城市道路人-车冲突和碰撞概率微观模型研究

Study of Probability Micro-models for Pedestrian-Vehicle Traffic Conflicts

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中文摘要

利用临界间隙理论，定义了城市道路行人过街的安全感知特征；在此基础之上，利用概率论方法，深入研究了行人与机动车之突和碰撞概率微观模型。其次，采用贝叶斯全概率公式和蒙特卡洛仿真方法求出具体的概率值，来分析行人安全感知、驾驶人反应时于人-车冲突概率的90%置信水平建立了行人过街的危险度评价指标，从而为交通管制实施提供最佳依据。

英文摘要

The safety perception of pedestrian crossing the urban road is defined according to the critical theory; On th pedestrian-vehicle traffic conflict and collision is studied in order to derive the probabilistic microscopic models collision. Then, the value of probability is calculated by the formula of Bayesian statistics and Monte Carlo simula perception、reaction time、traffic volumes and vehicle speed on the pedestrians. Finally, the indicator of risk eval confidence level of probability so as to provide the best foundation for the implementation of traffic regulation.