Dresden University of Technology

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 **"Friedrich List" Faculty of Transport and Traffic Sciences, Institute of Traffic Telematics**, the **Chair of Traffic Process Automation** offers a position as

Research Associate / PhD student(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 comprises 100% of the full-time weekly hours and is limited to 36 months. 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 (usually PhD).

The position is funded by the DFG under the research grant RAISE - Resilient multimodal transport management with shared autonomous electric vehicles under disruptions. This collaborative project aims to develop a resilient, multimodal transport management strategy that leverages automation and communication to optimize on-demand public transport services and traffic flow during disruptions, with a central focus on enhancing the resilience of urban transport networks to adapt and recover swiftly from unexpected events. The primary research question is how to jointly design real-time fleet management strategies for SAEVs to serve stranded passengers, alongside adaptive signal and lane access control strategies to minimize negative impacts on background road traffic.

RAISE is funded under the ANR-DFG French-German Collaboration for Joint Projects in Natural, Life and Engineering Science.

Tasks:

- independent and cooperative qualification through scientific research within the project
- training in the technical tasks of the individual dissertation topic through study of the literature and in defining concrete research goals and questions
- working on the PhD project with its focus on multimodal multilane multiclass traffic flow modelling, dynamic lane allocation and signal optimization
- collaborating with the PhD in the partner institute of IFPEN
- implementation of the planned research program, evaluation and interpretation of the results, elaboration and presentation of the research
- project-related scientific graduation work (Bachelor/Master/Diploma) in the subject-specific research field
- regular reporting on research progress to the supervising professor
- publishing the results of the research work
- cooperative maintenance of internal ex-change platforms (database, information pages, etc.)
- summarizing the results of the individual doctoral study project in a dissertation within the due time of 3 years.

Requirements:

- hold an university degree (MSc or equivalent) in one of the following fields: transportation engineering, applied mathematics, systems and control, operations research, data science, or equivalent
- be proficient in Python/Java/C++
- be proficient in written and spoken English
- be able to work in a team

We offer: Working in a team of enthusiastic scientists who work to push the boundaries of knowledge in the field in fundamental research and discuss their findings and potential applications with industry and policy-makers.

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. 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 applications containing all documents. The documents must be in English and contain:

- a letter of motivation for the application (cover letter)
- academic transcripts with marks
- curriculum vitae with a list of publications if applicable
- degree certificate
- a letter of recommendation

Please submit your detailed application including the mentioned documentation by **March 31, 2026** (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 **vpajob@tu-dresden.de** or to:

TU Dresden, Chair of Traffic Process Automation, Prof. Dr. Meng Wang, 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. Interviews will start as soon as suitable candidates are identified.

TUD is a founding partner in the DRESDEN-concept alliance.

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.