

A true annealing approach to the marriage in honey-bees optimization algorithm

Abstract

Marriage in Honey-Bees Optimization is a new swarm intelligence technique inspired by the marriage process of honey-bees. It has been shown to be very effective in solving the propositional satisfiability problem known as 3-SAT. The objective of this paper is to test a conventional annealing approach as the basis for determining the pool of drones. The modified algorithm is tested using a group of randomly generated hard 3-SAT problems to compare its behavior and efficiency against previous implementations. The overall performance of the MBO algorithm was found to have improved significantly using the proposed annealing function. Furthermore, a dramatic improvement was noted with the committee machine using this true annealing approach.