

## Doctoral Candidate Position in Superconducting Qubits

A Ph.D. position in the field of circuit electrodynamics is available in the Kvantti group, Department of Applied Physics at Aalto University, Finland. Our team is doing research on circuits consisting of superconducting qubits and resonators - presently one of the most promising platforms for future quantum computers and quantum simulators. Moreover, we explore additional applications of these devices for emerging quantum technologies such as supersensitive detection.

We are looking for a bright, motivated researcher to join our team. You should have excellent study records in physics or related disciplines up to the level of M.Sc. (awarded or expected soon). Prior laboratory experience in the fields of mesoscopic physics, nanoelectronics, cryogenics, microwave electronics, circuit design, clean-room techniques, and instrument programming is a plus. We also encourage applications from theorists with strong interests in developing analytical models and numerical simulations, and who are interested in working closer with experimentalists.

The successful candidate will have the chance to become an expert in a fast-developing field of quantum simulation and quantum information processing with superconducting qubits. You will have full access to the OtaNano research infrastructure for nano- and micro- technologies, comprising state-of-the-art equipment in nanofabrication, cryogenics, microscopy, and electronics. The skills that you will acquire during your Ph.D. are currently in very high demand both in academia and in high-tech companies: at present, there is a significant level of investment from private and governmental funding agents in the field of quantum technologies.

The starting salary of a Ph.D. student is 2448€/month, and it increases as you progress in your research and studies. Following the standard practice in the Department of Applied Physics, the contract will be made initially for two years, then extended to another two years after a successful mid-term progress review. The total duration of Ph.D. studies is four years.

This position is funded by the Academy of Finland under the Center of Excellence Quantum Technology Finland (QTF).

To apply, please send the following documents as a single pdf file:

- \* letter of motivation
- \* CV including publications (if any) and description of skills/previous experience
- \* degree certificates and academic transcripts
- \* contact details of at least two academic advisors (or letters of recommendation, if already available)

For further information please contact the group leader (Doc. Sorin Paraoanu) at [firstname.lastname@aalto.fi](mailto:firstname.lastname@aalto.fi)').

To send the documents, please use the link "Apply for this job" at the bottom of this page and e-mail a copy to the group leader. Applications are invited immediately. The deadline for applications is 31 August 2018. The position will be filled as soon as a suitable candidate is identified: therefore we encourage you to contact the group leader or send an application as soon as possible. Aalto University reserves the right for justified reasons to leave the position open, to extend the application period and to consider candidates who have not applied during the announced application period.

Studying at Aalto University: As a Ph.D. student in the Kvantti group you will be part of a vibrant community working on quantum technologies. You will have the opportunity to discuss on a daily basis and collaborate with theorists and experimentalists working on related topics. The group is also part of the Centre for Quantum Engineering at Aalto University.

Aalto University has six schools with nearly 20 000 students: it is the largest university in Finland focusing on education and research in technology, science, business, and arts. Finland is a safe, stable country, enjoying a high standard of living and quality of life. The Kvantti group is located in the Otaniemi campus (Espoo), one of the largest hubs of high-tech in Northern Europe.

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