

Special Issue

Advancing Digital Engineering: Transforming Industries with Model-Based Systems Engineering and Digital Twin Technology

Message from the Guest Editors

Industries across aerospace, defense, manufacturing, automotive, energy, telecommunications, and more are transforming due to technological advancements and increasing system complexity. Modern systems must support enhanced functionality, real-time data-driven decisions, scalability, reliability, and interoperability. Existing engineering methodologies struggle to meet demands for automation and digital system integration. Digital Engineering, Model-Based Systems Engineering (MBSE), and Digital Twin Technology provide a transformative framework for modeling, simulation, and lifecycle adaptability. This Special Issue invites contributions on novel theories, methodologies, architectures, and real-world applications in the following areas:

- MBSE-Driven Digital Twin Architectures
- Digital Thread & Interoperability Standards
- AI-Augmented MBSE & Digital Twins
- Verification, Validation, and Trust
- Lifecycle-Centric Digital Twin Ecosystems
- Cross-Domain Engineering Applications
- Enterprise Digital Transformation & Adoption

For more details, please refer to Special Issue:
[Advancing Digital Engineering](#)

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About the Journal

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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