

MODELING AND PARAMETER IDENTIFICATION OF CABLES IN ELECTRIC VEHICLES

(Master Thesis, in English)

The increasing demand for electric vehicles requires the development of new technologies to improve their efficiency and performance. One of the critical components of an electric vehicle is the cable network, which is responsible for the transmission of electrical power from the battery to the motor. The modeling and parameter identification of cables in electric vehicles are essential for the optimization of their design and performance.

The objective of this master thesis is to develop models and perform parameter identification of cables in electric vehicles. The study will focus on two types of models and two methods of parameter identification: simulation-based identification, and measurement-based identification. The simulation-based identification will involve comparing the simulated results with the experimental data obtained from the equipment circuits. The measurement-based identification will involve the use of instruments such as oscilloscopes, network analyzers, and signal generators to measure the parameters of the cables in the laboratory.

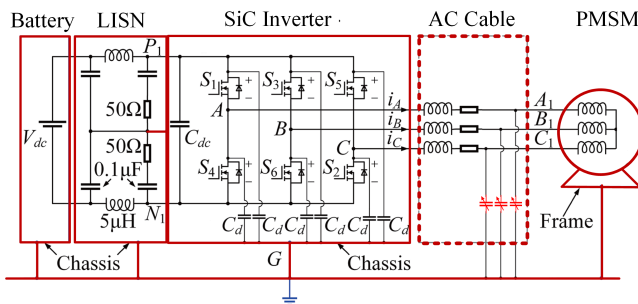


Figure 1: electric drive system with parasitic elements

Mentoring of the thesis:

Mohammadreza Bagheri, Room 213, ☎ 7904,
Email: mohammadreza.bagheribavaryani@tu-braunschweig.de