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Descrizione fisica	1 online resource (264 p.)
Collana	Wiley series in probability and mathematical statistics. Probability and mathematical statistics, , 0271-6232
Disciplina	519.5
Soggetti	Experimental design Mathematical models Mathematical statistics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Empirical Model Building; Contents; Introduction; 1. Models of Growth and Decay; 1.1. A Simple Pension and Annuity Plan; 1.2. Income Tax Bracket Creep; 1.3. Retirement of a Mortgage; 1.4. Some Mathematical Descriptions of the Model of Malthus; 1.5. Metastasis and Resistance; 2. Models of Competition, Combat, and Epidemic; 2.1. An Analysis of the Demographics of Ancient Israel Based on Figures in the Books of Numbers, Judges, and II Samuel; 2.2. The Plague and John Graunt's Life Table; 2.3. Modular Wargaming; 2.4. Predation and Immune Response Systems; 2.5. Pyramid Clubs for Fun and Profit 2.6. A Simple Model of AIDS3. Simulation and the Coming Qualitative Change in Scientific Modeling; 3.1. Simulation-Based Techniques for Dealing with Problems Usually Approached via Differential Equation Modeling; 3.2. SIMDAT: An Algorithm for Data-Based Simulation; 3.3 Simulation-Based Estimation; 4. Some Techniques of Nonstandard Data Analysis; 4.1. A Glimpse at Exploratory Data Analysis; 4.2. Nonparametric Density Estimation; 5. Paradoxes and False Trails; 5.1. Some Problems with Group Consensus; 5.2. Stein's Paradox; 5.3. Fuzzy Set Theory; 5.4. Quality Control; Appendix

	A.1. A Brief Primer in StochasticsA.2. A Simple Optimization Algorithm that Usually Works; Index
Sommario/riassunto	A hands-on approach to the basic principles of empirical model building. Includes a series of real-world statistical problems illustrating modeling skills and techniques. Covers models of growth and decay, systems where competition and interaction add to the complexity of the model, and discusses both classical and nonclassical data analysis methods.