

Masterarbeit

Development of the Optimization Platform for the Energy Management of Hybrid Electric Vehicle

Motivation: In order to improve the efficiency and reduce the repetitive work of optimization for energy management of hybrid electric vehicle (HEV), an universal optimization platform should be developed in MATLAB by using the GUI, which can be utilized to optimize the economic performance of HEV based on global and local optimization algorithms. The optimization results from this platform can also offer the support to the development and optimization of control strategy.

Aufgabe: After the literature review of energy management of hybrid electric vehicle, the appropriate global and local optimization algorithms should be chosen. Based on these algorithms, the GUI interface of energy management of HEV should be developed in allusion to different types of HEV (series, parallel and power-split).

Zusammenfassung:

- Literature review of energy management of hybrid electric vehicle
- Master of knowledge of GUI in MATLAB
- Development of GUI interface of energy management of different types of hybrid electric vehicle based on global and local optimization algorithms
- Documentation und presentation of work

Voraussetzungen: Software: MATLAB programming, GUI interface
Knowledge: global and local optimization, energy management of hybrid electric vehicle

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