

# 改良型巢狀分割法應用於旅行推銷員問題之研究

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## 摘要

This paper presents an implementation of the Modified Nested Partitions (MNP) meta-heuristics for solving the Traveling Salesman Problem (TSP). The NP method systematically partitions the feasible region and concentrates the search in regions that are the most promising. The most promising region is selected in each iteration based on information obtained from random sampling of the entire feasible region and local search. In the MNP, we modified the NP method's random sampling, local search methods and backtracking rules. Twenty problems from TSPLIB library are used to test the quality of the MNP. The average accuracy of the best solutions of the twenty problems computed by the MNP is 1.14% above the performance of the current best known solutions.

**關鍵字** : Traveling salesman problem (TSP); Meta-heuristics; Nested partitions