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Special Session on

Novel Flux Modulation Machines and Controls

Organized and co-chaired by:

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Call for Papers

Flux modulation machine has a big family which includes vernier PM machine, magnetic geared machine, flux switching machine, flux reversal machine, transverse flux machine, variable reluctance machine, brushless doubly fed machine, etc. With the utilization of flux modulation effect, these flux modulation machines are able to yield much higher torque density than regular synchronous machines, induction machines, etc. Thus, flux modulation machines are serving as promising choices for applications ranging from servo system, oil pumping, electric vehicle, to wind power generation, etc. However, flux modulation machines have several unique shortcomings, e.g. rich harmonics, low power factor, large core loss, strong armature reaction. Therefore, researchers are facing numerous challenges in both design techniques and control strategies for high-performance flux modulation machines.

This Special Section aims to provide a forum for professionals from both academia and industry all over the world to exchange their experience and achievements within the scope of machine topology, design, analysis, control and applications of various flux modulation machines. Manuscripts with both theoretical and practical/experimental results are strongly encouraged.

Topics of interest include, but are not limited to:

- Mathematical and integrated modeling of flux modulation machines
- Power factor and torque analysis for flux modulation machines
- Multi-electrical or mechanical ports flux modulation machines
- New topologies of flux modulation machines
- Multi-objective optimization techniques for flux modulation machines
- Novel vector and direct torque control strategies for flux modulation machines
- Sensorless control for flux modulation machines
- New materials and applications for flux modulation machines and control systems
- Other related topics

Submission of papers: deadline follows the deadline for the regular papers.

All the instructions for paper submission are included in the conference website:

<http://www.icem.cc/2020>