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Nota di contenuto	Contents ; Preface ; Chapter 1 Notations and Definitions ; 1.1 Notations ; 1.2 Definitions ; Chapter 2 Correlation and Dependence : An Introspection ; 2.1 Independence ; 2.2 Zero Correlation Versus Dependence ; 2.3 Some Geometrical Examples ; 2.4 Some Further Historical Remarks 2.5 A Brief Tour of Early Applications and Misinterpretations Chapter 3 Concepts of Dependence and Stochastic Ordering ; 3.1 Introduction ; 3.2 Concepts of Positive Dependence ; 3.3 Negative Dependence for More than Two Variables ; 3.4 Setwise Dependence ; 3.5 Other Approaches 3.6 Positive Dependence Orderings 3.7 Bayesian Approach to Stochastic Dependence ; Chapter 4 Copulas ; 4.1 Introduction ; 4.2 Definition and Some Properties ; 4.3 The Frechet Bounds ; 4.4 Examples ; 4.5 Construction of a Copula ; 4.6 Archimedean Copulas ; 4.7 Archimax Copulas 4.8 Copulas with Discontinuity Constraints

4.9 Copulas with More than Two Variables
; 4.10 Simulation Procedures ; Chapter 5 Farlie-Gumbel-Morgenstern Models of Dependence
; 5.1 Introduction ; 5.2 Initial Definition
; 5.3 Regression and Correlation ; 5.4 Iterations
5.5 Dependence Properties 5.6 A Class of n-variate FGM Distributions ; 5.7 Further Extensions ; 5.8 FGM Sequences ;
Chapter 6 Global Versus Local Dependence between Random Variables
; 6.1 Introduction ; 6.2 Global Measures of Dependence
; 6.3 Local Indices of Dependence
6.4 Non-parametric Estimation of Local Indices

Sommario/riassunto

The concept of dependence permeates the Earth and its inhabitants in a most profound manner. Examples of interdependent meteorological phenomena in nature and interdependence in the medical, social, and political aspects of our existence, not to mention the economic structures, are too numerous to be cited individually. Moreover, the dependence is obviously not deterministic but of a stochastic nature. However, it seems that none of the departments of statistics, engineering, economics and mathematics in the academic institutions throughout the world offer courses dealing with <i>dependence c