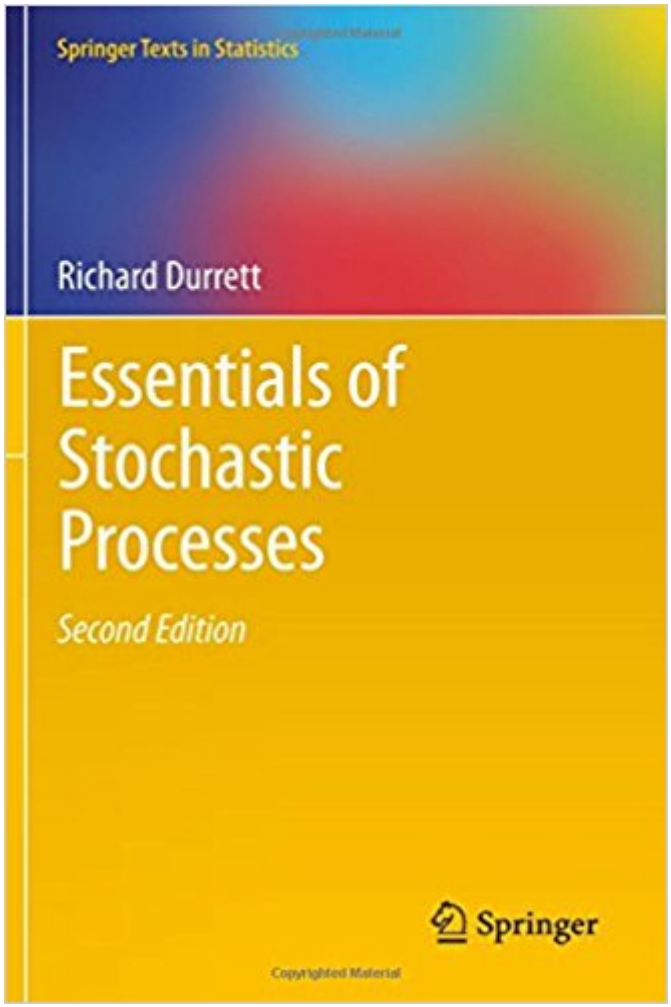
Essentials Of Stochastic Processes (Springer Texts In Statistics)



Synopsis

This book is for a first course in stochastic processes taken by undergraduates or masterÃ¢â ¬â„¢s students who have had a course in probability theory. It covers Markov chains in discrete and continuous time, Poisson processes, renewal processes, martingales, and mathematical finance. One can only learn a subject by seeing it in action, so there are a large number of examples and more than 300 carefully chosen exercises to deepen the readerÃ¢â ¬â„¢s understandingÃ Â The book has undergone a thorough revision since the first edition. There are many new examples and problems with solutions that use the TI-83 to eliminate the tedious details of solving linear equations by hand. Some material that was too advanced for the level has been eliminated while the treatment of other topics useful for applications has been expanded. Ã Â In addition, the ordering of topics has been improved. For example, the difficult subject of martingales is delayed until its usefulness can be seen in the treatment of mathematical finance.Ã Â Richard Durrett received his Ph.D. in Operations Research from Stanford in 1976. He taught at the UCLA math department for nine years and at Cornell for twenty-five before moving to Duke in 2010. He is the author of 8 books and almost 200 journal articles, and has supervised more that 40 Ph.D. students. Most of his current research concerns the applications of probability to biology: ecology, genetics, and most recently cancer.

Book Information

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Customer Reviews

From the reviews of the second edition:Ã¢â ¬Å“The book consists of six chapters and 265 pages.

Ã¢â ¬Â¦ Each chapter has a chapter summary before the exercises. The chapter summary restates the theorems of each section and adds short new commentary. Ã¢â ¬Â¦ With its many examples and applications, chosen from the broad experience of the author, this book is an excellent text for a course in applied probability.Ã¢â ¬Â• (Myron Hlynka, Mathematical Reviews, February, 2014)Ã¢â ¬Å“This is the second edition of introductory text book on stochastic processes by Richard Durrett. Ã¢â ¬Â¦ The new edition contains many new examples and problems. The chapters have been reorganized to facilitate the learning process. Ã¢â ¬Â¦ The new edition makes the topic of stochastic processes even more accessible for undergraduate students and people coming from fields of applications.Ã¢â ¬Â• (H. M. Mai, Zentralblatt MATH, Vol. 1244, 2012)

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Good book but has some typos. The book by Ross is more detailed.

It is very goodÃƒÂ Ã Â Ã Â• My professor recommended it to us!

Good quality.

A textbook’s value depends on its authority. Authority depends on trust. Sloppy editing breaks that

trust. The errors make proofs nonsense.When you’re a student learning this material for the first time, not yet equipped with measure theory and other tools, the ability to seek out and understand other sources is limited. Confirming corrections to Durrett’s work has taken me dozens of hours in a busy academic session.Late, late in game I found David Levin’s University of Oregon website and "Markov Chains and Mixing Times". I found the book eminently accessible given my level of knowledge. A friend also suggested Sheldon Ross’s Introduction to Probability Models as a reliable introductory text.I give this second of edition two stars because, when not sabotaging himself with typos, the author offers some crisp, clear proofs. At times, he commits the mortal sin, for introductory texts, of gaps in logic painted over with phrases like "with some work" without any hint as to direction. At times, variables, constants and indices appear, disappear of change name mid-proof without explanation. But, the book has promise, which a bit of care or professionalism in an editor might have realized.Recommendation: If the book is assigned as a textbook for a course, consult as a secondary source, download the largely incomplete errata on the book’s Springer product page (search ’springer errata durrett essentials’ and look for the ’Errata’ link) and approach with a skeptical eye.Recommendation / Plea to the Author: Give the book to an undergraduate or two and a grad student. Have them comb through the book and provide a full and complete errata on your page or on the Springer page. It’s never too late to correct a failure like this.

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Not bad.It is geared toward applied math.It also contains some practical examples to show the

applications.It contains many proof, but most of them are not rigorous (derivation-style)I found that Durett's book is easier to read than "Probability Model" by Ross,because Durett presents the same material in compact manner (less distraction)

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