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Efficient Multiprocessor Scheduling Using Water Cycle Algorithm

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Abstract

The multiprocessor scheduling problem consists of a set of tasks to be performed using a finite number of processors. This paper deals with the problem in a heterogeneous processing environment. A nature-inspired metaheuristic algorithm, water cycle algorithm (WCA), is being used for the purpose. For the purpose of comparison, contemporary strategies using genetic algorithm (GA), bacteria foraging optimization (BFO) and genetic-based bacteria foraging (GBF) found in the literature also reproduced in this paper. Because of close relationships between the matrixes formed by the problem with those of the