

ORNL Publications

External Publication

Job Posting Title

Hydrological-Biogeochemical Systems Modeler NB50694683

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Purpose

The Environmental Sciences Division at Oak Ridge National Laboratory is an interdisciplinary research and development organization with more than 60 years of achievement in local, national, and international environmental research. Our vision is to advance scientific knowledge and develop innovative strategies and technologies that strengthen the nation's capacity to find solutions that help sustain the Earth's natural resources.

We are seeking a highly motivated research staff scientist to join a multidisciplinary team that uses multiphysics simulations on high-performance computing resources to advance understanding of large-scale environmental systems. Potential focus areas include permafrost thermal hydrology; groundwater, watershed and stream hydrology; site- and watershed-scale contaminant and nutrient export; coupled water cycle and ecosystem dynamics; and related applications.

Major Duties/Responsibilities

In this position, you will lead independent research as well as collaborate with strongly interdisciplinary teams working on a variety of environmental applications. Initially, your primary responsibilities will be to design and execute numerical experiments using integrated surface/subsurface flow and reactive transport simulation tools, taking advantage of high-performance computing facilities. Working as part of a team, you will prepare and contribute to scientific publications, contribute to model development and testing, and compare simulation results to observations and laboratory experiments. You will have the opportunity to help shape the research directions of the team and participate in developing and proposing new research programs to a variety of sponsors. This is a full-time regular staff position with significant potential for scientific growth and career advancement for a creative and highly motivated individual.

Qualifications Required

- Ph.D. in hydrology, environmental science, geochemistry, engineering, ecological science, computational science or a related field
- System-level understanding of large-scale environmental issues
- Experience with Python or similar scripting tools to prepare model input and analyze results from large simulations
- Demonstrated experience with PDE-based multidimensional simulations coupling multiple environmental processes
- Demonstrated experience and productivity in using parallel software in a high-performance computing environment

- Ability to design and execute scientifically relevant numerical experiments as demonstrated in scientific publications
- Experience with subsurface flow and reactive transport codes is highly desirable
- Experience with standard software engineering tools and practices an advantage
- Effective interpersonal skills
- Demonstrated excellence in written and oral communication skills

This position will remain open for a minimum of 5 days after which it will close when a qualified candidate is identified and/or hired.

We accept Word(.doc, .docx), Excel(.xls, .xlsx), PowerPoint(.ppt, .pptx), Adobe(.pdf), Rich Text Format(.rtf), HTML(.htm, .html) and text files(.txt) up to 2MB in size. Resumes from third party vendors will not be accepted; these resumes will be deleted and the candidates submitted will not be considered for employment.

If you have trouble applying for a position, please email ORNLRecruiting@ornl.gov.

Notice: If the position requires a Security Clearance, reviews and tests for the absence of any illegal drug as defined in 10 CFR 707.4 will be conducted by the employer and a background investigation by the Federal government may be required to obtain an access authorization prior to employment and subsequent reinvestigations may be required.

If the position is covered by the Counterintelligence Evaluation Program regulations at 10 CFR 709, a counterintelligence evaluation may include a counterintelligence-scope polygraph examination.

ORNL is an equal opportunity employer. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply. UT-Battelle is an E-Verify Employer.