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Magnetic Material Modelling of Electrical Machines

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Message from the Guest Editors

Dear Colleagues,

Electromechanical energy conversion takes place in electrical motors, generators, and actuators. The efficiency and effectiveness of the conversion process depends on both the design of the devices and the materials used in these devices. Furthermore, the design process of the said devices is today carried out through extensive numerical field computations. The correctness and accuracy of these computations depend on the quality of the material models used. In this issue, we focus on different materials models and their usage in the finite element simulation of electrical motors, generators, and actuators. The modeling of properties such as hysteresis, alternating and rotating losses, and demagnetization are of interest, but also characterization of the materials and their dependency on mechanical quantities such as stresses and temperature are welcome. Both simulation methodologies and material models will be considered.

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Message from the Editor-in-Chief

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