

工程与应用

基于车辆路径问题的带近邻因子的粒子群算法

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摘要 提出了一种改进的粒子群算法。该算法通过引入近邻因子, 增强了当前粒子的学习功能, 克服了基本粒子群算法易陷于局部最优的缺陷, 提高了算法进化的收敛精度。将该算法用于解决车辆路径问题, 实验结果表明具有较好的性能和很好的应用价值。

关键词 [近邻因子](#) [粒子群算法](#) [车辆路径问题](#)

分类号

Particle Swarm Optimization with near neighborhood factor based on Vehicle Routing Problem

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Abstract

A modified Particle Swarm Optimization (PSO) is given in this paper. By using a near neighborhood factor, the learning capability of particles is enhanced; it can effectively overcome the shortcoming of trapping into a local optimization as compared with original PSO and improve the accuracy in the evolution period. The proposed algorithm has been applied to the Vehicle Routing Problem (VRP). The experiment results verify that the new algorithm is effective and useful.

Key words [near neighbor factor](#) [Particle Swarm Optimization \(PSO\)](#) [Vehicle Routing Problem \(VRP\)](#)

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