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Abstract

Traveler sales man problem is known research problem which has a lot of industrial applications. A lot of algorithms has been proposed to solve TSP, some of Ant Colony Optimization (ACO) and Bee Colony Optimization (BCO) algorithms. BCO algorithm has variations and enhancements to improve the performance. In this paper, a experimental comparison study between the basic Ant Colony Optimization and enhanced Bee Colony Optimization algorithms is done. Both ACO and enhanced BCO have been implemented using MATLAB. The comparison study includes comparing the time consumed, solution quality and algorithmic complexity in order to prove the effectivness and efficiency of each. The experimental study showed that the basic ACO outperforms the enhanced BCO in the required consumed time to get the solution path, while enhanced BCO proved to provide better solution quality.

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Keywords

ACO BCO TSP