Estimation of Variance Components in the Mixed-Effects Models: the case in which the random part follows a Gamma distribution

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Abstract

In our talk we present the mixed-effects linear model in which the random part follows a Gamma distribution. The mixed-effects linear model has received considerable attention from both theoretical and practical points of view due to its extensive applications. We consider the estimators of the cumulants of these models as linear combinations of first order cumulants with suitably chosen independent coefficients from a random part. Moreover, we simulate the variance components and show that their estimates can achieve good performance.

Keywords

Cumulants, Mixed-effects model, Method of Moments, Gamma distribution.

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