

Institution: Institute of Informatics, University of Gdańsk

Position: adjunct at the University of Gdańsk (post-doc)

Necessary degrees/skills:

1. PhD degree in Physics, Mathematics or Computer Science
2. Experience in quantum information theory.
3. High motivation in scientific research reflected by publications, attending conferences/workshops, reference letters from tutors, experience in co-working
4. Fluent in both spoken and written English
5. Soft skills, among others communicability, ability to work in a team, ability to help doctoral students in their work.

Objectives:

Sending information in a secure way is one of the pending problems of our civilization. Quantum Information theory offers new tool to address them which is quantum cryptography. There are different levels of trust: full resulting in present quantum cryptographic solution when user trusts the provider of quantum cryptographic devices. The other is partial, when one trusts only the statistics of inputs and outputs of these devices – this is quantum device-independent cryptography. Research within this project is devoted mainly to two aspects of quantum cryptography: its device dependent and independent version, as well as cryptography based on the non-signaling condition. It will concern also on general properties of non-signaling and contextual systems, especially in context of quantum computation. Within first aspect of the project, it will be studied properties of quantum private states, and use of the latter in multipartite quantum networks. Within the second one, we will study properties of non-signaling systems in context of secret key distillation and private randomness amplification in presence of eavesdropping and hacking.

Type of the competition: National Science Centre: SONATA BIS – ST

Deadline: 31.07.2017, 00:00 of CET zone.

How to apply: via e-mail khorodec@inf.ug.edu.pl

Employment:

Full time employment , from 6 to 24 month contract. Longer contracts are preferred. Additionally, the financial support of abroad scientific visits and attending conferences is assured by the project. We offer excellent environment based on interaction in other scientific groups of National Quantum Information Centre in Gdańsk, where my group is located (below the link to NQIC website):

<http://kcik.ug.edu.pl/>

Preferred time of starting position 1st October 2017.

Additional Information:

To apply send your CV including list of publications, copy of PhD degree (or equivalent confirmation of having PhD degree), reference letter and a short description of scientific interest in single pdf file to khorodec@inf.ug.edu.pl until 31.07.2017. Please include “Application SONATA-BIS” in the subject of your message. Any inquiries should be directed to the same address.