



**IEEE INTERNATIONAL SYMPOSIUM ON INDUSTRIAL ELECTRONICS ISIE'18  
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**Special Session on**

**Design and Implementation Issues of Model Predictive Control for Electrical Machines**

***Organized by***

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***Call for Papers***

The performance of electrical machines highly depends on the control properties (dynamics, accuracy, robustness, switching states selection, and optimization). Good dynamics of the response must be followed by high accuracy of the references tracking and minimization of the switching losses. Those are problematic issues in case of linear controllers, when their limitations are considered. Model Predictive Control (MPC) is considered as one alternative to classical controllers for electric machines. MPC is a conceptually different control technique that offers a high flexibility to control different electrical machines and to manage several control objectives, without adding significant complexity to the system. MPC has demonstrated to be easier to implement and understand than classical speed control techniques such as FOC and DTC providing a control of AC machines. MPC can dramatically change the way electrical energy is controlled using power semiconductors, and it offers challenging opportunities for research in electrical drives.

All researchers working in this area are encouraged to submit their papers with latest results to this Special Session.

Topics of interest include, but are not limited to:

- Sensorless MPC for electrical machines
- Application to mega-watt range wind turbines
- Cost function design and weighting factors tuning
- Fixed switching frequency
- Robustness against parameter change
- Fault tolerant MPC
- MPC for multiphase drives

All the instructions for paper submission are included in the conference website: <http://www.ieee-isie2018.org>