

Testing the mean in three-level data with doubly-exchangeable covariance structure

Ivan Žežula¹, Daniel Klein¹, and Anuradha Roy²

¹*P. J. Šafárik University, Košice, Slovakia*

²*University of Texas at San Antonio, San Antonio, Texas, USA*

Abstract

We consider matrix-valued multivariate observation model with three-level doubly-exchangeable covariance structure. Using known optimal estimators of unknown parameters under multivariate normality, we propose two different methods of testing the mean value. Both one-sample and two-sample tests are constructed, and exact distributions of the test statistics are derived. Possible methods of computing p-values and critical values of the distributions are compared using two real data examples.

Keywords

Multivariate observations, Three-level data, Special variance structures, Mean testing.

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References

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