Abstract

The main reason of this research is to analyze how the GRASP heuristic works in solving problems of manufacturing cell formation . In this context, there are made so many experimental analysis, comparing empiric results to results obtained from other kind of algorithm mentioned in literature.

The design of all proposal algorithms was made by an evolution, always inserting new techniques to each step. We can mention some of these techniques used as filter, in construction phase, data mining and path relinking.

However, after finishing tests, the results obtained with proposal algorithms couldn't get better than the best algorithms found in literature. The best proposal algorithm was ranking in third in general comparison, that places it better than other five algorithms found in literature.

Keywords: Metaheuristic, GRASP, Cluster, Cell formation problem, Data Mining, Path Relinking