



Research In Progress

Pedal Application Errors

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A number of spectacular crashes have resulted from drivers mistakenly pressing the accelerator instead of the brake, but it is unclear how frequently these pedal application errors occur. Pedal misapplication events are difficult to study because drivers may not realize that they made an error, believing instead that the accelerator stuck and prevented them from braking. Further, these incidents tend to occur on private property, often driveways or parking lots, so may not be reported to police or included in crash databases.

Pedal errors have resulted in property damage as well as severe injuries and fatalities. An older man drove into an outdoor market in Santa Monica in 2003 causing 10 deaths and 63 injuries. In October of 2007 a Chicago driver made a similar error as he was parking, and hit and killed a person standing on a sidewalk. In August of 2007 a driver injured four people when he applied the accelerator instead of the brake and drove his vehicle into a restaurant.

The purpose of this study is to acquire information from sources including media reports and police records to determine the extent of crashes resulting from pedal application errors. Data from an instrumented vehicle task will provide further insight into driver behaviors and characteristics that may increase the likelihood of a pedal error. Instruments will collect data on various measures, including positions of drivers' feet, time between accelerator release and braking. Cameras will capture traffic conditions ahead of and behind the test vehicle, as well as driver behaviors, including foot movements.

Findings from this study will be useful in developing countermeasures to reduce pedal application error crashes.

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