Technische Universität Dresden

TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. 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,** the **Chair of Traffic and Transportation Psychology** offers a full-time project position as

Research Associate / PhD Student (m/f/x)

within the MSCA Doctoral Network STEP-UP

(the salary is calculated according to MSCA regulation)

starting **May 1, 2027**. The position is limited to 48 months (max. until 08/2031). The period of employment is governed by § 2 (2) Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG).

About STEP-UP:

STEP-UP is a Marie Skłodowska-Curie Actions Doctoral Network investigating pedestrian behavior and mobility in urban environments. Its research focuses on three areas: individual and interpersonal aspects of pedestrian behavior, environmental and infrastructural barriers to walking, and interactions between pedestrians and other road users. The aim is to improve the understanding of pedestrian mobility and support the development of safer and more inclusive urban public spaces.

STEP-UP brings together academic and non-academic partners to train 10 PhD students through an international Joint Doctorate program. The candidates benefit from joint supervision by researchers at partner institutions, an integrated doctoral training program, and opportunities for interdisciplinary and cross-sectoral collaboration, including research secondments at partner organizations. In addition to specialized scientific knowledge, they develop transferable skills in areas such as research communication and dissemination. The program prepares them for careers in research and other fields related to transport and urban development.

About the Individual Research Project (IRP 9):

Independent mobility is a key milestone in children's personal development. Active participation in road traffic as pedestrians plays a particularly central role during childhood. The transition from accompanied to independent mobility is essential and is considered a critical component of health promotion, social participation, and inclusion. At the core of this transition is the development of cognitive abilities that enable children to perceive their environment purposefully, process relevant information, and respond appropriately to diverse traffic situations. These abilities are especially crucial when crossing the street, where the successful coordination of perception, decision-making, and action is vital. Children must be able to assess the overall situation, recognize potential hazards early, and make sound decisions. In addition, they must often evaluate the approach of an oncoming vehicle and judge whether the available gap is sufficient for a safe crossing. The objective of this proposed research is to analyze how the age-related development of key cognitive abilities influences children's perception, information processing, and decision-making in street-crossing situations. While previous studies have addressed aspects such as hazard perception or gap acceptance, there is currently no systematic, evidence-based overview of the development of traffic-relevant competencies and their impact on children's ability to safely navigate road environments – particularly when crossing streets. A deeper understanding of these relationships will support the development of targeted measures to promote the safe and independent participation of children in pedestrian traffic. The project is structured around the following sub-objectives: (1) Examine the perception and processing of traffic information, specifically identifying which visual (and auditory) cues children of different age groups attend to during various phases of street crossing. This will involve VR-based eye-tracking analyses in simulated traffic environments.; (2) Investigate information processing and executive functioning, focusing on the strategies children use to assess traffic situations and make

crossing decisions (including their knowledge, mental models of speed–distance relationships, and risk assessment). This will include both survey-based assessments and an experiment designed to examine the age-related development of knowledge, perception, and risk evaluation, and how these relate to successful street-crossing behavior.

This IRP is co-supervised by the University of Leeds (UK). The PhD student will be enrolled both at TUD and University of Leeds, and will receive two PhD degrees upon completion of the program. The IRP includes an 18-month secondment to Leeds to conduct VR experiments.

Requirements:

- above-average university degree (MSc or equivalent) in psychology, human factors, or a related field
- solid understanding of empirical research methods and statistical analysis
- ability to work efficiently and independently in a diverse, interdisciplinary and multicultural environment
- ability to work both in a team and independently
- ability to solve complex problems while adhering to strict deadlines
- proactive attitude
- excellent written and verbal communication skills in English to make full use of the network's training opportunities
- willingness (and ability) to travel, as secondments and project events are part of the program
- eligibility for enrolment in a PhD program at TUD and University of Leeds (see TUD requirements and Leeds requirements)
- knowledge of the host institution's language will be considered an asset in the selection process

Applicants can be of any nationality.

Candidates may apply prior to obtaining their master's degree, but cannot receive an employment contract before having obtained the master's degree.

Candidates may apply to multiple positions offered within STEP-UP, but should carefully choose the ones that they apply for.

In addition: Horizon Europe MSCA Mobility Rule: Researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organization (Germany) for more than 12 months in the 36 months immediately before the recruitment date – unless as part of a compulsory national service or a procedure for obtaining refugee status under the Geneva Convention.

Horizon Europe MSCA Eligibility Criteria: Doctoral Candidates (DC) must, at the date of recruitment by the host organization, have not been awarded a doctoral degree.

Applicants who do not fulfill the Mobility Rule and the Eligibility Criteria CANNOT be considered for the research position.

We offer:

- A competitive salary according to MSCA regulations (see page 118ff, https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-2-msca-actions_horizon-2023-2024_en.pdf), including a living allowance, a mobility allowance and, if eligible, a family allowance. The stated allowances represent the gross funding amounts. Employer contributions to social security, health insurance, and other statutory costs will be deducted in accordance with the applicable national regulations.
- The opportunity to undertake interesting work with a high degree of autonomy, within a flat organizational structure, as part of an open-minded team and in a supportive working environment.
- A well-structured training program provided by the host institution and the STEP-UP consortium.
- Opportunities to participate in additional capacity-building activities beyond the consortium, including summer schools and international conferences, with all associated costs covered by the project.

Please find additional information in the Information package for Marie Curie fellows in doctoral networks (https://op.europa.eu/s/z831).

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a 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.

Application: Interested candidates are invited to submit one single PDF containing the following documents in this exact order:

- Application Form (https://datashare.tu-dresden.de/s/S2zNpqLdyTpCQfL)
- Cover letter (up to 600 words) explaining why you are interested in the position, and sharing your initial ideas for the research project
- Evidence-based CV that reflects a representative array of achievements and qualifications appropriate to the position you are applying for
- Reference letters or, at minimum, the contact details of persons that may be contacted for reference
- Educational and professional certificates (university degree(s) with marks, internships, work-shops, languages, etc.)
- Copy of Passport
- A short video (maximum 30 seconds, not longer!), including personal introduction, background and your motivation to apply to the research position. The video must be uploaded separately to https://datashare.tu-dresden.de/s/fdTF2oyiT7BzHd9. Name your video file using the following format: YOURNAME_IRP9 (e.g., Jane_Smith_IRP9.mp4). Retain the original file extension.

quoting the reference **"Application for STEP-UP IRP 9 position"** by **December 20, 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 **verkehrspsychologie@tu-dresden.de** or to:

TU Dresden, Chair of Traffic and Transportation Psychology, Prof. Dr. Tibor Petzoldt, Helmholtzstr. 10, 01069 Dresden, Germany.

The email size of each e-mail incl. attachments must not exceed 10 MB in total.

Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Selection Procedure:

- Applications will be reviewed for eligibility and suitability based on the criteria listed for each position.
- After shortlisting, candidates will be invited for online interviews with the respective recruitment committees.
- The recruiting institution will send out notification of the selection outcome after the online interview.

In addition: More information can be found on the STEP-UP project website – https://project-stepup.eu

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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.