

## **Director of Institute of Theoretical and Applied Informatics, Polish Academy of Sciences announces open competition for post-doc position in Quantum Systems of Informatics Group**

INSTITUTION: Institute of Theoretical and Applied Informatics, PAS

CITY: Gliwice

COUNTRY: Poland

POSITION: post-doc (in polish adiunkt)

DISCIPLINE: informatics

POSTED: 24.04.2020

DOCUMENTS SUBMISSION DEADLINE: 25.05.2020 12.00

URL: [www.iitis.pl](http://www.iitis.pl)

KEYWORDS: quantum information; quantum machine learning; control of quantum systems;  
quantum error-correction; quantum speedup.

### DESCRIPTION:

Project title:

Near-term quantum computers: challenges, optimal implementations and applications

Project is carried out within the Team-Net programme of the Foundation for Polish Science

### Project description:

Quantum computers promise savings in time and effort necessary to perform certain computational tasks, which themselves are of great practical relevance for many branches of science and industry. Building a working quantum computer is a notoriously difficult task due to the destructive influence of noise and decoherence affecting large-scale quantum systems. Therefore, one expects that in the near future only devices consisting of a limited number of imperfect qubits (basic units of quantum computers) will be available. Our project aims to characterize the computational power and to investigate possible practical applications of such devices. To realize these ambitious goals, we will form a network of closely collaborating research groups working on cutting-edge aspects of quantum computing: quantum machine learning, control of quantum systems, quantum error-correction and identification resources responsible for quantum speedup.

### Project leader:

Prof. dr hab. Marek Kuś / Group leader dr hab. Zbigniew Puchała

### Requirements:

- having a doctoral degree in computer, mathematical or physical sciences; the doctoral degree must be obtained before the employment date. Candidates with planned dissertation defense must send confirmation of their defense date from the relevant Scientific Council.
- experience in scientific research, confirmed by authorship or co-authorship of publications from the following fields:
  - Quantum information theory,
  - Numerical calculations,
  - Classical probability theory,
- good team-working skills;

- fluent spoken and written English.

List of required documents:

- Curriculum Vitae (containing **email address** to which recruitment results will be sent);
- research record with a list of publications, and list of research projects (especially those in which the candidate was the principal investigator);
- copies of five most important papers of the candidates;
- a list of talks at selected conferences and workshops;
- a list of academic prizes and awards;
- documents confirming the scientific degrees (copies of Master, PhD, habilitation diplomas if applicable); candidates with planned PhD dissertation defense must send confirmation of their defense date from the relevant Scientific Council;
- names and contact details (e-mail addresses) of at least one senior researcher who may act as reference for the candidate
  - the candidate is expected to contact the reference and ask them to email reference letter to **konkursy@iitis.pl**; the letter must be sent before the deadline.
- statement that in case of employment, the IITiS PAN will be a place of scientific activity in the field of technical computer science and telecommunications within the scope of the Act of 20 July 2018 - Law on Higher Education and Science (pol. *oświadczenie stwierdzające, że w przypadku wygrania konkursu IITiS PAN będzie miejscem prowadzenia działalności naukowej w dyscyplinie informatyka techniczna i telekomunikacja w rozumieniu ustawy z dnia 20 lipca 2018 r. – Prawo o szkolnictwie wyższym i nauce*);
- additional documents (or copies) verifying qualifications.

Job applications have to be submitted personally or by mail to Secretary of Institute of Theoretical and Applied Informatics, PAS to the address:

Instytut Informatyki Teoretycznej i Stosowanej PAN,  
ul. Bałtycka 5,  
44-100, Gliwice, Poland.

On the envelope it should be written: “**NTQC post-doc**”. The deadline for submitting applications expires on **25.05.2020** (date of receipt).

An interview is expected. Selection committee reserves the right to invite for the interviews only preselected candidates. The interviews will be held in the last week of May (the confirmation will be sent to the prospect candidates shortly after the application deadline).

We offer full time employment contract from 1 June 2020. Minimum period of contract is 6 months, with possibility of extension, maximally till 30 June 2023 (36 months), subject to periodical evaluations. The Institute does not provide accommodation.

RENUMERATION:

- 15 000 PLN of remuneration (pol. brutto brutto) cost, i.e. expected net salary at around 9 600 PLN (2 100 EUR), for senior post-doctoral researcher (6-9 years after obtaining PhD).

- 10 000 PLN of half remuneration cost, i.e. expected net salary at around 6 400 PLN (1 400 EUR) for junior post-doctoral researcher (up to 5 years after obtaining PhD)

The competition is organized under the project carried out within the Team-Net programme of the Foundation for Polish Science, and is subject to "Team-Net competition regulations".

The decision of the Selection Committee will be announced on the webpage of IITiS PAN ([www.iitis.pl](http://www.iitis.pl)) and through emails to candidates. The decision of Selection Committee is subject to appeal within 7 days from its announcement.

According to Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, we also require that by applying, a candidate expresses his/her consent to the processing by the Institute of Theoretical and Applied Informatics, Polish Academy of Sciences of his/her personal data needed for the recruitment process.