عنوان مقاله:

Fuzzy Dynamic Programming for Scheduling Weighted Jobs on Single Machine

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خلاصه مقاله:

In this paper, dynamic programming for sequencing weighted jobs on a single machine to minimizing total tardiness is focused. Duo to significance of fuzzy numbers field, and its importance for decision makers who are facing on uncertain data, combination of dynamic programming and fuzzy numbers is applied. A random scheduling problem with fuzzy processing times is given and solved. In addition, algorithm consuming time during solving same category problem and different sizes are analyzed that for large problem CPU time usage is extremely unaffordable. Therefore demonstration of near-exact heuristic method such as Genetic Algorithm appears. In this paper sufficient discussion around solving this kind of problems and their algorithm analysis and a combination between Dynamic programming and genetic algorithm as a newly born method is proposed that stand on DP performance and genetic algorithm search power, and finally comparison on recent developed method has been held. Proposed method can deal with real-world problem easily. Thus, decision makers actually can use this modification of dynamic programming for coping with un-crisp problems

کلمات کلیدی:

Comparing Fuzzy Numbers, Dynamic Programming, Genetic Algorithm, Scheduling

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