



an Open Access Journal by MDPI

# Advances in Perception, Control and Optimization Methods in Intelligent Transportation Systems

Guest Editors:

### Dr. Haifeng Song

School of Electronic Information Engineering, Beihang University, Beijing 100191, China

### Dr. Min Zhou

School of Automation and Intelligence, Beijing Jiaotong University, Beijing 100044, China

### Prof. Dr. Xiaoqing Zeng

School of Transportation Engineering, Tongji University, Shanghai 200092, China

Deadline for manuscript submissions: **26 March 2025** 



mdpi.com/si/200353

# Message from the Guest Editors

Dear Colleagues,

In this Special Issue, we focus on the integration of operation control and intelligent perception technologies to advance the development of intelligent transportation systems (ITS). This Special Issue highlights how advanced mathematical and computational methods are applied to optimize the performance of modern transportation systems.

A key aspect of this issue is the improvement in traffic operation efficiency and safety within the context of increasing urbanization and technological advancements. Specifically, in the realm of ITS operation control, the issue underscores the importance of real-time monitoring and adjustment of traffic participants (cars, trains, passengers, and so on) to reduce congestion and enhance safety. It showcases innovative control strategies like model predictive control and reinforcement learning, tailored for the intricacies of transportation networks.

In summary, this Special Issue emphasizes the critical role of advanced mathematics, control, and optimization techniques in evolving intelligent transportation systems.







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 iournal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering sociology. particularly those that and 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, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/mathematics mathematics@mdpi.com X@MathematicsMDPI