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Job Title Professorship Energy Process Technology

Department Department of Mechanical Engineering

https://www.maschinenbau.tu-

darmstadt.de/fachbereich/index.de.jsp

Institution Technische Universität Darmstadt

Darmstadt, , Germany

Date Posted Nov. 5, 2025

Application Deadline Dec. 4, 2025 **Position Start Date** Oct. 1, 2027

Job Categories Professor

Academic Field(s) Mechanical Engineering

Job Website https://www.career.tu-darmstadt.de/tu-darmstadt/job/50173

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Job Description

The Department of Mechanical Engineering at TU Darmstadt invites applications for a

Professorship "Energy Process Technology"



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(W3)

(Code. No. 498)

as of October 1, 2027.

About TU Darmstadt

TU Darmstadt stands for excellent and relevant science. We are playing a decisive role in shaping farreaching processes of global change – from energy transition to artificial intelligence – through outstanding scientific knowledge and innovative academic programmes. We group our cutting-edge research into three fields: Energy and Environment, Information and Intelligence, Matter and Materials.

TU Darmstadt has strong ties to the Frankfurt-Rhine-Main metropolitan region and is well known for its cosmopolitanism and international outlook. As one of the three Rhine-Main Universities (RMU), TU Darmstadt cooperates closely with Goethe University Frankfurt and Johannes Gutenberg University Mainz. This includes academic research, study and teaching, the promotion of early-career researchers, and the transfer of knowledge and technology to the economy and society. TU Darmstadt actively promotes diversity and equality. We consider diversity to be the key to creative solutions and social progress.

Context of the professorship in the Department of Mechanical Engineering

Our department stands for the mechanical engineering of tomorrow – sustainable, interdisciplinary, and in dialogue with society and industry. We develop solutions for the major challenges of our time to ensure a livable future.

In this context, the defossilization of industrial energy and material conversion processes is one of the key tasks of the 21st century, to which the Department of Mechanical Engineering is making an important contribution. The overarching goal is to transition from the current linear economy to a circular economy in which the energy, chemical, and transportation sectors are linked. The aim is to make the best possible use of resources and reduce waste, emissions, and exergy losses to a minimum. Thermal processes in particular play a key role in the realization of a circular economy.

Your tasks

A university professorship in "W3 Energy Process Technology" is to be filled in the Department of Mechanical Engineering. The research of the professorship will focus on innovative thermal energy-material cycles as an important pillar of a sustainable circular economy. The professorship will actively contribute to the profile topics "Carbon Neutral Circles" and "Integrated Energy Systems" in the



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research field "Energy and Environment" at TU Darmstadt and thus to the research priorities of "Energy" and "Resources" in the Department of Mechanical Engineering.

The professorship for "Energy Process Technology" will link basic scientific research with applicationoriented research across scales. Innovative processes will be transferred from laboratory scale to pilot plants or demonstrators to develop the necessary expertise for the design of industrial plants. The scientific focus will be on experimental research accompanied by numerical simulations.

In this context, the professorship should address one or more of the following topics:

- Innovative CO2-neutral thermal industrial processes
- Innovative material energy storage processes
- Innovative waste-to-value synthesis processes

We expect a willingness to engage in national and international cooperation and interdisciplinary work both within the department and with other departments and research institutions.

The duties also include teaching in the field of energy process technology and participation in interdisciplinary courses offered by the department, as well as involvement in academic self-administration.

Your profile

We are looking for an excellent scientist who will represent the field of energy process engineering in research and teaching at the Department of Mechanical Engineering at TU Darmstadt.

Requirements include a degree in engineering or natural sciences followed by a qualified doctorate, proven internationally visible research achievements, habilitation or habilitation-equivalent achievements, experience in acquiring project funding, didactic and pedagogical aptitude, and leadership experience. In addition to successful work in public research institutions or universities, several years of practical experience in industry in the field of energy process engineering is considered advantageous. The willingness and ability to teach courses in German or English is required.

The prerequisites for employment are in accordance with the Sections 67 and 68 of the Hessisches Hochschulgesetz (Hessian Higher Education Act).



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As part of the Frankfurt Rhine-Main metropolitan region, Technical University of Darmstadt and its surroundings are characterized by living internationality. The core element of this is a cosmopolitan climate with functional multilingualism at our university. Therefore, very good English and, at the latest after three years, good German language skills are expected.

This job advertisement is open to people of all genders. TU Darmstadt aims to further increase the number of female professors, and we therefore strongly encourage interested female researchers to apply!

We offer

Technical University of Darmstadt offers varied and challenging assignments, freedom to work independently, the latest technologies, good collaboration between colleagues in partnership, needsbased training opportunities and customised personnel development.

Development and organisation – comprehensive in-house training offers, including the opportunity for continuing education and development;

Sustainable and mobile –eligibility to free public transport in the state of Hesse with the LandesTicket Hessen (Hesse StateTicket), in addition to opportunities to working mobile at times;

Fit and healthy – free of charge preventive medical check-ups and a wide-ranging subsidised sports programme;

Work-life balance – flexible working time models, plus BGM (Betriebliches Gesundheitsmanagement – University Health Management):

Family-friendliness and career – Technical University of Darmstadt is certified as a family-friendly university and offers a dual career program;

Accessibility is a high priority throughout our entire working environment. We constantly strive to further reduce digital, structural, and linguistic barriers for all employees and explicitly welcome applications from people with disabilities. In case of equal qualifications, applicants with a degree of disability of at least 50% or equal will be given preference.

You can find more information about TU Darmstadt as an employer on our website.

Appointment is usually made on a civil service basis with attractive remuneration depending on qualifications.

Data privacy

By submitting your application, you agree that your data may be stored and processed for the purpose of filling the vacancy. You can find our privacy policy on our webpage.



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Contact

If you have any questions about this position, please contact Prof. Dr. habil. Andreas Dreizler: dreizler@rsm.tu-darmstadt.de.

Application deadline: December 4, 2025

You can find our application form on https://www.career.tu-darmstadt.de/HPv3.ApplicationForm/ShortApply/Index/50173

Contact Information

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

Contact

Germany