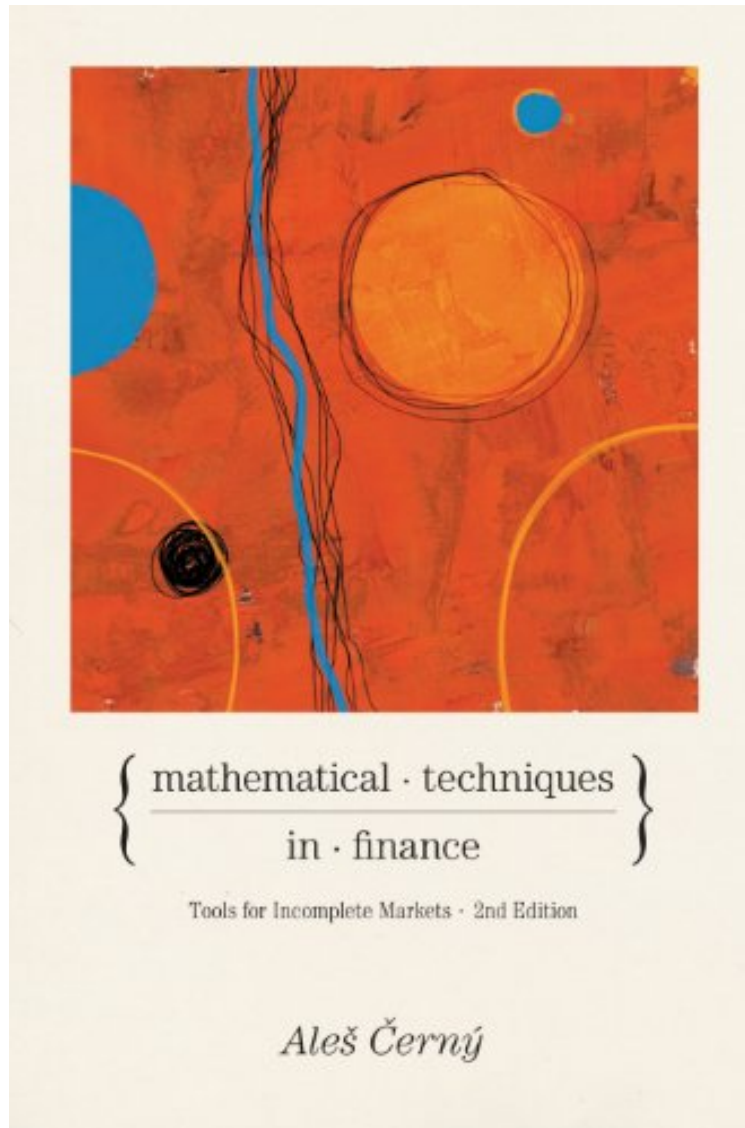


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suited for a master's level course and for practitioners. It fills the gap between undergraduate/MBA finance texts that focus on applications and Ph.D.-level texts that are in the theorem-proof style. To appreciate this book, I think the reader only needs to know calculus and a little linear algebra. The author is able to describe complex mathematical techniques in relatively easy, understandable terms. More importantly, the author highlights the important things to remember for each of the important concepts. For example, whether the absence of a Type I or Type II arbitrage is necessary for the existence of a solution when markets are complete or incomplete or which state variables play an important role in certain models. Moreover, I have read many finance books, and this text's discussion of risk-neutral pricing and continuous time finance is one of the best. Aside from providing proofs for the more important concepts, Cerny also provides many numerical examples and MATLAB code (the MATLAB programs are available on the author's website) to implement many of the examples. 7 of 7 people found the following review helpful. An excellent introduction to financial mathematics

By Aleksander Breian Hansen I had the great pleasure of attending Dr. Cerny's lectures in mathematical techniques in finance. The lectures were structured around this book and were accordingly brilliant. The book starts off gently, to great relief for those who need to cover more basic mathematics in discrete time, before moving on to continuous time and later introducing concepts such as Martingales and Brownian Motion. The book shows you how to derive such as the Black Scholes Formula, and introduces the Ito formula which is extensively used in pricing options. Importantly, the book is clearly written and 'recycles' the exercises as it progresses from simple to more complex topics. I found this to be of great use since you already have an understanding of what the exercise is all about, intuitively and 'mechanically', and you can compare the methods and more readily understand what is going on in the more complex examples. This book does not require a heavy maths background. As always, the more the better, however, you can easily make great use of this book only with an understanding of simple calculus like derivatives and integrals. A basic understanding of linear algebra will also prove beneficial. If you are looking for a book that will explain important concepts in finance, then this book is exactly what you are looking for.

Originally published in 2003, *Mathematical Techniques in Finance* has become a standard textbook for master's-level finance courses containing a significant quantitative element while also being suitable for finance PhD students. This fully revised second edition continues to offer a carefully crafted blend of numerical applications and theoretical grounding in economics, finance, and mathematics, and provides plenty of opportunities for students to practice applied mathematics and cutting-edge finance. Ales Cerny mixes tools from calculus, linear algebra, probability theory, numerical mathematics, and programming to analyze in an accessible way some of the most intriguing problems in financial economics. The textbook is the perfect hands-on introduction to asset pricing, optimal portfolio selection, risk measurement, and investment evaluation. The new edition includes the most recent research in the area of incomplete markets and unhedgeable risks, adds a chapter on finite difference methods, and thoroughly updates all bibliographic references. Eighty figures, over seventy examples, twenty-five simple ready-to-run computer programs, and several spreadsheets enhance the learning experience. All computer codes have been rewritten using MATLAB and online supplementary materials have been completely updated. A standard textbook for graduate finance courses

Introduction to asset pricing, portfolio selection, risk measurement, and investment evaluation  
Detailed examples and MATLAB codes integrated throughout the text  
Exercises and summaries of main points conclude each chapter

From the Back Cover "Ales Cerny's new edition of *Mathematical Techniques in Finance* is an excellent master's-level treatment of mathematical methods used in financial asset pricing. By updating the original edition with methods used in recent research, Cerny has once again given us an up-to-date first-class textbook treatment of the subject." --Darrell Duffie, Stanford University

About the Author Ales Cerny is Lecturer in Finance at The Business School, Imperial College London.