



Notification

The project “Hy2Works” offers opportunities for research in Battery Thermal Management Systems for Master students

Department of Energy Storage Systems (LES)
Aachen, Hohenstaufenallee 10

Dear students,

The Energy Storage System (LES) research team is looking for interested students to support the ongoing research activities. The LES team is engaged in designing and developing a Lithium-Ion battery energy storage system for electrifying hybrid (batteries + fuel cells) non-road mobile machinery. Thermal management is critical when it comes to heavy vehicle transportation, therefore, there are exciting tasks available for battery thermal management design processes.

FH Aachen, LES, has the necessary license and expertise to utilize the Multiphysics software COMSOL for battery layout and simulations.

FH Aachen, LES, also has testing facilities for Lithium-Ion batteries (charging/discharging cycling system, etc.) to perform experimental investigations.

FH Aachen, LES, is also expanding the battery lab facilities for the testing of battery modules and packs.

The scope of work could include one or more of the following research topics:

- Conceptual design and layout for battery energy storage system
- Application of Multiphysics model for integrated electro-thermal-flow model simulations
- Development of a battery thermal management system
- Battery safety analysis considering thermal runaway propagation model
- Experimental investigations of battery thermal management techniques

You should bring the following skills:

- Knowledge in the field of batteries
- Knowledge of 3D Software like CATIA or SolidWorks
- Knowledge of MATLAB/Simulink
- Knowledge of MS Office Tools
- Knowledge of FEA methods
- Team working and communication skills
- Curiosity towards challenging tasks and ability to solve problems independently

Master students can also apply for a thesis. The deadline is 20th February 2024.

If the research activities are part of a funded research project, there will also be an option for a Hiwi/Wihi position.

If you are interested in exciting tasks around batteries, feel free to contact us.

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Date: 13/12/2023

