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Simulated Annealing Algorithm to Minimize Makespanin Single Machine Scheduling Problem withUniform Parallel Machines

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ABSTRACT
This paper presents a simulated annealing algorithm to minimize makespan of single machine scheduling problem with uniform parallel machines. The single machine scheduling problem with uniform parallel machines consists of n jobs, each with single operation, which are to be scheduled on m parallel machines with different speeds. Since, this scheduling problem is a combinatorial problem; usage of a heuristic is inevitable to obtain the solution in polynomial time. In this paper, simulated annealing algorithm is presented. In the first phase, a seed generation algorithm is given. Then, it is followed by three variations of the simulated annealing algorithms and their comparison using ANOVA in terms of their solutions on makespan.

KEYWORDS
Uniform Parallel Machines, Measure of Performance, Heuristic, Simulated Annealing Algorithm, ANOVA

Cite this paper

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