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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A First Glimpse of Stochastic Processes -- A Brief Survey of the Mathematics of Probability Theory -- Diffusion Processes -- Beyond the Central Limit Theorem: Lévy Distributions -- Modeling the Financial Market -- Stable Distributions Revisited -- Hyperspherical Polar Coordinates -- The Weierstrass Random Walk Revisited -- The Exponentially Truncated Lévy Flight -- Put–Call Parity -- Geometric Brownian Motion.
Sommario/riassunto	This book introduces the theory of stochastic processes with applications taken from physics and finance. Fundamental concepts like the random walk or Brownian motion but also Levy-stable distributions are discussed. Applications are selected to show the interdisciplinary character of the concepts and methods. In the second edition of the book a discussion of extreme events ranging from their mathematical definition to their importance for financial crashes was included. The exposition of basic notions of probability theory and the Brownian motion problem as well as the relation between conservative diffusion processes and quantum mechanics is expanded. The second edition also enlarges the treatment of financial markets. Beyond a presentation of geometric Brownian motion and the Black-Scholes approach to

option pricing as well as the econophysics analysis of the stylized facts of financial markets, an introduction to agent based modeling approaches is given.