

Civil and Environmental Engineering

Present

Connecticut Roadway Safety Management System (CRSMS)

Speaker:

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Research Scientist – Project Manager
Connecticut Transportation Institute

The Connecticut Transportation Safety Research Center (CTSRC) collaborates with the Connecticut Department of Transportation on a variety of transportation safety data collection and analysis projects. The Connecticut Roadway Safety Management System (CRSMS) is a data-driven roadway safety management system customized for Connecticut and developed to implement the Highway Safety Manual. In this presentation Dr. Zhao will demonstrate the six analysis modules in the safety management system, including network screening, diagnosis, countermeasure selection, economic appraisal, and safety effectiveness evaluation. The network screening module integrates maps and allows identifying locations with the highest potential for safety improvements. The diagnosis module includes tools such as crash map, tabular data, summary statistics, crash trees, collision diagrams, and site condition view for users to identify potential factors that contribute to the crash patterns. The countermeasure selection, economic appraisal and project prioritization let users select, compare, and prioritize engineering solutions that can potentially reduce crash frequency or severity. The Safety Effectiveness Evaluation Module allows users to evaluate the change in crashes from the implemented safety solutions. It leads to a self-assessment of how effective funds or resources have been allocated for safety improvements.

Bio:

Dr. Zhao obtained her Ph.D. in Transportation Systems Engineering with a concentration on Transportation Safety from the University of Nebraska-Lincoln. Her experience includes implementing state-of-the-art crash data analysis methods using statistical and machine learning models, analyzing big transportation safety data from a variety of sources, and developing computer programs to automate the data processing pipelines. Dr. Zhao is currently working as a research scientist and project manager at CTSRC where she provides technical expertise and leadership in developing and maintaining an enterprise level crash analysis system that conforms to the Highway Safety Manual (HSM).

Friday, September 16, 2022
12:20 – 1:10 PM
McHugh Hall (MCHU) - Room 106