

Technische Universität Braunschweig - The Institute of Transportation and Urban Engineering



TU Braunschweig is the academic center in the middle of one of the most active research regions in Europe and has a renowned Faculty of Architecture, Engineering and Environmental Sciences. We work successfully with over 20 research institutions in our neighborhood as well as with our international partner universities. Our university's core research areas are Mobility, Engineering for Health, Future city and Metrology. TU Braunschweig is part of TU9 – the association of Germany's leading Institutes of Technology. The cooperating institutes stand for relevant research, strategic and results-driven thinking and action, committed teaching and the successful transfer of knowledge and technologies to society and industry. With Ecoversity – Collaborative space for change, TU Braunschweig is focusing on pooling the strengths of our high-performing research region and strengthening the support structures necessary for collaboration. It creates new spaces in research, teaching, administration, and knowledge transfer to enable even more intensive cross-disciplinary and cross-institutional collaboration, as well as to harness synergies between the university and research institutions, society, business, politics, and culture. The IVS is a small, research-oriented institute with a strong focus on integrated transport planning, traffic engineering, and sustainable mobility. Our size fosters a collaborative and supportive environment with close interaction between students, researchers, and faculty. IVS offers a practice-based curriculum in areas such as traffic simulation, public transport planning, mobility data analysis, and street space design. In research, the institute develops data-driven methods for traffic analysis, travel demand forecasting, and the simulation of innovative mobility solutions, with a particular emphasis on agent-based models and the use of floating car data. Close cooperation with cities, public authorities, and industry ensures both practical relevance and real-world impact.

The Institute of Transportation and Urban Engineering (IVS) offers a position as Research Associate (PhD) (m/f/d) at the Research Group "ReSpace!"

(EG 13 TV-L, full-time, fixed-term for 3 years, with possible extension)

City: Braunschweig; Starting date (earliest): At the earliest possible; Duration: 3 years;
Remuneration: EG 13 TV-L; Closing date: 24/08/25

Working field

- Contribute to research on the integration and co-simulation of passenger and freight transport
- Design, implement, and evaluate open-source agent-based transport demand models (MATSim)
- Develop and test multi-modal and multifunctional hub concepts and explore freight and passenger flow coordination
- Investigate operational and behavioral strategies for the spatiotemporal decoupling and co-ordination of passenger and transport flows
- Quantify and analyze key performance indicators to assess the effectiveness of integrated passenger-freight mobility scenarios
- Inter- and transdisciplinary exchange as well as collaboration with partners outside

academia

- Support teaching and supervision of student projects
- Experience in one or more of these research areas is an advantage.

Requirements

- An above-average academic degree (Master's or equivalent) in traffic engineering, urban planning, computer science, data science or related disciplines
- The activities of the ReSpace! will be conducted in both English and German. Therefore, a very good command of English is required; Knowledge of German or the willingness to learn it are advantageous
- High interest in inter- and transdisciplinary exchange and willingness to cooperate within and outside of university, combined with communication skills on a high level
- Profound methodological knowledge as well as a passion for research and ability for academic writing
- International experience is advantageous
- Willingness and skills to work independently and in an interdisciplinary team, as well as with partners from outside of academia.

What we offer

- An inspiring institutional and multidisciplinary setting. A vibrant campus life in an international atmosphere with lots of intercultural offers and international cooperations
- Opportunity for gaining ample experience in inter- and transdisciplinary research contributing to a more resilient future
- Advancement and support through a project-wide network of researchers
- The ReSpace! Studio - a joint work space for the doctoral researchers to foster real cooperation
- Applied research focusing on current global challenges
- An inspiring working environment and excellent research infrastructures as part of the TU Braunschweig Ecovercity community of researchers, teachers, students
- Vivid, interdisciplinary and international Graduate School, offering scientific support for early career researchers, a postdoc program, as well as other offerings from the Central Personnel Development Department and sports activities.

Application

We welcome applicants of all nationalities. At the same time, we encourage people with severe disabilities to apply. Applications from severely disabled persons will be given preference if they are equally qualified. Please attach a proof of disability to your application. We are also working on the fulfilment of the Central Equality Plan based on the Lower Saxony Equal Rights Act (Niedersächsisches Gleichberechtigungsgesetz—NGG) and strive to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from women are particularly welcome in this case.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at <https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen>. Application costs cannot be reimbursed.

Questions and Answers

For more information, please send an email to Prof. Dr.-Ing. Bernhard Friedrich: friedrich@tu-braunschweig.de.

Deadline for applications is August 24, 2025

As part of the application, we expect a proposal of one to max. three pages (plus references) outlining an idea for a PhD project related to the research aims of ReSpace! Interviews are scheduled for September 2025. Acceptances are expected to be sent out by mid-September 2025. The position will start on October 15th, 2025.

Please send your complete application as a single PDF file to friedrich@tu-braunschweig.de

Contact

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We look forward to your application!

More information at <https://stellenticket.de/196596/HTWB/>
Offer visible until 24/08/25

