
Consistent-DARP

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Abstract

We investigate a multi-period Dial-A-Ride Problem in the context of passengers with disabilities. The problem integrates an objective related to cost as well as an objective on the consistency of passengers schedules. This consistency is defined as the number of significantly different pickup times in a one week long planning. The problem is modeled as a route based mathematical model. This set partitioning formulation is combined with a large neighborhood search in an epsilon constraint algorithm. The method is evaluated on a benchmark of the literature and some managerial insights are derived on real instances.

Keywords: Multiperiod DARP, Time consistency, Metaheuristic

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