New UTCM Projects Awarded

UTCM’s inaugural Request for Preliminary Proposals (RFPP) yielded 45 submissions by the October 1, 2007 deadline. The group was reviewed and ranked by the UTCM Executive Committee and Advisory Board. Based on these rankings and other criteria, Formal Proposals were invited by the UTCM Executive Committee and Director.

Seventeen projects for FY08 were selected for funding by the UTCM Executive Committee in December 2007. Since that time, two additional projects have been funded by the Executive Committee. These 19 projects total nearly $1.6M, span all of UTCM’s focus areas and include projects in research, education and technology transfer. The projects include collaborative efforts of researchers and students in TTI, five departments and centers at Texas A&M University, three other Texas universities, TxDOT and private industry.

The listing of all FY08 projects can be found on the back cover. More information, including all current and completed UTCM projects, project abstracts and biographical information on UTCM PIs can be found on the UTCM web site at http://utcm.tamu.edu.

UTCM Student of the Year

“Overseeing the selection of the Outstanding Student of the Year is one of the very best things about being a UTC Director,” says UTCM Director Melissa Tooley. “And our first candidate, Meghan Wieters, sets a wonderfully high standard for our Center.” Indeed, the Ph.D. Candidate in Urban Regional Science at Texas A&M has held research assistantships from both TTI and the Southwest Region UTC (SWUTC), has a Master’s in Community and Regional Planning from the University of Texas, has professional experience as Principal Planner for the City of Austin, has developed and taught undergraduate courses at A&M and has numerous awards, including SWUTC’s Transportation Ph.D. Student of the Year in 2005. “What’s more,” said Tooley, “Meghan is a brilliant, organized young woman with an easy manner and determined attitude.” Meghan’s story of attending TRB as UTCM’s first SOY can be found on page 5.

RITA Administrators Tour TTI, UTCM

President Bush appointee Paul Brubaker, Administrator of the USDOT Research and Innovative Technology Administration (RITA), told UTCM and Texas Transportation Institute (TTI) employees, “The world is going to look very, very different in 10 years.”

Brubaker was referring to the nation’s growing and shifting population, the price of oil and the challenge of financing infrastructure projects. As RITA Administrator, Brubaker is responsible for coordinating DOT’s $1 billion research budget and is charged with advancing technologies that will improve the US transportation system.

Brubaker’s December 2007 visit to TTI was his first since being sworn in as RITA Administrator last summer. RITA Associate Administrator for Research, Development and Technology Dr. Jan Brecht-Clark accompanied him on the tour. Brecht-Clark oversees the University Transportation Centers program, which includes TTI’s two UTCs, the Southwest Region University Transportation Center (SWUTC) and the University Transportation Center for Mobility (UTCM).

Brubaker and Brecht-Clark were presented overviews of SWUTC and UTCM and toured TTI’s Translink® Laboratory, the Materials and Pavements Lab and TTI’s research and testing facilities at the Riverside campus.

“Dr. Jan Brecht-Clark and I found the briefings and exchanges very useful to understanding the major contributions TTI is making to improve the safety and performance of our national transportation infrastructure. Moreover, TTI is performing a great service to the nation and the state of Texas by training the next generation of national, state and local transportation leaders,” Brubaker said.

“The commitment and passion of the Aggie community to creating a world-class transportation research facility at A&M was evident from all of the people we met with.”
UTCM strongly encourages interdisciplinary collaboration. The UTCM program stresses the importance of interdisciplinary education as critical to the success of tomorrow’s transportation professionals. Likewise, transportation issues cannot be adequately addressed by a one-dimensional research approach. Research in UTCM’s focus areas must take into account engineering, economic, planning, and political issues in order to develop innovative but implementable results.

Forster Ndubisi’s Transportation Certificate Program (see Spotlight on Education below) will offer graduate students a way to include a focus in transportation in any degree program. Courses are being developed by Texas A&M’s Zachry Department of Civil Engineering, the George Bush School of Government & Public Service, the Department of Landscape Architecture & Urban Planning and TTI. The first degrees with this certificate are expected to be awarded in May.

Launched last fall, the Mobility Colloquium offers informal and topical lectures (see p. 4), with the intent of bringing together researchers with similar interests to stimulate collaboration. These popular seminars have been well attended by TTI staff from all over the state, as well as by faculty, administrators and students from a range of A&M departments with transportation interests.

The Mobility Colloquia have already brought researchers together: at the first colloquium, TTI Associate Research Scientist Sharada Vadali introduced herself to attendees from the Department of Agricultural Economics, and their discussions that day resulted in the submitting two successful UTCM proposals.

Such collaborations are commonplace in the UTCM: of the research projects we have funded to date, almost half of them have involved interdisciplinary collaboration among researchers, faculty and students of TTI and Texas A&M, including the George Bush School of Government and Public Service, the Department of Landscape Architecture and Urban Planning, the Center for Housing and Urban Development, the Department of Agricultural Economics and the Zachry Department of Civil Engineering. As the relationships formed by these research teams continue to develop, it is expected that the percentage of collaborative teams will increase.

A pilot study in the Texas border’s colonias communities addressing flexible transit systems for rural areas is one model. The UTTM Spotlight on Research (p. 61) Dr. Luca Quadrifoglio of Texas A&M’s Zachry Department of Civil Engineering is collaborating with TTI Senior Research Scientist Linda Cherrington. To gather data from local residents for their study, they are utilizing experienced local residents hired and trained by the Center for Housing and Urban Development in the College of Architecture at A&M.

Clearly, UTCM’s emphasis on collaboration is increasing the number of interdisciplinary research partnerships in transportation-related projects across the Texas A&M campus and beyond. This is a benefit that is expected to continue long after the UTTM grant expires. Collaboratively Yours,  

Forster Ndubisi

UTCM strongly encourages interdisciplinary collaboration. The UTCM program stresses the importance of interdisciplinary education as critical to the success of tomorrow’s transportation professionals. Likewise, transportation issues cannot be adequately addressed by a one-dimensional research approach. Research in UTCM’s focus areas must take into account engineering, economic, planning, and political issues in order to develop innovative but implementable results.

Forster Ndubisi’s Transportation Certificate Program (see Spotlight on Education below) will offer graduate students a way to include a focus in transportation in any degree program. Courses are being developed by Texas A&M’s Zachry Department of Civil Engineering, the George Bush School of Government & Public Service, the Department of Landscape Architecture & Urban Planning and TTI. The first degrees with this certificate are expected to be awarded in May.

Launched last fall, the Mobility Colloquium offers informal and topical lectures (see p. 4), with the intent of bringing together researchers with similar interests to stimulate collaboration. These popular seminars have been well attended by TTI staff from all over the state, as well as by faculty, administrators and students from a range of A&M departments with transportation interests.

The Mobility Colloquia have already brought researchers together: at the first colloquium, TTI Associate Research Scientist Sharada Vadali introduced herself to attendees from the Department of Agricultural Economics, and their discussions that day resulted in the submitting two successful UTCM proposals.

Such collaborations are commonplace in the UTCM: of the research projects we have funded to date, almost half of them have involved interdisciplinary collaboration among researchers, faculty and students of TTI and Texas A&M, including the George Bush School of Government and Public Service, the Department of Landscape Architecture and Urban Planning, the Center for Housing and Urban Development, the Department of Agricultural Economics and the Zachry Department of Civil Engineering. As the relationships formed by these research teams continue to develop, it is expected that the percentage of collaborative teams will increase.

A pilot study in the Texas border’s colonias communities addressing flexible transit systems for rural areas is one model. The UTTM Spotlight on Research (p. 61) Dr. Luca Quadrifoglio of Texas A&M’s Zachry Department of Civil Engineering is collaborating with TTI Senior Research Scientist Linda Cherrington. To gather data from local residents for their study, they are utilizing experienced local residents hired and trained by the Center for Housing and Urban Development in the College of Architecture at A&M.

Clearly, UTCM’s emphasis on collaboration is increasing the number of interdisciplinary research partnerships in transportation-related projects across the Texas A&M campus and beyond. This is a benefit that is expected to continue long after the UTTM grant expires. Collaboratively Yours,

Forster Ndubisi
One of UTCM’s most visible means of fostering interdisciplinary collaboration and technology transfer is the Mobility Colloquium, launched in the fall of 2007. This casual seminar series presents a variety of speakers from transportation and related disciplines such as architecture, agriculture and public policy, discussing mobility issues as well as topics of general interest. Students are encouraged to attend to broaden their knowledge, and researchers are encouraged to network with interdisciplinary colleagues.

While presenters speak, participants enjoy their brown bag lunches, with cookies provided by UTCM. Lively Q&A follows each presentation. To date, four colloquia have been successfully presented, with an average attendance of 50 people both in person and via videoconferencing units in TTI’s remote offices throughout Texas. Four colloquia have been presented to date:

**10.09.2007**
“The ABCs of UTCM: Who We Are and How to Get Funded”

Melissa S. Tooley, Ph.D., P.E.
Director, UTCM

I have heard the stories about the Annual TRB meeting—the thousands of people there, the years where participants frudged through the snow to get to the various hotels and the hundreds of sessions. I had heard the stories, but I never had the opportunity to go; that is, until I received TRB travel expenses as part of the award for the first UTCM Outstanding Student of the Year. Receiving this award was thrilling because now I got to experience these stories firsthand!

The banquet in which the SOYs received their awards was full of major leaders in the field. I had my picture taken with Former Secretary of Transportation Norman Y. Mineta, shook hands with Congressman James L. Oberstar, and generally enjoyed all the enthusiasm that rippled through the room. I attended primarily pedestrian-oriented sessions and was fed up of the discussions related to pedestrian signals. There was lively debate on whether the display of a countdown should or should not be in the MUTCD. Following the discussions on how Washington D.C. (DOT) determined a signal, I was able to walk around parts of D.C. to view the timing of intersections for pedestrians. And despite being a bit colder than I am used to, I had a great time taking in all the information, exhibits, the people and our nation’s capital.

Offering travel assistance as part of the SOY award affords a great opportunity for students to go to this important conference. It is a wonderful experience to be part of this award.

Thank you for this great opportunity and I hope the UTCM is able to continue to provide this excellent opportunity for students for many more years in the future.
Communicating the Value of Your Research: How to Convince Low Demand Density: A Pilot Study in the Texas Borderlands

Johanna Zmud, Ph.D., President, NuStats, Austin, TX
Timothy J. Lomax, Ph.D., Research Engineer, Mobility Analysis Program, Texas Transportation Institute

With a tongue-in-cheek title, Zmud and Lomax presented the results of a National Cooperative Highway Research Program (NCHRP) project designed to help researchers focus on the value of their research, not just the findings.

“We want to help ensure that the hard work of researchers actually makes a difference and is noticed for the value that it has,” Lomax said. “The first step, we think, is to figure out how to think about the range of audiences might understand the value of the research. Knowing that will help guide them to the people and groups that are most affected by the results. The next step is to know how to communicate that message to the right audience.”

Zmud detailed several case studies in a wide range of topics over the last two decades that were well received by their target audiences. She showed how various methods and outlets were used to successfully promote the value of the research depending on the project. “The common element to creating the widespread perception of value was a strong communication strategy,” Zmud said. She recommended that a communication plan be built into proposal budgets. She also said that the case studies clearly show that developing relationships with members of the target audience was the most important element in the communications process.

Diversity at Texas A&M: Why So Slow?

Karan L. Watson, Ph.D., P.E., Dean of Faculties and Associate Provost, and Regents Professor of Electrical Engineering, Texas A&M University

In honor of Black History Month, the UTCM and the TTI Diversity Council co-sponsored the Mobility Colloquium on diversification efforts of Texas A&M University.

Watson, who served as the Interim Vice President and Associate Provost of Diversity from November, 2005 to September, 2006, noted the slow progress of Texas A&M’s efforts in diversifying its students and faculty. She cited low percentages of minorities at TAMU compared to the percent of college-ready high school graduates in Texas. “For the state we live in, it TAMU does not change its behavior, by 2030 we will be a minority-serving university instead of having a well-represented segment of the population,” said Quadragliolo. “They will go door-to-door interviewing members of each household within El Cenizo.” Quadragliolo expects to collect 250 completed surveys by the end of May.

Concurrently, the team is preparing models to simulate proposed transit service operations and investigate the optimal configuration. Demand data will be updated based on results of the survey. Said Dr. Quadragliolo, “The project will conclude in August with a completed model that hopefully can be implemented in a future trial there.”

More information on this and other UTCM project can be found on our web site at http://utcm.tamu.edu under “Projects.”
More information on these projects can be found at http://utcm.tamu.edu under “Projects”.

**RESEARCH**

“Improving Mobility Data and Benefit Estimation Procedures” • T. Lomax, S. Turner, D. Schrank, W. Eisele, D. Ellis • 1/1/08 - 11/30/08 • $150,000

“A new systems approach to risk reduction and hazard mitigation of transportation infrastructure networks subject to multiple hazards” • M. Sanchez-Silva, D. Rosowsky • 1/1/08 - 12/31/08 • $95,888

“Estimating the Benefits of Managed Lanes” • M. Burris, D. Shaw • 1/1/08 - 2/28/09 • $80,000

“Methodology and Guideline for Regulating Traffic Flows under Air Quality Constraints in Metropolitan Areas” • Y. Zhang, Q. Ying • 1/1/08 - 8/31/09 • $80,000

“Mileage-Based User Fee Pilot Project: Rural/Small Urban Area Application in Northeast Texas” • G. Goodin, E. Lindquist • 2/1/08 - 8/30/09 • $80,000

“Expansion of the Border Crossing Information System” • J. Villa, R. Aldrete • 2/1/08 - 12/1/08 • $60,854

“Various Funding Methods Used Across the United States for Mass Transit” • L. Cherrington, K. Turnbull • 3/1/08 - 8/31/08 • $50,000

“Bio-Fuels Energy Policy and Grain Transportation Flows: Implications for Inland Waterways and Short Sea Shipping” • D. Vedenov, S. Vadali, G. Power, S. Fuller, M. Burris • 4/1/08 - 8/31/09 • $70,773

“Improved Demand-Response Productivity and Service Quality through Dispatch Strategies” • S. Edrington • 6/1/08 - 12/31/09 • $45,000

“Valuation of Buyout Options in Comprehensive Development Agreements” • G. Power, M. Burris, S. Vadali, D. Vedenov • 9/1/08 - 10/31/09 • $85,272

“Examining Challenges, Opportunities and Best Practices for Addressing Rural Mobility and Economic Development under SAFETEA-LU’s Coordinated Planning & Human Services Framework” • J. Martin, C. Giusti, E. Dumbaugh, L. Cherrington • 5/1/08 - 8/31/09 • $100,000

**EDUCATION**

“Regional Coordination Workshop” • J. Overman • 1/1/08 - 8/31/08 • $72,820

“Development and Teaching of a Special Topics Course on Intelligent Transportation Systems for the Zachry Department of Civil Engineering of Texas A&M University” • K. Balke, G. Hawkins • 1/1/08 - 12/31/08 • $47,421

“Developing an Interdisciplinary Certificate Program in Transportation Planning” • F. Ndubisi, E. Dumbaugh • 1/1/08 - 8/15/09 • $101,852

“Making Mobility Improvements a Community Asset” • B. Bochner, D. Lord • 1/1/08 - 8/31/09 • $154,629

**TECHNOLOGY TRANSFER**

“A Guide to Transportation Funding Options” • T. Geiselbrecht • 10/8/07 - 12/31/07 • $20,000

“Freeway Bottleneck Removals: Workshop Enhancement and Technology Transfer” • C. Walters • 2/1/08 - 8/31/08 • $78,000

“Promoting Workforce Development for the Transportation Profession Through a Multi-University/Agency Partnership” • R. Kommalapati, J. Perkins, D. Jasek, W. Stockton, R. Benz • 5/1/08 - 8/31/09 • $118,029

“Developing a Methodological Framework to Value Public Sector’s Risk Exposure in PPPs” • R. Aldrete, I. Damnjanovic • 9/1/08 - 8/31/10 • $99,979