Universität Stuttgart
Institut für Elektrische
Energiewandlung

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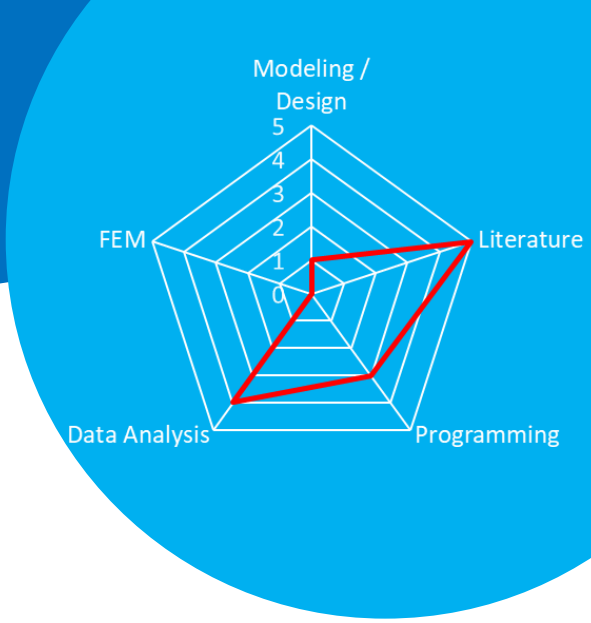

Literature Research About Dynamic Wireless Power Transfer with Focus on Multi-Phase Systems and Their Challenges

Dynamic Wireless Power Systems (DWPT) enable the transfer of energy between moving subsystems and are suitable for applications in which conductive methods represent an additional load/wear (energy chains) or cannot be used at all due to the circumstances (EV charging while driving). Compared to single-phase WPTs, multi-phase WPTs have higher power densities, but require more system components.

The aim of this work is to investigate further potentials and challenges of multi-phase systems compared to single-phase systems with the help of a literature review. To this end, comparison categories are to be defined, data collected and analysed, and findings derived. The results of the work are a developed Citavi library and an evaluation procedure.

Student Profile:

- → Structured, conscientious and independent way of working
- → Knowledge of WPT
- → Interest in DWPT
- → Enjoys developing knowledge and processing complex issues
- → Knowledge of working with Citavi
- → Basic knowledge of MatLab for data analysis and visualisation

Tasks:

- → Familiarisation with dynamic WPT systems
- → Developing suitable comparison categories for WPT systems
- → Researching sources
- → Carrying out a data analysis in MatLab
- → Processing and visualising the results

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