UNIVERSITY OF WARSAW

April 2026

Competition for a research scholarship in experimental polaritonics at the Faculty of Physics, University of Warsaw

Project title: Integrated perovskite-polariton circuits for spin logic

Project manager: Helgi Sigurðsson

Name of the unit: University of Warsaw, Faculty of Physics.

Number of seats: 1

Duration of the scholarship: 24 months

Total budget of stipend: 48 000 PLN

Date of commencement of work: 01/07/2026

The scholarship is awarded in accordance with the rules contained in the Regulations of NCN scholarships in research projects financed by the National Science Center introduced by the resolution of the Council of the National Science Center No. 25/2019 of 14 March 2019

Main tasks

We are seeking a responsible and driven individual for a position of a student in Experimental Research Physics in the field of condensed matter physics, quantum light-matter physics, and cavity polaritonics as part of the NCN project 'Integrated perovskite-polariton circuits for spin logic'. The student will be registered in physics within the Institute of Experimental Physics at the University of Warsaw. They will be working at the institute under the supervision of **Dr. Helgi Sigurðsson**, adiunkt and co-supervision of **Prof. Barbara Piętka**. The student's work will mainly be of experimental nature in the lab although we are open to students that are interested in hybrid work with both experiment and theory as part of the study. The focus will be on experimental (optical) characterization of novel nanophotonic structures and lasing devices based on perovskite materials, semiconductor optical microcavities, liquid crystals, and more. The work is done in close collaboration with the groups of prof. Barbara Piętka and prof. Jacek Szczytko.

The student will be working with state-of-the-art experimental equipment and developing expertise in working with lasers, optical characterization, spectroscopic techniques, data gathering and analysis of low dimensional semiconductor systems and nanophotonic structures in the lab. Moreover, the student will help develop theoretical models and numerical techniques to describe photonic transport, interactions of photons and excitons in abovementioned materials, and macroscopic quantum dynamical phenomena such as nonequilibrium Bose-Einstein condensation of polaritons across various cavity geometries. Ultimate goal is to underpin the role of polariton systems in lead-halide-perovskite waveguides, liquid crystal microcavities, and other novel cavity geometries for potential optoelectronic, spinoptronic, and nanolasing applications.

Competence requirements

- B.Sc. in physics.
- Familiarity with quantum mechanics, electromagnetism, condensed matter physics and quantum light-matter interactions.
- Good computer and data analysis skills.
- Familiarity in numerically solving ODEs and PDEs.
- Proficiency in English to read and write scientific papers and communicate with co-workers.
- Independence and ability to work in a team.

How to apply

The candidate must first sent an expression of interest to Dr. Helgi Sigurðsson through Helgi.Sigurdsson@fuw.edu.pl or by visiting office 3.65 at the Faculty of Physics.

Applicants should have the following information ready:

- A cover letter (max 2 pages) stating the candidate's interest in the project, interest in a scholarship program and expectations to the studies and what the applicant has to offer for the project.
- CV, The CV should include a list of publication and presentations, if applicable.
- Any certificates of education (e.g. BSc, MSc, or equivalent) along with the transcripts.
- Contact information for 2 recommenders (phone number and e-mail) along with information about their relationship with the applicant.
- Applicants may include a copy of their BSc or MSc thesis in the application as a PDF document.

Deadline for submission of documents: 15/06/2026

After the first interview stage, the selected candidate should ideally send a formal application for Ph.D. studentship at the University of Warsaw through the Doctoral School and the position is contingent on acceptance into the Ph.D. program.

More info provided by

Dr. Helgi Sigurðsson, adiunkt – Helgi.Sigurdsson@fuw.edu.pl

Information relating to personal data processing

1. Personal Data Controller

Pursuant to Article 13 of the Regulation (EU) 2016/679 of the European Parliament and of the Council 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 Regulation) (hereinafter referred to as "GDPR"), the Controller of your personal data is the University of Warsaw, 26/28 Krakowskie Przedmieście, 00-927 Warsaw.

You may contact the Controller in one of the manners provided at:
https://www.uw.edu.pl/kontakt/.

2. Data Protection Officer (DPO)

The Controller has appointed a Data Protection Officer (DPO who may be contacted about matters concerning your personal data via e-mail at: iod@adm.uw.edu.pl. You may contact the DPO in all the matters regarding the processing of your personal data by the University of Warsaw and executing your rights related to personal data processing.

However, the DPO's duties shall not include other matters, such as current matters related to the concluded contract, receipt of documents related to the performance of the contract, etc.

3. Objectives, legal basis and processing period

Your personal data will be processed for the purposes of:

- conclusion and performance of the scholarship contract – for the term of the agreement (legal basis: Article 6(1)(b) of the GDPR);
- establishment, enforcement or defense of potential contractual claims – for a period of three years from the expiry of the contract (legal basis: Article 6(1)(f) of the GDPR);
- the performance of accounting and tax obligations – for the period of five years from the end of the calendar year (legal basis: Article 6(1)(c) of the GDPR).

For the purpose of performance of the concluded contract, your personal data shall be processed within the scope necessary to perform the concluded contract. All other personal data shall be processed if necessary for the purposes of exercising rights and duties resulting from a legal provision, and/or other applicable regulations.

All your other personal data shall be processed in specific cases after you have given your separate consent to its processing (Article 6(1)(a) of the GDPR), which you have the right to withdraw at any time. Please also be reminded that your withdrawal of consent shall not affect the lawfulness of processing based on your consent before its withdrawal (Article 7(3) of the GDPR).

4. Data recipients

Your personal data may also be shared with parties authorized pursuant to the provisions of law, .e.g. the National Science Center. Access to your personal data shall also be granted to authorized employees of the Controller who must process your personal data as part of their professional tasks and duties.

Other entities that the Controller commissioned to perform certain activities, e.g. providers of services of personal and property protection, postal and courier services, transport services etc., entailing the necessity to process personal data may be data recipients.

You professional data may also be provided to parties to the contracts concluded by the Controller, if it is necessary for the performance of these contracts and results from the contracts concluded.

5. Data transfers outside of the European Economic Area (EEA)

Your personal data may also be processed by Google, our G-Suite for education service provider at their data processing centers.[1]

6. Rights of data subjects

According to the principles specified by the GDPR, you have the right to:

- access your data and receive its copy,
- rectify (correct) your personal data;
- restrict personal data processing;
- erase personal data (subject to Article 17(3) of the GDPR);
- object.

You also have the right to lodge a complaint with the President of the Personal Data Protection Office if you believe that the personal data processing violates the law.

7. Information on the data provision requirement

Provision of your personal data within the scope resulting from the legal and other regulations in order to allow the performance of tasks under the contract concluded is necessary to conclude a contract with you. Providing other personal data is voluntary.

…….. ……..

(Place and date) (Candidate's signature)

[1] https://www.google.com/about/datacenters/locations/index.html