Postdoctoral researchers in the Electric Drives Group
Aalto University

Job Title	Postdoctoral researchers in the Electric Drives Group
Department	T410 Dept. Electrical Engineering and Automation
Institution	Aalto University , , Finland
Date Posted	Apr. 24, 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-the-Electric-Drives-Group_R43089-1
Apply By Email	

Job Description

The Electric Drives Group is now looking for postdoctoral researchers in the following fields: *
Electric machine drives *
Power converters (emphasis on grid-connected and hydrogen systems) *
Physics-informed AI applied to machine drives and power converters

Your role
As a postdoctoral researcher, you will advance next-generation technologies in electric machine drives and power converters. Your research will be tailored to your expertise, spanning from hardware design to system-level optimization and control methods. For the AI position, you will develop machine learning models that incorporate physical principles of machine drives and converters. 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 you with opportunities to see

Postdoctoral researchers in the Electric Drives Group
Aalto University

your research implemented in real-world applications.

Your background and expertise
For the electric machine drives and power converter positions, you should have a recent doctoral degree in electrical engineering, control engineering, or a related field. For the physics-informed AI position, a doctoral degree in computer science or applied mathematics is also acceptable. The successful candidate will have expertise at least in one of these areas: *
Theoretical understanding and hands-on experience with electric machine drives or power converters *
Control engineering (experience with nonlinear systems is a plus) *
Machine learning and deep learning in context of physical systems

Programming skills are required, with Python experience preferred. A good command of written and spoken English is essential for our international research environment. We value candidates who are collaborative team players, intellectually curious, and open to exploring new research directions. A track record of publications in recognized journals and conferences in the field is expected.

Scientific environment
The Electric Drives Group conducts cutting-edge research on 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. 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 Center 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 4,000 €/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.

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) *

Postdoctoral researchers in the Electric Drives Group
Aalto University

CV including list of publications *
Contact details of two referees (and letters of recommendation, if already available)

The deadline for applications is 31 May 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.

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).

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. For more information about living in Finland:
[url=https://www.aalto.fi/services/about-finland]https://www.aalto.fi/services/about-finland

Contact Information

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

Contact

Finland