

Nonlinear Mixed-Effects Models with Dropouts and Missing Covariates

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KEY WORDS: Gibbs sampling; Missing data; Monte-Carlo EM algorithm

Abstract: Nonlinear mixed-effects models (NLME) are popular in longitudinal studies. In these studies, however, subjects may drop out early and covariates may contain missing data. We propose likelihood and approximate methods for NLME models with dropouts and missing covariates, using Monte-Carlo EM algorithms and MCMC methods. The approximate method is computationally more efficient than the likelihood method. A real dataset is analyzed using the proposed methods.