ICEM 2024, Torino, September 1-4 2024

Special Session on

High Torque Density Flux Modulation Machines and Drives

Organized and co-chaired by

- Shaofeng Jia, Associate Professor, Xi'an Jiaotong University, China (shaofengjia@mail.xjtu.edu.cn)
- Tianjie Zou, Assistant Professor, The University of Nottingham, UK (Tianjie.Zou@nottingham.ac.uk)

Call for Papers

Flux modulation machines have the outstanding advantage of high torque density due to the magnetic gear effect. Flux modulation machines have shown excellent application potential in fields such as aerospace, wind power generation, transportation electrification, and other fields. Therefore, flux modulation machines have been a hot research topic in recent years. Generally, the typical topologies of flux modulation machines include vernier machines, flux switching machines, flux reversal machines, magnetic geared machines, etc., and are not limited to radial flux, axial flux, transverse flux, and linear machines. To accelerate their application in the industrial field, further discussion and research are needed on the structure, performance analysis, modeling, and drive control of this machine. The object of this Special Session is to provide a forum so that researchers worldwide can share their recent research achievements and exchange ideas about the development of flux modulation machines.

Topics of interest include, but are not limited to:

- Principle investigation and analytical analysis of flux modulation machines
- Electromagnetic analysis of flux modulation machines
- Novel flux modulation machines topologies
- Design, optimization, and simulation of flux modulation machines
- Loss analysis and efficiency optimization of flux modulation machines
- Advanced drive technologies and control strategies of flux modulation machines
- Potential application discussion of flux modulation machines

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