



The University of Vermont

## Ph.D. Positions in Computational Mechanics

Two fully funded Ph.D. positions are available in the 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. The desired start date is mid-August 2024 for the Fall 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:**

- BSc 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).

### **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 three faculty members that can provide recommendation letters), and recent publications (if any) to Dr. Lampros Svolos at [Lampros.Svolos@uvm.edu](mailto:Lampros.Svolos@uvm.edu).

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