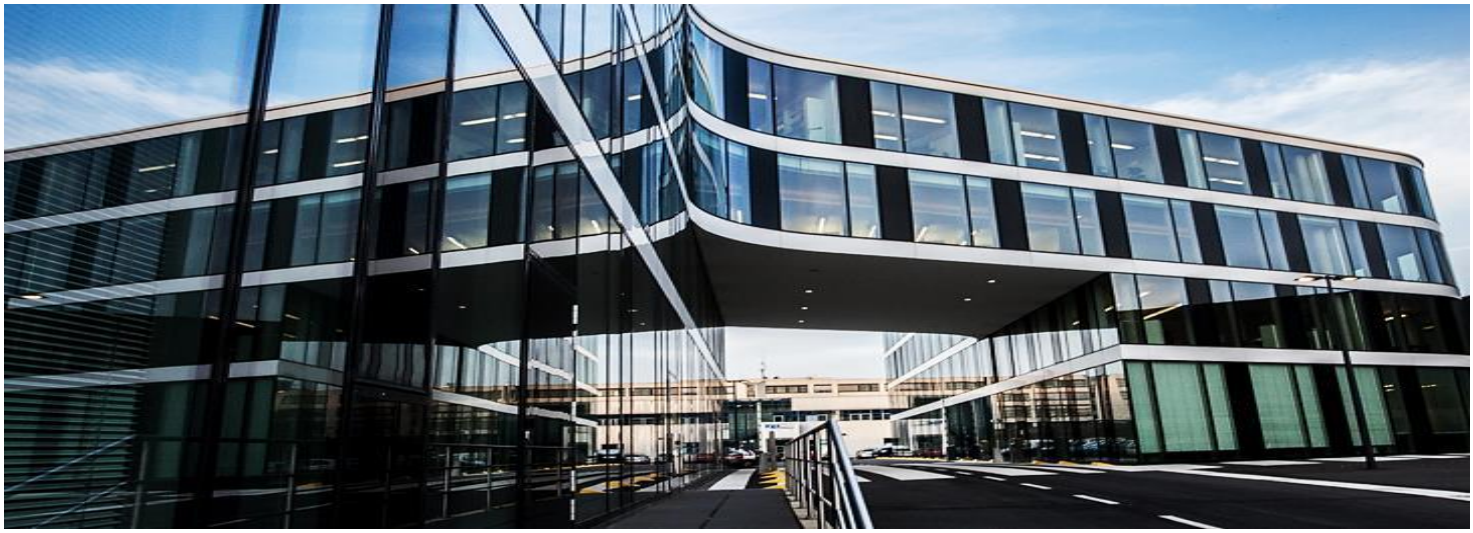

Teaching and Research Area Mechatronics in Mobile Propulsion | RWTH AACHEN UNIVERSITY

cmp Center for Mobile Propulsion | RWTH AACHEN UNIVERSITY

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
RWTH Aachen University
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Phone +49 (241) 80 – 48148

Project work / Thesis

Start: from now

☒ Faculty 1 ☒ Faculty 4
☒ Faculty 5 ☒ Faculty 6 ☒ Faculty 8

Evaluation of production costs and recyclability of automotive traction electric motors

Design decisions for electric machines, such as magnet slot shape, coil configuration and cooling systems, directly impact production costs and recyclability. Using available production cost models, these factors shall be evaluated for selecting motor designs that strike a balance between performance, costs and recyclability.

Your tasks

- You will survey available literature on production cost models, cost-data and recycling methods relevant for electric motors
- You will implement the best fitting cost model in either MATLAB or Python and establish a connection to the motor design software for e.g. Ansys MotorCAD, for modular & iterative cost estimation of different designs
- You will compare selected solutions for their recyclability
- You examine the possibility for data-driven solutions

Your competences

- You bring knowledge and interest in either production processes, industrial engineering or software engineering

Your benefits

- You build expert skills necessary for strategic consulting in product design, production and recycling, using modern tools and methods

Would you like to know more?

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