Tenure Track Professor in Embedded Electronics for Autonomous Systems
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 are international.

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 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.

More info at aalto.fi
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, 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.

The School is an international unit with close to 60 professors and 2 000 full-time students, including over 200 doctoral students.

Our research focuses on major societal issues, such as energy and environment, information and communication technologies as well as health and wellbeing.

The research focus areas are:
- Energy and environment
- ICT
- Micro and nanotechnology
- Health and wellbeing

We have deep industry-academia relationships both in research and teaching.

More info at elec.aalto.fi
The Department of Electrical Engineering and Automation (EEA) of the Aalto University School of Electrical Engineering is an ecosystem where scientists and engineers from different fields interact and work together by crossing over traditional boundaries to solve the most challenging scientific and technological problems, to provide excellent education and to produce wellbeing for the society.

EEA is an academic community of approximately 160 employees and 23 professors. Talented scholars can conduct their own independent research on topics related to our areas of inquiry. The department has over 60 students pursuing Doctor of Science in Technology and 39 senior research and teaching staff members.

Research
Research in EEA is organized in four focus areas, Power systems and conversion; Control, robotics and autonomous systems; Well-being and smart living environment; Industrial electronics and informatics. Because of the interdisciplinary nature, the department partner network covers a large share of Finnish and international industries from the energy sector to manufacturing industries, including many machinery production companies, medical sector, cities and public organizations, and service providers. There have been several spin-off companies utilizing the research results.

Teaching
The Department conducts research and provides education in bachelor, master's and doctoral programmes. The programs relevant for this professor positions is especially Master's program in Automation and Electrical Engineering including three majors Control, robotics and autonomous systems Translational Engineering Electrical Power and Energy Engineering

In all of these expertise in embedded electronics is needed and especially in the first one on autonomous systems too.

Tenure Track Professor in Embedded Electronics for Autonomous Systems

Position Description

Autonomous systems such as driverless cars, unmanned aerial or marine vehicles and mobile robots are starting to enter numerous application areas. The behavior of such systems is autonomous and relies on powerful embedded computer systems whose development requires understanding of the interplay between physical world and computation, hardware and software. Their operational environment is complex, such that key subsystems include perception, control, and decision making, while their nature limits available resources.

We are seeking outstanding individuals who have demonstrated excellence in addressing one or more of the above challenges. The excellence may be demonstrated in a particular application area of autonomous systems or by addressing a particular issue in a more general context. In both cases, we expect a successful candidate to be able to demonstrate physical realizations of systems.

As a tenure-track faculty member, you are expected to complement the expertise of the current faculty by bringing new ideas and perspectives into our community. You are also expected to teach embedded electronics and autonomous systems topics.

The position will be filled preferably at the Assistant Professor level but outstanding Associate or Full Professor level candidates can be considered. Industrial experience is considered as an advantage. The position will be located at the Aalto University Otaniemi Campus.

Requirements

The successful candidate has a
• doctorate in electrical engineering or related field
• Potential to carry out research and attract research funding at the highest level
• Passion and ability to teach at the undergraduate and/or graduate level
• Ability to build high-level international contact network
• Skills to cooperate with other research groups using jointly operated infrastructure

More information
To learn more of the position or the research environment, please contact Professor Jorma Kyyrä, jorma.kyyra@aalto.fi Tel. +358 50 563 9146

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 10-12 minutes to the heart of the city.

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

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

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

Innovative and bold, international at heart.
Aalto University –
a community of
game changers
aalto.fi