electrical Engineering with 1-2 years of relevant experience.
- Experience in applied mathematics and statistical methods with focus on dynamic systems and control theory.
- Experience motion control algorithms including Classical Washout, Adaptive Washout, and Optimal Control Methods.
- Proficiency multiple programming systems including MATLAB, LabVIEW, Arduino IDE, Python, MS Office, and C++.
- Ability to obtain Secret Clearance
- US Citizen

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 official 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.
- One recommendation. Your application will be considered incomplete and will not be reviewed until one recommendation is submitted. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

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. All documents must be in English or include an official English translation. If

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you have questions, send an email to navy@orise.orau.gov. Please list the reference code of this opportunity 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.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2024 12:00:00 AM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (27 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Physics** (16 👁)
- **Age:** Must be 18 years of age
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).