

*“Improving the **quality** of life  
by enhancing **mobility**”*



# UTC **M**

**University Transportation Center for Mobility**



**Annual Report FY 07**

# Director's Message

**What does it mean to make a difference?** Some people work to live, some live to work, but a significant number of us also work to make a difference, a positive mark on society. It is difficult to imagine any discipline with more potential for positive impact on both the lives of individual people and society as a whole than transportation.

We are all keenly aware as we sit in traffic that congestion wastes time and money. The 2007 Urban Mobility Report, cosponsored by UTCM, quantified this waste in terms of fuel, time and dollars lost sitting in traffic: 2.9 billion gallons, 4.2 billion hours and \$78 billion. Make no mistake, those figures are significant, and they clearly define the problem for 85 urban areas nationwide. But what do these numbers mean to the individual? The average urban traveler wasted the equivalent of five vacation days and 26 gallons of fuel, which at today's gas prices is a tidy sum of money. For a commuting parent, these figures translate to extra time that children spend in day care waiting to be picked up, parents missing soccer games and school plays, and too many family dinners of fast food in the car when it's too late to cook something healthy. Congestion wastes much more than the American family's fuel and money; the true cost is in the waste of our most important and nonrenewable resource – quality time with our families.

The transportation-dependent population of rural America has special transit needs that have been historically underfunded and difficult to address. Some examples of these problems are rural parents with no way to get their sick children to a doctor and welfare recipients with no transportation to training required for eligibility. A disproportionate number of rural residents are elderly and may no longer be able to drive themselves to town for their groceries or medical care. The needs are compelling; we have an opportunity at UTCM to make a real difference in the quality of life for rural Americans by finding effective solutions to their transportation needs.

A transportation system is working best when it goes unnoticed. That is, a functioning system is taken for granted, but a stressed system causes citizens to complain. With this in mind, UTCM will be conducting research and programs to address the overall mobility of our transportation system from coast to coast and border to border. We are seeking ways to address existing bottlenecks and prevent new ones from occurring, both locally and nationally. We will investigate methods of financing infrastructure improvements and maintenance. As an academic institution, we can provide the objective, unbiased information needed for good planning and decision making.

As a citizen and a parent, I want my country's transportation system to work for me. And as a transportation professional, I am grateful for the opportunity to participate in solving problems. As the UTCM addresses congestion, rural transit, mobility and innovative financing issues, we will help to improve the quality of life in this country one roadway, one traffic signal, one vehicle at a time.



*Melissa S Tooley*



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Funded by USDOT, Research & Innovative Technology Administration  
University Transportation Centers Program  
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## UTCM **M** Theme

*Improving the **quality** of life by  
enhancing **mobility**  
through programs in  
**Research • Education • Technology Transfer***





UTCM

# Research Focus Areas

UTCM's theme, "improving the quality of life by enhancing mobility," will be accomplished through programs in research, education and technology transfer. All research activities sponsored by the UTCM fall within one or more of the center's four focus areas:

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

**Coast-to-coast, border-to-border mobility** includes all modes and the local, regional and national linkages between them. Since a breakdown in one area's transportation system may affect the entire country, UTCM seeks to develop methods to predict, analyze and mitigate such failures, to identify chokepoints and how they affect the nationwide transportation system, and develop programs that would positively impact this area.

**Rural public transportation** research represents an opportunity for UTCM to improve the quality of life for rural residents. Research topics include better routing methods, the use of technology in rural transit systems, safety issues and more. In and near Texas, many areas of opportunity exist for such studies, including the Colonias (a series of economically disadvantaged small communities along the Texas/Mexico Rio Grande border), the Mississippi Delta and the Four Corners area of the American Southwest.

**Congestion management and mitigation** research currently underway at TTI will be expanded by the UTCM, providing a greater understanding of the benefits of mobility improvement programs and projects. Through such efforts, UTCM will set the stage for major, long-term research initiatives in this area.

**Innovative financing** methods can provide sources of funding for transportation improvements and new construction. For example, Public-Private Partnerships (P3s) and congestion pricing have the potential to generate revenue to fill the widening gap between the increasing number of vehicle miles traveled and the decreasing resources available for both new construction and existing infrastructure improvements. UTCM therefore solicits projects that seek to better understand the policy implications and implementation issues involved with P3s and other financing options.

UTCM

# Research Project

## **Transportation Planning, Policy and Climate Change: Making the Long Term Connection**

**Project dates:** September 1, 2007 to August 31, 2008

**Award:** \$50,000

Climate change and variability will have significant impact on the future mobility of the population in this country. Previous and current research conducted by the co-PIs has found that the transportation sector is not considering adaptation as a solution to these potential impacts and is not integrating climate change science and impacts into decision and planning processes.

These findings raise significant questions that will be explored in more detail in this project. If transportation decision makers are not concerned with climate change, why not, and will this situation continue even as climate change is recognized as a significant threat to the health and mobility needs of society? Can policy makers' uncertainty in regard to climate science be resolved? What other long range issues are considered more significant to planners and policy makers?

Coastal areas in particular are seen as vulnerable to climate change and variability and thus will comprise the regional focus of this study. Adaptation to abrupt climate change (such as a hurricane) will be studied along with longer term incremental changes. This project will expand the current research on adaptation to climate change in transportation planning and policy to include mobility and coastal impacts issues. Specific focus will be placed on identifying and framing best practices. The project will culminate with a workshop on this topic including regional and national transportation planners and decision makers and TTI staff and researchers.



**Eric W. Lindquist, Ph.D.**

*Assistant Director*

*Institute for Science,  
Technology and Public Policy  
George Bush School of  
Government and Public Service  
Texas A&M University*



**Arnold Vedlitz, Ph.D.**

*Director  
Institute for Science,  
Technology and Public Policy  
George Bush School of  
Government and  
Public Service  
Texas A&M University*

**UTCM Project #07-03**

**RiP.trb.org Database #14396**



**Transit Services for Sprawling Areas with Relatively Low Demand Density: A Pilot Study in the Texas Border's Colonias**

**Project dates:** September 1, 2007 to August 31, 2008

**Award:** \$75,000

In the last few decades, the Texas border with Mexico has experienced a tremendous growth in population, primarily due to immigration. The result is a collection of numerous and sprawled communities in which most of the residents are struggling to maintain acceptable living conditions with respect to basic services. One of these basic services is transportation; current transit service available in the Colonias is very limited, inadequate or nonexistent. One of the major challenges that service providers face in those areas is the relatively low demand density, which hinders the cost-effective development of traditional fixed route transit services. The objective of this research is to conduct a pilot study in selected communities within the Laredo and McAllen areas in Texas to collect demand data by simulation analysis to assess the appropriateness and feasibility of a potential future implementation of demand responsive or flexible transit solutions in the Colonias. Efficient response to essential transportation needs will thus improve quality of life by enhancing the mobility of the people in the Colonias.

**Luca Quadrifoglio, Ph.D.**

Assistant Professor

Zachry Department of Civil Engineering  
Texas A&M University

UTCM Project #07-02

RiP.trb.org Database #14221



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

**Project dates:** September 1, 2007 to August 31, 2009

**Award:** \$60,000

Agricultural commodities often originate over vast regions (such as the cotton belt) where low densities of production require considerable transportation effort to link the commodities into the intermodal transportation network. The complications for cotton are substantial since two-thirds of U.S. cotton production is exported. Because of underdeveloped intermodal linkages in rural areas, circuitous routings of cotton occur with potentially unnecessary traffic placed on rural and interstate connectors that link to intermodal facilities in congested metro centers (Dallas, Houston), congested border crossings (Laredo) and west coast ports (Long Beach/ Los Angeles). This study examines the feasibility of developing an efficient intermodal network to serve rural areas in the cotton belt and concurrently measure traffic reduction on highways and congested metro center arteries, and at border crossings and ports. A mathematical network model representing cotton transportation and logistic systems that includes considerable detail regarding transportation (truck, rail, barge, ship) will be developed to evaluate scenarios that represent potential solutions to identified chokepoints. Upon completion and validation of the base model (the current system), potential solutions will be incorporated into the model to measure transportation efficiency gains, changing traffic patterns, impact on highway maintenance costs and congestion mitigation at metros/ports. TTI and the Department of Agricultural Economics will collaborate in evaluation of gained efficiencies and congestion mitigation.

**Stephen W. Fuller, Ph.D.**

Professor

Department of Agricultural Economics  
Texas A&M University

**John Robinson, Ph.D.**

Associate Professor  
Department of  
Agricultural Economics  
Texas A&M University



**John Park, Ph.D.**

Associate Professor  
Department of  
Agricultural Economics  
Texas A&M University



UTCM Project #07-07

RiP.trb.org Database #14288

# Research Project



**Ivan Damnjanovic, Ph.D.**

Assistant Professor

Zachry Department of Civil Engineering  
Texas A&M University

**Impact of Reconstruction Strategies on System Performance Measures: Maximizing Safety and Mobility while Minimizing Life-Cycle Costs**

**Project dates:** September 1, 2007 to August 31, 2008

**Award:** \$60,000

The objective of this research is to develop a general methodological framework for planning and evaluating the effectiveness of highway reconstruction strategies on system performance measures: in particular safety, mobility, and the total cost of managing the network. While much of the previous research has been focused on analyzing the impacts of network improvement strategies (reconstruction or expansion) on single performance measures, such as life-cycle maintenance cost, system travel time, mobility, safety, or users' cost, only a few studies have attempted to examine these strategies from a more holistic and generalized perspective. Even though such comprehensive evaluation is immensely complex and computationally difficult, it is essential for determining the true impact of highway reconstruction programs on the system's performance.



**Andrew J. Wimsatt, Ph.D.**

Division Head  
Materials and Pavement Division  
Texas Transportation Institute



**Sergiy Butenko, Ph.D.**

Assistant Professor  
Zachry Department of Civil Engineering  
Texas A&M University

UTCM Project #07-04

RiP.trb.org Database #14397

# Education Project



**Forster O. Ndubisi, Ph.D.**

Professor and Head

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

**Graduate Certificate in Transportation Planning**

**Project dates:** September 1, 2007 to August 31, 2008

**Award:** \$60,000

This project will develop and implement a graduate Certificate in Transportation Planning. Texas A&M University currently offers instruction in transportation through its Masters of Urban Planning and Civil Engineering programs; however, there is a need for specialized instruction addressing emerging needs of the transportation industry. The Certificate in Transportation Planning program fills this need by providing students with the substantive knowledge base required to be broadly successful in the transportation profession, as well as with specialized instruction that builds student skills and capabilities in three critical areas: Transportation Systems Planning, Transportation and Urban Design and Transportation Policy.

The certificate will be developed by the Department of Landscape Architecture and Urban Planning in the College of Architecture, in partnership with the Texas Transportation Institute, the Zachry Department of Civil Engineering, and the Bush School of Government and Public Service. It will be used as a vehicle to forge lasting partnerships between the participating departments and programs.

The Transportation Planning Certificate program will be a five-course sequence comprised of a foundation course in transportation, a specialty area course, two supportive electives and a capstone. Students enrolled in the program will receive the Certificate in Transportation Planning in conjunction with their graduate degrees. This proposal is the first of a two-phase process focused on proposal development and approval, limited course development and delivery, web development, marketing and recruitment, student fellowships and program administration. The plan is to graduate the first group of four students by August 2008. This program will be open to any graduate student at TAMU with an interest in transportation.

UTCM Project #07-06

RiP.trb.org Database #14399



# UTCM Education Overview

**Education Goal:** A multidisciplinary program of course work and experiential learning that reinforces the mobility enhancement theme of the Center.

UTCM's interdisciplinary education programs include:

- **New Courses and Programs.** UTCM awards funds to develop new transportation courses for both students and professionals and new transportation programs on the Texas A&M University campus. Interdisciplinary collaboration is especially encouraged.
- **Student Research Opportunities.** UTCM offers undergraduate and graduate students the educational opportunities that research provides by requiring student involvement in all funded projects.

- **Awards for Excellence.** UTCM will select an Outstanding Student of the Year. This student will be awarded \$1,000 and travel expenses to attend the annual meeting of the Transportation Research Board in Washington, D.C., including an awards ceremony.
- **Other Enrichment Opportunities.** UTCM supports grants to expand existing opportunities to enrich the student learning experience such as summer programs, conferences or workshops.



# UTCM Tech Transfer Overview

**Technology Transfer (T2) Goal:** Make research results available to potential users in formats that can be directly implemented, utilized or otherwise applied.

UTCM requires technology transfer activities in all funded research projects and may include publication of papers in refereed journals, independently published reports, presentations at conferences and/or acquisition of patents. Additionally, UTCM funds T2 projects such as the development and presentation of workshops, courses and seminars for transportation professionals. Other T2 activities undertaken by the UTCM include:

- **UTCM Newsletter and web site.** *Upwardly Mobile*, the biannual UTCM newsletter and the UTCM web site provide articles, links and resources for information on mobility research activities.
- **Mobility Colloquium.** UTCM offers a lunchtime seminar series to encourage fellowship among transportation researchers, students and professionals. Interactions may stimulate opportunities for collaboration.
- **National Mobility Conference.** UTCM will develop and present a national conference to showcase the state of the art in transportation mobility and provide an opportunity for interaction in the transportation community.

# UTCM Tech Transfer Project

**Partnering to Promote Workforce Development for the Transportation Profession**



**Raghava Kommalapati, Ph.D., P.E.**

Associate Professor

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

**Project dates:** September 1, 2007 to January 31, 2008

**Award:** \$40,000

The long range objective of this multi-university/agency partnership among Prairie View A&M University, Texas Transportation Institute and Texas A&M University is to produce high quality transportation professionals from under-represented groups with graduate degrees and both research and professional experiences. The partnership will begin with expanding the existing Federal Highway Administration sponsored Summer Transportation Institute (STI), currently a one-year program between local high schools and PVAMU. The current STI will be augmented by a second-year program called STI Scholars which will provide additional education and an opportunity to mentor first-year STI participants. The STI Scholars curriculum will provide advanced challenges as well as real world experience among transportation professionals at TTI. All STI students will be encouraged to enroll in the four-year civil engineering program at PVAMU.

Creating and populating this program will be accomplished through a series of tasks that will be carried out over a two to six year period. This project is the first step in that process and focuses on:

- establishing the network path for students from STI through graduate education at TAMU
- creating marketing materials
- recruiting high school teachers as advisors
- recruiting employers and corporate sponsors

**Judy A. Perkins, Ph.D.**  
Professor & Head  
Department of Civil and Environmental Engineering  
Prairie View A&M University



**William R. Stockton, Ph.D.**  
Associate Agency Director and Research Engineer  
Texas Transportation Institute



**Robert J. Benz**  
Research Engineer  
Research and Implementation Division  
Texas Transportation Institute



**Deborah L. Jasek**  
Associate Research Specialist  
Center for Professional Development  
Texas Transportation Institute



**UTCM Project #07-05**

**RiP Database #14398**



**Timothy J. Lomax,  
Ph.D., P.E.**

Research Engineer

Mobility Analysis Program  
Texas Transportation Institute



**David L. Schrank,  
Ph.D.**

Associate Research  
Scientist  
Mobility Analysis Program  
Texas Transportation  
Institute

**Enhanced Urban Mobility Report 2007**

**Project dates:** May 1, 2007 to September 30, 2007

**Award:** \$50,000

For more than 20 years, the Texas Transportation Institute has produced urban congestion and mobility information. The statistics, charts and figures are used routinely by transportation professionals, legislators and the media to illustrate and discuss the transportation challenges facing cities and the nation. The 2007 Urban Mobility Report will include updated mobility data for each of the 85 urban regions included in previous reports as well as estimates of the congestion problem in U.S. urban regions. The report also will present the effect of potential solutions on the urban traffic congestion problem, including arterial street access management, traffic signal improvements, incident management, ramp metering, public transportation systems and high-occupancy vehicle lanes. Improvements will also be made to the freeway speed estimates and truck congestion cost procedures. Reliability problems will be described as one aspect of the congestion problem.

UTCM Project #07-01

RiP.trb.org Database #13690

UTCM researcher Tim Lomax, Research Engineer at the Texas Transportation Institute, offered testimony to the U.S. House of Representatives Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure on June 7, 2007.

Dr. Lomax presented a solution framework for America's congestion problems, emphasizing the following points to the Congressional subcommittee:

- There are multiple transportation problems and solutions, and many are related, such that fixing one will help relieve others.
- Simple solutions that build trust with the public can often be accomplished at relatively low cost.
- Engaging the public is key and should include discussion that emphasizes a benefit to the public, such as improving quality of life and economic development.
- Transportation is a service with travelers and shippers its consumers. We should manage the transportation system to bring the most reliable service to the consumer at the best price.

Lomax and Dr. David Schrank are recipients of a grant from the UTCM to produce an enhanced urban mobility report (see project description at left). For more than 20 years, TTI has produced urban congestion and mobility information heavily used for discussions of the nation's transportation challenges, of which this Congressional subcommittee meeting is a recent example. The 2007 Urban Mobility Report, published September 17, 2007, includes updated mobility data, estimates of congestion in all US urban regions, improved freeway speed estimates and more. For more information on this report, visit <http://mobility.tamu.edu>.

The transcript of Dr. Lomax's testimony can be found on the UTCM web site <http://utcm.tamu.edu> under Publications | Other Publications.



# UTCM Executive Committee



## Herbert H. Richardson, Ph.D.

*UTCM Executive Committee Chair  
and Director Emeritus*

*Texas Transportation Institute*

A graduate of the Massachusetts Institute of Technology, Dr. Richardson served MIT as professor, Head of the Department of Mechanical Engineering and Associate Dean of Engineering before joining Texas A&M in 1984 as Dean and Vice Chancellor of Engineering. He served as Chancellor of the Texas A&M University System prior to becoming Director of the Texas Transportation Institute in 1993.

Dr. Richardson's areas of expertise include transportation systems and technology, system dynamics and control, fluid mechanics, design and fluid power control. He is a member of the National Academy of Engineering, served for six years on the Council of the National Academy and

the Governing Board of the National Research Council (NRC), and is past Chairman of the Transportation Research Board. He has chaired and participated in numerous national committees of the NRC in areas such as Designing Safer Highways, Intelligent Vehicle-Highway Systems, Tank Car Safety, Future Strategic Highway Research and U.S. Aeronautics Vision 2050.

of Engineering. He served as Chancellor of the Texas A&M University System prior to becoming Director of the Texas Transportation Institute in 1993.

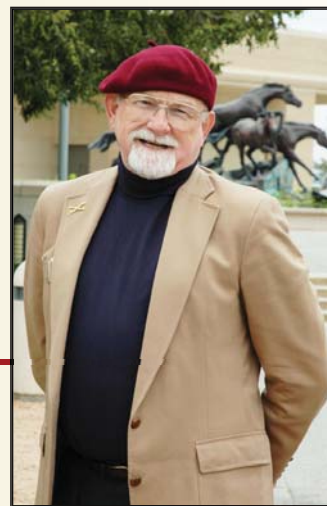
Dr. Richardson's areas of expertise include transportation systems and technology, system dynamics and control, fluid mechanics, design and fluid power control. He is a member of the National Academy of Engineering, served for six years on the Council of the National Academy and

Dock Burke, Regents Fellow and Senior Research Scientist, has fashioned an eclectic career of research and service during his nearly four decades with TTI. Mr. Burke holds a B.A. in Economics from the A&M College of Texas with an additional four years of study, research and teaching in the doctoral program in economics at Tulane University.

## Dock D. Burke, Jr.

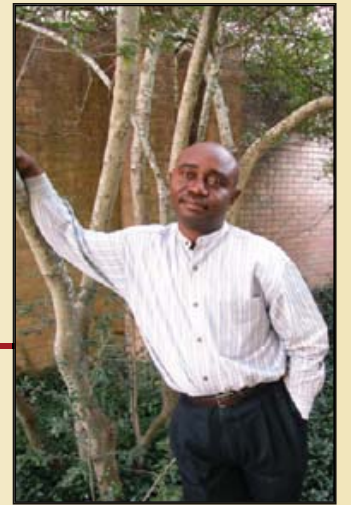
*Director, Southwest Regional  
University Transportation Center  
(SWUTC) and Director, External  
Programs*

*Texas Transportation Institute*



Burke's extensive research and implementation activities include establishing the Texas Center for Ports and Waterways at TTI (1990's) and incorporation of citizen participation in the TxDOT project development process (1970's). In the current phase of his career, Dock has succeeded in creating the dynamic SWUTC consortium that is among the best UTCs in the nation and whose approach to research, educational enhancement and technology transfer programs have been replicated many times by other UTCs. Burke has also succeeded in supporting breakthrough initiatives that have spun off entirely new program elements and individual successes, such as TTI's rail center, ports and waterways center, colonias van transportation program, TSU's urban transportation conferences, the SWUTC student awards program and the Summer Transportation Institute program. For these and other initiatives, TTI bestowed on Dock in 1997 its most prestigious award, Trinity/Director's Career Achievement for Research Award. In 2003 he was named a Regents Fellow by the Board of Regents of the Texas A&M University System.

Prior to his appointment at Texas A&M in July, 2004, Forster Ndubisi was a Professor of Landscape Architecture and City Planning and Director of the Interdisciplinary Design Institute at Washington State University, Spokane for seven years. He holds degrees in zoology with minors in ecology, landscape architecture and city and regional planning. He has served as a consultant in community design, land design and planning, ecological planning and growth management in Canada, Georgia and Washington state.



Dr. Ndubisi has received numerous awards, including the American Society of Landscape Architects (ASLA) Merit Award in research (1988) and the Council of Educators in Landscape Architecture (CELA) President's Award for Contribution to Education in Landscape Architecture (1993). He was a co-recipient of the Georgia ASLA

President's Award for Excellence in Professional Achievement (1994). His research on approaches to ecological planning won the only ASLA Honor Award for Research in 1999. Dr. Ndubisi's extensive publication record includes the books *Public Policy and Land Use in Georgia: A Reference Book* (1996) and *Planning Implementation Tools and Techniques: A Resource Book* (1992). A former president of CELA, he recently served on the Landscape Architecture Foundation (LAF) Board.

Dr. Ndubisi has received numerous awards, including the American Society of Landscape Architects (ASLA) Merit Award in research (1988) and the Council of Educators in Landscape Architecture (CELA) President's Award for Contribution to Education in Landscape Architecture (1993). He was a co-recipient of the Georgia ASLA President's Award for Excellence in Professional Achievement (1994). His research on approaches to ecological planning won the only ASLA Honor Award for Research in 1999. Dr. Ndubisi's extensive publication record includes the books *Public Policy and Land Use in Georgia: A Reference Book* (1996) and *Planning Implementation Tools and Techniques: A Resource Book* (1992). A former president of CELA, he recently served on the Landscape Architecture Foundation (LAF) Board.



## John P. Nichols, Ph.D.

*Professor and Head*

*Department of Agricultural Economics  
Texas A&M University*

Dr. Nichols received his B.S. and Ph.D. from Cornell University and his M.S. from Michigan State University.

Professor Nichols' research and teaching program includes agricultural and food product marketing and policy and international agribusiness. Dr. Nichols' teaching

responsibilities have included agribusiness and food marketing, strategic marketing and planning, and agricultural and food policy.

Primary research interests have focused on producer-based collective marketing programs, evaluation of marketing strategies and food industry marketing. Dr. Nichols is a member of the

Executive Committee of the International Food and Agribusiness Management Association and has served as planning chair for several IAMA World Food and Agribusiness Forums.

Throughout his career at Texas A&M University Dr. Nichols has been active in various administrative leadership roles in the department and with the college and Texas Agricultural Experiment Station. Since the early 1990s he has directed a series of agribusiness education projects in Russia, Armenia, and Georgia.



**David V. Rosowsky, Ph.D., P.E.**

*Professor and Head and A.P. and Florence Wiley Chair in Civil Engineering  
Zachry Department of Civil Engineering  
Texas A&M University*

Since 1990, Dr. David Rosowsky has conducted research in the areas of structural reliability, probabilistic modeling of structural and environmental loads, and probability-based design. His current research addresses four topics:

- behavior of the built environment subject to natural hazards,
- modeling and analysis of load effects on buildings and other structures, with particular emphasis on complex environmental phenomena,
- performance-based engineering for design, post-disaster condition assessment and loss estimation studies, and
- reliability-based assessment of reinforced concrete bridges.

Dr. Rosowsky serves on both national and international technical committees relating to structural safety, reliability-based design of engineered wood structures and design for natural hazards. He is a member of the Editorial Board of the ASCE Journal of Infrastructure Systems and was formerly an Associate Editor of the ASCE Journal of Structural Engineering and Natural Hazards Review. Dr. Rosowsky has received awards including the ASCE Norman Medal in 1998 and the ASCE Walter L. Huber Civil Engineering Research Prize in 2001. Prior to his arrival at Texas A&M University in 2004, Dr. Rosowsky was a professor at Oregon State University where he held the Richardson Chair in Wood Engineering and Mechanics.

Dr. Arnie Vedlitz is a Professor of Political Science at Texas A&M University and Professor of Health Policy at the Texas A&M Health Sciences Center. He is Division Head for the Science, Technology and Public Policy Division at the Texas Engineering Experiment Station as well as Division Head for the Science, Technology and Public Policy Division at the Texas Transportation Institute. He has served in a number of positions at Texas A&M University since 1973, including Associate Dean of the College of Liberal Arts and Associate Provost for External Affairs.

**Arnold Vedlitz, Ph.D.**

*Director and Bob Bullock Chair in Government and Public Policy  
Institute for Science, Technology and Public Policy*

*George Bush School of Government and Public Service  
Texas A&M University*



Dr. Vedlitz received his B.A. and M.A. degrees in Government from Louisiana State University and his Ph.D. in Political Science from the University of Houston. His externally funded research projects total more than \$15 million from NSF, EPA, NOAA, the Agency for Healthcare Research and Quality and numerous state agencies. He is the co-editor of a new book from MIT Press and author of an important book on public policy and dozens of scholarly articles and book chapters.

Arnie recently served on the Council of Competitiveness, National Innovation Initiative, Public Sector Task Force. His teaching and research focus on science and technology policy, minority politics, public policy, inter-group conflict, American political behavior, urban politics and political psychology.



# Advisory Board

**Rafael M. Aldrete-Sanchez, Ph.D., P.E.**

*Research Engineer*

*Research and Implementation - El Paso  
Texas Transportation Institute*



**Mark W. Burris, Ph.D., P.E.**

*Assistant Professor*

*Zachry Department of Civil Engineering  
Texas A&M University*



**Linda K. Cherrington**

*Research Scientist & Program Manager*

*Transit Mobility Program  
Texas Transportation Institute*



**Susan T. Chrysler, Ph.D.**

*Senior Research Scientist and Manager*

*Human Factors Program  
Center for Transportation Safety  
Texas Transportation Institute*



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**Eric W. Dumbaugh, Ph.D.**

*Assistant Professor  
Department of Landscape  
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Texas A&M University*

**Stephen W. Fuller, Ph.D.**

*Professor  
Agricultural Economics Department  
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**Beverly T. Kuhn, Ph.D., P.E.**

*Division Head  
System Management Division  
Texas Transportation Institute*



**Eric W. Lindquist, Ph.D.**

*Assistant Director  
Institute for Science, Technology and  
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**Judy A. Perkins, Ph.D.**

*Professor and Head  
Department of Civil and Environmental  
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Prairie View A&M University*



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**Christopher M. Poe, Ph.D., P.E.**

*Assistant Agency Director  
Division Head/Director  
Center on Tolling Research  
Texas Transportation Institute*

**Gary B. Thomas, Ph.D., P.E.**

*Director  
Center for Professional Development  
Texas Transportation Institute*



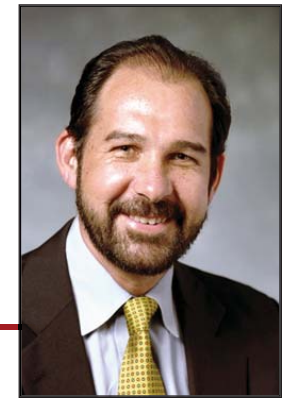
**Jorge A. Vanegas, Ph.D.**

*Director  
Center for Housing and Urban  
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College of Architecture  
Texas A&M University*



**Juan C. Villa**

*Research Scientist  
Economics and Policy Program  
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**Edward Weiner**

*Senior Policy Analyst  
Office of the Secretary of Transportation  
U.S. Department of Transportation*



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can be found on the UTCM web site <http://utcm.tamu.edu> under About Us | Advisory Board.

# UTCM Staff



**Melissa S. Tooley,**  
**Ph.D., P.E.**

Director

Dr. Melissa S. Tooley joined TTI in May, 2006. She is the former Director of the Mack-Blackwell National Rural Transportation Center (MBTC) at the University of Arkansas, and she served as an Assistant Professor of Civil Engineering at the University of Arkansas and the University of Florida. She has a decade of civil engineering consulting experience on projects involving roadway design, flood control, construction management, forensic engineering and civil infrastructure improvements.

Dr. Tooley is a past President of the National Council of University Transportation Centers and immediate past President of ARTBA's Research and Education Division, where she currently serves on the Board of Directors. She is a member of the Board of Regents of the Eno Transportation Foundation and is a former Eno Transportation Fellowship Recipient. A native of Little Rock, Arkansas, she was selected "Young Engineer of the Year" in 1995 by the Arkansas Society of Professional Engineers. She serves on two Transportation Research Board committees: Planning Needs and Requirements for Small and Medium Sized Communities and the Committee for Education and Training. Dr. Tooley was a Master's and Ph.D. level recipient of the Eisenhower Fellowship sponsored by the Federal Highway Administration. As a graduate student, she was selected as MBTC's 1994 Student of the Year.

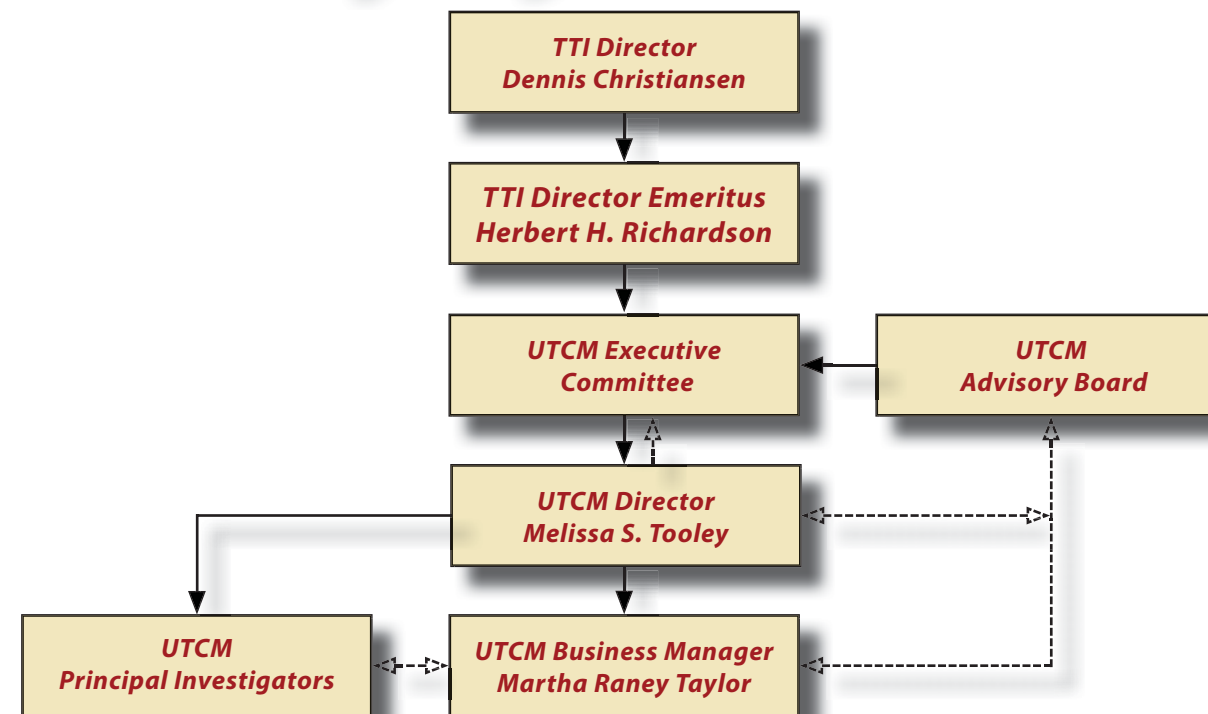


**Martha Raney Taylor**

Business Manager

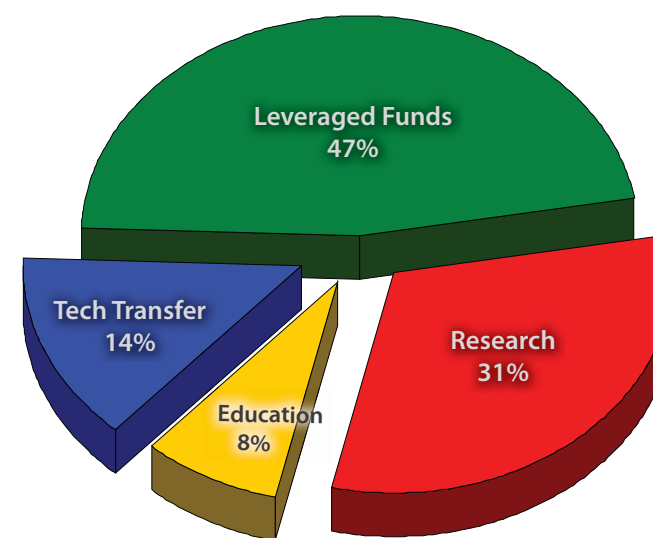
In two decades with Texas A&M, Martha has supported a variety of academic, research and business functions of the university: as assistant to the department head of Biology, assistant to the director of a research institute in the College of Science, program coordinator for a research council representing 1,700 principal investigators and as program coordinator for a high profile, \$16M research project in ambulance telecommunications technology. But her most challenging role prior to the UTCM was with the Bonfire Memorial, in which she managed communications and planning among the hundreds involved in the construction and dedication of the Bonfire Memorial honoring the twelve students killed in the 1999 collapse of Texas A&M's Bonfire. Martha joined the UTCM in May 2007.

# UTCM Organizational Chart

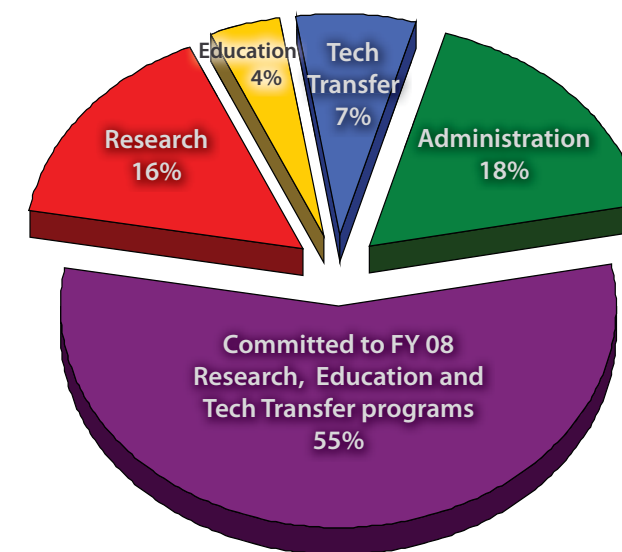


# UTCM Financial Report

**FY07 UTC Funds & Leveraged Funds  
Committed to UTCM Projects**



**FY07 UTC Funds Committed**





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Texas Transportation Institute

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