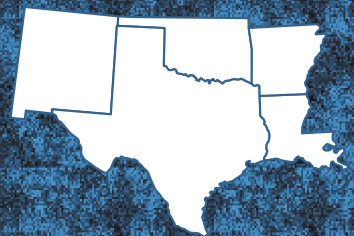


*Southwest Region
University Transportation Center*

ANNUAL REPORT

Transportation Solutions to Enhance Prosperity and the Quality of Life



Credits

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Southwest Region University Transportation Center Annual Report 2001

Transportation Solutions to Enhance Prosperity
and the Quality of Life

Consortium Members:
Texas A&M University
University of Texas at Austin
Texas Southern University

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From The Director

Ideas, People, Opportunity



Successful pursuit of our theme *Transportation Solutions to Enhance Prosperity and the Quality of Life* requires energized people (both faculty and students) creating dynamic and insightful ideas to generate and capitalize on new opportunities for transportation solutions for our fellow citizens. The

SWUTC program builds on its educational, research, and technology transfer successes by continually integrating new researchers, new students, and new faculty members into the diversified mix of our family. Classroom performance, research results, and outreach efforts in the current year created new and exciting outcomes for our participants. I am pleased to highlight some of the milestones.

As elements of our broadening educational programs supported by the SWUTC, we expanded our educational outreach to high school children participating in the Summer Transportation Institute programs at Houston (TSU), Dallas (Paul Quinn College), and San Antonio (UTSA). One hundred percent of the summer 2000 Undergraduate Fellows at UT-Austin subsequently applied for admission to UT's graduate transportation engineering program. The unique Mentors Program at Texas A&M provided selected state DOT employees an opportunity for advanced professional development in ITS and traffic operations/management.

Of all our students, Mr. Yi-Chang Chiu, a doctoral student at UT-Austin, was selected to receive the prestigious *Robert Herman Award* as the Outstanding Student in the SWUTC. His cutting edge doctoral work incorporates elements of economics, control theory, and real-time information to improve our understanding of the flow of vehicular traffic in congested urban networks. TAMU student, Mr. William Eisele, received the SWUTC's award as the *Outstanding Doctoral Student* for his academic proficiency specializing in ITS data management and transportation systems performance monitoring. This year, SWUTC established the *Naomi Ledé Outstanding Masters Student Award* and presented it to the first recipient -- Mr. Curtis Wilson, who is pursuing a Masters of Science degree in Transportation Planning and Management at TSU.

This year forty eight research and teaching faculty members from the consortium engaged in the SWUTC's research program. Developing, testing, and improving new ideas for our theme *Transportation Solutions to Enhance Prosperity and the Quality of Life*, SWUTC researchers were active on 28 projects, including these highlight projects: inland port development, older driver performance, smart growth, transportation management and national defense preparedness, uncertainty in land use models, travel demand forecasting models, and commuter behavior and real-time information. Among other results, this year's research program produced several award winning papers, theses, and dissertations as well as additional "spinoff" research funded by complementary sponsors.

Technology transfer and outreach opportunities challenge the SWUTC to use a variety of methods to make information readily available for

.potential users throughout the transportation industry. Symposia, internet website downloads, teleconferences, and workshops comprise the year's highlighted technology transfer successes.

- The Advanced Institute and the Undergraduate Summer Internship in Transportation at UT-Austin conducted a 14 part transportation research symposium that was attended by 150 individuals. Faculty members and students presented several current SWUTC research ideas.
- SWUTC "hooked-up" with several transportation centers to produce a teleconference on *North American Freight Transportation Issues and Trends: A Midcontinent Perspective*. This effort showcased presentations from faculty members of the Midcontinent Transportation Knowledge Network, a consortium including the University of Manitoba Transportation Institute, the Mountain Plains Consortium at North Dakota State University, and the National Center for Intermodal Transportation (NCIT) in Denver.
- Dr. Lei Yu's project report *Travel Demand Forecasting Models* was downloaded over 3500 times from the SWUTC website since October 2000. This is our highest-demand document ever.
- Teaming with the Mack-Blackwell National Rural Transportation Study Center, the SWUTC held the *Texas Rural Transportation Conference* at the Bush Presidential Library and Conference Center

at Texas A&M. Dr. Melissa Tooley, MBTC Director and Professor of Civil Engineering at the University of Arkansas, was the keynote speaker.

We continue to strengthen the relationships within the existing SWUTC consortium, its ancillary programs, and our newly established partnerships. The long-term vibrancy and health of the SWUTC are directly tied to the high performance of both the professional staff and student body in executing our research, education, and technology transfer programs. Stable and growing funding in both federal and state supporting budgets continues to be a high management priority to establish the administrative platforms for programmatic success in the SWUTC. Unrestored budgetary reductions still present real-time difficulties to the intended and expected fulfillment of the UTC vision, and we intend to find sustainable solutions to overcome this threatening condition.

Dock Burke,
Director



SWUTC Theme And Vision

The SWUTC theme

*Transportation Solutions to Enhance Prosperity
and the Quality of Life*

clearly challenges SWUTC participants to expand their capacities to the fullest to produce education, research, and service solutions to transportation issues facing the people of Region 6 and the U.S. Our theme encompasses four strategic thrusts - support of economic growth and trade; enhancement of mobility, accessibility and efficiency; promotion of safety and safe environments; and development of the transportation workforce.

To achieve maximum value from the SWUTC in implementing our grant, the SWUTC pursues the following vision to become

*an internationally recognized center for excellence
providing knowledge, diverse leaders, and
innovative solutions for the transportation challenges
of the 21st Century.*

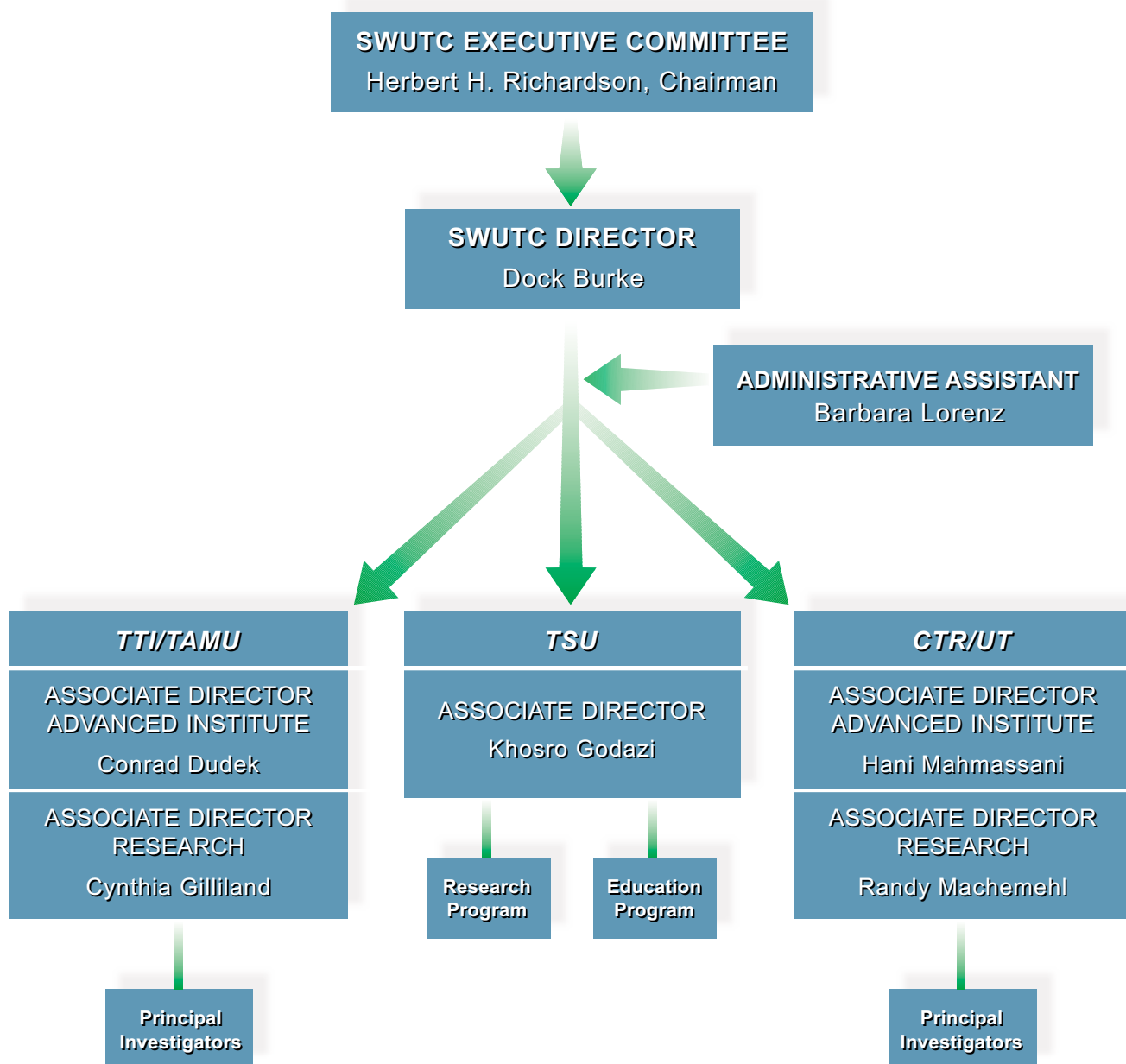
This ambitious vision calls upon us, over the expected lifetime of this UTC grant, to deliver premier research programs in transportation systems, transportation education and professional workforce development, and transportation technology transfer and service. We will pursue this vision by building on the significant resource base already in place within the transportation programs of the consortium universities, adding new partnerships and alliances with other universities and transportation entities in the region, and keeping the three program elements (research, education, and technology transfer) focused upon our theme.



Management Structure

The SWUTC Executive Committee oversees the SWUTC activities by establishing budget priorities; determining program content by selecting research projects and choosing those educational programs to be undertaken; and by reviewing the administrative affairs of the Center.

The SWUTC Director plans, executes, and reports the approved activities of the Center. The Director is assisted by an Administrative Assistant and five Associate Directors - two at TAMU/TTI, two at UT-Austin/CTR, and one at TSU/CTTR. These Associate Directors are each responsible for administering that portion of SWUTC's activities in their charge.



Key Center Personnel

SWUTC Executive Committee

Dr. Herbert Richardson, H. Chairman



Dr. Richardson is currently Director of the Texas Transportation Institute and Associate Vice Chancellor for Engineering in the Texas A&M University System, and also holds appointments as Regents Professor and

Distinguished Professor of Engineering at Texas A&M University. He is a member of the National Academy of Engineering, Honorary Member of the American Society of Mechanical Engineers, and Fellow of the American Association for the Advancement of Science. He served as the first Chief Scientist of the U.S. Department of Transportation, as Chairman of the Transportation Research Board, and has led or participated in numerous TRB panels, study committees, and review boards. He served for 6 years on the Governing Board of the National Research Council and the Council of the National Academy of Engineering. Most recently he received the Lamme Medal of the American Association for Engineering Education for leadership in engineering education.

Dr. C. Michael Walton, member

Dr. Walton is Professor of Civil Engineering and Ernest H. Cockrell Centennial Chair in Engineering, University of Texas at Austin. Dr. Walton is a member of the National Academy of Engineering and former Chairman of TRB. Dr. Walton has won numerous awards including The American Society of Civil Engineers 1992 James Laurie Prize for contributions to the advancement of transportation engineering; the 1987 Harland Bartholomew Award for contributions to the

enhancement of the civil engineer's role in urban planning and development; and the 1987 Frank M. Masters Transportation Engineering Award, for innovations in transport facility planning. The Transportation Research Board presented Dr. Walton with the 1998 W.N. Carey, Jr.

Distinguished Service Award in recognition of outstanding leadership in support of transportation research. In 1995, he was named TRB's Distinguished Lecturer in recognition of the research contributions over his entire career. The American Road and Transportation Builders Association presented Dr. Walton with the 1994 S.S. Steinberg Award recognizing his outstanding contributions to transportation education. He received the 1995 Distinguished Engineering Alumnus Award from the College of Engineering at North Carolina State University. The College of Engineering at the University of Texas at Austin awarded Dr. Walton the 1996 Joe J. King Award, their highest professional award, in recognition of his outstanding leadership to the engineering profession. The Institute of Transportation Engineers has awarded him the 1996 Wilbur S. Smith Distinguished Transportation Educator Award in recognition of outstanding contributions to the transportation profession by relating academic studies to the actual practice of transportation.

Dr. Carol Lewis, member

Dr. Lewis is Director of the Center for Transportation Training and Research at Texas Southern University and an Associate Professor of Transportation Studies. Dr. Lewis served as a panelist at the ITS America conference in April 1999, focusing on findings from a workshop structured to increase consumer participation in ITS projects. The workshop was partially underwritten by the Southwest Region University

Transportation Center (SWUTC). Since joining the Texas Southern University faculty in 1992, she has conducted research for the Texas Department of Transportation including Strategic Planning for Customer Surveys, Socio-economic and Land Value Effects of Elevated and Depressed Freeways, and Land Use Effects at Freeway Interchanges. She has also completed additional studies for the SWUTC such as *Perspectives on Three Issues Facing the Transit Manager in the Nineties*. A section of this study was included in proceedings of the 2nd National Conference on Women's Travel Issues (USDOT, FHWA). Lewis is also assisting with the citizen involvement portions of Major Investment Studies for the Metropolitan Transit Authority (Houston) and TxDOT.

Dr. Lewis belongs to a number of professional organizations including the Transportation Technical Advisory Committee of the local Metropolitan Planning Organization. She is also a member of the Harris County Ad Hoc Committee for Non-emergency Transportation Services. Since becoming CTTR's Director, Dr. Lewis had the pleasure of accepting two outstanding research awards. The first was from the Austin Metropolitan Business Council and the second from the Conference of Minority Transportation Officials.

Mr. G. Sadler Bridges, member

Mr. Bridges is Special Assistant to the Agency Director of the Texas Transportation Institute. Mr. Bridges has over thirty years of experience in transportation research. His research has included urban transportation, bus operations, high occupancy vehicles, and fixed guide-way transportation. Most recently, Mr. Bridges was the founder of the Intelligent Vehicle Initiative at TTI

and leader of TTI's ALERT™ program in Intelligent Vehicles. Mr. Bridges managed the 1970 and the 1972 National Transportation Studies for Texas, directing the efforts of several state agencies and twenty-three urbanized areas in Texas, and was its principal author. Another landmark study was the National Grade Crossing Inventory Project for which Mr. Bridges directed the pilot projects in Florida, Virginia and Connecticut, designed the cross numbering system, and did the cost analysis that was used to reimburse the railroads. He was a member of the Mobility 2000 Group on the application of advanced technologies to vehicles and highways. The technologies include advanced traffic management techniques, on-board navigation systems, and advanced vehicle control systems. He co-edited the Mobility 2000 reports of the meetings in San Antonio in 1989 and Dallas in 1990. He served on the Membership Committee, the Coordinating Council, the Planning Committee, and is chairman of the Institutional Issues Committee of IVHS AMERICA, a designated advisory commission to the U.S. DOT on IVHS issues.

Mr. Robert Harrison, member

Mr. Harrison is a Senior Research Scientist and Executive Director of the Center for Transportation Research at the University of Texas at Austin. He has worked in the area of transportation economics and planning for over 30 years and has published extensively in the area of economic impact studies, trucking issues, cost benefit analysis and transport system planning. Recently, his work has included a study on the use of consultants (which required an asset management approach), various studies evaluating integrated infrastructure management, financing studies, NAFTA corridor evaluations, and studies on expediting construction

scheduling. He has written over 40 research reports and published over 30 peer reviewed technical papers related to this body of work.

Mr. Harrison is a past president of the U.S. *Transportation Research Forum* (TRF), and a member of the Transportation Research Board Committees on Motor Vehicle Size and Weight and International Trade and Transportation. He is regarded as a leading specialist on the relationship between trucking costs and highway design characteristics and is currently reviewing the new World Bank Highway Development and Management model, an integrated management tool developed at a cost of over \$3 million

Dr. Lei Yu, member

Lei Yu is Associate Professor and Chairman of the Transportation Studies Department at Texas Southern University. As a professor at Texas Southern University, he has been teaching the courses in Highway Traffic Operations, Travel Demand Forecasting & Analysis, Transportation Design & Engineering, Computer Applications in Transportation, and Quantitative Analysis in Transportation. His research interests and expertise involve transportation data collection and modeling, the ITS related technologies and applications, dynamic traffic assignment and simulation, vehicle exhaust emission modeling, highway traffic control and operation strategies, travel demand forecasting models, and air quality issues in transportation. In the past years, Yu has been managing numerous research and consulting projects that were sponsored by various agencies such as Texas Department of Transportation (TxDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Southwest Region University Transportation Center (SWUTC) program, National Institute of Standards and Technology (NIST), City of Missouri City, Harris

County Improvement District #1, etc. Dr. Yu has published numerous research papers in scientific journals and conference proceedings, and project reports. In addition, he has served many times as the distinguished lecturer for the high-level Chinese Transportation Executives and Administrators. In September 2000, he was awarded the Cheung Kong Scholar by the Ministry of Education in China and Li Ka Shine Foundation in Hong Kong. Professionally, Dr. Yu is an active member of the Institute of Transportation Engineers (ITE), the American Society of Civil Engineers (ASCE) and the Transportation Research Board (TRB). He also holds membership on numerous committees, councils, and task forces in the regional, state, national and international organizations.

Dr. Dennis Christiansen, member

Dr. Christiansen is presently Deputy Director of the Texas Transportation Institute. Dr. Christiansen has been a member of the staff of the Texas Transportation Institute for over 20 years. Projects directed by Dr. Christiansen have addressed areas such as: the role of rail transit in Texas cities; roadway operations and design; transportation and energy relationships; the design and operation of bus transfer centers and park-and-ride lots; the role of intercity rail passenger service in Texas; the potential role for a system of strategic arterial streets; and urban goods movement. In addition to this research, Dr. Christiansen has become recognized as an international expert in the planning, design, operation and evaluation of preferential facilities for high-occupancy vehicles.

In 1979 he received the Transportation Research Board's Fred Burgraff Award. The International Institute of Transportation Engineers awarded him their Technical Paper Award in 1984 and the Technical council Award in 1988. The Texas

Section of the *Institute of Transportation Engineers* named him its Transportation Engineer of the Year in 1989. Dr. Christiansen is presently one of the 15-member Board of Directors for the *International Institute of Transportation Engineers* and is a past president of ITE.

Dr. Susan Handy, member

An Associate Professor, Community and Regional Planning, University of Texas at Austin. Dr. Handy is a product of the UTC graduate program in City and Regional Planning from the University of California at Berkeley where she received her Ph.D in 1992. Dr. Handy's research focuses on accessibility issues in transportation, especially alternative strategies for providing needed accessibility, including land use policies and telecommunications services.

Her research for the Southwest Region University Transportation Center has included: a project to develop practical methodologies for measuring accessibility at the neighborhood level using Geographic Information Systems and to evaluate accessibility needs in low-income neighborhoods; a three-year project on the relationship between urban form and travel behavior; and a project on the question of whether telecommunications technologies will lead to the substitution of in-home activities for out-of-home activities. She has served for a number of years on the Land Development Subcommittee and the Telecommunications and Travel Behavior Subcommittee of the Transportation Research Board.

Ms. Penny Beaumont, member

Ms. Beaumont is Associate Agency Director of the Texas Transportation Institute. As Associate Director for Governmental Relations and Policy, Ms. Beaumont is responsible for the agency's state and Federal legislative relations and strategy

development, as well as internal and external communications, strategic planning and supervision of the Continuous Improvement process. Prior to joining TTI, Beaumont served as Vice Chancellor for Communications and Development of the Texas A&M System, the first woman to hold vice chancellor rank in the System. Coordinating legislative communications for the 15-member A&M system was a primary responsibility in that job, as was on-going interaction with the legislative leadership in Austin, and with the Texas Congressional delegation.

Ms. Beaumont has been involved in technology policy development and legislative affairs since 1986. From 1987 until 1991, she served as the TAMUS Engineering Program's liaison to both the state legislature and Congress, securing funding for a number of engineering/transportation initiatives. She was founding member of the Technology Industry Legislative Task Force in 1986 and participated in a major industry/university legislative initiative, which secured passage of 11 major bills that changed the structure of university-based research and technology transfer.

In FY01 two new members joined the SWUTC Executive Committee

Dr. Laurence Rilett, member

Dr. Rilett is the E.B. Snead II Associate Professor in the Department of Civil Engineering at Texas A&M University, and an Associate Research Engineer at the Texas Transportation Institute. He received his B.A.Sc. degree (1987) and his M.A.Sc. degree (1988) from the University of Waterloo and his Ph.D. degree (1992) from

Queen's University. He has held academic positions as an Assistant Professor (1992-1995) and an Associate Professor (1995) at the University of Alberta. In the past 11 years he has



taught seven different undergraduate courses and four different graduate courses that cover a variety of topic areas including statistics, risk analysis, and transportation planning. He has served as chair on 6 Ph.D. dissertation committees and 17 Masters committees

and is currently supervising 8 Ph.D. students and 6 Masters students. In addition, he has authored or co-authored 32 refereed journal papers and 40 conference papers that were based on his research.

Dr. Rilett has been a principal investigator or co-principal investigator on over 20 research projects. Dr. Rilett's field of research is in the transportation system analysis area and his specific research may be divided into two main areas: ITS applications and transportation system modeling

Dr. Zhanmin Zhang, member

Dr. Zhang is an Assistant Professor in Transportation Engineering at the University of Texas at Austin. He obtained his Ph.D. at the University of Texas at Austin and has significant teaching and research experience elsewhere. Dr. Zhang has been actively conducting research in

the engineering and management of transportation infrastructure and the applications of advanced database and information systems to pavement management for more than 16 years here in the United States and abroad.

Dr. Zhang's research experience is characterized by a unique combination of his theoretical knowledge in pavement engineering and hands-on computer skills. He has conducted extensive research in the analysis, modeling, operation, and



management of pavement and infrastructure systems, using advanced computer technologies such as Geographic Information Systems (GIS), knowledge-based systems (KBS), and relational database management systems (RDBMS).

Dr. Zhang is actively involved with several professional committees under the Transportation Research Board (TRB) and American Concrete Institute (ACI). He also serves as a member of the Technical Advisory Panel (TAP) for the Research Management Committee (RMC) 1 of the Texas Department of Transportation (TxDOT).

Office of the Director

Dock Burke, Director

Dock Burke is the Director of the Southwest University Region Transportation Center at the Texas Transportation Institute. A Senior Research Economist, he also coordinates the activities of TTI's regional divisions. In his research career at the Institute, he has served as the Study Supervisor or co-supervisor of over 50 research projects, authored or co-authored 90 research reports and papers, and has made over 60 presentations on a wide variety of transportation related issues since joining the TTI in 1969. He is the 1997 recipient of TTI's prestigious TTI/Trinity Career Achievement in Research award.



SWUTC Administrative Staff: Dock Burke, Tracey Young, Lani Smith, Barb Lorenz

Barbara Lorenz, Administrative Assistant

Barbara Lorenz serves as Administrative Assistant in the SWUTC a position she has held since 1992. Ms. Lorenz oversees the daily operational activities of the Center.

SWUTC Associate Directors

Dr. Conrad Dudek, Associate Director - Advanced Institute, Texas A&M University

Dr. Dudek has taught transportation engineering courses in Civil Engineering for 27 years. He has thirty-four years experience in transportation research. He has administered civil engineering undergraduate and graduate programs in

transportation engineering with 10 faculty and approximately 55 graduate students. He has served as Program Manager, Project Director, Principal Investigator, Principal Researcher, or Study Supervisor on over 30 research projects sponsored by state and federal agencies.

Ms. Cynthia Gilliland, Associate Director - for Transportation Research at Texas A&M University

Ms. Gilliland has more than 26 years of experience in the governmental and quasi-governmental arenas, concentrating in the field of transportation. She has significant

experience in regional transportation planning and the development of regional transit authorities. She also has worked in local government, at the county and municipal levels, in positions supporting policy makers and carrying responsibilities for intergovernmental and legislative relations. Ms. Gilliland joined the Texas Transportation Institute in June 1995 and is currently Program Manager of TTI's Institutional Policies and Issues Program.

Mr. Khosro Godazi, Associate Director - for Transportation Research and Education, Texas Southern University

Mr. Godazi, newly appointed Associate Director for the SWUTC, has 15 years of teaching and administrative experience at Texas Southern University. He holds a BS in Civil Engineering Technology and a MS in City Planning. He is

coordinator of the 2-week Texas Summer Transportation Institute that has been held in Houston, at Texas Southern University for the last three years. In addition he spearheads the Transportation Studies Mentorship Program. Mr. Godazi has coordinated numerous conferences for the Center for Transportation Training and Research. Mr. Godazi has extensive experience in transportation research and has served as Principal Investigator on numerous SWUTC projects. Mr. Godazi also teaches transportation students in various Transportation Software and Quantitative Statistics



SWUTC members confer with Dr. Ledé after the official dedication of the Naomi Ledé Outstanding Student Award, March 7, 2001
Left to Right: Dock Burke, Naomi Ledé, Carol Lewis, Herb Richardson, Cinde Gilliland and Khosro Godazi

Dr. Randy Machemehl, Associate Director - for Transportation Research at UT-Austin

Dr. Machemehl is the Director of the Center for Transportation Research and Nasser I. Al-Rashid Centennial Professor in Transportation Engineering at the University of Texas. In addition to these duties, Dr. Machemehl has distinguished himself as a researcher focusing particularly on traffic engineering, transportation planning, and the application of microcomputers in transportation engineering. He is also a professional engineer and has memberships in the Institute of Transportation Engineers and in the American Society of Civil Engineers.

Dr. Hani Mahmassani, Associate Director - Advanced Institute, UT-Austin

Dr. Mahmassani is the Adnan Abou-Ayyash Centennial Professor in Transportation Engineering, and Professor of Management Science and Information Systems in the Department of Civil Engineering at the University of Texas at Austin. He has 24 years of teaching and research experience in

the field of transportation. He currently teaches courses in the analysis and design of transportation systems, traffic system performance and control, decision models and operations research. His numerous professional activities include serving as president of the Transportation Science Section of INFORMS, President of the International Association of Travel Behavior Research and Associate Editor of *Transportation Research C: Emerging Technologies*.

Education Program

The SWUTC supports Advanced Institutes that are integrated into established degree-granting university departments at Texas A&M University and the University of Texas at Austin. Additionally, the SWUTC supports the academic enrichment of a well-developed graduate transportation studies program at Texas Southern University. The SWUTC seeks to enhance these programs by strengthening the multidisciplinary qualities of a body of transportation science that will prepare today's students for leadership in the emerging information-rich economy.

Selected Education Highlights

2001 Texas Summer Transportation Institute Program Expanded

SWUTC Project #167130/ P.I. Naomi Ledé

For the third year, the SWUTC has provided support for the highly successful Texas Summer Transportation Institute (TSTI) hosted by the Texas Transportation Institute, Texas Southern University and Paul Quinn College held in the Houston and Dallas areas. This year, the program was expanded to include an institute held in San Antonio, Texas in a partnership involving UT-San Antonio, TTI and the SWUTC.

The 2001 TSTI program was open to all students from local high schools with a grade point average of at least 2.0 on a 4.0 scale. Students who participated in this year's TSTI program received an overview of careers in the transportation industry which was supplemented by special activities and fascinating educational trips to transportation facilities in the Houston, Dallas and San Antonio metropolitan areas. The curriculum also covers such critical frontiers on transportation as intermodalism, safety, highway design, future air navigation systems, environmentalism, and airline globalization.

"This program offers local high school students an opportunity to see the type of work performed by individuals in the transportation industry," said Ben Jurewicz, director of the Institute for Studies in Business, UT-San Antonio. "We hope that this experience will lead local students to opportunities in this career field." Since 1999, the TSTI program has proven itself to be a very successful initiative graduating 124 students - primarily minorities. Ninety percent went on to college with a majority indicating that they are currently pursuing careers in mathematics, science, business, technology and transportation engineering.



San Antonio TSTI students at Randolph AFB

2000 TSTI Program Receives National Awards

In April of this year, the TSTI program which is co-funded by the SWUTC was presented with two awards at the 2001 FHWA National Summer Transportation Institute Kick-Off and Annual Training Workshop in Nashville.

Presented to Dr. Naomi Ledé, Director of the TTI Summer Institute, was the Meritorious Achievement Award for innovative marketing of the TSTI program. This award recognizes the success of the multi-media promotion of the TSTI program resulting in a diverse group of participants who learned about and experience aspects of challenging transportation careers.

FHWA also presented Dr. Ledé the prestigious Partnering Award. The award cited continued successful partnerships with Paul Quinn College and Texas Southern University to enhance transportation career opportunities for students by working with an Intermodal Advisory Committee, which included a broad range of transportation professionals from aviation, railroads, highways, transit, motor carrier safety, the U.S. Coast Guard, academia, private sector, and Federal and State elected officials.

Uniqueness of TAMU Mentors Program Attracts Graduate Students and State DOT Employees to TAMU



2001 Mentor's Program Participants

During the summer of 2001, the TAMU Advanced Institute attracted state DOT employees into the Summer Mentor's Program for the second year. This highly successful program provides state DOT employees a unique opportunity for professional development in the areas of intelligent transportation systems and traffic operations and management. Employees from six state DOT's participated this year. The states represented were Illinois, Maryland, New York, South Carolina, Virginia and Washington. As part of the program, each participant working closely with recognized experts in the fields of intelligent transportation systems and traffic operations and management conducted research on a current issue. The results of the individual research efforts are compiled and documented in a report and are available for immediate implementation within the respective states.

In addition to the state DOT employees, five graduate students from the Advanced Institute also participated in the program. Steven Schrock, a Ph.D. Civil Engineering student at Texas A&M University emphasized the importance of the program by stating “the Mentor’s Program was one of the things that stood out to me as really unique about the Ph.D. program and it swung the balance in favor of A&M. It’s a draw you don’t hear about at other schools. With the mentors, the state employees, the grad students and Dr. Dudek, there was a full spectrum of experience that we could draw on. In addition to our research, we learned a lot as students through the lively exchange of information and interactions with mentors and state employees in formal and informal settings.”

University of Texas Advanced Institute Achieves Goal of One Hundred Percent Gender Diversity, Post Graduation Placement and Retention

The efforts of the Advanced Institute for Transportation Infrastructure Engineering and Management at the University of Texas at Austin to recruit from a diverse pool of prospects achieved the notable success of having a 100% female composition of entering AI fellows in the fall of 2000. Of the 10 new women recruited last year, 100% had outstanding credentials, from diverse ethnic origins and diverse disciplinary backgrounds, including one student with a degree in math from Carleton College, Minnesota.

Additionally, 100% of the Advanced Institute graduating fellows were placed in the transportation sector. The outstanding quality of education and leadership training associated with the Advanced Institute program is well recognized nationally, resulting in very strong demand for graduates in the industry and government. This continues to validate the basic premise and motivation for the existence of this program as part of the national effort to meet growing needs for advanced professionals in the transportation sector.

In an additional success, 100% of the summer 2000 Undergraduate Fellows applied to the graduate transportation engineering program at the University of Texas at Austin. Indications are excellent that graduates from the summer 2001 Undergraduate Fellows program will have a similarly high recruitment rate into the transportation engineering department.



*2001 University of Texas
Undergraduate Fellows touring
DART (Dallas Area Transit)
operations*

STUDENT AWARDS

SWUTC's Student Award Winners

Each year, in addition to selecting the overall SWUTC Outstanding Student to represent the SWUTC at TRB, the SWUTC honors two more students for their academic, professionalism and leadership achievements. Each of the three major awards presented yearly at the SWUTC; the Naomi Ledé Outstanding Masters Student Award, the SWUTC Ph.D. Student Award and the Robert Herman Outstanding Student Award comes with a \$1,000 cash award.

For 2001, The Robert Herman Outstanding Student Award went to Yi-Chang (Isaac) Chiu a doctoral student at the University of Texas at Austin. Mr. Chiu has emerged to be a tremendous intellectual force in the graduate program, and an all-around leader intellectually, professionally as well as on a personal level. His doctoral work is making a groundbreaking contribution that brings together concepts from economics, control theory and operations research to manage and control the flow of vehicular traffic in congested urban networks, under the provision of real-time information. Mr. Chiu has been outstandingly productive on his research and SWUTC projects, which are strongly related to his dissertation work. His doctoral work is of the highest quality. He is preparing a first-rate dissertation, that will make significant contributions to strategies for managing congestion and enhancing the quality of urban life in major cities. Mr. Chiu displays the kind of creative independence, unrelenting curiosity, persistence, determination, meticulous attention to detail, and quest for perfection that Robert Herman strived so hard to instill in young people.

The SWUTC Ph.D. Student Award Winner was William L. Eisele a doctoral student from Texas A&M University. Mr. Eisele received a Bachelors of Science degree from Michigan State University, graduating with high honors. He then pursued a Masters of Science degree from Michigan State University and graduated in December 1994, again with high honors. He is currently working full-time at the Texas Transportation Institute and is a Ph.D. candidate in the Civil Engineering Department. As a researcher at TTI, and as a practicing professional engineer in the State of Texas, he has had ample opportunities to be involved in a variety of transportation research projects and areas. His speciality areas include access management, intelligent transportation systems (ITS) data management, transportation system performance monitoring, and high-occupancy vehicle (HOV) facilities. Mr. Eisele's strong academic performance, numerous research products through a variety of sponsors including the SWUTC, and his outstanding leadership experiences made him an ideal choice to be this year's recipient of this prestigious award.

Curtis Wilson Selected to be First Recipient of Naomi Ledé Outstanding Masters Student Award and SWUTC Outstanding Student of the Year Award

Curtis Wilson, was the first recipient of the newly established Naomi Ledé Outstanding Masters Student Award and was the representative at the 2001 SWUTC Outstanding Student of the Year Award reception held by RSPA in Washington D.C. Mr. Wilson is currently pursuing a Masters of Science degree in Transportation Planning and

Management at Texas Southern University. He has chosen to focus his study in the area of Planning Methodology. His future plans are to pursue a Juris Doctorate Degree in Philosophy. He believes this will allow him to teach growing young professionals with interest in the planning and transportation field. Presently, he is employed with the fourth fastest growing county in the U.S., Fort Bend County, Texas. His position is Project Coordinator, in the Community Development Department. Some of his projects include city planning, planning and monitoring \$450,000+ of real estate development, capital improvement, researching design/zoning standards, and site plan development.

Curtis Wilson received his Bachelor of Science degree from Prairie View A&M University in Civil Engineering. Mr. Wilson's membership and leadership also include his current position as President of the Institute of Transportation Engineers and the Conference of Minority Officials (Texas Southern Student Chapters). Mr. Wilson received the National COMTO Carmen E. Turner Scholarship in Atlanta, Georgia in 2000. And he has received the TexITE Outstanding Student of the Year Award - Texas Southern Chapter.

Mr. Wilson was chosen to receive these two prestigious SWUTC designations because of his academic performance, leadership, professionalism and outreach.



Curtis Wilson Accepts Naomi Ledé Outstanding Masters Student Award

TAMU Selects Student Award Winners in Preliminary Competition

At Texas A&M University, there is a preliminary competition to select students to represent the University in the SWUTC regional competition. Each of the three selected TAMU students is presented with a \$500 cash award.

The winners of the TAMU selection were: Josias Zietsman to represent TAMU in the Robert Herman Award competition, William Eisele to represent TAMU for the Ph.D. Student of the Year Award, and Michelle Jozwiak to represent TAMU in the Naomi Ledé Outstanding Masters Student Award. Should any of these students be selected as the SWUTC regional award winner, as in the case of William Eisele, then they receive a \$1,000 cash award rather than \$500.

Research Program

SWUTC pursues a balanced program of transportation research (transit, highway, and multimodal) by selecting those projects that reflect our vision, theme and strategic thrusts. Some of the specific research program sub-themes are: improved linkages between the U.S. and Mexican transportation systems, developing transportation solutions to improve the livability of our neighborhoods and communities and the quality-of-life for their inhabitants, development of transportation-based solutions to various environmental and safety problems, and development of a superior transportation workforce for the 21st Century.

Selected Research Highlights

University of Texas SWUTC Student Researchers Receive Awards

Each year, through the various research efforts at the three consortium universities, numerous graduate and undergraduate students have the opportunity to be actively involved in the work of nationally recognized principal investigators. An often overlooked by-product of this SWUTC research mentorship is the generation of award winning thesis, dissertations and presentations directly linked to SWUTC research. Below are four highlights from the University of Texas program for 2001.

SWUTC Project #473700-00062/P.I. Rob Harrison

Ms. Sara Leitner, a graduate student at the University of Texas completed a very innovative thesis as part of Mr. Rob Harrison's research study on Inland Ports and their Contribution to Transportation Efficiencies. Ms. Leitner's work characterized and classified inland ports, and for the first time, described potential inland port applications. Her work was presented at the mid-year Transportation Research Board poster session

and her thesis has been nominated for a Best Thesis award.

SWUTC Project #473700-00065/P.I. Hani Mahmassani

Karthik Srinivasan, who previously received the Robert Herman Outstanding Student Award of the SWUTC in 2000, and is supervised by Dr. Hani Mahmassani, received Best Dissertation Award from the International Association of Travel Behaviour Research Dissertation. His dissertation was titled "Dynamic Decision and Adjustment Processes in Commuter Behavior under Real-Time Information."

SWUTC Project #167224/P.I. Randy Machemehl

Mr. Michael Hunter, a doctoral candidate in Transportation Engineering, under the supervision of Dr. Randy B. Machemehl received the first ASCE Joel Leisch Fellowship. Mr. Joel Leisch, son of Jack Leisch (deceased), a well-known civil engineer himself, made the fellowship presentation to Mr. Hunter. The selection criteria for the fellowship included accomplishments in research work.

SWUTC Project #167220/ P.I. Chandra Bhat

Mr. Harikesh Nair, a masters of science student under Dr. Chandra Bhat's supervision, received the Milton Pikarsky North American Memorial Award for best transportation MS thesis, awarded by the Council of University Transportation Centers, Fall 2000.

TAMU Research Project "Adaptive Equipment to Enhance Older Driver Performance" Produces Guidebook

SWUTC Project #167124/P.I. Rodger Koppa

As drivers age, limitations in their performance as drivers becomes more prevalent. These limitations



include visual losses, diminished range of motion, and various musculoskeletal disorders. Decrease in older drivers' ability to timeshare functions has also been noted. Through his SWUTC project, veteran researcher Rodger Koppa developed a guidebook that identifies applicable and practical equipment to improve older driver performance that arises from the automotive adaptive equipment field. This technology is for use by people who may not be classified as disabled per se, but could use adaptive approaches to minimize the age-related limitations in performance.



Rotating "Mobility Seat" manufactured by Braun Corp. to enhance older driver performance

The "Guidebook" is designed to be an easy to read document with a wealth of information for both individuals and professionals. Project Monitor Roger Levy of the Texas Center for Disability Studies applauded Dr. Koppa's tact in using language that will go a long way to not alienate seniors who don't think of themselves as having a disability.

This report is available for downloading at <http://swutc.tamu.edu/reports.html>

Findings from TSU Research Project "An Examination of the Smart Growth Initiative and its Application to Region VI Communities" Published in Report

SWUTC Project #473700-00042/P.I. Carol Lewis

The Smart Growth idea is a contemporary concept for how communities are approaching anticipated expansion or renewal. Communities implementing

Smart Growth strategies seek to efficiently use public and private resources to accommodate increases in population, while positively addressing side-effects of growth, such as traffic congestion, air pollution, and reduction in open space and farmland. Another key component is the efficient utilization of land by encouraging infill, in contrast to leap-frog development patterns. The goals are livability, economic vitality, and environment sensitivity. Over the last decade, renewed national emphasis has been directed to improving communities; planning officials added terms such as livable community and sustainable community to the vernacular of traditional coordinated land use planning.

The report generated by this research examines Smart Growth initiatives in the US and compares experiences in selected Region VI communities. Results of the research includes a recommendation on the appropriate role of transportation professionals in Smart Growth.

Findings from this research project have been presented at numerous meetings including at the TRF 2000 Annual Forum in November of 2000. The final report is available for downloading at <http://swutc.tamu.edu/reports.html>

SWUTC Research Acts as Seed Money for Expanded Funding

SWUTC Project #473700-00007/P.I. Russell Henk

Funded in 1999, Russell Henk's SWUTC research study titled "Evaluate Strategies for Using the

Transportation Management Infrastructure in the Role of National Defense Preparedness” has resulted in the potential for significant additional research and associated benefits to the Texas Transportation Institute. The opportunity created by the initial SWUTC funds specifically relates to the role of transportation management infrastructure and operating strategies during major emergencies (e.g., hurricane evacuations, military deployments and malevolent attacks in the United States). As part of the SWUTC research activities on this topic, many briefings with key transportation operating agencies, FHWA, Department of Defense, Congressional members and their staffs were conducted. During the course of this technology transfer, the critical nature of the challenges and need for additional



Hurricane Allison strikes Houston June 2001

research in the nation’s interest were made apparent to many important decision-makers. As such, there is a good possibility that Congress will provide earmarked funds for additional research on this topic (possibly several million dollars over the coming years) for the creation of what is currently being called the Center for Transportation Infrastructure Management during Emergencies (CTIME). These additional funds, research and potential large-scale benefits to the United States are a direct result of opportunities created by the SWUTC program.

UT-Austin Researcher Receives Award for Paper Based on SWUTC Work

SWUTC Project #167223/P.I. Kara Kockelman



Kara Kockelman

University of Texas at Austin researcher, Dr. Kara Kockelman integrated her research work on her SWUTC project “*Uncertainty in Integrated Land Use-Transport Models*” into a competitive paper titled “*Towards Behaviorally Consistent Integrated Transport Land Use Models, in Support of Infrastructure Systems*

Decisions” which won her the National Science Foundation Faculty Early Career Development CAREER Award, 2000-2004. This award came with an \$500,000 endowment.

A product of the University of California Transportation Center (UCTC) graduate education program, Dr. Kockelman came to the University of Texas in the Fall of 1998. Since that time, in addition to her teaching responsibilities in the Department of Civil Engineering, she has served as principal investigator on several SWUTC research projects. Her first SWUTC project, “*The Propagation of Uncertainty in Multi-Stage Transport Demand Models*” has already generated a published technical report. She will be presenting her findings on this research work at TRB in January 2002. In addition, her findings have been submitted for publication in *Transportation Geography*.

Dr. Kockelman is also the first recipient of the Clare Boothe Luce Professor of Civil Engineering 1999-2000. This appointment was, in part, for her outstanding research work.

Technology Transfer

Timely information, timely delivered to the right people is the desired outcome for the SWUTC's technology transfer program. Both educational and research program activities pursue vital aspects of technology transfer. Educationally, the student/professor relationships are the principal loci of technology transfer activities -- knowledge exchanged between professor and students in classroom and research endeavors. In the research program, technology transfer outcomes are typically associated with the delivery of research products (papers, lectures, presentations, reports, video/media) -- for individual research projects --- to potential and interested users and colleagues.

Selected Technology Transfer Highlights

Mid-Continent Transportation Knowledge Network Sponsors NAFTA Trade and Transportation Teleconference

The SWUTC along with the University of Manitoba Transportation Institute in Winnipeg (UMTI), the Great Plains Transportation Institute in Fargo (GPTI), the National Center for Intermodal Transportation in Denver (NCIT), and the Mountain-Plains Consortium at North Dakota State University collaborated on the NAFTA Trade and Transportation Teleconference on August 27, 2001. More than 50 transportation academicians and researchers participated in the highly successful conference that had the theme of *North American Freight Transportation Issues and Trends: A Midcontinent Perspective*. Papers presented at the event included:

"Barbarians at the Gate? The Issue of Mexican Truck Safety and the NAFTA" - Rob Harrison, Center for Transportation Research - University of Texas at Austin and SWUTC

"Ensuring the Safety of North American Motor Carrier Operations" - Brenda Lantz - North Dakota State University and GPTI

"Criteria & Design of a Model Border Crossing" - Bill Stockton, Texas Transportation Institute - Texas A&M University and SWUTC

"Economics of Congestion at a Border Gateway: The Case of Laredo" - Barry Prentice - University of Manitoba

"Free Trade But Not Free Transport? The Mexican Stand-Off" - Paul Dempsey - University of Denver and National Center for Intermodal Transportation

"Canadian-U.S. Rail Freight Flows Since NAFTA" - Denver Tolliver and Doug Benson - North Dakota State University and Mountain Plains Consortium



Participants at the NAFTA Trade and Transportation Teleconference

The Mid-Continent Knowledge Network has as a primary goal to facilitate the sharing of transportation education and research among participating universities. Through this teleconference, the network has made great strides at achieving that goal by bringing new research perspectives and information to the SWUTC researchers working on NAFTA related trade and transportation issues. At the SWUTC, researchers are principally focused upon the Mexico-Texas border. Consequently, the comparison/contrast that is shared with our northern border counterparts in North Dakota and Manitoba give additional depth to our understanding of our own perspectives. Dock Burke summarized the benefits of the Network in the future by stating that "we hope to expand on this initial phase and increase the exchange opportunities for faculty, researchers and

students between our institutions and the other members of the Network. We are also striving to find ways to connect the Network better to the private sector in promoting a better understanding of the trade and transportation issues surrounding the NAFTA and related economic interactions among the three North American countries. And we plan to connect the Network to some counterparts in Mexico so that the Network can become a true NAFTA resource, producing real-time interactions and shared knowledge among the interested research/ education communities."

TSU Research Generates Widespread Interest

SWUTC Project #167901/P.I. Lei Yu

The recently published report by SWUTC researchers Peng Yue and Dr. Lei Yu titled "Travel Demand Forecasting Models: A Comparison of EMME/2 and QRS II Using a Real-World Network" has been one of the most popular SWUTC reports generated to date. This report was downloaded from the SWUTC website 709 times during the month of August 2001. For a total of 3,535 times since it was published in October 2000. This report presents a comparative study of two widely used computer based travel demand forecasting models: QRS II vs. EMME/2. The comparative study identifies main features and differences of the two models, while providing useful information to practitioners. The comparative description of basic features of two models in this report includes model structure, network development, data input, network modification, parameter calibration, and modeling output. A real-world small urban network, South Missouri City Network, is used to support the comparison effort.

This report is available for downloading at <http://swutc.tamu.edu/reports.html>

UT-Austin Hosts Summer Symposium Series

During the summer of 2001, the UT-Austin Advanced Institute and the Undergraduate Summer Internship in Transportation program hosted a research symposium series from June 5th through August 16th. This fourteen part symposium series was open to all interested students and faculty at the University of Texas and was heavily attended by approximately 150 individuals. Faculty and students made presentations on current SWUTC research topics. Included in the presentations were:

"Hot-Lanes" - Pamela Murray, Ph.D. Candidate

"The Spatial Analysis of Travel Behavior" - Dr. Chandra Bhat

"Impact of Information Technology on Transportation Systems"
- Dr. Zhanmin Zhang

"Integrated Modeling of Land Use-Transport Systems" - Dr. Kara Kockelman

"A Vision for the Transportation System" - Dr. C. Michael Walton

"Challenges in Transportation Telecommunications Interaction" - Dr. Hani Mahmassani

"Solving the Transportation Problem" - Dr. Susan Handy

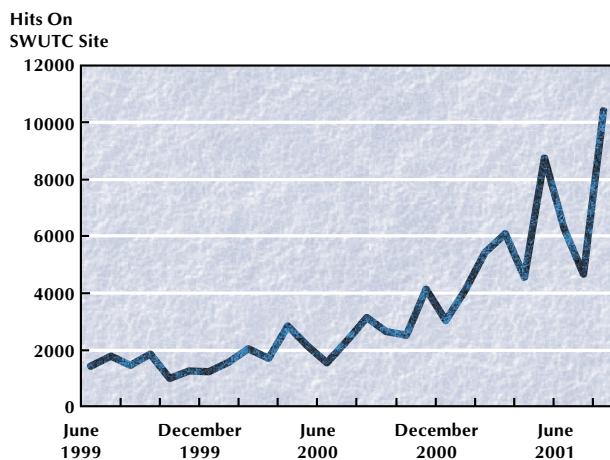
"Urban Traffic Congestion Problems" - Dr. Randy Machemehl



UT-A undergraduate Summer Interns after symposium session

SWUTC Implements Web Statistics Software

The SWUTC is utilizing a general statistics software package to track the SWUTC website performance and visitor behavior. This software provides specific information on number of hits, length of stay, which pages were viewed, which documents were downloaded, any errors that were encountered by visitors, top referring browsers, and much more. This software enables us to better serve the needs of our visitors and address any problems they encounter. Through this software we are able to track the dramatic increase in visitors to the SWUTC website during the 2000-2001 fiscal years.



SWUTC Ph.D. Student Hosts Seminar

SWUTC Project #167128/P.I. Josias Zietsman

Josias Zietsman a Texas Transportation Institute researcher and Ph.D. student from Texas A&M University hosted a transportation seminar through the Department of Civil Engineering at Texas A&M University on May 7th, 2001. The title of his presentation was *"Incorporating Sustainability Performance Measures into the Transportation Planning Process"*.

The seminar covered the purpose of sustainable transportation which is to address economic development, environmental stewardship, and social equity of current and future generations. While numerous qualitative studies have been performed on this topic, there has been little quantitative research and/or implementation of sustainable transportation concepts. The main reasons for this are related to a lack of understanding of sustainable transportation and lack of quantified performance measures to be used in the decision-making process. To address this problem, a comprehensive definition for sustainable transportation was developed as well as a framework on how to identify, quantify, and use performance measures for sustainable transportation in the transportation decision-making process.

This work is a direct product of his SWUTC research project funded in 2001 titled *"Sustainable Transportation Performance Measures for Developing Communities"*. The seminar was attended by 20 faculty and graduate students.

Transportation & Tourism Workshop a Success

SWUTC Project #167704/P.I. Katie Turnbull

The second Texas Rural Transportation Conference was held at the Bush Presidential Library and Conference Center on the Texas A&M University campus February 21, 2001 and focused on two specific themes - rural goods movement and tourism in rural Texas.

In a direct implementation of the SWUTC cooperative agreement with the Mack-Blackwell National Rural Transportation Study Center, Dr. Melissa Tooley was the invited keynote speaker. Her presentation, "Rural Transportation", was presented to a general session of all conference

attendees and covered key rural transportation problems such as highway design, ITS, commercial vehicle operational issues, social issues and intermodal issues. She then summarized several rural transportation initiatives being pursued by UTC and USDOT programs.

Other participants at the conference included individuals from Union Pacific Railroad, Alliance for

Rail Competition, Texas Historical Commission, Texas Department of Transportation, West Texas A&M University, Texas Parks and Wildlife, Texas A&M University, University of Texas at Austin, port business development agencies, and TTI. The conference format encouraged audience participation and discussion. The meeting concluded with key issues identified and research needs pinpointed by the attendees.



Melissa Tooley and Dock Burke at Transportation and Tourism Workshop

New Projects

Number: 473700-00009

Title: *Assess the Potential of Transportation Management Centers in Improving Hurricane Evacuation Operations*

P.I.: Russell Henk, TAMU

Number: 473700-00044

Title: *State of the Industry Overview - A Transit-Oriented Development Conference*

P.I.: Carol Lewis/Khosro Godazi, TSU

Number: 473700-00065

Title: *Emerging Models for Provision of Real-Time Traveler Information Services: Transportation System Management Implications*

P.I.: Hani Mahmassani, UT-Austin

Number: 473700-00066

Title: *Using the Gulf Intracoastal Waterway (GIWW) to Move Containers to Gulf Ports*

P.I.: Rob Harrison, UT-Austin

Number: 167121

Title: *Evaluation of the Economic Growth, Air Quality and Noise Impacts of Regional Jet Service at Commercial Airports Serving Small Cities*

P.I.: Jeff Borowiec, TAMU

Number: 167122

Title: *Vanpools as Alternative to Fixed-Route Service*

P.I.: Laura Higgins, TAMU

Number: 167123

Title: *Develop a Transportation Science Competition and Career Fair for Junior High and High School Students*

P.I.: Debbie Jasek/Beverly Kuhn, TAMU

Number: 167125

Title: *Development of Integrated Rollover Warning and Active Control Systems (RWCS) for Tractor-Semitrailers*

P.I.: Reza Langari/James Ochoa, TAMU

Number: 167126

Title: *Identification and Evaluation of In-Vehicle Distractors on Driving Performance*

P.I.: Michael Manser, TAMU

Number: 167127

Title: *Commercial Transportation Safety and Operations Workshop*

P.I.: James Ochoa/Dan Middleton, TAMU

Number: 167128

Title: *Sustainable Transportation Performance Measures for Developing Communities*

P.I.: Josias Zietsman, TAMU

Number: 167220

Title: *A Methodology to Analyze the Effectiveness of Roadway Pricing Control Strategies Using Travel Survey Data*

P.I.: Chandra Bhat, UT-Austin

Number: 167221

Title: *Impact of Latin American Trade on the Southwest Region's Economy and Transportation System: Case Studies (Continuation of 167801 funded FY00)*

P.I.: Leigh Boske, Ut-Austin

Number: 167222

Title: *The Education of Transportation Professionals*

P.I.: Susan Handy, UT-Austin

Number: 167223
Title: *Uncertainty in Integrated Land Use-Transport Models*
P.I.: Kara Kockelman, UT-Austin

Number: 167224
Title: *Adaptive Traffic Signal Control Development and Evaluation* (Continuation of 167805 funded FY00)
P.I.: Randy Machemehl, UT-Austin

Number: 167225
Title: *Characterizing Transit Passenger Access Decisions* (Continuation of 167806 funded FY00)
P.I.: Randy Machemehl, UT-Austin

Number: 167227
Title: *Freight Transportation and Logistics Implications of Electronic Commerce and Virtual Supply Chains* (Continuation of 167808 funded FY00)
P.I.: Hani Mahmassani, UT-Austin

Number: 167228
Title: *Integrating Real-Time Information with Dynamic Fleet Decision Systems for Intermodal Freight Mobility* (Continuation of 167807 funded FY00)
P.I.: Hani Mahmassani, UT-Austin

Number: 167229
Title: *Design and Implementation of an Intelligent Parking System for a Major Activity Center* (Continuation of 167811 funded FY00)
P.I.: C. Michael Walton, UT-Austin

Number: 167230
Title: *Impact of New Large Aircraft on Arrival Passenger Flows at Airport Terminals*
P.I.: C. Michael Walton, UT-Austin

Number: 167231
Title: *Restricting the Use of Reverse Thrust as an Emissions Reduction Strategy for Airports*
P.I.: C. Michael Walton

Number: 167232
Title: *Develop a Dynamic System to Simulate the Life-Cycle Performance of Pavements*
P.I.: Zhanmin Zhang, UT-Austin

Number: 167320
Title: *Analysis of Texas' Speed Limit Laws and Fatality Accident Rates*
P.I.: Ron Goodwin/Sharon Boxill, TSU

Number: 167321
Title: *An Evaluation of Alternative Fuels Usage by Public Transit Agencies*
P.I.: Ron Goodwin, TSU

Number: 167322
Title: *An Assessment of Examination Criteria Used for Transit Friendly Decision-Making*
P.I.: Carol Lewis, TSU

Ongoing Projects

Number: 473700-00005
Title: *Examining Information Needs for Efficient Motor Carrier Transportation Logistics*
P.I.: Bill Eisele/Larry Rilett, TAMU

Number: 473700-00007
Title: *Evaluate Strategies for Using the Transportation Management Infrastructure in the Role of National Defense Preparedness*
P.I.: Russell Henk, TAMU

Number: 473700-00043
Title: *The Integration of GIS and Transportation Modeling: A State-of-the-Practice Review*
P.I.: Sharon Adams, TSU

Number: 473700-00062
Title: *Inland Ports and their Contribution to Transportation Efficiencies*
P.I.: Rob Harrison, UT-Austin

Number: 473700-00063
Title: *Evaluating Operating Strategies and Transportation Control Measures which Reduce Air Pollution at Airports*
P.I.: C. M. Walton, UT-Austin

Number: 473700-00064
Title: *Real-Time Traveler Information Systems for Non-Commuting Trips*
P.I.: Hani Mahmassani, UT-Austin

Number: 167703
Title: *Developing a Sketch-Planning Technique Relating Economic Activity and Urban Mobility in Small and Medium-Sized Urban Areas*
P.I.: David Schrank, TAMU

Number: 167705
Title: *An Assessment of U.S.-Mexico Trade Corridors and Border Infrastructure Development*
P.I.: Felipe Zambrano, TAMU

Number: 167708
Title: *Automated Identification of Flow Patterns in Congested Traffic*
P.I.: Paul Nelson, TAMU

Number: 167709
Title: *Carbon Dioxide Emission Reductions Through the Use of Fly Ash in Concrete Production*
P.I.: Cindy Estakhri/John Overman, TAMU

Number: 167711
Title: *Agenda Setting in the Transportation Policy Domain*
P.I.: Eric Lindquist, TAMU

Number: 167802
Title: *Understanding the Growth in Nonwork VMT*
P.I.: Susan Handy, UT-Austin

Number: 167803
Title: *Develop a Dynamic System to Simulate the Life-Cycle Performance of Pavements*
P.I.: Zhanmin Zhang/Ron Hudson, UT-Austin

Number: 167805
Title: *Adaptive Traffic Signal Control Development and Evaluation*
P.I.: Randy Machemehl, UT-Austin

Number: 167806
Title: *Characterizing Bus Transit Passenger Boarding and Deboarding Processes*
P.I.: Randy Machemehl, UT-Austin

Number: 167807

Title: *Integrating Real-Time Information
with Dynamic Fleet Decision
Systems for Intermodal Freight
Mobility*

P.I.: Hani Mahmassani, UT-Austin

Number: 167808

Title: *Freight Transportation and Logistics
Implications of Electronic Commerce
and Virtual Supply Chains*

P.I.: Hani Mahmassani, UT-Austin

Number: 167809

Title: *From Information to Knowledge:
Strategies and Techniques for Mining
Real-Time Traffic Data Bases*

P.I.: Hani Mahmassani, UT-Austin

Number: 167810

Title: *The Implications of Data Usage and
Privacy on ITS Organizations*

P.I.: C. M. Walton, UT-Austin

Number: 167811

Title: *Intelligent Parking Systems*

P.I.: C. M. Walton, UT-Austin

Number: 167900

Title: *A Comparative Assessment of
Emerging Transportation Techniques:
A Seminar for Professional and
Student Exchange*

P.I.: Khosro Godazi, TSU

Number: 167903

Title: *Evaluation of the Potential to Link
Rural Communities with their Urban
Neighbors*

P.I.: Ron Goodwin, TSU

Number: 466610

Title: *Public Transportation for the
Colonias*

P.I.: Dock Burke, TAMU

Completed Projects

Number: 167701

Title: *An Internet Clearinghouse of Marine and Intermodal Information for Sustainable Transportation and Economic Development*

P.I.: John Basilotto, TAMU

Number: 167702

Title: *An Analysis of the Market Potential for Distance Learning Opportunities in Transportation Professional Development*

P.I.: Beverly Kuhn, TAMU

Number: 167704

Title: *Transportation and Tourism Workshop*

P.I.: Katie Turnbull, TAMU

Number: 167706

Title: *The Contribution of Hand-Held Cellular Phones to Vehicular Accidents*

P.I.: Jason Crawford, TAMU

Number: 167707

Title: *Comprehensive Engineering Approach to Achieving Safe Neighborhoods*

P.I.: James Bonneson, TAMU

Number: 167800

Title: *A Joint Model System of Mode Choice, Destination Choice, and Departure Time Choice for Nonwork Trips*

P.I.: Chandra Bhat, UT-Austin

Number: 167801

Title: *Impact of Latin American Trade on the Southwest Region's Economic Growth Prospects and Transportation System*

P.I.: Leigh Boske, UT-Austin

Number: 167804

Title: *The Propagation of Uncertainty in Multi-Stage Transport Demand Models*

P.I.: Kara Kockelman, UT-Austin

Number: 167901

Title: *Travel Demand Forecasting Models: A Comparison of EMME2/QRS*

P.I.: Lei Yu, TSU

Number: 167902

Title: *An Assessment of the Procedures for Integrating Taxicabs into an Urban Environment*

P.I.: Ron Goodwin/Carol Lewis, TSU

Number: 473700-00042

Title: *An Examination of the Smart Growth Initiative and Its Application to Region VI Communities*

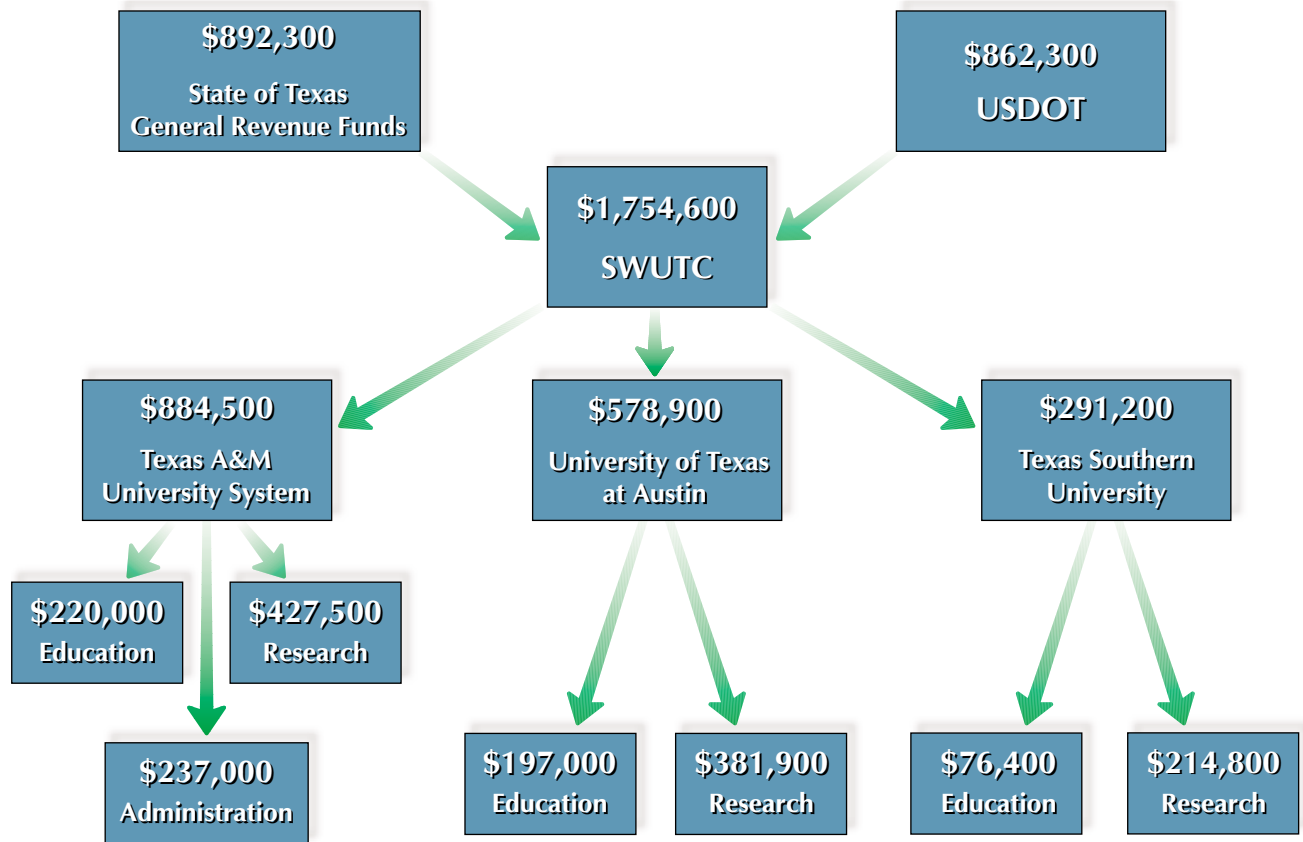
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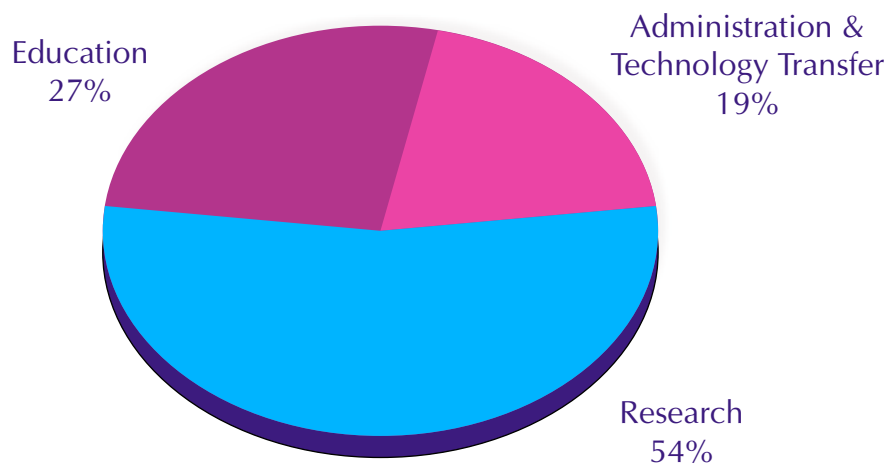
Title: *Adaptive Equipment to Enhance Older Driver Performance*

P.I.: Rodger Koppa, TAMU

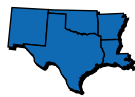
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