

A performance comparison of metaheuristics search for university course timetabling problems

ABSTRACT

This research presents the metaheuristics approach in solving a real world problem of University Course Timetabling in Universiti Malaysia Sabah Labuan International Campus (UMSLIC), Malaysia. The problem domain in UMSLIC has several constraints which need to be satisfied. Solutions are considered as feasible if the hard constraints are satisfied, while minimizing the cost of soft constraints as much as possible. In this research, a Constraint Programming (CP) algorithm is proposed and implemented in order to solve the hard constraint while satisfying the soft constraints is handled by using the Great Deluge (GD) algorithm. A comparison performance of the linear and non-linear Great Deluge algorithm is also investigated based on the results obtained, the combination of CP and GD algorithms is effective to produce better solutions.