



Research School for Operations
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Time dependent mobility allowance shuttle transit (TD-MAST) service: a hybrid way to integrate passenger and freight transportation services

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Recently, the hybrid transportation system which combine characteristics from both the traditional fixed route system and dial-a-ride (DARP) is get increasingly attention. Our research is focus on one type of service which named as Mobility Allowance Shuttle Transit (MAST) service that consists of the same vehicle performing the fixed and variable portions of the trips. However, little research is available on considering road congestion, which means vehicles travel time in a traffic network is dependent on their departure time. Our research fills this gap and explores time dependent Mobility Allowance Shuttle Transit (TD-MAST) service and use time dependent shortest path algorithm with other techniques to solve this problem with different sizes. Compared to the time independent counterpart in the literature, numerous complexity is added to the time dependent models.