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SPECIAL SESSION SS7

20th International Power Electronics and Motion Control Conference (IEEE-PEMC 2022) will include Special Sessions, which are organized on highly specialized topics within the conference scope.

Session Details:

Special Session Title: Fault Tolerant Techniques in AC Motor Drives

Session description (session scope, novelty, goals):	Keywords, topics:
The growing requirements for the quality of AC drives' operation, in particular in applications such as the transport of people and goods (passenger cars, trucks, buses, airplanes, drones, ships, trolleys) have increased interest in the safety and reliability issues of the propulsion systems. The reliability and availability of the systems as well as the reduction of the impact of failures are improved by the Fault Tolerant Control (FTC) mechanism. It can be divided into active FTC and passive FTC. The purpose of this special session is to focus on the latest advances in FTC and associated fault diagnosis, state variable estimation and robust control techniques for AC drives. It will enable scientists to discuss and exchange experiences to develop this technology.	<ul style="list-style-type: none"> – power electronics faults – AC motors faults – sensor faults – fault diagnosis – fault isolation – fault compensation – sensorless control – fault-tolerant control strategies and structures

Organizer(s) Details:

First organizer: Prof. Teresa Orłowska-Kowalska	
E-mail: teresa.orłowska-kowalska@pwr.edu.pl	Affiliation: Wroclaw University of Science and Technology Wroclaw, Poland
Short bio: Prof. Teresa Orłowska-Kowalska, (M'93–SM'05, IEEE) received the Ph.D. and D.Sc. degrees in electrical engineering from Wroclaw University of Technology, Wroclaw, Poland, in 1976 and 1990, respectively. Since 2006 she is Full Professor at this University, at the Department of Electrical Machines, Drives and Measurements. 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. She is co-author of over 450 journal and conference papers.	

Second organizer: Assoc. Prof. Emrah Zerdali	
E-mail: emrah.zerdali@ege.edu.tr	Affiliation: Ege University, Izmir, Turkey
Short bio: Assoc. Prof. Emrah Zerdali, (M'18, IEEE) received the M.Sc. and the Ph.D. degrees in electrical and electronics engineering from Nigde Omer Halisdemir University, Nigde, Turkey, in 2011 and 2016, respectively. He is currently working as an Associate Professor at the Department of Electrical and Electronics Engineering, Ege University, Izmir, Turkey. His current research interests include electric machines and drives, speed-sensorless control, fault-tolerant control, model predictive control and state/parameter estimation for electric machines.	

Information:

- IEEE IES Rules for Special Sessions organization: <https://ieeepemc2022.org/call-for-special-sessions/>