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Model Predictive Control in Mechatronic, Robotic, and Networked Systems

Guest Editors:

Dr. Constantin-Florin Caruntu
Department of Automatic Control and Applied Informatics, Gheorghe Asachi Technical University of Iasi, 70050 Iasi, Romania

Dr. Cosmin Copot
Department of Electromechanics, University of Antwerp, Antwerp, Belgium

Deadline for manuscript submissions:
closed (30 April 2022)

Message from the Guest Editors

Dear Colleagues,

Model predictive control (MPC) has received increasing interest among researchers and control practitioners in industries. Contributions from all fields related to Model Predictive Control in Mechatronic, Robotic, and Networked Systems are welcome to this Special Issue, including, particularly, the following:

- Decentralized, hierarchical, and distributed MPC
- Large-scale and cloud-based MPC
- MPC for cyber-physical systems
- Artificial intelligence in MPC
- Real-time implementation of MPC
- Applications of MPC in servo drives and electrical power drives
- Applications of MPC in industrial and mobile robotics
- Applications of MPC in industrial process control
- Applications of MPC in automotive systems
- Applications of MPC in networked and distributed systems

Prof. Dr. Constantin Caruntu
Dr. Cosmin Copot
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Editors-in-Chief

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Prof. Dr. Norman M. Wereley
Department of Aerospace Engineering, University of Maryland, 3179J Martin Hall, College Park, MD 20742, USA

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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Actuators Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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