

1. Record Nr.	UNINA9910139469703321
Titolo	Mathematical methods in survival analysis, reliability and quality of life // edited by Catherine Huber ... [et al.]
Pubbl/distr/stampa	London, : ISTE Hoboken, N.J., : John Wiley, 2008
ISBN	1-282-25388-3 9786613814531 0-470-61098-0 0-470-39356-4
Descrizione fisica	1 online resource (371 p.)
Collana	ISTE ; ; v.13
Classificazione	QH 252
Altri autori (Persone)	HuberCatherine
Disciplina	519.5/46
Soggetti	Failure time data analysis Survival analysis (Biometry)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Mathematical Methods in Survival Analysis, Reliability and Quality of Life; Contents; Preface; PART I; Chapter 1. Model Selection for Additive Regression in the Presence of Right-Censoring; 1.1. Introduction; 1.2. Assumptions on the model and the collection of approximation spaces; 1.2.1. Non-parametric regression model with censored data; 1.2.2. Description of the approximation spaces in the univariate case; 1.2.3. The particular multivariate setting of additive models; 1.3. The estimation method; 1.3.1. Transformation of the data; 1.3.2. The mean-square contrast 1.4. Main result for the adaptive mean-square estimator 1.5. Practical implementation; 1.5.1. The algorithm; 1.5.2. Univariate examples; 1.5.3. Bivariate examples; 1.5.4. A trivariate example; 1.6. Bibliography; Chapter 2. Non-parametric Estimation of Conditional Probabilities, Means and Quantiles under Bias Sampling; 2.1. Introduction; 2.2. Non-parametric estimation of p; 2.3. Bias depending on the value of Y; 2.4. Bias due to truncation on X; 2.5. Truncation of a response variable in a non-parametric regression model; 2.6. Double censoring of a response variable in a non-parametric model

2.7. Other truncation and censoring of Y in a non-parametric model
 2.8. Observation by interval; 2.9. Bibliography; Chapter 3. Inference in Transformation Models for Arbitrarily Censored and Truncated Data; 3.1. Introduction; 3.2. Non-parametric estimation of the survival function S; 3.3. Semi-parametric estimation of the survival function S; 3.4. Simulations; 3.5. Bibliography; Chapter 4. Introduction of Within-area Risk Factor Distribution in Ecological Poisson Models; 4.1. Introduction; 4.2. Modeling framework; 4.2.1. Aggregated model; 4.2.2. Prior distributions; 4.3. Simulation framework
 4.4. Results
 4.4.1. Strong association between relative risk and risk factor, correlated within-area means and variances (mean-dependent case); 4.4.2. Sensitivity to within-area distribution of the risk factor; 4.4.3. Application: leukemia and indoor radon exposure; 4.5. Discussion; 4.6. Bibliography; Chapter 5. Semi-Markov Processes and Usefulness in Medicine; 5.1. Introduction; 5.2. Methods; 5.2.1. Model description and notation; 5.2.2. Construction of health indicators; 5.3. An application to HIV control; 5.3.1. Context; 5.3.2. Estimation method
 5.3.3. Results: new indicators of health state
 5.4. An application to breast cancer; 5.4.1. Context; 5.4.2. Age and stage-specific prevalence; 5.4.3. Estimation method; 5.4.4. Results: indicators of public health; 5.5. Discussion; 5.6. Bibliography; Chapter 6. Bivariate Cox Models; 6.1. Introduction; 6.2. A dependence model for duration data; 6.3. Some useful facts in bivariate dependence; 6.4. Coherence; 6.5. Covariates and estimation; 6.6. Application: regression of Spearman's rho on covariates; 6.7. Bibliography; Chapter 7. Non-parametric Estimation of a Class of Survival Functionals
 7.1. Introduction

Sommario/riassunto

Reliability and survival analysis are important applications of stochastic mathematics (probability, statistics and stochastic processes) that are usually covered separately in spite of the similarity of the involved mathematical theory. This title aims to redress this situation: it includes 21 chapters divided into four parts: Survival analysis, Reliability, Quality of life, and Related topics. Many of these chapters were presented at the European Seminar on Mathematical Methods for Survival Analysis, Reliability and Quality of Life in 2006.
