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Titolo	Nonparametric hypothesis testing : rank and permutation methods with applications in R // Stefano Bonnini [and three others]
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ISBN	1-118-76349-1 1-118-76347-5
Descrizione fisica	1 online resource (254 p.)
Collana	Wiley Series in Probability and Statistics
Disciplina	519.5/4
Soggetti	Nonparametric statistics Statistical hypothesis testing R (Computer program language)
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Nonparametric Hypothesis Testing; Contents; Presentation of the book; Preface; Notation and abbreviations; 1 One- and two-sample location problems, tests for symmetry and tests on a single distribution; 1.1 Introduction; 1.2 Nonparametric tests; 1.2.1 Rank tests; 1.2.2 Permutation tests and combination based tests; 1.3 Univariate one-sample tests; 1.3.1 The Kolmogorov goodness-of-fit test; 1.3.2 A univariate permutation test for symmetry; 1.4 Multivariate one-sample tests; 1.4.1 Multivariate rank test for central tendency; 1.4.2 Multivariate permutation test for symmetry 1.5 Univariate two-sample tests 1.5.1 The Wilcoxon (Mann-Whitney) test; 1.5.2 Permutation test on central tendency; 1.6 Multivariate two-sample tests; 1.6.1 Multivariate tests based on rank; 1.6.2 Multivariate permutation test on central tendency; References; 2 Comparing variability and distributions; 2.1 Introduction; 2.2 Comparing variability; 2.2.1 The Ansari-Bradley test; 2.2.2 The permutation Pan test; 2.2.3 The permutation O'Brien test; 2.3 Jointly comparing central tendency and variability; 2.3.1 The Lepage test; 2.3.2 The Cucconi test; 2.4 Comparing distributions

2.4.1 The Kolmogorov-Smirnov test; 2.4.2 The Cramer-von Mises test; References; 3 Comparing more than two samples; 3.1 Introduction; 3.2 One-way ANOVA layout; 3.2.1 The Kruskal-Wallis test; 3.2.2 Permutation ANOVA in the presence of one factor; 3.2.3 The Mack-Wolfe test for umbrella alternatives; 3.2.4 Permutation test for umbrella alternatives; 3.3 Two-way ANOVA layout; 3.3.1 The Friedman rank test for unreplicated block design; 3.3.2 Permutation test for related samples; 3.3.3 The Page test for ordered alternatives; 3.3.4 Permutation analysis of variance in the presence of two factors; 3.4 Pairwise multiple comparisons; 3.4.1 Rank-based multiple comparisons for the Kruskal-Wallis test; 3.4.2 Permutation tests for multiple comparisons; 3.5 Multivariate multisample tests; 3.5.1 A multivariate multisample rank-based test; 3.5.2 A multivariate multisample permutation test; References; 4 Paired samples and repeated measures; 4.1 Introduction; 4.2 Two-sample problems with paired data; 4.2.1 The Wilcoxon signed rank test; 4.2.2 A permutation test for paired samples; 4.3 Repeated measures tests; 4.3.1 Friedman rank test for repeated measures; 4.3.2 A permutation test for repeated measures; References; 5 Tests for categorical data; 5.1 Introduction; 5.2 One-sample tests; 5.2.1 Binomial test on one proportion; 5.2.2 The McNemar test for paired data (or bivariate responses) with binary variables; 5.2.3 Multivariate extension of the McNemar test; 5.3 Two-sample tests on proportions or 2 x 2 contingency tables; 5.3.1 The Fisher exact test; 5.3.2 A permutation test for comparing two proportions; 5.4 Tests for R x C contingency tables; 5.4.1 The Anderson-Darling permutation test for R x C contingency tables; 5.4.2 Permutation test on moments

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Sommario/riassunto

A novel presentation of rank and permutation tests, with accessible guidance to applications in R. Nonparametric testing problems are frequently encountered in many scientific disciplines, such as engineering, medicine and the social sciences. This book summarizes traditional rank techniques and more recent developments in permutation testing as robust tools for dealing with complex data with low sample size. <

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