Abstract

Travelling salesman problem (TSP) finds applications in wide domains. It is a well known NP Hard problem. In this paper we have proposed nature inspired ant colony optimization on travelling salesman problem. A comparative analysis is done among the standard travelling salesman problem and proposed ant colony based approaches. All the implementations are compared in terms of communication overhead and execution time. It is found that multi colony based approach in which all colonies are independent is most efficient in terms of communication overhead and execution time.

References

2. Tianjun Liao, Krzysztof Socha, Marco A. Montes de Oca, Thomas Stutzle "Ant Colony Optimization for Mixed-Variable Optimization Problems" in IEEE TRANSACTIONS ON
Solution to Travelling Salesman Problem by Nature Inspired Algorithm

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Travelling salesman problem, Ant colony optimization, NP-Hard, metaheuristic.