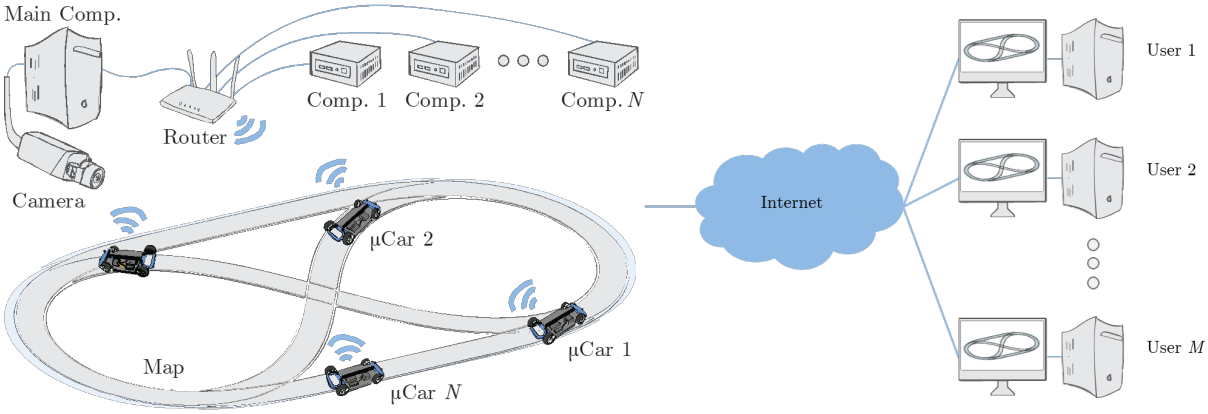
Student Assistant / Thesis

Cyber-Physical Mobility Lab

Problem Statement

The Cyber-Physical Mobility Lab (CPM Lab) is an open-source testbed for connected and automated vehicles. It is our group-wide project that makes our research results tangible, both for the scientific staff as well as for students. Our vision in developing the CPM Lab is to **See your Ideas Develop into Reality!** It consists of 20 model-scale vehicles for experiments and a simulation environment. The model-scale vehicles (µCars) are equipped with sensors, actuators, and wireless communications. A camera-based Indoor Positioning System (IPS) computes the positions and orientations of the vehicles. The µCars and the IPS communicate with external computation units that compute algorithms for networked and autonomous vehicles.

For more details on the CPM Lab visit our website cpm.embedded.rwth-aachen.de



Your Tasks

- Support in the development of different subsystems
- Extentions in the vehicles' hardware
- Development of networked algorithms for motion planning of the vehicles
- Implementation of different software parts
- Your own topic suggestions are welcome and will be discussed

Your Profile

- Knowledge of C++ and/or MATLAB
- General understanding of dynamical systems is a plus
- Student of Computer Science, Automation Engineering, Mechanical Engineering, Electrical Engineering or a similar study program

Our Offer

Positions are to be filled as soon as possible and are limited to 3 months. If suitable, an extension is possible/desired. The regular weekly working hours are 7-9 hours.

Contact

Please read our Instructions for Applications.

All members of the Cyber-physical Mobility Group, E-mail: cpm-info@embedded.rwth-aachen.de