

Doctoral Researcher in Chemical engineering Aalto University

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Posted Sep. 3, 2024, set to expire Jan. 2, 2025

Job Title Doctoral Researcher in Chemical engineering
Department T106 Chemical and Metallurgical Eng
Institution Aalto University
, , Finland

Date Posted Sep. 3, 2024

Application Deadline Open until filled
Position Start Date Available immediately

Job Categories Graduate Student

Academic Field(s) Chemical/Petroleum

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher-in-Chemical-engineering_R40675

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.

Circular Materials Bioeconomy Network (CIMANET) is an interdisciplinary doctoral education network to support the renewal of the bio-based industry through new sustainable materials and processes. CIMANET is part of the doctoral education pilot program established by Finland's Ministry of Education and Culture, providing scientific and technological competences to promote sustainable growth. It

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strengthens the knowledge base required to enhance the Finnish forest and bio-based industry with novel solutions unveiling the full potential of biomass. CIMANET consists of nine universities: Aalto University, Hanken School of Economics, LUT University, Tampere University, University of Helsinki, University of Jyväskylä, University of Oulu, University of Turku, and Åbo Akademi University.

CIMANET operates in close collaboration with the industry, research organizations, as well as other stakeholders to create economic and societal impact by addressing the major challenges of our century: resource sufficiency, access to clean water, and climate change. CIMANET has started in 2024 and will provide altogether 67 doctoral researchers funding for three years. Check out all the open positions at the [[url=https://www.aalto.fi/en/doctoral-education-pilot/cimanet-doctoral-education-pilot](https://www.aalto.fi/en/doctoral-education-pilot/cimanet-doctoral-education-pilot)]CIMANET pilot website.

We are now looking for a

Doctoral Researcher in Chemical engineering

Are you a future expert in chemical engineering and thermodynamics? Sustainable society craves people who can tell how we get valuable products from renewable resources, and thermodynamic models for developing and designing industrially feasible processes is a key to achieve that.

We are seeking a highly motivated and talented doctoral researcher to join our research group in the field of chemical engineering and modeling of thermodynamics and separation processes related to biorefineries. The project will involve both model development and related laboratory work with phase equilibria.

Scientific environment

The position is located at Aalto University, [[url=https://www.aalto.fi/en/department-of-chemical-and-metallurgical-engineering/chemical-engineering](https://www.aalto.fi/en/department-of-chemical-and-metallurgical-engineering/chemical-engineering)]Chemical Engineering research group. We have excellent facilities for experimental work on phase equilibria and separation processes, and highly qualified team of experts to support and guide your work. Our research group is doing experimental and modeling work on phase equilibria and separation processes for various industrially relevant biorefinery processes.

Your role and goals

New biobased systems with molecules containing several functional groups pose an important scientific challenge for predictive thermodynamic models. The current methods were mainly developed

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for fossil oil systems and need extensive upgrading. Your work will improve these models and enable industrial use of accurate predictive models. Capability for collaboration and discussions with industry utilizing the models is highly valued. You should: *

Develop and apply thermodynamic models to predict phase behaviour of biobased systems *

Conduct phase equilibria measurements to support the model development *

Analyze the impact of model developments on biorefinery processes *

Collaborate with other members of the research group and external partners to achieve project goals *

Present research findings at conferences and publish results in peer-reviewed journals

Your experience and ambitions *

Keen interest in thermodynamics, phase equilibria and separation processes *

Proficiency in process simulations (e.g. Aspen plus) and preferably in relevant programming languages (e.g., Python, MATLAB) *

Interest in experimental techniques for phase equilibria measurements and analyzing your results *

Excellent written and oral communication skills *

Ability to work independently and as part of a team

An applicant must have completed a Master's degree in Chemical Engineering, Chemistry, or a related field by 31 December 2024 or preferably earlier (to start employment on 1 January 2025)

Applicants must fulfill the admission criteria of the Aalto Doctoral Programme and, if chosen for a position, apply for, obtain and accept the right to pursue doctoral studies at Aalto University. For more information on the general requirements and the application process for doctoral studies, please visit [[url=https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies.](https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)][https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies.](https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)

What we offer *

Opportunity to work in a dynamic community of world-class researchers and professionals where students are rigorously selected and highly motivated. This leads to an exceptionally interactive and intellectually challenging atmosphere at Aalto. *

We have a flexible modern work culture. We value the balance and well-being of work and leisure in all aspects of life. *

We offer you an interesting job in an inspiring work environment. You will be able to work in a community where we promote socially significant goals in science and education. We will familiarize you with your tasks and you will be part of a nice and competent team that will provide you with support for your work tasks also in the future. We encourage and offer opportunities for continuous development of your own expertise. *

The expected starting date in the position is 1st January 2025. Presence in Finland for the duration of

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the contract is compulsory. *

Employment contracts will be made for three years with the funding from the Finnish Ministry of Education and Culture. Contract includes a prerequisite to apply, receive and accept doctoral study right within the probation period of the first 6 months. *

The annual workload of research and teaching staff at Aalto University is 1612 hours. *

Aalto University follows the salary system of Finnish universities. The starting salary is 3000 €/month (gross), and it increases as the Doctoral Researcher progresses in their research and studies. *

The contract includes Aalto University occupational healthcare. Aalto University provides excellent learning and development opportunities, and a commuter ticket benefit. Unisport offers versatile sports facilities and exercise services with a staff discount. *

We work in a hybrid way, and the primary workplace is Otaniemi, Espoo. The Otaniemi campus is a thriving and connected community of 100 nationalities. Life at the transformed campus is vibrant and filled with amazing architecture, calming nature, and a variety of cafes, restaurants, services and good connections along the metro and city train lines. See how the campus looks like on our virtual tour: <https://virtualtour.aalto.fi/>

Join us!

To apply, please submit the following application materials through our aalto.fi recruitment site by 23 September 2024 Finnish time. Click “Apply now”.

Please note: Aalto University’s employees should apply for the position via internal HR system Workday (Internal Jobs) by using their existing Workday user account (not via the external webpage for open positions). Aalto University’s students and visitors should apply as external candidates with personal (not Aalto) email.

All material should be submitted in English and in a pdf file. Application material should include:

1. Letter of motivation (max. one page). Please describe your background and future plans, and in particular your reasons for applying for this project.

2. A curriculum vitae and possible list of publications with complete study and employment history, contact details of referees from 2 senior academic people. We will contact your referees, if recommendation letters are required.

(please see CV example

https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Ftenk.fi%2Fsites%2Fdefault%2F06%2FTENK_CV_template_2020.docx&wdOrigin=BROWSELINK]TENK_CV_template_2020.docx (live.com))

3. A study transcript provided by the applicant’s university that lists studies completed and grades

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achieved.

4. A copy of the M.Sc. degree certificate or equivalent. (for doctoral study application it will need to be officially translated into Finnish, English or Swedish). If the degree is still pending, then a plan for its completion must be provided.

5. Plan for obtaining certificate of English/Finnish/Swedish language knowledge for doctoral study application if position is offered (in order to have it on time for application, see more from [\[url=https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies\]](https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)<https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies>)

We will go through applications, and we may invite suitable candidates to interview already during the application period. The position will be filled as soon as a suitable candidate is identified. The chosen candidate should apply for doctoral study right immediately after accepting the position.

Any questions?

For additional information, kindly contact Prof. Ville Alopaeus ([firstname.lastname\(at\)aalto.fi](mailto:firstname.lastname(at)aalto.fi)).

Aalto University reserves the right to leave the position open, extend the application period, reopen the application process, and consider candidates who have not submitted applications during the application period.

For questions about applying, please contact HR Partner Noora Katisko, who can be reached by e-mail at [firstname.lastname\(at\)aalto.fi](mailto:firstname.lastname(at)aalto.fi) .

Want to know more about us and your future colleagues?

You can watch these videos: [\[url=https://www.youtube.com/watch?v==5k_og_6zUJQ\]](https://www.youtube.com/watch?v==5k_og_6zUJQ)Aalto University - Towards a better world, [\[url=https://www.youtube.com/watch?v==dUfEGVM-ZP8&feature==youtu.be\]](https://www.youtube.com/watch?v==dUfEGVM-ZP8&feature==youtu.be)Aalto People , and [\[url=https://www.youtube.com/watch?v==ZK6pDWm1_CE\]](https://www.youtube.com/watch?v==ZK6pDWm1_CE)Shaping a Sustainable Future.

For more information about living in Finland: [\[url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff\]](https://www.aalto.fi/en/careers-at-aalto/for-international-staff)<https://www.aalto.fi/en/careers-at-aalto/for-international-staff>

Read more about working at Aalto: [\[url=https://www.aalto.fi/en/careers-at-aalto\]](https://www.aalto.fi/en/careers-at-aalto)<https://www.aalto.fi/en/careers-at-aalto>

About Finland

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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/)]<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/en/careers-at-aalto/living-in-finland](https://www.aalto.fi/en/careers-at-aalto/living-in-finland)]<https://www.aalto.fi/en/careers-at-aalto/living-in-finland>

Contact Information

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

Contact

Finland