

# Bachelor/Master Thesis

## *Development of an Autonomous Tool Trolley for use in future Production: Industry 4.0*

### Announcement from 15.10.2018

**Start:** At the Earliest

### Initial Situation:

In the production of small series as well as customer-configured products, tools for different work tasks are used on different workstations at various instances of time. Appropriate scheduling optimises the utilisation of production resources and enables them to be used jointly in different areas of assembly or production. However, the transport of the tools associated with the requirement in different locations means additional organisation and work effort. An AGV, in form of an autonomous tool trolley, is suitable for reducing this additional effort by making the production equipment available directly at the required location.

### We offer:

- Competence development in the field of Electrical engineering 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 a drive system controlled by a Raspberry PI. For this purpose, a robust chassis has to be designed and constructed suitable for the vehicle's kinematics, which should house the batteries and the electrical connections.

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

- Design and construction of the chassis
- Build up the electrical circuit to interface the RPI & motors with the batteries
- Creating an HMI for the RPI for controlling the trolley

### Your profile:

- Technical studies
- Motivation and commitment
- Interest in the field of electrical engineering and automation

### Have we piqued your interest?

Get in touch with us:

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