
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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Contents:

Preface xi

1 Introduction and Overview 1

Systems Perspectives 2

Systems Movement 3

Philosophical Background 3

Seminal Concepts Systems Science 5

Seminal Concepts Economics/Cognition 6

Seminal Concepts Operations Research 7

Seminal Concepts Sociology 8

Complexity and Complex Systems 8

Complex Versus Complicated Systems 11
Model Composition 233
Entangled States 233
Consistency of Assumptions 235
Observations 236
Computational Tools 236
Conclusions 237
References 238
10 Perspectives on Problem Solving 241
Introduction 241
What is? Versus What if? 242
Case Studies 243
Business Planning 243
New Product Planning 245
Technology Investments 248
Enterprise Transformation 250
Observations on Problem Solving 253
Starting Assumptions 253
Framing Problems 253
Implementing Solutions 255
Research Issues 255
Decomposition 256
Mapping 256
Scaling 257
Approximation 257
Identification 257
Parameterization 258
Propagation 258
Visualization 259
Curation 259
Conclusions 259
References 261
Index 263

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