

Neutron Diffraction Project Facilitator

NRC Canadian Neutron Beam Centre (NRC-CNBC)

Chalk River - Ontario

RCO

This is a continuing position.

Background

Recognized globally, the National Research Council (NRC) is Canada's premier research and technology organization. It is a leader in the development of a progressive, knowledge-based economy with more than 4,000 people across the country supporting Canada's global S&T competitiveness. NRC is a dynamic and vibrant knowledge organization that, in its ongoing evolution, is seeking a Neutron Diffraction Project Facilitator.

Your Challenge

Located at the NRU Reactor at Chalk River Laboratories, the NRC Canadian Neutron Beam Centre (CNBC) operates six neutron scattering instruments as an international user facility. Each year, about one hundred neutron scattering experiments are undertaken, supporting the research and development (R&D) programs of more than two hundred research participants from academia, government laboratories and industries from across Canada and abroad.

The NRU reactor is a medium-flux thermal-neutron source that operates at 110MW. Following a major repair (2009 May – 2010 August), its license is being renewed in 2011 for continued operation during the coming decade.

The CNBC values the attentive engagement of the staff with the visiting researchers. Beam-time proposals are welcomed continuously, evaluated immediately and may be refined through consultation between the proponents and staff to enhance the probability of positive impact from the investment of resources and effort. This approach aims to increase the size and quality of the neutron-scattering user community in Canada, and provides the staff with good opportunities for intellectual participation in leading national and international research programs. Over the past five years, CNBC research participants included more than 700 individuals from over 60 departments in about 30 Canadian universities and from over 100 foreign institutions in over 20 countries. Canadian users are represented by the Canadian Institute for Neutron Scattering, an independent organization with more than 500 members, which was incorporated in 1986 to promote and oversee Canada's neutron scattering competency, with elected leaders.

The purpose of this position is primarily focused on:

- Providing scientific support, project management and training to facilitate the neutron diffraction experiments of visiting students, researchers and clients.
- Leading CNBC projects for development of neutron-beam instruments, methods or new applications aligned with CNBC and NRC priorities.

Screening Criteria

Applicants must demonstrate within the content of their application that they meet the following screening criteria in order to be given further consideration as candidates:

Education

Bachelor degree or higher in a physical science (physics, chemistry, materials science).

Experience

Significant post-graduate working experience, which included being a user or staff member at a major user facility for research in condensed-matter science.

Significant hands-on experience performing neutron or X-ray powder diffraction experiments.

Significant hands-on experience with Rietveld analysis of powder diffraction data to refine models of crystal structure in any of the following categories:

- Simple materials (metals, alloys...)
- Complex materials (ceramics, minerals, composites...)
- Magnetic structures (ferro-, antiferro-, frustrated magnets...)

Significant experience sharing knowledge and know-how in an R&D context, interacting with scientists, co-workers, university students or clients.

Condition of Employment

Reliability Status

Language Requirements

English

Assessment Criteria

Candidates will be assessed on the basis of the following criteria:

Technical Competencies:

General knowledge of physics, chemistry and materials science.

Strong knowledge and hands-on experience with radiation beams, detectors, and diffraction methods, with a preference for experience in neutron diffraction.

Practical understanding of the features of powder diffraction patterns.

Strong knowledge and hands-on experience with Rietveld analysis for determining and refining crystal structures.

Behavioural Competencies:

Client Focus (Level 3)

Results Orientation (Level 3)

Communication (Level 3)

Teamwork (Level 3)

Initiative (Level 3)

Creative Thinking (Level 3)

For this position, NRC will evaluate candidates using the following competency profile(s): **research**

All competency profiles are available at: <http://www.nrc-cnrc.gc.ca/eng/careers/competencies.html>.

Relocation

Relocation assistance will be determined in accordance with NRC's directives.

Salary Range

This position is classified as a Research Council Officer (RCO), a group that is unique to the NRC. The RCO group uses a person-based classification system instead of the more common duties-based classification system. Candidates are remunerated based on their expertise, skill, outcomes and impacts of their previous work experience. The salary scale for this group is vast, from \$38,921 to \$125,067 per annum, which permits for employees of all levels from new graduates to world renowned experts to be fairly compensated for their contributions. In addition, an incumbent occupying a

position within the RCO Groups is currently entitled to receive a terminable allowance of \$8,000 per year.

Closing Date

15/09/2011 (3 days)

Applications will be accepted until 23:59 Eastern Time

Notes

These positions are being advertised internally and externally simultaneously; however, first consideration will be given to internal applicants.

Working conditions: The working environment includes the main floor of the NRU nuclear research reactor, which entails industrial hazards as well as radiation hazards. The candidate will be trained in safe practices in a radiation environment.

The CNBC user program at Chalk River operates 24 hours per day seven days a week. On occasion the candidate must work irregular hours to accommodate operational requirements.

To Apply	<p>All applications must be submitted on-line. Please do not fax or email your applications. By applying over the web, your application becomes available to managers immediately. Applications must be received no later than the closing date.</p> <p>You should also be prepared to attach your résumé into the online application form in one of the following formats:</p> <ul style="list-style-type: none">Microsoft WordRich Text Format (RTF)ASCII textPDF <p>As an employer who values diversity in its workforce, we encourage candidates to self-identify as members of the following designated groups: women, visible minorities, aboriginal peoples and persons with disabilities. Measures for accommodation are available to all candidates retained for further assessment.</p>
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For more information, see:

<http://www.nrc-nrc.gc.ca/careers/jobpost.nsf/EnglishAll/BB3A1D0E95549C36852578C60070EAE6>