An Investigation into Variants of Great Deluge(GD) for Hyper-Heuristic (HH) Approach

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Abstract

Today, Hyper-Heuristic is not new in AI Field. It is an emerged search technology to select or generate (new) low level heuristics for combinatorial optimization problem and has been applied in many problem domains: personal scheduling, channel assignment and university timetabling and so on. In general, it has two main stages: heuristics selection and move acceptance method. For the latter stage, most of Meta heuristics algorithms are used. Among them Simulated Annealing (SA) and Great Deluge (GD) are very popular. Based on the numerous well-known papers and the previous experience, now, this paper is investigated the variants of GD such as NLGD (non-linear GD), FD (flex deluge) and EGD (extended GD) for the hyper heuristics approach. These variants of GD are also applied as move acceptance method in HH approaches for the university exam time tabling problem.