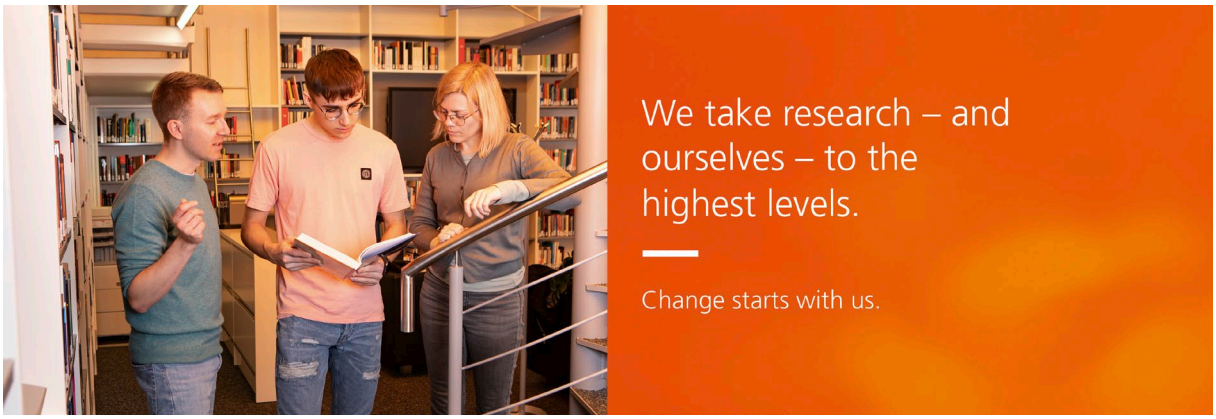
Fraunhofer IVI



Student assistant for the development of coupled multidomain physical models for hybrid EV systems

Are you interested in the coupled simulation of multidomain systems for hybrid EV application?
Our research group "Monitoring and Operating Strategies" is involved in the development of surrogate models of various components for hybrid EVs to estimate optimal operating strategies.

Your tasks

As a student assistant, you will take on individual tasks and will assist our group by developing and building mathematical surrogate models of various coupled multidomain components and subsystems for vehicle systems. These components will be built into a larger surrogate model that can be used to simulate and diagnose real systems from a testbench (HIL simulation). In later stages, you will also be involved in designing controllers and testing various operational strategies to minimize degradation and increase lifetime. Further on, exploring modeling with the help of physics-based neural networks is also a possibility.

Your profile

- enrolled in a study program in engineering – preferably in the fields of systems, mechanical, electrical, mechatronics or similar programs
- general knowledge in causal and acausal modeling approaches
- programming skills in Python and MATLAB Simulink, knowledge of the Modelica language is of great advantage
- experience and knowledge in numerical simulation techniques and multidomain coupled systems
- knowledge in machine learning and statistics is an added benefit
- good academic performance
- structured, independent, and result-oriented work style

What you can expect

- challenging tasks in highly relevant and application-oriented subject areas
- interdisciplinary research on future-oriented technologies
- flexible working hours
- modern research infrastructure
- insights into possible topics for internships and theses
- an open and cooperative working environment

Interested? Apply online now under the requisition number **IVI-Hiwi-00733** and send us your meaningful application documents. We look forward to getting to know you!

If you have any questions, please contact:
bewerbung.studenten@ivi.fraunhofer.de

You can find more information on the institute online:
www.ivi.fraunhofer.de/en

Jetzt bewerben