



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

“Model Predictive Control for Renewable Energy Integration”

Organized by

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Call for Papers

Integration of renewable energy sources (RES), e.g., solar, wind and marine energy is mainly performed by power converters due to its intermittent nature. Thus, power electronics plays a key role as enabling technology to realise efficient and reliable energy systems. Recent applications of Model Predictive Control (MPC) have been reported for the whole range RES integration, i.e., residential, distribution and utility-scale systems. However, several challenges remain unaddressed in terms of utility interactions, drive commissioning and parameter control design, grid code compliance, among others. The aim of this special session is to concentrate all related new contributions on MPC applications, to provide a fertile environment for discussion of emerging control technologies.

Topics of interest include, but are not limited to:

- 1) Emerging MPC control schemes for RES integration and smart grids.
- 2) Interactions between power converters controlled with MPC and the grid.
- 3) Continuous and finite control-set MPC controllers for electromobility systems.
- 4) MPC for distribution and utility-scale energy storage systems.
- 5) MPC of transformerless converters for residential grid-tie systems.
- 6) Efficiency, grid code compliance and reliability of MPC applications.
- 7) Technical issues of MPC applied to RES (long-horizon MPC, anti-islanding detection, harmonic injection, EMI design, systematically parameter selection).

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

<http://www.ieee-isie2018.org>