Ph.D. Student - Wildfire Science and Technology Lab
University of Nevada, Reno

Job Title	Ph.D. Student - Wildfire Science and Technology Lab
Department	Civil Engineering / Computer Science / Mechanical Engineering
Institution	University of Nevada, Reno Reno, Nevada
Date Posted	Feb. 19, 2025
Application Deadline	Open until filled
Position Start Date	Aug. 1, 2025
Job Categories	Graduate Student
Academic Field(s)	Water Resources Engineering Structural Engineering Risk Management & Financial Engineering Mechanical Engineering Ecological and Environmental Engineering Physics Engineering Mechanics Computer Engineering Computer Science Civil Engineering Aerospace/Aeronautical/Astronautics Engineering - Other
Apply By Email	hebrahimian@unr.edu

Job Description

We invite applicants for multiple cross-disciplinary Ph.D. positions to conduct research in technological

and scientific aspects of Wildfire Engineering across the Pre-Fire, Active-Fire, and Post-Fire domains. Our goal is to develop new capabilities for stakeholders to effectively prepare for, respond to, and recover from wildfires. We seek dynamic individuals who are curious and interested in this problem, willing to work within a multidisciplinary team in a fast-paced research and development environment, learn new skills, interact with stakeholders, and produce high-quality research and technology products. The positions are part of a cluster hire in support of the Hub. The candidates will interact with other research teams at the Hub as well as faculties at UNR and other partnering institutes and agencies. Depending on the background, candidates can be admitted and hosted within Civil and Environmental Engineering, Mechanical Engineering, or Computer Science Departments.

For Pre-Fire problem domain, we seek candidates with strong interest in engineering risk, reliability, and stochastic simulation concepts. For Active-Frie problem domain, we seek candidates with strong interest in analytical and computational methods related to physics-based wildfire simulation, fuel modeling, data-driven methods, artificial intelligence, and real-time applications. In the post-fire domain, we seek modeling capabilities for assessing how post-wildfire runoff, smoke deposition, altered vegetation and hydrology, and targeted restoration activity affect functioning and shape recovery.

Required Qualifications

- M.S. in Engineering, Physics, Computer Science, Ecology and Forestry, Earth Science, or related fields.
- A master's degree with GPA > 3.5.
- Excellent English-language communication skills (oral and written).
- Demonstrated ability to perform research and publish results in peer-reviewed literature.

Preferred Qualifications

Candidates should have a solid background in one or more of the following subjects:

- Computer programming – past experience with MATLAB, Python, and/or C++.
- Experience with cloud computing, GPU-based computing, and a working knowledge in Linux.
- Machine learning, neural networks, and artificial intelligence.
- Spatial data analysis.
- Computer vision techniques.
- Statistics, probability, reliability, and engineering risk assessment.
- Methods for stochastic simulation and uncertainty quantification.
- Fire sciences.

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Application / Review Process

Please send your complete C.V. along with your academic transcripts to hebrahimian@unr.edu.

EEO/AA Policy

The University of Nevada, Reno recognizes that diversity promotes excellence in education and research. We are an inclusive and engaged community and recognize the added value that students, faculty, and staff from different backgrounds bring to the educational experience.

The Nevada System of Higher Education (NSHE) is committed to providing a place of work and learning free of discrimination on the basis of a person's age, disability, whether actual or perceived by others (including service-connected disabilities), gender (including pregnancy related conditions), military status or military obligations, sexual orientation, gender identity or expression, genetic information, national origin, race, or religion.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact   Hamed Ebrahimian

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