



ICEM2020 – Gothenburg, Sweden, August 23-26, 2020

Special Session on

Software-based design of e-machines: present and perspectives

Organized and co-chaired by:

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Call for Papers

Nowadays, the simulation software are an indispensable tool assisting the engineers in the electrical machines design. These software permit to strongly optimize the machine geometry, reducing the development time and often limiting design loops involving physical prototypes. Moreover, several effects, such as field distribution into the machine and eventual areas of local saturation, are handled and possibly solved.

Modern design tools are expected to support the designer in the increasing request of comprehensive analyses, optimizations and verifications involving different physic domains such as Electromagnetic, Thermal, Mechanical, Vibro-acoustic and more.

The goal of this special session is to collect relevant innovative works dealing with development or improvement of software-based machine design tools and techniques. In recent years, several software were developed by both academia and industry, with growing level of accuracy and computational efficiency. The improvement in design software corresponds, in turn, to a better correlation between simulated and experimental machine performance, including maximum torque capability, torque ripple, power loss estimation, inductances evaluation and their variation with the working point and thermal behavior.

Topics of interest include, but are not limited to:

- FEM e-machine modeling
- Operating-cycle based design procedures
- New software design tools
- New multi-physic design procedure and related tools
- Application of cluster computing to e-machine design
- Application of machine learning to e-machine design
- Advanced modelling of iron loss

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>