

Title:

Nonparametric longitudinal process with survival time

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Abstract:

Observed longitudinal covariates often are subject to disease, death or censoring in biomedical and clinical studies. The hazard rate of survival is affected by the underlying longitudinal process. We will link the survival time and longitudinal process through time-varying coefficient Cox model to investigate the nonproportional effect of longitudinal covariate on survival time. The observed longitudinal measurements will be modeled through a mixed effect model with Bspline basis. This joint modeling longitudinal process and survival time will not only correct the bias of truncated longitudinal observations but also improve efficiency.