Post-Doctoral Position: Neuron mechanics

Under the advisement of Prof. Megan T. Valentine, Department of Mechanical Engineering, Materials Research Laboratory and Center for Bioengineering; [https://me.ucsb.edu/valentinelab/](https://me.ucsb.edu/valentinelab/)

Location: University of California, Santa Barbara, CA 93106

Start Date: February 1, 2018 (there is some flexibility)

Term of appointment: 1 year initial appointment, renewal upon mutual agreement for an additional 1 year

Project Overview: This collaborative project aims to understand the mechanical properties of neurons and neural stem cells in conditions of health and disease, and before and after exposure to blunt impact forces. A number of experimental methods will be used, including optical and magnetic tweezers and novel microelectromechanical systems (MEMS) devices to study the effects of disease and/or force-induced trauma on the cytoskeleton and force-based signaling. Results of this project will provide fundamental new knowledge of neural mechanics and force-sensing, while informing models and treatments of neurological diseases, including Alzheimer's Disease and Traumatic Brain Injury (TBI).

The ideal applicant is a trained experimentalist with a strong record of collaborative, interdisciplinary research in the mechanics of biological or soft materials or in the biophysics of living systems. A Ph.D. in Engineering, Physics or a related discipline is required. Prior experience with optical trapping, magnetic tweezers, or BioMEMS devices, microscopy and image analysis, and/or design of experimental instruments is desirable. Candidates who can contribute to the diversity and excellence of the academic community are especially encouraged to apply.*

Training environment: UCSB is one of the highest-impact research universities in the world, and is characterized by its highly collaborative and dynamic research environment. The successful candidate will work with Prof. Valentine to develop a personalized training plan that includes the development of technical and professional skills, including skills in networking, communication, and fundraising. In addition to contributing to this project, the postdoctoral scholar will gain exposure to the broader research activities of the Valentine Laboratory, including studies of vascular mechanics and mechanobiology and bio-inspired materials research.

To apply: Interested candidates should apply directly to Prof. Valentine at valentine@engineering.ucsb.edu, and provide the following:

- Curriculum vitae
- Brief summary of research accomplishments (no more than 2 pages)
- Names and contact information for at least three references
- Optional, but encouraged: Description of contributions furthering diversity (no more than 1 page)

*The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.*