

Postdoctoral Scholar in Alternative Coastal Futures Modeling

Oregon State University, the University of Washington, and several other regional partners, have recently initiated the Cascadia Coastlines and Peoples Hazards Research Hub ([Cascadia CoPes Hub](#)) focused on increasing coastal resiliency among communities in the US Pacific Northwest. We are seeking a Postdoctoral scholar to participate in this convergent coastal hazards research project focused on the impacts, and adaptation measures that mitigate, both chronic (climate change induced) and acute (seismic induced) coastal hazards within Cascadia (Mendocino County, CA to the Salish Sea, WA). The successful candidate will join a cohort of several postdocs spread across partner institutions who will work collaboratively on a wide range of project components from seismic hazards to coastal inundation to community planning and engagement. The **Postdoctoral Scholar in Alternative Coastal Futures Modeling** will assist, under the direction of their mentor(s), with the following activities:

- (1) Refine, calibrate, and implement, at select sites within the Cascadia region, the spatially explicit, agent-based, alternative coastal futures forecasting tool, *Envision* (Bolte et al., 2007; Lipiec et al. 2018; Mills et al 2018).
- (2) Process model data output and co-developed coastal community resilience metrics to explore a range of alternative coastal futures.
- (3) Develop visualizations of model output to communicate results to a diverse array of coastal stakeholders.
- (4) Along with the rest of the postdoctoral scholar cohort involved in the Cascadia CoPes Hub, the Scholar will serve as a Coastal Research Community Liaison to identify additional research needs and support science co-production, translation, and outreach. We see the role of Coastal Research Community Liaison critical to the success of the research conducted by all Hub researchers.
- (5) It is expected that this research will lead to one or more published peer reviewed journal articles that will be co-authored by the candidate and mentor as well as other products.

This postdoctoral scholar position is a full-time 1.00 FTE, 12-month, fixed term professional faculty position. Reappointment for an additional 1 -2 years is possible depending upon annual review. The position will be housed in the Department of Biological and Ecological Engineering or the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University.

Minimum/Required Qualifications:

- PhD (at the time of appointment) in Computer Science, Coastal Engineering, Oceanography, Coastal Geology, Civil Engineering, or related field.
- Excellent programming capabilities.
- Strong technical writing and communication skills.
- Demonstrated commitment to diversity, equity, and inclusion.

Preferred Qualifications:

- Experience and skill working in the C++ (or similar) and Python programming languages.
- Knowledge and experience working in coastal hazards projects
- Knowledge and experience with coupled natural human system models
- Experience and interest in community engagement, co-production, and transdisciplinary science

Timeline and Application

Applications will be considered until the position is filled. A complete application will be a single PDF document containing:

- Letter of interest describing how your qualifications and experience have prepared you for this postdoctoral position (1 – 2 pages).
- Research statement that highlights your research accomplishments and describes your next steps (1 – 2 pages).
- Curriculum Vitae (no length restriction).
- Names and contact information of three references (1 page).

Direct inquiries to peter.ruggiero@oregonstate.edu. To apply for this opportunity, submit a complete application via e-mail to Peter Ruggiero or John Bolte at john.bolte@oregonstate.edu.