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	Nota di contenuto	Option Pricing and Estimation of Financial Models with R; Contents; Preface; 1 A synthetic view; 1.1 The world of derivatives; 1.1.1 Different kinds of contracts; 1.1.2 Vanilla options; 1.1.3 Why options?; 1.1.4 A variety of options; 1.1.5 How to model asset prices; 1.1.6 One step beyond; 1.2 Bibliographical notes; References; 2 Probability, random variables and statistics; 2.1 Probability; 2.1.1 Conditional probability; 2.2 Bayes' rule; 2.3 Random variables; 2.3.1 Characteristic function; 2.3.2 Moment generating function; 2.3.3 Examples of random variables; 2.3.4 Sum of random variables 2.3.5 Infinitely divisible distributions2.3.6 Stable laws; 2.3.7 Fast Fourier Transform; 2.3.8 Inequalities; 2.4 Asymptotics; 2.4.1 Types of convergences; 2.4.2 Law of large numbers; 2.4.3 Central limit theorem; 2.5 Conditional expectation; 2.6 Statistics; 2.6.1 Properties of estimators; 2.6.2 The likelihood function; 2.6.3 Efficiency of estimators; 2.6.4 Maximum likelihood estimation; 2.6.5 Moment type estimators; 2.6.6 Least squares method; 2.6.7 Estimating functions; 2.6.8

Sommario/riassunto	Presents inference and simulation of stochastic process in the field of model calibration for financial times series modelled by continuous time processes and numerical option pricing. Introduces the bases of probability theory and goes on to explain how to model financial times series with continuous models, how to calibrate them from discrete data and further covers option pricing with one or more underlying assets based on these models. Analysis and implementation of models goes beyond the standard Black and Scholes framework and includes Markov switching models, Levy models and other mod