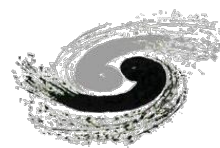




中國散裂中子源  
China Spallation Neutron Source



## *Job Posting Title*

Instrument Scientists on Elastic Diffuse Scattering Neutron Spectrometer (EDS) and Single-Crystal Time-of-Flight Neutron Diffractometer (SCND) at China Spallation Neutron Source (CSNS)

## *Purpose*

China Spallation Neutron Source (CSNS) is the first pulse neutron source located at Dongguan, Guangdong Province, China, which is operated by Institute of High Energy Physics (IHEP), Chinese Academy of Sciences (CAS). It obtained first neutron in September 2017 and passed national acceptance in August 2018. It will achieve 11 neutron instruments after Phase-I and CRG construction, including neutron powder diffraction (NPD), small angle neutron scattering (SANS), neutron reflectometer (NR), inelastic neutron scattering (INS) and neutron imaging (NI) techniques for diverse range of scientific and industrial studies. To fulfill users' requirements and enrich neutron scattering techniques, additional 11 instruments have been proposed in Phase-II (CSNS-II) that will start in the early of 2023. CSNS has immediate openings for more instrument scientist positions to work on the design, construction and operation of neutron instruments of CSNS-II.

Elastic diffuse scattering neutron spectrometer (EDS) is mainly aimed to characterize the short-range order of atomic displacement, vacancies and spins in single crystal sample. Single-crystal time-of-flight neutron diffractometer (SCND) is dedicated to solve crystallographic and magnetic structure of single-crystal samples with the unit cell up to  $\sim 100$  Å. These neutron instruments will consist a suite of single crystal neutron diffraction for studies of material science, condensed matter physics and molecular systems. Currently, 2 positions at CSNS are opening for the instrument scientist of EDS and SCND (one for each).

## *Duties/Responsibilities*

- Design, procure, install and commission the EDS spectrometer and SCND diffractometer.
- Work closely with the lead engineer, forming the core instrument team.
- Operate and develop and EDS and SCND, and scientific uses.
- Collaborate closely with scientist and engineers from different groups and research areas.

- Develop outstanding science and innovative technologies based on the use of neutron scattering techniques, especially neutron diffraction.

### *Qualifications Required*

- PhD in experimental studies in sciences relevant to the EDS and SCND programs, preferably in physics, chemistry, materials and life science.
- Extensive practical experience in neutron or X-ray single-crystal diffraction.
- Expert knowledge of the data analysis software for diffraction (e.g. Fullprof, GSAS, Jana).
- Experience of neutron instrumentation development.
- Ability to work collaboratively and individually.
- Good interpersonal communication and presentation skills, and ability to interact effectively with staff and users at all levels.
- Flexibility to occasional requests to work out-of-hours to support users.
- Responsible attitude to personal safety and the safety of others.
- Good oral and written English.

### *Preferred:*

- Experience with user operation at a large-scale neutron facility.
- Experience with time-of-flight neutron diffraction (powder or single-crystal)
- Practical knowledge of other neutron techniques relevant to materials research (e.g. inelastic scattering, SANS, reflectometry)
- Practical knowledge of polarized neutron scattering and extreme sample environment (low-temperature, magnetic field, high-pressure) experiments.
- Experience of analysis and reduction of single-crystal Time-of-flight neutron diffraction data, as well as crystallographic and magnetic structure refinement.
- Experience of Monte-Carlo simulation of neutron instruments.
- Experience of working in an international environment.

### *Duration and Location:*

The positions are permanent with a three-month initial probationary period and chances of promotion. The payment is based on the rule of CAS and quite internationally competitive. Your work place will be situated in Dongguan, Guangdong province, China.

### *Application and Contact*

Please provide your curriculum vitae and cover letter, as well as a list of publications and invited talks, and arrange for at least three recommendation letters of professional reference. Evaluation of applications will begin immediately and continue until the position is filled.

You can contact Dr. Erxi Feng ([fengex@ihep.ac.cn](mailto:fengex@ihep.ac.cn)) and Xiuhua Fang ([fangxh@ihep.ac.cn](mailto:fangxh@ihep.ac.cn)) for more information about these positions.