

## Special Issue

# Model-Based Systems Engineering (MBSE) for Complex Systems

### Message from the Guest Editor

- Model-Based Systems Engineering (MBSE) has emerged as a key methodology for managing the complexity inherent in today's engineering systems. By employing formalized modeling approaches to support system requirements, design, analysis, and validation, MBSE enhances collaboration, reduces development risks, and ensures better integration across disciplines and lifecycle stages. As systems increasingly integrate physical, digital, and human components, MBSE provides a structured foundation for design, simulation, and decision-making in multi-domain environments.
- This Special Issue, "Model-Based Systems Engineering (MBSE) for Complex Systems," seeks contributions that advance the theory, methods, and applications of MBSE. We welcome research papers, case studies, and reviews addressing model-driven architectures, system modeling languages, digital twins, systems-of-systems, cyber-physical systems, AI-assisted engineering, and lifecycle management. Submissions that connect MBSE with topics such as sustainability, resilience, autonomy, and interdisciplinary collaboration are also encouraged.

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### Guest Editor

Dr. Tugba Karabiyik

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### Deadline for manuscript submissions

30 November 2026



## Systems

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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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### Editor-in-Chief

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