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Nota di contenuto	Preface -- Part I: Theoretical Foundations: Multimodularity, Convexity and Optimization; Balanced Sequences; Stochastic Event Graphs -- Part II: Admission and Routing Control: Admission Control in Stochastic Event Graphs; Applications in Queuing Networks; Optimal Routing; Optimal Routing in two Deterministic Queues -- Part III: Several Extensions: Networks with no Buffers; Vacancies, Service Allocation and Polling; Monotonicity of Feedback Control -- Part IV: Comparisons: Comparison of Queues with Discrete-time Arrival Processes; Simplex Convexity; Orders and Bounds for Multimodular Functions; Regular Ordering -- References -- Index.
Sommario/riassunto	Opening new directions in research in both discrete event dynamic systems as well as in stochastic control, this volume focuses on a wide class of control and of optimization problems over sequences of integer numbers. This is a counterpart of convex optimization in the

setting of discrete optimization. The theory developed is applied to the control of stochastic discrete-event dynamic systems. Some applications are admission, routing, service allocation and vacation control in queueing networks. Pure and applied mathematicians will enjoy reading the book since it brings together many disciplines in mathematics: combinatorics, stochastic processes, stochastic control and optimization, discrete event dynamic systems, algebra.