

Title: Copula-graphic estimation with left-truncated and right-censored data

Abstract: In Survival Analysis and related fields of research right-censored and left-truncated data often appear. Usually, it is assumed that the right-censoring variable is independent of the lifetime of ultimate interest. However, in particular applications dependent censoring may be present; this is the case, for example, when there exist several competing risks acting on the same individual. In this paper we propose a copula-graphic estimator for such a situation. The estimator is based on a known Archimedean copula function which properly represents the dependence structure between the lifetime and the censoring time. An asymptotic representation of the estimator is derived. The performance of the estimator is investigated in an intensive Monte Carlo simulation study. An application to unemployment duration is included for illustration purposes. This is joint work with Noël Veraverbeke.