1. Record Nr. UNINA9910956108003321

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Titolo	Markov Chains : Gibbs Fields, Monte Carlo Simulation, and Queues / / by Pierre Bremaud
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 1999
ISBN	1-4757-3124-8
Edizione	[1st ed. 1999.]
Descrizione fisica	1 online resource (XVIII, 445 p. 3 illus.)
Collana	Texts in Applied Mathematics, , 2196-9949 ; ; 31
Disciplina	519.2 519.233
Soggetti	Probabilities Operations research Electrical engineering Probability Theory Operations Research and Decision Theory Electrical and Electronic Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"With 64 Illustrations."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	1 Probability Review -- 2 Discrete-Time Markov Models -- 3 Recurrence and Ergodicity -- 4 Long Run Behavior -- 5 Lyapunov Functions and Martingales -- 6 Eigenvalues and Nonhomogeneous Markov Chains -- 7 Gibbs Fields and Monte Carlo Simulation -- 8 Continuous-Time Markov Models -- 9 Poisson Calculus and Queues -- 1 Number Theory and Calculus -- 1.1 Greatest Common Divisor -- 1.2 Abel’s Theorem -- 1.3 Lebesgue’s Theorems for Series -- 1.4 Infinite Products -- 1.5 Tychonov’s Theorem -- 1.6 Subadditive Functions -- 2 Linear Algebra -- 2.1 Eigenvalues and Eigenvectors -- 2.2 Exponential of a Matrix -- 2.3 Gershgorin’s Bound -- 3 Probability -- 3.1 Expectation Revisited -- 3.2 Lebesgue’s Theorems for Expectation -- Author Index.
Sommario/riassunto	In this book, the author begins with the elementary theory of Markov chains and very progressively brings the reader to the more advanced topics. He gives a useful review of probability that makes the book self-contained, and provides an appendix with detailed proofs of all the prerequisites from calculus, algebra, and number theory. A number of

carefully chosen problems of varying difficulty are proposed at the close of each chapter, and the mathematics are slowly and carefully developed, in order to make self-study easier. The author treats the classic topics of Markov chain theory, both in discrete time and continuous time, as well as the connected topics such as finite Gibbs fields, nonhomogeneous Markov chains, discrete- time regenerative processes, Monte Carlo simulation, simulated annealing, and queuing theory. The result is an up-to-date textbook on stochastic processes. Students and researchers in operations research and electrical engineering, as well as in physics and biology, will find it very accessible and relevant.