Equivalent Transformation for Heterogeneous Traffic Cellular Automata

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Abstract

Understanding driving behavior is a complicated researching topic. To describe accurate speed, flow and density of a multiclass users traffic flow, an adequate model is needed. In this study, we propose the concept of standard passenger car equivalent (SPCE) instead of passenger car equivalent (PCE) to estimate the influence of heavy vehicles and slow cars. Traffic cellular automata model is employed to calibrate and validate the results. According to the simulated results, the SPCE transformations present good accuracy.

Keyword：traffic flow, passenger car equivalent, cellular automata