Opportunity Title: Military Injury Biomechanics Post-Graduate Research Fellowship
Opportunity Reference Code: MRDC-AARL-2023-0002

Organization U.S. Department of Defense (DOD)

Reference Code MRDC-AARL-2023-0002

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

Description The Department of Defense (DoD), U.S. Army Aeromedical Research Laboratory (USAARL) is offering a post-bachelor's internship opportunity.

What will I be doing?

This project falls under the Injury Biomechanics and Protection Group at USAARL. The IBPG Mission is to enhance Warfighter lethality, protection, and survivability for the battlefields of the future through next-generation biomechanical research. By engaging with a collaborative medical research team, the participant will conduct activities related to ongoing injury biomechanics experiments and medical research. Specifically, the participant will participate in projects focusing on injury biomechanics related to neurosensory response to injury, head acceleration, and risk of concussion as well as musculoskeletal injury. The participant will learn and apply research methods focused on musculoskeletal modeling, motion capture, data analysis, and laboratory testing of mechanical and biological surrogates. In addition, the participant will learn and apply grant writing principles and research protocol (e.g., Institutional Review Board - IRB) writing principles.

Why should I apply?

Under the guidance of a mentor, you will engage in activities and research in several areas. These include, but are not limited to:

- Applying research methods focusing on use of wearable devices in field settings and assessment of neurophysiological performance deficits.
- Applying concepts of statistical analysis and unique data reduction and analysis techniques to human exposure and response research data that has been previously, and is, currently being collected.

Where will I be located?

Fort Novosel, Alabama

What is the anticipated start date?

The USAARL 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 internships will be filled as qualified candidates are identified.

What is the 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.

What are the benefits?

USAARL will determine the stipend amount, but it will be in the range of $52,000-$60,000 based on a full-time, 12-month appointment. Stipends are typically based on a participant's academic standing, discipline, experience, and research facility location. Other benefits may include the

Opportunity Title: Military Injury Biomechanics Post-Graduate Research Fellowship
Opportunity Reference Code: MRDC-AARL-2023-0002

following:

- Health Insurance Supplement (*Participants are eligible to purchase health insurance through ORISE)*
- Relocation Allowance
- Training and Travel Allowance

About U.S. Army Aeromedical Research Laboratory

The U.S. Army Aeromedical Research Laboratory (USAARL) located at Fort Novosel, Alabama, is a nationally recognized laboratory for research into safety, survival, impact tolerance, sustainability and performance effectiveness of aviators and Soldiers. The USAARL's research focuses on blunt, blast and accelerative injury and protection; crew survival in military helicopters and combat vehicles; the en route care environment; human operator health and performance in complex systems and sensory performance, injury and protection. Current USAARL work for the Army's modernization priorities includes research in the areas of future vertical lift, the next generation combat vehicle and directed-energy weapons. The Laboratory's highly skilled workforce consists of rated aviators, medical professionals, doctoral- and masters-level researchers, and research technicians. Visit https://usaarl.health.mil/ to learn more about USAARL.

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 have a minimum of a bachelor's degree from an Accreditation Board for Engineering & Technology (ABET) program in engineering (aerospace, electrical, biomedical, mechanical, biomechanics, physics); or kinesiology, athletic training, and exercise physiology.

Highly qualified candidates will have demonstrated experience in some of the following research areas:

- biomedical imaging / imaging analysis tools (CT, MRI, x-rays)
- high speed imaging / analysis tools
- biomedical instrumentation (load cells, accelerometers)
- musculoskeletal modeling
- motion capture
- data acquisition equipment
- biomechanical research / testing with demonstrated injury biomechanics research
- postmortem human specimen) research / data and/or anthropomorphic test devices research.

Applicants are expected to be able to read, understand and execute techniques / procedures within the quality standards / timelines prescribed by the research plan. Experience in programming, data

Opportunity Title: Military Injury Biomechanics Post-Graduate Research Fellowship
Opportunity Reference Code: MRDC-AARL-2023-0002

acquisition, instrumentation, kinematic and video motion capture, and use of MATLAB highly preferred.

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 are 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 ARMY-MRMC@orise.orau.gov. Please list the reference code of this opportunity MRDC-AARL-2023-0002 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:** Currently pursuing a Bachelor's Degree to be received by 12/29/2023 11:59:00 PM.
- **Overall GPA:** 3.00
- **Discipline(s):**
  - **Engineering** (7 👁)
  - **Life Health and Medical Sciences** (6 👁)
  - **Mathematics and Statistics** (4 👁)
  - **Physics** (1 👁)
- **Age:** Must be 18 years of age
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).

Affirmation I affirm that I am 22 years of age or older

zintellect
climb higher

Opportunity Title: Military Injury Biomechanics Post-Graduate Research Fellowship
Opportunity Reference Code: MRDC-AARL-2023-0002