ICEM 2024, Torino, September 1-4 2024

Special Session on

Use of Artificial Intelligence for Optimized Design of Electrical Machines and Power Electronics Converters

Organized and co-chaired by

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Call for Papers

This session aims to bring together researchers, practitioners, and industry professionals to discuss and share the latest advancements in the application of artificial intelligence (AI) techniques in the design and optimization of electrical machines and power electronics converters. AI technologies have emerged as game-changers in this domain, offering adaptive, self-learning, and predictive capabilities that enable superior performance, and real-time decision-making. Particularly, the design, control and optimization of electric machines and power electronics benefit from machine learning techniques for a higher level of performance and reliability. The aim of this Special Session is to bring together original, theoretical and practical ideas, and future trends of AI implementation for design and optimization of electrical machines (motors and generators), high-power converters (inverters and rectifiers), and energy storage systems.

Topics of interest include, but are not limited to:

- Multi-objective optimization methods for electric machine design.
- Deep learning-based predictive control for resonant power converters.
- Use of ML algorithms to optimize electrical machines and power electronics converters.
- Application of AI in design processes of electrical machines, drives, power converters

Submission of papers: paper submission follows the rules of regular papers. All the instructions for paper submission are included in the conference website https://icem.cc/2024