BISICLES Ice Sheet Model Postdoctoral Scholar - 89935
Organization: CR-Computational Research

Berkeley Lab's Computational Research Division (https://crd.lbl.gov/) has an opening for a BISICLES Ice Sheet Model Postdoctoral Scholar. The Applied Numerical Algorithms Group (ANAG) develops advanced numerical algorithms and software for partial differential equations integrated with the application of the software to problems of independent scientific and engineering interest. The primary focus of our work is in the development of high-resolution and adaptive finite difference methods for partial differential equations in complex geometries with applications to DOE-mission applications including porous media flows, magnetohydrodynamics, industrial problems, climate, and fusion energy.

ANAG, in partnership with the Universities of Bristol and Swansea in the UK, is the home of BISICLES, an open-source adaptive mesh refinement (AMR) ice sheet model under development as a part of the Department of Energy-funded ProSPect SciDAC partnership (see http://bisicles.lbl.gov). You will join an interdisciplinary team of scientists and engineers in extending the current BISICLES capabilities while applying the model to a range of idealized and realistic problems.

What You Will Do:
• Work with C++ and Fortran developing new BISICLES capabilities, possibly including implementation of a subglacial hydrology model, coupling to the E3SM earth system model, and performance upgrades for current, new, and emerging computer architectures.
• Contribute to publications and participate in conferences and meetings.
• Contribute in a multidisciplinary team environment which includes mathematicians, computer/computational scientists, climate scientists and glaciologists.

What Is Required:
• Ph.D. in Applied Mathematics, Computer Science, or Physical Sciences/Engineering within the last 3 years, with a strong research background in at least some of glaciology, ice sheet modeling, applied mathematics, computational methods, and scientific computing.
• Some experience in C/C++ programming.

Additional Desired Qualifications:
• Experience developing mathematical and software models for science applications.
• Understanding of advanced computer and systems architecture and their contributions to the overall system performance.

• General experience in developing and/or using ice sheet models.
• Experience with building and using the open-source BISICLES model.

The posting shall remain open until the position is filled.

Notes:
• This is a full-time, 2 year, postdoctoral appointment with the possibility of renewal based upon satisfactory job performance, continuing availability of funds and ongoing operational needs. You must have less than 3 years paid postdoctoral experience. Salary for Postdoctoral positions depends on years of experience post-degree.
• This position is represented by a union for collective bargaining purposes.
• Salary will be predetermined based on postdoctoral step rates.
• This position may be subject to a background check. Any convictions will be evaluated to determine if they directly relate to the responsibilities and requirements of the position. Having a conviction history will not automatically disqualify an applicant from being considered for employment.
• Work will be primarily performed at: Lawrence Berkeley National Lab, 1 Cyclotron Road, Berkeley, CA.

How To Apply
Apply directly online at http://50.73.55.13/counter.php?id=180007 and follow the on-line instructions to complete the application process.

Learn About Us:
Berkeley Lab (LBNL, https://www.lbl.gov/) addresses the world's most urgent scientific challenges by advancing sustainable energy, protecting human health, creating new materials, and revealing the origin and fate of the universe. Founded in 1931, Berkeley Lab's scientific expertise has been recognized with 13 Nobel prizes. The University of California manages Berkeley Lab for the U.S. Department of Energy's Office of Science.

Equal Employment Opportunity: Berkeley Lab is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or protected veteran status. Berkeley Lab is in compliance with the Pay Transparency Nondiscrimination Provision (https://www.dol.gov/ofccp/PayTransparencyNondiscrimination.html) under 41 CFR 60-1.4. Click here (https://www.dol.gov/ofccp/regs/compliance/posters/ofccpost.htm) to view the poster and supplement: "Equal Employment Opportunity is the Law."