

Dynamics and Energy efficiency in Heavy-Duty Drive Technology

Master module in the summer semester 2023



Development Drivers

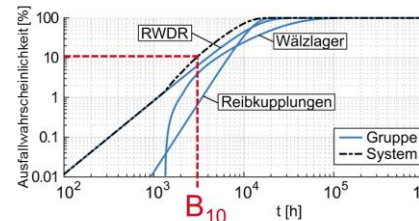
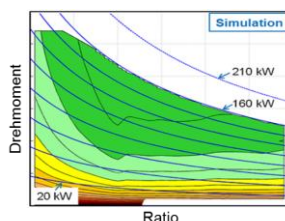
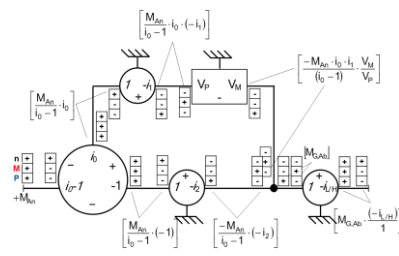
- Varying work tasks
- High availability
- Productivity & Comfort
- Scarcity of raw materials
- Environmental impact

Methods and Tools

- Transmission synthesis
- Efficiency studies
- Torsional vibration analysis
- Reliability calculation
- Systematic testing

Practical realization

- Transmission concepts
- Efficient components
- Hybrid technology in heavy-duty drive systems
- Future drive concepts



Drivetrain components

Synthesis & design of powertrains

Efficiency & Hybridization

Component design & reliability

Testing

Module description

- Masterveranstaltung
 - 6 CP (L2/P2)
 - Practice-oriented course
 - Guest lecture from industry
 - Excursion
 - Practical exercises
- M.Sc. elective for...
...Product Development
...Development and Design
...Automotive Engineering & Transportation
...Energy Engineering
...General Mechanical Engineering
 - Oral exam

Lecturer

- Univ.-Prof. Dr.-Ing. G. Jacobs

