Postdoctoral Position Available:
Software development for uncertainty quantification and workflow development. UC Berkeley's SimCenter (https://simcenter.designsafe-ci.org/) has an immediate opening in software development for a postdoctoral researcher through the Natural Hazards Engineering Research Infrastructure funded by the National Science Foundation. We are looking for a qualified, motivated researcher with interest and experience in uncertainty quantification, especially in the context of simulation-based approaches to reliability/risk assessment for Natural Hazards Engineering. Competitive applicants will have strong software development and computational statistics expertise and have demonstrated interest or experience in one or more of the following areas: advanced stochastic simulation techniques; machine learning; Bayesian inference; performance-based engineering. Knowledge of computational modeling systems for structural analysis, wind modeling, tsunami modeling, and/or geotechnical simulation, though not essential, will be highly regarded.

The project involves the creation of next-generation simulation applications and educational resources for natural hazards engineering on a scale ranging from single buildings through to metropolitan areas. This is a high impact applied effort involving multiple researchers spread across the United States. The home base for the center's postdocs is UC Berkeley; however, in exceptional cases alternate locations where other SimCenter participants are co-located can be considered. Advanced skills in computer programming are required. Candidates should have demonstrated experience (3–5 years) in one or more of the following: computational statistical analysis; computational uncertainty quantification; software engineering and software design; high-performance computing, scientific workflow systems; community software development, version control, documentation, and maintenance; proven knowledge of computer languages used in scientific computing (e.g., C, C++, Modern Fortran), and knowledge of scripting languages used in scientific data processing (e.g., Matlab, R, Python); proven experience/knowledge of parallel and multi-thread programming (e.g., MPI, OpenMP, CUDA) and I/O tools for parallel access and management of large datasets. In addition, the candidates must have excellent English language skills, social skills, design sense, and team spirit. Candidates need to be able and willing to work in a highly interdisciplinary environment.

Candidates should submit their application materials as a single pdf file (< 5 MB), including a short motivational letter, CV, and copies of academic credentials (bachelor, master/diploma, and PhD) with attention to: Professor Sanjay Govindjee <s_g@berkeley.edu>. Applicants are encouraged to submit their materials as soon as possible. Review of applications will begin on November 1, 2018 and will continue until the position is filled. The desired start date for the successful candidate is early 2019.