



Master Thesis

Start: from now

- ☒ Faculty 1 - Mathematics, Computer Science and Natural Sciences
- ☒ Faculty 4 - Mechanical Engineering
- ☒ Faculty 6 - Electrical Engineering and Information Technology

Performance and drive-cycle assessment for electric traction motor design

At the institute various motor-drive solutions for mobile propulsion are being investigated. One such is with the application of permanent magnet assisted synchronous reluctance motors. To methodically evaluate sizing options for different solutions, holistic performance curve requirements, for each use-case, are to be generated. Application in urban mobility vehicles (2/3 wheeler/micro vehicles), passenger cars (small/large etc.), commercial vehicles (trucks/buses), off-highway (tractors/construction vehicles) shall be considered as individual use-cases.

Your tasks:

- Review literature and establish state of the art of known methods for performance requirements for different use-cases
- Assess use-case typical performance curves and drive-cycles
- Derive electric motor torque-speed-power-efficiency curves based on chosen methods

Your competences:

- Automotive engineering – longitudinal dynamics, electrified powertrain
- Interest in system design, product development

Your benefits:

- Gain practical experience by using cutting-edge tools and methods for vehicle design, powertrain system design and strategic product development and business development

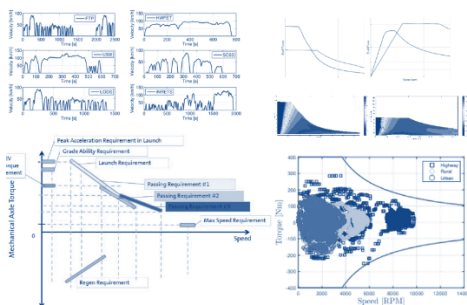
Would you like to know more?

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We are the Teaching and Research Area Mechatronics in Mobile Propulsion (MMP). Our heart beats for the technology of tomorrow's mobility. Around the interdisciplinary topics of mechanics, electrical engineering and information technology, we research sustainable and demand-oriented drive and vehicle concepts. We bring the future into drives!

You want to know more about us? Then you will find more information under the following links:

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