

## Postdoctoral opportunity

Applications are invited for a postdoctoral position examining how hillslope traits (i.e., slope, aspect, vegetation, soil properties) influence hydrological and biogeochemical cycling under scenarios of increasing drought frequency and severity. The successful candidate will join a dynamic, collaborative research team and will use an ecosystem-scale model to develop a comprehensive understanding of how water and nutrients flow through ecosystems from bedrock to canopy. This project will focus on the interactions between biogeochemical cycles, with an emphasis on their role in ecosystem responses to drought and disturbance. The position is part of a larger partnership with the Department of Energy's Watershed Function Scientific Focus Area: <http://watershed.lbl.gov>.

### *Key responsibilities*

- Develop, parameterize, benchmark, and simulate hillslope transects for mountainous regions (e.g., Rocky Mountains, Cascades, Sierras) using the EcoSIM model.
- Investigate regional impacts of disturbance scenarios (e.g., drought, insect infestation) on hydrological and biogeochemical processes.
- Organize and analyze benchmark and trait databases to improve ecosystem representation, with a focus on plant-microbe interactions and ecosystem diversity.
- Work closely with a multi-disciplinary team to advance hypotheses related to water and nutrient flow through ecosystems.

### *Required qualifications*

- A recent PhD (within the last two years) in Earth Sciences, Terrestrial Biogeochemistry, or a related discipline.
- A strong background in process-based modeling and statistical analysis, including time-series analysis.
- Proficiency in Fortran, and another programming language (either Matlab, R, or Python).

### *Desired Skills*

- Experience with ecosystem models (e.g., EcoSIM, *ecosys*, LPJ-GUESS, or similar process-rich ecosystem hydrobiogeochemical models).
- Familiarity with hydrological and biogeochemical processes in mountainous ecosystems.
- Excellent communication skills and the ability to work collaboratively in an interdisciplinary team.

This position is based at Oregon State University in Corvallis, and informal inquiries should be directed to Nick Bouskill ([nick.bouskill@oregonstate.edu](mailto:nick.bouskill@oregonstate.edu)).