Post-doctoral position: Improving understanding and modeling of tropical forest carbon uptake in a changing climate

The Terrestrial Ecosystem Science and Technology (TEST) group (http://www.bnl.gov/TEST/) at Brookhaven National Laboratory is seeking a post-doc interested in understanding and reducing model uncertainty associated with projecting the response of tropical forest ecosystems to global change. The successful candidate will work closely with Drs. Serbin and Rogers to: 1) assemble a comprehensive database of plant traits associated with modeling carbon assimilation and respiration in tropical forest ecosystems, 2) develop an independent multi-assumption, multi-scale, mechanistic description of canopy physiology and 3) identify the key modeling assumptions and parameters that lead to variability in model projections of the response of tropical forests to rising temperature and carbon dioxide concentration. The successful candidate will be part of a multidisciplinary, multi-institutional project (NGEE-Tropics) - led by Lawrence Berkeley National Laboratory - that brings together a team of scientists seeking to improve the representation of tropical forest ecosystems in Earth System Models.

The essential duties and responsibilities of the post-doc include-

Data curation, synthesis and management
Integrate and run existing process models within an uncertainty quantification environment
Computer programming and modifications to existing model code
The development, testing, and application of key submodels of carbon uptake and respiration
Publish results in peer-review journals and present at scientific conferences

Prospective candidates should have-

Ph.D. in computer science, plant biology, ecosystem ecology, ecophysiology, or related field
Computer programming experience
Willingness to work collaboratively in team environments
Effective written and oral communication skills
Record of publication in high quality internationally recognized journals
Preferred Knowledge, Skills, and Abilities:
Experience with programming in Fortran, C-based languages, Python, and R, including the ability to work within version control and community development frameworks (e.g. GitHub)
Experience working within Linux and High-performance computing (HPC) environments
Background in plant biochemistry, physiology, and ecology with a focus on photosynthesis, respiration , and allocation
Experience using numerical simulation models to predict carbon fluxes and stocks
Experience working within model-data assimilation and uncertainty quantification frameworks

Application Process-

Applicants should visit the BNL Careers website (http://www.bnl.gov/HR/careers/) and search for Job #181 to apply. Review of applications begins on February 2nd, 2015 and the position will remain open until a suitable candidate is identified. Our preferred start date is April 1st, 2015.

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