Professur für Mobility Policy
TUM School of Social Sciences and Technology
Technische Universität München

Opportunities for Talents

The **Collaborative Research Center (CRC) "AgiMo"**, funded by the DFG, offers a position, subject to the availability of resources, as

Research Associate / Doctoral Researcher (m/f/x)

Join the TUM Professorship of Mobility Policy starting October 1, 2025, as a doctoral researcher in the DFG-funded Collaborative Research Center „AgiMo“ TRR 408.

The Technical University of Munich (TUM), as a University of Excellence, is one of the leading and most dynamic research institutions in the country. TUM has established the Collaborative Research Center (CRC) “Data-driven agile planning for responsible mobility” (AgiMo), funded by the German Research Foundation (DFG). This interdisciplinary center, involving four universities (next to TUM, TU Dresden, TU Berlin and TU Braunschweig) and the German Aerospace Centre (DLR), will conduct research on 20 research topics with 25 PhD candidates over the next years. The following main research goals are pursued by this Center: (1) develop a new set of consistent scientific methods for mobility planning and management, (2) integrate a new set of modular metrics for responsible mobility, (3) embed the planning methods into the open data AgiMo Digital Twin, (4) develop participatory planning methods based on the technical outcomes from the digital twin to create future scenarios for responsible mobility that are technically well-grounded and at the same time represent stakeholder preferences. The integrated Research Training Group (RTG) will provide doctoral researchers with an attractive qualification program, foster networking, enable internationalization and mobility, and create a collaborative environment. TUM and the CRC embody a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation, and active participation. For TUM, 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 **Collaborative Research Center "AgiMo"**, funded by the DFG, offers a position, subject to the availability of resources, as

Research Associate / PhD Student (m/f/x)
(subject to personal qualifications employees are remunerated according to salary group E 13 TV-L)

starting **October 1, 2025**. The position is limited until June 30, 2029. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position aims at obtaining further academic qualifications (usually a PhD).

Job ID:	**PMP_TRR408_C5**
Investigators:	Prof. Dr. Allister Loder, TUM Professorship of Mobility Policy, and co-supervised by at least one leading international researcher
Requirements:	excellent university degree (diploma, master's degree) in transport or related study programs with a solid basis in transport, data science, and/or data analytics; or equivalent practical experience.

Description of the PhD topic (project C5)
Project C5 in the CRC is concerned with the multimodal macroscopic fundamental diagram (MFD) that represents network-wide traffic states in an urban road network, accounting for cars, buses, trams, bicycles, and trucks as a function of transport supply and travel demand. The objective of the project is first to develop assessment indicators based on the MFD to characterize network-wide interventions, like reallocating road space or travel demand management schemes. Second, to develop an MFD-based traffic simulation linked to the agent-based simulation

environment MATSim. The developed methods will then be applied to case studies from the CRC as well as to assess empirically the network changes in Greater London due to the expansion of cycle highways.

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 making the objectives more precise; working on the individual PhD study project with its focus on the methodological contributions as well as on empirical data processing for the case study analysis in collaboration with other CRC members (fellow doctoral researchers and supervising professors); implementation of the planned research program, evaluation and interpretation of the results, elaboration and presentation of the research; participation in lectures, workshops and summer schools according to the guidelines of the RTG curriculum; supporting scientific graduation work (Bachelor/Master) in the subject-specific research field; regular reporting on research progress to the supervising professors; publishing the results of the research work individually and in concert with others; 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 and 9 months. The successful candidate will also work closely together with other doctoral researchers at the Professorship of Mobility Policy, in particular the Emmy-Noether-Research Group “READAPT”, with the other universities and chairs being part of the CRC, and will have the opportunity for international research exchanges.

General requirements

We are looking for first-class graduates with expertise in the CRC-addressed PhD subjects, high interdisciplinary desire to learn, and willingness to cooperate, openness for internationalization and diversity, very good verbal and written English communication skills (good command of German or interest in learning it is a bonus) as well as the absolute determination to submit the dissertation after 3 years and 9 months of research. In the case of this project, more specific desired requirements are

- Experience in working with large-scale spatial-temporal traffic and/or travel behavior data, e.g., loop detector, floating car data, GPS data, cellphone data.
- Experience with transport simulation software, e.g., SUMO, MATSim, etc.
- Good command of a statistical or procedural programming language such as R, python, julia, matlab, etc.
- Interest in transport policy

We offer

We offer a full-time position as academic staff with the opportunity to pursue a doctoral degree. The position will be limited to three years and nine months. Payment will be based on the Collective Agreement for the Civil Service of the Länder (*TV-L*). Further, we offer

- **Pioneering Research Environment:** Shape the future of data-driven transport planning and management through the involvement in collaborative research.
- **Cross-Disciplinary Collaboration:** Immerse yourself in a highly collaborative and interdisciplinary research environment, where you'll work alongside experts from fields such as transport and urban planning, engineering, data science, and computer science.
- **Skill Development:** Our extensive qualification concept goes beyond research, offering targeted training in research methods, project management, and leadership skills. This ensures you graduate not only as a specialist in your field but also as a well-rounded professional.

- **Global Networking:** Collaborate with our network of local and international partners, fostering connections that transcend geographical boundaries and enrich your academic and professional network. This includes a paid research stay abroad for three months.
- **Career Advancement:** Receive dedicated support for fellowship applications and tailored guidance for your career.
- **A working space in the city center of Munich**

TUM strives to raise the proportion of women in its workforce and explicitly encourages applications from qualified women. The position is suitable for disabled persons. Disabled applicants will be given preference in case of generally equivalent suitability, aptitude and professional performance.

Application

If you are interested in working in our team, please send your application together with a strong CV and supporting documents, e.g., transcripts of records, to Prof. Dr. Allister Loder (Allister.loder@tum.de). Application deadline: July 13th, 2025.

Information on data protection

As part of your application, you provide personal data to the Technical University of Munich (TUM). Please view our privacy policy on collecting and processing personal data in the course of the application process pursuant to Art. 13 of the General Data Protection Regulation of the European Union (GDPR) at https://portal.mytum.de/kompass/datenschutz/Bewerbung/. By submitting your application, you confirm to have read and understood the data protection information provided by TUM.