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A NOTE ON THE EXISTENCE OF THE MAXIMUM LIKELIHOOD ESTIMATE IN VARIANCE COMPONENTS MODELS

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Abstract

In the paper, the problem of the existence of the maximum likelihood estimate and the REML estimate in the variance components model is considered. Errors in the proof of Theorem 3.1 in the article of Demidenko and Massam (Sankhyā 61, 1999), giving a necessary and sufficient condition for the existence of the maximum likelihood estimate in this model, are pointed out and corrected. A new proof of Theorem 3.4 in the Demidenko and Massam's article, concerning the existence of the REML estimate of variance components, is presented.

Keywords: variance component, linear mixed model, maximum likelihood.

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