

Full Time: Research Associate in Modeling and Simulation of Anomalous Traffic Events

Availability: From January 2017 and onwards
Contact: Dr. David Eckhoff david.eckhoff@tum-create.edu.sg
Location: **TUM CREATE, Singapore**

Background

We have an open position for a research associate at **TUM CREATE in Singapore** with a background in Computer Science with a focus on modelling and simulation.

Objective & tasks

TUM CREATE is researching into the Ultimate Public Transport System (UPTS) for Singapore based on autonomous mobility and enabling infrastructure. Realistic traffic simulation plays a major part in the evaluation of such a new public transport system. To this end, we are looking into the modelling and simulation of anomalous traffic events such as accidents, red light or right of way violations, and other unexpected behavior by drivers. This project is concerned with both macroscopic system dynamic models and microscopic agent simulation to introduce realistic anomalies into a city-scale traffic simulation. The selected candidate will be enrolled in the TUM PhD program and is expected to publish their research results in top conferences and journals.

Required Degree Level: Master's Degree

Degree Specialisation: Computer Science or similar

What we offer you

- An international and multidisciplinary working environment
- Opportunity to work on a project with real-life relevance
- Enrolment in the PhD program of the Technical University of Munich (TUM)
- Work with researches from world-renowned Universities (TU Munich and NTU Singapore)
- A competitive salary

Soft Skills

- Ability to work independently
- Motivation to learn new topics
- Good communication skills
- Team player and goal oriented

Preferred Qualifications

- Background in statistical analysis and modelling
- Knowledge of numerical analysis software (e.g., R or MATLAB)
- Knowledge of modelling and simulation techniques
- Experience in discrete event simulation
- Programming skills in C++
- Proficient in at least one scripting language (e.g., Perl or Python).
- Comfortable with Linux, Git, LaTeX

Send your resume/CV to the contact person if interested

NOTE: Only shortlisted candidates will be contacted

ABOUT TUM CREATE

TUM CREATE is a research platform for the improvement of Singapore's public transportation, including the deployment of electric and autonomous mobility. At TUM CREATE, researchers from Technical University Munich and Nanyang Technological University join forces and are funded by Singapore's National Research Foundation as part of the Campus for Research Excellence And Technological Enterprise (CREATE) to investigate into next generation transportation systems. TUM CREATE is organised into 6 different research groups with each group bringing world-class expertise in their respective domains to study the different problems in establishing the Ultimate Transportation System of the future in Singapore.

