

Special Section on:

Advances in Wireless Power Transfer Technologies

Recently, application of wireless (contactless) power transfer (WPT) technology in electric transportation, smart e-mobility and future smart cities has gained wider attention. This is evident from the use of WPT technology in electric cars and heavy-duty mass transit, unmanned aerial vehicles (UAVs/Drones), sea/undersea vehicles (ships/submarines), utility vehicles (forklifts/golf carts), micro-mobility devices (scooters/e-bikes), and smart cities, offices, and buildings. WPT can be achieved either via electromagnetic inductive power transfer (IPT) or via electro-static capacitive power transfer (CPT). This Special Section (SS) welcomes contributions from papers that focus on the latest advances in WPT technology in the above or any other applications. Topics of interest of this SS include, but are not limited to:

- ✓ State-of-the-art in IPT/CPT technologies
- ✓ Advanced FEA-based designs of power transfer coils and plates
- ✓ Power electronic converters – Modeling, analysis, design, simulation, and testing
- ✓ Resonant power electronic converters and compensation techniques
- ✓ Controller development and strategies for misalignment tolerance
- ✓ High-power fast charging (50 kW and above)
- ✓ Intelligent control and energy management strategies
- ✓ Capacitive coupling for wireless power transfer – Power electronics and control
- ✓ Foreign-object detection techniques for dynamic charging
- ✓ Interoperability
- ✓ Electric grid requirements and standardization for WPT
- ✓ EMI/EMC issues and mitigation techniques
- ✓ High-frequency DC/AC inverters and control
- ✓ Grid integration of WPT systems

Manuscript Preparation and Submission

Follow the guidelines in “Information for Authors” in the IEEE Journal of Emerging and Selected Topics in Industrial Electronics: <http://www.ieee-ies.org/pubs/jestie#policies>

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On the submitting page #1 in popup menu of manuscript type, select: SS on Advances in Wireless Power Transfer Technology.

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