LBNL Soil Modeling Postdoctoral Fellow - 80035

Organization: ES-Earth Sciences

This postdoctoral position is for a scientist to conduct research on soil organic matter dynamics by improving soil organic matter models and using them to understand soil responses to climate change. We seek a scholar with experience in numerical modeling of terrestrial ecosystem processes and expertise in a relevant aspect of soil biogeochemistry, such as soil microbial ecology, organo-mineral associations, or biotic-abiotic interactions governing nutrient cycling. The postdoc will be part of a collaborative observational, experimental, and modeling team studying soil organic matter dynamics in two soil manipulation (warming, plant inputs) experiments in California. The main goal of the project is to build knowledge, data, and model structures that improve site, regional, and global predictions of terrestrial carbon dynamics and their interactions with climate. To that end, the postdoc may employ a range of numerical modeling structures, from finely-resolved three-dimensional reactive transport models to the climate-scale land model CLM. The overall project is led by Margaret Torn and the modeling component is led by Bill Riley. Eoin Brodie, Peter Nico, and Neslihan Tas are leading observational efforts on characterizing microbial physiology, mineral interactions, and genomics of the soil system.

The position offers an excellent working environment as part of a skilled interdisciplinary team. Lawrence Berkeley National Laboratory (LBNL) is a recognized center of excellence in land modeling, soil biogeochemistry, and climate science.

The position will require someone with strong motivation, scientific curiosity, and excellent oral and written communication skills. The project will require an applicant with a wide range of skills, such as: (1) mechanistic understanding of microbial processes and biotic-abiotic interactions in soil; (2) use of state-of-the-art land-surface biogeochemical or reactive transport models; (3) ability to develop numerical representations of complex inter-related terrestrial ecosystem processes suitable for site- and global-scale models; (4) uncertainty characterization, parameter estimation, and sensitivity analyses; (5) design of interesting modeling experiments and oral and written presentation of results; and (6) ability to work as a member of a collaborative, interdisciplinary team.

Applicants are asked to upload a CV, one-page statement of research interests, up to three publications as PDFs, and contact information for three references to the LBNL application portal under position number 80035.

How To Apply

Apply directly online at http://50.73.55.13/counter.php?id=17779 and follow the on-line instructions to complete the application process.

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