

## **Post-Master's Research Associate in Software Development Infrastructure**

### **Nuclear Modeling, Design and Safety Nuclear Science and Technology Division Oak Ridge National Laboratory Oak Ridge, Tennessee**

ORNL10-66-NSTD

#### **Project Description:**

The Nuclear Modeling, Design and Safety (NMDS) Group within the Nuclear Science and Technology Division (NSTD), Energy and Engineering Sciences Directorate, Oak Ridge National Laboratory (ORNL), seeks entry-level, highly-motivated applicants for a post-master's research associate position, focused on the maintenance of a collaborative development environment (CDE) to facilitate the development of nuclear safety analysis software. Additional responsibilities include automated builds, regression testing, assistance with software deployment and development of modern websites to promote the products and capabilities of the NMDS group. The group is responsible for the development, enhancement, and maintenance of the SCALE software suite, which is developed with the sponsorship of the U.S. Department of Energy and the Nuclear Regulatory Commission and is used by regulators, licensees and researchers for nuclear criticality safety, reactor physics, radiation shielding, and sensitivity and uncertainty analysis in approximately 40 nations. SCALE is developed in a collaborative team environment of approximately 25 staff members from three organizational groups, Nuclear Data and Criticality Safety, Reactor Physics, and Radiation Transport, coordinated by the NMDS group. The primary functions of the position are (1) provide support to engineering staff in the use of CDE based on a GForge Advanced Server infrastructure; (2) develop and maintain an automated software testing infrastructure; (3) support software deployment and updates through an automated installation tool developed in Java; and (4) develop improved websites through creation of a dynamic infrastructure and interaction with research and development staff members to generate content.

#### **Qualifications:**

Candidates must have completed a M.S. in computer science, nuclear engineering, physics or a related field, and should have expertise in Java, Visual C++, Fortran, HTML, Javascript, XML, Perl, or other relevant languages. Experience in or an understanding of computational nuclear engineering is desirable, but the desire to gain understanding of nuclear analysis and data is essential. The candidate must have demonstrated problem-solving skills and a willingness to apply those skills to a variety of problems. The candidate will participate as a member of a collaborative software development team and must possess the associated interpersonal and communication skills.

U.S. citizenship is not required; however, it is desirable that the candidate either holds or is able to obtain a Department of Energy security clearance. Salary will be determined according to the education, research skills, and experience of qualified candidates.

Applicants cannot have received the most recent degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment.

**Technical Questions:**

Questions regarding the position can be directed to Brad Rearden, [reardenb@ornl.gov](mailto:reardenb@ornl.gov). Please include the requisition number and title when corresponding.

**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>.

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 program is open to all qualified U.S. and non-U.S. citizens without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.