Transportation Center Seminar

“Road Safety Analyses using Data from Naturalistic Driving Studies: Challenges and Opportunities”

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Thurs. May 16, 2013
4:00 – 5:00 pm
Location:
Transportation Center
Chambers Hall – 600 Foster
Ruan Conference Center
Refreshments available at 3:30 pm

Abstract:

Naturalistic driving studies seek to obtain information about driver behavior using onboard vehicle sensors and cameras with an experimental protocol that asks study participants to drive "naturally"; i.e. as they normally would. The technique has received much recent attention as a method to better understand driver behavior that contributes to crash events; the expectation is a better understanding of the role of the driver in crash occurrence.

Challenges posed by naturalistic driving studies include: small sample size of crash events, difficulty in analyzing data from differing time scales and measurement accuracies, and a relative lack of methodological studies with the technique. This presentation provides an overview of the study method and then several examples of analysis methods that aim to overcome study challenges. Particular attention is paid to identification of surrogate events which may be thought of as near crashes that can be used to supplement crash data.

Bio: Dr. Paul P. Jovanis is Professor, Civil and Environmental Engineering at Penn State and Director, Transportation Operations Program at Penn State’s Larson Transportation Institute. Dr. Jovanis conducts research in analysis methods for road safety management. He is developing methods to better utilize the capabilities of naturalistic driving study data. He is Principal Investigator on a $2million SHRP 2 safety naturalistic driving data collection project, one of 6 sites nationally. Jovanis continues to study the safety implications of driver hours of service regulations; work begun at Northwestern’s Transportation Center in the 1980’s. Dr. Jovanis has served on a number of Transportation Research Board committees and task forces; he just began serving as Chair of the Safety and System User Group, supporting over 20 committees in safety-related areas.