



## Bachelor Thesis / Master Thesis

### Start: from now

- Faculty 1 - Mathematics, Computer Science and Natural Sciences
- Faculty 4 - Mechanical Engineering
- Faculty 6 - Electrical Engineering and Information Technology

### Simulation and function development for mobile robot for charging electric vehicles

The increasing demand for charging infrastructure can be supplemented in some places by mobile charging infrastructure in the form of intelligent charging robots. The complex software of the charging robots generates high risks, which can be reduced by early testing with digital twins in the early development phase.

Within the scope of this work, a detailed simulation model of the charging robot will be created with a focus on the electrical behavior and the communication interfaces. This will be used to test and validate different charging use cases with the functions developed in each case.

### Your tasks / your profile:

- You have good Matlab/Simulink knowledge
- You are interested in automotive & energy applications
- You have the ability to work responsibly and scientifically



Teaching and Research Area  
Mechatronics in Mobile Propulsion  
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### Would you like to know more?

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