Seminar Series in Statistics and Biostatistics

01.10.2018, 14:15 @ Seminar Room 819, Niels Henrik Abels hus, 8th floor

Ingrid Van Keilegom Flexible parametric model for survival data subject to dependent censoring

Abstract: When modeling survival data, it is common to assume that the (log-transformed) survival time (T) is conditionally independent of the (log-transformed) censoring time (C) given a set of covariates. There are numerous situations in which this assumption is in doubt, and a number of correction procedures have been developed for different models. However, in most cases, some prior knowledge about the association between T and C is required. When neither prior knowledge nor auxiliary information is available, the application of many existing methods turns out to be limited. In this paper, we develop a flexible parametric model to estimate the association between T and C, without any additional information. We show that the association between T and C is identifiable. The performance of the proposed method is investigated both in an asymptotic way and through finite sample simulations. We also develop a diagnostic plot approach to assess the quality of the fitted model. Finally, the approach is illustrated on real data coming from a study on liver transplantations.

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Ingrid is full professor at the Catholic University of Leuven (Belgium), Department of OR and Business Statistics.
Her research mainly focuses on survival/duration analysis, measurement error problems and non-parametric as well as semiparametric regression.

Next seminar

09.10.2018 @ 14:15
Emanuele Gramuglia (Oslo)

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