Risk Modeling, Assessment, And Management (Wiley Series In Systems Engineering And Management)
Presents systems-based theory, methodology, and applications in risk modeling, assessment, and management. This book examines risk analysis, focusing on quantifying risk and constructing probabilities for real-world decision-making, including engineering, design, technology, institutions, organizations, and policy. The author presents fundamental concepts (hierarchical holographic modeling; state space; decision analysis; multi-objective trade-off analysis) as well as advanced material (extreme events and the partitioned multi-objective risk method; multi-objective decision trees; multi-objective risk impact analysis method; guiding principles in risk analysis); avoids higher mathematics whenever possible; and reinforces the material with examples and case studies. The book will be used in systems engineering, enterprise risk management, engineering management, industrial engineering, civil engineering, and operations research. The fourth edition of Risk Modeling, Assessment, and Management features: Expanded chapters on systems-based guiding principles for risk modeling, planning, assessment, management, and communication; modeling interdependent and interconnected complex systems of systems with phantom system models; and hierarchical holographic modeling. An expanded appendix including a Bayesian analysis for the prediction of chemical carcinogenicity, and the Farmer’s Dilemma formulated and solved using a deterministic linear model. Updated case studies including a new case study on sequential Pareto-optimal decisions for emergent complex systems of systems. A new companion website with over 200 solved exercises that feature risk analysis theories, methodologies, and application. Risk Modeling, Assessment, and Management, Fourth Edition, is written for both undergraduate and graduate students in systems engineering and systems management courses. The text also serves as a resource for academic, industry, and government professionals in the fields of homeland and cyber security, healthcare, physical infrastructure systems, engineering, business, and more.

**Book Information**

Series: Wiley Series in Systems Engineering and Management (Book 1)

Hardcover: 720 pages

Publisher: Wiley; 4 edition (August 3, 2015)

Language: English

ISBN-10: 111901798X


Product Dimensions: 8.7 x 1.7 x 11.2 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)