عنوان مقاله:

Identification Methods of Accident Hotspots and Providing a Model for Evaluating the Number and Severity of Accidents on Roadways

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خلاصه مقاله:

Whenever an accident index exceeds a certain limit, then the critical conditions is created for a spot or section. Accordingly, that spot and section are identified as a hotspot or black spot. Therefore, determining the criterion for critical limits is always one of the essential challenges for traffic safety authorities. The purpose of identifying accident hotspots is to achieve high-priority locations in order to optimally and effectively allocate the safety budgets as well as to promote more efficient and faster safety at the road network level. Obviously, a suitable criterion for communities depends on different factors and parameters such as annual safety budgets, technology level, the amount of trained personnel, community operating strengths, and safety strategic plans and projects. Thus, it is not possible to prescribe a definite and stable criterion for different communities. In recent years, human, vehicle, road and environment have been recognized as the three main effective elements of the road transportation in the occurrence of accidents. In the present study, with combining the parameters related to accidents (including accident time, accident cause and accident severity), geometric parameters of the accident location (including: road width, shoulder width and radius of horizontal and vertical curves, road surface conditions, vertical slopes), and traffic parameters (including: average daily and hourly traffic volume, heavy traffic percentage and average speed), hotspots were identified by using the superior methods of Poisson regression and negative binomial distribution and based on the combined criteria of number and severity of accidents and equivalent damage factors.

کلمات کلیدی:
hotspots identification, regression models, number and severity of accidents

لینک ثابت مقاله در پایگاه سیویلیکا: