

Abstract

The aim of this work was to compare metaheuristic Ant Colony with other metaheuristics like Simulated Annealing, Tabu Search or Greedy algorithms. Metaheuristics were compared on three different NP-hard problems. Specifically, Traveling Salesman Problem, Graph Coloring Problem and Set Covering Problem. Detailed description of implementation of metaheuristics in particular problems can be found in this work. Metaheuristics were compared based on cost function and execution time. However, this work tries to identify instances, in which Ant Colony was the best choice. Ant Colony is reliable metaheuristic on large Traveling Salesman or Set Covering problems.