

# **Postdoctoral Research Associate for Developing the Spin-Echo Grazing Incidence Scattering (SERGIS)**

**Neutron Sciences Directorate  
Neutron Facility Development Division  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee**

**ORNL10-17-NFDD**

## **Project Description:**

The Neutron Scattering Science Division at Oak Ridge National Laboratory seeks to fill a postdoctoral research associate position in neutron scattering studies of soft-condensed matter systems such as dense colloids, artificial membranes and nano-structured films. This position will work closely with the scientists at the SNS on developing the SERGIS (Spin-Echo Resolved Grazing-Incidence Scattering) technique. SERGIS uses the well-known neutron spin echo effect for encoding the momentum transfer in reflectometry by the application of tilted magnetic-field interfaces. The research team will be conducting active research related to soft-condensed matter materials using the state-of-the-art neutron scattering instruments available in national labs.

## **Major Duties/Responsibilities:**

- Conduct neutron scattering experiments on soft-condensed materials such as biological colloidal systems and membranes.
- Develop the theoretical data analysis protocol needed for the interpretation of the experimental results.
- Travel to other neutron facilities to do neutron scattering experiments.
- Publish research results in scientific journals.
- Maintain a strong commitment to the implementation and perpetuation of values and ethics.
- Ensure compliance with environment, safety, health and quality program requirements.

## **Qualifications:**

A PhD or equivalent degree in physics, materials science, chemistry or related field is required. The successful candidate is expected to have a background and experience in soft matter studies and proficiency with applications of scattering methods to structural/dynamical characterization. The candidate should be a self-starter, able to work independently and participate creatively in refining program directions. Presentations at national meetings and publication of scientific results in peer-reviewed journals are expected. The candidate must have good oral and written communication skills in English, and be able to interact effectively with a broad range of colleagues.

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:**

For more information about this position please contact Roger Pynn ([pynn@mrl.ucsb.edu](mailto:pynn@mrl.ucsb.edu)) and Lee Robertson ([chenw@ornl.gov](mailto:chenw@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/](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.