Quasi-shrinkage estimation of block covariance matrix with structured off-diagonal blocks

Monika Mokrzycka[1] **and Malwina Mrowińska**[2]

[1] *Institute of Plant Genetics PAS, Poznań Poland*
[2] *Poznań University of Technology, Poland*

Abstract

The block covariance matrix partitioned into four sub-blocks, with unstructured diagonal blocks and structured cross-covariance matrices is assumed. The structure of the off-diagonal block corresponds to the appropriate part of autoregression of order one structure. The least squares estimation method for such a structured covariance matrix as well as its improvement by shrinkage method are presented.

Keywords

Block covariance matrix, Autoregression of order one, Least squares estimation, Shrinkage method.