



SURVEY ARTICLE

A Study on Multi Project Resource Constrained Project Scheduling using Metaheuristic Approach

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Abstract— Project management in the business field is defined as managing and directing time, material, personnel, and costs to complete a particular project. One important phase in the project planning is Project Resource Scheduling. This process identifies resources amount and type according to the activity that scheduled. Planning the efficient use of resources is a complex task. The purpose is to create a smoother distribution of resource usage i.e. to minimize the fluctuation of the resource usage. The resource leveling is used to produce a solution to the problem. In meta-heuristic algorithms, generating individuals in the initial step has an important effect on the convergence behavior of the algorithm and final solutions. Using some heuristics for generating one or more near-optimal individuals in the initial step can improve the final solutions obtained by meta-heuristic algorithms. Different criteria can be used for evaluating the efficiency of scheduling algorithms, the most important of which are makespan and flowtime. This paper provides a survey on various multi project resource constrained scheduling algorithms used for evolutionary computing.

Key Terms: - Project Scheduling; Metaheuristic Approach; Ant Colony Optimization; Particle Swarm Optimization

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