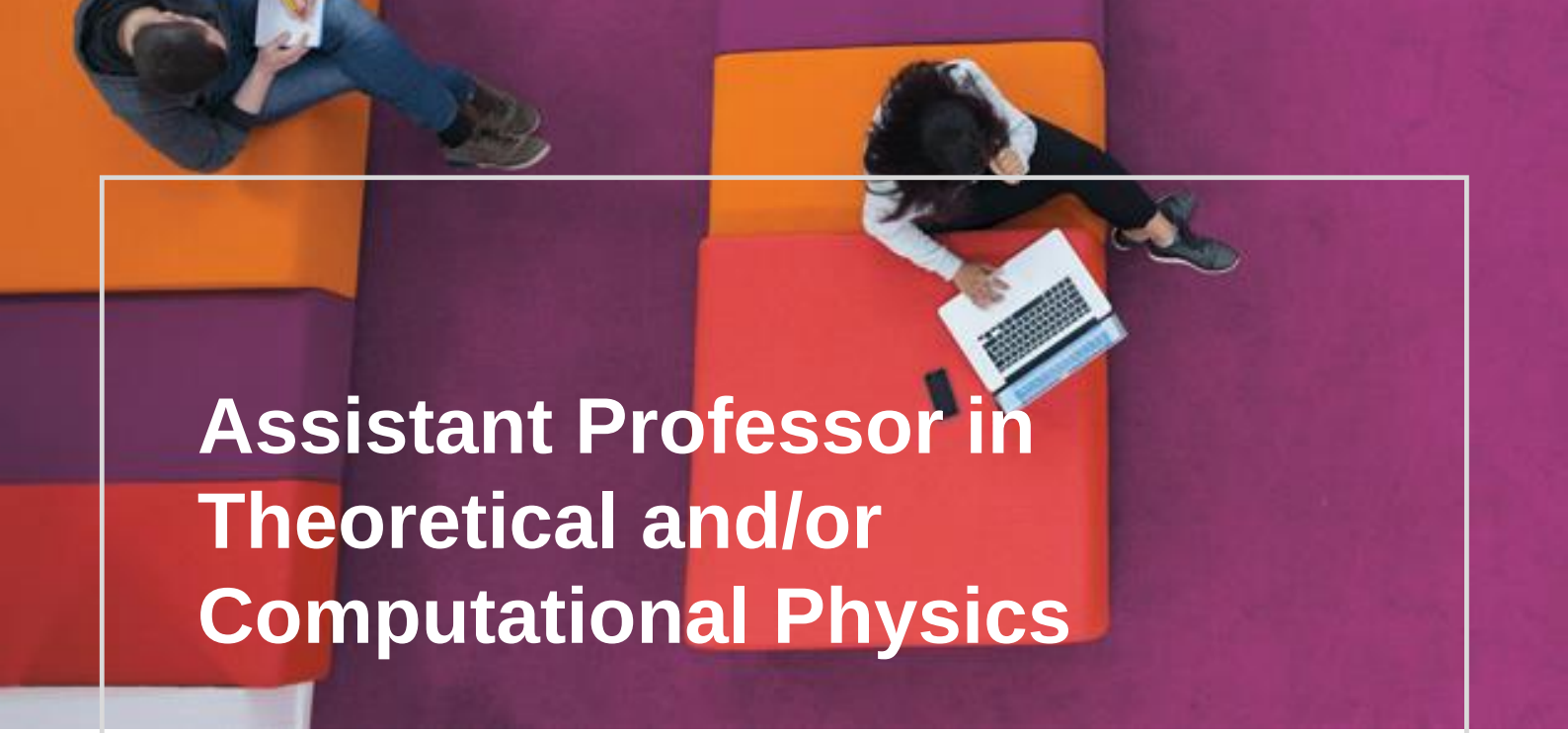
Assistant Professor in Theoretical and/or Computational Physics

School of Science

Aalto University



Assistant Professor in Theoretical and/or Computational Physics

Job description
We invite applications for a tenure track position in theoretical and/or computational physics at the Department of Applied Physics in Aalto University, see https://www.aalto.fi/department-of-applied-physics. The Department is seeking to strengthen the areas of condensed matter and statistical physics in particular, but excellent candidates from any field that complements existing theoretical and experimental efforts are welcome. The successful candidate is expected to establish an outstanding independent research program and work actively to support that via external funding. We strive for gender balance in all positions and at all levels and particularly encourage female candidates to apply for this position.

Throughout their career, those in the academic tenure track system are expected to exercise and guide scientific research, to provide related higher academic education, to follow the advances of their field, to participate in service to the Aalto University community, and to take part in societal interaction and international collaboration in their field.

Requirements
Only Assistant Professor level candidates are considered in the recruitment. We look for applicants who have

- A doctorate in physics or in a related field.
- Potential to carry out research and attract research funding at the highest level.
- Willingness to be effective teachers in the undergraduate and graduate degree programs of the School of Science.
- Aalto School of Science is committed to improving its gender diversity profile and this will be considered carefully in the selection of candidates.

The applicants will be reviewed on the basis of their merits in research, teaching, academic leadership, and activity in scientific community. At the Assistant Professor level, evaluation is based mainly on research merits and the applicant's potential.

A more detailed description of the tenure track system at Aalto University is available at https://www.aalto.fi/tenure-track

How to apply
The application material for the tenure track position includes:
• Cover page
• Curriculum Vitae (max 2 pages)
• List of publications (including Google Scholar Profile and/or Researcher ID)
• A research statement describing past research and plans for future research (max 5 pages)
• A research statement: summary of merits and highest achievements in research (max 2 pages) and plans for future research (max 3 pages)
A teaching statement (max 1 page)
• List of two referees (contact information required only at this stage)

All material should be submitted in English and must be in standard pdf format, with a minimum of 11 pt font size. Applications shall consist of one single pdf file with file name "lastname_firstname_application.pdf". The first document of the pdf file is the cover letter, followed by the appendices in the order given in the list above. The application material will not be returned. The applications will be evaluated by international experts. Applicants who have been short-listed will be invited for interviews and to present their research.

The applications for the tenure track positions are to be addressed to the Dean of Aalto University School of Science. **Deadline for the applications is Feb 24, 2019 Finnish time.** Please refer to the name of the position concerned in your application.
You may submit the application through SAIMA application system at https://www.aalto.fi/careers/tenure-track-position-in-theoretical-andor-computational-physics.

Aalto University reserves the right in exceptional cases to leave the position open, to extend the application period and to consider candidates who have not submitted applications during the application period.

Department of Applied Physics

The Department of Applied Physics hosts 25 research groups that pursue vigorous research in the field of physical sciences with important industrial applications and technological potential. Much of this research focuses on condensed matter and materials physics, quantum physics, and nano-optics, and on advanced energy sciences, with topics extending from fundamental research to important applications of societal relevance. For the future, growing emphasis will be given to quantum technology and engineering, designer matter, and database-driven machine learning in materials research. The department educates future generations of research professionals, data specialists, technology experts, inventors, and scientists for industry and society. We are a highly international community: on average 53% of our research and teaching personnel have an international background, including six of our current 21 professors. 45% of our PhD students and 74% of our postdocs come from abroad. Among our tenure track professors, four have been recruited in the past five years.

The department has an extremely successful track record in national and European competitive funding calls. External funding represents over 50% of our total income. Our researchers have received 22 ERC grants (> €30m) since 2010 (in quantum, solid state and soft matter physics). The department also currently coordinates two Academy of Finland Centres of Excellence [Molecular Engineering of Biosynthetic Hybrid Materials (HYBER) and Quantum Technology Finland (QTF)] and the Centre for Quantum Engineering (CQE), an Aalto strategic initiative. These contribute significantly to interdisciplinary research collaboration locally, nationally and internationally. Many of our researchers also participate in Aalto University's cross-cutting Materials and Energy platform activities, and a number of our staff manage Aalto's participation in the activities of the Helsinki Institute of Physics (HIP). We also coordinate the OtaNano national open-access research infrastructure, which includes two major facilities hosted at the department, the Nanomicroscopy Center and the Low Temperature Laboratory.

Aalto offers excellent computational resources at two levels. At the university level, Science-IT (science-it.aalto.fi) provides mid-range scientific computing and special resources needed by researchers in the School of Science, offering high-quality support and even research-project-level customization. These resources are integrated into the Aalto IT environment, with regular local training in scientific computing practice for entry-level users. At the national level, Aalto has excellent access to the neighbouring Centre for Scientific Computing (csc.fi), which offers a state-of-the-art supercomputing environment, cloud services, HPC training and an extensive selection of scientific software, as well as access to international computing resources. These facilities are free for academic users. Aalto is also a node in the CECAM network (cecam.org), playing a part in a vibrant network of computational workshops and seminars.

Our researchers' strong local and international collaborative relationships foster innovation and scientific impact. We host c. 150 visitors and 10-15 international conferences per year. We also nurture public outreach by our faculty and encourage activities that increase the visibility of physics in the media to attract future generations of innovative thinkers to the field.

Living in Finland

Finland is located within the Scandinavian region of Northern Europe and has a population of 5.4 million. It is a beautiful and vast country with contrasting landscapes and four distinct seasons, enjoying phenomena such as the midnight sun in the summer and northern lights in the winter. It is among the best countries in the world according to many quality of life indicators, including being the overall #1 country in human wellbeing.

Finland has one of the most advanced educational systems in the world, and as a result of an innovative mind-set and investment, is proud to provide exceptionally high standards of social security and healthcare, financed by the state. The country embraces some of Europe's last true wildernesses, yet also has comprehensive and reliable transport networks. The Helsinki Vantaa airport serves over 100 direct destinations. It is a popular transfer point between Asia and Europe, with direct connections to Bangkok, Singapore, Hong Kong and several locations in Japan and China. There are also direct flights to several major North American destinations including Chicago, New York and San Francisco. The city of Helsinki is Finland's capital, with a population of 1.4 million within the metropolitan area. The capital is thriving and is in the midst of the greatest infrastructure upgrade it has seen in a century. Aalto University is situated in Espoo, about seven kilometres west of Helsinki city centre. The campus is directly connected to the city's underground metro network, with a travel time of 15 minutes to the heart of the city.

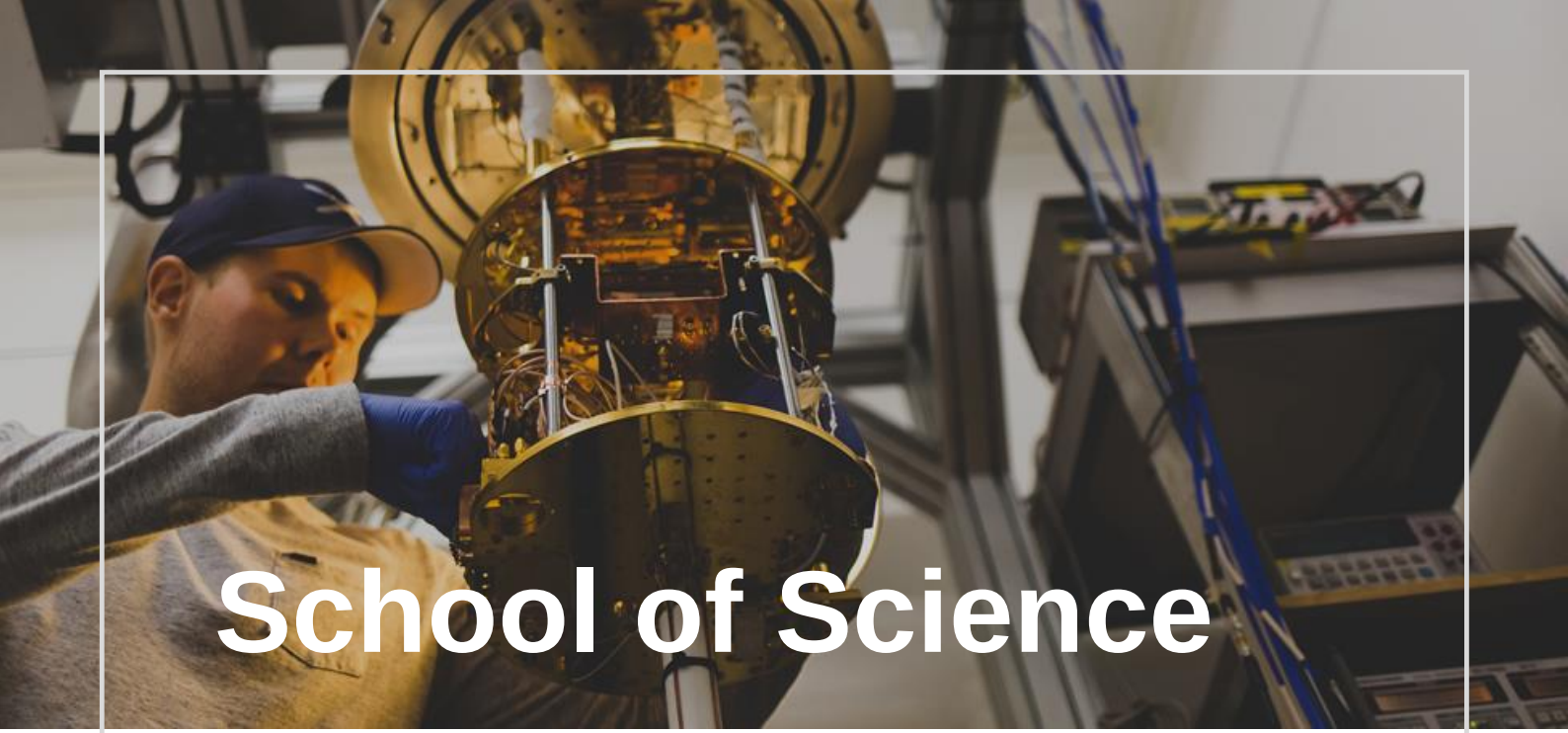
The Visit Finland site provides more details on Finland and Helsinki: https://www.visitfinland.com/

Further information about Helsinki and Espoo can be found at: https://www.myhelsinki.fi/en and https://www.visitespoo.fi/en

Further information about living in Finland can be found at https://finland.fi/ and for international candidates Aalto University provides useful information at: https://www.aalto.fi/aalto-university/international-staff-information-package

The Department of Applied Physics offers relocation assistance to new professors and is committed to providing informal assistance to help their families to settle down in Finland.

More info at finland.fi



School of Science

Changing the world for the better through high-level research, making a significant impact on society.

At the school, the research carried out meets the highest of international scientific standards in our focus areas and scientific and technological applications on the basis of research findings are developed. The school is an important research partner and has strong connections with many international networks.

Moreover, the school is committed to having an active role in society and promoting the societal effectiveness of research findings at both a national and international level. During the last twenty years, the school has generated approximately 100 patents and tens of research-based enterprises.

The School has five Departments: Applied Physics, Computer Science, Industrial Engineering and Management, Mathematics and Systems Analysis and Neuroscience and Biomedical Engineering

Around 3 500 students are taught by the School of Science. Over 250 master's degree students and 90 doctoral candidates graduate from the school every year.In total, there are 1 500 members of academic staff at the school, of which 110 are professors, 400 are doctoral candidates, and other research and teaching personnel 600.

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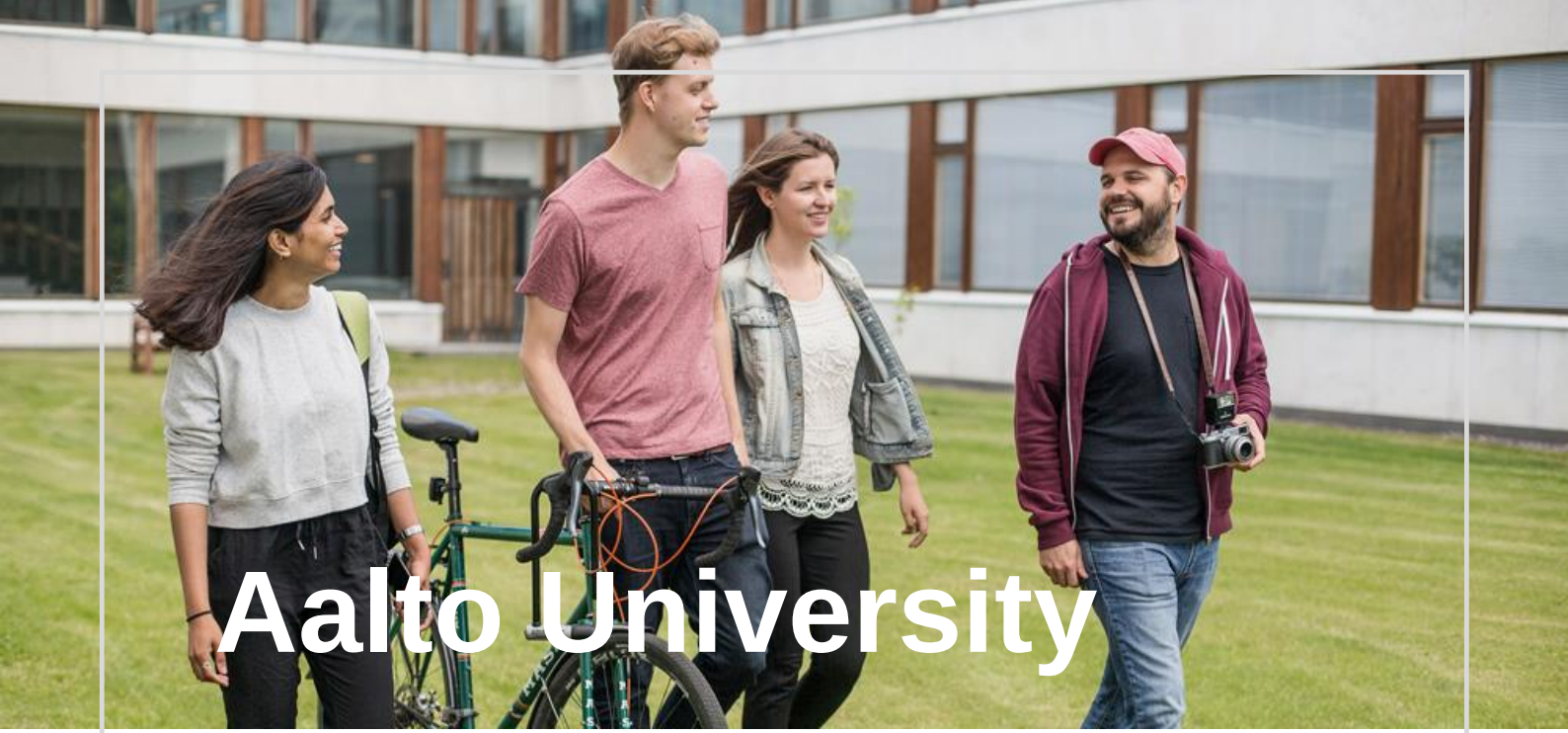
More info at
sci.aalto.fi



Aalto University is a multidisciplinary community of bold thinkers where science and art meet technology and business.

Aalto University is a university where research, art and education are promoted hand in hand. We are committed to identifying and solving grand societal challenges and building an innovative future. With high-quality research we aim at creating significant impact on the international scientific community, industry and business, as well as the society at large. Disciplinary excellence is combined with multidisciplinary activities, engaging both students and the local innovation ecosystem.

Aalto has six schools with nearly 11 000 students and more than 400 professors. We are an international community: more than 30% of our academic personnel have an international background.

Aalto University was founded in 2010 as three leading Finnish universities, Helsinki University of Technology, the Helsinki School of Economics and the University of Art and Design Helsinki, were merged. Our campuses are located in Espoo and Helsinki, Finland.

The University campus in Espoo is developing into a unique, open innovation hub and a centre of collaboration that attracts partners from all around the world. It encourages sharing of ideas, inter-disciplinary encounters, creativity, growth and entrepreneurship. The core of the campus will be a vibrant city with versatile services and attractive places to meet.

Aalto University

More info at aalto.fi

Aalto University – a community of game changers *aalto.fi*

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