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

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Index Terms

Computer Science  Algorithms

Keywords

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