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New Topologies, Design, Modeling and Control of DC-DC Converters in Power Systems

Guest Editor:

Prof. Dr. Antonio Lazaro
Power Electronics System Group, Universidad Carlos III de Madrid, 28911 Leganes, Spain

Deadline for manuscript submissions:
closed (28 February 2022)

Message from the Guest Editor

Dear Colleagues,

DC-DC converters play a very important role as an enabling technology in the latest trends in novel power systems. Virtual Power Plants, massive energy storage in batteries, energy recuperators connected to railway catenaries, solid state transformers, the vehicle to grid initiative, etc.

This Special Issue focuses on new topologies of DC-DC converters to be integrated in new electrical networks, their design, modelling and control. Original papers will be accepted in all areas related to the above aspects. Topics of interest for publication include, but are not limited to, the following:

- Innovative power topologies
- Design and multi-objective optimization techniques of transformers and inductances specific to these converters
- Multi-objective converter design and optimization techniques including the cooling system
- Modelling of parasitic lay-out elements and new active snubbers
- Real-time optimization and reconfiguration techniques for PWM modulators
- Modelling strategies and identification of system uncertainties
- Control techniques oriented to the stabilization of a system with multiple converters and multiple power flows

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Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Aerospace Engineering, University of Roma Sapienza, Via Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

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Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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