

The book was found

Stochastic Processes With Applications (Classics In Applied Mathematics)



Synopsis

This book develops systematically and rigorously, yet in an expository and lively manner, the evolution of general random processes and their large time properties such as transience, recurrence, and convergence to steady states. The emphasis is on the most important classes of these processes from the viewpoint of theory as well as applications, namely, Markov processes. The book features very broad coverage of the most applicable aspects of stochastic processes, including sufficient material for self-contained courses on random walk in one and multiple dimensions; Markov chains in discrete and continuous times, including birth-death processes; Brownian motion and diffusions; stochastic optimization; and stochastic differential equations. Most results are presented with complete proofs, while some very technical matters are relegated to a Theoretical Complements section at the end of each chapter in order not to impede the flow of the material. Chapter Applications, as well as numerous extensively worked examples, illustrate important applications of the subject to various fields of science, engineering, economics, and applied mathematics. The essentials of measure theoretic probability are included in an appendix to complete some of the more technical aspects of the text. Audience: This book can be used for a number of different courses for graduate students of mathematics, statistics, economics, engineering, and other fields who have some background in probability and analysis. It is also intended as a reference for researchers and professionals in many areas of science and technology whose work involves the application of probability. Contents: Preface to the Classics Edition; Preface; Sample Course Outline; Chapter I: Random Walk and Brownian Motion; Chapter II: Discrete-Parameter Markov Chains; Chapter III: Birth Death Markov Chains; Chapter IV: Continuous-Parameter Markov Chains; Chapter V: Brownian Motion and Diffusions; Chapter VI: Dynamic Programming and Stochastic Optimization; Chapter VII: An Introduction to Stochastic Differential Equations; Chapter 0: A Probability and Measure Theory Overview; Author Index; Subject Index; Errata.

Book Information

Series: Classics in Applied Mathematics

Paperback: 694 pages

Publisher: Society for Industrial & Applied; Siam Classics ed. edition (August 5, 2009)

Language: English

ISBN-10: 0898716896

ISBN-13: 978-0898716894

Product Dimensions: 6.8 x 1.3 x 9.7 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,292,744 in Books (See Top 100 in Books) #116 in Books > Science & Math > Mathematics > Applied > Stochastic Modeling #3435 in Books > Textbooks > Science & Mathematics > Mathematics > Statistics #5043 in Books > Science & Math > Mathematics > Applied > Probability & Statistics

Customer Reviews

This may be the best all-around treatment [of stochastic processes] for use by graduate students with varied backgrounds but with some mathematical ambitions. --William G. Faris, University of Arizona The book is remarkably comprehensive. The additional notes at the end of the chapters contain a fund of information. --Richard F. Gundy, Rutgers University

A very broad coverage of the most applicable aspects of stochastic processes. The emphasis is on the most important classes of these processes from the viewpoint of theory as well as applications, namely, Markov processes. It is for graduate students, but will also be useful to professionals as a reference.

[Download to continue reading...](#)

Stochastic Processes With Applications (Classics in Applied Mathematics) Continuous-time

Stochastic Control and Optimization with Financial Applications (Stochastic Modelling and Applied Probability) Advanced Mathematics for Engineers With Applications in Stochastic Processes

(Mathematics Research Developments) Stochastic Simulation: Algorithms and Analysis (Stochastic Modelling and Applied Probability, No. 57) (No. 100) Multidimensional Stochastic Processes as

Rough Paths: Theory and Applications (Cambridge Studies in Advanced Mathematics) Stationary and Related Stochastic Processes: Sample Function Properties and Their Applications (Dover Books on Mathematics)

Differential Equations and Their Applications: An Introduction to Applied Mathematics (Texts in Applied Mathematics) (v. 11) Applied Probability and Stochastic Processes

Introduction to Stochastic Processes (Dover Books on Mathematics) Stochastic Processes (Dover Books on Mathematics) How to Gamble If You Must: Inequalities for Stochastic Processes (Dover Books on Mathematics)

Stochastic Processes: Theory for Applications Stochastic Models,

Information Theory, and Lie Groups, Volume 2: Analytic Methods and Modern Applications (Applied and Numerical Harmonic Analysis) Principles of Mathematical Analysis (International Series in Pure

and Applied Mathematics) (International Series in Pure & Applied Mathematics) Introduction to the Foundations of Applied Mathematics (Texts in Applied Mathematics) Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics (Contemporary Mathematics) Stochastic Processes Fundamentals of Probability, with Stochastic Processes (3rd Edition) Probability, Statistics, and Stochastic Processes Essentials of Stochastic Processes (Springer Texts in Statistics)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)