

A Formal Model of Multi-agent System for University Course Timetabling Problems

ABSTRACT

This paper describes a general framework of Multi-agent system which incorporates the hyper-heuristics search methodology with both Great Deluge and Simulated Annealing acceptance criteria respectively. There are three types of agents introduced in the framework which involve the communication between heuristic agents, cooperative agents and mediator agent. The common goal for each agent is to improve the quality of course timetabling solutions until the best solution is found when the termination condition meets. A preliminary experiment has been conducted towards this approach in university course timetabling problem and the results show the framework is able to increase the quality of existing solution compared with other meta-heuristics which have been studied in the previous researches.