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Altri autori (Persone)	JaworskiPiotr DuranteFabrizio HardleWolfgang
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Convolution-based Autoregressive Process by Umberto Cherubini and Fabio Gobbi -- Selection of Vine Copulas by Claudia Czado, Eike Christian Brechmann and Lutz Gruber -- Copulas in Machine Learning by Gal Elidan -- An Overview of the Goodness-of-fit Test problem for Copulas by Jean-David Fermanian -- Assessing and Modeling Asymmetry in Bivariate Continuous data by Christian Genest and Johanna G. Nešehová -- Modeling Time-Varying Dependencies between Positive-Valued High-Frequency Time Series by Nikolaus Hautsch, Ostap Okhrin and Alexander Ristig -- The Limiting Properties of Copulas under Univariate Conditioning by Piotr Jaworski -- Singular Mixture Copulas by Dominic Lauterbach and Dietmar Pfeifer -- Toward a Copula Theory for Multivariate Regular Variation by Haijun Li -- CIID Frailty Models and Implied Copulas by Jan-Frederik Mai, Matthias Scherer and Rudi Zagst -- Copula-based Models for Multivariate Discrete Response Data by Aristidis K. Nikoloulopoulos -- Vector Generalized Linear Models: A Gaussian Copula Approach by Peter X -- K. Song, Mingyao Li and Peng Zhang -- APPENDIX A: Gaussian-Hermite Quadrature -- APPENDIX B: AREs of GEE and VGLM for binary -- Application of Bernstein Copulas to the Pricing of Multi-asset Derivatives by Bertrand Tavin.

Sommario/riassunto	Copulas are mathematical objects that fully capture the dependence structure among random variables and hence offer great flexibility in building multivariate stochastic models. Since their introduction in the early 1950s, copulas have gained considerable popularity in several fields of applied mathematics, especially finance and insurance. Today, copulas represent a well-recognized tool for market and credit models, aggregation of risks, and portfolio selection. Historically, the Gaussian copula model has been one of the most common models in credit risk. However, the recent financial crisis has underlined its limitations and drawbacks. In fact, despite their simplicity, Gaussian copula models severely underestimate the risk of the occurrence of joint extreme events. Recent theoretical investigations have put new tools for detecting and estimating dependence and risk (like tail dependence, time-varying models, etc) in the spotlight. All such investigations need to be further developed and promoted, a goal this book pursues. The book includes surveys that provide an up-to-date account of essential aspects of copula models in quantitative finance, as well as the extended versions of talks selected from papers presented at the workshop in Cracow. .