Postdoctoral Researcher in quantum computing and algorithms
Aalto University

Job Title	Postdoctoral Researcher in quantum computing and algorithms
Department	T411 Dept. Electronics and Nanoeng
Institution	Aalto University , , Finland
Date Posted	Oct. 27, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Electrical and/or Electronics Computer Science
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher-in-quantum-computing-and-algorithms_R44597
Apply By Email	

Job Description

Aalto University is where science and art meet technology and business. We shape a sustainable future by making research breakthroughs in and across our disciplines, sparking the game changers of tomorrow and creating novel solutions to major global challenges. Our community is made up of 120 nationalities, 14 000 students, 400 professors and close to 5000 other faculty and staff working on our dynamic campus in Espoo, Greater Helsinki, Finland. Diversity is part of who we are, and we actively work to ensure our community’s diversity and inclusiveness. This is why we warmly encourage qualified candidates from all backgrounds to join our community.

The School of Electrical Engineering is one of the six schools of Aalto University. Our portfolio covers fields from natural sciences to engineering and information sciences. In parallel with basic research,

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we develop ideas and technologies further into innovations and services. We are experts in systems science; we develop integrated solutions from care of the elderly to space robotics.

We are now looking for a Postdoctoral Researcher in quantum computing and algorithms.

Are you as excited about quantum technology and its future applications as we are?

We are now looking for a postdoctoral researcher to support the Micro and Quantum Systems (MQS) research group in developing various quantum computing schemes at Aalto University's Electronics and Nanoengineering department. In this position you will have a chance to make a real impact by high-quality research and by supervising doctoral students. Join us in shaping the future!

Your role and goals
Your primary task as a postdoc is to conduct research into quantum algorithms and information. You are expected to take an active role in advancing the research projects of the MQS group. Our recent research has focused on the theory and applications of variational quantum algorithms and quantum machine learning. We also have activity in quantum optics, so additional experience and interest in this topic is considered a definite advantage. Theoretical research into the capabilities of quantum computing and quantum advantage is also a prospective topic, especially in relation to cryptography. The exact research topics can be adjusted within the limits set by our current projects according to the interests of the applicant. Your goal in research will be to produce world-class results, in collaboration with the other group members, and publish them in high-impact journals.

In addition to research, you will also be expected to take part in the supervision of PhD students and the teaching activities of the research group.

Your network and team
Currently, our research group consists of 1 professor, 1 lecturer, 1 staff scientist, 1 postdoc and 5 PhD students. The group is led by Professor Ilkka Tittonen.

Your experience and ambitions
Applicants are expected to * hold a PhD and excellent study records in theoretical physics, mathematics, computer science, or other relevant field. * have sufficient background in quantum computing to conduct research on the topic. * have a demonstrated ability for independent and collaborative research on advanced topics. * have a working proficiency in English (Finnish language is not required)

The research responsibilities can be adjusted according to the background of the applicant. Familiarity

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with cryptography and/or quantum optics is a definite advantage. Teaching experience will also be a valuable asset.

What we offer
We offer the applicant the opportunity to conduct research in a vibrant and active national and international community. Finland hosts many active research groups in quantum computing connected via a national quantum consortium called InstituteQ with many quantum-related activities. We also have access to real quantum hardware, VTT’s Q50 machine, which sits right downstairs from our offices. Aalto University also offers ample opportunities for multidisciplinary research and teaching collaboration.

The duration of the contract is two (2) years from the starting date.

We offer you interesting work in an inspiring work environment. You will work in a community of students, researchers and other professionals, where we promote socially significant goals in the fields of science and education. We will familiarize you with your tasks and you will become part of a friendly and competent team that will offer you support in your work tasks also in the future.

Our vast array of professional development opportunities at Aalto University means you will grow and learn, having the chance to participate actively in staff trainings and development projects based on your interests and needs.

We work in a hybrid way, and the primary workplace is Otaniemi, Espoo. The Otaniemi campus is a thriving and connected community of 100 nationalities, 13,000 students and 4,500 employees. Life at the transformed campus is vibrant and filled with amazing architecture, calming nature, and a variety of cafes, restaurants, services and good connections along the recently opened metro line.

Join us!
To apply, please share the following application materials (as PDFs) with us through our recruitment site ("Apply now!”). Please note that our recruitment system allows max 5 attachments, so please combine the copies of certificates and transcripts in one PDF, if necessary. * CV (including a list of publications) * Motivation letter * Recommendation letters (max. 2, if available)

Please apply as soon as possible, at the latest November 30th, 2025. ?We will go through applications, and we may invite suitable candidates to interview already during the application period.

Please note: Aalto University’s employees should apply for the position via our internal HR system Workday (Internal Jobs) by using their existing Workday user account (not via the external webpage for

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open positions).

For more information regarding the open position, please contact Professor Ilkka Tittonen, ilkka.tittonen@aalto.fi. Additional information in recruitment process related questions, please contact HR Advisor Monika Mäkinen, [url=mailto:hr-elec@aalto.fi]hr-elec@aalto.fi.

About Finland
Finland is a great place for living with or without family - it is a safe, politically stable and well-organized Nordic society. Finland is consistently ranked high in quality of life and was just listed again as the happiest country in the world. For more information about living in Finland: [url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff]https://www.aalto.fi/en/careers-at-aalto/for-international-staff .

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Finland