Opportunity Title: Biomechanics Research Fellow at the U.S. Air Force Research Laboratory (AFRL)
Opportunity Reference Code: AFRL-711HPW-2022-0014R

Organization U.S. Department of Defense (DOD)

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How to Apply Click on *Apply* at the bottom of the opportunity to start your application.

Description The U.S. Air Force Research Laboratory (AFRL) is offering a fellowship at the Wright-Patterson Air Force Base. The purpose of this fellowship is to provide opportunities for hands-on experience through activities/projects in support of the Biodynamics Section within the AFRL 711th Human Performance Wing (711 HPW). The intent is to complement your education with application within a Department of Defense (DoD) setting.

What will I be doing?

You would be involved in supporting the Aircrew Biodynamics mission in developing biodynamic injury criteria, mathematical injury risk models, and computational models for the full range of Air Force aircrew population exposed to vibration, ejection, and impact events. These models assist in guiding mitigation technologies to reduce the risk of acute and chronic injury from current and future aircraft.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on, educational experience through utilization of biomechanical measurement technologies such as motion tracking, electromyography, accelerometers, force transducers, and interventions for the warfighter. You will also have the opportunity to collect and analyze biomechanical data, participate in the generation of manuscripts, and gain exposure to collaborations across the tri-services.

Where will I be located?

Dayton, Ohio

What is the anticipated start date?

AFRL is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and fellowships will be filled as qualified candidates are identified.

What is the appointment length?

Appointments are initially for one year with the option to extend the appointment for up to four additional years, contingent upon project needs and funding availability. The participation rate will be full-time (40 hours/week).

What are the benefits?

You will receive a stipend to be determined by AFRL. Stipend is competitive and commensurate with experience and degree level. 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 AFRL 711 HPW

The 711th Human Performance Wing (711 HPW), headquartered at Wright-Patterson Air Force Base in Ohio, is the first human-centric warfare wing to consolidate human performance research, education, and consultation under a single organization. Established under the Air Force Research Laboratory (AFRL), the 711 HPW is comprised of the Airman Systems Directorate (RH) and the United States Air Force School of Aerospace Medicine (USAFSAM). For more information about the Air Force Research Laboratory, 711 Human Performance Wing, Airman Systems Directorate, Airman Biosciences Division, please visit https://afresearchlab.com/.

About ORISE

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

The qualified candidate will recently have earned a Master or Doctoral degree, or expects to have completed the degree by December 31, 2023. Degree must have been received within five years of the appointment start date.

Highly competitive applicants will have education and/or experience in one or more of the following:

- **Analyzing and modeling movement/kinematic data**
- **Injury biomechanics**
- Coding, specifically **MATLAB**
- Interacting with human subjects, biomechanical sensors, project management with respect to IRB preparation, and maintaining regulatory compliance
- Human subjects/anthropomorphic test devices/post-mortem human subjects research, statistics and post-processing software (TEMA, JMP, SPSS, SAS, R, etc.)
- Signal processing, ML/AI, or modeling (LS-DYNA, MSC ADAMS,

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OpenSim, Visual3D, AnyBody)

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 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.
- 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 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.

If you have questions, send an email to AIRFORCE@orise.orau.gov. Please list the reference code of this opportunity [AFRL-711HPW-2022-0014R] 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!

Point of Contact Alecia

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2023 12:00:00 AM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (27 👁)
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (4 👁)
  - **Physics** (2 👁)

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