

China Spallation Neutron Source(CSNS)

Institute of High Energy Physics, Chinese Academy of Sciences

CSNS is the first spallation neutron source in China, located in Dongguan city, roughly 100km north of Hong Kong. As one of the four advanced spallation neutron source facilities in the world, CSNS seeks to answer the fundamental science questions about materials and promote technical innovations that improve our daily lives. It provides a powerful research platform for diverse fields, such as materials science and technology, physics, life sciences, chemistry, resources and environment, new energy, etc.

CSNS obtained its first neutron beam on August 28, 2017 and has entered its operation phase. Currently CSNS is running with stable beam power of about 100 kW and operating 3 neutron instruments including a powder diffractometer, a SANS and a polarized neutron reflectometer, with another 17 instruments in construction or planning.

Introduction

The high-resolution neutron powder diffractometer group within the Neutron Science Division in CSNS is constructing a new powder diffractometer, which is expected to reach a world-leading resolution of $\Delta d/d < 0.05\%$. The group seeks an instrument scientist to develop the beam line and a postdoc researcher to carry out original research on magnetic materials by utilizing multiple neutron/X-ray/muon scattering techniques. The positions represent extraordinary opportunities to develop a world-class neutron instrument and conduct frontier research in condensed matter physics and materials science. Applications are sought from highly creative and motivated individuals who are majored in condensed matter physics or materials science and have demonstrated skills/experience in the diffraction technique.

Job description

The instrument scientist is expected to prosecute his/her own research program as well as spend time in development of the high-resolution powder diffractometer and supporting users to maximize the scientific output from the instrument. Major Duties and Responsibilities are:

- Conduct a scientific research program that includes but not limited to the use of the high-resolution powder diffractometer and help guide the scientific program on the diffractometer.
- Contribute to technical developments on the diffractometer including on the instrument itself, sample environment and data reduction and analysis software.
- Provide technical support to users from proposal submission through experimental time to data analysis, as well as being responsible for safety, maintenance and calibration of the diffractometer.

The postdoc researcher will join an interdisciplinary team with a focus on research on dynamic magnetic and atomic structure of materials with strong magnetoelastic coupling and quantum magnetic excitations in strongly correlated electron systems. We are utilizing the existing neutron instruments at CSNS as well as the instruments at other neutron/synchrotron/muon sources to characterize the microscopic magnetism and verify its relevance with the exotic properties of these systems.

We offer the instrument scientist a permanent position with salary provided in accordance to the regulations of CSNS. The postdoc position is a full-time position with a salary of about 400000 rmb/year and appointed on a 24-month service basis with a possibility of an offer of a permanent position after the service. Both positions are eligible for a quality benefits package, including a contributory pension plan, paid vacation, medical plan options, etc.

Basic Qualifications

- PhD (or are expected to have until the employment) in physics, chemistry or materials science.
- Evidence of a scientific publication record at PhD or post-doctoral level is required, as well as proven expertise in the diffraction technique
- Two-year previous postdoc experience is required for the instrument scientist position
- Experience in large neutron facilities would be advantageous but is not essential for the instrument scientist position.

How to Apply

This position will be filled on a continual basis and will remain open until filled. Interested candidates should email their CV and cover letter, outlining their suitability for the position, to Dr. Ping Miao <miaoping@ihep.ac.cn>), leading instrument scientist of the high-resolution neutron powder diffractometer, China Spallation Neutron Source, Institute of High Energy Physics, Chinese Academy of Sciences.