

Professor, Optimal Manufacturing Processes and Systems Aalto University

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Posted Oct. 2, 2024, set to expire Feb. 1, 2025

Job Title	Professor, Optimal Manufacturing Processes and Systems
Department	T212 Mechanical Engineering
Institution	Aalto University , , Finland
Date Posted	Oct. 2, 2024
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Professor
Academic Field(s)	Mechanical Engineering
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Professor--Optimal-Manufacturing-Processes-and-Systems_R40541

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 13 000 students, 400 professors and close to 4 500 other 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 School of Engineering is one of the six schools of Aalto University. The main task of the School of Engineering is to renew technologies related to the industry and the built environment through scientific research, technological innovation and inspiring education. Our objective is to create new knowledge,

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information and solutions to serve the goals of sustainable development. Our research topics are highly relevant to the surrounding society, connecting theory with practice. Collaborative projects with the technology industry and the surrounding society have been a trademark for decades. Our research focus areas are Multidisciplinary Energy Technologies, Sustainable Built Environment, Marine and Arctic Technology, Mechanics and Materials and Systems Design and Production.

We are now looking for an

ASSISTANT PROFESSOR OF MANUFACTURING PROCESSES AND SYSTEMS (tenure track)

Job Description

At Aalto University, we aim to be the main provider of manufacturing engineering specialists and leaders for Finnish industry. This assistant professor (tenure track) position will be part of the Materials to Products (M2P) research group of the Department of Mechanical Engineering.

With this position we aim at strengthening the educational excellence and analytical, numerical and experimental research on industrially relevant topics in manufacturing. The area for this call is on manufacturing processes and systems encompassing conventional and advanced techniques. The research requires active collaboration with Finnish industry.

The position is located at the Aalto University Campus in Otaniemi, Espoo.

Your Role and Goals *

Carry out high-quality research and publish in top venues of the discipline; *

Lead research via attracting and building up your own research team, and raise external funding from national and international sources; *

Teach courses on manufacturing processes and systems, typically two to three courses per year, and participate in curriculum development. *

Supervise doctoral students with research-based knowledge, creativity and an entrepreneurial mindset; *

Supervise master and bachelor students having thesis topics often from industrial partners; *

Contribute to the development of strategic openings and positioning Aalto University internationally and build a high-level international collaboration network; *

Cooperate with industry to secure the relevance and dissemination of the research as well as the capability of our students to meet the needs of the working life; *

As a Tenure Track professor, you contribute to the expertise of the faculty by bringing new ideas and perspectives into our community.

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Scientific Environment

Department of Mechanical Engineering

At the Department of Mechanical Engineering, the about 300 staff members, with 30 tenure track professors, research, teach, develop and create solutions targeting social need and shaping a safe and efficient future generation of materials, manufacturing, structures, machines, ships, energy flows and systems. The department's multidisciplinary research converges on the arctic technology, sustainable energy vectors, and digital twin world. The focus areas of education are in mechanics and energy science and technology. The Department has strong links to industry and generates growing impact that can be seen in business and society. The demographics of the Finnish economy drive the industry to search for growth with innovations in the global market.

(See [[url=https://www.aalto.fi/en/department-of-mechanical-engineering](https://www.aalto.fi/en/department-of-mechanical-engineering)]<https://www.aalto.fi/en/department-of-mechanical-engineering>)

Materials to Products (M2P) Research Group

The position will be filled in the Materials and Manufacturing to Products (or simply, Materials to Products, M2P) research group of the Department of Mechanical Engineering. Our expertise in research and higher education at Manufacturing includes the following main topics: modelling and optimisation of production systems; casting and welding technology; additive manufacturing technology and applications; digital production; non-destructive testing and safety; modelling of materials and applications; hydrogen effect on metals; and measurements by digital image correlation. Additionally, we do have a large workshop area for research and education.

(see [[url=https://www.aalto.fi/en/department-of-mechanical-engineering/materials-to-products](https://www.aalto.fi/en/department-of-mechanical-engineering/materials-to-products)]Materials to Products | Aalto University)

Your experience and ambitions

We are looking for a candidate, whose research interest focuses on the practices in engineering problem solving and development related with advanced and digitalized manufacturing solutions, on the road to a sustainable society. An ideal candidate, with a relevant doctoral degree, has a track record showing cooperation with company partners and wide understanding and demonstrated capability to cooperate with various stakeholders. We appreciate practical experience in manufacturing.

In addition to general competence in manufacturing processes and systems, we look for a candidate with demonstrated ability to translate scientific research to practical level solutions on one or some of the following topics: *

Forming, Cutting; *

Surface Treatment; *

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Injection Moulding, Casting; *
Assembly; *
Manufacturing systems; *
Automation and Robotics; *
Production modelling and optimization; *
Digitalization of manufacturing.

In the long term your work will have a social impact also in wider perspective. Therefore, we hope that you will present evidence of research and/or education promoting radical creativity, sustainability in manufacturing, and digitalization leading to industrial impact and entrepreneurial initiatives.

After all, we are also looking for a passionate educator, and we can't highlight too much the importance of teaching and learning activities within the field. As a community of passion-based educators and pedagogical developers we hope that you can show some evidence about your educational development projects or cases.

As a summary, we have a super interesting vantage position for an outgoing academic, who can network with Finnish manufacturing industries and the academic community at Aalto University and beyond. However, for the right candidate the best part of the job is working with our students and further development of our interdisciplinary course offering.

What We Offer *

A tenure track position with promotion to tenured position based on merits; *
A benefits package including access to occupational health care; *
Start-up funding and grant writing support to help you establish your own team; *
Excellent multi-disciplinary collaboration possibilities within the university.

Great future in one of the happiest, cleanest, and safest countries in the world, with comprehensive social security system and free education up to university level.

Tenure track in Aalto University

The position will be placed on the Aalto University Tenure Track. Individuals on the tenure track have the possibility to advance in their career through regular performance assessments, which take into account their merits in all areas of their scope of duty. Launched only in 2010, the tenure track has attracted a wide range of international applicants, giving Aalto University the possibility of recruiting top experts and talent to join the Aalto University community.

Throughout their careers, those in the academic tenure track system are expected to exercise and

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guide scientific research, to provide related higher academic education, to follow the advances in their field, to participate in service to the Aalto University community, and to take part in societal interaction and international collaboration in their field. For more information on the tenure track system of Aalto University, please see [\[url=https://www.aalto.fi/en/tenure-track\]](https://www.aalto.fi/en/tenure-track)<https://www.aalto.fi/en/tenure-track>.

Ready to Apply?

If you want to join our community, please submit your application latest on November 10th, 2024 (before midnight Finnish time) through our recruitment system by using the ["Apply!"](#) link above. If you are already working at Aalto, please apply via our internal system Workday -> Find Jobs.

If you wish to hear more about the position, please contact group leader Professor Jouni Partanen, [\[url=mailto:pedro.vilaca@aalto.fi\]](mailto:pedro.vilaca@aalto.fi)jouni.partanen@aalto.fi. In case you have questions related to the recruitment process, please contact HR Partner Anna-Maija Harju, [\[url=mailto:anna-maija.harju@aalto.fi\]](mailto:anna-maija.harju@aalto.fi)anna-maija.harju@aalto.fi.

To apply, please share the following application materials with us in English and in PDF: *

Application letter *

Curriculum vitae including list of publications -?Please use the?[\[url=https://www.tenk.fi/en/template-researchers-curriculum-vitae\]](https://www.tenk.fi/en/template-researchers-curriculum-vitae)template?(opens in new window) recommended by The Finnish Advisory Board on Research Integrity (TENK). *

Research portfolio - For instructions, visit?[\[url=https://www.aalto.fi/sites/g/files/flghsv161/files/2023-03/Liite%201%2020230222%20Aalto%20Tenure%20Track%20Policies%20and%20Procedures_ENG.pdf\]](https://www.aalto.fi/sites/g/files/flghsv161/files/2023-03/Liite%201%2020230222%20Aalto%20Tenure%20Track%20Policies%20and%20Procedures_ENG.pdf)pdf.pdf and Procedures?-document, page 25. *

Copies of up to five (5) most significant publications, with justification for their significance on the scope of "Manufacturing", and description of your role in them. *

Teaching portfolio - See?[\[url=https://www.aalto.fi/sites/g/files/flghsv161/files/2024-04/Teaching-competence-assessment_Guidelines-for-a-candidate_2024_Aalto-University.pdf\]](https://www.aalto.fi/sites/g/files/flghsv161/files/2024-04/Teaching-competence-assessment_Guidelines-for-a-candidate_2024_Aalto-University.pdf)Teaching portfolio guidelines for candidate?(pdf)? *

Contact details (names, positions, affiliations and e-mail addresses) of three (3) senior academic leaders available for providing recommendation letters. We contact them later for shortlisted candidates.

General instructions for applicants including evaluation criteria, language requirements and guidelines for compiling your CV are given at [\[url=https://www.aalto.fi/en/tenure-track/interested-in-joining-our-tenure-track\]](https://www.aalto.fi/en/tenure-track/interested-in-joining-our-tenure-track)<https://www.aalto.fi/en/tenure-track/interested-in-joining-our-tenure-track>.

Aalto University reserves the right for justified reasons to leave the position open or to extend the

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application period.

Want to know more about us and your future colleagues? You can watch these videos: *

[url=https://www.youtube.com/watch?v=#61;5k_og_6zUJQ]https://www.youtube.com/watch?v=#61;5k_og_6zUJQ

and *

[url=https://www.youtube.com/watch?v=#61;dUfEGVM-

ZP8&feature=#61;youtu.be]https://www.youtube.com/watch?v=#61;dUfEGVM-

ZP8&feature=#61;youtu.be *

Check out our new virtual campus experience: [url=https://virtualtour.aalto.fi/]https://virtualtour.aalto.fi/

About Aalto University campus, Helsinki and Finnish society

At Aalto, high-quality research, art, education and entrepreneurship are promoted hand in hand.

Disciplinary excellence is combined with multidisciplinary activities, engaging both students and the local innovation ecosystem. Our campus, at Otaniemi, is part of the greater Helsinki region (about 10? km away from Helsinki Citycenter), and quickly transforming into an open collaboration hub that encourages encounters between students, researchers, industry, startups, and other partners. 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 to strengthen Finland's innovative capability.

The greater Helsinki region is a world-class information technology complex, attracting leading scientists and researchers in various fields of science and engineering. As a living and working environment, 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/world-happiness-report-2024-most-comprehensive-picture-yet-of-happiness-across-generations/ For more information about living in Finland: [url=https://www.aalto.fi/services/about-finland]https://www.aalto.fi/services/about-finland

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Contact Information

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

Contact

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