

Max-Min Ant System to solve the software project scheduling problem

[Sistemas de Hormigas Max-Min para resolver el Problema de Programación de Proyectos de Software]

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The Software Project Scheduling Problem is a special case of project scheduling problems. This problem consists in assigning workers with different skills, to a series of tasks in a software project so that the project is completed in the shortest time and the lowest cost possible. In addition, this allocation must meet the constraints of skill required for each task and the precedence constraints between tasks. The solution to this problem is presented using the Max - Min Ant System algorithm and the Hypercube framework. Two heuristics capable of guiding the algorithm to find better solutions are proposed. Experimental results are presented and compared with other techniques of resolution, showing an improvement by implementing our proposal. © 2014 AISTI.

Hypercube

Max-Min Ant System

Metaheuristics

Software Project Scheduling

Information systems

Ant system algorithm

Hypercube

Max-Min Ant System

Meta heuristics

Precedence constraints

Project scheduling problem

Software project

Software Project Scheduling

Scheduling