عنوان مقاله:

Solving Multi-Mode Resource Constrained Project Scheduling Problem Using Artificial Bee Colony

محل انتشار:

هشتمین کنفرانس بین المللی مهندسی صنایع (سال: 1391)

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خلاصه مقاله:

This work presents an artificial bee colony algorithm (ABC) to solve the multi-mode resource constrained project scheduling problem (MRCPSP) with renewable andnonrenewable resources, in which each project activity has several execution modes. The algorithm has six phases: preprocessing, initialization, handling infeasible solutions,generating serial schedule, updating mechanism and termination. The first phase tries to reduce the search space before starting ofthe algorithm. The second phase generates randomly a set of initial solutions. The third phase transforms the infeasible solutions to feasible ones. The fourth phase generates serial schedules. The fifth phase updates the positions of the bees in thesearch space. Finally, the last phase terminates the algorithm and returns the best solution found by the method. The proposed algorithm is applied on a set of well known literaturebenchmarks. The results show that the proposed method is efficient, successfully solves the MRCPSP problems, and has competitive performance compared to the other methods

کلمات کلیدی:

component; Artifu:ial Bee Colony; Project scheduling; Multi-Mode resource Constrained Project Scheduling Problem

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