

Opportunity Title: EACE Rehabilitation Data Science Fellowship

Opportunity Reference Code: EACE-2020-0011R

Organization U.S. Department of Defense (DOD)

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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.](#)
- Recommendation(s) 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 STEM-WORKFORCE@orise.orau.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.

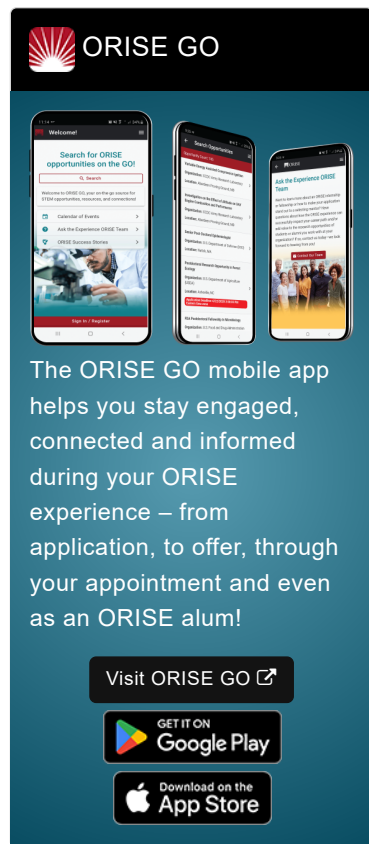
Description The Extremity Trauma and Amputation Center of Excellence (EACE) is the leading advocate for research and treatment of Department of Defense (DoD) and Department of Veterans Affairs (VA) patients with extremity trauma and amputation. The EACE leads efforts to enhance collaboration between the DoD and the VA extremity trauma and amputation care providers and conduct scientific research to minimize the effects of traumatic injuries and improve clinical outcomes (<https://www.health.mil/About-MHS/OASDHA/HSPO/EACE>). This research fellowship will be housed jointly between the Naval Medical Center San Diego (NMCSD) and the University of California - San Diego (UCSD).

Research will focus on large-scale, longitudinal analyses of health outcomes following limb trauma and amputation in the military. Data elements are diverse, including electronic health records, walking mechanics, and health/wellness surveys measured before and after injury over the course of physical rehabilitation. The candidate will focus on the initial project phase, to include development of an efficient framework for data extraction, reduction, and organization. This work will inform subsequent aims of applied machine learning to select, train, and validate models for prediction of health and function in persons with limb trauma and amputation. The candidate will be provided hands-on, collaborative experience to take an early-stage project from initiation to analysis to knowledge product generation in a short period of time with high return on investment. The candidate will also have the opportunity to contribute to grant submissions to add to their knowledge of pursuing funding and becoming an independent researcher. The candidate will be a part of a network of ORISE fellows nationally across the EACE.

Please note: This research fellowship will be housed jointly between the Naval Medical Center San Diego (NMCSD) and the University of California - San Diego (UCSD).

For more information about EACE, please visit (<https://www.health.mil/About-MHS/OASDHA/HSPO/EACE>)

Appointment Length



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This appointment is a 9 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.

Desired start: December 2020

Participant Benefits

Participants will receive a stipend to be determined by **EACE**. 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.

Qualifications Opportunity Requirements:

- U.S. Citizenship, ability to obtain Secret clearance through background checks
- Degree (Bachelor's/Master's/PhD, current student or recent graduate considered): computer science, bioinformatics, statistics, neuroscience, biomedical/electrical engineering (or similar)
- Programming: Python, Pandas, PySpark, SQL, database extract-transform-load
- Proficient with software version control and collaborative coding (GitHub)
- Excellent organizational, time management, and communication skills (oral and written)
- Intellectual independence and initiative. Ability to collaborate as part of an interdisciplinary team is essential


Desired Skills (knowledge of is beneficial, not required):

- Applied machine learning; feature engineering, dimensionality reduction (PCA, SVM), classification, clustering, regression, model selection and performance validation
- Deep learning, neural networks, e.g. LSTM
- Electronic health records, physical therapy, prosthetics & orthotics, biomechanics, human movement analysis

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 months or currently pursuing.
 - **Overall GPA:** 3.40
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([16](#)👁)
 - **Engineering** ([27](#)👁)

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- **Life Health and Medical Sciences** ([45](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 60 month(s).