



SPECIAL SESSION SS08

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 the scope that were not included in the previous editions of the conference.

Session details:

Session title: <u>Fault Diagnosis and Fault-Tolerant Control in Power Electronics, Drives and Renewable Energy Systems</u>	
<p>Session description (session scope, novelty, goals; 100-200 words):</p> <p>The aim of this special session is to discuss recent developments concerning the fault detection and isolation as well as fault-tolerant control strategies for AC motor drives applied in different industrial processes and renewable energy systems. The presentations may focus on: monitoring and diagnostics of AC motor/generator faults, including converter, motor/generator and sensor faults; intelligent fault detection and diagnostics systems for power converters and drives, including signal processing, observers and artificial intelligence based methods; fault-tolerant control methods, including redundant or multiphase topologies of converters and motors as well as new control methods for fault compensation.</p>	<p>Keywords, topics:</p> <p><u>Fault diagnosis, fault isolation, fault-tolerant control, power electronics, electric drives, renewable energy systems</u></p>

Organizer(s) details:

First (main) organizer (title, name and surname): <u>Prof. Demba Diallo</u>	
E-mail: demba.diallo@geeps.centralesupelec.fr	Affiliation: Université Paris-Saclay, CentraleSupélec, CNRS, France
Short bio: Prof. Demba Diallo (SM'05, IEEE) received the M.Sc. and Ph.D. degrees in electrical and computer engineering from the National Polytechnic Institute of Grenoble, Grenoble, France, in 1990 and 1993, respectively. He is currently working with the Group of Electrical Engineering of Paris, France. He is head of the French Research Network on Electrical Engineering and Social Issues. His research interests include advanced control techniques and diagnosis of electromechanical systems, design of electric power trains and autonomous systems.	
Second (optional) organizer (title, name and surname): <u>Prof. Zheng Wang</u>	
E-mail: zwang@seu.edu.cn	Affiliation: Southeast University, Nanjing, China
Short bio: Prof. Zheng Wang , (S'05–M'09–SM'14, IEEE) received the B.Eng. and M.Eng. degrees from Southeast University, Nanjing, China, in 2000 and 2003, and the Ph.D. degree from the University of Hong Kong, in 2008, all in electrical engineering. Since 2016 he is Full Professor at SU, Nanjing. His research interests include power electronics, electric drives, fault diagnosis and tolerance, renewable power generation, microgrids.	
Third (optional) organizer (title, name and surname): <u>Prof. Teresa Orłowska-Kowalska</u>	
E-mail: teresa.orłowska-kowalska@pwr.edu.pl	Affiliation: <u>Wrocław University of Technology, Wrocław, Poland</u>
Short bio: Prof. Teresa Orłowska-Kowalska , (M'93–SM'05, IEEE) received the Ph.D. and D.Sc. degrees in electrical engineering from Wrocław University of Technology, Wrocław, Poland, in 1976 and 1990, respectively. Since 2006 she is Full Professor at this University. Her current research interests include applications of the observers and AI methods in sensorless control of AC drives, diagnostics and fault-tolerant control of AC motor drives.	

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