

Abstract

The propositional satisfiability problem (SAT) is one of the most studied NP-complete problems in computer science [1]. Some of the best known methods for solving certain types of SAT instances are stochastic local search algorithms [6]. Pure Additive Weighting Scheme (PAWS) is now one of the best dynamic local search algorithms in the additive weighting category [7]. Fang et. al [3] introduce the island confinement method to speed up the local search algorithms. In this paper, we incorporate the island confinement method into PAWS to speed up PAWS. We show through experiments that, the resulted algorithm, PAWSI, betters PAWS in solving the hard graph coloring and AIS problems.

