

## Oregon State University

### **Postdoctoral Scholar in Coastal Community Resilience to Extreme Natural Hazards**

A postdoctoral scholar is sought for a position in Coastal Community Resilience to Extreme Natural Hazards working under the advisement of Dr. Dan Cox and Dr. Andre Barbosa in the College of Engineering, School of Civil and Construction Engineering at Oregon State University. The successful candidate will serve as a postdoctoral scholar in the NIST-funded Center of Excellence (COE) on Risk-Based Community Resilience Planning, conducting research on risk and resilience assessment in the face of multiple hazards, and support multi-disciplinary research on community resilience, including implementation and ground-truthing of decision-support frameworks. The postdoctoral scholar will play an important role in Center's Testbed activities and on verification and validation of the open source IN-CORE (Interdependent Networked Community Resilience Modeling Environment). The anticipated scope of the work includes modeling the reliability of coastal infrastructure, including buildings, transportation, water, and electrical power network infrastructure and its interdependence, subjected to earthquake and tsunami, storm surge, and flooding; developing models of recovery; and developing risk informed decision models to support coastal resilience for current and projected conditions, including climate change, aging infrastructure and other nonstationary processes. For further details on the research, scope and position expectations please contact Dr. Dan Cox.

**Qualifications:** Candidates should have been awarded a Ph.D. in Civil Engineering, Coastal Engineering, Structural Engineering or a related field within less than five years, and have an excellent record of research, publications, and strong communication skills. Successful candidates will ideally have a strong background in reliability, probabilistic risk assessment with emphasis on surge and flooding from tsunami and hurricanes, and quantification of risk and resilience. Expertise in regional assessment, network analysis and applications of statistical modeling are preferred. The following experience with software or coding is preferred but not required: OpenSees or other finite element software, OpenFOAM or other computational fluid dynamics software; coding in python and/or Matlab; working knowledge of GIS and Jupyter notebooks. The candidate must have the ability to work independently to achieve project objectives, meet project deadlines and reporting requirements, and help mentor other team members. The candidate also must fill an important role in facilitating collaborations with the multi-disciplinary, multi-institutional project team.

**Appointment:** The appointment is expected with an anticipated latest start date of June 1, 2020. This date may be discussed and adjusted as needed. The duration of the appointment is two years, contingent upon successful performance in year one. The salary and benefits are competitive, and funding is available for the postdoctoral fellow for travel and training purposes.

**To Apply:** Please contact Dr. Dan Cox by email at [dan.cox@oregonstate.edu](mailto:dan.cox@oregonstate.edu) with the subject heading "Community Resilience Post-Doc Application" and provide a CV, two sample publications, and the contact information of at least two references. Review of applications will begin immediately but is expected to close by April 1, 2020. Additional supporting information may be requested upon review.

**Additional Information:** Additional details on the research group and center with which the postdoctoral scholar will be affiliated can be found at: <https://cce.oregonstate.edu/barbosa> (Dr. Barbosa webpage), <https://cce.oregonstate.edu/cox> (Dr. Cox webpage), and <http://resilience.colostate.edu/> (NIST COE). Information on the School of Civil and Construction

Engineering can be found at <https://cce.oregonstate.edu/>. Oregon State University, as one of the largest land grant institutions in the U.S., is located in Corvallis, Oregon, which has been ranked as the 5th best college town in the US (<https://livability.com/top-10/college/10-best-college-towns/2019/or/corvallis>), and was named the best city to live in Oregon by the US Chamber of Commerce (<https://www.chamberofcommerce.org/best-cities-to-live-in-oregon/>). With proximity to the ocean and mountains for outdoor activities and a supportive, inclusive community, Corvallis offers excellent work-life balance for all who come to live in Oregon.