

A scheduling problem for software project solved with ABC metaheuristic

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The scheduling problems are very common in any industry or organization. The software project management is frequently faced with different scheduling problems. We present the Resource-Constrained Project Scheduling problem as a generic problem in which different resources must be assigned to different activities, so that the make span is minimized and a set of precedence constraints between activities and resource allocation to these activities are met. This Problem is a NP-hard combinatorial optimization problem. In this paper we present the model the resolution of the problem through the Artificial Bee Colony algorithm. The Artificial Bee Colony is a metaheuristic that uses foraging behavior of honey bees for solving problems, especially applied to combinatorial optimization. We present an Artificial Bee Colony algorithm able to solve the Resource-Constrained Project Scheduling efficiently. © Springer International Publishing Switzerland 2015.

Artificial Bee Colony

Metaheuristic

Optimization

Project scheduling

Software project management

Combinatorial optimization

Evolutionary algorithms

Optimization

Project management

Scheduling

Artificial bee colonies

Artificial bee colony algorithms

Combinatorial optimization problems

Metaheuristic

Project scheduling

Resource constrained project scheduling

Resource-constrained project scheduling problem

Software project management

Problem solving