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ON ADMISSIBILITY IN ESTIMATING THE MEAN SQUARED ERROR OF A LINEAR ESTIMATOR

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Abstract: Consider a linear estimator of a parametric vector $C\beta$ in the normal Gauss-Markov model $Y \sim \mathcal{N}(X\beta, \sigma V)$. The Mean Squared Error of such an estimator may be presented in the form $k\sigma + \beta' X' K X \beta$ and may be estimated by quadratics in Y. Some basic decision-theoretic questions in the estimation are discussed. Among others, some admissible estimators of the MSE in several classes of the quadratics are given.

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