The main focus of the research activities conducted in the VIRTUAL VEHICLE consists in the development of new technologies, methods and tools for the individual CAE disciplines, the virtual product design, the multi disciplinary optimisation and the coupled simulation. Applied research and funded research projects constituting a bridge between the academia and industry take centre stage. Linking the different fields of excellence covered by the VIRTUAL VEHICLE forms a unique research platform.

DIPLOMA- / MASTER THESIS

„Development and implementation of an optimal regenerative braking for electric vehicles“
(Ref. Nr. D_078)

As part of a project with international partners, the VIRTUAL VEHICLE is working on the development of an electric drivetrain for a lightweight vehicle. In this work a strategy for recuperative braking has to be developed. It should be optimal with respect to high energy recovery, driving safety and driving comfort. In a first step the recuperative brake system has to be integrated and optimized within an existing simulation model. In a further step, the regenerative braking system will be integrated in a prototype.

Your duties and responsibilities:
- Literature research on the topic regenerative braking strategies
- Determination of optimization criteria
- Integration and optimization of the regenerative braking strategy in an existing simulation model
- Implementation of the regenerative brake in a prototype

What we expect from you:
- Studies in Electrical Engineering, Automotive Engineering, Mechatronics, or similar
- Knowledge in the field of automotive engineering
- Experience in dealing with MATLAB/Simulink
- Self initiative, analytical and structured working

What we offer:
- Chance to work in an international platform for research and development
- Interesting work in a research company
- Expense allowance

Start date: as soon as possible
Duration: 3 – 4 months

For technical questions please contact Mr. Andreas Kerschbaumer, andreas.kerschbaumer@v2c2.at, +43 (0) 316 – 873 – 9610.

Please address your application to: Christiane Otter
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