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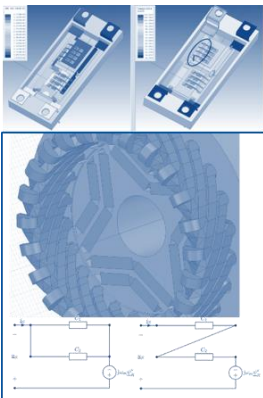


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We are the Teaching and Research Area Mechatronics in Mobile Propulsion (MMP). Our heart beats for the technology of tomorrow's mobility. Around the interdisciplinary topics of mechanics, electrical engineering and information technology, we research 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:

- [Who we are](#)
- [What drives us](#)
- [What we research](#)
- [Where we are involved](#)
- [How we bring research into teaching](#)



Teaching and Research Area  
Mechatronics in Mobile Propulsion  
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Phone +49 (241) 80 – 48148

## Master Thesis

### Start: from now

- ☒ Faculty 4 - Mechanical Engineering
- ☒ Faculty 6 - Electrical Engineering and Information Technology

### Design and mechanical integration of a reconfigurable winding solution in automotive electric motors

Typically, automotive applications require a wide range of operating points for torque and speed from the electric traction motor. However, for a given machine design with fixed winding configuration, the peak efficiency is available only within a specific region. Active winding re-configuration enables the use of certain motor types typically not used in automotive traction application. Besides, it is poised to make peak efficiency available over a wider range of driving scenarios when compared to conventional fixed configuration motors.

#### Your tasks:

- Selection of appropriate power-semiconductor switch
- CAD-Design and integration of switches in compact layout inside inverter or motor winding head

#### Your competences:

- Knowledge about mechatronic components and systems
- Basic understanding of electrical or power engineering

#### Your benefits:

- Gain experience in cutting edge software and tools for electric motor design and automotive powertrain development

### Would you like to know more?

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