

JOB OFFER

Position in the project:	Master-student
Scientific discipline:	Theoretical Physics
Job type (employment contract/stipend):	scholarship
Number of job offers:	1
Remuneration/stipend amount/month ("X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"):	2000 PLN scholarship (440 EUR)
Position starts on:	01.06.2021
Maximum period of contract/stipend agreement:	2 years
Institution:	Center for Theoretical Physics, Polish Academy of Sciences
Project leader:	Prof. dr hab. Marek Kuś / Group leader dr hab. Michał Oszmaniec
Project title:	Near-term quantum computers: challenges, optimal implementations and applications <i>Project is carried out within the Team-Net programme of the Foundation for Polish Science</i>
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.
Key responsibilities include:	<ol style="list-style-type: none">1. Conducting research2. Writing scientific papers.3. Preparation of Master thesis dissertation4. Participation in scientific conferences

Profile of candidates/requirements:	<ol style="list-style-type: none"> 1. Having a status of a student in Poland 2. Interest in the practical and mathematical aspects of quantum computing 3. At least basic knowledge of quantum information theory or quantum computing 4. Optionally (not all skills are required at the same time): <ol style="list-style-type: none"> a. programming experience (C ++, Python or Matlab), b. experience in programming on quantum computers (Qiskit, Forest) c. basic knowledge of mathematical physics (e.g. representation theory of Lie groups and Lie algebras, operator theory)
Required documents:	<ol style="list-style-type: none"> 1. Curriculum vitae; 2. Transcript of grades 3. Motivation letter 4. Research record with a list of publications, and list of research projects; PDF files of the most important paper of the candidates; a list of talks at conferences and workshops, and a list of academic prizes and awards;
We offer:	<p>Scholarships for the period of up to two years, subject to periodical evaluations. Scientific and organizational support; Basic equipment and core facilities.</p> <p>The Institute does not provide accommodation.</p>
Please submit the following documents to:	<p>Submit by email to Michał Oszmaniec (oszmaniec@cft.edu.pl)</p> <p>Please write in the tile of the email “NTQC master-student”</p>
Application deadline:	12:00 CET 23.05.2021
For more details about the position please visit (website/webpage address):	<p>An interview is expected. Selection committee reserves the right to invite for the interviews only preselected candidates. The interviews will be held in the second half of October (the confirmation will be sent to the prospect candidates shortly after the application deadline).</p>
Appeals	<p>Possible appeals against the decision should be sent to Michał Oszmaniec (oszmaniec@cft.edu.pl) no later than 7 days after receiving the decision, i.e. the date of results announcement. In the protest an explicit justification have to be included.</p>

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 Center for Theoretical Physicists, Polish Academy of Sciences of his/her personal data needed for the recruitment process.