
Description: Explains multi-level models of enterprise systems and covers modeling methodology

This book addresses the essential phenomena underlying the overall behaviors of complex systems and enterprises. Understanding these phenomena can enable improving these systems. These phenomena range from physical, behavioral, and organizational, to economic and social, all of which involve significant human components. Specific phenomena of interest and how they are represented depend on the questions of interest and the relevant domains or contexts. Modeling and Visualization of Complex Systems and Enterprises examines visualization of phenomena and how understanding the relationships among phenomena can provide the basis for understanding where deeper exploration is warranted. The author also reviews mathematical and computational models, defined very broadly across disciplines, which can enable deeper understanding.

- Presents a 10 step methodology for addressing questions associated with the design or operation of complex systems and enterprises
- Examines six archetypal enterprise problems including two from healthcare, two from urban systems, and one each from financial systems and defense systems
- Provides an introduction to the nature of complex systems, historical perspectives on complexity and complex adaptive systems, and the evolution of systems practice

Modeling and Visualization of Complex Systems and Enterprises is written for graduate students studying systems science and engineering and professionals involved in systems science and engineering, those involved in complex systems such as healthcare delivery, urban systems, sustainable energy, financial systems, and national security.

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