Special Issue

Modeling and Analysis for Stability and Reliability in Railway Systems

Message from the Guest Editors

- Railway systems form the backbone of modern transportation and logistics, yet they face persistent challenges from increasing operational complexity, ageing infrastructure, and the high demand for service continuity. Ensuring stability (from train dynamics to network operations) and reliability (of components, subsystems, and the entire network) is paramount.
- Addressing these interconnected challenges requires a holistic, system-thinking approach. Advanced modelling, data-driven analysis and predictive simulation are no longer optional but essential tools for understanding complex failure mechanisms, predicting system behaviour under stress, and optimising maintenance and control strategies.
- This Special Issue aims to attract high-quality, original research articles that present the latest advancements in the modelling and analysis of railway systems, with a specific focus on enhancing stability and reliability. We invite contributions that explore novel methodologies, advanced simulation techniques, data-driven approaches, and practical case studies that offer new insights into the design and management of robust, resilient, and efficient railway systems.

Guest Editors

Prof. Dr. Mladen Nikšić
Dr. Martin Starčević
Prof. Dr. Adam Szeląg

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Systems
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
systems@mdpi.com

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Message from the Editor-in-Chief

Systems is a leading venue for the quick and global dissemination of results of cutting-edge research in various areas of systems science and systems-related fields. An increasing number of researchers are realizing the enormous potential of systems thinking in managing the many unprecedented and complex issues in all areas of need. The *Systems* journal provides a home of exceptional quality for the manuscripts of these researchers who often find it difficult to publish their work in conventional discipline focused journals.

Editor-in-Chief

Prof. Dr. Ben Clegg
Operations & Service Management Department, Aston Business School, Aston University, Birmingham B4 7ET, UK

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