Postdoctoral Researcher in Fluid Power
Aalto University

Job Title	Postdoctoral Researcher in Fluid Power
Department	T212 Mechanical Engineering
Institution	Aalto University , , Finland
Date Posted	Mar. 19, 2024
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Mechanical Engineering
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher-in-Fluid-Power_R39121
Apply By Email	

Job Description

Aalto University is a community of bold thinkers where science and art meet technology and business. We are committed to identifying and solving grand societal challenges and building an innovative future. Aalto University has been ranked the 9th best young university in the world (Top 50 under 50, QS 2018) and one of the world's top technology challenger universities (THE 2017), for its outside-the-box thinking on research collaboration, funding and innovation. Aalto has six schools with nearly 11 000 students and 4000 employees of whom close to 400 are professors. Our main campus is located in Espoo, capital area of Finland.

Postdoctoral Researcher in Fluid Power

Fluid Power Laboratory is looking for a Postdoctoral Researcher for an industry-university collaboration project that investigates the utilization of waste heat energy.

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The aim of the project is to develop a proof-of-concept actuator that converts waste heat in process industry into work. The actuator is based on the expansion of gas due to increase in heat, generating pressure which is converted into linear motion. Different methods to maximize the gas expansion and the speed of the expansion are studied. The project is funded by Business Finland and consists of a research consortium of multiple companies and co-operation with Tampere University.

We look for scholars who are about to complete, or have completed within the past 5 years, their doctoral studies in a relevant field. The candidates are required to have a strong background in scientific computing, numerical analysis, numerical linear algebra, and applied mathematics. Programming skills, fluid power system design, CFD, ML, AI, and strong interest in implementing numerical methods in practice are considered a significant advantage. A good command of English is required, Finnish language is not.

Your role and goals

As a postdoctoral researcher, your main task is to manage and lead research and write publications about fluid power related topics. You will be working as a part of a research group consisting of young talents working on the same topic areas. You will have the possibility to contribute to the hands-on experimental work at the lab. In addition to research, postdoctoral researchers are expected to participate in teaching, for example, by instructing B.Sc. or M.Sc. theses or acting as a teacher in fluid power courses. Furthermore, postdoctoral researchers are expected to participate in grant writing for funding.

Your experience and ambitions * PhD in a relevant field (electrical engineering, mechanical engineering, energy, computer science, etc.) * Background in scientific computing, numerical analysis, numerical linear algebra, applied mathematics * Proficiency in MATLAB/Simulink and Python * Publications in high-quality journals and conferences * Taking initiative, responsibility, and leading teamwork * Excellent communications skills

Language requirements * English: Excellent proficiency

Experience from the following technologies is considered an advantage: * Knowledge and skills related to fluid power system design, ML, AI, CFD and thermal processes are greatly appreciated.

You will be working in the Fluid Power Laboratory at Otaniemi Campus, which located in Espoo, Finland. We offer excellent facilities for the research of fluid power systems with multiple on-going experimental research projects. Fluid Power Laboratory is part of the Mechatronics Group, which conducts world-class research in the areas of rotating machinery, autonomous mobility, hydraulics, and

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digitalization of industry. More information on Mechatronics group can be found on: [url=https://www.aalto.fi/en/node/12211]https://www.aalto.fi/en/department-of-mechanical-engineering/mechatronics. Furthermore, check out the Fluid Power Lab web page for more: [url=https://www.aalto.fi/en/department-of-mechanical-engineering/fluid-power-laboratory]https://www.aalto.fi/en/department-of-mechanical-engineering/fluid-power-laboratory

We offer

The expected starting salary is 4067 € / month
* Full-time employment for 2 years * If funding allows, the employment can be extended. * Opportunity to work in a supporting environment encouraging curiosity and critical thinking * Possibility for self-development and personal growth * Focus predominantly leading and conducting research * Occupational healthcare

Join us!

For your application, please include the following documents: * Motivation letter (maximum one page) * Please also include when you would like to start * CV and publication list * Short research statement * Any other supporting documents, such as letters of recommendation

All materials must be submitted in English.

The deadline for applications is April 14th, 2024, at 23:59 Finnish time (UTC +2). 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 and visitors should apply for the position via the internal HR system Workday (Internal Jobs -> Find Jobs) by using their existing Workday user account.
We may invite suitable candidates to interview already during the application period. You will hear from us the latest in the last week of April. We aim to have a transparent and equal recruitment process, so feel free to ask us for feedback.

Contact for more information:
Prof. Jari Vepsäläinen, [url=mailto:jari.vepsalainen@aalto.fi]jari.vepsalainen@aalto.fi . For questions related to the recruitment process, please contact HR Advisor Paula Thomsson-Levä [url=mailto:paula.thomsson-leva@aalto.fi]paula.thomsson-leva@aalto.fi .

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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 just listed again as the happiest country in the world: [url=https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-world/]https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-world/ . For more information about living in Finland: [url=https://www.aalto.fi/services/about-finland]https://www.aalto.fi/services/about-finland & [url=https://www.aalto.fi/en/services/welcome-to-aalto-university-and-finland-info-package]https://www.aalto.fi/en/services/welcome-to-aalto-university-and-finland-info-package

About Aalto University
Want to know more about the Aalto Community? You can watch these videos: Aalto University - Towards a better world, Aalto People , and 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=http://virtualtour.aalto.fi/]virtualtour.aalto.fi/

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Aalto University has been awarded with HR Excellence in Research quality label in European Commission, guaranteeing that we adhere to top quality HR practices in both recruitment and employment relations.
More about Aalto University:

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Contact Information

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

Contact

Finland