

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 Transport Planning and Road Traffic**, the **Chair of Transport Ecology** offers a position as

**Technical Employee 'Database development' (m/f/x)**  
**in the field of „Data Analysis of Vehicle Emissions“**

(subject to personal qualification employees are remunerated according to salary group E 11 TV-L)

starting **as soon as possible**. The position comprises 50% of the full-time weekly hours and is limited to three years (time limitation pursuant to TzBfG). An increase in working hours is intended.

The **"Friedrich List" Faculty of Transport and Traffic Sciences** is Germany's most comprehensive academic center of excellence for transportation sciences and pursues research on all modes of transport and mobility. At the Chair, we are researching how climate-friendly mobility and clean transport can be designed and implemented.

**Tasks:** In the area of "Data Analysis of Vehicle Emissions" you will be part of a team of researchers working on the analysis of vehicle emissions; we are tightly networked with experts across Europe. We receive the results of new field and laboratory measurements (remote sensing, plume chasing, PEMS and others) and analyse them using advanced data science methods. The aim is to determine the real emissions for the European vehicle fleet (passenger cars, light commercial vehicles, lorries and buses alike) under broad operating conditions. Furthermore, we develop methods to identify vehicles that drive with excessive pollutant emissions.

Your central task is analysing database processes, developing new databases, maintenance and continuous development of the in-house emissions database and continuous further development of the software architecture and functionalities. You are responsible for the ongoing integration of new datasets, the optimisation of processes and the trouble-free operation and access to the data. You will implement a version management and systematic description with metadata. Together with the responsible scientists, you will test and implement meaningful routines for quality control/quality checks. In the case of missing or incorrect data, methods of estimation or imputing must be developed. Furthermore, you will implement new algorithms for analysing measurement data. In the future, we plan to open up the system to external users, which will expand your area of responsibility to include the management of interactions, data security and rights management.

We are continuously developing the topic of "clean transport" as a team. Therefore, we will also rely on your expertise what meaningful analysis can be performed using the database developed by you. Third-party funded projects are acquired on an ongoing basis and we ask for your specialist knowledge and active participation. You will participate in the success by an increase of your contract.

**Requirements:**

- university of Applied Sciences or Bachelor's degree in computer science or a computer science-related subject or equivalent knowledge and experience
- experience with the setup, development and automation of databases, including quality control and internal/external user administration
- Practical experience in a comparable field of activity
- conceptualisation and implementation of DB routines (for quality control, versioning, logging, automation, etc.)
- experience in interface design for data import and export
- knowledge of databases (especially MS SQL), MS Access, programming and scripting languages, especially Java
- ability to work in a team and appropriate communication skills
- independent and conscientious way of working
- language skills: English and German, at least B1 level in one language and B2 level in the other language.

**Desired:**

- previous experience as administrator including database backup and maintenance
- profound knowledge of relational databases (mainly PostgreSQL or similar)
- knowledge of working with version management tools (Git, etc.)
- experience with performance adjustments to the DB
- familiarity with MS Office programmes.

**We offer:**

- interesting work for the next 3 years and longer-term prospects
- a team with competent colleagues in a welcoming and committed atmosphere
- self-determined and family-friendly office times, mobile office
- professional and personal development opportunities
- attractive social benefits from the public sector with fixed working hours and extensive holiday entitlement
- an excellent urban and regional environment.

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 a motivation letter, your ideas for the management of a research database, CV and certificates by **May 16, 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> as a single pdf file to [jens.borken-kleefeld@tu-dresden.de](mailto:jens.borken-kleefeld@tu-dresden.de) or to: **TU Dresden, Fakultät Verkehrswissenschaften "Friedrich List", Institut für Verkehrsplanung und Straßenverkehr, Professur für Verkehrsökologie, Prof. Dr. Jens Borken-Kleefeld, 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>.