

Aalto University is a university created from the high-profile merger between three leading universities in Finland—the Helsinki University of Technology, the Helsinki School of Economics, and the University of Art and Design Helsinki. Aalto University opens up new possibilities for strong multi-disciplinary education and research. Aalto has 20,000 students and around 75,000 alumni. The staff of 4,500 includes 300 professors.

## **Doctoral Candidate position in quantum engineering**

A Doctoral Candidate (Ph. D.) position is available in the Kvantti group, which is part of the O. V. Lounasmaa Laboratory, School of Science, Aalto University. The group is doing experimental and theoretical research on quantum coherent systems, and it is currently focusing on superconducting qubits and resonators in circuit QED architectures. This is an extremely active field of research, aiming at harnessing quantum-mechanical effects for tasks such as quantum computing, ultrasensitive detection, *etc.* As a Ph.D. student, you will be very fast immersed into our projects, you will work with state-of-the-art equipment in nanofabrication, cryogenics, and microwave electronics, and therefore you will have the chance to develop world-class expertise in quantum engineering.

More details about our research activity can be found at: <http://tl.tkk.fi/wiki/LT/Kvantti>

We are looking for a scientifically talented and motivated person, who has a M.Sc. in physics (or a in an engineering field directly relevant to the topic of research) or is expected to obtain one soon. Previous experience with clean-room fabrication, electronics, r.f. measurements, and cryogenics are a plus. The successful candidate should be able to demonstrate a solid background and interest in quantum physics in particular. A significant part of our work is related to the development of theoretical models for quantum devices, therefore good programming skills are appreciated. Students with theoretical interests who are interested in being closely involved in experiments are encouraged to apply.

The position is funded by the Academy of Finland. The gross starting salary is approx. 2170 euros and it includes occupational health services. The approximate timescale for completing the Ph.D. is 4 years. The successful candidate could start in the spring of 2013 or later, depending on the particular situation of the applicant.

To apply please send an e-mail containing your CV (including publications, if any), a transcript of your academic records, a proof of proficiency in English (*e.g.* TOEFL) and/or other standardized tests (*e.g.* GRE), and a description of your research interests together with a summary of your skills to the Registry Office of Aalto University [registry@aalto.fi](mailto:registry@aalto.fi), together with a copy to the leader of the group [firstname.lastname@aalto.fi](mailto:firstname.lastname@aalto.fi) (see below). If you have been involved in a research project before, please include also any related relevant material (publications, M.Sc. thesis, *etc.*). In addition, please list the names/e-mails/phones of three persons for references and arrange with them to send the letters of reference directly by e-mail to the above addresses.

The deadline for applications is January 31, 2013, but we encourage the candidates to send their application materials as early as possible. The successful candidates will be contacted for an interview.

Sorin Paraoanu,  
Group Leader, O.V. Lounasmaa Laboratory, Aalto University  
tel. + 358 50 344 2650