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| Altri autori (Persone) | KruopisJulius NikulinM. S (Mikhail Stepanovich) |
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| Nota di contenuto | Cover; Non-parametric Tests for Censored Data; Title Page; Copyright Page; Table of Contents; Preface; Terms and Notation; Chapter 1. Censored and Truncated Data; 1.1. Right-censored data; 1.2. Left truncation; 1.3. Left truncation and right censoring; 1.4. Nelson-Aalen and Kaplan-Meier estimators; 1.5. Bibliographic notes; Chapter 2. Chi-squared Tests; 2.1. Chi-squared test for composite hypothesis; 2.2. Chi-squared test for exponential distributions; 2.3. Chi-squared tests for shape-scale distribution families; 2.3.1. Chi-squared test for the Weibull distribution 2.3.2. Chi-squared tests for the loglogistic distribution 2.3.3. Chi-squared test for the lognormal distribution; 2.4. Chi-squared tests for other families; 2.4.1. Chi-squared test for the Gompertz distribution; 2.4.2. Chi-squared test for distribution with hyperbolic hazard function; 2.4.3. Bibliographic notes; 2.5. Exercises; 2.6. Answers; Chapter 3. Homogeneity Tests for Independent Populations; 3.1. Data; 3.2. Weighted logrank statistics; 3.3. Logrank test statistics as weighted |

sums of differences between observed and expected number of failures; 3.4. Examples of weights
3.5. Weighted logrank statistics as modified score statistics
3.6. The first two moments of weighted logrank statistics; 3.7. Asymptotic properties of weighted logrank statistics; 3.8. Weighted logrank tests; 3.9. Homogeneity testing when alternatives are crossings of survival functions; 3.9.1. Alternatives; 3.9.2. Modified score statistics; 3.9.3. Limit distribution of the modified score statistics; 3.9.4. Homogeneity tests against crossing survival functions alternatives; 3.9.5. Bibliographic notes; 3.10. Exercises; 3.11. Answers; Chapter 4. Homogeneity Tests for Related Populations
4.1. Paired samples
4.1.1. Data; 4.1.2. Test statistics; 4.1.3. Asymptotic distribution of the test statistic; 4.1.4. The test; 4.2. Logrank-type tests for homogeneity of related $k > 2$ samples; 4.3. Homogeneity tests for related samples against crossing marginal survival functions alternatives; 4.3.1. Bibliographic notes; 4.4. Exercises; 4.5. Answers; Chapter 5. Goodness-of-fit for Regression Models; 5.1. Goodness-of-fit for the semi-parametric Cox model; 5.1.1. The Cox model; 5.1.2. Alternatives to the Cox model based on expanded models; 5.1.3. The data and the modified score statistics
5.1.4. Asymptotic distribution of the modified score statistic
5.1.5. Tests; 5.2. Chi-squared goodness-of-fit tests for parametric AFT models; 5.2.1. Accelerated failure time model; 5.2.2. Parametric AFT model; 5.2.3. Data; 5.2.4. Idea of test construction; 5.2.5. Asymptotic distribution of H_n and Z ; 5.2.6. Test statistics; 5.3. Chi-squared test for the exponential AFT model.; 5.4. Chi-squared tests for scale-shape AFT models.; 5.4.1. Chi-squared test for the Weibull AFT model; 5.4.2. Chi-squared test for the lognormal AFT model; 5.4.3. Chi-squared test for the loglogistic AFT model
5.5. Bibliographic notes

Sommario/riassunto

This book concerns testing hypotheses in non-parametric models. Generalizations of many non-parametric tests to the case of censored and truncated data are considered. Most of the test results are proved and real applications are illustrated using examples. Theories and exercises are provided. The incorrect use of many tests applying most statistical software is highlighted and discussed.
