THE GROWTH CURVE MODEL WITH AN AUTOREGRESSIVE COVARIANCE STRUCTURE

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Abstract. The growth curve model with an autoregressive covariance structure is considered. An iterative algorithm for finding the MLE's of the parameters in the model is presented, based on the modified likelihood equations. Asymptotic distributions of the MLE's are obtained when the sample size is large. A likelihood ratio statistic for testing the autoregressive covariance structure is presented.