



# Institute of Physics of the Polish Academy of Sciences Scholarship for a PhD Student



**Job ID: #JOB 50/2022**

## Job Description

**Job Title:** Student: optical neural networks

**Job Summary:**

The polariton physics group invites to participate in an internship as part of a project financed by the National Science Center.

The duties of the scholarship holder will include conducting theoretical research, in particular modeling quantum effects and physical implementations of optical neural networks.

**Job Description:**

The aim of the internship is theoretical research on a new kind of optical neural networks based on exciton-polaritons in microcavities. It has been shown that such systems can be used to construct optical simulators of spin phenomena known from condensed matter systems. Hybrid light-matter systems are also natural candidates for successors to electronic systems for artificial intelligence applications since, according to fundamental estimates, they can achieve much higher speed and energy efficiency.

**Requirements:**

1. Student in physics at the Master level, in a higher education institution in Poland
2. Basic numerical modeling or programming skills,
3. Ability to work in a team,
4. Interest in the research project topic.

**Main research field:** Physics

**Sub Research Field:** Solid state physics

**Career Stage:** Early stage researcher

**Research Profile** ([details](#)): First stage researcher (R1)

**Type of Contract:** Temporary 12 months

**Status:** Part-time

**Salary:** 1500 PLN per month (untaxed scholarship).

## Contact

More information can be obtained from  
prof. dr hab. Michał Matuszewski (e-mail: [mmatu@ifpan.edu.pl](mailto:mmatu@ifpan.edu.pl)).

## Application details

**Application deadline:** 14 November 2022. Later applications will not be considered.

**Required materials:**

- Curriculum Vitae
- List of publications

- Consent to process your personal data
- Contact details of research supervisor or other collaborators.

All materials should be submitted in electronic form to the address:

[rekrutacja@ifpan.edu.pl](mailto:rekrutacja@ifpan.edu.pl) and [mmatu@ifpan.edu.pl](mailto:mmatu@ifpan.edu.pl) with Job ID in the subject.

### **Information clause – scholarship competition**

Pursuant to Article 13 paragraphs 1 and 2 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals 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 Regulation) Official Journal of the European Union, L 119, 4 May 2016, page 1, as amended, hereinafter referred to as “GDPR”, we hereby inform as follows:

1. The Institute of Physics of the Polish Academy of Sciences with its registered office in Warsaw, Al. Lotników 32/46, represented by its Director, is the Controller, i.e. an entity deciding about how your personal data will be used. You may contact the Controller using one of the contact forms available on the website: tel. (22) 116-2111, e-mail: [director@ifpan.edu.pl](mailto:director@ifpan.edu.pl)
2. The Director of the Institute of Physics of the Polish Academy of Sciences has appointed the Data Protection Officer (DPO), whom you may contact in matters relating to your personal data, by sending an email to the following address: [iodo@ifpan.edu.pl](mailto:iodo@ifpan.edu.pl)
3. Your personal data will be processed in connection with your participation in the scholarship competition and if you win the competition, in connection with receiving the scholarship – on the basis of your consent – Article 6 paragraph 1 item a GDPR.
4. Your personal data will be processed for a period of 6 months after the end of the scholarship competition and in the case of receiving the scholarship – for a period resulting from legal and tax regulations;
5. Your personal data will be made available to other entities that can finance and settle the scholarship granted and entities authorized under provisions of law. Your data will only be accessed by people authorized by the Controller;
6. Provision of your personal data is mandatory; in the event of failure to do so, you will not be able to participate in the scholarship competition;
7. You have the right to access your data, the right to rectify it and limit processing thereof;
8. You have the right to lodge a complaint to the President of the Office for Personal Data Protection, if you consider that the processing of your personal data violates provisions of the General Data Protection Regulation.

#### **Consent to processing:**

I hereby consent to the processing of my personal data contained in the application/request form by the Institute of Physics of the Polish Academy of Sciences to conduct the scholarship competition and in the case of being granted the scholarship, to pay and settle it. I provide my personal data voluntarily and I declare that it is accurate. I have read the content of the information clause.

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Date and signature