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Durrett, Richard

Essentials of stochastic processes. 2nd ed.

Springer Texts in Statistics. New York, NY: Springer (ISBN 978-1-4614-3614-0/hbk; 978-1-4614-3615-7/ebook). x, 265 p. (2012).

This is the second edition of introductory text book on stochastic processes by Richard Durrett. A detailed discussion of the book can be found in the review of the first edition [*R. Durrett*, Essentials of stochastic processes. Springer Texts in Statistics. New York, NY: Springer (2012; Zbl 0940.60004; ME pre01350309)]. The new edition contains many new examples and problems. The chapters have been reorganized to facilitate the learning process. The part in continuous time Markov chains contains new sections on exit distributions and hitting times. In the chapter on mathematical finance a treatment of American options and the capital asset pricing model can be found now. The new edition makes the topic of stochastic processes even more accessible for undergraduate students and people coming from fields of applications. *H. M. Mai (Berlin)*

Classification: K65

Keywords: Markov chains; Poisson process; renewal processes; martingales; Black-Scholes formula; American options

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