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

Sustainability of technical raw material utilisation

Location: School of Energy Systems, Department of Sustainability Science, Lappeenranta

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

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Applied statutes

Universities Act (558/2009)
Government Decree on Universities (770/2009)

Regulations of LUT University (8 December 2022, amended 7 April 2026)
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 Mika Horttanainen, professor, head of department, tel. +358 40 848 5850, email mika.horttanainen@lut.fi or Risto Soukka, professor, tel. +358 40 072 3094, email risto.soukka@lut.fi

1 Background

LUT University is a globally connected research university and a member of the European university alliance EULiST. With strong performance in international university rankings and extensive global partnerships, LUT offers an excellent environment for conducting impactful research and collaborating across borders to address some of the world's most pressing challenges.

LUT seeks solutions to global issues with its 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.

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.

LUT School of Energy Systems

The LUT School of Energy Systems focuses systematically and broadly on the direct and indirect electrification of all energy use including heating and process heat, thereby promoting the defossilisation of the entire energy system.

The core vision and goal of the school is to deliver leading research on low-carbon energy technologies and the associated complex, net-zero carbon 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 are energy conversion and storage, solar economy and smart grids, digital product processes in mechanical systems, and sustainability. The school also includes the experimental research unit LUT Voima, supporting the implementation of proofs of concept for research purposes.

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 an impact on business and society. A key principle in our research is to bridge areas from fundamental theory to empirical work, innovation and close-to-market products, technologies, processes or services that may transform energy systems and improve people's lives globally.

Our school provides bachelor's, master's, and doctoral programmes and has Finland's largest group of researchers in the field of energy. The unit employs 37 professors and more than 400 staff members overall.

2 Vacant professorship

The professorship in the Sustainability of technical raw material utilisation is located in the Department of Sustainability Science at the LUT School of Energy Systems. The department also has professors in life cycle management, waste management systems, environmental management and economics, circular economy, new socio-ecological models, sustainability of energy systems, and assessment of biodiversity impacts. The research group headed by the professor will work in close cooperation with the other professors of sustainability science.

The professorship responds to the rapid increase in the need for technical raw materials, meaning materials of non-biological origin. Especially the energy transition, electrification, digitalisation, and the development of artificial intelligence demand more technical raw materials, such as rare earth elements (REE) and other critical raw materials. They are

necessary for the energy and sustainability transition, including renewable energy generation, electric vehicles, and electricity storage. While the transition makes it possible to mitigate climate change and other problems caused by fossil fuel use, it also shifts the burden onto many rare and critical non-renewable raw materials. Sustainability assessment using life cycle assessment (LCA) is one way to get important information on the environmental impacts of new technological solutions, but it does not adequately capture the problems of resource depletion and geographically limited availability of raw materials. Improving the circularity of the materials is an important part of the solutions, but recycling alone cannot solve the raw material problems. The open professorship will complement the department's current expertise and research focus by using different modelling and computational methods to assess of the availability and sustainability of technical raw materials, including their extraction and utilisation.

The new professorship will significantly strengthen the university's research on sustainability and energy system transition, which is also a focus of other LUT units, such as the energy technology and electrical engineering departments. Thus, the new professor will be a part of an internationally recognised and growing group of specialists.

The position requires expertise in at least two of the following research fields:

- Assessment of the global and local sufficiency and availability of technical raw materials, especially the raw materials related to sustainability and the energy transition
- Assessment of the sustainability of technical raw material utilisation based on strong knowledge of life cycle assessment or other applicable methodologies
- Risk analysis of raw material availability related to geopolitical factors

The person appointed to the professorship must present strong research achievements in the focus areas above as well as proof of successful project work and research collaboration with research institutions and relevant industry. In addition, applicants must demonstrate experience in leading a research group or organisation and in the acquisition of funding from competitive sources.

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

- planning and implementation of distance and contact teaching at the bachelor's, master's, and doctoral levels
- supervision of final theses and doctoral studies
- acquisition of research funding
- cost-conscious leadership and project management of the research team
- preparation of national and international projects
- societal interaction
- increasing awareness in a way that serves industries
- close collaboration and engagement with businesses in the field
- taking part in the preparation of projects in other LUT units as an expert
- general administrative work related to the university's operation

The position is at the assistant or associate professor level of the tenure track. It will be filled through an open call for a fixed term of four years. The tenure track offers researchers a possibility to advance to a full professorship. LUT is committed to providing tenure track researchers the possibility to progress 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. The position is based in Lappeenranta and may require travel to the university's other locations as needed.

3 Qualifications

According to the administrative regulations of LUT University, adopted on 20 December 2022 (amended 7 April 2026), assistant and associate 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 their field of research, and when relevant to the duties of the position, practical experience in the field of the professorship.

The applicant must have research and teaching merits, proof of effective research and the acquisition of external research funding, and international experience. The appointed applicant will be a part of the existing 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, oral and written fluency in English is required. If the appointed person is not fluent in Finnish, acquiring Finnish skills during the employment relationship is encouraged. For that purpose, LUT offers in-house Finnish language courses to staff members.

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 primarily 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 all the following documents:

- a curriculum vitae (max. 10 pages)
- a copy of the applicant's doctoral diploma (no other diplomas)
- a full list of publications, including the total number of publications in the Scopus database, the total number of citations, the h-index and Scopus ID, and equivalent information from the applicant’s Google Scholar profile
- a separate list of up to 10 publications submitted for expert evaluation
- the 10 above-mentioned publications as separate attachments
- a teaching portfolio or an equivalent account of the applicant’s teaching qualifications, including courses taught by the applicant, related feedback, the applicant’s pedagogical training and teaching philosophy, and courses that the applicant can or prefers to teach
- an account of the applicant´s merits and activities of significance to the vacancy (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 within the agreed timeframe. 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 applicants and, if possible, any 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 submitted 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 the proposal by the dean and provost, 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 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 publications a year with a national Publication Forum rating
- Proof of participation in international cooperation
- Successful acquisition of external funding and acting as, e.g., a project manager in externally funded project.
- Applying for post-doctoral researcher posts of the Research Council of Finland
- 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