PhD position at Jagiellonian University in Kraków within the Quantera project
"*Dissipative Quantum Chaos Perspective on Near-Term Quantum Computing*"
Number 2021/03/Y/ST2/00193 funded by Polish National Science Centre

Principal Investigator: Karol Życzkowski
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www: https://chaos.if.uj.edu.pl/~karol/

Requirements:
1. Holding a master degree in physics preferentially with specialization in theoretical physics;
2. An additional advantage will be:
   a) experience in theory of quantum information
   b) knowledge of mathematical physics and strong analytic skills
   c) experience in numerical methods.

Scope of work:
The objective of this project is to develop a methodological approach to practical use of current and near-term quantum computer prototypes. The project focuses on *major challenges that prevent broad applications of some quantum technologies*. The aims of the project are control of open quantum systems and to develop methods for the reconstruction and estimation of complex quantum states or channels. The project will advance our knowledge on how to enhance the robustness and scalability of quantum information technologies in the presence of environmental decoherence.

The PhD student will work on modeling intrinsic decoherence as quantum operations, studies on quantum computing in presence of external noise, superoperator description of quantum algorithms and dissipative quantum error correction.

Conditions of fellowship:
gross monthly fellowship 5.000,00 PLN
30 months - preferable starting date: October 2022

Applications should be sent by email to: karol.zyczkowski@uj.edu.pl
not later than August 31, 2022
The candidates can be called for online interview.

The candidates, who would like to take part in the competitive selection process, should submit the following documents to Principal Investigator via e-mail:
1. application form;
2. CV;
3. copy of the master diploma;
4. information on the candidate's scientific achievements;
5. recommendation letter concerning the candidate's research prepared by scientific supervisors;
6. information regarding processing of personal data.

INFORMATION ON DATA PROCESSING
in the competitive procedure and the agreement for the implementation of research and funding of a scholarship awarded by the National Science Center

According to the Art. 13 of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data (…) (General Data Protection Regulation, hereinafter referred to as "GDPR") Jagiellonian University informs that:

1. **The controller** of your personal data is Jagiellonian University, Golębia 24 Str., 31-007 Kraków, represented by the JU Rector.

2. The controller's representative designed for this purpose is the **Data Protection Inspector,** Gołębia 24 Str., 31-007 Kraków, office 31. You may contact him through his e-mail: iod@uj.edu.pl, or by phone: 12 663 1225.

3. Your personal data will be processed according to the Art. 6.1. b) **in order to** carry out the necessary procedures for the scholarship competitions, the award of scholarships in research projects funded by the National Science Centre, and in the case of election of a Scholarship Holder in connection with the conclusion of an agreement for the scholarship payment and activities related to the collection of scientific scholarship according to the Regulations for granting scientific scholarships in the scientific projects funded by the National Science Centre, the project grant agreement "…………" (Hereinafter referred to as the "Project"), under which is the competition for the position of Scholarship Holder.

4. Providing personal data is voluntary, but necessary to participate in the recruitment procedure, and in case of being accepted - is a condition for signing a project financing agreement and implementation of an agreement for the scholarship payment.

5. The recipients of your personal data **will be**: the National Science Centre based in Krakow, institutions evaluating or controlling the correct implementation of the project within which the agreement was concluded, auditors acting in accordance with the law or on behalf of Jagiellonian University, institutions such as the Supreme Chamber of Control, the competent tax office and the Social Insurance Institution, other entities authorized to obtain data on the basis of the law and the grant agreement concluded with the National Science Centre.

6. Your personal data will not be transferred to third countries (outside the European Economic Area) or to international organizations. If, however, your data in the recruitment process is transferred to the Jagiellonian University in an electronic version, they can be processed in the Office 365 OneDrive cloud based on the entrustment agreement between the Jagiellonian University and Microsoft and on the basis of a document called the "Privacy Shield" implemented by Microsoft.

7. Your personal data **will be processed for the period**: until the completion of the project and settlement of the project financing agreement concluded with the National Science Centre,

and then until the expiry of the period of prescription under the grant agreement; for archiving purposes - for a period of time prescribed by law.

8. You have the **right to**: obtain information about the processing of personal data and rights granted in accordance with the GDPR, access to your data and its rectification, as well as the right to delete personal data from the administrator's bases (unless further processing is necessary for the implementation of legal obligation or to establish, investigate or defend claims), and the right to limit the processing, data transfer, objecting to the processing - in the cases and on the conditions specified in the GDPR.

9. Your personal data will not be subject to automatic decision making or profiling.

10. You have the right **to complain to the President of the Office for Personal Data Protection** in the event of recognition that the processing of your personal data violates the provisions of the GDPR.

I confirm that I have read and accept the information above.

………………………………………………………………
place, date, signature