Call for Papers for the Special Session on

Rare-Earth Magnet Free Machines for a Sustainable Future

Organized and co-chaired by

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Technical Outline of the Session and Topics

Electrical machines are the backbone of modern transportation, renewable energy systems, and industrial electrification. The dependency on permanent magnet machines offers high efficiency and power density but introduces challenges related to rare-earth material cost, demagnetization, environmental impact, and supply-chain vulnerability. With the global shift toward green transportation and clean energy, sustainable machine technologies have become essential. Rare-earth magnet-free electrical machines, such as **synchronous reluctance, switched reluctance, advanced induction machines, and special machines**, provide a viable alternative with high fault tolerance, robustness, and eco-friendly operation. The objectives of this special session are primarily to present innovative designs, control strategies, and experimental solutions for magnet-free electric drives.

Topics of the session include, but are not limited to:

- Design of rare-earth magnet-free machines for EV and renewable energy applications
- High fault-tolerant and robust machine topologies
- High torque-density induction machines
- Multiphase rare-earth magnet-free machines
- Advanced control strategies for rare-earth magnet-free machines
- Optimization techniques of rare-earth magnet-free machines
- Special machine design, control, and optimization techniques

Timeline for Authors

All the instructions for paper submission are available on the conference website. Please visit www.iecon2026.org or scan the QR code for the timeline.