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Nota di contenuto	Preface; Contents; 1. Introduction; 1.1 Definitions; 1.2 Rank tests and empirical distribution functions; 1.3 Hypotheses of the tests; 1.4 Weak convergence of the test statistics; 1.5 Tests for densities and curves; 1.6 Asymptotic levels of tests; 1.7 Permutation and bootstrap tests; 1.8 Relative efficiency of tests; 2. Asymptotic theory; 2.1 Parametric tests; 2.2 Parametric likelihood ratio tests; 2.3 Likelihood ratio tests against local alternatives; 2.4 Nonparametric likelihood ratio tests; 2.5 Nonparametric tests for empirical functionals; 2.6 Tests of homogeneity 2.7 Mixtures of exponential distributions2.8 Nonparametric bootstrap tests; 2.9 Exercises; 3. Nonparametric tests for one sample; 3.1 Introduction; 3.2 Kolmogorov-Smirnov tests for a distribution function; 3.3 Tests for symmetry of a density; 3.3.1 Kolmogorov-Smirnov tests for symmetry; 3.3.2 Semi-parametric tests, with an unknown center; 3.3.3 Rank test for symmetry; 3.4 Tests about the formof a density; 3.5 Goodness of fit test in biased length models; 3.6 Goodness of fit tests for a regression function; 3.7 Tests about the form of a regression function 3.8 Tests based on observations by intervals3.8.1 Goodness of fit tests for a density; 3.8.2 Goodness of fit tests for a regression function; 3.8.3 Tests of symmetry for a density; 3.8.4 Tests of a monotone density; 3.9 Exercises; 4. Two-sample tests; 4.1 Introduction; 4.2 Tests of independence; 4.2.1 Kolmogorov-Smirnov and Cramer-von Mises

tests; 4.2.2 Tests based on the dependence function; 4.2.3 Tests based on the conditional distribution; 4.3 Test of homogeneity; 4.4 Goodness of fit tests in R2; 4.5 Tests of symmetry for a bivariate density; 4.6 Tests about the form of densities
4.7 Comparison of two regression curves4.8 Tests based on observations by intervals; 4.8.1 Test of independence; 4.8.2 Test of homogeneity; 4.8.3 Comparison of two regression curves; 4.9 Exercises; 5. Multi-dimensional tests; 5.1 Introduction; 5.2 Tests of independence; 5.3 Test of homogeneity of k sub-samples; 5.4 Test of homogeneity of k rescaled distributions; 5.5 Test of homogeneity of several variables of Rk; 5.6 Test of equality of marginal distributions; 5.7 Test of exchangeable components for a random variable; 5.8 Tests in single-indexmodels; 5.9 Comparison of k curves
5.10 Tests in proportional odds models5.11 Tests for observations by intervals; 5.11.1 Test of independence; 5.11.2 Test of homogeneity; 5.11.3 Comparison of k regression curves; 5.12 Competing risks; 5.13 Tests for Markov renewal processes; 5.14 Tests in Rkn as kn tends to infinity; 5.15 Exercises; 6. Nonparametric tests for processes; 6.1 Introduction; 6.2 Goodness of fit tests for an ergodic process; 6.3 Poisson process; 6.4 Poisson processes with scarce jumps; 6.5 Point processes in R+; 6.6 Marked point processes; 6.7 Spatial Poisson processes
6.8 Tests of stationarity for point processes

Sommario/riassunto

An overview of the asymptotic theory of optimal nonparametric tests is presented in this book. It covers a wide range of topics: Neyman-Pearson and LeCam's theories of optimal tests, the theories of empirical processes and kernel estimators with extensions of their applications to the asymptotic behavior of tests for distribution functions, densities and curves of the nonparametric models defining the distributions of point processes and diffusions. With many new test statistics developed for smooth curves, the reliance on kernel estimators with bias corrections and the weak convergence of the