TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the Faculty of Mechanical Science and Engineering, the Institute of Mechatronic Engineering invites applications for the Chair (W3) of Fluid-Mechatronic Systems (Fluidtronics) to be filled on April 1, 2025.

We are looking for a scientifically proven personality (m/f/x) who is able to represent the field of fluid-mechatronic systems and related topics in research and teaching with commitment and will successfully manage the internationally established chair with more than 30 employees and extensive laboratory equipment.

Your responsibilities in teaching contain courses in:

**Fundamentals of hydraulics and pneumatics**
- with components and basic structures of hydraulic and pneumatic systems, hydraulic and pneumatic circuit design as well as hydraulic fluids and sealing elements

**Fluid-mechatronic drives und controls**
- for mobile machinery with implement and travel drive systems, including partially and fully automated systems and driver assistance systems; for industrial machines in the fields of metal forming and cutting as well as converting and packaging technology; for aircraft and spacecraft systems.

These are to be offered in modern teaching formats and concepts (including in digital form) in German and English as part of international degree programs. Your willingness to participate in academic self-administration as well as national and international research networks, including the initiation of research projects, is a prerequisite.

Your research areas, which shall cover fundamental as well as application-oriented aspects, are expected at least in one or two of the following fields:

**Holistic development of fluid-mechatronic drive and control systems**
- focusing on applications in mobile machinery, industrial machines as well as aircraft and spacecraft technology; functional structuring and design, taking components and economic criteria / effects into consideration; including alternative hydraulic fluids; covering all phases of product life cycle and the product development process
Technology integration and digitization
of fluid power (hydraulics / pneumatics) and electrical drive components, control and power electronics, mechanics, actuators and innovative sensors; hybridization of drive systems; monitoring / diagnosis and error-management; intelligent networking in communication networks and cloud services

Methods, software tools and experimental analysis techniques
for processes of development and utilization of virtual fluid-mechatronic systems; consideration, evaluation and optimization of the properties of relevance regarding function and safety; scientific validation.

We expect nationally and internationally verifiable research work as well as relevant, outstanding publications on the listed main topics. Close cooperation with national and international partners from science and industry as well as good networking in industry and committees are highly desirable. In addition, you should have many years of practical experience in technically oriented, leading corporate functions as well as relevant teaching experience in the above-mentioned subject areas. Applicants must fulfill the appointment requirements of § 59 of the Institutions of Higher Education Act in the Free State of Saxony (SächsHSG).

For further questions, please contact the Dean of the Faculty of Mechanical Science and Engineering, Prof. Dr.-Ing. M. Beckmann, phone +49 351 463-32786; E-Mail: berufungen.mw@tu-dresden.de.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment. If you have any questions about these topics, please contact the team of the Equal Opportunity Officer of the Faculty of Mechanical Science and Engineering (gleichstellung.mw@tu-dresden.de) or the Representative of Employees with Disabilities (schwerbehindertenvertretung@tu-dresden.de, Tel.: +49 351 463-33175).

Please submit your application including a CV in tabular form, a description of your scientific career, an overview of research activities, a list of your scientific publications and patents, and a list of courses taught, results of evaluations as well as a copy of the certificate of your highest academic degree, preferably in electronic form (one PDF file) until December 15, 2023 (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies) via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it to berufungen.mw@tu-dresden.de or as hard copy (stamped arrival date of the university central mail service applies) to: TU Dresden, Fakultät Maschinenwesen, Dekan, Herrn Prof. Dr.-Ing. M. Beckmann, Helmholtzstr. 10, 01069 Dresden. In case of hard copies, please attach all documents to your application in electronic form (CD or USB storage medium).

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tudresden.de/karriere/datenschutzhinweis.