

BIASS in the Estimation of Covariance Matrices and Optimality Criteria

Authors : Juan M. Rodriguez-Diaz

Abstract : The precision of parameter estimators in the Gaussian linear model is traditionally accounted by the variance-covariance matrix of the asymptotic distribution. However, this measure can underestimate the true variance, specially for small samples. Traditionally, optimal design theory pays attention to this variance through its relationship with the model's information matrix. For this reason it seems convenient, at least in some cases, adapt the optimality criteria in order to get the best designs for the actual variance structure, otherwise the loss in efficiency of the designs obtained with the traditional approach may be very important.

Keywords : correlated observations, information matrix, optimality criteria, variance-covariance matrix

Conference Title : ICCSDA 2015 : International Conference on Computational Statistics and Data Analysis

Conference Location : Athens, Greece

Conference Dates : July 20-21, 2015