

A THREE-STAGE PROCEDURE FOR SELECTING A GOOD ENOUGH SIMULATED SYSTEM

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Abstract

In this paper, we consider the problem of selecting one of the best simulated systems with high probability. We present a heuristic approach that consists of three stages for solving this problem. In the first stage, the ordinal optimization technique is used to select a subset that overlaps with the set of the best $m\%$ systems with high probability, then subset selection approach is used to get a smaller subset that contains the best among the subset that is selected by the first stage. Finally, the indifference zone approach is used to select the best system among the survivors in the second stage. This approach is tested on numerical examples, the results show that this approach indeed selects one of the best systems with high probability.

Keywords: Statistical Selection, Simulation Optimization, Ordinal Optimization, Ranking and Selection.

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