عنوان مقاله:

The Development of a Hierarchical Car-following Model of Traffic Behavior on Freeways and Expressways

محل انتشار:

هشتمین کنگره بین المللی مهندسی عمران (سال: 1388)

تعداد صفحات اصل مقاله: 8

نویسنده:

Mehdi Fallah Tafti - *Assistant Professor in Traffic Engineering, Civil Engineering Department, Yazd University, Iran*

خلاصه مقاله:

Several distance thresholds were defined in the car following algorithm namely safety distance, desired following distance, minimum following distance, and catch up distance. These distance thresholds, plus the angular velocity threshold and the relative speed of vehicle to its front vehicle, were used as the measures to classify the situation of vehicle. Seven different possible situations were defined. For each situation, the proper relationship to calculate the required acceleration of vehicle was proposed. A combination of stopping distance and constant deceleration models was used in the car following algorithm. When the vehicle is moving in the merge area, the resulting acceleration rate may be adjusted to reflect drivers desire to facilitate merging. The results of validation of the developed car-following .model indicated that there is a good match between the results of the model and real data under similar conditions

کلمات کلیدی:

car following, microscopic simulation, close following