

**Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz**

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Einladung zum

Biometrischen Kolloquium

am Freitag, den 28. Mai 2010 um 14:00 Uhr (s.t.)

in der Informatikbibliothek (Ebene 3, Raum 88.03.806) der
Besonderen Einrichtung für Medizinische Statistik und Informatik
(MSI) der Medizinischen Universität Wien
Spitalgasse 23, 1090 Wien

Vortragende:

Catherine Legrand

(Université catholique de Louvain, Belgium):

**Generalized conditional linear models with time varying
coefficients under right censoring:
practical implementation and extensions**

Wir freuen uns auf zahlreichen Besuch.

Georg Heinze
Präsident

Martin Posch
Sekretär

Generalized conditional linear models with time varying coefficients under right censoring: practical implementation and extensions

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In previous work, Teodorescu (2008) proposed a very general class of transformation models for time-to-event data in case of right censoring and/or left truncation. This class of models includes as special cases models such as the Cox model, the additive model, the log-logistic model, and allows inclusion of time-dependent coefficients. Teodorescu (2008) proposed a least square estimation procedure of the model parameters. At each event time, the survival of each patient is computed using the non-parametric Beran estimator and a linear regression model is fitted based on pseudo-responses obtained by transforming these survival estimates.

In this presentation, we consider the case of right censoring (and no truncation) and we address various issues encountered when implementing this approach, either to run large scale simulations or to apply it to real data. For example, we discuss the issue of bandwidth selection for the computation of the non-parametric Beran estimate and the bootstrap based approach proposed by Teodorescu (2008). We will present the results obtained when applying this methodology to the case of one continuous covariate either with constant or time-dependent effect over time. After discussing some real examples in which this model can be of use, we discuss how we will further extend this model by the inclusion of random effects.