

EMPIRICAL BAYES APPROACH TO MULTIPARAMETER ESTIMATION: WITH SPECIAL REFERENCE TO MULTINOMIAL DISTRIBUTION

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(Received February 10, 1987; revised May 2, 1988)

Abstract. Empirical Bayes approach to estimation of many parameters is considered. Special features of the techniques discussed are: (i) the handling of unequal sample sizes at various stages of an Empirical Bayes sampling scheme and (ii) a general iterative procedure for estimating the parameters of a parametric prior distribution based on the likelihood approach. Linear empirical Bayes estimation is also considered. Application of the general techniques is demonstrated with special reference to a multinomial data distribution.

Key words and phrases: Empirical Bayes estimation, multiparameter, multinomial.