

A Generalization of the Levin-Robbins Procedure for Binomial Subset Selection and Recruitment Problems

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Abstract

We introduce a family of sequential selection and recruitment procedures for the subset identification problem in binomial populations. We demonstrate the general validity of a simple formula providing a lower bound for the probability of correct identification in a version of the family without sequential elimination or recruitment. A new application of the noncentral hypergeometric distribution is revealed. A similar theorem is conjectured to hold for the more efficient version which employs sequential elimination or recruitment.