

## **Postdoctoral Scientist – Advancing a Multiscale Modeling Framework (MMF)**

PNNL is recruiting a postdoctoral scientist to improve modeling of water cycle processes using a multiscale modeling framework (MMF) that integrates a cloud-resolving model (CRM) into the U.S. Department of Energy Accelerated Climate Modeling for Energy (ACME) Earth System model. Research will be conducted to evaluate different MMF configurations with a two- or three-dimensional CRM embedded in an atmospheric model with grid resolution ranging from 100km to 25km. Research will also be conducted to evaluate several subgrid-scale parameterizations including subgrid momentum transport in the CRM, which have important effects on boundary layer clouds and shallow convection, with subsequent impacts on deep convection and organized convection. Combining systematic evaluation of different CRM configurations embedded in the ACME high resolution atmosphere, and exploring physics representations including boundary layer turbulence and land-atmosphere interactions, the successful candidate will work with PNNL scientists and contribute to optimizing the MMF for ACME simulations of water cycle processes, as part of a Department of Energy funded Exascale Computing Project (ECP).

**Qualifications:** A Ph.D. degree in atmospheric sciences or related fields. Expertise in modeling cloud and boundary layer turbulence and experience in atmospheric modeling, particularly using MMF, and high performance computing will be considered favorably during the evaluation.

Applications should include:

- Cover letter describing the applicant's research experience and interests.
- Curriculum vitae with a list of publications in refereed journals.
- Names and addresses of three references.

Interested candidates may send further inquiries to Ruby Leung ([Ruby.Leung@pnnl.gov](mailto:Ruby.Leung@pnnl.gov)<<mailto:Ruby.Leung@pnnl.gov>>).

To apply, please visit <http://jobs.pnnl.gov> and search for job ID 305989.