



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.

## Bachelor-/Master Thesis

### "Fuel cell drive for heavy commercial vehicles and special vehicles"

Ref.Nr. B\_073

Bachelor-/Master Thesis



Fuel cell-powered vehicles will play an important role in the decarbonisation of the vehicle fleet as, in addition to their zero emissions, high efficiency, long range and reduced noise levels, they have the further advantage that they can also be refuelled very quickly. This means that fuel cells can be used to power heavy commercial vehicles, agricultural machinery and construction, mining and fire-fighting vehicles. In these applications, in addition to long operating times, high ambient temperatures, high concentrations of harmful gases and dust, vibrations and inclined positions are to be expected.

Thermal management poses a major challenge for fuel cell drives. As part of a Bachelor's/Master's thesis, a radiator is to be constructed that is optimised for use in the high-temperature circuit.

Fuel cells are very sensitive to gases such as sulphur dioxide, ammonia or nitrogen oxides. A filter is therefore installed upstream of the cathode path. In a further project, a filter with improved adsorption behaviour is to be developed and validated with real gas concentrations.

### Your Tasks

- Design and construction of an optimised radiator.
  - CFD-simulation.
  - Setup and calibration.
  - Measurement realisation.
- Design of an optimised filter.
  - Setup and calibration.
  - Measurement realisation.

### What we expect from you

- Enjoy solving difficult simulation and measurement tasks.

## 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:

Bernhard Lechner  
+43-(0)316-873-9027

## Data Protection Notice

Virtual Vehicle Research GmbH processes your application to manage your application. For further information please see our [Data Protection Notice](#). If you consent that your submitted data is also stored in our talent pool for up to 1 year after the last contact with you, please let us know by E-mail. You may withdraw your consent at any time.

## APPLY NOW and JOIN OUR TEAM

---

Contact: Katharina Fink | +43 316 873 9016 | Inffeldgasse 21a, 8010 Graz | [www.v2c2.at](http://www.v2c2.at)