Computer modeling and simulation (M&S) allows engineers to study and analyze complex systems. Discrete-event system (DES)-M&S is used in modern management, industrial engineering, computer science, and the military. As computer speeds and memory capacity increase, so DES-M&S tools become more powerful and more widely used in solving real-life problems.

Based on over 20 years of evolution within a classroom environment, as well as on decades-long experience in developing simulation-based solutions for high-tech industries, *Modeling and Simulation of Discrete-Event Systems* is the only book on DES-M&S in which all the major DES modeling formalisms – activity-based, process-oriented, state-based, and event-based – are covered in a unified manner:

- A well-defined procedure for building a formal model in the form of event graph, ACD, or state graph
- Diverse types of modeling templates and examples that can be used as building blocks for a complex, real-life model
- A systematic, easy-to-follow procedure combined with sample C# codes for developing simulators in various modeling formalisms
- Simple tutorials as well as sample model files for using popular off-the-shelf simulators such as SIGMA®, ACE®, and Arena®
- Up-to-date research results as well as research issues and directions in DES-M&S
Modeling and Simulation of Discrete-Event Systems is an ideal textbook for undergraduate and graduate students of simulation/industrial engineering and computer science, as well as for simulation practitioners and researchers.

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