

How would you charge autonomous electric vehicles? Or to put it another way, which charging technology is most economical for EV charging? Depending on the surrounding environment and numerous other conditions, the suitability of a charging technology can vary. In addition to economic aspects, ecological aspects must also always be taken into account today.

Starting with a market research, the current automated charging options will first be evaluated recorded and from an economic/ecological point of view. In a second step, the potential for improvement of inductive charging in private and public environments will be examined in more detail. In a parallel master thesis, different technical concepts will be investigated, which will be evaluated from an economic point of view in this thesis. The final analysis places these results in the context of the state of the art.



Image: Qualcomm

Students profile

- → Self-reliant and determined working attitude
- → Basic understanding of electrical engineering and economical/ ecological skills
- → Interested in insight into current R&D of automotive inductive charging

Work package and schedule

1) Literature and Market Research

- → Capture of existing automated charging capabilities
- → Economical/ecological evaluation of the state of the art

2) Inductive Charging

- → Potential for improving the economic value of inductive charging systems for various application scenarios
- → Complementary technical concepts by parallel running master thesis

3) Final Evaluation

 \rightarrow Final comparison and documentation

A complementary technical study is planned in a parallel master thesis with IEW, Uni Stuttgart in a federally funded research project.