Publicacions més rellevants de la línia de recerca:
Anàlisi de la Supervivència

Abstract: Interval censoring is encountered in many practical situations when the event of interest cannot be observed and it is only known to have occurred within a time window. The theory for the analysis of interval-censored data has been developed over the past three decades and several reviews have been written. However, it is still a common practice in medical and reliability studies to simplify the interval censoring structure of the data into a more standard right censoring situation by, for instance, imputing the midpoint of the censoring interval. The availability of software for right censoring might well be the main reason for this simplifying practice. In contrast, several methods have been developed to deal with interval-censored data and the corresponding algorithms to make the procedures feasible are scattered across the statistical software or remain behind the personal computers of many researchers. The purpose of this tutorial is to present, in a pedagogical and unified manner, the methodology and the available software for analyzing interval-censored data. The paper covers frequentist non-parametric, parametric and semiparametric estimating approaches, non-parametric tests for comparing survival curves and a section on simulation of interval-censored data. The methods and the software are described using the data from a dental study.

Abstract: The constant-sum property given in Oller et al. (2004) for censoring models justifies the use of a simplified likelihood to obtain the nonparametric maximum likelihood estimator of the lifetime distribution. In this paper we study the relevance of the constant-sum property in the identifiability of the lifetime distribution. We show that the lifetime distribution is not identifiable outside the class of constant-sum models. We also show that the lifetime probabilities assigned to the observable intervals are identifiable inside the class of constant-sum models. We illustrate all

these notions with several examples.

Abstract: We propose a Bayesian framework for analysing regression models in which one of the covariates is intervalcensored. We encountered such a situation in an AIDS clinical trial in which the goal was to examine the association between delays in initiating a new treatment after indinavir failure and the subsequent viral load level of patients at the time of enrollment into the new treatment. The methodology we propose uses a mixture of Dirichlet processes. This mixture enabled us to specify all the components in the model parametrically, except for the distribution of the intervalcensored covariate, which was treated nonparametrically. The paper explains the proposed methodology for the linear regression model in detail. The performance of the method is assessed by simulations and illustrated using the AIDS clinical trial.