

UTC Category  
UTC Name  
Initial Year  
Current Funding  
UTC Director  
Contact Info

Title III  
University Transportation Center for Mobility  
2005  
\$1.5 million/year  
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*Improving the Quality of Life by Enhancing Mobility*  
<http://utcm.tamu.edu/>

Theme  
Web site

## Background

The University Transportation Center for Mobility™ (UTCM) was established in 2005 as a Title III University Transportation Center, and is housed within the Texas Transportation Institute (TTI) at Texas A&M University (TAMU). The theme of the UTCM is "Improving the Quality of Life by Enhancing Mobility." The resources and expertise of TTI and the Texas A&M University System provide a unique opportunity to make a difference in mobility in this country through the UTC Program, while developing research, education, and technology programs with a lasting impact. The UTCM accomplishes its objectives through research in four focus areas.

## Research Project Highlights

**Refining the Real-Timed Urban Mobility Report** • Timothy Lomax, Mobility Analysis Program, TTI

**Refining a Methodology for Determining the Economic Impacts for Transportation Improvements** • David Ellis, Mobility Analysis Program, TTI

**Teen Driver Cell Phone Blocker** • Mark Benden, School of Rural Public Health, Texas A&M Health Science Center; Rainer Fink, Industrial Engineering; Russell Henk, Research and Implementation Division, TTI - San Antonio, El Paso

**Feasibility of Mileage-Based User Fees: Application in Rural/Small Urban Areas of Northeast Texas** • Ginger Goodin, System Planning, Policy and Environment Research Group, TTI-Austin; Eric Lindquist, Bush School of Government and Public Service

**The Value of Non-Medical Transportation for Improving the Quality of Life for the Rural Elderly: Methodology and Information Considerations** • James Mjelde and Rebecca Dudensing, Department of Agricultural Economics, TAMU

## UTCM Research Focus Areas

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

## Education and Technology Transfer

In addition to research projects, the UTCM's education programs and technology transfer initiatives will continue to positively impact the development of the transportation workforce in a sustainable way.

**Designing Communities to Provide Safe Mobility Options for Older Adults** • Eric Dumbaugh, Department of Landscape Architecture & Urban Planning, TAMU

**Evaluating the Use of Transfers for Improving Rural Public Transportation Systems** • Luca Quadrifoglio, Zachry Department of Civil Engineering, TAMU; Suzie Edrington, Transit Mobility Program, TTI-Houston

**Multiple Depot Vehicle Routing with Applications to Paratransit and Rural Transportation** • Swaroop Darbha, Department of Mechanical Engineering, TAMU; Luca Quadrifoglio, Zachry Department of Civil Engineering, TAMU

**Comparing Perceptions and Measures of Congestion** • Minh Le, Research and Implementation Division, TTI-Dallas; Shawn Turner, Mobility Analysis Program, TTI

**Leveraging Land Development Returns to Finance Transportation Infrastructure Improvements** • Jesse Saginor and Eric Dumbaugh, Department of Landscape Architecture & Urban Planning, TAMU; David Ellis, Mobility Analysis Program, TTI

## Research Project Highlights (cont.)

### Effect of Climate Change on Crop Production Patterns with Implications to Transport Flows and Inland Waterways •

Dmitry Vedenov, Gabriel Power and Bruce McCarl, Department of Agricultural Economics, TAMU; Sharada Vadali, Mobility Analysis, TTI

Use of Performance Measurement to Include Air Quality and Energy into Mileage-Based User Fees • Reza Farzaneh, Air Quality Studies Program, TTI; Trey Baker and Ginger Goodin, System Planning, Policy and Environment Research Group, TTI-Austin

## Educational Activities

The UTCM's education activities are purposed to increase both the quantity and quality of graduates prepared to enter the professional transportation workforce. Some of the education activities the UTCM supports include:

### Academic Course and Program Development

- **Interdisciplinary Graduate Certificate in Transportation Planning**—This interdisciplinary certification program at Texas A&M University was developed by the Department of Landscape Architecture and Urban Planning (LAUP) in the College of Architecture in partnership with TTI, the Zachry Department of Civil Engineering, and the Bush School of Government and Public Service. The program is open to graduate students in any field who have an interest in transportation. In its first two years, the program awarded 19 scholarships and two fellowships to certificate students, enrolled 30 students in the program, and awarded 17 certificates to graduating students. In the program, two new graduate courses were developed (Transportation Investment Decisions and Applied Transportation Studio) and one new undergraduate course (Transportation and Urban Form).
- **Other new graduate courses**—In addition to the courses developed in the Transportation Certificate Program, standalone courses have been developed in the areas of Transportation Infrastructure Finance and Intelligent Transportation Systems.
- **Course Modules**—Several research projects have also developed modules for incorporation in existing graduate courses.

### Professional Course and Program Development

The UTCM is funding the development of two professional certification programs to enhance the skills of practitioners:

- **Transit Management Certificate**
- **Transportation Planning Professional Certificate**

### Student Fellowships, Assistantships, and Other Enrichment Opportunities

The UTCM offers independent fellowships and assistantships to enhance educational and training opportunities for outstanding

graduate students at Texas A&M. The UTCM provides funding for graduate students to attend professional conferences and workshops for additional training and networking with transportation professionals. The UTCM also annually names a Student of the Year (SOY).

## Technology Transfer Activities

Examples of T2 activities that have been sponsored by the UTCM include state and national conferences; professional development activities, including technology user groups, webinars, and online education; websites providing resources for various transportation technologies; development of new technologies; workforce development/outreach programs for K-12; diversity initiatives; and activities that enhance communications and opportunities for collaboration between transportation-related programs at TAMU. Examples of the UTCM's T2 activities include:

### Conferences and Workshops

- **Annual Symposia on Mileage-Based User Fees**—2009-2011
- **Technology User Groups**—for rural and small urban transit agencies in Texas, 2009-present
- **Conference on Performance Measures for Transportation and Livable Communities**—2011
- **Context Sensitive Solutions Workshops**—2009
- **Bottlenecks Workshops**—2009

### Internet Resources

- **Mileage-Based User Fees**—State-of-the-Practice Website: <http://utcm.tamu.edu/mbuf>
- **Guide to Transportation Funding Options**—State-of-the-Practice Website: <http://utcm.tamu.edu/tfo>
- **Active Traffic Management**—State-of-the-Practice Website and Webinars (under development)

### Technology Development

- **Bluetooth®-Based Travel Time/Speed Measuring Systems Development**—Patent pending and technology has been licensed to a private-sector entity for commercialization
- **Teen Driver Cell Phone Blocker**—A study is underway that is testing the technology

### K-12 Outreach / Workforce and Diversity Development Programs

- **Summer Transportation Institute & STI Scholars** 2008 - 2012; Support and expansion of a successful STI program at Prairie View A&M University, an historically black university
- **Outreach Programs for Minority Students in Rural South Texas**—2009-2011
- **Modules for Middle School**—Developing transportation-related webinars and in-class workshops for middle school students