



2026 Fourth International Conference on Sustainable Mobility Applications, Renewables and Technology (SMART)

October 18-21, 2026

Call for Contributions to the Special Session on Inductive Charging Technologies for Electric and Hybrid Electric Vehicles

By Prof. Dr. Benedikt Schmuelling

Thematic: Inductive or wireless power transfer (WPT) for electric and hybrid vehicles has gained significant momentum in recent years and is considered a key enabling technology for convenient, safe and user-friendly charging infrastructures. Especially in urban environments, automated driving applications, public transport and logistics, inductive charging opens new possibilities for static, semi-dynamic and dynamic energy transfer while reducing mechanical wear and improving system robustness. Recent advancements in power electronics, magnetic design, system control, communication, standardization and infrastructure integration have considerably improved efficiency, power density and scalability of inductive charging systems. At the same time, challenges remain regarding interoperability, electromagnetic compatibility, grid integration, system optimization and economic viability. This special session aims to bring together researchers and practitioners from academia and industry to present and discuss state-of-the-art scientific results, innovative concepts, technological developments and real-world demonstration projects related to inductive charging for electric and hybrid vehicles.

Topics of interest include, but are not limited to

- Static, semi-dynamic and dynamic inductive charging systems
- Power electronics, resonant converters and control strategies for WPT
- Coil and magnetic structure design, shielding and EMI mitigation
- System efficiency optimization and power scaling
- Communication, positioning and alignment strategies
- Interoperability, standardization and safety aspects
- Grid integration, energy management and V2G concepts
- Inductive charging for public transport, automated vehicles and logistics
- Demonstration projects, pilot installations and field tests
- Economic assessment and infrastructure planning

Both theoretical contributions and applied research results are highly welcome.

Submission: Prospective authors are invited to submit an extended abstract of two to three A4 pages. There is no specific template. Abstracts should be submitted directly to the special session organizer via email: schmuelling@uni-wuppertal.de

Deadlines:

June 19, 2026	August 9, 2026	Abstract submission
June 30, 2026	August 14, 2026	Provisional Acceptance
August 31, 2026		Full paper submission
September 7, 2026		Final acceptance