

Neutron Diffraction Instrument Scientist

Summary:

The Neutron Sciences Directorate at Oak Ridge National Laboratory (ORNL) invites applications for Neutron Diffraction Instrument Scientist. With the world's highest flux reactor-based neutron source (the High Flux Isotope Reactor) and the world's most intense pulsed accelerator-based neutron source (the Spallation Neutron Source), ORNL has become the world's foremost center for neutron science. Research at these facilities will encompass the physical, chemical, materials, biological, and medical sciences and will provide opportunities for up to 2000 researchers each year from industry, research facilities, and universities all over the world. To learn more about Neutron Sciences at ORNL go to: <http://neutrons.ornl.gov>.

Responsibilities & Qualifications:

The successful candidate will be a member of a team to develop new world-leading capabilities for crystallography to service many aspects of scientific research using single-crystal neutron diffraction. The TOPAZ single crystal neutron diffractometer is part of the SNS Instruments Next Generation Project (SING) and is scheduled for commissioning early in FY2009. TOPAZ is designed to perform elastic scattering experiments under controlled environmental conditions to probe material structures and responses. Enabling to measure the same single crystal sample with neutron as with X-ray diffraction was the guiding design principle of TOPAZ. TOPAZ will address problems and greatly expand the range of materials explored in chemistry, earth sciences, materials science, solid-state physics, and biology.

Major duties and responsibilities:

- Will develop and lead, together with the Lead Instrument Scientist, the scientific program for the TOPAZ single crystal neutron diffraction instrument in the Neutron Scattering Science Division, which includes both the SNS and HFIR facilities.
- Works well within the TOPAZ team, single crystal diffraction group and with other SNS staff and research groups to conduct world leading research at SNS.
- Interacts with other scientists within the team to maximize scientific output on the TOPAZ instrument.
- Interacts with shop personnel, and external suppliers and contractors to support instrument development during construction and for further upgrades.
- Contributes profound knowledge of software packages and applications related to small and large molecule data processing and analysis software
- Contributes profound knowledge in programming languages like C/C++, Labview, or similar and contributed to data analysis packages or substitutions/additions
- Develops links with the User Community and conduct research in small and large molecule crystallography and structural analysis using neutron diffraction.
- Ensures compliance with environmental, safety, health, and quality program requirements including ISMS
- Maintains a strong commitment to the implementation and perpetuation of laboratory values and ethics.

QUALIFICATIONS REQUIRED: Ph.D. plus postdoctoral experience in chemical crystallography, physics, material science or a structural chemistry discipline, involving neutron and/or x-ray diffraction, or equivalent combination of training and experience, is required. Strong written and oral communication skills and the desire to work in a team environment on technically and scientifically challenging problems are required. Experience with instrument, software and programming development, particularly at a neutron or x-ray synchrotron facility, is desired. Software and programming skills for object oriented and specific diffraction problems are a plus.

ORNL offers competitive salaries and comprehensive benefits.

Apply at <http://jobs.ornl.gov/>

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

Please submit your resume, references, and publication list in one file. We only accept Microsoft Word documents. 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 Helpdesk@icims.com.

UT-Battelle is committed to achieving its strategic business objectives by attracting, retaining and developing a diverse workforce.

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