



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.

Bachelor-/Master Thesis

“Experimental Battery Safety research”

Ref.Nr. DEP E_147

Bachelor-/Master Thesis

In the recent years both, the electromobility and the Li-ion battery technology showed impressive progress. The cell manufacturer achieved an increase of the energy density of mass-produced cells above 300 Wh/kg. With higher energy density new safety challenges arise. In the worst case failure of a cell, the Thermal Runaway (TR), the cell releases the stored energy in an exothermic reaction.

The battery-safety team offers several diploma/bachelor thesis topics in currently ongoing funded research projects. **The concrete research topics can be defined during personal meeting with the project manager.** These can be from fields like gas-sensing, flow-measurement, mechanical measurement, optical methods, electrical safety (insulation, arcing), calorimetry, mechanical design and fabrication of test-assemblies, automatization of experiment analysis.

Your Tasks

- Prepare the battery-safety experiments using existing tools in our laboratory.
- Assist during Thermal Runaway experiments.
- Analysis of the experiments.
- Compare the experiments, find correlations.

What we expect from you

- Studies in chemistry, physics, mechanical engineering or similar.
- Interest in one of the fields like: mechanical assembly of the test stand, working in Laboratory and workshop environment, mechanical design (Fusion360, Catia) or automatization and data analysis (LabVIEW, Python).
- Interest in Li-ion battery technology.

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:

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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

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