

## FORM FOR EMPLOYERS

INSTITUTION: **Center for Theoretical Physics, Polish Academy of Sciences**

CITY: **Warsaw**

POSITION: **Group Leader position in Neutral Atom Applications at the Center for Quantum-Enabled Computing**

DISCIPLINE: **Physics**

POSTED: **2026-04-01**

EXPIRES: **2026-05-17**

WEBSITE: <https://www.cft.edu.pl>

KEY WORDS: Atomic physics, Simulations, Rydberg Atoms, Many-body quantum physics, Quantum information theory, quantum computing, artificial intelligence, machine learning, quantum computational advantage

# Group Leader in Neutral Atoms Applications (f/m/x)

**Ref. Number: MAB/05/2026**

**Location:** Warsaw, Poland

**Salary: 20 750 - 24 250 PLN/month gross** (approx. PLN 16,300-18,500 net per month);  
employment contract: 1 FTE; full social security and health insurance

**Number of positions available: 1**

**Work Arrangement:** Hybrid

**Start of the position:** Negotiable, preferably on July 1, 2026

**Period of employment:** *Until the end of 2029.* Employment may be extended beyond the project period under a standard CTP PAS contract and salary scale, subject to a positive performance evaluation.

**Keywords:** Atomic physics, Simulations, Rydberg Atoms, Many-body quantum physics, Quantum information theory, quantum computing, artificial intelligence, machine learning, quantum computational advantage

### Important Dates:

- Application deadline: May 17, 2026.
- Candidates will be informed about the results by the end of June 2026.

**Source of financing:** Center for Quantum-Enabled Computing / Centrum Obliczeń Wspomaganych Kwantowo (FENG.02.01-IP.05-M032/25). The project is carried out within the International Research Agendas programme of the Foundation for Polish





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Science co-financed by the European Union under the European Funds for Smart Economy 2021-2027 (FENG).

## About the project and us

The *Center for Quantum-Enabled Computing* project's overarching objective is to address several key challenges in the field of computing by paving the way to a verifiable, energy-efficient, reliable, and scalable computational advantage based on quantum systems.

Project temporary website: <https://remik24-web.github.io/QT-website/>

The candidates are welcome to inquire about the project details, research agenda and organizational issues. The questions should be sent by email to R. Augusiak (<http://raugusiak.weebly.com>): [augusiak@cft.edu.pl](mailto:augusiak@cft.edu.pl)

The Center for Theoretical Physics of the Polish Academy of Sciences (CFT PAN) is a research institute that conducts research in various fields of physics, including quantum information, research on the cosmos and gravitation, semiconductors, and atomic gases. The Institute's strategy is to employ the strongest scientists while giving them freedom in conducting research. The result is the high position of CFT PAN in Poland, publications at a world-class level (papers in *Nature* and *Science*), a large number of grants (approximately 30 projects), and participation in international consortia.

The CTP PAS also hosts a number of scientific events, including seminars, workshops, and conferences, which are open to the public. The Institute also creates educational content accessible on its official [YouTube](#) channel.

## About the role

We are seeking a person who will lead the ***Neutral Atoms Applications Group*** of the newly established Center for Quantum-Enabled Computing (within the structures of the [Center for Theoretical Physics of the Polish Academy of Sciences](#)) — the first scientific unit in Poland dedicated to the application of quantum effects in computing. The focus of the Group will be on combining theoretical research with potential implementations. The possible research topics include (but are not limited to):

- Development of strategies for achieving fault tolerance and efficient quantum error correction and mitigation tailored to neutral-atom quantum computing and simulation platforms.
- Design of optimal many-body gate implementations, together with the exploration of measurement-free error correction protocols and the integration of mid-circuit measurements with real-time feed-forward control.



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- Development of scalable architectures for hybrid analog–digital quantum computation and simulation on neutral-atom platforms, combining analog Hamiltonian evolution with digital gate-based control to optimize performance, resource efficiency, and robustness to noise.
- Optimization of quantum simulation protocols, including the identification of non-trivial Hamiltonians that can be reliably simulated using Rydberg platforms, as well as their experimental implementation in collaboration with the University of Stuttgart; this also includes the study of circular Rydberg state microwave qubits and their quantum-logic mapping to clock qubits.

Your responsibilities will also include:

- Contributing to the research agenda and leading the research of their group and being responsible for implementation of related milestones, in cooperation with other group leaders.
- Conducting world-class research oriented towards applications of quantum computing, quantum algorithms, or machine learning.
- Publishing articles in top-tier journals and disseminating results on thematic conferences.
- Applying for external funding from key national and international agencies, including National Science Center (NCN) or ERC.

Researcher's profile according to the European Council's recommendations: R2 or R3.

## About you

The candidate must meet the following criteria:

- **PhD degree in physics** (or a related discipline relevant to the research agenda) obtained by the application deadline.
- **Proficiency in English** (spoken and written); knowledge of Polish is an asset.
- **Strong track record of scientific achievements** related to the scope of the group, demonstrated by publications in recognized journals and invited conference presentations.
- **Experience in leading a research team** or demonstrated leadership potential.
- **Experience in conducting research projects**, acting as a Principal Investigator (PI) or Co-Investigator.
- **Openness to internal and external collaborations**, including international networking.



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- **Experience in the commercialization** of research results and collaboration with industry is a significant advantage.
- **Experience in supervising students or PhD students** will be considered an advantage.

Additionally, if selected for the position of Research Group Leader, the candidate accepts that the position involves:

- full-time employment at the Center for Quantum-Enabled Computing (may be reduced to 50% in the case of ERC awardees),
- transferring their current externally funded research projects to the C4QEC (provided that the rules of the funding agency and, where applicable, the current employer allow it), as the place of their implementation, provided that the research topic is aligned with the C4QEC Research Agenda.

At the same time, the C4QEC employee's maximum total professional commitment to all projects carried out at CTP PAS and other units may not exceed 276 hours per month.

## What we offer

- Competitive salary: PLN 20,750–24,250 gross per month (approx. PLN 16,300-18,500 net per month). The indicated amount includes the seniority allowance. In addition, the Employee may be entitled to bonuses, awards or other remuneration components in accordance with the Remuneration Regulations binding at the Institute. The remuneration is determined and paid in accordance with the Remuneration Regulations in force at the Institute.
- Possibility to apply for additional internal or external funding;
- Leadership over an independent research group;
- Open Access publishing support;
- Funds to conduct applied research (TRL>1) in the domain of quantum computing and/or machine learning;
- Possibility to file patent applications within the project;
- Funds to employ 3 other researchers: 1 postdoc and 2 PhD students and also several students;
- Funds for participation in scientific events (conferences, workshops, etc.) to disseminate project's results, inviting collaborators, research visits at partner institutions;
- Possibility to conduct research/teaching project in collaboration with students;
- Office space for the team;
- Access to training and career development opportunities at CTP PAS;
- Access to computational resources at CTP PAS.

## How to apply



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approach each candidate individually, also considering the needs of people with disabilities.

We appreciate all feedback received after the recruitment process. It motivates us to improve our recruitment efforts.

## **Our commitment to Equality, Diversity and Inclusion**

The CTP PAS operates in an all-inclusive environment irrespective of personal, physical, or social characteristics. Teamwork is highly valued, individual strengths are recognised and appreciated, and we are committed to advancing the careers of everyone.

Equality, respect, and openness are fundamental values in an academic environment, where diversity is essential. We strive to provide a safe and inclusive space for everyone who is part of our scientific community.

The CTP PAS has regulations for reporting violations of law and protection of whistleblowers.



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