

DAAD GSSP 2020

Project 2

Parking of Autonomous Vehicles in Cities

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Cities suffer from scarcity of parking space, in particular close to residential and office areas. Future autonomous vehicles will allow for individualized valet parking in remote parking facilities. With respect to road capacity and passenger waiting time, efficient feeder traffic from and to a system of distributed remote parking facilities is desirable. This project addresses the parking space management in conurbations by assigning adequate parking locations to requesting autonomous vehicles. In a first step a deterministic optimization model is to be developed based on realistic parking scenarios. In a second step dynamic decision making is to be implemented in a stochastic simulation environment. The project aims at a prototype of a parking management system assigning reasonable parking spaces to requesting autonomous cars.

An interest in questions of operations research, machine learning and logistics research is advantageous for working on this topic.

