Abstract

The common problem of multiprocessor scheduling can be defined as allocating a task graph in a multiprocessor system so that schedule length can be improved. Task scheduling in multiprocessor system is a NP-complete problem. A number of heuristic methods have been cultivated that achieve partial solutions in less than the minimum computing time. Genetic algorithms have obtained much awareness as they are robust and provide a good solution. In this paper, genetic algorithm based on the principles of evolution to obtain an optimal solution for task scheduling is developed. Genetic algorithm is based on three operators: Natural Selection, Crossover and Mutation. The simulation results prove that the method proposed generates better results.

References

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**Index Terms**

- Computer Science
- Algorithms

**Keywords**

- Parallel computing
- Heterogeneous system
- Task scheduling
- Task duplication
- Schedule length and Load balance