

Statistisches Kolloquium

Zeit: Dienstag, 04.06.2013, 15.15 - 16.00
Ort: HKW 4 (sogen. „Toaster“), Raum 503
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Titel: **Multivariate count data with censoring**

Abstract

Censoring is widely used for survival data. With count data it is often the case that the counts are not fully observed but we know that they may exceed a certain number leading to right censored data. In the univariate case there are papers treating such data. The aim of the present work is to exploit models for multivariate counts with censoring. The motivation for this work lies on modelling the number of renewals of subscription on a large number of distinct magazines of the same publisher, leading to multivariate count data, with right censoring. Note that only non-informative censoring is treated in this work. We propose a model based on copulas. The basic idea is fully explored for the bivariate case. Interestingly application of copulas is easier when censoring occurs. Then we extend to the multivariate case. For this, instead of writing down the complicated likelihood, we switch to a composite likelihood approach. Simulations results show the good behaviour of the approach in both the bivariate and the multivariate case. Real data application is also provided.