



SPECIAL SESSION SS09

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.

Session details:

Session title: <u>Advanced Electrical Machines, Power Converters and Drive Technologies for Oceanic Wave and Wind Power Generation</u>	
<p>Session description (session scope, novelty, goals; 100-200 words):</p> <p>In recent years, with soaring price of fossil fuels, the global energy system is on the verge of a drastic revolution. The evolutionary development in the ever-increasing penetration of renewable energy sources (RESs) is commonly recognized as the major driving forces of the revolution. Increasingly, oceanic wave and wind energies are becoming two of the most promising RESs in the world. And, the electrical machine, power converter and drive technology are the three of the most important elements for oceanic wave and wind energy conversion systems, which determine the power quality, conversion efficiency and reliability of the system. The objective of this special session is to identify, address and disseminate state-of-the-art research works on advanced electrical machines, power conv. and drive technol. for oceanic wave and wind power generation.</p>	<p>Keywords, topics:</p> <p>New topologies of electrical machines, and power converters; Modelling and analysis for machines and converters; Control strategies and efficiency optimization; Fault diagnosis, condition monitoring and tolerance operation; Power converters with energy storage for smooth wave and wind energy penetration into power grids.</p>

Organizer(s) details:

First (main) organizer (title, name and surname): <u>Dr. Md Rabiul Islam</u>	
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Short bio: <u>Dr. Md Rabiul Islam received the B.Sc. and M.Sc. degree from Rajshahi University of Engineering and Technology, Bangladesh, in 2003 and 2009, respectively; and the Ph.D. degree from University of Technology Sydney, Australia, in 2014, all in electrical engineering. He was appointed a lecturer at RUET in 2005 and promoted to full professor in 2017. In early 2018, he joined at the School of Electrical, Computer, and Telecommunications Engineering, University of Wollongong, Australia. His research interests include power electronic converters, renewable energy technologies, power quality, electrical machines and electric vehicles.</u>	
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E-mail: <u>liuyi82@hust.edu.cn</u>	Affiliation: <u>Huazhong University of Science and Technology, Wuhan, China</u>
Short bio: <u>Dr. Yi Liu received his Ph.D. degree in Mechatronic Engineering from the Huazhong University of Science and Technology, Wuhan, China, in 2016. In Jul. 2016, he became a Postdoctoral Research Fellow at the State Key Laboratory of Advanced Electromagnetic Engineering and Technology, Huazhong University of Science and Technology, where he became a Lecturer in Jan. 2020. He has published more than 40 high-quality SCI-indexed International journal papers and one book, and held over 20 granted / pending invention patents. His current research interests include multi-port electrical machines and power converter systems.</u>	

