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SMACD2020
ERFURT · GERMANY

20 – 23 July 2020

Call for Special Session | www.smacd-conference.org

WIRELESS POWER TRANSFER SYSTEMS: ENHANCED MODELING, SIMULATION AND DESIGN

In the last decade, the growing number of personal electronic devices that the average person relies on has created a large demand for Wireless Power Transfer (WPT). The development and commercialization of this technology for consumer applications have also opened opportunities in several markets, such as wearable electronics, RF energy harvesters, health-care and automotive industry.

WPT-charging for consumer electronics (e.g., smartphones, smartwatches, etc.) is increasingly impacting our life. Extreme flexibility, low-cost and good tolerance to devices misalignment are mandatory features for these systems. WPT-chargeable medical implants (e.g., pacemakers, hearing aids, etc.) are considered as the best alternative to conventional implantable devices, by eliminating any complication due to leads and batteries, but they are subject to tight safety, size and ultra-low power consumption constraints.

WPT-charging for electric vehicles batteries is also an important step towards a new model of sustainable transport. Several solutions are already available on the market for electric vehicles static charging, but dynamic WPT-charging still requires more insights before it can be effectively adopted.

Whatever the application, investigating the relationships between the main properties of circuit architectures, power devices, coils and control strategies and the efficiency of the energy-transfer between the source and the load of the WPT-charging systems is of primary importance.

Suitable models and methods are needed to accomplish such a challenging task, considering also the impact of uncertainties and tolerances. Therefore, this Special Session aims to bring together original contributions on enhanced modeling, simulation, design and testing of WPT-charging systems.

TOPICS INCLUDE, BUT ARE NOT LIMITED TO:

- Systems and devices behavioral modeling
- Systems and devices design and optimization
- Electromagnetic modeling and simulation
- Electrical and magnetic measurement
- Efficiency analysis
- Testing and diagnostic tools.

PAPER SUBMISSION

All paper submissions should follow the SMACD 2020 guidelines:
<https://smacd-conference.org/paper-submission>

Important note

Authors should **only** indicate the “Special Session” option when submitting the paper on the EasyChair platform.

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Prospective Authors interested in the Special Session are invited to inform the organizers about their contribution. For any further information, please contact the organizers.

IMPORTANT DATES

- 6th March 2020** Paper Submission Deadline
- 17th April 2020** Author Notification
- 15th May 2020** Camera Ready Paper Submission
- 15th May 2020** Early Registration Deadline

CONFERENCE VENUE

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