Model Predictive Control and Optimization Applied to Process Control

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Message from the Guest Editors

Dear Colleagues,

Predictive control (MPC) is one of the advanced control techniques with a significant impact on industry. However, the use of optimization routines involves a high computing cost, which usually restricts its application to environments with high-performance computers or slow dynamic processes. That question evidences that there is a significant gap between the state-of-the-art research and applications in the MPC field. The topics of interest of this Special Issue include but are not limited to:

- Nonlinear predictive control of hybrid systems
- Multimodal nonlinear predictive control
- Stochastic predictive control
- Fuzzy and neural network predictive control
- Adaptative predictive control
- Economic predictive control
- Predictive control for fast dynamics
- Explicit predictive control
- Optimization algorithms for model predictive control
- Heuristic optimization for model predictive control
- Real industrial applications
- Real-time model predictive implementation
- Machine learning and artificial intelligence for model predictive control.

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Special Issue

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Message from the Editor-in-Chief

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