

PhD Student and Post Doctoral Opportunities in Computational Structural Mechanics: Immediate Availability

A PhD student or Post Doc is sought to contribute to a research program that integrates numerical methods, supercomputing, structural mechanics, and damage modeling. This position will provide support for externally funded research projects aimed at developing a multi-scale approach linking atomic modeling, peridynamics, and finite elements to characterize damage tolerance of complex material systems and to formulate non-linear surrogate models. Desired interests and technical knowledge to include micromechanics modeling and analysis using peridynamics, finite element analysis with user developed subroutines, computer programming to generate user subroutines, mathematics, and fracture mechanics. **This research supports hypersonic capability development by investigating material degradation and structural performance of advanced materials during flight.**

All applicants must be able to work in an environment conforming to International Traffic in Arms Regulations (ITAR) requirements. Funding for these positions includes PhD (tuition, health insurance, and a stipend) and Post Doc (salary is commensurate with national labs).

Prospective students should have a degree in engineering (or a related field) and an interest in numerical methods, programming, structural mechanics, peridynamics, and finite element analysis.

Contact: Dr. Stephanie TerMaath (stermaat@utk.edu)

For more information: <https://volmechutk.weebly.com/>



The Joint Institute for Computational Sciences Building on the Oak Ridge National Laboratory campus.



View of the Smoky Mountains from atop the Chimney Tops Trail in Smoky Mountain National Park

About Knoxville

Our historic and revitalized downtown, a few blocks from campus, is abuzz with events, such as the [Dogwood Arts](#) festival. Downtown Knoxville showcases eclectic dining and shopping, a weekly outdoor farmers' market, two historic theatres, art galleries, and museums. The region's rich and progressive music scene features everything from local hip-hop concerts at shoebox-sized clubs to large acts at a 1,000-seat 1920s art deco theatre. Lakes and rivers scatter the landscape and 65 miles of greenway trails make Knoxville an outdoor adventurer's paradise. The Knoxville area offers more than eighty parks, including the 1,000-acre [Knoxville Urban Wilderness](#) located just ten minutes from the University. The Urban Wilderness offers an abundance of hiking, mountain biking, canoeing, trail running, and an escape to nature just miles from downtown Knoxville. To top it off, less than an hour away is the [Great Smoky Mountains National Park](#), with over 800 miles of maintained trails in an exceptionally diverse ecosystem.