



## Bachelor Thesis / Master Thesis

### Start: from now

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

### Compact multi-state electromechanical contactor using compliant mechanisms for high power reconfigurable motors

For a novel traction motor and drive solution with improved efficiency, one-time mode changeover, reconfiguring switch on the AC high power line between motor and inverter is required. Typically, power semiconductor solid-state switches are used due to smaller size and faster switching times compared to electromechanical contactors/switches/relays. However, electromechanical contactors tend to have lower losses.

#### Your tasks:

- Establish state of the art in electromechanical contactors and compliant mechanisms for reconfigurable electromagnetic devices
- Propose design solutions considering compact size, response time and electromagnetic behavior
- Build a prototype with the help of RWTH Speed Funds

#### Your competences:

- Mechanics and design
- Interest in mechatronics and electromechanical actuators

#### Your benefits:

- Opportunity to innovate and make in the exciting field of mechatronics, cool mechanisms and 3D rapid prototyping

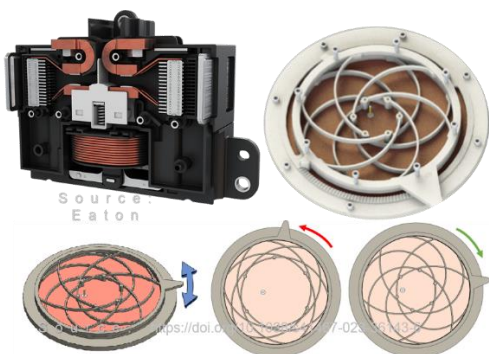
### Would you like to know more?

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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!

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