the chapters will also be of interest to experts in the financial market interested in new methods and products. This volume presents the results of the European ESF research networking program "Advanced Mathematical Methods for Finance".

This book presents innovations in the mathematical foundations of financial analysis and numerical methods for finance and applications to the modeling of risk. The topics selected include measures of risk, credit contagion, insider trading information in finance, stochastic control and its applications. Advanced mathematical methods for finance also focuses on the theory of differential equations, functional analysis, mathematical statistics, and numerical analysis and simulation. These tools are increasingly important in the study of financial instruments and the very application to the modeling of risk.

Advanced mathematical methods for finance aims to develop and apply advanced mathematical tools in finance, including methods from stochastic analysis, deterministic and stochastic control theory, the theory of differential equations, functional analysis, mathematical statistics, and numerical analysis and simulation. This project aims at the development and application of advanced mathematical tools in finance methods from stochastic analysis, deterministic and stochastic control theory. The theory of differential equations, functional analysis, mathematical statistics, and numerical analysis and simulation are playing an increasingly important role in the study of financial instruments and the very application to the modeling of risk.

Advanced mathematical techniques play an ever increasing role in modern quantitative finance written by leading experts from academia and financial practice. This book offers state of the art papers on the application of jump processes in mathematical finance, on term structure modelling and on statistical aspects of financial modelling.