UNIVERSITY OF MINNESOTA
Driven to Discover℠

Research Assistant Position in the Department of Civil, Environmental, and Geo-Engineering (CEGE) of the University of Minnesota

A funded Research Assistant (RA) position is available in Prof. Qizhi He's *Intelligent Computational Mechanics Group* in the Department of Civil, Environmental, and Geo- Engineering. The successful candidate will work with Prof. Qizhi He (CEGE) and Prof. Ju Sun (CS) on an interdisciplinary project funded by University of Minnesota Informatics Institute (UMII) to develop a knowledge-augmented machine learning model for enabling fast and reliable defect prediction in additive manufacturing (3D printing). This project involves thermomechanical modeling, signal/image processing, optimization, and deep learning. Students from the University of Minnesota are welcome to apply.

Qualifications

- Current UMN undergraduate or graduate students in civil, mechanical, aerospace, computer engineering, computer science, material science, physics, applied mathematics, or a related discipline.
- Programming experience (Fortran, Python, TensorFlow, PyTorch, etc.) with either 1) machine/deep learning (Deep neural networks, etc.) or 2) computational physics (mechanical, thermal, etc.) is required.
- Knowledge and research experience about using numerical methods (e.g., finite element softwares COMSOL or ABAQUS) for solving physical problems described by partial differential equations (PDEs), including solid materials, CFD, advanced manufacturing, or multiphysics processes would be a strong plus.

Employment details:

Interested candidates are invited to email Dr. He at "imechanics.group@gmail.com" with a CV and (unofficial) transcripts, and briefly describe your research experience. This and any other specific inquiries are encouraged to be addressed with "ML-AM RA Position - [Your name]" in the subject line.

Deadline: Available