Some comments on maximum likelihood estimation under various statistical models

Katarzyna Filipiak

Poznań University of Technology, Poland

Abstract

The aim of this talk is discuss relations between the conditions of the existence of maximum likelihood estimators of covariance structures:

- in explicit form (cf. Szatrowski, 1980),
- as projections (cf. Fuglede and Jensen, 2013).

This topic is inspired by the invariance property of maximum likelihood estimators (Zehna, 1966).

Keywords

Maximum likelihood estimator, Multivariate model, Jordan algebra, Projection.

References

[1] Fuglede, B. and S.T. Jensen (2013). Positive projections of symmetric matrices and Jordan algebras. *Expo. Math. 31*, 295–303.

[2] Szatrowski, T.H. (1980). Necessary and sufficient conditions for explicit solutions in the multivariate normal estimation problem for patterned means and covariances. *Ann. Statist. 8*, 802–810.

[3] Zehna, P.W. (1966). Invariance of maximum likelihood estimators. *Ann. Math. Statist. 37*, 744.