



virtual  **vehicle**

VIRTUAL VEHICLE is a leading international R&D center for the automotive and rail industries. The center focuses on advanced virtualization of vehicle development. This linking of numerical simulations and hardware testing leads to a powerful HW-SW system design. About 300 people are now employed at our site in Graz - their expertise enables the efficient development of affordable, safe and environmentally friendly vehicles.

Master Thesis

“Modelling of Fuel Cell Electric Long-haul Truck”

Ref.Nr. B_069

Master Thesis

The number of battery-powered vehicles in the EU is expected to reach 30-40 million by 2030. For commercial vehicles, it is still open whether a significant number of long-distance trucks will have a fuel cell on board to generate electrical energy. By means of simulation, the dimensioning of the hydrogen tank and the battery is to be carried out with a focus on the typical driving distances, times and efficiency of the system in long-distance transport. At the same time, the costs of the battery and hydrogen tank as well as the running costs for energy for the different versions of the systems will be examined by means of an economic analysis.

Your Tasks

- Adaptation of the longitudinal dynamics simulation model.
- Carrying out series of simulations and evaluating them.
- Determine a sweet spot of hydrogen quantity and battery size with regard to efficiency and costs of the systems.

What we expect from you

- Ongoing studies in the field of electrical engineering, mechanical engineering, automotive engineering or similar.
- Knowledge of and interest in electric vehicles with fuel cells.
- Motivation to create models in Matlab/Simulink or similar software.

What we offer

- Collaboration and contribution in an engaged, dynamic team.
- Interesting work in an international research center.
- **Paid** Thesis.
- Mentoring program for new employees’.
- Diverse sports and health activities regularly.
- Corporate Events.

For technical questions please contact:

Michael Waltenberger
+43-(0)316-873-9022

APPLY NOW and JOIN OUR TEAM

Contact: Barbara Cappello | +43 316 873 9028 | Inffeldgasse 21a, 8010 Graz | www.v2c2.at