Special Issue

Digital Transformation of Engineering 4.0 and beyond with Model-Based Systems Engineering

Message from the Guest Editor

The digital transformation of engineering has seen an unprecedented evolution over the past decade. Model-based systems engineering has emerged as the means to replace conventional document-based methods, with an increasing reliance on models and simulations (digital twins). Fundamental to this transformation is the requirement to maintain a seamless digital information thread throughout the lifecycle, from the concept through to the design, and the manufacturing to the in-service performance. The current limitations in interoperability between tools within an MBSE lifecycle have yet to be overcome. New concepts, such as artificial intelligence and machine learning, are potentially within reach and may allow us to overcome some of these hurdles. This Special Issue will explore the current and future directions of MBSE as a key enabler for Engineering 4.0 and beyond. Also of interest are the lessons learnt during the adoption of MBSE solutions, as well as where gaps still exist in achieving a seamless digital thread across a product's lifecycle.

Keywords

- MBSE
- digital thread
- digital-twins
- digital transformation
- systems engineering

Guest Editor

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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

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