

Job Title: Polarization Associate

Requisition Id 8035

Overview:

The Neutron Optics and Polarization Group within the Neutron Technologies Division at Oak Ridge National Laboratory (ORNL) is looking for a Polarization Associate. The mission of this group is to design new instruments, to develop new instrumental capabilities, and to support the day-to-day operation of our instruments with state-of-the-art technologies in the areas of neutron polarization, polarization analysis, and neutron optics. Our research interests fall into these areas: developing new neutron polarization techniques, Larmor labeling methods, developing new instrument concepts, and neutron optics.

As a Polarization Associate, you will join a team of R&D scientists and students who develop new devices and techniques for manipulating neutron beams and their polarization state, and who provide operational support of these new capabilities at our national neutron user facilities, the High Flux Isotope Reactor (HFIR) and the Spallation Neutron Source (SNS). You will assist with design, testing and operation of polarized neutron apparatus, and in particular operation of ^3He -filter based neutron polarizers. Interfacing with other teams, you will work with neutron instrument scientists and engineers who will lean on your expertise in finding solutions for their scientific or engineering requirements.

Major Duties/Responsibilities:

- Support the development and routine operation of polarization devices, including ^3He polarization filters.
- Assist in the development of new polarized neutron techniques for neutron instruments at HFIR and SNS.
- Participate in scientific research with neutron optics.
- Participate in the operation of the neutron optics test beam lines at HFIR.
- Assist internal and external scientists with neutron scattering experiments.
- Publish results in scientific journals, conference proceedings and ORNL technical reports as appropriate.
- Maintain a strong commitment to the implementation and perpetuation of laboratory values and ethics.
- Ensure and monitor compliance with environment, safety, health (ESH), and quality program (QA) requirements. Promptly identify ESH and QA issues and communicate them to project and division management, ESH and QA contacts, and/or subcontractor contacts as appropriate.
- As a member of the ORNL scientific community, you will be expected to commit to ORNL's Research Code of Conduct. Our full code of conduct, and a statement by the Lab Director's office can be found here: <https://www.ornl.gov/content/research-integrity>.

Basic Qualifications:

- A Bachelors degree in engineering, physics, chemistry, materials science, or a closely related discipline.
- A minimum of 2 years of relevant experience.
- Proficiency in computer automated design.
- Proficiency in mechanical assembly.

Preferred Qualifications:

- A Masters degree in engineering, physics, chemistry, materials science, or a closely related discipline.
- Experience with magnetic modeling and magnet assembly.
- Experience with high power lasers.
- Experience with basic cryogenic technology.
- A general understanding of neutron scattering instruments (elastic, inelastic) and neutron optical transport technology.
- Excellent written and oral communication skills.
- Motivated self-starter with the ability to work independently and to participate creatively in collaborative teams across the laboratory.
- Ability to function well in a fast-paced research environment, set priorities to accomplish multiple tasks within deadlines, and adapt to ever changing needs.

About Neutron Sciences Directorate:

The Neutron Sciences Directorate (NScD) at Oak Ridge National Laboratory (ORNL) operates the High Flux Isotope Reactor (HFIR), the United States' highest flux reactor-based neutron source, and the Spallation Neutron Source (SNS), the world's most intense pulsed accelerator-based neutron source. Together these facilities operate 30 instruments for neutron scattering research, each year carrying out in excess of 1,000 experiments in the physical, chemical, materials, biological and medical sciences for more than 3,000 visiting scientists. HFIR

also provides unique facilities for isotope production and neutron irradiation. To learn more about Neutron Sciences at ORNL go to <http://neutrons.ornl.gov>.

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), Adobe (unsecured .pdf), Rich Text Format (.rtf), and HTML (.htm, .html) up to 5MB 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.

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.