

Van Trees Inequality and Its Applications

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Abstract

Van Trees inequality is a Bayesian version of the classical Cramér-Rao lower bound. It is an important tool in establishing optimality of various estimation procedures and it has diverse applications in numerous statistical problems. Different versions of the van Trees inequality will be presented, together with some of its applications to the Decision Theory, Large Sample Optimality, Non- and Semiparametric Estimation , and in the Optimal Design Theory.