

Bachelor/Master Thesis

Trajectory Planner for Indoor Navigation of Self Driving Chassis using Multi-Vision System

Announcement from 23.08.2018

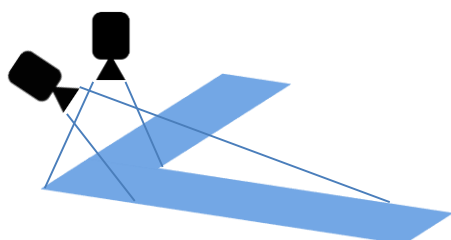
Start: At the Earliest

Initial Situation:

The production of new vehicle concepts like electric cars, is accompanied by high financial risks, due to expensive production systems. Considering current trends, the automotive industry has a need for more flexibility and low-invest assembly systems. In the final assembly of electric vehicles, self-driving chassis realize an agile low-cost assembly concept overcoming the need for any transport infrastructure.

We offer:

- Competence development in the field of Computer Vision and Automation
- Practical work with excellent hardware
- Early start possible and desired
- Intensive support and interdisciplinary exchange



Your Task:

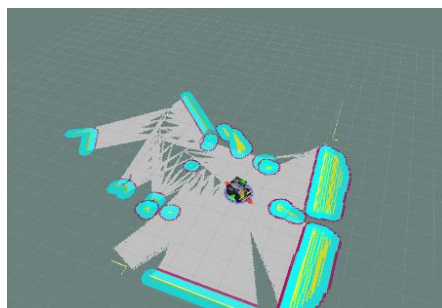
The aim of the thesis is to develop an indoor navigation system using multiple ceiling mounted cameras. For this purpose, a trajectory planner has to be implemented suitable for the vehicle's kinematics.

The following tasks are to be completed as part of the thesis work:

- Literature research in the field of trajectory planning
- Creating a layered 2D Cost Map
- Implementation of planner algorithm based on vehicle kinematic model
- Evaluation on the demonstrator

Your profile:

- Technical studies
- Motivation and commitment
- Interest in the field of automation and image processing



Have we piqued your interest?

Get in touch with us:

Sriram Badri, M.Sc.
S.Badri@pem.rwth-aachen.de

