

システム情報工学研究科特定課題研究報告書概要

年 度	平成 25 年度	学位名	修士( ビジネス )	
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報告書題目 (株) いいじまの自動販売機管理事業における作業の疲労度予測と効率化に関する研究 (Heuristic Algorithms for Finding Efficient Routes of Vending Machines Considering Work Fatigue) ((作業疲労度を考慮した効率のよい自販機巡回路を求めるための発見的解法))				
報告書概要  In Iijima Corporation's existing distribution pattern, the 586 vending machines distribution task is performed mainly by 6 people. It seems that workload imbalance has somehow occurred in the distribution process. Route design has become a major concern to reduce the distribution cost and to balance distribution workload in Iijima Corporation in practice. In order to characterize the route design problem, we first aim at focusing on applications of the k-means clustering algorithm using SPSS software for dividing the ownership of intensive distribution points into several clusters. We then make a feasible route among the points of each cluster using nearest insertion heuristics algorithm and reconstruct the clusters to improve workload balancing considering fatigue degree of each region provided in Chapter1. In this chapter, we present a framework so called "cluster-first, route-second, balancing-third" method to explore possible solutions to this issue. The aim of this chapter is to provide a framework to compute efficient travelling route considering not only the total distance but also the fatigue degree in Iijima Corporation.				
審査日	平成 26 年 01 月 27 日			
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