EES Postdoc Job ad

Functional Job Title

Postdoctoral Researcher – Arctic land-surface modeler

What You Will Do

Put your land surface modeling talents to good use by joining the Earth and Environmental Science Division at Los Alamos National Laboratory (LANL). LANL is a multi-disciplinary research institution engaged in science on behalf of national security. You will work with a multi-disciplinary team of observational and computational earth scientists, hydrologists, ecologists and computer scientists in an effort to understand the rate and patterns of landscape change in the Arctic and its impact and feedbacks on carbon and nutrient fluxes.

Your research will include Arctic land-surface modeling using the U.S. Department of Energy's Energy Exascale Earth System (E3SM; https://e3sm.org/) model and may include:

- Land surface modeling of permafrost-influenced landscapes including sub-grid representation of process heterogeneity.
- New representations of permafrost hydrology in land surface or watershed models, including snow processes.
- Use of direct and remotely sensed observations, including drone-based acquisitions, for Arctic permafrost trend analysis and model validation.
- Trips to Alaska to support the collection of field observations.

While the large-scale research goals for the project have been established, there is significant flexibility in the way these goals may be achieved. A self-motivated, creative postdoc will find this environment conducive to intellectual and professional growth. A comprehensive knowledge of the novel components of the research activities will not be necessary as on-the-job training will support the candidate's success through a collaborative team atmosphere.

We seek applications from diverse candidates with expertise in any of the following research areas: land surface modeling and analysis, Arctic system modeling, frozen ground modeling, hydrology, with an emphasis on the modeling of snow. Candidates with experience working in and/or analyzing Arctic and permafrost-affected landscapes and thermally-influenced hydrological processes are particularly encouraged to apply. We invite applications from individuals with interests in developing and implementing models for diverse computational architectures (desktop to HPC and cloud).

What You Need

Minimum Job Requirements:

- Land-surface modeling or similar experience
- A basic understanding of hydrological processes and models
- Proficiency in at least one or more scientific programming languages
- An ability to work and communicate effectively in a diverse team environment

Education/Experience: A PhD in earth science, computer science, civil engineering, climate science, geography, or closely related fields is highly preferred, although exceptional candidates with an MS and relevant experience

will also be considered.

Desired Qualifications:

- Experience with Python and Fortran90
- Big datasets or database management skills
- Research experience in permafrost environments and/or the causes and impacts of changing thermo-hydrologic regimes
- Publications in refereed journals
- A history of successful research in collaborative team environments

Note to Applicants:

Submit *curriculum vitae*, digitized copies of transcripts, names and contact information of three references, and a one-page cover letter detailing qualifications and research interests **to the LANL job site (jobs.lanl.gov).** Address your cover letter to Dr. Dylan Harp and Dr. Katrina Bennett. Applications will be reviewed as received. We expect to fill a postdoc position by May 2021. Additional questions may be directed to Dylan (dharp@lanl.gov) and Katrina (kbennett@lanl.gov). Applications sent only to the email addresses and not to the jobs.lanl.gov site will not be considered.

Candidates may be considered for a Director's Postdoctoral Fellowship and outstanding candidates may be considered for the prestigious Marie Curie, Richard P. Feynman, or J. Robert Oppenheimer Postdoctoral Fellowships. For general information related to the Postdoc Program, salary, and benefits go to: http://www.lanl.gov/careers/career-options/postdoctoral-research/index.php. Salary ranges can be found at: https://www.lanl.gov/careers/career-options/postdoctoral-research/postdoc-program/postdoc-salary-guidelines.php.

Where You Will Work

Located in beautiful northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. Our generous benefits package includes:

- PPO or High Deductible medical insurance with the same large nationwide network
- Dental and vision insurance
- Free basic life and disability insurance
- Paid maternity and parental leave
- Award-winning 401(k) (6% matching plus 3.5% annually)
- Learning opportunities and tuition assistance
- Flexible schedules and time off (paid sick, vacation, and holidays)
- Onsite gyms and wellness programs
- Extensive relocation packages (outside a 50 mile radius)

LANL is an Equal Employment Opportunity and Affirmative Action Employer and strives for a diverse workforce supported by the following resources and programs:

- Office of Diversity and Strategic Staffing
- African American Partnership Program
- Employee Resource Groups: African American, American Indian, Asians and Pacific Islander, Hispanic/Latino, Individuals with Disabilities, DiverseAbility, Prism, LGBTQ+, Veteran and Transitioning Service Members, Women's Group, Atomic Women, Women in Computing, Future Female Leaders in Engineering.