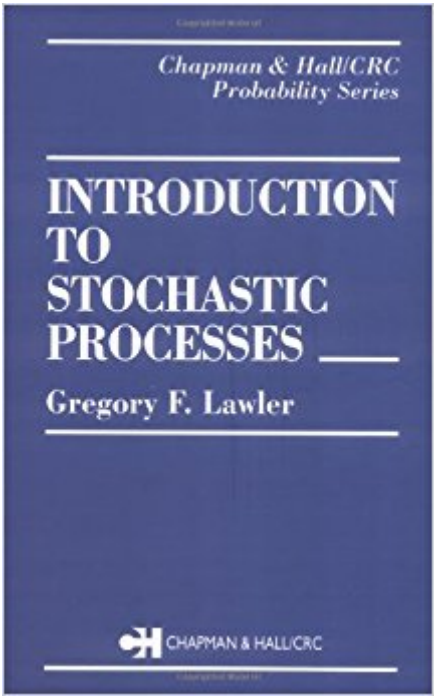
Introduction To Stochastic Processes (Chapman & Hall/CRC Probability Series)



Synopsis

This concise, informal introduction to stochastic processes evolving with time was designed to meet the needs of graduate students not only in mathematics and statistics, but in the many fields in which the concepts presented are important, including computer science, economics, business, biological science, psychology, and engineering. With emphasis on fundamental mathematical ideas rather than proofs or detailed applications, the treatment introduces the following topics:Markov chains, with focus on the relationship between the convergence to equilibrium and the size of the eigenvalues of the stochastic matrixInfinite state space, including the ideas of transience, null recurrence and positive recurrenceThe three main types of continual time Markov chains and optimal stopping of Markov chainsMartingales, including conditional expectation, the optional sampling theorem, and the martingale convergence theoremRenewal process and reversible Markov chainsBrownian motion, both multidimensional and one-dimensionalIntroduction to Stochastic Processes is ideal for a first course in stochastic processes without measure theory, requiring only a calculus-based undergraduate probability course and a course in linear algebra.

Book Information

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Customer Reviews

"Well-chosen examples and interesting exercises make this text a good choice for a first course in stochastic processes for a broad class of students." - Journal of the American Statistical Association

Good book but hard for those without much math background.I could have understood things better if I put more time.Definitely, complicated if your math is not so good.

This is a great textbook for advanced math students.

When I was a grad student in the early 90's, the only available texts for this subject were Hoel, Port and Stone's third volume and Phillip Protter's book. The problem was that Hoel, Port and Stone was too intuitive, and Prottor was too formal.This book is just right. The examples are well thought out, and the presentation of the subject matter is effecient without being sparse. The segue from the intuitive concept to the formal definitions / proofs is almost seemless.I would recommend this book to anyone who wishes to learn about stochastic processes. Glad I found it!

great

Thsi text is too complicated. I wish I had bought a better book. But unfortunately there are not many good books on this topic.

Content is good. There are an awful lot of obvious typos. Might discourage somebody who isn't particularly confident.

This is one of the best books I've ever read in Stochastic Processes. Prof. Lawler presents Markov Chains (Finite, Countable and Continuous), Optimal Stopping, Martingales and Brownian motion concisely and straight to the gist of the subject. The exercises set at the end of each chapter fall into 2 categories: for people who read the book well and actually understand what has been stated, and to people who have a thorough understanding of solid probability theory (harder exercises).Furthermore, it is such a small book that makes me wonder how so many information could fit in there.The only small drawback is the few typos which can be picked up easily by the diligent reader.In total is an extremelly good book, especially for people that haven't had an extensive contact w/ the subject before (or even measure theory), without losing any point of precision whatsoever.

The book is great is perfectly goes with the Ross Probability Models book, but unlike the Ross book it has nice readable examples and it's not the hard on the proofs, which I like and it has very doable

nice simple problems and a lot of examples that only bad side is that there are no solution. So it's a great supplementary book to use in any grad class that requires stochastic processes queuing theory or Brownian motion to be explained nicely.

Introduction to Stochastic Processes (Chapman & Hall/CRC Probability Series) Modeling and Analysis of Stochastic Systems, Second Edition (Chapman & Hall/CRC Texts in Statistical Science) Modeling and Analysis of Stochastic Systems, Third Edition (Chapman & Hall/CRC Texts in Statistical Science) Generalized Linear Models, Second Edition (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) Dynamic Prediction in Clinical Survival Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) 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) Introduction to Scientific Programming and Simulation Using R (Chapman & Hall/CRC The R Series) Introduction to Scientific Programming and Simulation Using R, Second Edition (Chapman & Hall/CRC The R Series) Introduction to Modern Cryptography, Second Edition (Chapman & Hall/CRC Cryptography and Network Security Series) A Concise Introduction to Pure Mathematics, Fourth Edition (Chapman Hall/CRC Mathematics Series) An Introduction to Systems Biology: Design Principles of Biological Circuits (Chapman & Hall/CRC Mathematical and Computational Biology) Design of Experiments: An Introduction Based on Linear Models (Chapman & Hall/CRC Texts in Statistical Science) Introduction to Computational Biology: Maps, Sequences and Genomes (Chapman & Hall/CRC Interdisciplinary Statistics) Introduction to High Performance Computing for Scientists and Engineers (Chapman & Hall/CRC Computational Science) Measure and Integral: An Introduction to Real Analysis, Second Edition (Chapman & Hall/CRC Pure and Applied Mathematics) A Concise Introduction to Pure Mathematics (Chapman Hall/Crc Mathematics) Introduction to Set Theory, Third Edition, Revised and Expanded (Chapman & Hall/CRC Pure and Applied Mathematics) Introduction to Proteins: Structure, Function, and Motion (Chapman & Hall/CRC Mathematical and Computational Biology) Algorithms in Bioinformatics: A Practical Introduction (Chapman & Hall/CRC Mathematical and Computational Biology)