

论文

# THE UNBIASED ESTIMATION THEORY FOR EXPONENTIAL FAMILY

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**摘要** In this paper, the necessary and sufficient conditions for a function of the parameter in a one-parameter natural exponential family (NEF) to have an unbiased estimator with finite variance are obtained. The recursive formulae of the Fisher information matrices of any order for a one-parameter NEF and a one-parameter regular exponential family (REF) are derived respectively. The expression of the UMVUE for an estimable function of the parameter in a one-parameter NEF or a one-parameter REF is given.

**关键词** [UMVUE](#), [REF](#), [NEF](#), [moment polynomial](#)

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**Key words** [UMVUE](#) [REF](#) [NEF](#) [moment polynomial](#)

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