

IVT - Assignments

Head:	Dr. A. Kouvelas
Topic:	Calibration of common car-following models for simulation of Connected and Automated Vehicles
Assistant:	M. Makridis
Registration:	www.ivt.ethz.ch/en/studies/downloads/assignments.html#registration
<p>Modeling of vehicle longitudinal movement is performed with microscopic car following models. This project will calibrate well-known car-following models of the literature to fit observed trajectories with human-driven vehicles, Adaptive Cruise Control (ACC) equipped vehicles and Cooperative-ACC equipped vehicles. Different objective functions will assess the models' performance with regard to vehicle movement, energy consumption and platoon stability to validate the models. The result will provide an overview for the capabilities of each model and a combined objective function along the above dimensions.</p>	
Links:	-
Additional remarks:	Good skill in Python programming is essential. Good understanding of traffic simulation and optimization is needed. Registration for this project work takes place directly via the professorship. Interested students should contact the supervisor Dr. Anastasios Kouvelas, akouvela@ethz.ch.
Minimum credits:	11 ECTS
Recommended lectures:	-
