

DIPLOMA THESIS

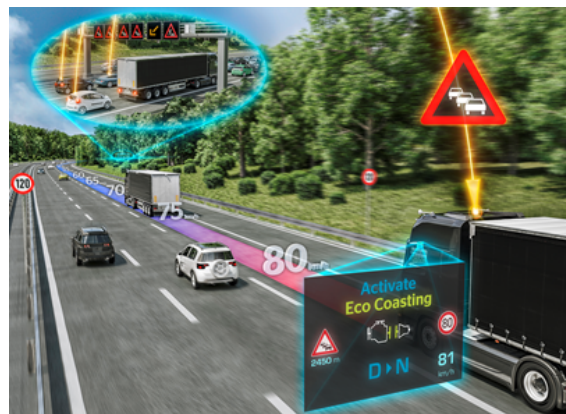
Predictive thermal and energy management of heavy-duty fuel cell electric vehicles: modelling and control



Content of the proposed diploma thesis:

Thermal and energy management are critical tasks for the advancement and commercialization of heavy-duty fuel cell vehicles. The development of predictive control strategies is under investigation to improve the vehicles' performance regarding the hydrogen economy and system lifetime.

This research topic is developed within the framework of the project HyTruck and FC4HD in collaboration with AVL.





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General tasks:

- Definition of a thesis plan (work packages, milestones, and timeline)
- Literature study of the state of the art
- Modelling in Matlab/Simulink
- Design and validation of control algorithms
- Documentation

Requirements:

- Knowledge of MATLAB
- Knowledge of model predictive control (preferred)
- Good writing/speaking skills in English
- High motivation

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