

# **Postdoctoral Research Associates in Computational Environmental Science**

**Environmental Sciences Division  
Biological and Environmental Sciences Directorate  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee**

ORNL08-99-BESD

## **Project Description:**

The Environmental Sciences Division (ESD) <http://www.esd.ornl.gov> at the Oak Ridge National Laboratory (ORNL) <http://www.ornl.gov> is seeking applications for a postdoctoral position in areas including global change biogeochemistry, high performance computing, parallel simulation, and scientific simulation. The successful candidate will be capable of integrating into the research team to enhance research in global terrestrial carbon cycle science and developing high performance simulation models of terrestrial ecosystem components of earth system models.

Strong programming experience in C, C++, FORTRAN on parallel computers using UNIX operating systems is essential. Applicants with backgrounds in mathematics, optimization theory/application, or computer science, are encouraged to apply. Experience in numerical modeling of terrestrial ecosystems or atmospheric processes, application of inverse modeling methods to hydrology, ocean, or atmosphere dynamics is a definite advantage. The successful candidate will have the following specific duties:

- Contribute to the development of global terrestrial ecosystem carbon/nitrogen cycle models, including maintaining and modifying current codes using MPI for analyses of climate change forcings from terrestrial carbon cycle feedbacks to the atmosphere.
- Assisting in using these models for the study the impact of climate variability on the terrestrial carbon cycle by assembling model inputs including forcings and boundary conditions, and developing and/or employing methods for analysis of model results, including visualization methods.
- Evaluating carbon cycle model uncertainties and performing diagnostic analyses.
- Participate in earth system model development that uses data assimilation methods to scale measurements from ecosystem to global scales and from synoptic to century timescales.

## **Qualifications:**

Doctoral Degree required. Applicants cannot have received the most recent degree more than five years prior to the date of application appointment and must complete all degree requirements before starting their appointment. Strong programming and modeling skills, as well as experience in environmental sciences are important. The appointment is for 2 years with the possibility of an extension depending on program funding.

## **Technical Information:**

For additional information contact Drs. Wilfred Post ([postwmiii@ornl.gov](mailto:postwmiii@ornl.gov), 865-576-3431) or Tony King ([kingaw@ornl.gov](mailto:kingaw@ornl.gov), 865-576-3436), Environmental Sciences Division, Oak Ridge National Laboratory.

**How to Apply:**

Qualified applicants must apply online at [https://www2.ornl.gov/ORNL\\_POST/](https://www2.ornl.gov/ORNL_POST/). All applicants will need to register before they can begin the online application. For complete instructions, on how to apply, please see the instructions at <http://www.ornl.gov/orise/edu/ornl/ornl-pdpm/application.htm>. When applying for this position, please reference the position title and number.

This appointment is offered through the ORNL Postgraduate Research Participation Program and is administered by the Oak Ridge Institute for Science and Education (ORISE). The position is open to citizens or legal permanent residents of the US without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.