

## عنوان مقاله:

Transportation Safety Modeling Considering Land-Use Type

## محل انتشار:

هشتمین کنگره ملی مهندسی عمران (سال: 1393)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

Transportation safety planning is effective in reducing direct costs of crashes (e.g., injuries, fatalities, financial losses and delays) as well as indirect costs (e.g., wasting energy, missing workforce in the society, and economic and psychological consequences). Since different types of land uses are associated with different driving behaviors, pedestrian activities, transportation modes, demographic characteristics, traffic flow and roadway conditions, it is vital for practitioners to consider the transportation safety related countermeasures for each type of land use separately. In this research, data for 1,398 segments of the city of Charlotte, North Carolina is used to model crash frequency and then models are validated using data for 352 segments. First, the crash data is clustered into different homogenous groups using Two-Step Cluster Analysis to evaluate the effectiveness of land-use type in categorizing the crash data into the different levels of safety. Then, Negative Binomial Regression (NBR) models are developed for residential, commercial and industrial land uses separately as well as for the entire set of samples including all types of land uses. Significant variables are then compared across these three categories (land uses) to identify the role of different factors (such as traffic volume, congestion ratio, speed limit, number of lanes, condition of parking on the roadside, etc.) in reduction of crashes for each type of land use. Based on the final results of the modeling procedure, recommendations are made to increase transportation safety considering the type of land use

## کلمات کلیدی:

Land Use, Crash Frequency, Safety Planning, Negative Binomial, Two-Step Cluster Analysis

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/296539>

