



*University Transportation Center for Mobility™*

**Annual Report FY 11**



# TABLE OF CONTENTS

Director's Message.....	3	ADMIN
Student Spotlight.....	4	EDUCATION
Spotlight on Technology Transfer .....	6	TECH TRANSFER
Spotlight on Research .....	8	RESEARCH
New Projects (Awarded FY 11)		PROJECTS
New Research Projects .....	10	RESEARCH
New Technology Transfer Projects .....	19	TECH TRANSFER
Ongoing Projects (Awarded FY 09 - FY 10) .....	24	PROJECTS
Projects Completed in FY 11 .....	25	PROJECTS
Technology Transfer Activities		TECH TRANSFER
Sponsored Conferences & Workshops.....	28	TECH TRANSFER
UTCM Mobility Colloquia .....	28	TECH TRANSFER
TRB Sessions.....	28	TECH TRANSFER
TRB Presentations & Posters .....	28	TECH TRANSFER
Other Presentations.....	29	TECH TRANSFER
Reports & Publications .....	32	TECH TRANSFER
UTCM Staff .....	34	ADMIN
Organizational Chart.....	35	ADMIN
Financial Report.....	36	ADMIN

A report of the  
 University Transportation Center for Mobility™  
 Funded by USDOT, Research & Innovative Technology Administration  
 University Transportation Centers Program  
 Report Period: September 1, 2010 - August 31, 2011  
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# UTCM THEME

Improving the  
quality of life  
by enhancing  
mobility

through  
innovations in  
**RESEARCH,  
EDUCATION,  
and  
TECHNOLOGY  
TRANSFER**

# UTCM FOCUS AREAS



- Coast-to-coast, border-to-border mobility
- Rural public transportation
- Congestion management and mitigation
- Innovative financing

**T**his year's cover photo represents *many things* – the road to progress, the

educational journey, and an armadillo's-eye view of a transportation system, to name a few. It also depicts the end of a well-built road, which has particular meaning for me at this time. As the existing Centers in the UTC program enter their final year, this Annual Report offers an opportunity for me to reflect on our well-built road.

Our center was designated in SAFETEA-LU to “provide transportation research, training, and curriculum development” at the Texas Transportation Institute. The challenge for me when I came to TTI six years ago was to determine the direction of the new UTC. The strategic planning process yielded our theme of “Improving the quality of life by enhancing mobility” and the adoption of 4 Focus Areas:

- Coast to coast, border to border mobility,
- Rural public transportation,
- Congestion management and mitigation, and
- Innovative financing.

I was also tasked by TTI Director Dr. Dennis Christiansen and TTI Director Emeritus Dr. Herb Richardson to develop sustainable, high impact programs in research, education and tech transfer. We have accomplished these objectives, and more, as evidenced by the following two examples of our many successful efforts.

In early 2008, UTCM awarded a project to TTI Division Head Ginger Goodin to explore an emerging innovative financing concept known as mileage-based user fees (MBUF). This feasibility study in rural and small urban areas in Texas was followed later that year by a project to define a possible path toward implementation of MBUF. In 2009, as interest in the topic was expanding, the UTCM sponsored a national MBUF Symposium planned by Goodin's research team to foster scholarly discourse on MBUF and implementation issues. Three such annual symposia have now occurred in Texas, Minnesota and Colorado. Further, the UTCM's MBUF website provides symposia results, a clearinghouse for national MBUF research, links to news, pilot studies and other resources, and a listserv for ongoing dialogue on MBUF issues. In 2010, UTCM research in this area was extended to include air quality and energy in performance measures of MBUF. On the basis of these investments by UTCM, TTI's researchers have gone on to conduct MBUF projects for TxDOT,



ADMIN

FHWA-RITA and the Office of Policy (with Battelle), FHWA, and the Colorado DOT.

An opportunity identified early in the UTCM's strategic planning process was to improve the quality of life for rural residents through rural public transportation research and technology transfer. This type of work is difficult to match; as a Title III center without a match funding requirement, the UTCM was uniquely positioned to help. Rural public transportation research sponsored by the UTCM has included such topics as evaluating the use of transfers for improving rural transit systems, assessing rural mobility and economic development under SAFETEA-LU's Coordinated Planning and Human Services network, evaluating impacts of funding and allocation changes on rural transit, improving demand response productivity and service quality through dispatch strategies, and providing transit services for sprawling areas with low demand density. UTCM researcher and Advisory Board Member Linda Cherrington was recently invited to speak on “Challenges and Opportunities for Transit in Rural America” as part of RITA's Transportation Innovation Series.

So, while I am disappointed that the UTCM will not continue in its present form after SAFETEA-LU and its extensions expire, I am encouraged that its well-built programs in research, education and technology transfer will continue as we planned. I am proud of what we have accomplished through our University Transportation Center, and I look forward to meeting the challenges of the future.

Melissa S. Tooley

Director, University Transportation Center for Mobility™





**UTCM SPOTLIGHT ON TECHNOLOGY TRANSFER**



**Russell Henk, PE**  
Senior Research Engineer

Center for Transportation Safety  
Texas Transportation Institute -  
San Antonio

**Teens in the Driver Seat® Sponsors  
Student-Led Distracted Driving Awareness Festival**

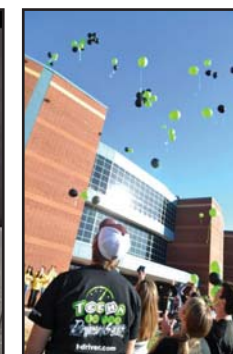
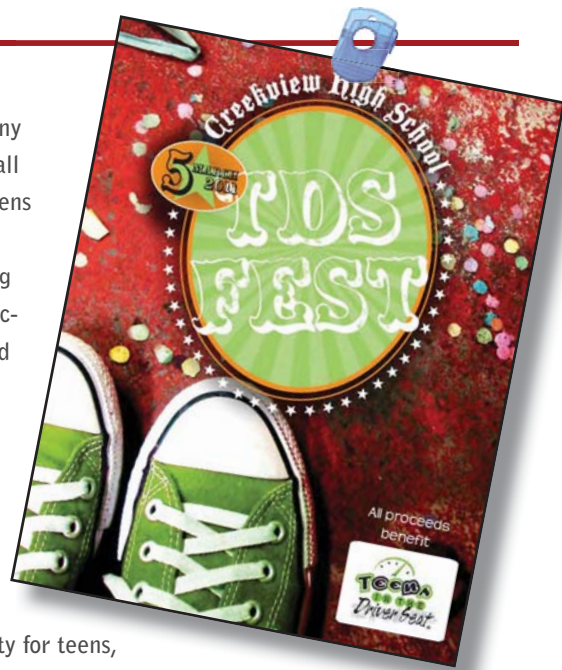
Car crashes kill more young people than any other cause, accounting for nearly half of all teen deaths in America each year. Most teens and parents are unaware of the top five dangers for teens behind the wheel: driving at night, speeding and street racing, distractions (including cell phone use, texting, and too many teen passengers), low seat belt use, and alcohol use.

But a group of proactive teens is working to change that.

Started in 2002, Teens in the Driver Seat® (TDS) is the first peer-to-peer program that focuses solely on traffic safety for teens, addressing all five of these risks. With funding from the UTCM, Texas teens form the TDS Teen Advisory Board (TAB), which helps to shape the TDS program. The Texas Transportation Institute (TTI) provides the science, guidance and project resources.

For nearly a year, the Teen Advisory Board designed and planned a major festival event that took place March 5, 2011 at Creekview High School in Carrollton, Texas. "TDS Fest" brought awareness programs to teens in a fun atmosphere of carnival games, booths and activities, with live music, giveaways and lots of interaction with members of the TAB, TDS members at Creekview High School and TTI's TDS staff. The carnival atmosphere provided a fun way to drive home the meaningful message of TDS - "Strive to Keep Our Drive Alive."

"Awareness programs aimed at changing teen behavior have typically suffered from one major problem - they are run by adults," says Russell Henk, director of the Teens in the Driver



Students at TDS Fest (l to r) took photos with the "Big Distraction" inflatable cell phone, maneuvered pedal cars on a distracted driving obstacle course, and placed shoes around the school flagpole in honor of teens lost in car crashes. The shoes were later donated to charity.



Seat® program. "TDS is different because it's driven by the people that teens really listen to - their peers."

TDS Fest was planned and implemented by the Teen Advisory Board, whose 15 members attend high schools across Texas, lead TDS programs in their communities, and attend quarterly Board meetings. Each TAB member hosted a different booth at TDS Fest run by that member's high school. With the help of TTI's TDS staff, they engaged the support and attendance of adult community leaders, attracted sponsors, constructed booths and advertised the event with flyers, T-shirts and word of mouth in the local schools and in the community.

The result of the Teen Advisory Board's efforts was "fantastic," says Henk. "TDS Fest was crowded with over 200 teens having fun, while still receiving the serious message of the dangers teens face when driving." Dozens of teens recited and signed the TDS Pledge (see inset graphic, center of this page), which was created by the TAB.

U.S. Transportation Secretary Ray LaHood videotaped a special message endorsing the event (available on the TDS YouTube Channel at <http://www.youtube.com/teensinthedriverseat#p/u/17/D6xK-fGxa7X0>), broadcast as part of the opening ceremonies. Other activities included a driving simulator, TDS pedal-driven cars on a distracted driving obstacle course run by the Garland Youth Council and former TAB member Ana Garcia, Wii Mario Kart



Distracted Driving game booth, a raffle raising money to support TDS activities, professional video tapings of teens' stories of TDS's impact on their lives, a balloon launch celebrating the lives of loved ones who drive, a memorial walk in remembrance of teens lost in car crashes, and a collection of shoes - later donated to charity - representing the 400 Texas teens that lose their lives annually in car accidents. Particularly sobering was a display of a crashed truck which seat-belted teens had survived (see photo at left).

The UTCM-funded TDS Teen Advisory Board is composed of a dozen or more teens serving one-year, renewable terms. Members act as liaisons to the TDS program in their local communities, serve as a voice for their peers to the TDS program, and lead other teens by example in responsible driving habits. TAB members are actively involved in the TDS program in each of their schools and communities and other teen driving awareness events held in their local communities. "As a peer-to-peer program, the Teen Advisory Board is critical to our mission," says TTI associate research specialist Kathy Montemayor. "Real teenagers in TDS leadership ensure our program is timely and relevant. They let us know what ideas work and which communication avenues to use."

Teens in the Driver Seat® is implemented by teens in 500 Texas high schools, plus four other states across the country.

This technology transfer activity is part of the following UTCM project:  
**Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America's Youth**

UTCM Project #10-10-52 • 01.01.10 - 05.31.12  
Principal Investigator: Russell Henk, PE  
Abstract: TRB RiP #24826



**Curtis Morgan**

Assistant Research Scientist and Program Manager

Multimodal Freight Transportation  
Texas Transportation Institute



**Ben Sperry**

Graduate Assistant Researcher

Multimodal Freight Transportation  
Texas Transportation Institute

**Survey Finds Amtrak's Hiawatha Service Provides Critical Link to Intermodal Mobility**

Contributed by Ben Sperry

Recent policy and regulatory events have raised interest in intercity passenger rail as a personal mobility solution among transportation planners, policy makers, and the general public. As the nation moves forward with significant development of its intercity passenger rail infrastructure, understanding who is using existing services, how the services are being used to enhance mobility, and implications for regional travel patterns if investments in passenger rail are not made are critical to support planning and decision making. Due to a general lack of investment in passenger rail in the U.S. over the last several decades, however, there are very few corridors in the country where intercity passenger rail could truly be considered well integrated into the multimodal transportation system. One such intercity corridor is between Milwaukee, Wisconsin, and Chicago, Illinois. Operating between the two cities (approximately 90 miles) is an Amtrak intercity passenger rail route known as the Hiawatha Service.

Owing to the route's trip-time competitiveness with the automobile, frequent daily service, and an intermodal connection with the airport in Milwaukee, the Hiawatha Service is the ideal setting for a research study of the impacts of intercity passenger rail on urban, regional, and national mobility. In January 2011, researchers from the Texas Transportation Institute (TTI) passenger rail research group, with financial support from the University Transportation Center for Mobility™ (UTCM) and in

partnership with the Wisconsin Department of Transportation (WisDOT), initiated a research project to examine the mobility impacts of the Hiawatha Service intercity passenger rail route. In the first phase of this project, TTI researchers and WisDOT staff collaborated to develop and administer an on-board passenger survey of Hiawatha Service passengers. The survey was distributed to all adult passengers on all Hiawatha Service trains on Thursday, March 31 and Saturday, April 2, 2011. Nearly 2,300 completed surveys were obtained and the response rate for the survey was approximately 60 percent.

One intermediate stop on the Hiawatha Service between Chicago and Milwaukee is at the Milwaukee Airport Rail Station, which is adjacent to the Milwaukee General Mitchell International Airport. The station, which opened for service in January 2005, is one of only four such stations in the U.S. where a direct link between the Amtrak national intercity passenger rail system and an airport is provided. Hiawatha Service passengers wishing to connect between the rail station and the airport terminal do so by way of a circulating shuttle bus. In the second phase of this project, TTI researchers designed and implemented a two-part survey procedure that examined the passengers utilizing the air-rail intermodal interface at the Milwaukee Airport Rail Station. On-site interviews of passengers using the circulating shuttle were conducted over a 15-day period in May and June 2011. As a follow-up to the on-site interview, passengers were invited to respond to an Internet survey providing more details about their trip and personal characteristics. More than 950 on-site interviews were conducted, which resulted in 155 valid follow-up Internet survey responses.

**Summary of Survey Findings**

- The Hiawatha Service plays a critical role in supporting regional mobility by relieving congestion on major highways in the area — approximately 70 percent of passengers would drive if the rail service was not available.
- More than half of Hiawatha Service passengers on weekday trains are traveling for work- or business-related purposes, including 13 percent of passengers who are using the train to commute to work on a less than daily basis.
- On weekends, more than 70 percent of Hiawatha Service passengers are traveling for leisure/entertainment or to visit family or friends.

HIGHLIGHTS FROM THE MILWAUKEE AIRPORT SHUTTLE PASSENGER SURVEY

**Primary trip purpose for Milwaukee Airport shuttle passengers:**

- 36% visiting family for friends
- 31% going to/from a business trip
- 20% leisure/vacation
- 7% personal business
- 6% going to/from a meeting or conference

**If the Hiawatha Service was not an option to access the Milwaukee Airport:**

- 33% of shuttle passengers would have used a different airport. Of those,
  - 79% would have used Chicago (O'Hare)
  - 21% would have used Chicago (Midway)
- 25% would have driven and parked at the airport.
- 14% would have used a mototcoach bus, shuttle or transit service
- 11% would have used a taxi or car service
- 9% would have been driven by a family, friend, or colleague
- 8% would have used other travel options

This research is funded by the following UTCM project:

**Intercity Passenger Rail: Implications for Urban, Regional, and National Mobility**

MILWAUKEE AIRPORT  
UTCM Project #11-10-75  
Research Team: Curtis Morgan & Ben Sperry  
01.01.11 - 10.31.11  
Abstract: TRB RiP #27820

- A majority of passengers using the Hiawatha Service to access the Milwaukee Airport were doing so instead of flying out of two Chicago-region airports. In this context, the Hiawatha Service helps extend the market area for the Milwaukee Airport into the Chicago region.
- Not all passengers connecting to the Milwaukee Airport were catching a flight. Approximately 20 percent of shuttle passengers reported accessing the airport to connect with other transportation options, including rental cars. This reinforces the role of the Milwaukee Airport Rail Station as a multimodal hub for the interface of air and surface transportation modes.



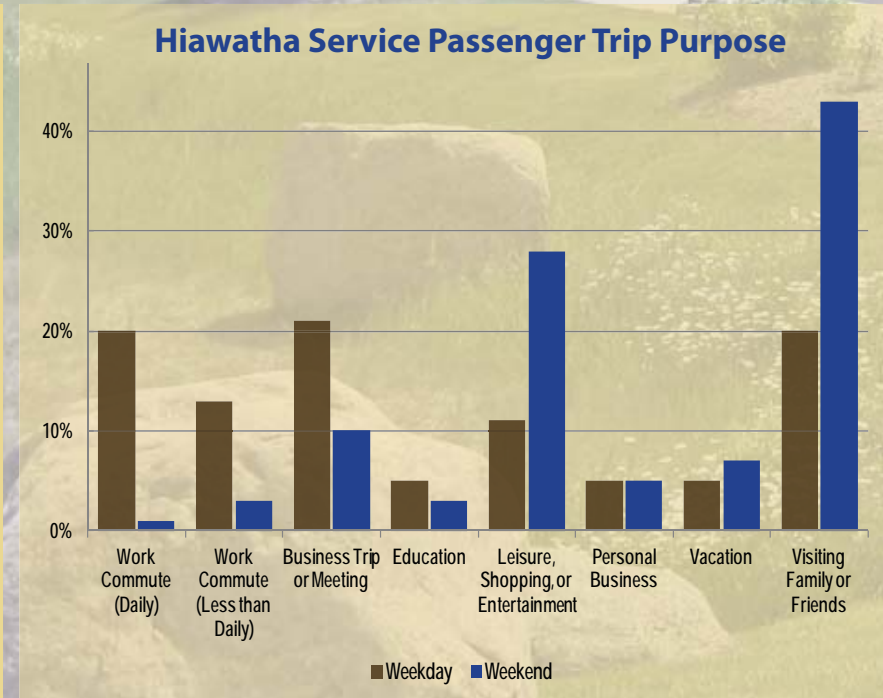
HIGHLIGHTS FROM THE HIAWATHA SERVICE ON-BOARD PASSENGER SURVEY

**If the Hiawatha Service was not available:**

- 69% of passengers would travel by automobile
- 14% would use local transit rail or bus service
- 14% would not have made the trip
- 3% would travel by airplane

**Home Residence of Hiawatha Service Passengers:**

- 52% from the Milwaukee area
- 23% from the Chicago area
- 15% from other areas of Wisconsin
- 9% from other U.S. States
- 1% from other areas of Illinois





# UTCM **NEW RESEARCH PROJECTS**

UTCM Project #11-00-65 • RiP.trb.org Database #27530

## **Assessing Public Benefits and Costs of Freight Transportation Projects: Measuring Shippers' Value of Delay on the Freight System**



### **Bruce Wang, PhD**

Assistant Professor

Zachry Department of Civil Engineering  
Texas A&M University

**Project dates:** August 1, 2010 - July 31, 2011

**Award:** \$74,999

This project is developing a model for estimating the value of delay (VOD) for highway freight shippers. The research explores the issues important to shippers when evaluating value of delay. A small number of case studies of representative shippers is being conducted and issues associated with surveying shippers are being identified through a pilot survey. The research involves a survey of shippers and Logit modeling of collected data. Participating shippers are classified into groups to ensure reliable estimates of shipper's value of delay and also to minimize the sampling size.

RESEARCH



UTCM Project #11-00-72 • RiP.trb.org Database #28070

## **Comparing Perceptions and Measures of Congestion**

**Project dates:** January 1, 2011 - January 31, 2012

**Award:** \$97,553

People's perception of congestion and the actual measured congestion do not always agree. Measured congestion relates to the delay resulting from field measurements of traffic volume, speed, and travel time. People's perception of congestion (historically gathered through surveys) can be influenced by relative growth in congestion, improved or new transportation infrastructure, and societal attitudes on transportation. By examining both the perceived and measured congestion, the research should help relate "congestion" in context of the daily experience of commuters. In this project, researchers are collaborating with IBM researchers who have been involved with commuter congestion surveys for the past several years. For the past three years, IBM's Commuter Pain Study has measured the attitudes of commuters from across the world on their daily travel. The study is based on a survey intended to gather drivers' opinions about local traffic issues. The daily commute in some of the world's most economically important international cities is longer and more grueling than before imagined, reflecting the failure of transportation infrastructure to keep pace with economic activity. In the most recent report, the majority of motorists surveyed say that traffic has gotten worse in the past three years. The Texas Transportation Institute (TTI) publishes the annual Urban Mobility Report (UMR), measuring urban mobility based on public and private traffic data for highways, streets, and transit. The UMR provides information on long-term congestion trends, the most recent congestion comparisons, and a description of many congestion improvement strategies for over 75 urban cities in the U.S. This research will utilize the IBM survey results to be able to connect the relationships between perceived congestion and measured congestion in some key U.S. cities and some key international cities. The researchers will focus on analyzing the traffic data used to develop the TTI mobility performance measures, particularly for the international traffic data made available through this collaboration.



### **Minh Le, PE**

Associate Research Engineer

Research and Implementation  
Texas Transportation Institute - Dallas

### **Shawn Turner, PE**

Division Head

Mobility Analysis  
Texas Transportation  
Institute



RESEARCH





**Curtis Morgan**

Assistant Research Scientist and Program Manager

Multimodal Freight Transportation  
Texas Transportation Institute

UTCM Project #11-10-75 • RiP.trb.org Database #27820  
**Intercity Passenger Rail: Implications for Urban, Regional, and National Mobility**

**Project dates:** January 1, 2011 - October 31, 2011

**Award:** \$43,000

Recent policy and regulatory events have revived interest in intercity passenger rail among transportation planners, policy makers, and the general public. As part of a fully integrated multimodal intercity transportation corridor, passenger rail can provide a number of measurable impacts on urban, regional, and national mobility. One such corridor in the U.S. is the Milwaukee-Chicago corridor, where Amtrak's Hiawatha Service intercity passenger rail route provides a frequent and competitive travel alternative for urban and regional travelers. Rail passengers can also seamlessly connect to air carrier service via a station stop at the Milwaukee airport, providing potential impacts for long distance travelers. Using the Hiawatha Service corridor as a case study, this project examines the impacts of intercity passenger rail on urban, regional, and national mobility. Two primary data sources – an on-board survey of Hiawatha Service passengers and an Internet-based survey of passengers using a shuttle bus connecting between the airport rail station and the airport terminal – are being analyzed to determine the extent to which the rail service impacts personal mobility in the region. The findings of this project provide unique insight into the mobility impacts of intercity passenger rail and can be used by state DOT and other public agency staff to develop rail service plans and administer state passenger rail programs throughout the U.S.

See related article, p. 8



UTCM Project #11-03-67 • RiP.trb.org Database #27814  
**Designing Communities to Provide Safe Mobility Options for Older Adults**

**Project dates:** January 1, 2011 - February 29, 2012

**Award:** \$22,984

Contemporary community design practice is based on the perceived safety needs of families with children. Little attention has been given to the effects of these practices on older adults, who have difficulty accomplishing their travel objectives in such environments. This study examines a geographic information system (GIS)-based database of crash incidence and urban form to understand how different community design elements may influence the incidence of traffic-related crashes, injuries and deaths involving motorists and pedestrians aged 75 and older.



**Eric Dumbaugh, PhD**

Assistant Professor

Department of Landscape Architecture  
and Urban Planning  
Texas A&M University

UTCM Project #11-06-73 • RiP.trb.org Database #27818  
**Refining the Real-Timed Urban Mobility Report**

**Project dates:** January 1, 2011 - March 31, 2012

**Award:** \$136,393

The Texas Transportation Institute (TTI) is considered to be a national leader in providing congestion and mobility information. The Urban Mobility Report (UMR) is the most widely quoted report on urban congestion and its associated costs to the nation. The report measures system delay, wasted fuel and the annual cost of congestion in all U.S. urban areas. The data that are available to analyze the transportation performance continue to evolve. In the past year the UMR researchers partnered with a private sector historical speed provider – INRIX – to obtain nationwide speed data to create the best possible estimate of mobility conditions. Researchers are further refining the UMR methodology to make even better use of this data and this partnership. While the TTI and private sector databases have been matched and used to re-compute the UMR statistics based on actual speed data for all days and all major urban roads, there is more research needed to make full use of the potential of the more comprehensive database. This research is further improving the estimates of congestion and its costs, maintaining TTI's position as the most authoritative source of mobility and congestion information.



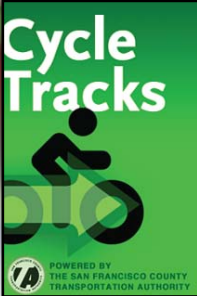
**Tim Lomax, PhD, PE**

Research Engineer

Mobility Analysis  
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RESEARCH



**Joan Hudson, PE**

Associate Research Engineer

Texas Transportation Institute - Austin



**Jennifer Duthie, PhD**

Research Associate

Center for Transportation Research

Cockrell School of Engineering  
University of Texas at Austin



**Yatinkumar Rathod, PE**

Associate Transportation Researcher

System Operation Management  
Texas Transportation Institute - Arlington

UTCM Project #11-35-69 • RiP.trb.org Database #27815

**Using Smartphones to Collect Bicycle Travel Data in Texas**

**Project dates:** January 1, 2011 - May 31, 2012

**Award:** \$72,000

Data collection for bicycling fails to adequately assess the existing demand on the transportation system. Although some agencies purchase expensive data collection equipment to assist them in understanding usage, details such as who, why, where, and how are not captured by current count technology. Intercept surveys provide this information but are time-consuming and static. If Smartphones prove to be an effective tool for collecting bicycle travel data, the information could be used for aiding decision making as to where to locate bicycle facilities and what types of facilities users prefer. By providing adequate facilities, the mode share of bicyclists can increase and lead to a reduction in congestion. Researchers are developing the study using an existing Smartphone application called CycleTracks, created by the San Francisco County Transportation Authority. Austin, Texas area bicyclists are being targeted to test the application. Austin's strong cycling culture, its reputation for bicycle friendliness, and the presence of several universities including the University of Texas make it an ideal test environment.

UTCM Project #11-08-74 • RiP.trb.org Database #27819

**The Value of Non-Medical Transportation for Improving the Quality of Life for the Rural Elderly: Methodology and Information Considerations**

**Project dates:** January 1, 2011 - May 31, 2012

**Award:** \$117,487

Aging baby boomers, increases in life expectancies, and migration of the young from and elderly to rural areas are factors increasing the elderly rural population. Mobility to non-medical activities has a profound effect on the independence and quality of life of this age cohort. Aging, however, is associated with reduced transportation options, especially in rural areas as the elderly give up their personal automobiles. This project is increasing our understanding of the transportation issues for rural elderly persons. The study focuses on rural elderly patrons' willingness to pay for subsidizing non-medical transportation. Methodological issues as well as applied economic analysis are explored. Researchers are surveying rural residents to determine their willingness to pay for services and their views of rural transportation issues. Findings will be relevant to policy debates on rural elderly quality of life.



**James Mjelde, PhD**

Professor

Department of Agricultural Economics  
Texas A&M University

**Rebekka Dudensing, PhD**

Assistant Professor & Extension Economist

Department of Agricultural Economics  
Texas A&M University



RESEARCH

UTCM Project #11-47-77 • RiP.trb.org Database #27823

**The Multiple Vehicle MAST Service: Design and Scheduling**

**Project dates:** June 1, 2011 - May 31, 2012

**Award:** \$99,999

Conventional "fixed route" transit services suffer within low density rural areas, because of their lack of flexibility. An innovative flexible transit solution, called the Mobility Allowance Shuttle Transit (MAST) service, merging the low-cost operability of fixed route systems with the flexibility of demand responsive systems has been investigated by researchers. Vehicles follow a base fixed route, with one or more mandatory checkpoints, but are allowed to deviate from their path to serve passengers at their desired locations. This new service showed promising preliminary results for the simple single-vehicle/single-line case. This project will focus on identifying decision tools for the fleet size design of the multi vehicle MAST system and develop a proper scheduling algorithm for real time operations.



**Luca Quadrifoglio, PhD**

Assistant Professor

Zachry Department of Civil Engineering  
Texas A&M University



UTCM Project #11-00-68 • RiP.trb.org Database #28069

### **Refining a Methodology for Determining the Economic Impacts of Transportation Improvements**

**Project dates:** March 1, 2011 - May 31, 2012

**Award:** \$48,398

Estimating the economic impact of transportation improvements has previously proven to be a difficult task. There are various methods and models currently in use that all establish their own unique parameters but have no consistent standards or definitions in common. There is a need to set standards for economic impact measurements and incorporate these measures into a refined and usable system. This project examines the current and historical techniques utilized in transportation economic impact studies to determine how effective the available methods are and researchers are developing a cohesive method that is both user-friendly and functional for various levels of analysis. We are assembling the most applicable measures and techniques of economic impact estimations and combining them to create a more standardized method of evaluation. Our analysis incorporates direct, indirect and induced effects on economic development. Some factors include employment, wages, property values, gross sales, business development, business location, change in land use, and change in travel patterns. From our compilation of economic effects, we are determining a basic group of elements to be utilized. These results can be used to determine the economic effects of specific projects as well as to educate the general public about the impacts transportation improvements, or lack of improvements, have and will have on their community. The resulting economic impact model will allow decision makers to see the effects transportation improvements have on the local market and enable them to make more informed choices.



#### **David Ellis, PhD**

Research Scientist

Mobility Analysis  
Texas Transportation Institute



#### **Brianne Glover**

Associate Transportation  
Researcher

Texas Transportation  
Institute

**See related article, p. 4**

UTCM Project #11-07-66 • RiP.trb.org Database #27813

### **Understanding Traveler Behavior: The Psychology Behind Managed Lane Use**

**Project dates:** September 1, 2011 - May 31, 2012

**Award:** \$90,000

Recent analysis by Dr. Burris of Houston's Katy Freeway/Managed Lane (ML) travelers and Minnesota's Interstate 394 Freeway/High Occupancy Toll (HOT) lane traveler data has found that many travelers pay to use these HOT lanes and MLs when adjacent toll-free lanes are operating at nearly the same speed. Assuming that drivers are indeed cognizant of the fact that HOT and ML lanes are traveling at nearly the same speed, then it would seem that travelers are paying for the use of these lanes for reasons other than travel time savings. This project will attempt to (a) assess whether travelers are indeed aware that the speed of the travel lanes are about the same, and (b) investigate the role of psychological variables, like risk aversion, that may explain why travelers choose to pay to use these lanes when the travel time is almost equal.



#### **Mark Burris, PhD**

E.B. Snead '25 Development Professor I

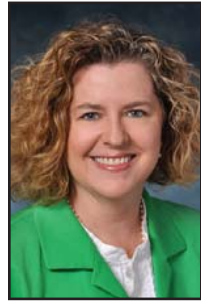
Zachry Department of Civil Engineering  
Texas A&M University



RESEARCH



### Enhancement and Outreach for the Active Management Screening Tool



#### Beverly Kuhn, PhD, PE

Division Head  
and Senior Research Engineer

System Management Division  
Texas Transportation Institute

**Project dates:** September 1, 2011 - May 31, 2012

**Award:** \$90,000

Active traffic management (ATM) – widely deployed for decades in Europe but in its infancy in the United States – maximizes the effectiveness and efficiency of the facility, and increases throughput and safety through integrated systems with new technology, including the automation of dynamic deployment to optimize performance quickly. The principal investigator recently completed a beta version of an Active Management Screening Tool (AMST) for use by agencies in their congestion management process (CMP). The purpose of the AMST is to help agencies better assess the potential of active management strategies for their region within the CMP. It is structured to provide beneficial information and guidance related to active management strategies in all areas and levels of transportation planning. Active management strategies included in the tool are: HOV lanes, HOT lanes; express toll lanes; non-tolled express lanes; exclusive/dedicated truck lanes; exclusive transitways; temporary shoulder use; speed harmonization; queue warning; dynamic rerouting and traveler information; ramp metering; dynamic merge control; and automated enforcement. In this project, researchers are enhancing the AMST with recent and emerging research and domestic experiences to make it a more robust product. Researchers are also expanding the website developed in a previous UTCM project to incorporate recent development and changes in the newly formed Active Transportation and Demand Management program within the Federal Highway Administration (FHWA). Furthermore, by reaching out to practitioners across the country regarding the availability of the AMST, this project can have a positive impact on transportation networks by providing a tool to assess appropriate active management strategies for a region.



## UTCM NEW TECHNOLOGY TRANSFER PROJECTS

### Mileage-Based User Fee Symposium



#### Ginger Goodin, PE

Division Head

Texas Transportation  
Institute - Austin

**Project dates:** September 1, 2010 - August 31, 2011

**Award:** \$35,585

The fuel tax is rapidly losing its ability to support system needs. Federal environmental regulations and the escalating price of fossil fuels have created a strong incentive to develop and utilize more fuel-efficient vehicles, which will drive down fuel tax revenues relative to use of the nation's roadway network. Given the challenges associated with the declining sustainability of the fuel tax, the likely successor is a road user fee largely based on actual usage. This project co-sponsored the third annual two-day Symposium on Mileage-Based User Fees that brought together professionals in the field of mileage-based fees for the purpose of sharing information on current applications and exploring their potential as a supplement or replacement for the fuel tax.



### Creating the Next Generation of Transportation Professionals



#### Melisa Finley, PE

Associate Research Engineer

Work Zone and Dynamic Signs  
Program  
Texas Transportation Institute

**Project dates:** October 1, 2010 - September 30, 2011

**Award:** \$40,000

Recent studies by the National Science Board reported a troubling decline in the number of U.S. citizens who are training to become engineers and scientists. Previously, this research team developed a half-day in-class workshop and field trip agenda for middle school students that offered an opportunity to gain hands-on experience and insight into what transportation engineering and other technology careers have to offer. Both types of events (in-class workshops and field trips) provided experiences to encourage interests in engineering, science, and math. However, budget, travel, and time constraints limit the ability of school districts and transportation professionals to conduct these types of in-person events, as well as more in-depth workshops. Thus, new methods for conducting these types of programs need to be investigated. In this project the team is (1) developing more in-depth educational modules, (2) assessing the feasibility of using webinar technology to conduct the modules, (3) expanding the number of locations where workshops are conducted in-class, (4) conducting modules via webinar at select locations, if determined to be feasible, and (5) comparing the effectiveness of implementation methods.

RESEARCH

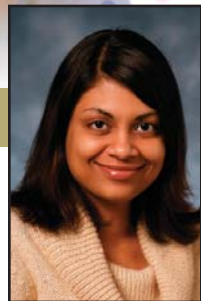
TECH  
TRANSFER





UTCM Project #11-15-78 • RiP.trb.org Database #27824

### Livability Performance Measures Workshop



TECH TRANSFER

#### Tara Ramani

Associate Transportation Researcher

Air Quality Studies

Texas Transportation Institute

Conference on  
Performance Measures  
for Transportation and  
Livable Communities

September 7-8, 2011 • Austin, Texas

**Project dates:** January 1, 2011 - December 31, 2011

**Award:** \$19,995

The U.S. Department of Transportation, the Department of Housing and Urban Development, and the U.S. Environmental Protection Agency launched a “sustainable communities” initiative in 2009. Combined with other policy and research initiatives at the national, regional and state level, this initiative has made livability an area of emphasis for many transportation agencies. Livability is primarily concerned with issues such as transportation choices, neighborhood character, access to destinations, affordability, and maintaining cohesive rural, urban and suburban communities. As transportation agencies work toward addressing livability goals, it is important that they monitor their progress. Performance measurement is highly relevant in this context and can help transportation agencies better understand and apply livability concepts and enhance decision-making processes. Researchers are planning and conducting a workshop on transportation and livability performance measures. The workshop includes the participation of researchers and transportation practitioners from a variety of agencies. The outcome of this workshop will advance the field of livability performance measures and help agencies such as state departments of transportation, metropolitan planning organizations, transit agencies, and other groups to develop and use livability performance measures.

UTCM Project #11-45-79 • RiP.trb.org Database #27825

### Transportation and Tourism Conference

**Project dates:** January 1, 2011 - April 30, 2012

**Award:** \$14,000

In this project, researchers are planning and conducting a Texas Transportation and Tourism Conference. This event builds on the 2001 Texas Rural Transportation Conference, which was supported by the Southwest Region University Transportation Center and included a Transportation and Tourism Track. This conference brings together key players from the various groups involved with tourism and transportation in the state. The conference includes a discussion of areas for further research, outreach, and technology transfer. The conference sessions may include topics such as eco-tourism, aviation and tourism track, bicycle, pedestrian, and motorcycle, tour operators, and Texas trails. This project covers the conference logistics, planning and delivery, including site selection, registration, and on-site support. It will also include a final report summarizing the key elements and research needs covered at the conference.



#### Beverly Storey

Associate Research Scientist  
Program Manager

Environmental Management  
Texas Transportation Institute



Photos (l to r): Andie Smith/Dickinson Cattle Co., Inc. (www.texaslonghorn.com); Rob Causey/traveltop.net

TECH TRANSFER



UTCM Project #11-13-76 • RiP.trb.org Database #27822  
**An eCertificate in Transportation Planning**

**Project dates:** January 1, 2011 - April 30, 2012

**Award:** \$62,000

This purpose of this proposal is to extend the delivery of the recently developed graduate certificate in transportation planning to a national audience via distance education as an online eCertificate. While the need for an interdisciplinary approach to transportation is widely recognized by the professional community, there are few educational programs that address the field of transportation in a truly comprehensive, interdisciplinary manner. Texas A&M University's campus-wide graduate certificate in transportation planning was established in August 2008 to address this need. The Certificate provides an interdisciplinary perspective on how economics, public policy, finance, and urban design influence the effectiveness of transportation systems. This Certificate has proved to be very successful. A limitation is that it is only available to graduate students physically enrolled at Texas A&M. In this project, researchers are (1) converting four courses in the existing certificate program to online courses, (2) developing a plan for delivering these courses via distance education and (3) submitting the program for university approval. The eCertificate will substantially increase access to Texas A&M's transportation curriculum and strengthen Texas A&M's stature as a national and global leader in the education of transportation professionals.

UTCM Project #11-27-70 • RiP.trb.org Database #27816  
**Using Innovative Educational Modules to Prepare Our Next Generation of Transportation Professionals**

**Project dates:** January 1, 2011 - May 31, 2012

**Award:** \$70,000

Basic science and mathematics competence, including awareness of engineering careers, gained in grades K-12 form the foundation of an educated, capable, and technical future transportation workforce. This project is developing educational STEM-based modules for grades 6-12 that engage students in real world applications of math, deductive reasoning, and problem solving. These modules can be incorporated in either the classroom or informal educational settings, such as an after-school enrichment program. The project tasks are to (1) identify candidate schools for participation, (2) identify and prioritize module ideas, (3) conduct kickoff meetings with selected schools, (4) develop pilot modules, (5) test pilot modules at participating schools, (6) develop final modules and (7) deliver modules and the final project report.

**Forster Ndubisi, PhD, ASLA**  
 Professor and Head

Department of Landscape Architecture  
 and Urban Planning  
 Texas A&M University



**Eric Dumbaugh, PhD**  
 Assistant Professor

Department of  
 Landscape Architecture  
 and Urban Planning  
 Texas A&M University



**Ken Joh, PhD**  
 Assistant Professor

Department of  
 Landscape Architecture  
 and Urban Planning  
 Texas A&M University



**Debbie Jasek**  
 Research Specialist

Center for Professional Development  
 Texas Transportation Institute

UTCM Project #11-00-63 • RiP.trb.org Database #28147

**Transportation Workforce Development: Sustaining and Expanding High School Outreach Programs and Multi-Agency Partnerships**

**Project dates:** February 1, 2011 - July 15, 2012

**Award:** \$98,635

The objective of this ongoing multi-university/agency partnership among Prairie View A&M University (PVAMU), the UTCM, Texas Transportation Institute and Texas A&M University (TAMU) is to produce high quality transportation professionals from underrepresented groups with research and other real world experiences. Current pipeline programs consist of the 12 year-old Federal Highway Administration-sponsored Summer Transportation Institute (STI) and the four year-old STI Scholars program, developed with previous UTCM funding. These programs established an academic pathway from 11th grade through undergraduate and advanced degree programs to placement in transportation careers. In this project, researchers are 1) developing sustaining funds for operating the program; 2) expanding current outreach efforts to local high schools; 3) providing scholarships to STI program students to pursue Civil Engineering at Prairie View A&M and to other students who pursue transportation engineering; and 4) developing opportunities for research and workplace internships. Project tasks are: (i) review and update the curricula for the existing STI and STI Scholars program; (ii) foster a stimulating environment on the web for former students to network and promote the STI and STI Scholars programs; (iii) continue to develop the network for sustainability; and (iv) revise and complete a streamlined academic pathway for the students to follow. This project is enhancing the positive impact of the existing STI and STI Scholars programs on the Civil Engineering programs at PVAMU and TAMU and providing a blueprint for expansion of these successful outreach programs to other universities and community colleges.



**Raghava Kommalapati, PhD, PE, BCEE**  
 Interim Department Head and  
 Associate Professor

Department of Civil and Environmental  
 Engineering  
 Prairie View A&M University

**Radhakrishnan Ramalingam, PhD**  
 Associate Professor

Department of Civil and  
 Environmental Engineering  
 Prairie View A&M University

**Bill Stockton, PhD, PE**  
 Research Engineer  
 Executive Associate Agency  
 Director

Texas Transportation Institute





## UTCM ONGOING PROJECTS

### RESEARCH

#### Statistical Analysis of Waterway Network Congestion: Causes and Costs

Research Team: Ximing Wu, PhD and Stephen Fuller, PhD, Department of Agricultural Economics, Texas A&M University  
Project dates: March 1, 2009 - August 31, 2011 • Award: \$79,656  
UTCM Project #09-16-14 • RiP.trb.org Database #20595

#### The Impact of Gas Prices on Toll Road Use

Researcher: Mark Burris, PhD, Zachry Department of Civil Engineering, Texas A&M University  
Project dates: September 1, 2009 - August 31, 2011 • Award: \$58,158  
UTCM Project #09-01-03 • RiP.trb.org Database #20581

#### Multiple Depot Vehicle Routing with Applications to Paratransit and Rural Transportation

Research Team: Swaroop Darbha, PhD, Department of Mechanical Engineering, Texas A&M University  
Luca Quadrifoglio, PhD, Zachry Department of Civil Engineering, Texas A&M University  
Project dates: September 1, 2009 - August 31, 2011 • Award: \$80,000  
UTCM Project #09-15-13 • RiP.trb.org Database #20584



#### Developing Performance Measures for Sustainable Freight Movement

Research Team: Joe Zietsman, PhD, PE and Mohamadreza Farzaneh, PhD, PE, Air Quality Studies, Texas Transportation Institute  
Project dates: September 1, 2009 - December 31, 2011 • Award: \$80,000  
UTCM Project #09-37-15 • RiP.trb.org Database #20596

#### Teen Driver Cell Phone Blocker

Research Team: Mark Benden, PhD, CPE, School of Rural Public Health, Texas A&M Health Science Center  
Rainer Fink, PhD, Department of Engineering Technology and Industrial Distribution, Texas A&M University  
Project dates: January 1, 2010 - December 31, 2011 • Award: \$105,500  
UTCM Project #10-15-47 • RiP.trb.org Database #24800

#### Use of Performance Measurement to Include Air Quality and Energy into Mileage-Based User Fees

Research Team: Mohamadreza Farzaneh, PhD, PE, Air Quality Studies, Texas Transportation Institute  
Richard T. Baker, and Ginger Goodin, PE, Texas Transportation Institute - Austin  
Project dates: January 1, 2010 - January 31, 2012 • Award: \$100,000  
UTCM Project #10-25-50 • RiP.trb.org Database #24803

#### Effect of Climate Change Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns

Research Team: Dmitry Vedenov, PhD, Stephen Fuller, PhD, Gabriel Power, PhD, and Bruce McCarl, PhD, Department of Agricultural Economics, Texas A&M University  
Project dates: February 1, 2010 - October 31, 2011 • Award: \$95,000  
UTCM Project #10-54-51 • RiP.trb.org Database #24804

## TECHNOLOGY TRANSFER

#### Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America's Youth

Research Team: Russell Henk, PE, Teens in the Driver Seat® Center, Texas Transportation Institute - San Antonio  
Project dates: January 1, 2010 - May 31, 2012 • Award: \$38,497  
UTCM Project #10-10-52 • RiP.trb.org Database #24826



#### Transit Management Certificate Program

Research Team: Linda Cherrington, Transit Mobility Program, Texas Transportation Institute - Houston  
Ben Welch, PhD, Department of Management, Texas A&M University  
Project dates: January 1, 2010 - May 31, 2012 • Award: \$75,000  
UTCM Project #10-55-48 • RiP.trb.org Database #24801

#### Graduate Certificate Program in Transportation Planning: Phase 2

Research Team: Forster Ndubisi, PhD, ASLA, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University  
Project dates: February 1, 2010 - September 30, 2011 • Award: \$58,000  
UTCM Project #10-02-56 • RiP.trb.org Database #24830



## UTCM PROJECTS COMPLETED IN FY 11

### RESEARCH

#### Improving Intermodal Connectivity in Rural Areas to Enhance Transportation Efficiency and Reduce Metro/Port/Border Congestion: A Case Study

Research Team: Stephen Fuller, PhD, John Robinson, PhD, and Francisco Fraire, Department of Agricultural Economics, Texas A&M University  
Sharada Vadali, PhD, Mobility Analysis Program, Texas Transportation Institute  
Project dates: September 1, 2007 - September 30, 2010 • Award: \$60,000  
UTCM Project #07-07 • TRID Online Accession #01342387

#### Leveraging Land Development Returns to Finance Transportation Infrastructure Improvements

Research Team: Jesse Saginor, PhD, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University  
David Ellis, PhD, Mobility Analysis Program, Texas Transportation Institute  
Project dates: June 1, 2009 - January 31, 2011 • Award: \$100,000  
UTCM Project #09-13-12 • TRID Online Accession #01340814

#### Estimating the Value of Freight Delays in the Freight System

Researcher: Bruce Wang, PhD, Zachry Department of Civil Engineering, Texas A&M University  
Project dates: September 1, 2009 - January 31, 2011 • Award: \$3,856\*  
UTCM Project #09-00-45 • RiP.trb.org Database #23692  
\* This project received additional funding through a UTCM Fellowship in the amount of \$43,577.

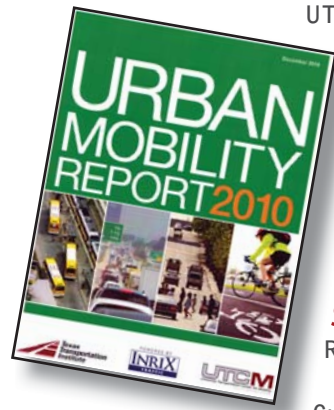
PROJECTS

# UTCM PROJECTS COMPLETED IN FY 11

## RESEARCH (CONT.)

### Development of a Short-Term Prediction Model for Commercial Vehicle Crossing Times

Research Team: Rajat Rajbhandari, PhD, PE, Research and Implementation, Texas Transportation Institute - El Paso  
 Don Kang, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University  
 Project dates: November 1, 2009 - March 31, 2011 • Award: \$53,530  
 UTCM Project #10-09-60 • TRID Online Accession #01218144



### Real-Timing the 2010 Urban Mobility Report

Research Team: Timothy Lomax, PhD, PE, Mobility Analysis Program, Texas Transportation Institute  
 Project dates: January 1, 2010 - December 31, 2010 • Award: \$170,000  
 UTCM Project #10-65-55 • TRID Online Accession #01339706

### Texas Urban Triangle: Pilot Study to Implement a Spatial Decision Support System (SDSS) for Sustainable Mobility

Research Team: Michael Neuman, PhD, AICP and Douglas Wunneburger, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University  
 Curtis Morgan, Multimodal Freight Transportation, Texas Transportation Institute  
 Project dates: January 1, 2010 - January 31, 2011 • Award: \$109,785  
 UTCM Project #10-18-57 • TRID Online Accession #01340833

### Impacts of Funding and Allocation Changes on Rural Transit in Texas

Research Team: Suzie Edrington, Transit Mobility Program, Texas Transportation Institute - Houston  
 Project dates: January 1, 2010 - February 28, 2011 • Award: \$65,000  
 UTCM Project #10-19-46 • TRID Online Accession #01351431

### Best Practices and Outreach for Active Traffic Management

Researcher: Beverly Kuhn, PhD, PE, System Management Division, Texas Transportation Institute  
 Project dates: January 1, 2010 - April 30, 2011 • Award: \$122,000  
 UTCM Project #10-01-54 • RiP.trb.org Database #24828

### Evaluating the Use of Transfers for Improving Rural Public Transportation Systems

Research Team: Luca Quadrifoglio, PhD, Zachry Department of Civil Engineering, Texas A&M University  
 Suzie Edrington, Transit Mobility Program, Texas Transportation Institute - Houston  
 Project dates: January 1, 2010 - May 31, 2011 • Award: \$80,000  
 UTCM Project #10-60-59 • TRID Online Accession #01218145

### Examining Long-Distance Express Bus as an Extension of and Feeder to Passenger Rail Systems



Research Team: Laura Higgins, Center for Transportation Safety, Human Factors Group, Texas Transportation Institute  
 Curtis Morgan, Multimodal Freight Transportation Program, Texas Transportation Institute  
 Project dates: April 1, 2010 - January 31, 2011 • Award: \$82,000  
 UTCM Project #10-44-53 • TRID Online Accession #01340830

### Examining Challenges, Opportunities and Best Practices for Addressing Rural Mobility and Economic Development under SAFETEA-LU's Coordinated Planning and Human Services Framework

Research Team: June Martin, Cecilia Giusti, PhD, and Eric Dumbaugh, PhD, Department of Landscape Architecture and Urban Planning, Texas A&M University  
 Linda Cherrington, Transit Mobility Program, Texas Transportation Institute - Houston  
 Project dates: May 1, 2008 - May 31, 2011 • Award: \$100,000  
 UTCM Project #08-17-09 • RiP.trb.org Database #15600

## EDUCATION

### A New Graduate Course in Transportation Infrastructure Finance in the Civil Engineering Department at Texas A&M University

Research Team: Ivan Damnjanovic, PhD, Zachry Department of Civil Engineering, Texas A&M University  
 Sharada Vadali, PhD, Mobility Analysis Program, Texas Transportation Institute  
 Erin McTigue, PhD, Department of Teaching, Learning and Culture, Texas A&M University  
 Project dates: January 1, 2010 - February 28, 2011 • Award: \$60,000  
 UTCM Project #10-22-49 • TRID Online Accession #01331971

## TECHNOLOGY TRANSFER

### Promoting Workforce Development for the Transportation Profession Through a Multi-University/Agency Partnership

Research Team: Raghava Kommalapati, PhD, PE and Judy Perkins, PhD, Department of Civil and Environmental Engineering, Prairie View A&M University  
 Debbie Jasek, Center for Professional Development, Texas Transportation Institute  
 Bill Stockton, PhD, PE, Texas Transportation Institute  
 Robert Benz, PE, Research and Implementation, Texas Transportation Institute - Houston  
 Project dates: May 1, 2008 - September 30, 2010 • Award: \$118,029  
 UTCM Project #08-45-07 • TRID Online Accession #01339708



### Facilitating Outreach Programs for Minority Students in Rural South Texas

Researcher: Debbie Jasek, Center for Professional Development, Texas Transportation Institute  
 Project dates: January 1, 2009 - February 28, 2011 • Award: \$29,000  
 UTCM Project #09-10-08 • TRID Online Accession #01340827

### The Transportation Economy: Past and Future

Research Team: Richard Cole and David Dennis, TTI Communications, Texas Transportation Institute  
 Project dates: January 1, 2009 - May 31, 2011 • Award: \$50,000  
 UTCM Project #09-27-05 • RiP.trb.org Database #20583

### Transportation Plan Repository and Archive

Research Team: John Overman, Transit Mobility Program, Texas Transportation Institute - Arlington  
 Sandra Tucker, University Libraries, Texas A&M University  
 Project dates: January 1, 2010 - February 28, 2011 • Award: \$45,000  
 UTCM Project #10-20-58 • TRID Online Accession #01340824

### Development of a Mileage-based User Fee Research Website

Researcher: Richard T. Baker, Texas Transportation Institute - Austin  
 Project dates: July 1, 2010 - November 30, 2010 • Award: \$3,556  
 UTCM Project #10-00-61 • TRID Online Accession #01340825





## UTCM TECHNOLOGY TRANSFER ACTIVITIES

### SPONSORED CONFERENCES AND WORKSHOPS

- Texas Transit Leadership Seminar.** Austin, TX, October 2010/January 2011.
- Teens in the Driver Seat® TDS Fest.** Carrollton, TX, March 5, 2011.
- 3rd Annual Symposium on Mileage-Based User Fees.** Breckenridge, CO, June 13-14, 2011.
- Conference on Performance Measures for Transportation and Livable Communities.** Austin, TX, September 7-8, 2011.
- Transportation and Tourism Conference.** San Antonio, TX, February 1-3, 2012.
- Summer Transportation Institute.** Prairie View A&M University, Prairie View, TX, June 6 - July 1, 2011.

### UTCM MOBILITY COLLOQUIA

- "Development and Growth of the Texas A&M Health Science Center."** Presented by David S. Carlson, Vice President for Research and Dean, School of Graduate Studies, Texas A&M Health Science Center. College Station, TX, December 6, 2010.
- "Smarter City Vision: An Opportunity to Think and Act in New Ways."** Presented by John F. Drewry, Client Executive, State of Texas IBM Corporation, and H. John Rowland, Jr., Intelligent Transportation Solutions, IBM Corporation. College Station, TX, October 25, 2010.

### TRB SESSIONS • 90th Annual TRB Meeting, Washington, DC, January 23 - 27, 2011

- "A Generally Applicable Sustainability Assessment Framework for Transportation Agencies"**  
Moderator: Tara Ramani
- "Building the 21st Century Workforce: Mission-Critical Issues, Cross-Modal Opportunities, and Key Partnerships in Transportation Workforce Development"**  
Moderator: Melissa Tooley

### TRB PRESENTATIONS AND POSTERS

• 90th Annual TRB Meeting, Washington, DC, January 23 - 27, 2011

- "Interactive Q&A"**  
Session: Active Traffic Management  
Presenter: Beverly Kuhn
- "Benefactors: TTI Experience with Private-Sector Speed Data for Performance Monitoring"**  
Session: Use of Private-Sector and Blended Private-Public Sector Speed Data by Public Agencies for Planning and Operations  
Presenter: Shawn Turner
- "Truck Transportation at the U.S./Mexico Border: Trade Facilitation Implications"**  
Session: Transportation and Cross-National Borders  
Presenter: Juan Carlos Villa

#### **"Predetermining Performance-Based Measures for Managed Lanes"**

Session: What Makes Managed Lanes Successful? (e-Session)  
Presenters: Mark Burris, Chao Huang, Tina Geiselbrecht and Ginger Goodin

#### **"Economic Impacts of Intercity Passenger Rail Service: Evidence from Passenger Surveys"**

Session: Assessing the Value of Intercity Passenger Rail  
Presenters: Benjamin Sperry and Curtis Morgan

#### **"Cluster Analysis of Intercity Rail Passengers in an Emerging High-Speed Rail Corridor"**

Session: Assessing the Value of Intercity Passenger Rail  
Presenters: Benjamin Sperry, Kristopher Ball and Curtis Morgan

#### **"HOT-Lane Policies and Their Implications"**

Session: Road Pricing and Managed-Lane Research: New Tools and Promise for the Future  
Presenter: Mark Burris

#### **"Exploratory Study: Vehicle Mileage Fees in Texas"**

Session: Road Pricing and Managed-Lane Research: New Tools and Promise for the Future  
Presenter: Richard T. Baker

#### **"Findings from the National Symposium on Mileage-Based User Fees"**

Session: Taxation and Finance  
Presenters: Ginger Goodin, Richard T. Baker and Lee Munnich

#### **"Public Acceptability of Vehicle Mileage Fees: Texas-Based Focus Group Results"**

Session: Taxation and Finance  
Presenters: Richard T. Baker and John Sabala

#### **"The Worst Are Always the Worst: Why Congestion Threshold Speeds Don't Matter as a Decision-Making Input"**

Session: Emerging Performance Measurement and Management Topics and Perspectives  
Presenter: Teresa Qu and Tim Lomax

#### **"Coordinated Decentralized Paratransit Systems: Formulation and Comparison with Alternative Strategies"**

Session: Taxation and Finance  
Presenters: Chung-Wei Shen and Luca Quadrioglio

### OTHER PRESENTATIONS

- Attavanich W., McCarl B.A., Fuller S.W., Vedenov D.V. and Ahmedov Z. "The Effect of Climate Change on Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns." 2011 Canadian Agricultural Economics Society & Western Agricultural Economics Association Joint Annual Meeting. Banff, Alberta, Canada, June 29 - July 1, 2011.
- Attavanich W., McCarl B.A., Fuller S.W., Vedenov D.V. and Ahmedov Z. "The Effect of Climate Change on Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns." 2011 Agricultural and Applied Economics & Northeastern Agricultural and Resource Economics Association Joint Annual Meeting. Pittsburgh, PA, July 24-26, 2011.
- Chandra S., Quadrioglio L. and Shen C. "An Optimal Cycle Length Model for Feeder Transit Services." Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting. Austin, TX, November 7-10, 2010.
- Cherrington L. "Challenges and Opportunities for Transit in Rural America." USDOT Research and Innovative Technology Administration (RITA) Transportation Innovation Series. Washington, DC, August 17, 2011.
- Conrady C., Hash C., Tripodis C., Sosa F., Martinez K., Henk C. and Henk R. "General Session 2 – The Top 5 Driving Risks for Teens." National Student Safety Program 2011 Conference. Honolulu, HI, July 15-18, 2011.
- Dumbaugh E. and Zhang Y. "Urban Form and the Incidence of Crashes Involving Older Drivers and Pedestrians." Association of Collegiate Schools of Planning 52nd Annual Conference. Salt Lake City, UT, October 14, 2011.



**OTHER PRESENTATIONS (CONT.)**

Edrington S. "Rural Technology User Groups." TxDOT Public Transportation Providers Semi-Annual Meeting, Austin, Texas, July 2010.

Edrington S. Panel moderator. TxDOT Public Transportation Providers Semi-Annual Meeting. Austin, TX, July 2010.

Ellis D. "Transportation Finance 101." Greater Houston Partnership and Transportation Hall of Honor Ceremony. Houston, TX, September 8, 2010.

Ellis D. "Transportation Finance 101." Hot Mix Asphalt Association. Galveston, TX, September 22, 2010.

Ellis D. "Transportation Finance 101." TTI Strategic Solutions Center Board of Advisors. College Station, TX, September 23, 2010.

Ellis D. "Transportation Finance 101." Northwest Houston Chamber of Commerce. Houston, TX, June 14, 2011.

Ellis D. Keynote Speaker at The Bond Buyer's 12 Annual Transportation Finance/P3 Conference: Bridging the Gap. Chicago, IL, November 14-16, 2011.

Goodin G. and Farzaneh, M. "Mileage-Based User Fees." Research Development Seminar, Texas Transportation Institute. College Station, TX, March 3, 2011.

Henk R. "Teens in the Driver Seat® Program Review." TTI 2011 Traffic Safety Conference. Austin, TX, March 21-23, 2011.

Henk R. "Preventing Roadway Fatalities and Injuries." Webinar #4 in the American Public Health Association Webinar Series, "What Healthy Communities Need from their Transportation Networks." April 5, 2011. Accessible on the web at <http://wpc.0948.edgecastcdn.net/000948/webinar/transport/4/lib/playback.html>.

Henk R. "Using Peer Influence to Prevent Teen-Driver Crashes." UTC Safety Spotlight Conference: Improving Roadway Safety Programs Through University-Agency Partnerships. Washington, DC, November 2-3, 2011.

Henk R. and Benz R. Teens in the Driver Seat® Exhibit Booth. Future Career & Community Leaders of America Statewide Meeting. Houston, TX, April 14-15, 2011.

Lomax T. "Mobility in Texas: Trends and Strategies." Texas 2030 Executive Committee. Austin, TX, September 13, 2010.

Lomax T. "Mobility in the Metroplex (or Not): Trends and Strategies." Dallas Chamber of Commerce Transportation Policy Committee. Dallas, TX, September 23, 2010.

Lomax T. "Mobility in Houston: Trends and Strategies." North Houston Area Association Transportation Committee Meeting. Houston, TX, October 6, 2010.

Lomax T. "Current and Future Congestion in Urban Texas." Testimony before the Texas House Transportation Committee. Austin, TX, October 26, 2010.

Lomax T. "Urban Mobility Report Congestion in the Lower 50." Transport Canada briefing. Ottawa, Canada, October 27-29, 2010.

Lomax T. "Mobility in Houston: Trends and Strategies." Greater Houston Partnership Transportation Policy Committee Meeting. Houston, TX, January 24, 2011.

Lomax T. "Congestion Management Issues." Guest lecturer in CVEN 681 Seminar in Transportation, Texas A&M University. College Station, TX, February 12, 2011.

Lomax T. "Congestion Management Issues: National Perspective (from an Aggie?)" Guest lecturer in Dr. Walton's class, University of Texas. Austin, TX, March 3, 2011.

Lomax T. "Mobility in Austin: Trends and Strategies." Capitol Area Metropolitan Planning Organization Technical Advisory Committee Meeting. Austin, TX, April 27, 2011.

Lomax T. "Mobility in Austin: Trends and Strategies." Capitol Area Metropolitan Planning Organization Transportation Policy Board Meeting. Austin, TX, May, 4, 2011.

Lomax T. "Mobility in Houston: Trends and Strategies." Central Houston Association Transportation Committee Meeting. Houston, TX, May 6, 2011.

Lomax T. "Debate About the Urban Mobility Report Findings: Why Can't People Read?" 19th Annual Congress for the New Urbanism. Madison, WI, June 1-4, 2011.

Lomax T. "Our Nation's Congestion Capital: We're #1!" Northern Virginia Transportation Alliance 2011 Seminar Series. Virginia, June 8, 2011. Accessible on the web at <http://nvtav2.timberlakepublishing.com/Files/No%20VA%20Transp%20Alliance%20-%20Lomax%20June%202011%20v3.pdf>

Lu W., Wang W. and Quadrifoglio L. "Multi-Vehicle Mobility Allowance Shuttle Transit: Formulation and Comparison with Single-Vehicle Case." Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting. Austin, TX, November 7-10, 2010.

Lu W., Xie Y., Wang W., and Quadrifoglio L. "An Analytical Model to Select the Fleet Size for MAST Systems." IEEE Forum on Integrated and Sustainable Transportation Systems. Vienna, Austria, June 29 - July 1, 2011.

Lu W., Xie Y., Wang W., and Quadrifoglio L. "Multi-Vehicle MAST Service: Formulation and Comparison with Single-Vehicle Case." IEEE Forum on Integrated and Sustainable Transportation Systems. Vienna, Austria, June 29 - July 1, 2011.

Miao Q., Wang B. and Adams T. "Assessing the Value of Delay to Truckers and Carriers." Texas Section of the American Society of Civil Engineers Spring 2011 Meeting. College Station, TX, April 27-30, 2011.

Qu T. "Investigating the Effect of Freeway Congestion Thresholds on Decision-Making Inputs." Natural Built Virtual College of Architecture Symposium, Texas A&M University. College Station, TX, October 18, 2010.

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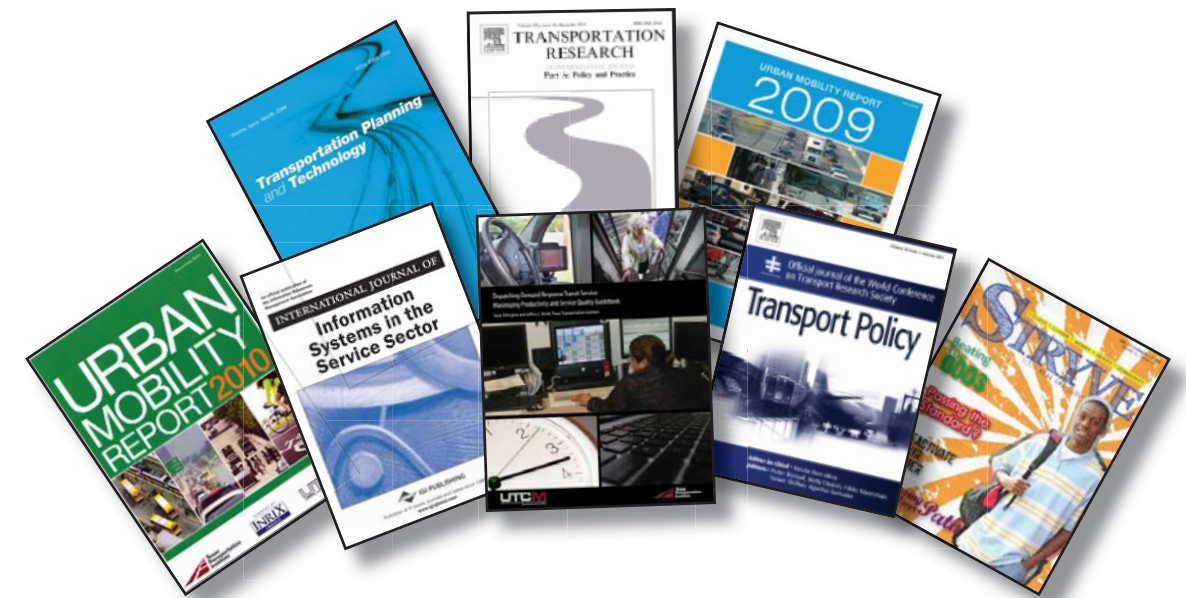
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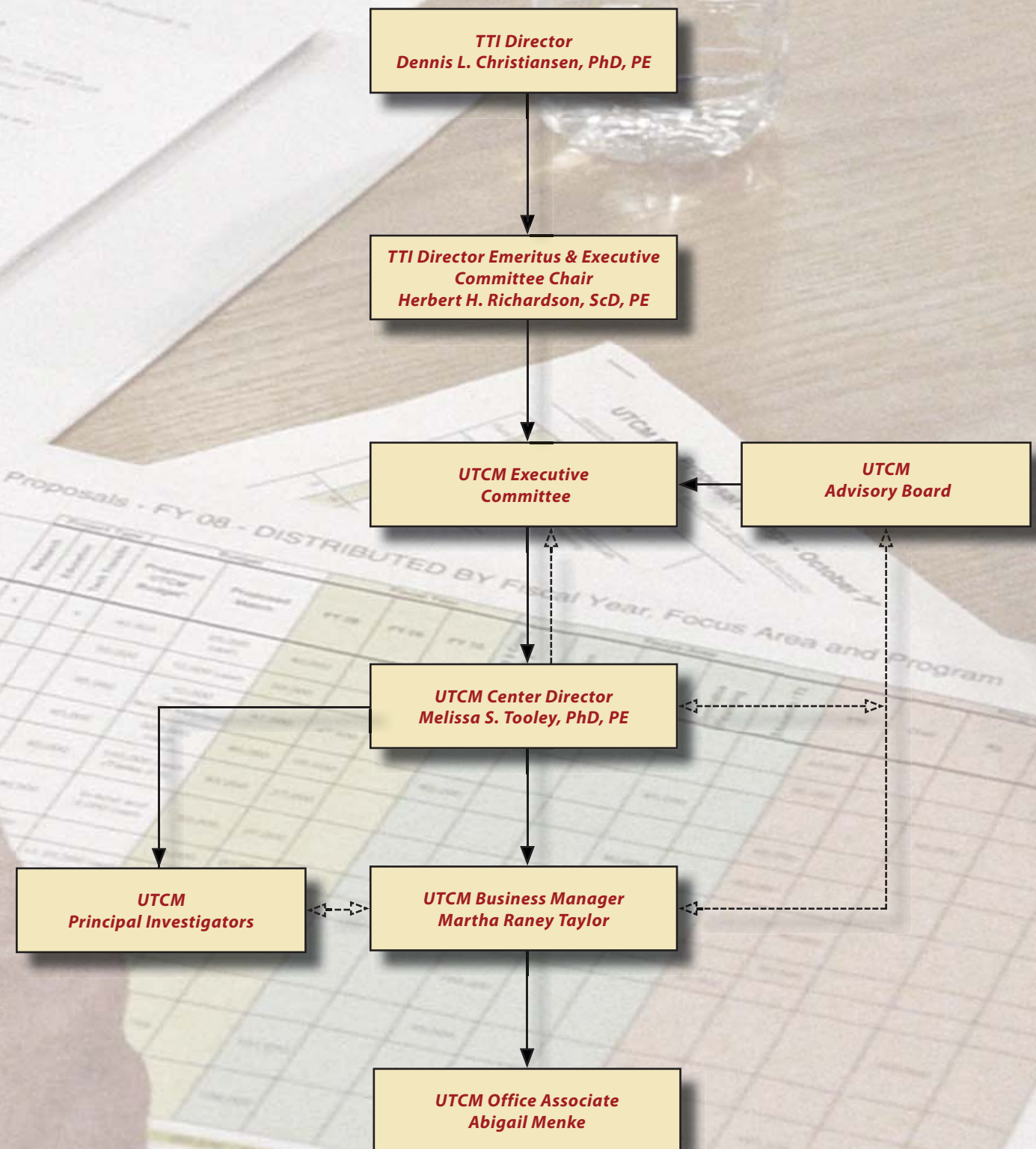


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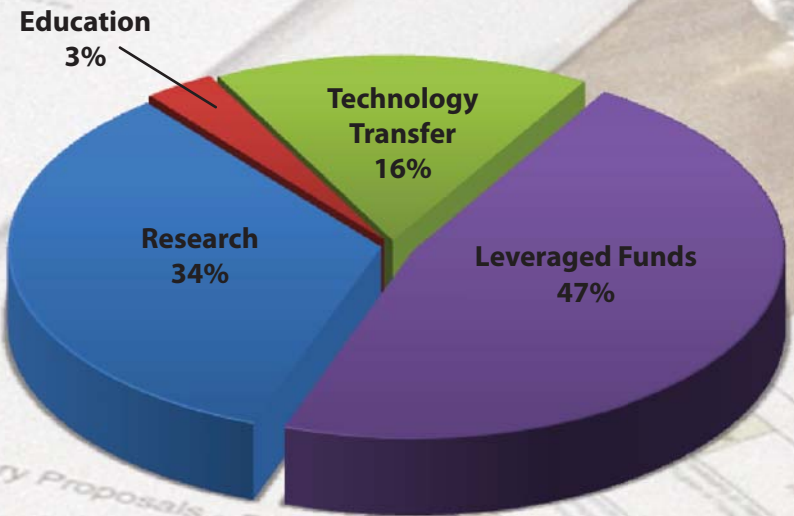
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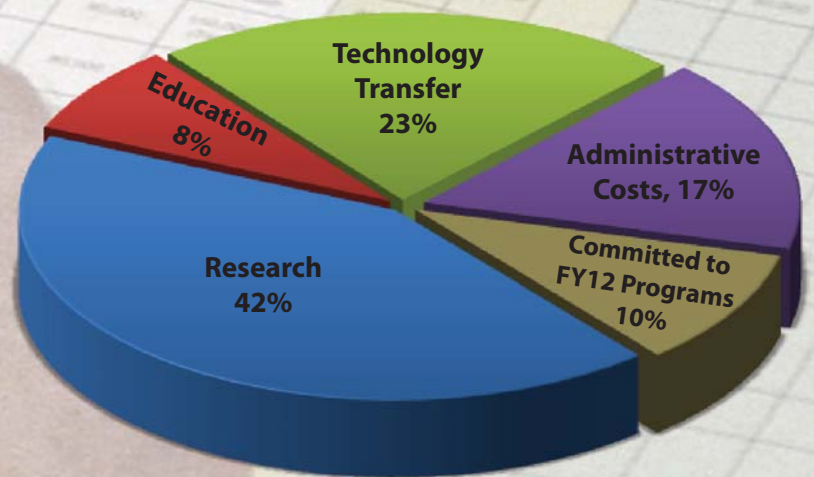


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## FY11 Project Funds



## FY11 Federal Funds



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