Postdoctoral researchers in AI for energy conversion systems
Aalto University

Job Title	Postdoctoral researchers in AI for energy conversion systems
Department	T410 Dept. Electrical Engineering and Automation
Institution	Aalto University , , Finland
Date Posted	Nov. 6, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Electrical and/or Electronics
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-researchers-in-AI-for-energy-conversion-systems_R44690-5
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 Electric Drives Group is seeking two postdoctoral researchers to develop artificial intelligence for energy conversion systems (e.g., electric machines and drives, power electronics, electrolysers).
Your role

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As a postdoctoral researcher, you will advance AI-based technologies for modelling, control, and optimisation of next-generation energy conversion systems. You will also have opportunities to contribute to our open-source computational tools, teach master-level courses, and advise doctoral students. Our strong industry connections will provide opportunities to see your research implemented in real-world applications.

Your background and expertise

You have a recent doctoral degree in electrical engineering, control engineering, computer science, applied mathematics or a related field. The successful candidate will have expertise in at least in one of: *

Machine learning in the context of physical systems *

AI-based condition monitoring *

Reinforcement learning

Programming skills are required, with Python experience preferred. Theoretical understanding and hands-on experience with electric machine drives or power electronics is a plus. We value candidates who are collaborative team players, intellectually curious, and open to exploring new research directions. A track record of publications in recognised journals and conferences in the field is expected.

Scientific environment

The Electric Drives Group conducts cutting-edge research on energy conversion, including electric machine drives and power converters. Our work spans from fundamental modelling and analysis to advanced control design and system optimization. Our specialty is developing embedded control, estimation, and identification algorithms that directly interface with physical hardware. We work closely with industry partners, and our research has led to several methods now used in commercial products. We are part of the Research Council of Finland Centre of Excellence in High-Speed Electromechanical Energy Conversion Systems, the Finnish Centre of Artificial Intelligence (FCAI) Special Interest Group in Energy, and the Aalto University Hydrogen Innovation Centre.

We offer

The expected starting salary for a postdoctoral researcher is approximately 4100 €/month and salary will increase with responsibilities and performance over time. The fixed term contract is initially for two years. As an employer, Aalto University provides excellent learning and development opportunities as well as occupational healthcare services. Finland has a comprehensive social security system. The primary workplace will be the Otaniemi Campus at Aalto University. Positions are available immediately or as agreed.

Join us!

Please submit your application through the “Apply now” link at the bottom of the web page and include the following documents in English in a single PDF file: *

Letter of motivation (max one page) *

CV including list of publications *

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Copy of your degree certificates and a transcript of studies *
Contact details of two referees (and letters of recommendation, if already available)

The application deadline is 5 December 2025. The positions will be filled as soon as suitable candidates are identified. Aalto University reserves the right for justified reasons to leave the position open, to extend the application period, reopen the application process, and to consider candidates who have not submitted applications 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 open positions). If you are a student or visitor at Aalto University, please apply with your personal email address (not aalto.fi) via [url=https://www.aalto.fi/en/careers-at-aalto]Aalto University open positions
More information
If you wish to hear more about the positions, please contact prof. Marko Hinkkanen (marko.hinkkanen@aalto.fi). Regarding the application process and practical arrangements, please contact HR Advisor Johanna Haapalainen (hr-elec@aalto.fi).

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

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