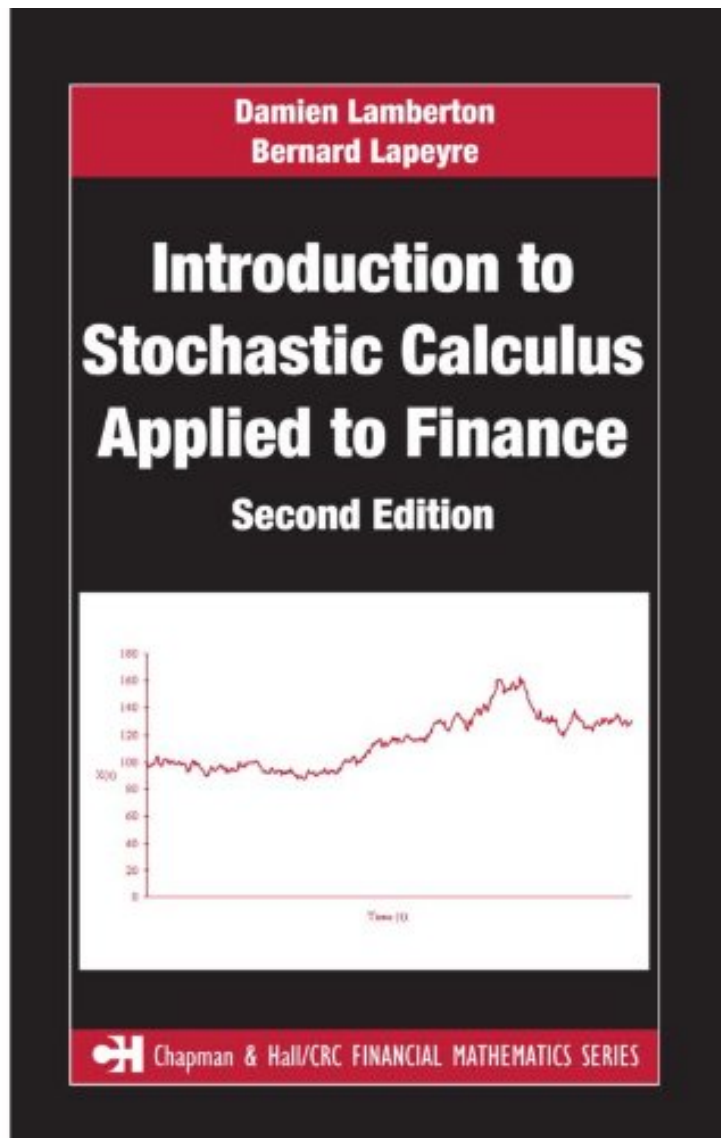


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Introduction to Stochastic Calculus Applied to Finance, Second Edition (Chapman and Hall/CRC Financial Mathematics Series)

Damien Lambertson, Bernard Lapeyre
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Damien Lambertson, Bernard Lapeyre : Introduction to Stochastic Calculus Applied to Finance, Second Edition (Chapman and Hall/CRC Financial Mathematics Series) before purchasing it in order to gage whether or not it would be worth my time, and all praised Introduction to Stochastic Calculus Applied to Finance, Second Edition (Chapman and Hall/CRC Financial Mathematics Series):

8 of 9 people found the following review helpful. A very efficient book for the right audienceBy BachelierIntroduction

to Stochastic Calculus Applied to Finance, translated from French, is a widely used classic graduate textbook on mathematical finance and is a standard required text in France for DEA and PhD programs in the field. Most folks familiar with Steve Shreve's Stochastic Calculus Models for Finance will be surprised at its brevity, for this work is aimed at different audiences. Whereas Shreve's work is aimed at mathematicians and physicists who are coming to finance, and building on the commonalities of understandings of time series and data sets and signals, Lamberton Lapeyre's work is aimed at an audience of mathematically trained engineers, who look at data sets as information for solving problems. Shreve's work, is, therefore, to help people come up with mathematical proofs, and LL's is to help people solve problems. Both probabilistic and partial differential equation approaches are covered, so both those from electrical and telecommunication engineering and mechanical engineering will be satisfied and on familiar ground. Numerical and algorithmic methods are also covered for those with systems analysis and operations management backgrounds. This book, however, is decidedly for those who have had significant mathematical training. Whereas with Hull, Wilmott, Neftci, or Joshi you can play around with their approaches almost instantly in Excel or other programming tools (VBA, C, etc.), Lamberton and Lapeyre's work is for those who think out loud with a white board and others do the dirty work of coding. This work lacks specific examples, data sets, etc. Which makes it difficult to place. Its clarity and brevity are welcome, and it expands the knowledge beyond Hull of those who are not trained in math and came up the practical coding grunt side of quantfin. But it also is not a complete theoretical treatment for the first string math and theory set. In short, the book is what it is: a short primer on a large area of mathematics in finance for those well-trained in a variety of engineering and applied mathematical subjects. In other words, this book is for the French, because all the best French students are always Engineers first and something else afterwards. If you also happen to be trained as an engineer and find Hull, Wilmott, Joshi Neftci too easy, and Shreve too hard, then this is the book for you. Or if you are like me, and you've banged your head against this stuff for years just through the happenstance of your career and want to see how a mathematician writes about your gritty world, this is a great book for shedding light in areas filled with cobwebs.

0 of 0 people found the following review helpful. Compact read By T. This is a compact, informative, and good book. If you know what you are looking for, and have prior knowledge of stochastic calculus then this is a good (but expensive) book. 28 of 29 people found the following review helpful. A good INTRODUCTION to ONE part of finance By Dr. Christof Luchsinger (cl@luchsinger-mathematics.ch) As precisely mentioned in the title, this book is only an introduction; and it is not an introduction to finance, but to stochastic calculus applied to finance. The buyer of this book should therefore be aware of three facts: 1. After having read this book you are not (yet) an expert on stochastic calculus applied to finance. You have to continue with other books mentioned in Lamberton/Lapeyre. But this book is an excellent framework that leads you to many important results, omitting proofs that are only technical. 2. Mathematics is used in many other areas of Finance too (Time Series Analysis for example). What is treated in this book is only a very small part of Finance Mathematics, but an important one. 3. One should read another book with more economic background at the same time. The authors begin with discrete-time models to present many important ideas in a (mathematically) simple environment before treating the continuous models. Introduction to stochastic integration and stochastic differential equations is brief. Stochastic integration is only with respect to the standard brownian motion. After having reached the Black-Scholes model and American options, the approach via partial differential equations is treated, followed by interest rate models, models with jumps and, a good idea: a chapter on simulations. The book has very few mistakes, no important ones, only a strange layout failure on pages 6 to 7. So I highly recommend this book as an INTRODUCTION to ONE important part of finance mathematics if read in combination with another book with more economic background. It can especially be used for upper graduate student seminars or as a basis for lecture courses.

Since the publication of the first edition of this book, the area of mathematical finance has grown rapidly, with financial analysts using more sophisticated mathematical concepts, such as stochastic integration, to describe the behavior of markets and to derive computing methods. Maintaining the lucid style of its popular predecessor, Introduction to Stochastic Calculus Applied to Finance, Second Edition incorporates some of these new techniques and concepts to provide an accessible, up-to-date initiation to the field. New to the Second Edition Complements on discrete models, including Rogers' approach to the fundamental theorem of asset pricing and super-replication in incomplete markets Discussions on local volatility, Dupire's formula, the change of numeraire techniques, forward measures, and the forward Libor model A new chapter on credit risk modeling An extension of the chapter on simulation with numerical experiments that illustrate variance reduction techniques and hedging strategies Additional exercises and problems Providing all of the necessary stochastic calculus theory, the authors cover many key finance topics, including martingales, arbitrage, option pricing, American and European options, the Black-Scholes model, optimal hedging, and the computer simulation of financial models. They succeed in producing a solid introduction to stochastic approaches used in the financial world.

The second edition of this book provides a concise and accessible introduction to the probabilistic techniques needed to understand the most widely used financial models. This edition incorporates many new techniques and concepts to

be used to describe the behavior of financial markets. ... the solutions obtained using SciLab for computer experiments are available at <http://cermics.enpc.fr/~bl/scilab/> These experiments were well designed by the authors based on their teaching and research experience and were found to be effective in communicating these concepts and ideas and enhancing the understanding of readers. ... a solid introduction to stochastic approaches used in the financial world. The authors cover many key finance topics The book can be used as a reference text by researchers and graduate students in financial mathematics. It also is ideal reading material for practicing financial analysts and consultants using mathematical models for finance. *Technometrics*, May 2009, Vol. 51, No. 2
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