



SPECIAL SESSION SS06

2020 IEEE 19th International Power Electronics and Motion Control Conference (IEEE-PEMC 2020) will include Special Sessions, which are organized on highly specialized topics within conference scope that were not included in the previous editions of the conference. The organizers of those sessions must observe the scope of the conference and submit session proposal to the Conference secretariat for acceptance. Please provide data of the session included in the form below. At least one (and max. two) session organizer is required to provide contact data and short biography.

Session details:

Session title: Power Electronic Systems for Efficient and Sustainable Energy Supply

<p>Session description (session scope, novelty, goals; 100-200 words):</p> <p>Over the last decade the increasing penetration of renewable energy systems and appearance of novel power supply paradigms such as Active Distribution Grids have stimulated an extensive research in advanced power converter topologies and control algorithms with the main emphasis on such merits as wide input voltage and load regulation range, improved quality of the input and output parameters, enhanced control flexibility and low cost. Another challenging task in the design of such converters is their long-term reliability for ensuring the continuity of operation and resilience of electric power supply system. This special issue aims to concentrate the latest developments and allow researchers to discuss and share experiences to advance this technology.</p>	<p>Keywords, topics:</p> <p>Advanced power electronic converter topologies, Power flow control and optimization algorithms, Frequency and voltage regulation, Energy storage systems (including the use of electrical vehicles for this function), Demand generation strategies, Energy flexibility, Condition monitoring, intelligent protection and fault diagnosis</p>
---	---

Organizer(s) details:

First (main) organizer (title, name and surname): Prof. Dmitri Vinnikov	
E-mail: dmitri.vinnikov@taltech.ee	Affiliation: Tallinn University of Technology, Tallinn, Estonia
Short bio: Prof. Dmitri Vinnikov received the Dipl.Eng., M.Sc., and Dr.Sc.techn. degrees in electrical engineering from Tallinn University of Technology, Tallinn, Estonia, in 1999, 2001, and 2005, respectively. His research interests include applied design of power electronic converters and control systems, renewable energy conversion systems, impedance-source power converters, and implementation of wide bandgap power semiconductors. He has authored or coauthored two books, five monographs and one book chapter as well as more than 200 papers on power converter design and development and is the holder of numerous patents.	
Second (optional) organizer (title, name and surname): Prof. Mariusz Malinowski	
E-mail: malin@isep.pw.edu.pl	Affiliation: Warsaw University of Technology, Warsaw, Poland
Short bio: Prof. Mariusz Malinowski received the Ph.D. and D.Sc. degrees in electrical engineering from the Institute of Control and Industrial Electronics, Warsaw University of Technology (WUT), Warsaw, Poland, in 2001 and 2012, respectively. His current research interests include the control and the modulation of grid-side converters, multilevel converters, smart grids, and power-generation systems based on renewable energies. He has co-authored over 130 technical papers and six books. He holds two implemented patents.	

www.ieee-pemc2020.org

