Opportunity Title: USARIEM Biomedical Engineer – Clothing Testing & Modeling
Opportunity Reference Code: USAMRDC-RIEM-2022-0039

Organization	U.S. Department of Defense (DOD)
Reference Code	USAMRDC-RIEM-2022-0039
How to Apply	Click on *Apply* at the bottom of the opportunity to start your application.
Description	The U.S. Army Research Institute of Environmental Medicine (USARIEM) is offering a fellowship within their Thermal and Mountain Medicine Division (TMMD). TMMD conducts research to optimize and enhance physical and cognitive performance and prevent illness associated with military operations at environmental extremes, such as heat, cold, high terrestrial altitude, and subterranean spaces. TMMD research supports physiological modeling and military materiel developers of clothing, equipment, food, and pharmaceuticals.

What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers to learn and gain hands-on experience in material and clothing evaluations using standard test methods. The data you collect as a participant will be used for input to thermoregulatory models that predict human responses in extreme environments, primarily extreme heat and cold.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. You will also engage in activities and research in several areas. These include, but are not limited to,

- Collecting data from physical experiments that will be used for thermoregulatory model input.
- Aiding in running thermoregulatory models.
- Creating and maintaining Graphical User Interfaces that serve as user-friendly versions of models.

Where will I be located?

Natick, Massachusetts

What is the anticipated start date?

Immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed continuously, and fellowships 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. The participation rate will be full-

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time (40 hours/week).

What are the benefits?

You will receive a stipend to be determined by USARIEM. 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 USARIEM

USARIEM is internationally recognized as the DoD's premier laboratory for Warfighter health and performance research and focuses on environmental medicine, physiology, physical and cognitive performance, and nutrition research.

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 bachelor's or master's degree (or will complete their degree by May 2023) in Biomedical Engineering, Mechanical Engineering, Electrical Engineering, or a similar discipline. The 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:

- Familiarity or strong interests in operating, maintaining, troubleshooting, and repairing electromechanical systems.
- Knowledge of basic physics and engineering principles with an emphasis on heat transfer and thermodynamics.
- Knowledge or strong interest in the thermal performance of textiles/clothing, physiology, human science, the interaction between humans and clothing, and biomedical engineering.
- Advanced computing skills (experience with C#, Java, and/or MATLAB preferred).
- Must be conscientious, highly motivated, able to conduct research

independently, and have strong interpersonal skills.
- Clear oral and written communication skills.
- Strong interest and willingness to learn about evaluating textiles and clothing using standard test methods (e.g., thermal manikins), physiology, and mathematical modeling.

This research routinely involves lifting 25 – 50 pounds.

Application Requirements

A complete application consists of the following:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records
- 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 and personal characteristics and describe how they know you. You can always log back into 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 [USAMRDC-RIEM-2022-0039] 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 or Master's Degree received within the last 60 months or anticipated to be received by 5/31/2023 12:00:00 AM.
	• **Discipline(s):**
	   ○ **Chemistry and Materials Sciences** (12 👁)
	   ○ **Communications and Graphics Design** (2 👁)
	   ○ **Computer, Information, and Data Sciences** (17 👁)
	   ○ **Earth and Geosciences** (21 👁)
	   ○ **Engineering** (27 👁)
	   ○ **Environmental and Marine Sciences** (14 👁)

- **Life Health and Medical Sciences** ([48 👁](#))
- **Mathematics and Statistics** ([11 👁](#))
- **Physics** ([16 👁](#))
- **Science & Engineering-related** ([2 👁](#))
- **Social and Behavioral Sciences** ([28 👁](#))
- **Age:** Must be 18 years of age