

TRANSPORTATION SEMINAR

An Alternative Approach to Safety Analysis

Friday, February 17, 2017

3:00pm to 4:30pm

Please join us in Schwada Building (SCOB) room 101 **Mohamed Abdel-Aty, Ph.D., P.E.**

Professor of Civil Engineering, University of Central Florida



Traffic safety analysis can be divided into two broad categories: microscopic and macroscopic analyses. The microscopic safety analysis focuses on roadway entities such as segments, intersections, corridors and so on. The microscopic safety analysis aims at identifying contributing factors for traffic crashes from roadway geometric designs, traffic related characteristics of roadway entities, and providing specific engineering countermeasures to alleviate traffic safety problems. On the contrary, the macroscopic safety analysis concentrates on zonal based traffic crashes with demographic, socio-economic, and zonal level traffic/roadway characteristics. Compared to the microscopic level study, macroscopic analysis provides a broad spectrum perspective, and also it suggests long-term policy based countermeasures such as enactments of traffic laws/rules, police enforcement, education, safety campaign, and area-wide engineering solutions. A need of incorporating roadway safety considerations in long-term transportation planning process has been emphasized in the last decades in accordance with Moving Ahead for Progress in the 21st Century Act (MAP-21) and Fixing America's Surface Transportation Act (FAST Act). This integration planning process is called transportation safety planning or macroscopic traffic safety analysis. Incorporating safety in the long-range transportation plans has been a vital issue. In this seminar, general introduction to the macroscopic safety analysis, geographic units, statistical methodologies, contributing factors by crash types, and recent topics in macroscopic safety studies will be discussed to provide attendees with a better understanding and recent trends of traffic safety research studies at the macroscopic level.

Dr. Mohamed Abdel-Aty, PE is a Pegasus Professor and Chair of the Civil, Environmental and Construction Engineering Department at the University of Central Florida (UCF). He is also the Deputy Director of the Transportation Center (CATSS). His main expertise and interests are in the areas of traffic safety analysis, simulation, big data and data analytics and ITS. In the last 20 years, Dr. Abdel-Aty has managed more than 50 research projects in excess of \$12 million. Dr. Abdel-Aty has published 440 papers, more than 220 in journals (Citations 8600, H-Index 47). He supervised to graduation 58 PhD and MS students. Dr. Abdel-Aty is the Editor-in-Chief of Accident Analysis and Prevention, the premier journal in safety. He is a member of the Editorial Boards of the ITS Journal and the International Journal of Sustainable Transportation, and member of multiple TRB Committees, including Safety Performance and User Information Systems. Dr. Abdel-Aty is a leading traffic safety expert at both the national and international levels.


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