

<<财政工程的有限差方法>>

图书基本信息

书名：<<财政工程的有限差方法>>

13位ISBN编号：9780470858820

10位ISBN编号：0470858826

出版时间：2006-5

出版时间：John Wiley & Sons Inc

作者：Duffy, Daniel J.

页数：422

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<财政工程的有限差方法>>

内容概要

The world of quantitative finance (QF) is one of the fastest growing areas of research and its practical applications to derivatives pricing problem. Since the discovery of the famous Black-Scholes equation in the 1970's we have seen a surge in the number of models for a wide range of products such as plain and exotic options, interest rate derivatives, real options and many others. Gone are the days when it was possible to price these derivatives analytically. For most problems we must resort to some kind of approximate method.

<<财政工程的有限差方法>>

书籍目录

0 Goals of this Book and Global Overview. PART I THE CONTINUOUS THEORY OF PARTIAL DIFFERENTIAL EQUATIONS. 1 An Introduction to Ordinary Differential Equations. 2 An Introduction to Partial Differential Equations. 3 Second-Order Parabolic Differential Equations. 4 An Introduction to the Heat Equation in One Dimension. 5 An Introduction to the Method of Characteristics. PART II FINITE DIFFERENCE METHODS: THE FUNDAMENTALS. 6 An Introduction to the Finite Difference Method. 7 An Introduction to the Method of Lines. 8 General Theory of the Finite Difference Method. 9 Finite Difference Schemes for First-Order Partial Differential Equations. 10 FDM for the One-Dimensional Convection – Diffusion Equation. 11 Exponentially Fitted Finite Difference Schemes. PART III APPLYING FDM TO ONE-FACTOR INSTRUMENT PRICING. 12 Exact Solutions and Explicit Finite Difference Method for One-Factor Models. 13 An Introduction to the Trinomial Method. 14 Exponentially Fitted Difference Schemes for Barrier Options. 15 Advanced Issues in Barrier and Lookback Option Modelling. 16 The Meshless (Meshfree) Method in Financial Engineering. 17 Extending the Black – Scholes Model: Jump Processes. PART IV FDM FOR MULTIDIMENSIONAL PROBLEMS. 18 Finite Difference Schemes for Multidimensional Problems. 19 An Introduction to Alternating Direction Implicit and Splitting Methods. 20 Advanced Operator Splitting Methods: Fractional Steps. 21 Modern Splitting Methods. PART V APPLYING FDM TO MULTI-FACTOR INSTRUMENT PRICING. 22 Options with Stochastic Volatility: The Heston Model. 23 Finite Difference Methods for Asian Options and Other ‘ Mixed ’ Problems. 24 Multi-Asset Options. 25 Finite Difference Methods for Fixed-Income Problems. PART VI FREE AND MOVING BOUNDARY VALUE PROBLEMS. 26 Background to Free and Moving Boundary Value Problems. 27 Numerical Methods for Free Boundary Value Problems: Front-Fixing Methods. 28 Viscosity Solutions and Penalty Methods for American Option Problems. 29 Variational Formulation of American Option Problems. PART VII DESIGN AND IMPLEMENTATION IN C++. 30 Finding the Appropriate Finite Difference Schemes for your Financial Engineering Problem. 31 Design and Implementation of First-Order Problems. 32 Moving to Black – Scholes. 33 C++ Class Hierarchies for One-Factor and Two-Factor Payoffs. Appendices. A1 An introduction to integral and partial integro-differential equations. A2 An introduction to the finite element method. Bibliography. Index.

<<财政工程的有限差方法>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>