Multi-Objective Multi-Mode Resource-Constrained Project Scheduling Problem by Preemptive Fuzzy Goal Programming

Authors : Busaba Phurksaphanrat

Abstract : This research proposes a pre-emptive fuzzy goal programming model for multi-objective multi-mode resource constrained project scheduling problem. The objectives of the problem are minimization of the total time and the total cost of the project. Objective in a multi-mode resource-constrained project scheduling problem is often a minimization of make-span. However, both time and cost should be considered at the same time with different level of important priorities. Moreover, all elements of cost functions in a project are not included in the conventional cost objective function. Incomplete total project cost causes an error in finding the project scheduling time. In this research, pre-emptive fuzzy goal programming is presented to solve the multi-objective multi-mode resource constrained project scheduling problem. It can find the compromise solution of the problem. Moreover, it is also flexible in adjusting to find a variety of alternative solutions.

Keywords : multi-mode resource constrained project scheduling problem, fuzzy set, goal programming, pre-emptive fuzzy goal programming

Conference Title : ICCSEA 2014 : International Conference on Computer Science, Engineering and Applications

Conference Location : Madrid, Spain

Conference Dates : March 27-28, 2014