

FORM FOR EMPLOYERS

INSTITUTION Institute of Physics of the Polish Academy of Sciences

CITY Warsaw

POSITION Research assistant, #JOB 22/2026

DISCIPLINE Physics

POSTED 13/07/2026

EXPIRES 16/08/2026

WEBSITE

https://www.ifpan.edu.pl/images/instytut/Oferty_pracy_i_konkursy/2026/2026-07-13_Asystent_022-2026_EN.pdf

KEY WORDS Research assistant, Physics, Quantum mechanics, Warsaw

DESCRIPTION (field, expectations, comments):

Job Summary:

The successful candidate will work as a research assistant (PhD candidate) within the “Quantum Information and Inference” (QI2) group led by dr Jan Kolodynski, within the Division of Theoretical Physics@IFPAN (theory.ifpan.edu.pl). Their work will be devoted to developing novel dynamical models and signal processing methods for quantum sensors within the FIRST TEAM FENG project funded by the Foundation for Polish Science. Apart from conducting scientific research, at the end of the contract the successful

candidate will be obliged to defend a doctoral thesis in the extramural mode. The position demands broad interests in theoretical physics, as it involves research tasks at the intersection of quantum information theory, quantum optics and atomic physics (theory).

Newly employed staff members can count on the support of the Institute's Welcome Centre, whose staff member provides assistance with practical matters related to relocating

to and starting work in Poland, as well as with settling into the new academic environment.

Job Description:

The position is dedicated to research on quantum sensors – optically pumped magnetometers (OPMs) and optomechanical devices – in particular, designing quantum models of their dynamics that involve relevant mechanisms of measurement back-action decoherence and quantum feedback. This will also require development of signal processing tools (incorporate methods of e.g. Bayesian inference, machine learning and control theory) necessary for such devices to leverage quantum effects in real-time sensing tasks.

The research will be conducted in close collaboration with the experimental group of Prof. Morgan Mitchell from ICFO (Barcelona) – examples of previous work include (arxiv:2503.14793, arxiv:2510.11884).

Profile of a candidate for the position:

- MSc title in Physics or in related fields (e.g. Applied Mathematics, Engineering, Computer Science) or an equivalent that qualifies one for PhD studies in Physics in the

country of issue.

- Proficiency in spoken and written English is essential.
- Background in quantum information theory, quantum optics and/or atomic physics (documented by publications, undergraduate BA/MSc thesis or reference letters).

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- Experience in numerical analysis and software engineering will also be an asset.

Main research field: Physics

Sub Research Field: Quantum mechanics

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. Further prolongation of employment will be based on successful progress in research.

Status: Full-time

Salary: The successful candidate will be employed as a Research Assistant until the end of 2029 at the latest, with full employment rights and benefits, including an additional private

medical insurance package. The gross monthly salary will be approximately PLN 9,100, which corresponds to approximately PLN 7,000 net per month, depending on the applicable tax and social security deductions.

The FIRST TEAM project (FENG.02.02-IP.05-0083/23) is implemented as part of the FIRST TEAM 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 dr Jan Kołodyński

(e-mail: jankolo@ifpan.edu.pl).

Application details

Application deadline:

16 August 2026. Applications submitted after the deadline will not be considered.

Interviews (either online or in person) with shortlisted candidates will take place between 7

and 11 September 2026.

Required materials:

- Motivational letter.
- Curriculum Vitae (incl. list of all publications).
- A scanned copy of the Master's degree diploma (or an equivalent qualification), or a statement indicating when the Master's degree diploma is expected to be awarded.
- Transcript of academic records, including especially the grades from all undergraduate courses relevant to the job.
- Reference letter from at least one (recommended: two) scientist holding a PhD title, which preferably should be directly sent by the person providing the letter to jankolo@ifpan.edu.pl.
- Consent to process your personal data (expressed on the form attached to this

announcement).

- Recommended: Electronic printout of the undergraduate thesis, if public and already available (unofficial translation is sufficient if not in Polish or English).

All materials should be submitted in electronic form to the address:
rekrutacja@ifpan.edu.pl

with Job ID #JOB 22/2026 in the 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>