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基于SOFM的P-Hub中心问题的最优求解

(吉首大学物理科学与信息工程学院, 湖南 吉首 416000)

Optimized Solution of P-Hub Median Problem Based on SOFM

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摘要 “位置-分配问题”是运输问题中一个重要的研究问题,其中P-Hub中心问题被广泛的应用在航空、通讯、邮件送发问题上.目前已有许多启发式的方法被广泛应用求最优解,如基因算法、模拟退火法、Hopfield network等;本研究针对顾客及服务中心数目已知的条件下,提出了基于人工神经网络的自组织特征映射网络求解方法,运用神经元的自我学习功能来找出最佳的服务中心位置.

关键词: 位置-分配问题 P-Hub中心问题 自组织特征映射

Abstract: Location-allocation is a important research area in transportation problem, and P-Hub median is widely used in aviation, communication, post system and so on. Many heuristic methods are applied to find optimal solution in P-Hub median problem, such as GA, SA, Hopfield Network etc. With the number of customers and service centers known, this article presents the solution method based on artificial neural network SOFM, which uses self-learning of neurons to get optimal location and cluster.

Key words: location-allocation problem P-Hub median problem SOFM

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