Doctoral Researcher in nonlinear systems and control
Aalto University

Job Title	Doctoral Researcher in nonlinear systems and control
Department	T410 Dept. Electrical Engineering and Automation
Institution	Aalto University , , Finland
Date Posted	Aug. 8, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Graduate Student
Academic Field(s)	Electrical and/or Electronics
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher-in-nonlinear-systems-and-control_R43833-1
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 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 Nonlinear Systems and Control group ([url=https://www.aalto.fi/en/department-of-electrical-engineering-and-automation/nonlinear-systems-and-control]https://www.aalto.fi/en/department-of-electrical-engineering-and-automation/nonlinear-systems-and-control) at Aalto University explores synergies between nonlinear control theory and physics informed machine learning to provide formal

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guarantees on performance, safety, and robustness of robotic and learning-enabled systems.

The research group is seeking a talented

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with strong interest in nonlinear stability theory, modeling & identification, optimal control, certifiably safe & robust control, and learning for dynamics & control.

The main task of the PhD student will be to develop sound data-driven methodologies for learning control policies with provable guarantees on performance and safety, for example, through the efficient computation of Lyapunov and barrier functions, forward and backward reachable sets, optimal value functions etc. The broad goal is to build upon recent developments in learning Operator Theoretic representations of dynamical systems that focus on model interpretability, scalability to high dimensions, and data efficiency. The exact direction of the research is chosen depending on your experience and interests. Please relate clearly to some of the research topics in your Letter of Motivation.

Outstanding researchers from the areas of Control Engineering, Robotics, Machine Learning, AI, and related areas including Optimization, Mathematics and Physics are welcome to apply. The candidate is expected to conduct independent research and should have strong analytical skills as well as be fluent in spoken and written English. Successful candidates will have the opportunity to collaborate with the vibrant Aalto research community, including the [url=https://irobotics.aalto.fi/]Intelligent Robotics group and the [url=https://www.aalto.fi/en/department-of-electrical-engineering-and-automation/mobile-robotics]Mobile Robotics group, as well as the [url=https://fcai.fi/]Finnish Center for Artificial Intelligence. The group also actively collaborates internationally with top institutions in the US and Sweden.

If you are chosen for this position, you will apply for the study right in doctoral studies at Aalto University School of Electrical Engineering. Thus, please see the student information and admission criteria at [url=https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-electrical-engineering]https://www.aalto.fi/en/study-options/aalto-doctoral-programme-in-electrical-engineering.

WE OFFER

The position will be filled for a period of 4 years (2 + 2). The starting date is in October 2025 or as mutually agreed. The salary will be based on both the job requirements and the employee’s personal

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performance in accordance with the salary system of Finnish universities. The starting salary for a PhD student is 3075 EUR/month.

We offer a wide range of staff benefits, such as occupational health care, flexible working hours, excellent sports facilities on campus and several restaurants and cafés on campus with staff discounts. The position is located at the Aalto University Otaniemi campus which can be easily reached by public transport.

READY TO APPLY?

Please submit your application through our online recruitment system. To access the recruitment system, please use the “Apply now!” link below.

Applications received before September 15th 2025 (23:59 EET (GMT+2)) will be given guaranteed consideration. Applications will continue to be processed and reviewed following this date until the position is filled, but candidates are encouraged to apply as soon as possible.

Please write your application and all the accompanying documentation in English and attach them in PDF format. Please attach only the following documents to your application: *
A letter of motivation describing your research interests and how the research fits to the Nonlinear Systems and Control group (max. 1 page) *
Curriculum vitae (include the contact details of at least two references, and if available, a list of publications) *
PDF copy of your MSc and BSc degree certificates, including transcripts of all MSc and BSc university records (grades and courses) and their English translations (Finnish and Swedish certificates are also accepted). Unofficial transcripts are acceptable for job application purposes.

Please note that our recruitment system allows max 5 attachments, so please combine the copies of certificates and transcripts in one PDF, if necessary.

ADDITIONAL INFORMATION

For further information about the application or the position, please contact Assistant Professor Shankar Deka, shankar.deka@aalto.fi. Additional information in recruitment process related

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questions, please contact HR Advisor Johanna Haapalainen, hr-elec@aalto.fi.

Want to know more about us and your future colleagues? You can watch these videos: [url=https://www.youtube.com/watch?v=i8zawpNMVG8]This is Aalto University! [url=https://www.youtube.com/watch?v=5k_og_6zUJQ]Aalto University - Towards a better world and [url=https://www.youtube.com/watch?v=ZK6pDWm1_CE]Shaping a Sustainable Future.
Read more about working at Aalto: [url=https://www.aalto.fi/en/careers-at-aalto]https://www.aalto.fi/en/careers-at-aalto
Check out our new virtual campus experience: [url=https://virtualtour.aalto.fi]https://virtualtour.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 listed again as the happiest country in the world: [url=https://worldhappiness.report/news/world-happiness-report-2025-people-are-much-kinder-than-we-expect-research-shows/]World Happiness Report 2025

For more information about living in Finland: [url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff]Aalto Careers for International Staff.

Contact Information

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

Contact

Finland