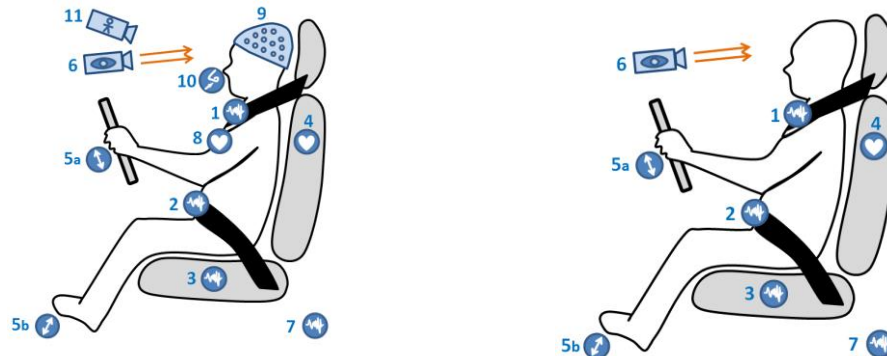# Scientific Project Assistent/
Wissenschaftlicher Projektmitarbeiter

Evaluation of driver performance in semi-automated driving by physiologic, driver behavior and video based sensors

Fahrtüchtigkeitsbewertung bei teilautomatisiertem Fahren durch physiologische, verhaltens- und kamerabasierte Sensorik

The road to the autonomous vehicle will develop gradually through the introduction of new assistive and automatic systems in the coming years. The closest target is to liberate drivers of the need of permanent monitoring and to allow, for limited periods and driving contexts, to carry out other activities while driving (SAE Level 3). The results of the project will be a system of sensors, algorithms and a classification-model, which is able to characterize earlier and more reliably the state of the driver. This will be based on comprehensive data concerning age and gender, suitable for integration into the existing vehicle environment.

Description of work:

- Development of a test plan for drowsiness detection in a driving simulator;
- Modification of the existing driving simulator for drowsiness detection;
- Conduction of experiments with volunteers and multiple physiological sensors;
- Signal processing and data analysis of simulator tests;
- Development of innovative drowsiness detection algorithms;
- Final demonstration in a test vehicle;

Requirements:

- The project will be carried out in a multi-disciplinary team including psychologists, experts in human physiology and automotive engineers, team spirit is essential;
- Motivation to work in experiments as well as in theory (Artificial Neural Networks)
- Motivation for developing programming skills (Matlab-Simulink, C++)
- Flexibility (working hours are about 20 hours a week)

Duration: 2 years
Start: May 2017
Place of work: TU Graz, Institute of Automotive Engineering

We offer a **50% employment** with a contract at TU Graz, students and PhD candidates are welcome.

http://ftg.tugraz.at

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