

# 物流中心之粒子群最佳化演算法應用效率之提昇

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## 摘要

The picking policy is the important factor for order picking routing planning in distribution centers. Good routing planning will improve the efficiency of order picking systems effectively and immediately. It does not only decrease operating cost but also promote the enterprises' competition. The problem of picking routing planning is a NP-Hard problem, same as Traveling Salesman Problem (TSP) and Vehicle Routing Problem (VRP). This study proposes a heuristic algorithm to find the initial solution for PSO algorithm in order to improve the quality of the solution and speed up the process for finding the solution of PSO. Compared with past literatures by simulation, it is verified that the performance of this study has the better performance. This research provides industry with a model to consult when redesigning routing planning

**關鍵字：**Order Picking System, Picking Routing Planning, Particle Swarm Optimization, Maximum Loop Insertion