Special Session on

Next-Generation Electrified Transport: Advances in Electric Drive System

Organized and co-chaired by:

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Abstract

The global acceleration toward sustainable development has positioned electrified transport as a pivotal component of the transition. Technologies such as electric automotive systems, eVTOL aircraft, and electric propulsion ships are emerging as compelling alternatives to conventional transportation methods. However, diverse application scenarios pose significant challenges for the design, analysis and optimization of the electric drive system. The multi-dimensional performance characteristics demand cross-disciplinary design techniques, including electromagnetics, thermal, NVH, power electronics and control strategies.

This Special Session provides a global forum for researchers to share and discuss findings regarding advanced electric drives for next-generation electrified transport.

Topics of interest include, but are not limited to:

- Electric Drive for next generation electrified transport.
- High power density electrical machine and its drive system.
- Multiphysics optimization and artificial intelligence aided design methods.
- Cooling and thermal management.
- NVH analysis and improvement.
- Power electronics solutions and system integration.
- High reliability design and fault tolerant control strategies.

Important dates

- Full Paper Submission: February 1, 2026
- Full Paper Notification: May 1, 2026
- Final Paper Upload: June 1, 2026

Submission of papers

Paper submission follows the rules of regular papers. All the instructions for paper submission are included in the conference website:
https://icem2026.ubi.pt/submission.html