

Biomedical/Electrical/Mechanical Engineer Research Fellow

Job Description

An ORISE Research Fellow position for a biomedical / electrical / mechanical engineer is available in the Division of Biomedical Physics, Office of Science and Engineering Laboratories at the U.S. Food and Drug Administration, located in Silver Spring, MD. Funding is available for up to 1 year with the possibility of extension. The candidate must have received his / her most recent degree within 5 years of the start date and be eligible to work in the U.S. All candidates must meet applicable security requirements which include a background check and a minimum of 3 out of the past 5 years' residency status in the US.

The candidate will join a research team studying regulatory science questions to advance new patient monitoring and physiological closed-loop controlled medical devices. The candidate will work closely with other team members on a project to study and determine best practices in the design, evaluation, and use of patient specific models (e.g., physiological models of the respiratory system) for medical device testing. Candidates will be involved with and learn about developing computational modeling and simulation methods for testing physiological closed-loop controlled medical devices, writing and maintaining software documentation, developing scientific manuscripts, and contributing to future research study design. Strong communication and writing skills are required.

Desired Skills & Experience

- PhD or MS degree in biomedical engineering, electrical engineering, mechanical engineering, or a related field with a strong interest in biomedical research career;
- Strong technical background and experience in signal processing, system identification, control system design and analysis, estimation theory in physiology, computational modeling and simulations of physiological and/or medical device systems;
- Experience in one or more of the following:
 - Designing, evaluating, and implementing simulations of computational physiologic systems models;
 - Computational analysis of physiologic signals (e.g., respiratory variables);
- Excellent programming skills in high level languages (e.g., Matlab / Python) and software for system modeling, simulation, and testing (e.g., Simulink / LabView);
- Background or research experience in cardiorespiratory physiology.

How to Apply

To apply, submit a cover letter describing background/skills/interests and a resume/CV addressed to Ramin Bighamian, PhD (ramin.bighamian@fda.hhs.gov) with the e-mail subject (Research Fellow Application).

Note that this appointment is offered through the CDRH Postgraduate Research Participation Program and is administered by the Oak Ridge Institute for Science and Education (ORISE). The program is open to all qualified U.S. and non-U.S citizens without regard to race, color, age religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran. The individual selected for appointments will not become employees of ORISE, ORAU, DOE, FDA, CDRH, or any other office or agency. Proof of health insurance is required for participation in this program. The appointment is full-time at FDA in the Silver Spring, MD.