



Rain-related Fatal Crashes in Texas

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Weather has a direct impact on traffic safety. This study focuses on fatal crashes in the presence of rain. We reviewed information related to the events that lead to rain-related crashes in the Texas since 1982. Analysis of the data reveals that 12.4% of crashes in Texas were rain-related. Most rain-related crashes are located in Texas "Flash Flood Alley" which includes major urban centers. Fatal crash data and GIS are used to explore and identify the spatio-temporal distribution of the crashes. Spatial statistical techniques are used to identify significant patterns of rain-related fatal crashes. Logistic and nonlinear regression is used to identify and rank all environmental and non-environmental factors that contribute to fatal crashes. Focus will be on factors that amplify the rain effect. Identifying the variables contributing to these fatal crash types is necessary for the implementation of effective countermeasures for road weather safety purposes.