

Post-Master's Research Associate in Software Engineering

Neutron Scattering Science Division Oak Ridge National Laboratory Oak Ridge, Tennessee

ORNL08-84-NSSD

Project Description:

The purpose of this position is to support the Beam Instrumentation Group's LabVIEW-based computer systems. The incumbent, under supervision of a senior Engineer, will implement LabVIEW applications to help build beam instruments and support accelerator commissioning and operation.

Major Duties/Responsibilities:

- Programming in LabVIEW acquire and process data and perform motion control
- Commissioning and maintaining instruments for the SNS accelerator
- Performing calibrations in the field or in the lab
- Writing and maintaining drivers for PCI cards for Windows-based computers
- Documenting the beam instrumentation systems including the test-stand and calibration results
- Performing all work in compliance with environmental, safety, health and quality programs
- Collaborating with other groups to improve performance of diagnostic systems
- Assisting in achieving the requirements for performance, reliability, safety and documentation
- Maintaining a strong commitment to the implementation and perpetuation of values and ethics

Qualifications:

- **Work Direction and Interfaces:** Reports to the SNS Beam Instrumentation Software team Leader. Works with the staff from SNS and Beam Instrumentation Group members.
- **Authority/Approval Levels:** Has the authority to utilize beam instrumentation group resources in the development and deployment of instrument systems.
- **Measures of Effectiveness:**
 - Timeliness in the development, installation, and deployment of test stands and beam instrument systems
 - Progress in supporting software such as device drivers and data-acquisition and signal processing routines
 - Compliance with environmental, safety, health and quality programs
 - Success in effectively and positively collaborating with other groups

Qualifications:

- **Required:** B.S. or M.S. in engineering or computer science with one year of working experience with data-acquisition systems or an equivalent combination of education and experience is required. The candidate must be an independent LabVIEW programmer, possessing a demonstrated record of quick and successful software development for particle accelerator applications, including motion control and data-acquisition. Must have excellent

written and verbal communications skills. All degree requirements must be completed before starting the appointment.

- **Qualifications Desired:** Experience with writing C/C++ and Visual Basic programs, PCI drivers for Windows, and maintaining PCs is highly desirable. Knowledge of signal processing is desirable.

How to Apply:

Qualified applicants must apply online at https://www2.ornl.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.

This appointment is offered through the ORNL Postgraduate Research Participation Program and is administered by the Oak Ridge Institute for Science and Education (ORISE). The program 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.