Six to eight week Internships for two projects with **Sandia National Laboratories**, Livermore, CA next summer (summer 2016).

**Sandia National Laboratories** is the nation's premier science and engineering lab for national security and technology innovation. We are a world-class team of scientists, engineers, technologists, post docs, and visiting researchers all focused on cutting-edge technology, ranging from homeland defense, global security, biotechnology, and environmental preservation to energy and combustion research, computer security, and nuclear defense.

Three departments cosponsor this summer intern program, and project work spans the intersecting interests of these groups.

The Thermal/Fluid Science and Engineering Department is a multidisciplinary group of engineers that specialize in fluid mechanics and heat and mass transfer. The group develops new computational methods and tools to describe fluid mechanics and heat transfer for multi-scale, multi-physics problems, performs computational analyses to predict the design performance of engineered systems, develops material models, works closely with experimentalists to design and test systems, and develops and performs uncertainty quantification, verification, and validation of complex simulations. Research areas include the thermal decomposition of materials, multiphase flow modeling, combustion and heat transfer modeling, and energy systems.

The Mechanics of Materials Department performs experimental and analytical studies to understand the mechanical behavior of materials. Our work consists of both experimental efforts covering the entire discovery-characterization-validation spectrum and the development of models to simulate material responses under various loading and environmental conditions, at scales from atomic to continuum. In addition, computational methodologies are developed to allow implementation of the material models for high performance computing simulations. A current focus of the department is in the area of predicting material failure at various length scales.

The Multi-Physics Modeling and Simulation Department provides solid mechanics research, development, and analysis. The department uses high-performance computing to provide high-fidelity solutions of complex, nonlinear, structural, and thermal, applications. A primary focus of the department is on the development and application of finite element methods to solve problems in the areas of solid mechanics and structural dynamics.


Applicants must be US citizens.

Graduate students should have at least a 3.5 GPA (3.7 preferred).

Undergraduates will be considered that have some finite element experience.