

## DIPLOMA THESIS

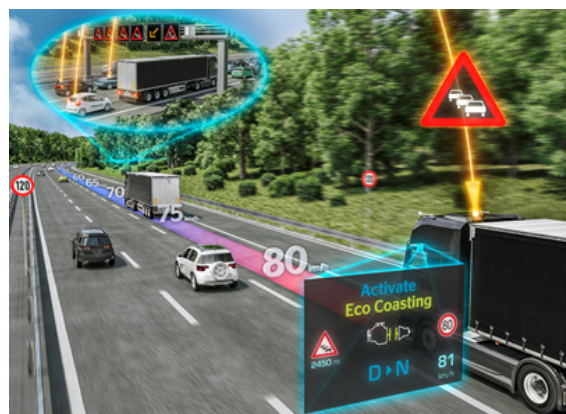
# Predictive thermal and energy management of heavy-duty fuel cell electric vehicles: modelling and control



### 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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MECHATRONIK  
Mechanics & Mechatronics



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

Contact:

Associate Prof. Dipl.-Ing. Dr.techn. Christoph Hametner

Institute of Mechanics and Mechatronics  
Division of Control and Process Automation  
TU Wien

Getreidemarkt 9 / BA / 6th floor, E325-04  
1060 Vienna

Tel.: +43 1 58801 325515  
Email: [christoph.hametner@tuwien.ac.at](mailto:christoph.hametner@tuwien.ac.at)

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