

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.

The **"Friedrich List" Faculty of Transport and Traffic Sciences** invites applications for the

Chair (W3) of Smart Road Traffic Infrastructure

to be filled at the **earliest possible date**.

Key Duties and Academic Responsibilities

The chair will represent the scientific field of intelligent and sustainable transport infrastructures in research and teaching. The focus is on innovative solutions for intelligent and sustainable road transport infrastructure in its role of enabling mono- and intermodal transport, taking into account all road-based modes of transport (in particular motor vehicles, bicycles, and pedestrians). Consideration should also be given to innovative aircraft that navigate using road-based sensor technology and are planned as part of intermodal networks in close coordination with all other modes of transport. The aim is to upgrade the infrastructure to facilitate intermodal, highly automated and networked mobility as well as the integration of road-based and other relevant transport systems (e.g. urban air transport). This includes the development of methods for designing safe, efficient, resilient and thus generally sustainable road transport infrastructures. With a focus on the domain of transport infrastructure, methods and tools of artificial intelligence, stochastic simulation (agent-based simulation) or Building Information Modeling (BIM) shall be used. From 2027, the chair will have access to the experimental facilities of the Smart Mobility Lab (SML) in Hoyerswerda for the development of automated and networked mobility solutions. The chair also actively participates in the German-language bachelor's and German- and English-language master's programs of the Friedrich List Faculty of Transportation Sciences, as well as in teaching exports, e.g., to the Faculty of Civil Engineering and the Faculty of Mechanical Engineering.

Requirements & Candidate Profile

We are looking for you (m/f/x) as a dynamic and committed person with a proven scientific track record and network in the designated field of the chair, both nationally and internationally. We require your expertise in the digital planning, construction, and operation of road traffic infrastructure, taking into account all types of road users and usage requirements. We also expressly welcome your experience in this field with regard to current and future, in particular highly automated driving and aircraft technology. You have in-depth expertise in at least one of the following areas:

- concepts for the design and technologies for the flexible use of transport infrastructures, especially with regard to increasing automation in transport,
- concepts for monitoring and adaptive control of the operation of intelligent transport infrastructures,

- quantitative methods for evaluating traffic safety in the planning, design and operation of transport infrastructures,
- Concepts for reducing traffic-related environmental impacts (e.g., immission control) and climate adaptation through intelligent transport infrastructures,
- experience in the development of national and international guidelines in the context of transport infrastructures.

We expect you to successfully acquire funding at the state/federal (e.g., SMWA, BMBF, BMDV) and EU levels, as well as comparable research contracts from the public sector (e.g., the Federal Highway and Transport Research Institute BASt) and industry. We require relevant experience in third-party funded research. Activities related to the German Research Foundation (DFG) are particularly welcome.

We attach particular importance to your willingness to cooperate with other chairs at the "Friedrich List" Faculty of Transport Sciences and TUD, and likewise expect cooperation with non-university research institutions, especially in the DRESDEN-concept network, as well as with practice partners. We are also looking for enthusiasm for experimental research that can be implemented in a unique way at the SML, which is operated in interdisciplinary cooperation between the specialist areas of highly automated driving, flying (drones), agriculture, and robotics.

Your teaching responsibilities will include active participation in the German-language bachelor's and German- and English-language master's programs at the "Friedrich List Faculty of Transport and Traffic Sciences", as well as teaching exports, e.g., to the Faculty of Civil Engineering and the Faculty of Mechanical Engineering. This includes operational teaching in courses and student supervision, as well as strategic program development. We require relevant didactic skills and teaching experience.

Your involvement in academic self-administration is a given. Your independent, reflective approach to work, strategic thinking, sense of responsibility, and motivational leadership of interdisciplinary, diverse teams round off your profile.

We look forward to your application if you hold a university degree in transportation sciences, civil engineering or related relevant fields. The requirements for appointment, the official duties and the administrative status are governed by §§ 59, 69, 71 of the Act on Higher Education Institutions in the Free State of Saxony (SächsHSG) and the Saxon Regulation on Official Duties at Higher Education Institutions (HSDAVO).

For questions, please contact the head of the appointment committee, Prof. Dr. Tibor Petzoldt, phone +49 351 463-42699; email: tibor.petzoldt@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 Equal Opportunities Officer of the "Friedrich List" Faculty of Transport and Traffic Sciences (Ms. Susanne Wunsch, +49 351 463-36689) or the Representative of Employees with Disabilities (Mr. Roberto Lemmrich, +49 351 463-33175).

We look forward to receiving your application by **May 14, 2026** (time stamp on the email server or the stamped arrival date of the university central mail service of TUD applies).

How to Apply

Please attach the following documents to your letter of application:

- curriculum vitae in tabular form, synopsis of the academic career
- list of academic publications and overview of research projects with details of third-party funding acquired
- list of courses taught, results of teaching evaluations covering the last three years
- and copies of the certificates of all academic degrees.

We kindly ask you to submit your application by email. Please use the SecureMail Portal of TUD (<https://securemail.tu-dresden.de>) and send your documents in a single PDF document to: **berufungen.vw@tu-dresden.de**. If you are applying by regular mail, please also attach your application documents in electronic form (CD or USB thumb drive) and send them to:

TU Dresden, Fakultät Verkehrswissenschaften „Friedrich List“, Dekanin, Frau Prof. Dr.-Ing. Regine Gerike, Helmholtzstr. 10, 01069 Dresden, Germany.

TUD is a founding partner of the research alliance DRESDEN-concept e.V.

DRESDEN
concept



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>.