

DISA SEMINARS

ON THE ROBUSTNESS OF BAYES PREDICTIONS IN LINEAR MODELS WITH ELLIPTICAL ERRORS

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Faculty of Economics
Via Inama, 5 - Trento

We consider the prediction problem for linear regression models with elliptical or spherically symmetric errors, a special case of which is the multivariate t-distribution with heavy tails. It is shown that the Bayes prediction density under the elliptical errors assumption is exactly the same as that for normally distributed errors when the prior information is objective or in the conjugate family. Thus assuming that the errors have a normal distribution when the true distribution is indeed elliptical, will not lead to incorrect predictive inferences. This extends some earlier work of Arnold Zellner (1976, Jour. of Amer. Statist.Assoc) and others.

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