M.S./Ph.D. Research and Teaching Assistantships at Tufts University

The Civil and Environmental Engineering Department at Tufts University has several teaching assistantships and research assistantships available for students interested in pursuing an MS or PhD degree within a dynamic research environment. Both assistantships include summer support for thesis research. Located only six miles from historic downtown Boston in Medford, Massachusetts, the Department of Civil and Environmental Engineering at Tufts University thrives on interdisciplinary collaborations. Assistantships are currently available in the following areas:

- Study of geological processes using applied math and mechanics and incorporating geophysical data, with focus on earthquakes, landslides, and glacial processes. Potential applicants are encouraged to contact Prof. Robert Viesca (robert.viesca@tufts.edu).
- The study of the development and use of waste by-products in infrastructure. Specific focus is on the technical and non-technical issues associated with synthetic lightweight aggregates. Potential applicants are encouraged to contact Prof. Chris Swan (chris.swan@tufts.edu).
- Hydrogeology of helium migration in southern California groundwater; modeling hydrothermal reactions for copper mineralization in central Africa; and borehole instrumentation for poroelasticity monitoring of shallow bedrock in New England. Contact Professor G. Garven (grant.garven@tufts.edu).
- Experimental research focused on advancing our understanding of the physical and mechanical characteristics of sediments found in nature from the surface to about 5 km depth. These are all mechanically compressed materials with little diagenesis. We are interested in measuring the variation in characteristics with stress as well as exploring the reasons for such change. For this, we integrate macroscopic measurements with microfabric observations. We analyze the microfabric using SEM, TEM, TGA and MICP techniques, mineralogy using XRD and XRF, acoustic properties using compressional and shear waves, electrical resistivity within compressional devices, and mechanical properties using uniaxial compression and triaxial shear apparatus. Our laboratory has equipment to measure properties of specimens compressed up to 100 MPa. We study real geologic materials from the Gulf of Mexico, north slope of Alaska, London, Boston, offshore Japan and other locations because we believe the natural compositional complexity is fundamental to the behaviors. Interested applicants should contact Prof. John Germaine (john.germaine@tufts.edu).

Please include a resume with your inquiry. The application deadline for enrollment in Fall 2016 is January 15, 2016. For general information please contact Laura Sacco at laura.sacco@tufts.edu.