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The Effect of Initial Sample Size and Increment in Simulation Samples on a Sequential Selection Approach

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Abstract : In this paper, we argue the effect of the initial sample size, and the increment in simulation samples on the performance of a sequential approach that used in selecting the top m designs when the number of alternative designs is very large. The sequential approach consists of two stages. In the first stage the ordinal optimization is used to select a subset that overlaps with the set of actual best k% designs with high probability. Then in the second stage the optimal computing budget is used to select the top m designs from the selected subset. We apply the selection approach on a generic example under some parameter settings, with a different choice of initial sample size and the increment in simulation samples, to explore the impacts on the performance of this approach. The results show that the choice of initial sample size and the increment in simulation samples does affect the performance of a selection approach.

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