البحث رقم (7)

عنوان البحث :	**A novel task scheduling approach for dependent non-preemptive tasks using fuzzy logic**
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ملخص البحث	

Multiprocessor task scheduling problem is a pressing problem that affects systems' performance and is still being investigated by the researchers up till now. Many approaches have been developed to solve this problem. Finding the optimal schedules is considered to be a computationally hard problem. Consequently, that multiprocessor environment requires an adequate algorithm to predetermine which task should be executed and on which processor. In recent years, Researchers have used fuzzy logic in the field of task scheduling in order to achieve optimal performance, but this area of research is still not well investigated. In addition, there are various scheduling algorithms that used fuzzy logic but most of them are often performed on uniprocessor systems. This paper presents a new proposed algorithm which is called "Priority – Fuzzy- B-Level" algorithm in which the tasks' priorities are derived from the Fuzzy logic and bottom level parameter. This approach is designed to find task schedules with optimal or sub-optimal lengths in order to achieve high performance for a multiprocessor environment. With respect to the proposed algorithm, the precedence constraints between the non-preemptive tasks and their execution times are known and described by a directed acyclic graph. The number of processors is fixed, the communication costs are negligible and the processors are homogeneous. The suggested technique is tested and compared with the Prototype Standard Task Graph Set.