This Special Session aims to gather original contributions on enhanced modeling, simulation, design and testing of WPT-charging systems.

Topics include, but are not limited to:
- Systems and devices modeling
- Systems and devices design and optimization
- Electromagnetic modeling and simulation
- Electrical and magnetic measurement
- Power & efficiency performance analysis
- Testing and diagnosis methods and tools
- Environmental impact and safety.

Prospective Authors interested in the Special Session are invited to inform the organizers about their contribution.

For any further information, please contact the organizers:
- Giulia Di Capua
giulia.dicapua@unicas.it
University of Cassino and Southern Lazio, Italy
- Nicola Femia
femia@unisa.it
University of Salerno, Italy
- Antonio Maffucci
maffucci@unicas.it
University of Cassino and Southern Lazio, Italy

Important Dates
- 7th March 2021 Paper Submission Deadline
- 20th March 2021 Extended Paper Submission Deadline
- 18th April 2021 Author Notification
- 15th May 2021 Camera Ready Paper Submission
- 15th May 2021 Early Registration Deadline

Paper Submission Process

Paper Length: The maximum number of accepted pages is four, including all figures, tables and references. Papers exceeding the 4-page limit will be automatically rejected.

Paper Size and Format: Only US Letter (8.5" x 11") or A4 (210mm x 297mm) formats are allowed.

Paper Format: Authors should prepare the manuscript according to the IEEE double-column conference paper template style.

File Size: The size of the PDF files submitted should not exceed 2.0 MB.

Virtual Conference
The SMACD 2021 will move to a fully virtual platform.

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

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In the last decade, the growing number of personal electronic devices that people rely on in daily life 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 challenging tasks, considering also the impact of uncertainties and tolerances.