

1. Record Nr.	UNISA996495168303316
Autore	Kochar Subhash C.
Titolo	Stochastic comparisons with applications : in order statistics and spacings / / Subhash C. Kochar
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	9783031121043 9783031121036
Descrizione fisica	1 online resource (280 pages)
Disciplina	519.2
Soggetti	Stochastic analysis Stochastic orders Anàlisi estocàstica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- References -- Acknowledgements -- Contents -- 1 Introduction and Preliminaries -- 1.1 Introduction -- 1.2 Notations and Definitions -- 1.3 Order Statistics, Record Values, and Generalized Order Statistics -- 1.3.1 Record Values -- 1.3.2 Generalized Order Statistics -- 1.4 Multivariate Distributions and Copulas -- 1.5 Majorization and Related Orderings -- References -- 2 Magnitude Orders -- 2.1 Introduction -- 2.2 (Usual) Stochastic Order -- 2.3 Hazard Rate and Reverse Hazard Rate Orders -- 2.4 Likelihood Ratio Order -- 2.5 Mean Residual Life and Some Other Stochastic Orders -- 2.6 Relations Between Magnitude Stochastic Orders -- 2.7 Multivariate Orders -- 2.8 Stochastic Comparisons Within a Random Vector -- 2.9 P-P Plots -- 2.10 Closure and Preservation Properties -- 2.11 P-P Order -- 2.12 Inference for the (Usual) Stochastic Ordering -- 2.13 Inference for the Hazard Rate Ordering -- 2.14 Inference for the Crossing Point of Two Survival Functions -- 2.15 Testing for the Joint Stochastic and the Joint Likelihood Ratio Orders -- References -- 3 Variability Orders -- 3.1 Introduction -- 3.2 The Dispersive Order -- 3.3 The Right Spread Function -- 3.4 The Right Spread Order (Excess

Wealth Order) -- 3.5 Peakedness Order -- 3.6 Connections with Other Variability Orders -- 3.7 Nonparametric Inference for Variability (Spread) -- References -- 4 Skewness and Relative Aging Orders -- 4.1 Introduction -- 4.2 Skewness Orders -- 4.3 Connections Between Skewness Orders and Variability Orders -- 4.4 Statistical Inference for Skewness and Relative Aging -- References -- 5 Dependence Orders -- 5.1 Introduction -- 5.2 Notions of Monotone Dependence -- 5.3 Monotone Dependence Orders -- 5.4 Measures of Dependence -- 5.5 Dependence Between N and SN and a Positive Dependence Paradox -- 5.6 Nonparametric Tests for Independence -- References.

6 Stochastic Comparisons of Order Statistics -- 6.1 Introduction -- 6.2 Stochastic Comparisons of Order Statistics in the One-Sample Problem -- 6.2.1 Likelihood Ratio Ordering Among OrderStatistics -- 6.2.2 Hazard Rate Ordering Among Order Statistics -- 6.2.3 Variability Orders Among Order Statistics -- 6.2.4 Skewness Comparisons of Order Statistics -- 6.3 Stochastic Comparisons of Order Statistics in the Two-Sample Problem -- 6.4 Stochastic Comparisons of Order Statistics in the Proportional Hazard Rate Model -- 6.5 Comparing the Order Statistics of Heterogeneous Samples with Those of Comparable HomogeneousSamples -- 6.6 Stochastic Comparisons of Order Statistics in the Two-Sample Scale Problem -- References -- 7

Stochastic Comparisons of Sample Spacings -- 7.1 Introduction -- 7.2 Stochastic Orders Between Spacings from Restricted Families of Distributions -- 7.3 Distributions of Normalized Spacings in the Case of Heterogeneous Exponential Random Variables -- 7.4 Stochastic Comparisons of Sample Spacings of Two Distributions -- 7.5 Comparing Spacings of Two Heterogeneous Exponential Samples -- 7.6 Stochastic Comparisons of Sample Ranges of Heterogeneous and Homogeneous Exponential Samples -- 7.7 Stochastic Comparisons of Relative Spacings -- References -- 8 Dependence Among Order Statistics and Spacings -- 8.1 Introduction -- 8.2 Dependence Between Two Order Statistics -- 8.3 Dependence Orders Between Two Pairs of Order Statistics Based on Random Samples -- 8.4 Dependence of the ith Order Statistic on the First Order Statistic in the PHR Model -- 8.5 Order Statistics from Exchangeable BivariateDistributions -- 8.6 Dependence Among Spacings -- References -- 9 Stochastic Comparisons of Weighted Sums of RandomVariables -- 9.1 Introduction -- 9.2 Peakedness Ordering of Linear Functions of Symmetric Random Variables.

9.3 Stochastic Comparisons of Weighted Sums of Non-negative Random Variables -- 9.3.1 Comparing Weighted Sums of Non-negative Random Variables According to Magnitude and Dispersive Orders -- 9.3.2 Magnitude and Variability Comparisons for Weighted Sums of Gamma Random Variables -- 9.3.3 Skewness Orders Between Weighted Sums of Gamma Random Variables -- 9.3.4 Right Spread Order Between Weighted Sums of Gamma Random Variables -- 9.4 Stochastic Comparisons of Linear Combinations of Uniform Random Variables -- 9.5 Stochastic Comparisons of Convolutions of Discrete Distributions -- 9.5.1 Comparing Binomial and Poisson-Binomial Distributions -- 9.5.2 Comparing Two Poisson-Binomial Distributions -- 9.5.3 Comparing Two Geometric Distributions -- 9.6 Weighted Sums of Dependent Random Variables -- References -- 10 Stochastic Comparisons of Mixtures of Distributions -- 10.1 Introduction -- 10.2 Aging Properties of Mixture Distributions -- 10.3 Stochastic Comparisons of Mixtures -- References -- Index.