Pacific Northwest National Laboratory
Job Announcement (ID: 304443)

Online announcement and application:
http://pnnl.jobs/richland-wa/post-doctorate-ra-atmospheric-climate-modeling/EEB5B521CCC04034AEEA3D6C703E82CB/job/

Point of Contact for Further Information: Philip J. Rasch
http://www.pnnl.gov/contacts/staffinfo.asp?uid=F3A6D0710EBBBE46B1BF55FF84C38221

Opening Date: 2015-06-30
Closing Date: 2015-08-29

Directorate: Fundamental & Computational Sciences
Division: Atmospheric Sciences & Global Change
Group: Advanced Study & Development

Job Description

Pacific Northwest National Laboratory (PNNL) is recruiting **up to three postdoctoral research associates** to work on projects related to high-resolution global Climate and Earth System models. We are particularly interested in features pertaining to the Earth's water cycle, aerosol-cloud-climate interactions, and interactions between Earth's atmosphere and surface components, that are often influenced by natural and anthropogenic gaseous and aerosol emissions. We are interested in answering hypothesis-driven physical questions, but also in the computational challenges of modeling these processes accurately on current and upcoming computer systems.

The selected candidates will work with PNNL scientists on one or more of the following projects: 1) ACME (Accelerated Climate Modeling for Energy; http://climatemodeling.science.energy.gov/projects/accelerated-climate-modeling-energy); 2) HiLAT (High Latitude Climate Change modeling; http://www.hilat.org); 3) development and evaluation of CEDS (the Community Emission Data System; http://www.epa.gov/ttn/chief/conference/ei21/session2/ssmith.pdf) and subsequent climate science application exploring emissions role in climate change; and 4) A nascent project in climate/computational science that includes a component to explore efficient model testing and evaluation methods using ensembles of simulations suitable for next generation computing systems (e.g, http://doi.org/10.5194/gmd-7-1961-2014).

Minimum Qualifications

Candidates must have received a PhD within the past five years from an accredited college or university.

Qualifications

Candidates should have experience in analysis and/or modeling of at least one of the following: a) components of the atmospheric hydrologic or aerosol cycles; b) interactions between the atmosphere and surface (i.e., ice, land, and ocean); c) climate variability; d) anthropogenic aerosols and their impact on the climate system; and e) computational climate modeling.

Required:

- Demonstrated familiarity with numerical modeling and analysis of the atmosphere or the Earth's climate system
- Excellent written and oral communication skills in English
- Ability to work collaboratively in interdisciplinary teams.
- Interest in contributing to an active intellectual environment

Preferred:

- Demonstrated expertise in process parameterization, or diagnosis of model fidelity, behavior or deficiencies,
- Familiarity with high performance computing, and statistical analysis
- Experience with large datasets and efficient computation, including parallel processing.
- Experience with computer languages usually used for climate modeling and analysis (Fortran, Python, R, NCL, Matlab, IDL, etc.)
- Familiarity with Linux/Unix computational environments

Preferred Education/Credential:

A Ph.D. in Hydrology, Geoscience, Atmospheric Science, Civil and Environmental Engineering, Physics, Applied Mathematics, or related subjects is required.

Equal Employment Opportunity

Pacific Northwest National Laboratory (PNNL) is an Affirmative Action / Equal Opportunity Employer and supports diversity in the workplace. All employment decisions are made without regard to race, color, religion, sex, national origin, age, disability, veteran status, marital or family status, sexual orientation, gender identity, or genetic information. All staff at the Pacific Northwest National Laboratory must be able to demonstrate the legal right to work in the United States.