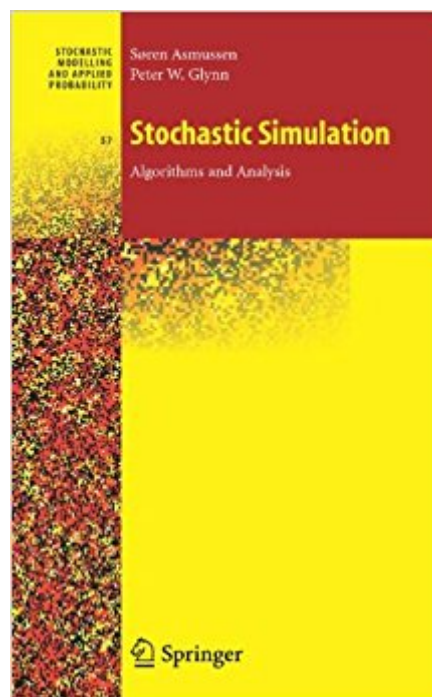The book was found

Stochastic Simulation: Algorithms And Analysis (Stochastic Modelling And Applied Probability, No. 57) (No. 100)

Synopsis

Sampling-based computational methods have become a fundamental part of the numerical toolset of practitioners and researchers across an enormous number of different applied domains and academic disciplines. This book provides a broad treatment of such sampling-based methods, as well as accompanying mathematical analysis of the convergence properties of the methods discussed. The reach of the ideas is illustrated by discussing a wide range of applications and the models that have found wide usage. The first half of the book focuses on general methods; the second half discusses model-specific algorithms. Exercises and illustrations are included.

Book Information

Hardcover: 476 pages

Publisher: Springer; 2007 edition (July 27, 2007)

Language: English

ISBN-10: 038730679X

ISBN-13: 978-0387306797

Product Dimensions: 6.1 x 1.1 x 9.2 inches

Shipping Weight: 1.4 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars   4 customer reviews

Best Sellers Rank: #667,885 in Books (See Top 100 in Books)   #99 inÃ Â Books > Science & Math > Mathematics > Applied > Linear Programming   #327 inÃ Â Books > Business & Money > Processes & Infrastructure > Operations Research   #427 inÃ Â Books > Textbooks > Engineering > Industrial Engineering

Customer Reviews

From the reviews: "The adequate statistical simulation of random quantities is one of the challenges of this century. Therefore, sampling-based computational methods have become a fundamental part of the numerical toolset of both practitioners and researchers Ã¢â ¬Â| . This book provides a descriptive treatment of a variety of such sampling-based methods. Some steps to the mathematical analysis of their convergence properties and diverse applications are sketched as well. Ã¢â ¬Â| this book is of potential interest to many researchers, students and instructors." (Henri Schurz, Zentralblatt MATH, Vol. 1126 (3), 2008) "This is a very interesting book for all who are interested in stochastic simulations. Ã¢â ¬Â| the book is designed as a potential teaching and learning tool for use in a wide variety of courses. Ã¢â ¬Â| it is a book that should be on the bookshelf of everybody who is seriously interested in stochastic simulations." (EMS Newsletter,

September, 2008) "The present book provides a broad treatment of sampling-based computational methods, as well as accompanying mathematical analysis of the convergence properties of these methods for a wide range of stochastic application problems. Ã¢â ¬Â| A set of exercises Ã¢â ¬Â| is also given at the end of each chapter. This book will be a reference of great value for researchers in probability, statistics, operations research, economics, finance, and engineering Ã¢â ¬Â| . It would also be perfect as a textbook for graduate seminars or courses in stochastic simulation." (Mou-Hsiung Chang, Siam Review, Vol. 51 (1), 2009) "This book is intended to provide a broad treatment of the basic ideas and algorithms associated with sampling-based methods, often referred to as Monte Carlo algorithms or stochastic simulation. Ã¢â ¬Â| the book will be very useful to students and researchers from a wide range of disciplines." (John P. Lehoczky, Mathematical Reviews, Issue 2009 c) "Stochastic Simulation, written by two prominent researchers in applied probability, is an outgrowth of that maturation. The authorsÃ¢â ¬â„¢ goal is not to tell the reader everything known about simulation, nor is it to give a collection of recipes, but rather to provide insight into analyzing problems via simulation. Ã¢â ¬Â| The book would make an excellent text for a graduate course in simulation, especially in a mathematical sciences department." (Peter C. Kiessler, Journal of the American Statistical Association, Vol. 104 (486), June, 2009)

Sampling-based computational methods have become a fundamental part of the numerical toolset of practitioners and researchers across an enormous number of different applied domains and academic disciplines. This book provides a broad treatment of such sampling-based methods, as well as accompanying mathematical analysis of the convergence properties of the methods discussed. The reach of the ideas is illustrated by discussing a wide range of applications and the models that have found wide usage. The first half of the book focuses on general methods, whereas the second half discusses model-specific algorithms. Given the wide range of examples, exercises and applications students, practitioners and researchers in probability, statistics, operations research, economics, finance, engineering as well as biology and chemistry and physics will find the book of value. SÃƒÂ¸ren Asmussen is a professor of Applied Probability at Aarhus University, Denmark and Peter Glynn is the Thomas Ford professor of Engineering at Stanford University.

This book is definitely one of the best if you want to gain an in-depth understanding of Statistical Computing/Monte Carlo method. The authors are among the most famous authorities in this area(actually much of the material introduced comes from their own papers). Some mathematical/statistical sophistication is needed to fully understand the material. I would

recommend it to those who specialize in statistics, applied probability, operations research, etc.

I've never bothered to review any book on prior to this note, but I felt the book was unduly trashed in the "grad student" review and I wanted to even the score a bit. I purchased the book and have used it along side Glasserman's (very useful) book for financial applications. I found the book to be a nice companion to the Glasserman book, generally going into greater mathematical detail.

purchased them for my son when he was doing his ph,d

The introduction states the book will be useful for "readers with backgrounds ranging from an exposure to introductory probability to a much more advanced knowledge of the area." Try reading the first two pages with an "exposure" to "introductory" probability. Not likely. The book then goes on to list 2 full pages of notation explanations. This is completely separate from the ad-hoc notation explanations that appear in the text. It goes without saying that the notation the authors chose is confusing, tedious and distracting. The book is basically a horribly-explained tutorial on simulation experiment design. Most of all, it's undeniably dense, and the material is made much more complicated than necessary.

Stochastic Simulation: Algorithms and Analysis (Stochastic Modelling and Applied Probability, No. 57) (No. 100) Continuous-time Stochastic Control and Optimization with Financial Applications (Stochastic Modelling and Applied Probability) Applied Probability and Stochastic Processes Clay Modelling for Beginners: An Essential Guide to Getting Started in the Art of Sculpting Clay ~ (Clay Modelling | Clay Modeling | Clay Art) Probability and Computing: Randomization and Probabilistic Techniques in Algorithms and Data Analysis Analytics: Business Intelligence, Algorithms and Statistical Analysis (Predictive Analytics, Data Visualization, Data Analytics, Business Analytics, Decision Analysis, Big Data, Statistical Analysis) Analytics: Data Science, Data Analysis and Predictive Analytics for Business (Algorithms, Business Intelligence, Statistical Analysis, Decision Analysis, Business Analytics, Data Mining, Big Data) Dynamic Prediction in Clinical Survival Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) Stochastic Models, Information Theory, and Lie Groups, Volume 1: Classical Results and Geometric Methods (Applied and Numerical Harmonic Analysis) Stochastic Models, Information Theory, and Lie Groups, Volume 2: Analytic Methods and Modern Applications (Applied and Numerical Harmonic Analysis) Atmospheric and Space Flight Dynamics: Modeling and Simulation with MATLABÃ Â® and

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