U.S. Department of Transportation
Research and Innovative Technology Administration

Research Development & Technology Information Interchange

http://www.rita.dot.gov

Volume 1, Issue 1 **September 1, 2009 – October 23, 2009**

***Note- press ctrl and left click to jump directly to opportunities of interest.**

Resources

International Transportation Forum Short-term Database. *The Organization for Economic and Community Development, International Transportation Forum (ITF) Short-term Database:* The ITF Short-term Database is available for access on-line for researchers to use. Data covers surface transportation measures reported by quarter for member countries. The following link to this Web program allows the researcher a selection of data series and exports them into different formats. This program also provides a graphic representation of the researcher's selection. For further review, go to: http://www.internationaltransportforum.org/shorttermtrends/.

University Transportation Centers (UTCs)

Technical Reports

Providing Reliable Route Guidance using Chicago Data. *The Department of Civil & Environmental Engineering, Northwestern University and the Department of Computer Science, University of Illinois, Chicago* published Technical Report #2009-001. The focus of this research is to develop methods and procedures to implement reliable route guidance, and moreover, to demonstrate its utility. For further information, go to: http://www.ccitt.northwestern.edu/documents/CCITTreportNie_Nelson(Year%201).pdf.

Final Reports

Road Traffic Safety in African Countries – Status, Trend, Contributing Factors, Counter Measures and Challenges. *Baruch College, The City University of New York* published, Final Report #49777-31-19. The study's intention is to update the status, trends, causes, existing countermeasure, and issues in traffic safety, facing African countries. It is the hope of the author that the finding could stimulate discussion and to inform policy makers in traffic safety policy formation. For further information, go to: http://www.utrc2.org/research/assets/168/FinalRept-Traffic-Safety1.pdf.

Developing Model Asphalt Systems using Molecular Simulation. *University of Rhode Island Transportation Center* published Final Report #000216. The focus of this project was computer simulations were have been conducted in order to calculate the physical properties of mixtures of molecules, with their concentrations chosen so they serve as a simplified model of asphalt. Different molecules were chosen to reflect the maltene, resin, and asphaltene components of an asphalt. The energies and forces originating from each molecule are represented using classical mechanics-based equations for the contributions from each atom, with the underlying parameters taken from established studies in the chemistry literature. For further information, go to: http://www.uritc.org/media/finalreportspdf/000216.pdf. .

Research in Progress (RIP)

Reducing Noise and Vibration of Hydraulic Hybrid and Plug-in Hybrid Electric Vehicles-Phase III Control of a Single-Axis MR Mount. *University of Toledo, Ohio*'s project focuses on efforts to increase fuel efficiency and reduce polluting emissions. The proven advantages of the hybrid vehicles or variable cylinder management also comes with challenging problem of noise, vibration and harshness (NVH). This issue has to be properly addressed in order for the technologies to quickly enter the market or be widely applied. For further information, go to: http://www.utoledo.edu/research/ututc/researchprojects/UTUTC-AE-4.html.

A Data Library Management System for Midwest Freight View and its Data Repository. *University of Toledo, Ohio*'s

project is a continuation of the development of Midwest Freight View (MWFV), a comprehensive data repository and information delivery system for intermodal freight transportation in the Great Lakes Region. In particular, this project shall be devoted to the development of a set of formalized data library functions that include a complete set of user guides, technical manuals, and training modules for using the system, a detailed inventory of the contents of the data repository, and complete documentation of the contents of the repository according to national metadata standards. In addition, the project will include a related set of tasks that include the establishment of formally-defined directory structures for storage of the data, backup and security protocols, and the development of formal procedures for updates, additions, or edits to the contents of the repository. For more information, see: http://www.utoledo.edu/research/ututc/researchprojects/UTUTC-IU-16.html.

Transportation Informatics: An Image Analysis System for Managing Transportation Facilities -- Phase II. *University of Toledo, Ohio*'s project is a continuation (Phase II) of a proof of concept demonstration project (UTUTC-IU-5) with the objective to assist transportation agencies efficiently record, monitor and evaluate the conditions of transportation infrastructure assets so as to more effectively managing the needs for maintenance or rehabilitation with minimum total costs and least interruptions of service to the public. For further information, go to: http://www.utoledo.edu/research/ututc/researchprojects/UTUTC-IU-14.html.

Maximizing Port and Transportation System Productivity by Exploring Alternative Port Operation Strategies. *Georgia Institute of Technology, Atlanta and Georgia Transportation Institute University Transportation Center's* project objective is to explore solutions for maximizing both port and freight industry productivity with better visibility, understanding, and measure of their operations and interactions. These interactions will include the gate queue behavior and communication (e.g. container arrival time) between the port and the freight industry. A video-based sensing system shall be developed to provide better visibility of gate operations and activities (e.g. truck waiting time and characteristics of the queued trucks). Collaborating with the port and freight industry's decision-makers about their processes and operations (e.g. freight dispatching and management), will provide a better understanding of all port operations. A stochastic simulation model of the interaction between the port and freight industry to provide better visibility and understanding on their interactions will be developed. For further information, contact James Tsai at (404) 385-0904 or james.tsai@ce.gatech.edu.

Value Pricing Data Analysis of HOV Lane Conversion. *Georgia Institute of Technology, Atlanta's* goal of the data preparation element of this project will be to summarize the second-by-second Commute Atlanta instrumented vehicle data and create data subsets that can be used in various research activities. Data must be processed in a manner that ensures the confidentiality and not be breached. A data set will be compiled from approximately 100 households for which complete household and vehicle level data are available over the study period. These data shall be processed for use in household-level travel behavior analysis. In the household-level data set, detailed travel summaries will be retained (trip time, date, distance, duration, origin zone, destination zone, trip purpose, etc.), and these data will be linked to household demographic characteristics. A second data set will be prepared for corridor-level data analysis. This data set will be comprised of segments of second-by-second data taken from approximately 300 vehicles, where the data are directly linked to specific travel corridors of interest (freeways and major arterials). For further information, contact Randall Guensler at (404) 894-0405 or randall.guensler@ce.gatech.edu.