Chapter

Theory, Methodology, Tools and Applications for Modeling and Simulation of Complex Systems

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An Overview of Simulation-Oriented Model Reuse

- Ying Liu
- , Lin Zhang
- , Weicun Zhang
- , Xiaolin Hu

Abstract

Simulation-oriented model reuse (SOMR) technology is an important way to improve the efficiency of modeling and simulation (M&S) and the credibility of simulation results. Recently, following the rapid development of the new technologies (cloud computing, service-oriented architecture (SOA), Web-based simulation, etc.), a mass of tools and architectures on SOMR technologies have been put in use, meanwhile a large number of related papers on SOMR have been published. This paper aims to describe the essence of SOMR briefly through investigating and summarizing the existing researches on SOMR. The contributions of this paper includes: (1) introducing the concepts and evolution process of SOMR; (2) analyzing the motivation and requirements of SOMR; (3) summarizing the general process and the categories of SOMR; and (4) providing a description and comparison of SOMR technologies.

Keywords

M&S SOMR Credibility SOA

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- *Lin Zhang* (13) (14)
- *Weicun Zhang* (15)
- *Xiaolin Hu* (16)

Author Affiliations

- 13. School of Automation Science and Electrical Engineering, Beihang University, Beijing, 100191, China
- 14. Engineering Research Center of Complex Product Advanced Manufacturing Systems, Ministry of Education, Beijing, 100191, China
- 15. School of Automation and Electrical Engineering, University of Science and Technology Beijing, Beijing, 100083, China
- 16. Department of Computer Science, Georgia State University, Atlanta, GA, 30314, USA

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