Assistant Professor, Structural Engineering for Risk and Reliability
Civil and Environmental Engineering
University of California, Berkeley

The Department of Civil and Environmental Engineering at the University of California, Berkeley, invites tenure-track faculty applications in the area of structural engineering for risk and reliability. Hiring will be at the untenured assistant professor level.

Reliability, risk, and resilience modeling and assessment and decision-making upon such analyses are critical aspects of performance-based design of complex civil engineering systems, structures, and infrastructure. Performance-based engineering prior to, during and after natural hazards, such as earthquakes, tsunamis, firestorms, hurricanes, tornadoes, floods, extreme temperatures, as well as man-made hazards, is a pressing computationally demanding societal need. It is also recognized that analysis on an individual hazard-by-hazard basis can underestimate the threats to the built environment that sustains human activity on local and regional scales, particularly in view of a rapidly changing climate. These analyses need to also consider new material systems, aging infrastructure, and an ever-increasing wealth of monitoring data. This research area brings together probabilistic methods, predictive modeling, computational statistics, decision theory, and data-driven methodologies to characterize, model, and predict the effect of such threats and their mutual interactions on the built environment – all foundational elements of performance-based engineering.

We seek candidates who study risk, reliability, and resilience. Of particular interest are candidates who develop methods to examine the effects of interacting uncertainties via computational techniques at the interface between artificial intelligence/machine learning, risk and reliability analysis, decision theory, and their integration with prevailing simulation methods, such as digital-twins and finite element techniques.

Diversity, equity and inclusion are core values in the College of Engineering and the Department seeks candidates whose research, teaching or service has prepared them to contribute in those areas. An additional statement of contributions to equity and inclusion will be requested of semi-finalists, allowing candidates to showcase their interest in and contributions to these issues that do not appear in other documents. Examples of ongoing programming in the College of Engineering are available at: https://engineering.berkeley.edu/diversity; UC Berkeley guidance is available here: https://ofew.berkeley.edu/recruitment/contributions-diversity/support-faculty-candidates.

Faculty will be expected to teach existing undergraduate and graduate courses as part of the Civil and Environmental Engineering curricula as well as develop new and innovative courses. They will also be encouraged to collaborate with faculty throughout the Department and across the Berkeley campus. The deadline for applicants to submit their application is October 16, 2020; applications submitted after the deadline of October 16, 2020 will not be considered. All letters will be treated as confidential per University of California policy and California state law. Please refer potential referees, including when letters are provided via a third party (i.e., dossier service or career center), to the UC Berkeley statement of confidentiality (http://apo.berkeley.edu/evalltr.html) prior to submitting their letters.

The expected start date is July 1, 2021. To be considered for this position, a PhD (or equivalent international degree) or enrollment in a PhD (or equivalent international degree) granting program is required at the time of application. Please submit your application materials electronically through Berkeley's Academic Personnel recruiting website at https://aprecruit.berkeley.edu/JPF02674. Please

contact us at jobs@ce.berkeley.edu if you have questions or encounter any problems with the application process.

The University is also committed to addressing the family needs of faculty, including dual career couples, and single parents. For information about potential relocation to Berkeley, or career needs of accompanying partners and spouses, please visit https://ofew.berkeley.edu/new-faculty.

The University of California is an equal opportunity affirmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy see: https://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct.