High Collision Concentration Location Identification in California

Abstract

Improving the safety of the roadway system is number one priority for California Department of Transportation (Caltrans). To this end, Caltrans continuously monitor traffic collisions that occur on its roadway system to identify high collision concentration locations (HCCL) that can benefit from the implementation of safety countermeasures and the results of such monitoring effort become the basis for determining the allocation of hundreds of millions of dollars of government funding to different programs. Many roadways sites have been further improved due to such efforts, however, existing procedures for detecting HCCL have room for further improvement.

In an effort to assist Caltrans in improving HCCL detection procedure, the researchers from University of California at Berkeley developed a Continuous Risk Profile (CRP) approach. The performance of CRP approach and two existing procedures called Sliding Moving Window (SMW) and Peak Searching (PS) method have been evaluated using empirical data from more than 600 miles of freeways located in California. The findings from the empirical analysis will be presented in the seminar. The overall HCCL detection procedures from collection of traffic collision data, analysis, field visit and incorporating the site into funding program will be discussed together with challenges that Caltrans face in each step.

Biography

Koohong Chung has B.S., M.S., and Ph.D. from University of California at Berkeley (U.C.Berkeley) in Civil and Environmental Engineering department and currently working at California Department of Transportation (Caltrans). At Caltrans, Dr. Chung has worked on traffic operations, incident management, and traffic safety related projects while serving as a panel member for number of research projects that were funded by Caltrans. Through those projects, Dr. Chung gained in-depth knowledge of the Caltrans databases, the procedures for selecting high collision concentration locations, and the policies involving safety investigation. He is also currently teaching a graduate level engineering class at U.C.Berkeley.

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