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	Descrizione fisica	1 online resource (XXVI, 719 p. 221 illus., 108 illus. in color.)
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	Soggetti	Statistics Economics, Mathematical Finance R (Computer program language) Statistics for Business, Management, Economics, Finance, Insurance Quantitative Finance Statistical Theory and Methods Finance, general
	Lingua di pubblicazione	Inglese
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	Nota di contenuto	Introduction -- Returns -- Fixed income securities -- Exploratory data analysis -- Modeling univariate distributions -- Resampling -- Multivariate statistical models -- Copulas -- Time series models: basics -- Time series models: further topics -- Portfolio theory -- Regression: basics -- Regression: troubleshooting -- Regression: advanced topics -- Cointegration -- The capital asset pricing model -- Factor models and principal components -- GARCH models -- Risk management -- Bayesian data analysis and MCMC -- Nonparametric regression and splines.
	Sommario/riassunto	The new edition of this influential textbook, geared towards graduate or advanced undergraduate students, teaches the statistics necessary for financial engineering. In doing so, it illustrates concepts using financial markets and economic data, R Labs with real-data exercises, and graphical and analytic methods for modeling and diagnosing modeling errors. Financial engineers now have access to enormous quantities of data. To make use of these data, the powerful methods in

this book, particularly about volatility and risks, are essential. Strengths of this fully-revised edition include major additions to the R code and the advanced topics covered. Individual chapters cover, among other topics, multivariate distributions, copulas, Bayesian computations, risk management, multivariate volatility and cointegration. Suggested prerequisites are basic knowledge of statistics and probability, matrices and linear algebra, and calculus. There is an appendix on probability, statistics and linear algebra. Practicing financial engineers will also find this book of interest. David Ruppert is Andrew Schultz, Jr., Professor of Engineering and Professor of Statistical Science at Cornell University, where he teaches statistics and financial engineering and is a member of the Program in Financial Engineering. Professor Ruppert received his PhD in Statistics at Michigan State University. He is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics and won the Wilcoxon prize. He is Editor of the Journal of the American Statistical Association-Theory and Methods and former Editor of the Electronic Journal of Statistics and of the Institute of Mathematical Statistics's Lecture Notes—Monographs. Professor Ruppert has published over 125 scientific papers and four books: Transformation and Weighting in Regression, Measurement Error in Nonlinear Models, Semiparametric Regression, and Statistics and Finance: An Introduction. David S. Matteson is Assistant Professor of Statistical Science at Cornell University, where he is a member of the ILR School, Center for Applied Mathematics, Field of Operations Research, and the Program in Financial Engineering, and teaches statistics and financial engineering. Professor Matteson received his PhD in Statistics at the University of Chicago. He received a CAREER Award from the National Science Foundation and won Best Academic Paper Awards from the annual R/Finance conference. He is an Associate Editor of the Journal of the American Statistical Association-Theory and Methods, Biometrics, and Statistica Sinica. He is also an Officer for the Business and Economic Statistics Section of the American Statistical Association, and a member of the Institute of Mathematical Statistics and the International Biometric Society.