

Postdoctoral Research Associate in Radiation Transportation and Criticality

**Nuclear Science and Technology Division
Energy and Engineering Sciences Directorate
Oak Ridge National Laboratory
Oak Ridge, Tennessee**

ORNLO9-58-NSTD

Project Description:

A postdoctoral research associate position will be available in the Radiation Transport and Criticality Group of the Nuclear Science and Technology Division at the Oak Ridge National Laboratory. This position will involve the development of a continuous energy version of the SCALE Monte Carlo radiation transport code, Monaco. The project will include (1) generation of continuous energy cross sections for Monte Carlo simulation of radiation transport and (2) implementing the capability to use continuous energy neutron and gamma data in the Monaco Monte Carlo radiation transport code for use in accurate modeling and simulation techniques for quantifying signatures for safeguards applications.

Qualifications:

A Ph.D. in nuclear engineering is required. The job requires working knowledge of at least one of the two areas mentioned in the description. The candidate must have expertise in computer programming with FORTRAN (95 or 2003 standard) and UNIX/LINUX-based operating systems. The candidate will participate as a member of a development team and must possess the associated interpersonal and communication skills. The ideal candidate would have experience with existing criticality safety or radiation transport codes in SCALE and nuclear data processing software in AMPX. The ideal candidate would have experience developing continuous energy Monte Carlo transport codes for radiation transport applications. The ideal candidate would also know the nature of continuous energy neutron and gamma cross sections.

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 (\$60,000 to \$100,000 per year plus benefits) 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:

Contact Sedat Goluoglu at goluoglus@ornl.gov. Please reference the position title and number when corresponding about this position.

How to Apply:

Qualified applicants must apply online at 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.

The postdoctoral position will be offered through the Oak Ridge Institute for Science and Education (ORISE) Oak Ridge National Laboratory Postdoctoral Research Associates program <http://www.ornl.gov/orise/edu/ornl/ornl-pd/ornlpdoc.htm>. These positions is open to all qualified candidates without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.