

Pedestrian Detection in a Night Time Driving and Texting Task

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Abstract: The dangers of texting and driving have become the focal point of driving research in recent years. Most of this research has been directed at examining the dangers distracted drivers present to other motorists. However, roadside pedestrians are also endangered by distracted drivers. According to the National Highway Traffic Safety Administration nearly 76,000 pedestrians were injured in traffic accidents in 2012. An additional 5,000 accidents resulted in pedestrian deaths.

Current research tends to focus on daytime driving despite the fact that distracted night time driving is far more dangerous for motorists and pedestrians alike. Nearly 70% of all pedestrian/automobile fatalities in 2012 occurred at night. These numbers are projected to continue over the coming years. Despite this projection surprisingly little research has been done on preventing pedestrian/vehicle collisions. Even less research has been done on night time prevention.

The goal of this research study was to examine the effects texting while driving at night has on a driver's ability to detect roadside pedestrians as well as examining the effects the pedestrian's clothing has on their visibility. To do this participants were driven through a closed road course at night and given a texting task to complete when prompted. The participants were also asked to report anytime they saw a roadside pedestrian. The pedestrians were wearing one of three possible clothing options.

The results of this study indicate that the presence of texting is not the determining factor of if a pedestrian will be detected, but instead it is the pedestrians clothing choice that determines detection and the distance of detection.