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Vehicle scheduling based on plant growth simulation algorithm and distribution staff behavior

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ABSTRACT

Considering the distribution staff's satisfaction and fuzzy characteristics of customers' time window, the paper makes fuzzy description and measurement of staff satisfaction from such three aspects as salary and welfare, working strength and harmonious cooperation. Taking the minimum total logistics distribution cost and maximum distribution staff satisfaction as the objective functions, the study constructs the logistics distribution vehicle scheduling model considering the staff satisfaction and fuzzy time window. The plant growth algorithm is designed to solve the logistics distribution vehicle scheduling model. The simulation results show that the proposed the model succeeds in improving the customer satisfaction and the distribution efficiency, and that the optimization algorithm is feasible and effective.

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Izvirni znanstveni članek

Razporejanje vozil z uporabo algoritma, ki simulira rast rastlin in upoštevanjem obnašanja distribucijskega osebja

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POVZETEK

Prispevek obravnava mehek opis in meritve zadovoljstva osebja distribucijskega oddelka iz treh vidikov, in sicer plače in blaginje, delovne moči ter usklajenost sodelovanja. Pri tem so upoštevani zadovoljstvo distribucijskega osebja in mehke značilnosti časovne razpoložljivosti strank. Najmanjši stroški logistične distribucije in najvišja stopnja zadovoljstva distribucijskega osebja sta bili optimizacijski funkciji za model logistične distribucije razporejanja vozil, pri katerem raziskava upošteva zadovoljstvo osebja in mehki razpoložljivi čas strank. Algoritem, ki simulira rasti rastlin, je bil prilagojen za reševanje modela logistične distribucije razporejanja vozil. Rezultati simulacije so pokazali, da predlagani model uspe izboljšati zadovoljstvo strank in učinkovitost distribucije ter da je optimizacijski algoritem izvedljiv in učinkovit.

PODATKI O ČLANKU

Ključne besede:
Razporejanje vozil
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