

## Student thesis



Bachelor or master thesis

# Simulative investigations of a battery electric truck with overhead line systems

## Topic and Goal of the Thesis

As part of the transition from the combustion engine to e-mobility in road traffic, several manufacturers of commercial vehicles have started to electrify their vehicles. Depending on the application, the focus is on vehicles with battery-electric drive or fuel cell technology. To increase the range of electric trucks with only one battery as energy storage, overhead line systems are also conceivable. These shall be investigated in more detail in a simulation.

## Working Points

In the course of this work, a simulation model of a battery-electric truck with overhead line system is to be extended to represent the power demand in a driving cycle.

- Research on the state of the art of overhead line systems for commercial road vehicles
- Extension of a simulation model in Matlab/Simulink
- Processing of scientific questions with the help of the simulation environment

## Requirements

- Good English or German language skills
- Reliability, commitment and enjoyment of working independently

## Department

Energy Management & Drivetrains

## Contact

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## Entry Date

Earliest possible date

## Prior knowledge

Matlab (advantageous)

Please send applications by e-mail with current grades and curriculum vitae