

General information

Reference: FLNP JINR-PostDoc-2019-05

Workplace : Frank Laboratory of Neutron Physics JINR (FLNP JINR)

Date of publication : November 1st, 2019

Type of Contract : research fellow

Contract Period : 12 – 36 months taking into consideration the results achieved during the 12 months

Expected date of employment : 15 May 2020

Proportion of work : Full time

Remuneration : approximately 30000 USD gross per year payed in rubles. Final amount will be commensurate with qualifications and experience. 13% income tax is applied in accordance with the RF regulations. Social package: see additional information below

Desired level of education: PhD

Experience required 2 to 5 years of postdoctoral experience.

Missions

The IBR-2 pulsed fast reactor can be rightly referred to as a record-breaking neutron source both as to the intensity of neutron flux in pulse and as to the engineering solutions allowing us to achieve it. IBR-2 is a fast pulsed reactor with mechanical modulation of reactivity.

FLNP JINR has a specialized department for development of neutron spectrometers for condensed matter investigations at IBR-2 reactor and manufacturing components of the spectrometric chain. The Department of Spectrometers Complex has significant experience in development, operating and support the detector systems of different types for the neutron instruments at the IBR-2 reactor. The research fellow has to become an active part of the work group on detectors.

Activities

The design and development of position sensitive detectors based on scintillators, ³He gas, thin films with 10B coverage. Investigation of the new neutron detector technologies and its application in the development of new detectors. Design and development of the full-size prototypes of innovative detectors with adjusting the technologies of its manufacture. The analysis of new and under operation detector's characteristics by the bench tests. Supporting the working parameters of the detectors installed at the neutron instruments at the IBR-2 reactor. Possible supervision of students and internships. Participation in conferences of the appropriate profile with presenting results and its publication in peer-reviewed journals.

Skills

The candidate should have a PhD in physics and proven experience in experimental methods in nuclear physics. The knowledge in neutron scattering methods is welcome. Software knowledge (office tools, computer skills: user level). English proficiency.

Work Context

WORKPLACE: The work is carried out in close cooperation with groups of physicists operating neutron devices at the pulsed source IBR-2, with groups of electronic engineers and software developers. The job will develop in close collaboration with the Detector Group at the Frank Laboratory of Neutron Physics, Department of Spectrometers Complex. The Group's total staff is 12 and includes 4 PhD. The Department's total staff is 52.

Constraints and risks

The postdoctoral fellow will be expected to undertake international travel. During experiments shift work and working on weekends may be necessary. The experiments will be carried out at IBR-2 reactor whereby the necessary authorizations will be attributed following a yearly medical examination arranged by the laboratory.

Additional Information

Applications should include a detailed CV, a brief statement of research interests, list of publications and at least two letters of reference forwarded to Dr. Otilia Ana Culicov culicov@nf.jinr.ru before February 1st 2020.

Social package offered by JINR:

- The employer offers free health insurance covering medical services in the frame of the Russian compulsory medical insurance system.
- The employer will pay no pension insurance.
- The employer can offer accommodation in its own apartments (one-, two- or three-room flat depending on the number of family members) in the limits of availability and the laboratory can partly offset the rent expenses.
- Half price access to the JINR Olympic-size swimming pool and preferential access to the sport infrastructure of JINR.

Short-listed candidates will be invited to an interview, remotely, or in person.