



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

October 18-21, 2026

Call for Contributions to the Special Session on Next-Generation EV Charging: WPT, Power Electronics and Grid Services

By Dr. Cristian Giovanni Colombo and Prof. Michela Longo

Thematic: Electric vehicle charging is increasing critical link between electric mobility, power grid and renewables. The special session focuses on solutions that make charging more efficient, scalable, and grid-supportive, including both static and dynamic wireless power transfer, advanced converter architectures, and bidirectional operation enabling V2X services. Both modelling, optimization and experimental demonstrations are key aspects that need to be investigated as topics of interests.

Topics of interests:

- Wireless charging (IPT and CPT) for static and dynamic applications: coils, compensation, shielding and misalignment;
- High-power chargers and resonant converters, SiC and GaN, thermal and reliability design, modular and SST approaches;
- Bidirectional chargers (V2G) and V2X: control, aggregation, grid services, power quality and unbalance mitigation;
- Renewables and storage integration: PV-assisted charging hubs, DC microgrids, hybrid storage (battery and supercapacitor);
- Safety, EMC and EMF exposure, interoperability, standards and certification, diagnostics and monitoring;
- Co-simulation and FEM, digital twins, optimization, prototypes and field trials.

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: cristiangiovanni.colombo@polimi.it and michela.longo@polimi.it

Deadlines:	August 9, 2026	Abstract submission
	August 14, 2026	Provisional Acceptance
	August 31, 2026	Full paper submission
	September 7, 2026	Final acceptance