Head:	Dr. Anastasios Kouvelas / Dr. Michail Makridis
Topic:	**Microscopic traffic simulation for the city of Zurich with SUMO**
Assistant:	Ying-Chuan Ni
Registration:	www.ivt.ethz.ch/en/studies/downloads/assignments.html#registration

The project is about simulating the traffic flow at the microscopic level for the city of Zurich with SUMO, an open-source microsimulation tool. The simulation needs to consider the operation of all possible modes within the network (cars, buses, trams, etc.), realistic demand profile, and traffic signal timing plans. The final step will be to analyze the simulation output and assess the traffic performance with different indicators, including average origin-destination travel times and network fundamental diagrams.

The tasks may include (depending on the final format, to be discussed):

- Building the network in SUMO
- Implementing the multi-modal traffic demand profile and signal timing plans in the networks
- Calibrating the simulation parameters based on available data
- Analyzing the network traffic performance by generating MFDs

Links:	https://www.eclipse.org/sumo/
Additional remarks:	Please contact the assistant at least two months before the start date if interested.
Minimum credits:	8-11 ECTS
Recommended lectures:	Road Transport Systems (Verkehr 3), Transport Systems, Traffic Engineering
Additional information:	Good understanding of traffic microsimulation is important. Python programming skill is required.