Influential observation in mixed linear model of repeated measures cross-over designs

Chengcheng Hao[1], Tatjana von Rosen[1], and Dietrich von Rosen[2]

[1]*Stockholm University, Sweden*
[2]*Swedish University of Agricultural Sciences, Uppsala, Sweden*

Abstract

The aim of this work is to develop new methodology to detect influential observations. Linear mixed models are applied to different kinds of cross-over designs. Perturbations are performed. We consider measures of influence of the perturbations on parameter estimates and their variances. Closed-form solutions for estimators of variance components as well as fixed effect parameters in cross-over designs are utilized.

Keywords

Local influence analysis, Balaam's cross-over design, Repeated measurement, Linear mixed model.

References

Putt, M. and Chinchilli, V.M. (1999). A mixed effects model for the analysis of repeated measures cross-over studies. *Stat. Med. 18*, 3037–3058.