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SPECIAL SESSION SS4

2022 IEEE 20th International Power Electronics and Motion Control Conference (IEEE-PEMC 20220) will include Special Sessions, which are organized on highly specialized topics within the conference scope.

Session Details:

Special Session Title: Digital Twin Technologies in Electrical Machines and Drives

Session description (session scope, novelty, goals; 100-200 words):	Keywords, topics:
<p>Implementation of Digital Twin technologies for electrical energy conversion systems (electrical machines) and control devices (drives) is an important and open question in the industrial domain. Digital Twins are used to predict a complex system's future performance, behavior, and maintenance needs. Besides using a high-quality simulation, one of the commitments is monitoring and maintaining control of the whole system via a constant live link between virtual and physical entities, along with its development history, but also contains much information from the respective manufacturers and services.</p> <p>The scope of this Special Session includes but is not limited to the topics related to the development and implementation of Digital Twins, as well as design methodologies.</p>	<ul style="list-style-type: none"> - Condition monitoring - Data acquisition - Data processing - Digital twin - Electric drives - Electrical machines - Industry applications - IoT - Model-driven development - Motor drives - Telemetry

Organizer(s) Details:

First organizer: Prof. Anton Rassõlkin	
E-mail: anton.rassolkin@taltech.ee	Affiliation: Tallinn University of Technology, Estonia
<p>Short bio: Anton Rassõlkin holds the position of professor in Mechatronics at the Department of Electrical Power Engineering and Mechatronics, Tallinn University of Technology (TalTech, Estonia). The main research interests are mechatronics and electrical drives, particularly for electric transportation, as well as autonomous vehicles. Currently, he is working on a project focused on developing of Digital Twin for the propulsion drive of the autonomous electric vehicle. He is an author and co-author of 60 international journal and more than 120 conference papers. Since 2020 he has been an IEEE Senior Member.</p>	
Second organizer: Dr. Toomas Vaimann	
E-mail: toomas.vaimann@taltech.ee	Affiliation: Tallinn University of Technology, Estonia
<p>Short bio: Toomas Vaimann is currently a senior researcher in Tallinn University of Technology (TalTech, Estonia), Department of Electrical Power Engineering and Mechatronics. His main research interest is the diagnostics of electrical machines. Currently, he is focused on the development of industrial internet methods for electrical energy conversion systems monitoring and diagnostics. He is an author and co-author of 70 international journal and more than 150 conference papers. Since 2020 he has been an IEEE Senior Member.</p>	

Information:

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