



Ph.D. Positions in Computational Mechanics

Join us in advancing the field of Computational Mechanics and embark on a rewarding Ph.D. journey at the University of Vermont!

Multiple Ph.D. positions are available in the Applied and Computational Mechanics Group in the Department of Civil and Environmental Engineering at [the University of Vermont](https://www.uvm.edu) under the guidance of Dr. Lampros Svolos.

Anticipated Start Date: Spring 2025 semester and/or Fall 2025 semester.

Research Topics:

We seek motivated candidates interested in developing novel and efficient numerical methods at the intersection of mechanics and applied mathematics. Example research topics include:

- Multiphysics modeling of fracture (e.g., ductile failure of metals, fracking, glacier calving)
 - Modeling the effects of fire on steel infrastructure components
 - Multiscale modeling of composite materials under extreme conditions
 - Efficiently solving coupled thermomechanical problems through the use of machine learning
- Simulations will be performed on the high-performance computing (HPC) clusters of the Vermont Advanced Computing Center ([VACC](https://vacc.uvm.edu)).

Required Qualifications:

- B.Sc. degree in Engineering or Applied Mathematics (or a closely related field)
- Solid mathematical foundation (e.g., linear algebra, differential equations)
- Programming experience with Python or C++ for scientific applications

Preferred Qualifications:

- Background in Computational Mechanics (e.g., finite element method for structural mechanics) or Applied Mathematics (e.g., numerical methods for differential equations)
- Experience with finite element software packages (intermediate or advanced level)

What We Offer:

- Multiple positions are available with competitive salary and circumstantial benefits package aligned with university guidelines. [Fellowships, Assistantships, and Stipends \(uvm.edu\)](https://www.uvm.edu)
- These positions are fully funded.

Application Process:

All prospective candidates for graduate studies at the University of Vermont (UVM) are required to submit their applications online following the instructions [here](#). If you are interested in these research topics, you are encouraged to send your CV (including contact information of faculty members that can provide recommendation letters) and recent publications (if any) to Dr. Lampros Svolos at Lampros.Svolos@uvm.edu, with the subject line "PhD Application: [Your Name]."

We look forward to hearing from you!