結合門檻接受法與費洛蒙記憶於求解車輛路線問題

卓裕仁, 鄭佳琳

運輸科技與物流管理學系

管理學院

m9203001@chu.edu.tw

摘要

The Threshold Accepting (TA) is a deterministic meta-heuristic method, which is capable of escaping from the fetter of local optimum by accepting a poor solution. On the other hand, the Ant Colony Optimization (ACO), which transfers the objective value of found solutions into the pheromone and stores it in arcs, is a random-searching meta-heuristic. This study intended to introduce the pheromone memory of ACO into the TA scheme for solving the Vehicle Routing Problem (VRP), and choose thirty-two VRP benchmark instances to test the proposed TA_ACO approach. Experimental results showed that the TA_ACO exactly improved the performance of solving the VRP instances, and the average percentage of errors among the 32 instances was merely 2.87%.

關鍵字：Threshold Accepting (TA), Vehicle Routing Problem (VRP), Pheromone Memory.