



Institute of Physics of the Polish Academy of Sciences



Job ID: #JOB 32/2024

Job Description

Job Title: Research assistant, Junior postdoctoral researcher.

Job Summary:

The winning candidate will work as a research assistant at the [International Centre for Interfacing Magnetism and Superconductivity with Topological Matter - MagTop](#) of the Institute of Physics of the Polish Academy of Sciences. The Centre and the junior postdoctoral researcher position are supported by the MagTop project (FENG.02.01-IP.05-0028/23) implemented as part of the MAB FENG action of the Foundation for Polish Science co-financed by the European Union from the 2nd Priority funds of the Programme European Funds for Smart Economy 2021-2027 (FENG).

Job Description:

Background: In our group we are building and testing pioneering low temperature functional nanostructures with a special emphasis on superconducting devices. Our expertise involves fast time-resolved thermometry of nanostructures based on the probing of Josephson junctions with short current pulses, which we call the switching thermometry [1, 2]. It allows us to trace the thermal transients with a temporal resolution of a single nanosecond, which appear in the response to a local dissipation. We can directly investigate the dynamics of various energy relaxation channels at the nanoscale. Our second field of interest is vortex electronics. It involves building nanodevices for controlling and manipulating of superconducting vortices to present new functionalities e.g. memory cells and logical elements for application in quantum computing [3, 4].

[1] M. Zgirski, *et al.*, Phys. Rev. Applied 10, 044068 (2018).

[2] M. Zgirski, *et al.*, Phys. Rev. Applied 14, 044024 (2020).

[3] M. Foltyn, *et al.*, Phys. Rev. Applied 19, 044073 (2023).

[4] M. Foltyn, *et al.*, Science Advances, *in press* (2024), arXiv:2402.06427 (2024).

Aim: Conducting research in the field of experimental quantum thermodynamics and superconducting nanodevices in the Functional Superconductivity Group.

Requirements:



- A PhD degree in Physics or in related fields, such as e.g. materials engineering and electronics held for no longer than five years, is required,
- RESPONSIBILITY for the individually defined project,
- Strong interest in the proposed research (please verify on our webpage <http://coolphongroup.ifpan.edu.pl> whether our research profile matches your scientific interest),
- Good soft skills: The candidate should work in harmony with the rest of the researchers,
- Good manual skills,
- Experience in low temperature RF/microwave electrical measurements of nanostructures will be of an advantage,
- Prior experience with Ginzburg-Landau simulations of superconductivity will be of an advantage.

Main research field: Physics

Sub Research Field: Solid State Physics, Nanotechnology, Superconductivity

Career Stage: Junior Postdoctoral Researcher – a person holding a doctoral degree for no longer than five years. The period of five years is counted from the year of obtaining the doctoral degree.

Research Profile ([details](#)): Recognized Researcher (R2)

Type of Contract: Initial employment for a fixed term of 24 months, including a 3-month probationary period. Prolongation of employment for a further 31 months will be based on performance and the successful completion of an evaluation.

Status: Full-time employee

Salary: The person will be employed as a full-time research assistant for a maximum period of 55 months (with all employee benefits and an additional medical insurance package) with a gross salary of PLN 11 200 per month, which is approximately PLN 8 300 net/month. The MagTop project (FENG.02.01-IP.05-0028/23) is implemented as part of the MAB FENG action of the Foundation for Polish Science co-financed by the European Union from the 2nd Priority funds of the Programme European Funds for Smart Economy 2021-2027 (FENG).

Contact

More information can be obtained from: open_positions@MagTop.ifpan.edu.pl

Please make contact.

Application details

Application deadline: 15.09.2024. Later applications will not be considered.

Required materials:

- Detailed scientific CV (up to 3 pages),
- Scan of PhD diploma,



- Full list of publications,
- Cover/motivation letter, please mention earliest possible starting date (up to 1 page),
- Contact details for two researchers who can provide references.
- A statement by the candidate of consent to the processing of personal data for the purposes of recruitment (as below).

All required materials for the position must be sent to open_positions@MagTop.ifpan.edu.pl and rekrutacja@ifpan.edu.pl with the Job ID# as a subject.



DATA PROCESSING UNDER CONSENT FOR THE PURPOSES OF RECRUITMENT

Under Art. 13 sections 1 and 2 of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Resolution), EU OJ L 119 of 04.05.2016, page 1, as amended, hereinafter referred to as "GDPR", we hereby inform as follows:

1. The Data Controller of the provided personal data is the Institute of Physics of the Polish Academy of Sciences, Al. Lotników 32/46, 02-668 Warsaw, phone (22) 116-2111, e-mail director@ifpan.edu.pl.
2. Contact details to the Data Protection Officer are as follows: e-mail iodo@ifpan.edu.pl
3. Your personal data shall be processed for the purpose of carrying out the recruitment process for the position of Research Assistant (Junior Postdoctoral Researcher)
4. Processing of your personal data in scope of: full name, date of birth, correspondence address, information about education and course of past employment shall take place under Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code. In the scope in which you sent to us more personal data than indicated above, we process your data under the consent granted by you.
5. Your personal data shall be stored for 1 month from completion of the recruitment process. If you grant consent for processing of personal data for future recruitments, we shall process your data until withdrawal of the consent by you, however, no longer than for the period of 6 months from the day of submittal of the application by you.
6. Provision of the abovementioned data in the scope indicated above is a statutory requirement resulting from Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code, in the remaining scope it is voluntary. Failure to provide the data referred to in Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code precludes consideration of your candidacy for the offered position.
7. You have the right to access your personal data, to rectify them, erase them, restrict their processing.
8. You may submit a complaint to the Inspector General for the Protection of Personal Data.
9. You have the right to withdraw the consent to process your personal data in the scope in which they were provided at any time. Withdrawing the consent does not affect the lawfulness of processing carried out on the basis of consent before its withdrawal.

Consent content:

☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents for the purpose of carrying out the recruitment process for the position of Research Assistant (Junior Postdoctoral Researcher).*

If you want us to consider your candidacy also in the future recruitment processes, please grant the additional consent:

☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents in future recruitment processes taking place during 6 months from the day of appearance of this job advertisement.*