

Special Issue

Decision-Making and Simulation Applications in Intelligent Transportation Systems

Message from the Guest Editor

This Special Issue focuses on the synergy between decision-making methodologies and simulation applications in ITS, and aims to highlight innovative approaches that leverage artificial intelligence (AI), soft computing, machine learning (ML), agent-based modelling, digital twins, and multi-criteria decision analysis to address challenges such as traffic congestion, autonomous vehicle integration, multimodal transport coordination, and sustainability. The scope of this Special Issue includes, but is not limited to, the following topics:

- Decision-support systems for ITS planning, operations and control;
- Simulation-based evaluation of traffic management strategies;
- Multi-criteria decision-making in transportation infrastructure development, preference modelling and trade-off analytics in transport policies and investments;
- Agent-based and system dynamics modelling of traveler behaviour, mode choice and network interactions under policy change;
- Digital twin applications in transport networks;
- AI/ML-driven predictive analytics for demand, traffic states, incidents and maintenance, integrated into operational decision-making processes, etc.

Guest Editor

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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.

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