

Symmetrically Dependent Models Arising in Visual Assessment Data

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Abstract:

Given the data from bilateral visual assessments at k different instances, we define the contralateral correlations (C) between fellow eyes, and the lateral correlations (L) among k different assessments of the same eye. Under permutation symmetric dependence structure between observations from fellow eyes and among observations from the same eye, and obtain maximum likelihood estimates of L , C , and $L - C$. Large-sample estimates of the corresponding covariance structures are also obtained.