

Ph.D. Graduate Research Assistant Positions in Structural Engineering

Position Description

The Smart Resilient Infrastructure and Urban Systems (SRI-US) lab directed by Dr. Milad Roohi in the Durham School of Architectural Engineering and Construction at the University of Nebraska-Lincoln is seeking motivated students for Ph.D. Graduate Research Assistant positions starting in Fall 2022/Spring 2023. The prospective Ph.D. students will conduct research on the interplay and connection between the multi-disciplinary data, algorithms, computational models, and emerging technologies to improve the design, assessment, and monitoring of interconnected civil infrastructure and urban systems against deterioration, natural hazards, and climate change. The positions will be based at Peter Kiewit Institute in the City of Omaha and will provide competitive stipends (including summer), full tuition coverage, and benefits.

Qualifications

- B.Sc. and M.Sc. degrees in Civil and Structural Engineering, Mechanical Engineering, Electrical Engineering, Architectural Engineering, Systems Engineering, Computer Science, or other related disciplines.
- Research experience and interest in one or more of the following areas:
 - Multi-hazard risk, reliability, and resilience of civil infrastructure and urban systems
 - Sensing, identification, health monitoring, and control in stochastic structural and dynamical systems
 - Data science, machine learning, and network science applied to civil infrastructure/natural hazards research
 - Technological development, testing, design, and assessment of sustainable and resilient structures
 - Earthquake engineering, computational structural mechanics, and finite element analysis
- In-depth knowledge of mathematics, probability and statistical methods.
- Proficient in at least one of programming languages (e.g., Python, MATLAB, R, Java or C++)
- Hands-on experience with one or more of the following is a plus: 1) advanced engineering and finite element modeling software, 2) catastrophe modeling platforms, 3) GIS and database software, 4) data fusion, machine learning and statistical modeling packages.
- Capability to work independently and as part of a team with excellent written and oral communication skills.

Application Instructions

Qualified candidates are invited to send an email to Dr. Milad Roohi (mroohigh@colostate.edu) with the subject of "Prospective Ph.D. Student – LAST NAME" to briefly introduce their backgrounds and research interests and attach a single combined file including 1) CV (with a list of degrees, GPAs, publications, references and English proficiency scores if available), 2) unofficial transcripts, 3) a representative publication if available, and 4) a short statement describing their relevant research experience and fit to the position. The review of applications starts immediately, and selected candidates will be contacted to schedule a virtual interview.

About the University of Nebraska-Lincoln and Durham School

The University of Nebraska-Lincoln (UNL) is a top-tier research institution (classified within the Carnegie R1: Doctoral Universities – Highest Research Activity category), a proud member of the Big Ten Academic Alliance, and a leader among the Association of Public and Land-grant Universities. UNL is the state's flagship university and the intellectual center of the state of Nebraska. The university has more than 26,000 students and more than 150 undergraduate and 135 graduate degree programs and is ranked as a best-value university by The Princeton Review.

The Durham School is co-located in two cities, Lincoln and Omaha, which are approximately 50 miles apart. With approximately 30 faculty, 500 undergraduate students, and 100 graduate students, the Durham School is the only endowed academic unit (\$30 million) in the UNL College of Engineering and has strong ties with several world-class engineering and construction firms, many of which are headquartered in Omaha, including HDR, DLR, Leo A Daly, Kiewit, J.E. Dunn, McCarthy, and many others.