

## JOB OFFER

Position in the project:	Scientific Programmer / Software Engineer / Postdoc
Scientific discipline:	Computer science / Physics / Mathematics
Job type (employment contract/stipend):	Full time employment contract
Number of job offers:	1
Remuneration/stipend amount/month ( <i>"X0 000 PLN of full remuneration cost, i.e., expected net salary at X 000 PLN"</i> ):	12000 - 18000 PLN Full remuneration costs (depending on experience). Expected <b>net salary</b> 12000 PLN (2500 Euro)
Position starts on:	01.03.2023 (starting date is flexible)
Maximum period of contract	10 months
Institution:	Center for Theoretical Physics, Polish Academy of Sciences
Project leader:	Dr hab. Michał Oszmaniec
Project title:	National Supercomputing Infrastructure for EuroHPC - EuroHPC PL
Project description:	<p>The main goal of the project is to develop comprehensive library for characterization, certification, and error-mitigation of for near-term quantum computers (including prototypes of IBM quantum computers). We will design modules for effective characterization and mitigation of errors on these devices. We will use the latest scientific research in the field of quantum computing while being compatible with the Qiskit and Bracket environments.</p> <p>This project is a part of a larger initiative aiming at providing access to quantum computers to the industry and scientific community in Poland. The resource-efficient characterization and error mitigation schemes will allow the use of the full potential of noisy and imperfect quantum computers both for research purposes and for potential practical applications such as quantum chemistry or combinatorial optimization problems. In technical terms, the project is a medium size Python package containing several modules, extensively using object oriented programming.</p>
Key responsibilities include:	<ul style="list-style-type: none"> <li>• Conducting surveys of currently available methods of characterization and error mitigation on NISQ devices</li> <li>• Developing software for quantum characterization and error-mitigation on NISQ devices, specifically               <ol style="list-style-type: none"> <li>a. Implementing new functionalities in the package</li> </ol> </li> </ul>

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	<ul style="list-style-type: none"> <li>b. Adding new modules based on implementation of existing algorithms and methods</li> <li>c. Refactoring already written code</li> <li>d. Optimizing and implementing numerical algorithms for quantum computing related purposes</li> <li>• Preparation of progress reports and documentation for the project</li> <li>• Integration with Qiskit, Bracket and other quantum programming environments such as Qibo</li> <li>• Designing proof-of-principle experiments for testing of the developed software</li> </ul>
Profile of candidates/requirements:	<ul style="list-style-type: none"> <li>• PhD (at the moment of starting of the position) in Physics, Mathematics, Computer Science, or related fields</li> <li>• strong background in Python development</li> <li>• strong skills in object oriented software design basic knowledge and interest in numerical programming</li> <li>• detail oriented, analytical and creative thinking with passion for quality</li> <li>• experience with quantum computing and familiarity with Qiskit, PyQuil, Cirq or similar libraries is a plus</li> </ul>
Required documents:	<ul style="list-style-type: none"> <li>• Curriculum vitae.</li> <li>• Research record with a list of publications, R&amp;D and research and programming projects.</li> <li>• PDF files of up to five most important papers of the candidates; a list of talks at conferences and workshops, and a list of academic prizes and awards.</li> <li>• Motivation letter.</li> <li>• Name 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 <a href="mailto:rekrutacja@cft.edu.pl">rekrutacja@cft.edu.pl</a>. The letter must be sent before the deadline).</li> </ul>
We offer:	<ul style="list-style-type: none"> <li>• Full-time employment for the period of 10 months with the possible further extensions from other Quantum Software – related projects</li> <li>• Working in the friendly and energetic environment of passionates of quantum computing (website of the group: <a href="http://www.quantin.pl">www.quantin.pl</a>)</li> <li>• Access to quantum hardware: <b>Rigetti, ION Q, IBM</b></li> <li>• Access to trainings carried out within the group</li> <li>• Possibility of attendance of international conferences and scientific exchanges</li> </ul>

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Please submit the following documents to:	Submit to email address: <a href="mailto:rekrutacja@cft.edu.pl">rekrutacja@cft.edu.pl</a> . Please write in the title of the email <b>MO/02/2023</b> until <b>03.02.2023</b> .
Application deadline:	12:00 CEST <b>03.02.2023</b>
	<p>An interview is expected. Selection committee reserves the right to invite for the interviews only preselected candidates.</p> <p>Interviews will take place in June (confirmation will be sent to candidates shortly after the application deadline).</p> <p>Seniority of candidates will not be preferred by default. Instead, the Selection Committee will assess the expertise of the candidates, bearing in mind their qualifications and achievements at the career stage they are currently at.</p>
Euraxess job offer	<a href="https://euraxess.ec.europa.eu/jobs/61787">https://euraxess.ec.europa.eu/jobs/61787</a>

**Information Clause – Job Recruitment****Information Obligation under the Article 13 of the RODO \*:****1. Data Administrator**

The administrator who is a deciding entity on how your personal data will be used is the Center for Theoretical Physics PAN represented by the Director with the seat in Warsaw Al. Lotników 32/46. You can contact the Administrator by using one of the contact forms available on the website: : <http://www.cft.edu.pl/>

**2. Data Protection Inspector**

The Director of the Center for Theoretical Physics of the Polish Academy of Sciences has appointed the Data Protection Inspector (Inspektor Ochrony Danych - IOD) with whom you can contact in all matters relating to your personal data. You can contact the Inspector by sending an email to: [iod@cft.edu.pl](mailto:iod@cft.edu.pl)

**3. The Purposes of Processing and the Legal Basis for Processing**

Your personal data will be processed for the purpose of running the current recruitment.

The basis for the processing of personal data are the provisions of the Labor Code Act of June 26, 1974 (uniform text: Dz. U. of 2018, item 917) and based on your consent for data processing.

**4. The Period of Storage of Personal Data**

Your personal data will be kept for the duration of the present recruitment.

**5. Data Recipients\*\***

The recipients of your personal data will be only entities authorized to obtain personal data on the basis of the law. Access to your data is provided only to employees authorized by the administrator and associates who must have access to the data to perform their duties.

**6. Your Processing Rights**

You have the right to access your data and the right to correct it or limit processing, as well as the right to appeal against the processing.

**7. The Obligation to Provide Data and the Consequences of not Providing Data**

Providing your personal data specified in the Labor Code is obligatory, and for the remaining extent voluntary.

**8. The right to make a complaint to the President of the Office for the Protection of Personal Data**

When you feel that the processing of personal data violates the provisions of the general regulation on the protection of personal data, you have the right to make a complaint to the President of the Office for the Protection of Personal Data.

**Consent to Data Processing**

**I consent to the processing of my personal data by the Center for Theoretical Physics PAN for the needs of:**

☐ Present recruitment.

I provide the data voluntarily and I declare that they are truthful. I got acquainted with the contents of the above information, including information about the purpose and methods of processing personal data and the right to access my data and the right to correct them.

.....  
signature of the employee

\* 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 regulation on data protection)