Record Nr. UNINA9910955130303321 Autore Cerny Ales <1971-> Titolo Mathematical techniques in finance: tools for incomplete markets // Ales Cerny Princeton [N.J.],: Princeton University Press, 2009 Pubbl/distr/stampa **ISBN** 9786612608148 9781282608146 1282608142 9781400831487 1400831482 9780691141213 0691141215 Edizione [2nd ed.] Descrizione fisica 1 online resource (412 p.) 332.015195 Disciplina Soggetti Finance - Mathematical models Risk management - Mathematical models Derivative securities - Mathematics Pricing - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references and index. pt. 1. The simplest model of financial markets -- pt. 2. Arbitrage and Nota di contenuto pricing in the one-period model -- pt. 3. Risk and return in the oneperiod model -- pt. 4. Numerical techniques for optimal portfolio selection in incomplete markets -- pt. 5. Pricing in dynamically complete markets -- pt. 6. Towards a continuous time -- pt. 7. Fast fourier transform. Sommario/riassunto 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 Cerný 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