Abstract

Job Shop Scheduling Problem (JSSP) is an optimization problem in which ideal jobs are assigned to resources at particular times. In recent years many attempts have been made at the solution of JSSP using a various range of tools and techniques such as Branch and Bound and Heuristics algorithms. This paper proposed a new algorithm based on Genetic Algorithm (GA), Tabu Search (TS) and Simulated Annealing (SA) algorithms to solve JSSP. The proposed algorithm is mainly based on the genetic algorithm. The reproduction phase of the genetic algorithm uses the tabu search to generate new population. Simulated annealing algorithm is used to speed up the genetic algorithm to get the solution by applying the simulated annealing test for all the population members. The proposed algorithm used many small but important features such as chromosome representation, effective genetic operators, and restricted neighbourhood strategies. The above features are used in the hybrid algorithm to solve several bench mark problems.

References

Integrating Genetic Algorithm, Tabu Search and Simulated Annealing For Job Shop Scheduling Problem


Integrating Genetic Algorithm, Tabu Search and Simulated Annealing For Job Shop Scheduling Problem

Copenhagen Business School, Copenhagen, Denmark, 1997.

Index Terms

Computer Science
Artificial Intelligence
Keywords
Simulated Annealing  Tabu Search  Genetic Algorithm And Job Shop Scheduling