

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, Institute of Material Handling and Industrial Engineering**, the **Chair of Material Handling** offers a position as

**Research Associate (m/f/x)**

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **as soon as possible**. The position is initially limited until February 28, 2026. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification.

**Tasks:** You will conduct research into technical logistics systems, such as wire rope, chain and belt drives, industrial trucks, driverless transport systems and much more. You will work on publicly funded research projects - also in co-operation with partners from research and industry - as well as research contracts from companies. The work is varied and covers the following areas:

- Development of mechanical models for non-linear friction and elasticity in the field of materials handling technology, in particular rope friction
- Experimental analysis: planning, execution and evaluation of test series to determine friction coefficients and model validation in various materials handling scenarios
- Calculation: analytical and numerical analyses of coupled equations of motion, finite element method
- Scientific communication: publication of scientific articles, attendance at international conferences, reporting on ongoing and completed research projects, application for publicly funded research projects.

**Requirements:**

- university degree in engineering preferably with a focus on materials handling and logistics
- confident handling of Microsoft Office and/or LaTeX
- knowledge of a programming language (ideally C++ or Python)
- confident handling of CAD/CAE software (e.g. SolidWorks, Inventor, Mathcad, Ansys)
- very good to good German and English skills (written and spoken)
- Previous knowledge in the fields of technical logistics, material handling and conveyor technology as well as technical mechanics is welcome
- collaborative, collegial and goal-oriented working style
- willingness to further academic qualification.

**We offer:**

- opportunity for hybrid work
- flexible working hours
- company pension scheme
- free further training programmes as a doctoral candidate at TUD.

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.

Please submit your detailed application with the usual documents by **June 6, 2024** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal <https://securemail.tu-dresden.de> by sending it as a single pdf file to [technische.logistik@tu-dresden.de](mailto:technische.logistik@tu-dresden.de) or to: **TU Dresden, Fakultät Maschinenwesen, Institut für Technische Logistik und Arbeitssysteme, Professur für Technische Logistik, Herrn Prof. Dr.-Ing. habil. Thorsten Schmidt, Helmholtzstr. 10, 01069 Dresden, Germany**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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**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://tu-dresden.de/karriere/datenschutzhinweis>.