

POSTER

Flexible Nonparametric Estimation of Conditional Bivariate Distributions for Recurrent Event: A Comparison of IPCW and LIN-based MethodsGUSTAVO SOUTINHO^a, LUÍS MEIRA-MACHADO^b^a Portucalense University
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lmachado@math.uminho.pt**Abstract**

A main objective in recurrent event analysis is the estimation of the bivariate distribution function. This estimation is crucial across various fields, as it helps to better understand the patterns of recurring events and their underlying dynamics. The term 'gap time' refers to the interval between consecutive occurrences of an event, and the bivariate distribution function captures the joint probability distribution of two such gap times. Although substantial progress has been made in this area, many existing methods assume independent censoring and overlook the role of covariates. Therefore, this paper aims to introduce nonparametric methods for estimating the bivariate distribution function while accounting for covariates. The goal is to offer more accurate and relevant tools for analyzing recurrent event data, improving the interpretation and insights derived from such analyses.

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