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Novel Designs, Modeling and Sizing Optimization of Electrical Machines

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Message from the Guest Editors

Dear Colleagues,

In many applications today, the constraints are often severe and of different natures, pushing the designers of electrical machines to develop specific topologies and sizing methodologies.

The increase in specific power, for example, leads to pushing the magnetic saturation and heating constraints beyond the limits usually acceptable by conventional analytical models. Electrical machines are also increasingly bigger, considering their working cycle with the search for a complex compromise between energy efficiency, mass, cost, etc. Considering the working cycle, the control strategy (flux weakening management) thus becomes an important part of the problem, directly impacting the design of the machine.

The goal of this Special Issue is to highlight the impact of these optimizations under strong and multiple constraints in the design of electrical machines, highlight the development of more efficient technological solutions (cooling, materials, power supply, etc.) or adapted sizing methodologies (multiscale optimization, multiphysics, design considering working cycle, etc.).

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Guest Editors

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Message from the Editor-in-Chief

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