Job ID: #JOB12/2025

Job Description

Job Title: Research assistant and Phd Candidate

Job Summary:

The winning candidate will work as a ¾ full time 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 and prepare a doctoral thesis in the extramural mode, attending lectures at the Warsaw-4-PhD Doctoral School.

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 Master's degree in Physics or in related fields, such as e.g. materials engineering and electronics, is required (or an equivalent that qualifies one for PhD studies in physics in the country of issue),
- 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: candidate should work in harmony with the rest of researchers,
- Good manual skills,

- Experience in low temperature RF/microwave electrical measurements of nanostructures will be of an advantage,
- Prior experience with the Ginzburg-Landau simulations of the superconductivity will be of an advantage.

Main research field: Physics

Sub Research Field: Solid state physics, Nanotechnology, Superconductivity

Career Stage: Early Stage researcher or 0-4 yrs. (Post-graduate)

Research Profile (**details**)**:** First Stage Researcher (R1)

Type of Contract: Initial employment for a fixed term of 24 months, including a 3-month probationary period. Prolongation of employment until May 31, 2029 (end of the project) will be based on performance and successful completion of a mid-term evaluation performed at a level analogous to that in the PhD school. The doctorate will be carried out in an extracurricular mode.

Status: Part -time employee hired at ¾ of full-time contract
Salary: The person will be employed as a research assistant in a ¾ full time position (with all employee benefits and an additional medical insurance package) with a gross salary of PLN 7263,75 per month, which is approximately PLN 5 500 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: 18.07.2025.

Later applications will not be considered.

Required materials:

- Scientific CV
- Cover letter
- Scan of MSc diploma or equivalent (or an explanation of when one is expected)
- Academic record (for finalized semesters)
- Recommended: A recommendation letter by an academic, or their contact email,
- 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 in electronic form to open_positions@MagTop.ifpan.edu.pl and rekrutacja@ifpan.edu.pl with the Job ID#JOB12/2025 as a subject.

The Institute of Physics of the Polish Academy of Sciences has Rules for Internal Reports specifying the procedure for reporting violations of law and taking follow-up actions, which can be found on the Institute's website at the link:
https://www.ifpan.edu.pl/en/institute/internal-reports-concerning-violations-of-law.html

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
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. 22^1 § 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. 22^1 § 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. 22^1 § 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.*

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.*