

Adams, New York State DOT

- Utilization of LIDAR Technology for Highway Inventory by Huda Shamayleh and Aemal Khattak, University of Nebraska-Lincoln
- Extraction of Transportation Infrastructure from Hyperspectral Remote Sensing Data, James Gerjevic, University of Northern Iowa
- Application of GIS to Emergency Management, Cynthia Wilson Orndoff and Raman Deep Mata, University of Missouri-Columbia

National Bridge Live Load Testing and Rating Workshop

Last March the MTC organized, developed, and hosted the first-ever “National Bridge Live Load Testing and Rating Workshop” in Kansas City, Missouri, where the University of Missouri-Columbia showcased its field bridge load-testing vehicle. Approximately 90 people attended and actively participated in the event.

User Benefits of Winter Maintenance – Intercity Traffic During Winter Storms

(Tom Maze, Iowa State University)

Winter storm maintenance is generally understood to be beneficial. Comparing the value of investments in winter maintenance versus other things, such as roadside safety devices, is difficult because of the lack of analytical information. The objective of this project is to better quantify the logistics costs of reducing the level of service and of closing intercity highway routes because of winter weather. The project will also determine safety implications and traffic pattern changes due to weather-induced road closures, and if feasible, identify measures of user cost due to winter storm-induced road closures and severe winter storms.

Roadway Alignments as Assets: Evaluating Alternatives for Valuing Major Highway Corridor Rights-of-Way

(David Plazak, Iowa State University)

In the United States, there are approximately 625 billion square feet of public roadway rights-of-way with a potential book (original) valuation of about \$3.5 trillion, or \$70 billion in an average-sized state. A series of short-sighted decisions about direct accesses, traffic signals, median breaks, or adjacent land development could significantly diminish the value of such assets. The main objectives of this project are to explore alternative means of valuing right-of-way, to understand what these different approaches to valuation imply, and to determine which one presents the best picture of the value of the assembled right-of-way.

A Web-based Implementation of Winter Maintenance Decision Support System Using GIS and Remote Sensing

(Ramanathan Sugarman, University of Northern Iowa)

Winter maintenance, particularly snow removal and the stress of snow-removal materials on public structures, is an enormous budgetary burden on municipalities and non-governmental maintenance organizations in cold climates. Lately, geo-spatial technologies, chiefly involving the use of GIS for mapping and route-generation, are providing a valuable tool for planning snow removal operations. However, most are not constructed with a non-technical user in mind. The objective of this project is to implement a web-based winter maintenance decision support system that improves the ability of stakeholders to evaluate different procedures for optimally managing assets for snow removal. This will be accomplished by integrating geo-spatial analytical techniques, a snow removal asset management system developed with support from the MTC, and spatial decision support systems.