

Special Session on Additive Manufacturing of Electrical Machines

Organized and co-chaired by:

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Abstract

Additive manufacturing (AM), commonly known as 3D printing, is rapidly transforming the design and production landscape of electrical machines. Its ability to fabricate complex geometries, integrate multiple materials, and reduce production waste opens new frontiers in machine performance, efficiency, and customization.

This special session aims to bring together researchers, engineers, and industry experts to discuss recent advances, challenges, and opportunities in the application of additive manufacturing to electrical machines. Contributions are invited that address innovative materials, design methodologies, modeling techniques, process optimization, and practical implementations in electrical energy conversion systems.

Topics of interest include, but are not limited to:

- Additive manufacturing techniques for electrical machine components (rotors, stators, windings, cores, housings).
- Advanced materials and composites for AM-based electrical machines.
- Multi-material and functionally graded structures.
- Magnetic and electrical property optimization in 3D-printed components.
- Thermal management and structural integrity of AM parts.
- Topology optimization and design freedom enabled by AM.

- Simulation and modeling of AM processes for electromagnetic applications.
- Integration of AM in prototyping and mass production of electrical machines.
- Case studies and industrial applications.

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>