
Contents

Part I Portfolio Optimization and Option Pricing

Threshold Accepting Approach to Improve Bound-based Approximations for Portfolio Optimization <i>Daniel Kuhn, Panos Parpas, Berç Rustem</i>	3
Risk Preferences and Loss Aversion in Portfolio Optimization <i>Dietmar Maringer</i>	27
Generalized Extreme Value Distribution and Extreme Economic Value at Risk (EE-VaR) <i>Amadeo Alentorn, Sheri Markose</i>	47
Portfolio Optimization under VaR Constraints Based on Dynamic Estimates of the Variance-Covariance Matrix <i>Katja Specht, Peter Winker</i>	73
Optimal Execution of Time-Constrained Portfolio Transactions <i>Farid AitSahlia, Yuan-Chyuan Sheu, Panos M. Pardalos</i>	95
Semidefinite Programming Approaches for Bounding Asian Option Prices <i>Georgios V. Dalakouras, Roy H. Kwon, Panos M. Pardalos</i>	103
The Evaluation of Discrete Barrier Options in a Path Integral Framework <i>Carl Chiarella, Nadima El-Hassan, Adam Kucera</i>	117

Part II Estimation and Classification

Robust Prediction of Beta

Marc G. Genton, Elvezio Ronchetti 147

Neural Network Modelling with Applications to Euro Exchange Rates

Michele La Rocca, Cira Perna 163

Testing Uncovered Interest Rate Parity and Term Structure Using Multivariate Threshold Cointegration

Jaya Krishnakumar, David Neto 191

Classification Using Optimization: Application to Credit Ratings of Bonds

Vladimir Bugera, Stan Uryasev, Grigory Zrazhevsky 211

Evolving Decision Rules to Discover Patterns in Financial Data Sets

Alma Lilia García-Almanza, Edward P.K. Tsang, Edgar Galván-López . 239

Part III Banking, Risk and Macroeconomic Modelling

A Banking Firm Model: The Role of Market, Liquidity and Credit Risks

Brenda González-Hermosillo, Jenny X. Li 259

Identification of Critical Nodes and Links in Financial Networks with Intermediation and Electronic Transactions

Anna Nagurney, Qiang Qiang 273

An Analysis of Settlement Risk Contagion in Alternative Securities Settlement Architectures

Giulia Iori, Christophe Deissenberg 299

Integrated Risk Management: Risk Aggregation and Allocation Using Intelligent Systems

Andreas Mitschele, Frank Schlottmann, Detlef Seese 317

A Stochastic Monetary Policy Interest Rate Model

Claudio Albanese, Manlio Trovato 343

Duali: Software for Solving Stochastic Control Problems in Economics

David A. Kendrick, Marco P. Tucci, Hans M. Amman 393

Index 421