

Research Engineer Tufts University

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Posted May 6, 2025, set to expire Dec. 31, 2025

Job Title	Research Engineer
Department	Center for Applied Brain and Cognitive Sciences
Institution	Tufts University Medford, Massachusetts
Date Posted	May 6, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Research Scientist/Associate
Academic Field(s)	Biomedical Engineering & Bioengineering
Job Website	https://jobs.tufts.edu/jobs/21491?lang=en-us&iis=Job+Board&iisn=AcademicKeys
Apply By Email	
Job Description	

Overview

The Center for Applied Brain and Cognitive Sciences (CABCS) is a collaborative research initiative between Tufts University and the U.S. Army DEVCOM Soldier Center that aims to advance the understanding of cognitive capabilities and human-system interactions in high-stakes contexts. The center focuses on five primary research areas: predictive modeling, human-machine integration, team-level performance, physical activity and brain function, and neuroenhancement. By leveraging state-of-the-art facilities and expertise in engineering, mathematics, and neuroscience, the CABCS develops and applies innovative solutions to measure, predict, and enhance cognitive and physical performance, with a profound impact on both academic and defense-related research. The center's research has far-reaching implications for various fields, including healthcare, education, and emergency response, and contributes to the development of practical frameworks for neuroenhancement, ultimately optimizing human performance in critical contexts and driving innovation in multiple sectors

What You'll Do

We are seeking a Biomedical Research Engineer with a Ph.D. in Biomedical Engineering or a related field and extensive expertise in developing and optimizing 3D in vitro intestinal models to study host-microbiome interactions and drug

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responses. The ideal candidate has demonstrated proficiency in mammalian cell culture, organoid maintenance, and primary cell isolation, with hands-on experience in molecular and cell-based assays, including ELISA, qRT-PCR, immunostaining, flow cytometry, and enzyme assays. The candidate should have a strong background in data analysis, statistical modeling (e.g., PCA), and visualization tools to interpret experimental results and generate detailed reports for publications. Experience with BSL-2 lab environments, regulatory compliance, and maintaining meticulous documentation in Electronic Lab Notebooks (ELN) is essential. The candidate should also have expertise in tissue engineering and biomaterials with experience in using advanced imaging techniques such as scanning electron microscopy (SEM) and confocal microscopy. Additionally, the candidate has demonstrated leadership and organizational skills by managing multiple projects, collaborating with interdisciplinary teams across academia, industry, and clinical settings, and contributing to scientific publications and conference presentations. A strong understanding of project management, attention to detail, and the ability to balance independent work with collaborative teamwork are critical for success in this role.

This is a one year limited term appointment with the opportunity of possible renewal based on funding and continued successful performance in the role.

Essential Functions:

- Design and development of 3D in vitro intestinal models.
- Conduct molecular and cell-based assays.
- Conduct data analysis and statistical modeling.
- Apply advanced imaging techniques such as SEM and confocal microscopy.
- Manage multiple research projects and ensure laboratory regulatory compliance for all managed projects.
- Design and optimize experiments to test hypotheses and answer research questions.
- Collaborate with researchers, industry, and/or leadership to design and conduct experiments and communicate complex scientific concepts to diverse audiences.

What We're Looking For

Basic Requirements

Knowledge and experience typically acquired by:

- Doctoral degree in engineering or physical science.
- At least 4 years (including doctoral experience) of experience in biomedical engineering research. Experience with BSL-2 lab environments and regulatory compliance.
- Expertise in tissue engineering and biomaterials.
- Experience with advanced imaging techniques such as scanning electron microscopy (SEM) and confocal microscopy.

Preferred Qualifications:

- Experience managing multiple projects simultaneously.

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- Experience collaborating with interdisciplinary teams across academia, industry, and clinical settings.
- Experience contributing to scientific publications and conference presentations.

Pay Range

Minimum \$71,050.00, Midpoint \$88,850.00, Maximum \$106,700.00

Salary is based on related experience, expertise, and internal equity; generally, new hires can expect pay between the minimum and midpoint of the range.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

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