Funded by the European Union

This project has received funding from the European Union's Horizon Europe Research and Innovation programme under Grant Agreement No. 101070558

JOB OFFER – Research Assistant_ABS_2024_07

Position in the project:	**Research Assistant for the Foundational Underpinnings of Quantum Technologies Group in "Foundations of quantum computational advantage" project**
Scientific discipline:	quantum physics (including foundations of quantum theory, quantum information, quantum computation, categorical quantum mechanics)
Job type (employment contract/stipend):	employment contract
Number of positions offered:	2
Remuneration/stipend amount/month:	gross monthly salary up to PLN 13 000 (depending on experience based on research resume and publication record)
Position starts on:	employment date is negotiable, no later than 01.09.2024
Maximum period of contract/stipend agreement:	9 months with possibility of extension
Institution:	International Centre for Theory of Quantum Technologies, University of Gdansk, Poland
Project leader:	Dr hab. Ana Belen Sainz, prof. UG
Project title:	*Foundations of quantum computational advantage – FoQaCiA* (project number: Project 101070558 — FoQaCiA) The project is financed from the Horizon Europe Framework Programme (HORIZON), granted by the European Commission, within the type of action HORIZON Research and Innovation Actions (HORIZON-RIA) - call Digital and emerging technologies for competitiveness and fit for the green deal (HORIZON-CL4-2021-DIGITAL-EMERGING-01).
Project description:	<u>About project</u> We are looking for an enthusiastic and motivated Researcher to work in the International Centre for Theory of Quantum Technologies (ICTQT), in the Foundational Underpinnings of Quantum Technologies led by Ana Belen Sainz. The selected candidate will work on foundational questions of quantum computation, such as - What non-classical feature of physical systems powers quantum advantage? - How can such a resource be certified? <u>Keywords:</u> process theories, resource theories, Bell nonlocality, contextuality, quantum computation. More information on the scope of the group may be found at www.fuqt.eu <u>About the ICTQT</u> The International Centre for Theory of Quantum Technologies (ICTQT) is a joint research unit of the University of Gdańsk (UG) and the Institute of Quantum Optics

	and Quantum Information of the Austrian Academy of Sciences (IQOQI-Vienna) subordinated to the UG Rector. ICTQT was established in 2018 as a part of the International Research Agendas program co-financed by the Foundation for Polish Science. The founders of ICTQT are Marek Zukowski and Pawel Horodecki. ICTQT is a pioneering and leading quantum information research center in Poland, focused on quantum communication and new computing techniques. The purpose of the ICTQT is to conduct scientific research and development works under the adopted ICTQT Research Agenda, in an international academic environment and at the highest academic level, with due regard for high ethical standards, good academic practice in particular, and to disseminate knowledge. ICTQT is located in Gdańsk, near Gdynia and Sopot, which together form Tri-City. The mentioned region is the cradle of Polish jazz and rock festivals. Moreover, it is one of the most beautifully located urban areas in Poland, with sandy sea beaches, lakes, and woods in the nearby area. More information at: www.ictqt.ug.edu.pl
Key responsibilities include:	1. Active scientific research. 2. Presentation and discussion of ideas and results with a diverse audience at ICTQT and at external events. 3. Participation in activities organised by ICTQT. 4. Participation in seminars, group meetings, and other activities of scientific exchange.
Profile of candidates/requirements:	1. MSc degree in physics, mathematics, computer science, or philosophy. Applications from doctoral students studying in their 3rd and 4th year are welcome. 2. The candidate should be interested in mathematical and conceptual foundations of quantum mechanics and quantum information, and related topics, especially those which are within the research agenda of the group (see www.fuqt.eu). 3. The candidate should be committed to working collaboratively within an inclusive and diverse environment. 4. Some experience in numerical calculation/optimization is welcome. 5. Good written and oral communication skills are appreciated.
We offer:	1. Full-time employment in a rapidly developing unit, the International Centre for Theory of Quantum Technologies at the University of Gdansk. The start date of employment is negotiable; 2. Scientific and organizational support; 3. Basic equipment and core facilities; 4. Friendly, inspiring, and interdisciplinary environment, which features close connections to the National Centre for Quantum Information (KCIK) and the Institute for Theoretical Physics and Astrophysics (IFTiA) at UG. 5. Integration into an interdisciplinary team of Canada-wide and European scientists: UBC (Raussendorf), Ottawa (Broadbent), Waterloo (Yard), SFU (de Silva), INL Portugal (Galvão, Barbosa), UCL (Abramsky), Stockholm (Bengtsson), Granada (Bermejo-Vega), Sevilla (Cabello), Bilkent (Okay).
Required documents:	1. Recruitment form; 2. Curriculum vitae; 3. A research resume with a list of publications (if any), and a list of research projects (if any) in which the candidate took part (with specification of the role); a list of invited talks at conferences and workshops (if any), and a list of academic prizes and awards (if any); 4. PDF files of (at most) three most relevant papers by the candidate (or just web links, in the case of open access publications); 5. Motivation letter (including statement of current scientific interests)– up to 1 page; 6. The reference letter about the candidate sent directly by at least one senior researcher (**the candidate is expected to contact the referees and ask them to**

	send reference letters directly to ictqt-careers@ug.edu.pl. **The letters must be sent before the deadline for submitting applications)**; 7. Documents confirming scientific degrees (a scan of MSc diploma) 8. NOTE: Before signing the employment contract, the person selected in the competition is requested to submit to the University of Gdańsk the original of the MSc diploma. At the stage of employment, other documents will not be honored.
General rules of the recruitment process:	The recruitment procedure has two stages: - Pre-selection candidates by the Selection Commission (SC), based on the application form; - Interview of the pre-selected candidates by the SC; 1. An interview is expected at the beginning of July 2024. 2. ICTQT Selecting Commission (SC) reserves the right to invite for the interview only pre-selected candidates. 3. SC's decision is final and is not subject to appeal. 4. SC reserves the right to close the competition without selecting a candidate. 5. The decision on the selection of the candidate will be made within one month from the deadline for submitting applications. 6. In the event of resignation from accepting the position of the selected candidate, the SC has the right to send the offer to the person placed on the reserve list, and in the absence of such a list, the SC has the right to reconsider the applications submitted to the competition and to indicate a new candidate.
Please submit the documents to:	ictqt-careers@ug.edu.pl
Application deadline:	June 28, 2024, 8:00 am CET
For more details about the position please visit:	https://ictqt.ug.edu.pl/pages/careers/ and https://euraxess.ec.europa.eu/jobs/