The Mathematics of Derivatives Securities with Applications in MATLAB (The Wiley Finance Series)

Mario Cerrato
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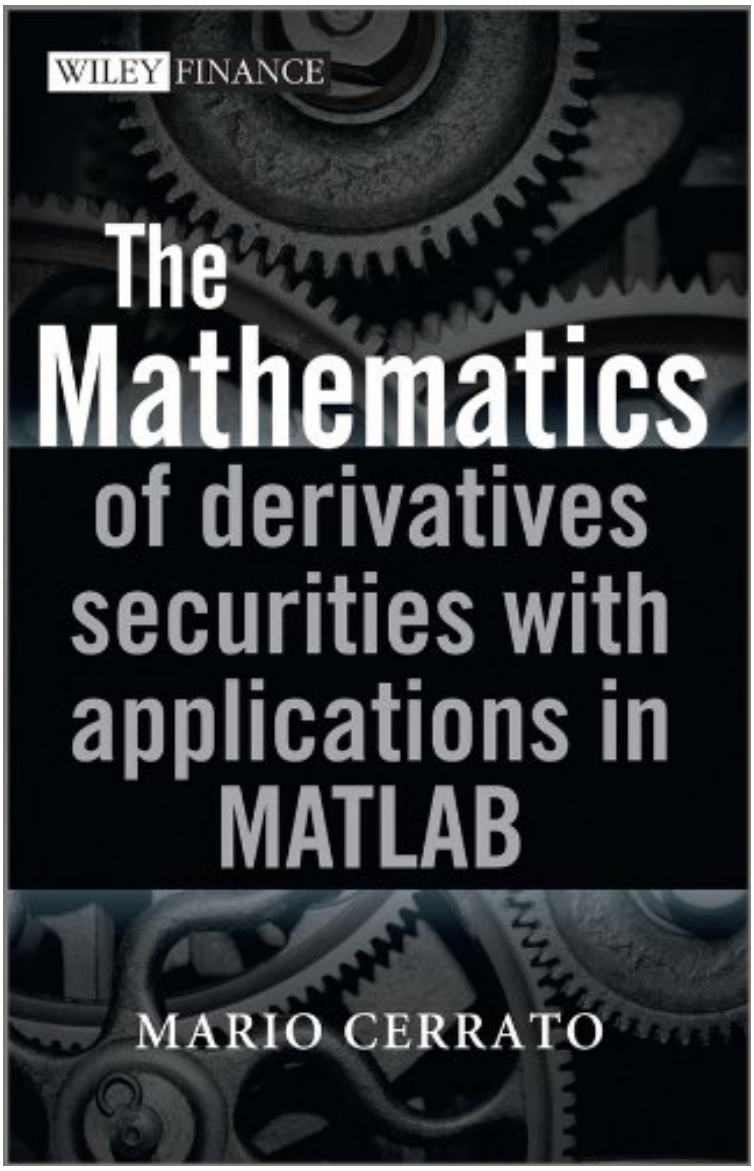

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usefull0 of 0 people found the following review helpful. I would highly recommend this book if you have some exposure to derivative ...By CustomerI would highly recommend this book if you have some exposure to derivative pricing and measure theory. The author does a very good job staying focused on the topic at hand, and providing just the right amount of reference material in the text. Furthermore, he includes Matlab programs at the end of some of the chapters.

Quantitative Finance is expanding rapidly. One of the aspects of the recent financial crisis is that, given the complexity of financial products, the demand for people with high numeracy skills is likely to grow and this means more recognition will be given to Quantitative Finance in existing and new course structures worldwide. Evidence has suggested that many holders of complex financial securities before the financial crisis did not have in-house experts or rely on a third-party in order to assess the risk exposure of their investments. Therefore, this experience shows the need for better understanding of risk associate with complex financial securities in the future. The Mathematics of Derivative Securities with Applications in MATLAB provides readers with an introduction to probability theory, stochastic calculus and stochastic processes, followed by discussion on the application of that knowledge to solve complex financial problems such as pricing and hedging exotic options, pricing American derivatives, pricing and hedging under stochastic volatility and an introduction to interest rates modelling. The book begins with an overview of MATLAB and the various components that will be used alongside it throughout the textbook. Following this, the first part of the book is an in depth introduction to Probability theory, Stochastic Processes and Ito Calculus and Ito Integral. This is essential to fully understand some of the mathematical concepts used in the following part of the book. The second part focuses on financial engineering and guides the reader through the fundamental theorem of asset pricing using the Black and Scholes Economy and Formula, Options Pricing through European and American style options, summaries of Exotic Options, Stochastic Volatility Models and Interest rate Modelling. Topics covered in this part are explained using MATLAB codes showing how the theoretical models are used practically. Authored from an academicrsquo;s perspective, the book discusses complex analytical issues and intricate financial instruments in a way that it is accessible to postgraduate students with or without a previous background in probability theory and finance. It is written to be the ideal primary reference book or a perfect companion to other related works. The book uses clear and detailed mathematical explanation accompanied by examples involving real case scenarios throughout and provides MATLAB codes for a variety of topics.

The book can be warmly recommended to readers who wish to learn the main methods of quantitative finance without delving into its mathematical foundations. (Zentralblatt MATH, 1 December 2012)From the Inside Flap"Excellent book aimed at graduate students in quantitative finance, especially those without a background in mathematical finance or physics. It combines finance theory with Matlab applications helping the reader to understand how theoretical models can be used in practice."mdash;Guglielmo Maria Caporale, Professor of Economics and Finance Director, Centre for Empirical Finance, Brunel University"If you do not have the background of a mathematicians or a physicist, but you wish to learn about the world of financial derivatives this is the book for you. There is no excess of math, yet the book is rigorous, and everything is there to serve a purpose, with the right balance between theory and practical application."mdash;Lucio Sarno, Professor of Finance and head of the Finance Faculty, Cass Business School"Cerrato has achieved in this book something that I, for one, did not think possible ndash; namely to bring the mathematics of pricing and hedging options and other derivatives to people without a formal background in advanced mathematics such as traders, risk managers, students and academics in the field of finance, economics, business and management. It treats in great detail subject areas of interest to students, academics and practitioner quants, from background mathematics to the central concepts of derivatives valuation through to their numerical implementation. This book will be a valuable resource for students, academic researchers, risk managers, regulators and trading rooms alike. Like Roger Federer with a tennis racket in his hand, Cerrato makes it all look easier than it is. The commitment of a student to advancing his knowledge can be judged simply by whether he or she ahs bought this book."mdash;John Crosby, Managing Director, Grizzly Bear capital/Visiting Professor of Finance, Centre for Economic and Financial Studies, Glasgow University / Invited Lecturer, MSc Mathematical Finance, Oxford Univ.About the AuthorMario Cerrato, Glasgow, Scotland is a Lecturer in Economics at the University of Glasgow, Department of Economics. He previously held posts at London Metropolitan University, Banca del Salento and Expedia Capital Management Ltd. He has been actively involved in various consultancies in the area of financial engineering over the last five years. He has published numerous articles in the area of financial econometrics and financial derivatives in international journals like the International Journal of Finance Economics, International Journal of Theoretical and Applied Finance, Computational Statistics and Data Analysis.