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## PhD – Traffic Simulation

Organization: Robert Bosch GmbH | Nation: Germany | Location: Renningen | Functional Area: Research & Development |  
Level: Ph.D. | Date: 14.12.2017 | Reference no.: DE00590807

**Do you want beneficial technologies being shaped by your ideas? Whether in the areas of mobility solutions, consumer goods, industrial technology or energy and building technology – with us, you will have the chance to improve quality of life all across the globe. Welcome to Bosch.**

The Corporate Sector Research and Advance Engineering is in charge of designing, testing and exploring systems, components and technologies. Our innovations consistently aim to achieve an improvement in the quality of life. Renningen, near Stuttgart, is the hub of the Bosch Group's global research and advance engineering activities. Here around 1,600 employees from the center for research and advance engineering are developing new materials, methods and technologies, along with new systems, components and production processes.

### Your contribution to something big

- ▶ Simulation of future mobility concepts such as e.g. autonomous shuttles/taxis in urban areas starting with one example region
- ▶ Modelling travel demand and mode-choice enables a quantified deduction of key performance indicators for future mobility concepts e.g. fleet performance/optimal vehicle size, individual reliability of mobility mode, utilization rate/TCO/ROI
- ▶ Combining current open source frameworks (MatSim, Sumo) with a microscopic agent based mode-choice algorithm to an appropriate tool-chain
- ▶ Evaluation of different operation strategies from the field of operation research to optimize fleet systems for various use cases

### What distinguishes you

- ▶ Master Science in Engineering e.g. Computational Engineering, Applied Computer Science, Software Engineering, Traffic Engineering, Cybernetics
- ▶ (Very) good grades
- ▶ Practical experience in development environments highly appreciated e.g. Eclipse, Github, Matlab
- ▶ Experience in traffic simulation frameworks appreciated e.g. matsim or sumo
- ▶ Strong knowledge of relevant programming languages e.g. Java, C++, Python
- ▶ First practical working experience is a plus
- ▶ Knowledge of different traffic simulation methods is a plus
- ▶ Independence and strong intrinsic motivation
- ▶ Strong English language skills (scientific writing)

Duration: 3 years

The final PhD topic is subject to your university.

### Your future job location offers you

Benefits & Services, Parking, Health & Sport, Catering, Childcare, Company medical service, Employee discounts, Traffic and transport, Room for creativity, Flexible and mobile work

### Make it happen.

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