



Postdoctoral Programme in Neutron Instrument Simulation

12-month contract, renewable for another max. 24 months

Your mission

The main objective of this position is the development of new neutron instruments or its elements (like neutron guide, collimator, chopper etc.) for the present operating IBR-2 reactor and for the future neutron source in FLNP reactor NEPTUN. The work content is the performing of simulations in program packages VITESS and McSTAS. The simulations have to provide the optimal characteristics of every element of a neutron instrument for the best quality of the instrument as whole.

Your tasks

You will work with IT group in Spectrometer Complex Department FLNP. Your research programme will focus on:

- Monte Carlo simulations with program packages VITESS and/or McStas.
- Defining the optimal parameters of elements of neutron instruments in collaboration with instrument responsible.
- Making the conclusions and recommendations about the optimal parameters of neutron instrument's elements.

Constraints and risks

Remote work is allowed.

Depending on your citizenship, you may need to obtain a visa and this process can last several months. JINR offers all the necessary support for obtaining the entry permit for the Russian Federation.

Your profile

- Highly motivated candidate with a PhD (obtained less than 5 years ago) in physics, materials science or in a similar field.
- Age under 40, have not had more than 3 temporary positions.
- Strong background in experimental physics is a prerequisite.
- Practical experience in neutron scattering methods would be advantageous.
- As an international intergovernmental research organization, we are particularly keen to ensure that we also attract applicants from outside of Russia. You must have good knowledge of English and be willing to learn Russian (a language course will be provided by JINR).

What we offer

High quality of life

Called the "Island of Stability", the city of Dubna is ideally located on the bank of Europe's largest waterway — the Volga River (only 2.5 hours from Moscow by train or bus and 1.5 hours by car from Sheremetyevo International Airport). It is important for us that our employees quickly and easily adapt to the new living conditions and have a healthy work-life balance. Therefore, we offer accommodation in comfortable guest-house rooms (for singles), or fully furnished flats owned by JINR, and annual paid leave.

Prospects

We guarantee you a **12-months postdoctoral contract, renewable for another max. 24 months (36 month in total)**, in a multicultural scientific environment.

Remuneration

2300 USD per month, paid in Russian rubles at the planned exchange rate (forecasted year-average), which is adopted with the JINR budget for the current year. In 2023, the exchange rate is 69.2 Russian rubles per 1 USD.

Income tax of 13% is applied. The employer shall pay no pension insurance.

Benefits

We offer considerable social benefits: settling-in allowance, air fare (except for family members), free local health insurance for you and your family members, relocation assistance (under certain conditions), free public school or kindergarten attendance for children. We also offer free Russian courses and subsidies for the use of JINR sports infrastructure (Olympic swimming pool, stadium, gym, etc.), as well as access to a variety of cultural activities.

[Apply now](#)



Joint Institute for Nuclear Research (JINR) — operates a large park of accelerators and a reactor based intense neutron source in Dubna (Russia). From the very foundation of the Institute, the implementation of the JINR motto “Science brings nations together” has grown into a special scientific atmosphere of mutual respect and support. Let's work together to better understand the fundamental properties of matter that might enable a quantum leap in the living standards of our society.

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