

ORNL Publications

External Publication

Job Posting Title

Accelerator Physicist / NB50538674

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Purpose

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. 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>.

Purpose:

Maintain and develop the intellectual understanding of the SNS accelerator beam, needed to maintain stable operations and participate in power upgrades. Utilize the SNS accelerator to further develop the understanding of high intensity beam physics, e.g. conceive and pursue beam based experiments. Develop models and software needed to simulate and understand beam effects. Participates in studies for power upgrades and additional beam applications. Participates in physics development beam shifts to perform beam physics studies. Interfaces with other team members as well as the, and diagnostic physics teams, as well as the Controls and Operations Groups.

Major Duties/Responsibilities

Develops a line of inquiry to understand or improve an aspect of the SNS accelerator beam.

- * Develops beam study plans, and participates in shifts to pursue the general lines of inquiry.
- * Develops beam simulation models or tools to help understand high intensity beam physics.
- * Help diagnose and remedy machine issues that are not understood, that may involve beam effects.
- * Participates in scientific conferences, workshops, meetings and publishes results in the form of SNS technical notes and memos, workshop and conference proceedings, and scientific journals.
- * Participates with other team members in developing goals, resource plans, and policies for the Team and the Group.
- * Assists team leader in coordinating the work of graduate students in the team.
- * Ensures compliance with environment, safety, health, and quality program requirements including ISMS.
- * Maintains a strong commitment to the implementation and perpetuation of values and ethics.

Qualifications Required

PhD degree in related sciences and at least one year of experience after the PhD in accelerator physics is required.

Qualifications Desired:

A background in accelerator physics and experience working with an accelerator is desirable. Experience working in a control room, conducting accelerator-based experiments, and performing accelerator simulations is also desirable.

Work Directions and Interfaces

Reports to the SNS Accelerator Physics Team leader, works with physicists, engineers, Postdocs and students.

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), Excel(.xls, .xlsx), PowerPoint(.ppt, .pptx), Adobe(.pdf), Rich Text Format(.rtf), HTML(.htm, .html) and text files(.txt) up to 2MB 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.

Notice: If the position requires a Security Clearance, reviews and tests for the absence of any illegal drug as defined in 10 CFR 707.4 will be conducted by the employer and a background investigation by the Federal government may be required to obtain an access authorization prior to employment and subsequent reinvestigations may be required.

If the position is covered by the Counterintelligence Evaluation Program regulations at 10 CFR 709, a counterintelligence evaluation may include a counterintelligence-scope polygraph examination.

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