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| Soggetti | Computer science—Mathematics<br>Mathematics<br>System theory<br>Calculus of variations<br>Operations research<br>Decision making<br>Manufactures<br>Discrete Mathematics in Computer Science<br>Mathematics, general<br>Systems Theory, Control<br>Calculus of Variations and Optimal Control; Optimization<br>Operations Research/Decision Theory<br>Manufacturing, Machines, Tools, Processes |
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| Nota di contenuto | 1 Systems and Models -- 2 Languages and Automata -- 3 Supervisory Control -- 4 Petri Nets -- 5 Timed Models -- 6 Stochastic Timed Automata -- 7 Markov Chains -- 8 Introduction to Queueing Theory -- 9 Controlled Markov Chains -- 10 Introduction to Discrete-Event Simulation -- 11 Sensitivity Analysis and Concurrent Estimation -- I Review of Probability Theory -- I.1 Basic Concepts and Definitions -- I. 2 Conditional Probability -- I.3 Random Variables -- I.4 Conditional Distributions -- I.5 Functions of Random Variables -- I.6 Expectation |

-- I.7 Characteristic Functions -- I.8 Random Sequences and Random Processes -- II IPA Estimator -- About the Authors.

Sommario/riassunto

A substantial portion of this book is a revised version of Discrete Event Systems: Modeling and Performance Analysis (1993), which was written by the first author and received the 1999 Harold Chestnut Prize, awarded by the International Federation of Automatic Control (IFAC) for best control engineering textbook. This new expanded book is a comprehensive introduction to the field of discrete event systems, emphasizing breadth of coverage and accessibility of the material to readers with different backgrounds. Its key feature is the emphasis placed on a unified modeling framework that transcends specific application areas and allows linking of the following topics in a coherent manner: language and automata theory, supervisory control, Petri net theory, (max,+) algebra, Markov chains and queueing theory, discrete-event simulation, perturbation analysis, and concurrent estimation techniques. Introduction to Discrete Event Systems will be of interest to advanced-level students in a variety of disciplines where the study of discrete event systems is relevant: control, communications, computer engineering, computer science, manufacturing engineering, operations research, and industrial engineering.