Research Internship in the Driverless Mobility Group at the Institute of Resource Efficient Data Processing and Data Transmission (HSA_ired)

Cooperative Path Planning of Automated Vehicles in Constrained Environment

Autonomous driving will shape the future of mobility for several types of vehicles. Cooperative path planning is required to optimize driving under challenging scenarios. Cooperative path planning is a method where multiple automated vehicles are moving inside a constrained map, where it is relevant to make a cooperative decision on how participants plan their future motion.
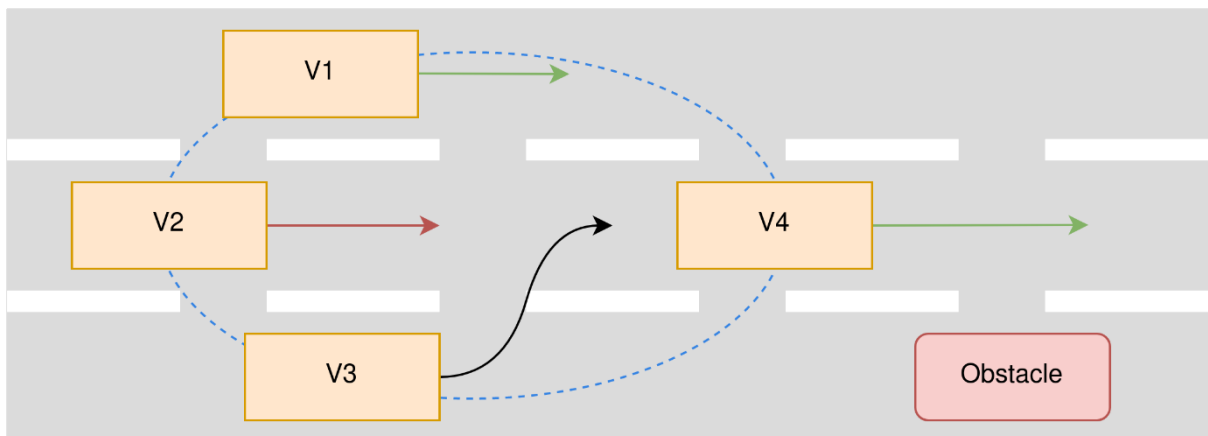
Scope of the internship

- Research different methods for cooperative path planning, decision-making
- Support the team with the development of path-planning algorithms
- Setup a simulation for the constrained environment

Special requirements

- Background in engineering sciences, ideally with a focus on software
- Strong interest in future technologies, especially in intelligent and unmanned vehicles
- Familiar with the Python programming language, preferably C++
- Familiar with the Linux operating system
- Familiar with the principles of ROS

Qualification level: Preferably Master's degree or advanced Bachelor's degree

Programs lines: SRI, A2S

Prof. Dr-Ing. Carsten Markgraf, carsten.markgraf@tha.de, Professor for Electrical Engineering and Mechatronics, Member of Driverless Mobility @ THA_ired
Samuel Leitenmaier, B. Eng., samuel.leitenmaier@tha.de, Driverless Mobility @ THA_ired