

Investigation of Riders' Path on Horizontal Curves

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Abstract : It is well known that trajectory along with speed are two of the most important contributing factors in road accidents. Trajectory is meant as the "line", usually different from the center-line that a driver traverses through horizontal curves which depends on the characteristics of the road environment (especially the curvature), the vehicle and the driver himself. Drivers and especially riders, tend to broaden their paths in order to succeed greater path radiuses and hence, reduce the applied centrifugal force enhancing safety. The objective of the present research is to investigate riders' path on horizontal curves. Within the context of the research, field measurements were conducted on a rural two lane highway, with the participation of eight riders and the use of an instrumented motorcycle. The research has shown that the trajectory of the riders is correlated to the radius and the length of the horizontal curve as well.

Keywords : trajectory, path, riders, horizontal curves

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