UNE ÉTUDE ALGÉBRIQUE DE L'ADMISSIBILITÉ EN ESTIMATION LINÉAIRE DE LA MOYENNE SUR UN MODÈLE GÉNÉRAL DE GAUSS-MARKOV

Jean-Jacques Téchené

Abstract: It would appear useful to come back to the question of admissibility in linear estimation on a general Gauss-Markov model. We prove how a functional approach to this problem, based on a very important LaMotte theorem [11], clearly leads to characterization of all admissible linear estimators of mean vector or linear transformation of mean vector. Thus we have managed to modify significantly a Klonecki and Zontek theorem [9] allowing us to find in a different way an essential characterization shown by Baksalary and Markiewicz [4], based on the logic put forward by Rao (cf. [13] and [14]). We also give a variational characterization of admissibility in linear estimation and a geometrical proof of a Baksalary and Mathew theorem [7] relative to equality between the set of best linear unbiased estimators (or Gauss-Markov estimators) and the set of linear admissible estimators of mean vector. We finish by explaining more results on admissibility of linear estimators of vector parameters.

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