Abstract

Multiprocessor real-time task assignment algorithm helps in the design and implementation of real time systems. Assigning real time task to heterogeneous multiprocessor system is challenging problem because the performance of each task varies from one processor to another. As the result of this determining solution for assigning task in heterogeneous processor leads to an NP hard problem. In this paper, Hybrid Ant Colony Optimization
incorporated with Tabu search algorithm [HACO_TS] is proposed for real time task assignment in the heterogeneous system. The proposed Max-Min Ant System is included with a Tabu search algorithm to improve task assignment solution without exceeding the processors computing capacity and fulfilling the dead line constraints. From the experimental results, the proposed algorithm achieved better utilization compared to random assignment algorithm.

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Index Terms

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Keywords
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