



## **Postdoctoral Programme in Neutron Diffraction**

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

### **Your mission**

The successful candidate will work with our Diffraction sector. He/she will be involved in the investigation of the crystal structure and phase transformations in crystal materials using neutron diffraction methods. Neutron diffractometry will be carried out at High Resolution Fourier Diffractometer (HRFD) operating at the IBR-2 pulsed reactor. This is a time-of-flight instrument that can be easily switched between high-resolution and high-intensity diffraction modes, which are both used for the analysis of phase transformations. Experiments will be carried out both at room temperature and under conditions of temperature change (heating and cooling).

### **Your tasks**

Your research programme will focus on:

- Pursuing a high-quality personal research programme using neutron diffraction.
- *In situ* neutron diffraction.
- Analysis of large amounts of data.
- Publication of research results in peer-reviewed scientific journals.
- Presentation of results at international scientific conferences and meetings.
- Assistance to users as a local contact for experimental setup and data acquisition, participation in user education as needed, and ensuring users are provided with analysable data when possible.

### **Constraints and risks**

The candidate is expected to go on in-country/international business trips for periods of 1 to 4 weeks. Work in shifts and work on the weekends may be necessary. The work will be carried out at the nuclear reactor, while the necessary authorizations will be issued following an annual medical examination arranged by the employer.

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 or materials science is a prerequisite.
- Practical experience in diffraction (neutron, XRD, EBSD) and electron microscopy (TEM/SEM) 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

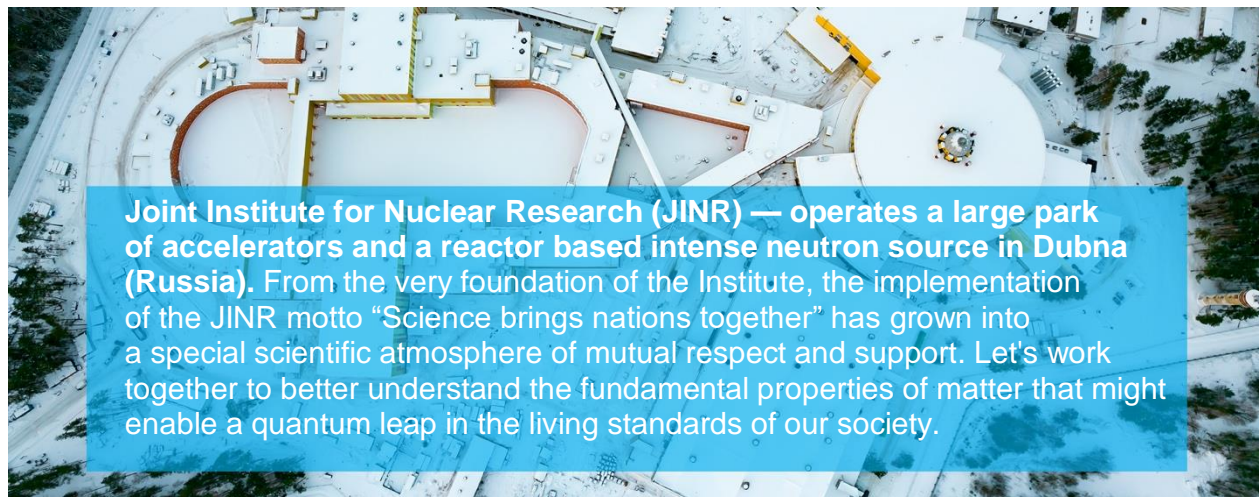
2300 USD per month, paid in Russian rubles at the planned exchange rate (forecasted year-average), which is adopted with the JINR budget for the current year. In 2023, the exchange rate is 69.2 Russian rubles per 1 USD.

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

### Benefits

We offer generous social benefits (settling-in allowance, free health insurance for you and your family members), relocation assistance (under certain conditions), free school or kindergarten attendance for children. We also offer free language 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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