



## New Directions on Model Predictive Control

Guest Editors:

**Prof. Dr. Jinfeng Liu**

Department of Chemical & Materials Engineering, University of Alberta, Edmonton, AB T6G 1H9, Canada

**Dr. Helen Durand**

Department of Chemical Engineering and Materials Science, Wayne State University, Detroit, MI 48202, USA

Deadline for manuscript submissions:

**closed (31 July 2018)**

### Message from the Guest Editors

Model predictive control (MPC) has been an important and successful advanced control technology in process industries, mainly due to its ability to handle effectively complex systems with hard control constraints. At each sampling time, MPC solves a constrained optimal control problem online, based on the most recent state or output feedback to obtain a finite sequence of control actions and only applies the first portion. MPC presents a very flexible optimal control framework that is capable of handling a wide range of industrial issues while incorporating state or output feedback to aid in robustness of the design.

The purpose of this Special Issue is to assemble a collection of current research in MPC that handles practically-motivated theoretical issues, as well as recent MPC applications to highlight the significant potential benefits of new MPC theory and design.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Francisco Chiclana**  
School of Computer Science and  
Informatics, De Montfort  
University, The Gateway,  
Leicester LE1 9BH, UK

## Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

**Journal Rank:** JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

## Contact Us

---

*Mathematics* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/mathematics](http://mdpi.com/journal/mathematics)  
[mathematics@mdpi.com](mailto:mathematics@mdpi.com)  
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)