

Beam Instrumentation Post-Doc
Neutron Scattering Science Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee

ORNL07-64-NSD

Project Description:

Participate in SNS Beam Instrumentation design, modeling, prototyping, commissioning and operation; provide computational beam dynamics support for the preparation and analysis of commissioning studies.

1. Develops and implements commissioning algorithms for the SNS Ring electron scanners.
2. Participates in Beam Instrumentation design for the SNS accelerator systems.
3. Performs calculations and simulations using multi-particle tracking codes to study the beam dynamics and space charge on measured profiles via electron scanners.
4. Performs calculations and simulations to analyze Ring beam profile monitor (RPM) commissioning and measurement results.
5. Checks design and hardware implementation of ring profile monitor components, data acquisition and software.
6. Collects, maintains, and verifies documentation of the RPM system components and layout.
7. Summarizes work in publications, conference proceedings, and laboratory reports.
8. Ensures individual compliance with environment, safety, health, and quality program requirements, including ISMS.
9. Maintains a strong commitment to the implementation and perpetuation of values and ethics.

Qualifications: Ph.D. degree required

Required discipline: Physics

Experience in one of the following areas required:

Numerical simulation of charged particle beams, design of electron gun, or measurement and analysis of accelerator beam parameters. Ability to collaborate in team setting with physicists/engineers in commissioning of accelerators highly desirable. Some travel to partner laboratories required. Excellent written and oral communications.

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.

How to Apply:

Qualified applicants may apply online at https://www2.orau.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 (ORNL07-64-NSD).

This appointment is offered through the ORNL Postdoctoral Research Associates Program and is administered by Oak Ridge Associated Universities (ORAU). This appointment is open to all qualified U.S. and non-U.S. citizens without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.