

# **Calls for Papers for Special Issue: Distributed and Real Time Simulation of Next Generation Complex Systems (S21-1)**

This Special Issue of the *SIMULATION* Journal aims at highlighting the most recent advances in distributed simulation and real time applications for the next generation of complex systems.

The focus is on Modeling and Distributed Simulation / Real-Time Application concepts, methods, methodology, practice, and toolkits, as well as related lessons learned and challenges applicable to next generation complex systems.

The authors should propose recent advances on topics that include, but are not limited to:

- Paradigms, Methodology, Algorithms and Software Architectures for Large-Scale Distributed Simulations of Next Generation Complex Systems.
- Paradigms, Modelling, Architecture and Environments for Large-Scale Real-time Systems and Concurrent Systems with Hard and Soft Real-Time Constraints.
- Non-functional Properties of Distributed Simulation and Real-Time Systems.
- Theoretical Foundations of Large-Scale Real-Time and Simulation Models.
- Languages and Tools, Development Environments, Data Interfaces, Network Protocols and Model Repositories that Address Very Large Simulations.
- Data Management and Distribution Issues, Interest Management, Semantic Modelling, Multi-resolution Modelling, Dead-Reckoning Mechanisms.
- Environmental and Emerging Simulation Challenges of Next Generation Complex Systems.
- Performance and Validation of Large-Scale and Distributed Simulations of Next Generation Complex Systems.
- Upcoming Visual Interactive Simulation Environments.
- Next Generation Collaborative Virtual and Augmented Reality, Shared Interaction Spaces, Telepresence Systems and Shared Workspaces, 3D Video and Acoustic Reconstruction, Shared Object Manipulation.

The authors can focus on high-impact innovations in the application of Distributed Simulation and Real Time Applications to concepts, methods, applications, toolkits and environments, promoting advances in all facets of M&S that led to novel solutions of next generation complex systems in existing and emerging complex problem domains derived from theory.

# Instructions for Manuscript Preparation

For manuscript formatting and other guidelines, please visit the Author Guidelines for *SIMULATION* page at <http://www.scs.org/pubs/simulation/submissionGuidelines.html>. Manuscripts should be prepared and submitted online at <http://mc.manuscriptcentral.com/simulation>. **Please note in your online cover letter that the paper is submitted for the special issue Distributed and Real Time Simulation of Next Generation Complex Systems (S21-1).**

**Note:** Manuscripts must not have been previously published or be submitted for publication elsewhere. Each submitted manuscript must include title, names, authors' affiliations, postal and email addresses, an extended paper, and a list of keywords. For multiple author submission, please identify the corresponding author.

## Due Dates

Submission for Full Papers: **November 30th, 2021**

## Guest Editors

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