1. Record Nr. UNINA9911019439303321 Autore Fries Christian <1970-> Titolo Mathematical finance: theory, modeling, implementation / / Christian Fries Hoboken, N.J., : Wiley-Interscience, c2007 Pubbl/distr/stampa **ISBN** 9786610974344 9781280974342 1280974346 9780470179789 0470179783 9780470179772 0470179775 1 online resource (544 p.) Descrizione fisica Disciplina 332.601/5195 Soggetti Derivative securities - Prices - Mathematical models Securities - Mathematical models Investments - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references (p. 503-510) and index. Nota di bibliografia Nota di contenuto Mathematical Finance: Theory, Modeling, Implementation; Contents; 1 Introduction; 1.1 Theory, Modeling, and Implementation; 1.2 Interest Rate Models and Interest Rate Derivatives; 1.3 About This Book; 1.3.1 How to Read This Book: 1.3.2 Abridged Versions: 1.3.3 Special Sections; 1.3.4 Notation; 1.3.5 Feedback; 1.3.6 Resources; I Foundations; 2 Foundations; 2.1 Probability Theory; 2.2 Stochastic Processes; 2.3 Filtration; 2.4 Brownian Motion; 2.5 Wiener Measure, Canonical Setup: 2.6 Ito Calculus: 2.6.1 Ito Integral: 2.6.2 Ito Process: 2.6.3 Ito Lemma and Product Rule 2.7 Brownian Motion with Instantaneous Correlation 2.8 Martingales: 2.8.1 Martingale Representation Theorem; 2.9 Change of Measure; 2.10 Stochastic Integration; 2.11 Partial Differential Equations (PDEs); 2.11.1 Feynman-Kac Theorem; 2.12 List of Symbols; 3 Replication; 3.1

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Sommario/riassunto

A balanced introduction to the theoretical foundations and real-world applications of mathematical finance The ever-growing use of derivative products makes it essential for financial industry practitioners to have a solid understanding of derivative pricing. To cope with the growing complexity, narrowing margins, and shortening life-cycle of the individual derivative product, an efficient, yet modular, implementation of the pricing algorithms is necessary. Mathematical Finance is the first book to harmonize the theory, modeling, and implementation of today's most prevalent pri