Application of Fuzzy Logic to Predictive Job Shop Scheduling in an Interconnected System

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Abstract

The features of high performance and reliability of systems have made them powerful computing tools. Such computing environment requires an efficient algorithm to determine when and on which system a given task should execute. This paper proposes a system that uses fuzzy logic in job allocation and job sequence or a dispatching rule in an interconnected system. The proposed system was implemented using MatLab 2008. It was designed to meet up with the timing, sequencing, routing and priority setting. The sequencing of jobs was approached using fuzzy controllers having rules with two antecedents which include the job processing time and the job Priority. From the result obtained, the system was able to achieve load balancing and minimize the job processing time.

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Index Terms

Computer Science
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Keywords

Fuzzy logic, job scheduling, job processing time, job Priority and interconnected system.