

**INSTITUT SAINS MATEMATIK
UNIVERSITI MALAYA
SIRI KOLOKIU**

Tajuk: Bayesian and non-Bayesian prediction distribution for multivariate simple regression model with correlated multivariate normal responses

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Abstract

The presentation provides both classical and Bayesian approaches to the prediction distribution for a set of future responses for a multivariate simple regression model with unknown regression and scale parameters matrices. The scaled errors of the model, from both the performed and future experiments, are assumed to be independently distributed as multivariate normal variable, but the responses are correlated. The error and response matrices follow matrix normal distribution. Conditional on a set of realized responses, another set of the future unrealized responses follow a matrix T distribution. The number of degrees of freedom of the prediction distribution depends on the size of the realized sample, and the dimension of the regression parameters in the model. The prediction distribution obtained by the classical method is the same as that derived under the Bayesian method with non-informative prior. The marginal distributions of the prediction distribution and some applications of its applications are discussed.

SEMUA DIJEMPUT HADIR