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	Nota di contenuto	Foundation of Probability Theory and Discrete-time Martingales -- Portfolio Selection Theory in Discrete Time -- Financial Markets in Discrete Time -- Martingale Theory and Itˆo Stochastic Analysis -- The Black-Scholes Model and Its Modifications -- Pricing and Hedging of Exotic Options -- Itˆo Process and Diffusion Models -- Term Structure Models For Interest Rates -- Optimal Investment-Consumption Strategies in Diffusion Models -- Static Risk Measures -- Stochastic Calculus and Semimartingale Model -- Optimal Investment in Incomplete Markets -- Martingale Method for Utility Maximization -- Optimal Growth Portfolios and Option Pricing.
	Sommario/riassunto	This book gives a systematic introduction to the basic theory of financial mathematics, with an emphasis on applications of martingale methods in pricing and hedging of contingent claims, interest rate term structure models, and expected utility maximization problems. The general theory of static risk measures, basic concepts and results on markets of semimartingale model, and a numeraire-free and original probability based framework for financial markets are also included. The basic theory of probability and Ito's theory of stochastic analysis, as preliminary knowledge, are presented.