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Description of the appointment process of a tenure track position (assistant/associate/full professor)

Nuclear power engineering

Location: School of Energy Systems, Department of Energy Technology, Lappeenranta campus

The rector has approved the description and initiated the appointment process on 10 March 2026.

Applied statutes

Universities Act (558/2009)
Government decree on universities (770/2009)

Regulations of LUT University (8 December 2022, amended 20 September 2025)

Rector's decision: Academic career tracks of the Lappeenranta–Lahti University of Technology LUT (16 January 2025)

Additional information

Further information on the duties of the professor is provided by Teemu Turunen-Saaresti, professor, tel. +358 50 539 5733, teemu.turunen-saaresti@lut.fi

1 Background

LUT University is a challenger university aiming to conduct high-quality research that is relevant to society and industries. As a compact, agile, and highly focused university, together with its partners, LUT contributes to an economically, ecologically, and socially sustainable society in its focus areas.

We at LUT University seek solutions to global issues with our expertise in technology, business, and social sciences. LUT is a trailblazer in promoting the energy transition and the regenerative use of natural resources and helps build resilient communities, industry, and businesses through data, research, and education. LUT's campuses are in Lappeenranta and Lahti, Finland, but its impact is global.

LUT University was established in 1969. Our entrepreneurially thinking scientific and international community comprises approximately 9000 students and 1500 experts engaged in scientific research and academic education. There are more than 100 nationalities present on our modern campuses in Lappeenranta and Lahti.

In our schools – the LUT School of Energy Systems, the LUT School of Engineering Sciences, and LUT Business School – we conduct research and provide education that are internationally recognised and relevant to both society and business.

Times Higher Education (THE) has ranked LUT among the top 11 small universities across the globe in 2022. The THE university rankings present the world's top universities for interdisciplinary research.

LUT School of Energy Systems (LES)

The LUT School of Energy Systems promotes energy and resource efficiency and pursues the global decarbonisation of energy processes.

The core vision and goal of the school is to deliver leading research on low-carbon energy technologies and the associated complex, net-zero, or even carbon-negative energy systems and markets. The research and education at the school cover energy technology, electrical engineering, mechanical engineering, and sustainability science. The strategic focus areas of the school’s research include sustainable energy technologies, energy conversion and storage, digital production processes in mechanical systems, and sustainability. The school also includes the experimental research unit LUT Voima.

We are internationally recognised as a leading centre of energy research, and we have an unparalleled reputation for conducting research that combines academic excellence with close ties to major Finnish industries, especially the Finnish power industry, making a distinct impact on business and society. A key principle in our research is to bridge areas from fundamental theory to empirical work, innovation, advanced technologies and processes, close-to-market products, and services and business models that can transform energy systems on an industrial scale.

Our school provides bachelor's, master’s, and doctoral programmes and has Finland’s largest group of researchers in the field of energy. The school employs 42 assistant, associate, and full professors and 420 staff members overall. LUT’s nuclear engineering master’s programme is a special duty of national importance assigned and funded by the Ministry of Education and Culture.

Department of Energy Technology

At the LUT School of Energy Systems (LES), the Department of Energy Technology is responsible especially for research and education in energy technology and energy

conversion-related processes, covering thermodynamics, fluid dynamics, thermal engineering, biomass processing, industrial energy systems, nuclear power reactors and societal dimensions of energy technologies.

The department's activities have largely focused on energy technologies and the economy of energy production, grounded in a deep understanding of the physical fundamentals of energy technologies and their applications in industrial-scale processes and power conversion equipment. Efficiency, economy, safety and sustainability are the guiding principles of the Department of Energy Technology.

2 Vacant professorship

The professorship of nuclear power engineering is located at the Department of Energy Technology of the LUT University School of Energy Systems (LES). The position is based in Lappeenranta, Finland.

https://www.lut.fi/en/about-lut/faculties/lut-school-energy-systems/energy-technology

The professor is expected to lead and oversee a high-level academic research group.

The focus area of the professorship is engineering of nuclear power generation for electricity, heat, and chemicals. Current nuclear engineering research at LUT focuses on nuclear power plant engineering for industrial and municipal purposes and covers all needed engineering disciplines: reactor physics, reactor dynamics, nuclear process systems engineering, nuclear thermal hydraulics, radiation safety, reliability engineering, and nuclear safety analyses.

LUT University's Nuclear Engineering Laboratory has extensive capabilities for nuclear thermal-hydraulic experimentation and analysis, including advanced measurement technologies and data processing, modern computational facilities, and coupled code development for the modelling of coupled reactor physics – thermal hydraulic – fuel behaviour problems. The university has made significant investments in these experimental capabilities, and the laboratory has a robust mix of ongoing academic and contract research with strong prospects for continuation.

The professor of nuclear power engineering is expected to produce high-quality research in one or more of the topics above. Relevant applications range from Generation II operating reactors (light-water reactors, LWRs) to Generation III operating or planned reactors (LWRs and SMRs) and selected Generation IV technologies (gas-cooled high-temperature reactors, liquid metal cooled reactors).

The duties of the professor include giving and/or overseeing bachelor's, master's, and doctoral education in nuclear technology; the exact educational responsibilities will be agreed on with the head of the degree programme in energy technology. Teaching in Finnish is not required.

Proof of and potential in high-impact international publishing are expected, as high-impact international research is one of the most important duties of professors at LUT University.

Skills for collaborating both within LUT and with national and especially international partners are crucial to the position, and the candidate is expected to provide evidence of successful international collaboration and the acquisition of research funding. Preparations for national and especially international research and education projects are part of the work of professors at LUT University. Practical industrial experience in the field is considered an advantage in this position.

The duties of the professor include the integration of nuclear engineering into other research areas of the Department of Energy Technology and cooperation with colleagues at the

department, the School of Energy Systems, and other schools and departments of LUT University. Also included are societal engagement that serves industry, the economy, and society, and general administrative work related to the university's operation and duties of national importance in nuclear power and safety.

The professorship's fields of research include the following, and applicants are expected to master at least one:

- thermal hydraulics experimentation and/or modelling
- nuclear power plant engineering, including commercial-scale and/or modular nuclear reactors
- nuclear energy conversion process modelling, design, and optimisation
- nuclear safety analysis methodologies

The main application areas:

- safe and economic operation of current industrial-scale nuclear power plants
- resolving emerging issues related to availability or safety
- deployment of novel nuclear technologies beyond the current state of the art

The person appointed to the professorship must present strong research achievements in at least one of the research fields and application areas above as well as proof of successful project work and research collaboration with research institutions and industry. In addition, we require evidence of the management of an organisation and the acquisition of funding from competitive sources.

The duties related to the field of research include the following:

- high-impact international research
- planning and implementation of bachelor's, master's, and doctoral education
- supervision of final theses and doctoral studies
- preparation of national and international research and education projects
- acquisition of research funding
- increasing public awareness of nuclear power in a way that benefits society
- taking part in the preparation of projects in other LUT units as an expert
- general administrative work related to the university's operation.
- cost-conscious leadership and project management
- close collaboration and interaction with businesses in the field

The position is at the assistant, associate, or full professor level of the tenure track and will be filled through an open call for a fixed term of four years (assistant/associate professor) or permanently (full professor). The tenure track system offers researchers a possibility to advance to a full professorship. LUT is committed to providing tenure track researchers the possibility to advance to the next level, provided they meet the requirements in the promotion reviews, are suitable for the position, and conduct research that fits LUT's strategy and operation.

More information on the LUT tenure track system:
https://www.lut.fi/en/research/research-career-lut/tenure-track

The position starts with a six-month trial period.

3 Qualifications

According to the administrative regulations of LUT University, adopted on 8 December 2022 (amended 20 September 2025), assistant, associate, and full professors are required to have a doctorate, high-level scientific qualifications, experience in heading scientific research, the ability to acquire funding, the ability to provide high-level instruction based on research, the ability to supervise final theses, proof of international cooperation in the field of research in question, and when relevant to the duties of the position, practical experience in the field of the professorship.

Practical experience in the field is not a requirement in this position, but it is considered an advantage. Applicants must demonstrate in their application how they have collaborated with industry.

Applicants must present research and teaching merits and proof of effective research, the acquisition of external research funding, and international experience. The appointed applicant will become the supervisor of a research group and may need to perform other demanding management duties assigned by the university. Therefore, related skills will be taken into consideration in the appointment and attention will be paid to the applicant's merits as defined in LUT's tenure track system (Annex).

According to the university regulations, section 28, professors are required to have the language skills needed for the successful completion of their duties.

In this position, spoken and written fluency in English is required. The appointed person is encouraged to acquire the necessary Finnish skills during the employment relationship. For this purpose, LUT offers in-house Finnish language courses to staff members. The appointed candidate will not be required to teach in Finnish.

Only candidates from countries that have fully implemented the provisions of the international nuclear non-proliferation treaty and its additional protocols can be considered for this position.

4 Applying for the position

Application

The application must specify the tenure track level applied to. The deadline for applications is indicated in the vacancy announcement. The application and material for expert assessors should be submitted through the online recruitment system mentioned in the vacancy announcement.

All application documents must be in English and in PDF format. The application must include:

- a curriculum vitae (max. 10 pages)
- a copy of the applicant's doctoral diploma
- a full list of publications including the applicant’s Scopus and Google Scholar details: the Scopus ID and Google Scholar profile URL
- a separate list of the publications submitted for expert evaluation
- publications for evaluation by experts (max. 10)
- a teaching portfolio or an equivalent account of the applicant's teaching qualifications
- an account of the applicant's merits and activities of significance to the vacancy, including the applicant’s collaboration with industry (max. 3 pages)
- an account of the applicant's vision on the development of education, research, and projects in the field of the professorship at LUT University (max. 3 pages)

Contact information

Applicants must give the university an email address at which they can be reached. Applicants who do not wish to be contacted by email must give a postal address at which they can be reached during the appointment process. The university prefers email.

5 Expert evaluators

Selection of experts

The experts must be impartial. Before the selection of expert evaluators, the applicants must be provided the possibility to comment on their possible disqualification.

Based on the proposal of the selection committee, the dean invites at least three internationally recognised experts to submit a statement on the qualification of the applicants. The university's staff members may not be invited as expert evaluators. To the extent possible, the experts should be chosen with the applicants' fields of specialisation in mind and with a view to impartiality.

Sections 27–29 of the Administrative Procedure Act (434/2003) apply to the disqualification of an expert evaluator.

Applications forwarded to expert evaluators

The provost may limit the number of applications forwarded to expert evaluators if there are four applicants or more. At least three applications must be forwarded to the experts. The applications may be limited to the most suitable candidates for the position in the view of the person making the decision. The provost must present grounds for the decision. The applicants will be informed if any applications are excluded from the evaluation.

Expert statements

The expert evaluators must give their statements in writing. More specific dates will be sent to the evaluators along with instructions. In their statements, the experts must evaluate especially the scientific qualification of the applicant, and if possible, also other merits related to the professorship, and rank the applicants in order of preference.

Expert evaluators may not take part in the appointment process at a later stage.

The statements must be sent or emailed to the university (separate instructions issued) by the deadline.

6 Interview and trial lecture

Applicants deemed qualified for the position by the experts will be invited to an interview. The selection committee may ask the applicants to give a public trial lecture.

7 Appointment

The selection committee makes an appointment proposal to the tenure track committee, which then makes its own proposal to the dean and provost. The dean and provost then make a joint proposal to the rector on filling the position or leaving it vacant. The proposal shall be based on the merits presented by the applicants, expert statements, possible trial lectures, and other related matters.

The evaluation of the applicant's qualifications considers scientific publications and other research results with scientific value, pedagogical expertise, teaching experience, teaching-related merits, a trial lecture if needed, the number of supervised dissertations, and management and leadership skills. In addition, the applicant's activity in the scientific community, success in raising research funding, scientific work abroad, and international positions of trust are considered.

The rector decides either to appoint an applicant or to leave the position vacant.

The appointment proposal may be made or let lapse even if all of the experts have not submitted their statements, provided that the time limit for the statements has expired, at least three experts have submitted their statements, and the impartial treatment of the applicants is not compromised by doing so.

After the rector has made the appointment decision, an employment contract is concluded with the appointed person. If no employment contract is concluded, the rector may, based on a new proposal, make a new decision and appoint another applicant. The rector may also leave the position vacant. When the employment contract is concluded with the person appointed, the final decision is made known to all interviewed applicants.

Annex

Tenure track appointment criteria

The positions below require a doctorate in an applicable field, a research field that fits the LUT strategy (see LUT Strategy 2030), a goal-oriented plan for the work in question, teaching experience and an up-to-date account of teaching merits (teaching portfolio).

LUT has joined the international CoARA Agreement on Reforming Research Assessment (https://coara.eu/agreement/the-agreement-full-text), which emphasises qualitative assessment in recruitments and promotions to specialist positions. This is highlighted especially in the assessment of peer-reviewed scientific publications. We require high-level publications. The quality of publications is evaluated based on their content, such as novelty and impact. High-level publications have also passed a high-level peer review, where only the best manuscripts are accepted for publication.

In the tenure track criteria below, we apply the classification of the Finnish Publication Forum (JUFO) as a guiding indicator of high-level publications (ratings 2 and 3), but applicants always select their best publications for a qualitative evaluation by experts. The applicant's work will be evaluated in light of LUT's high ethical standards for research.

In international recruitments, the evaluation must consider that applicants from beyond Finland and Europe may not have been involved in Finnish or European research projects and may not have taken into consideration the Finnish Publication Forum classification. Such applicants are evaluated in terms of their success in acquiring competitive funding through their own national channels or through international ones, and in terms of impact factors of scientific journals in their own field. Only in promotion and tenure reviews are the same criteria be applied to them as to Finnish persons.

The following qualifications are to be considered in the recruitment of researchers for different levels.

Assistant professor:

- peer-reviewed scientific publications
- contacts with the international scientific community in the field
- the ability to take part in applying for external funding in the research group and for fellowships of the Research Council of Finland
- the ability to participate in teaching and final thesis supervision

Associate professor:

- successful publication history after the doctoral defence, target of three high-level publications a year
- proof on international cooperation
- successful acquisition of external funding and acting as, e.g., a project manager in externally funded projects
- applying for the Research Council of Finland’s research fellow positions
- participation in the supervision of doctoral students
- participation in the commercialisation of research results
- participation in teaching, the development of teaching and the supervision of final theses

Full professor:

- o proof of the successful performance of duties

1. Scientific research
   - publications: target of three high-level publications a year; emphasis on publications from recent years
   - supervised dissertations: target of approximately one doctorate a year
   - other scientific publications, such as books and chapters
   - citations
   - important keynote/plenary presentations and scientific awards
   - editorial work in scientific journals
2. Academic teaching experience
   - high-quality teaching proven in different ways, such as feedback received
   - up-to-date teaching portfolio
   - development of teaching modules
   - supervision of final theses
3. Academic leadership
   - establishing and heading a research group
   - leadership experience and evidence of leadership and interpersonal skills
   - other leadership experience and feedback received
4. Acquisition of external funding
   - EU, ERC, Research Council of Finland, and Business Finland
5. Work in the scientific community
   - international scientific societies and expert advisory duties
   - duties with an impact on the scientific community
6. Societal impact
   - presence in societal dialogue
   - corporate funding and external funding not referred to in point 4 above
   - professional experience beyond universities
   - innovations, patents, collaboration with companies (e.g., board memberships)
   - activity in the university's stakeholder groups