



Annual Report

The University of Texas at Austin Institute of Transportation Engineers Student Chapter

For the Year of April 1, 2010 to March 31, 2011

Report Submitted By:

Pedro A. Serigos
Student Chapter Secretary
404 358 2951
pserigos@mail.utexas.edu

Report Approved By:

Dr. Chandra Bhat
Student Chapter Advisor
512 471 4535
bhat@mail.utexas.edu

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Section I: Executive Summary



This year has yet again been successful and eventful for The University of Texas at Austin Institute of Transportation Engineers Student Chapter. We were pleased to have new members join, bringing with them more energy and new ideas to our chapter. We are always searching for new ways to improve our Chapter and help others, and this year was no exception. We continued some of our favorite recurring professional activities, including attending and presenting at the Texas ITE and Transportation Research Board Conferences, hosting Distinguished and Technical Speaker presentations, mentoring summer transportation interns, and organizing the new graduate student orientation. Each year, we volunteer at the ExploreUT and Introduce a Girl to Engineering Day Events. At these events, we used the traffic simulation activity, which was again very successful. We have also continued to attend the Capitol Region ITE Meetings, helping us to keep in touch with our local ITE community, as well as national ITE events at the TRB conference. Our ITE Chapter and ITE members have received several awards over this time, including the Graduate Student Professional Development Award, Kolodzey Travel Grant, American Planning Association Award for Outstanding Student Project, Mirzayan Policy Fellowship, ENO Fellowship and others. We are pleased to share all of these activities and more with you in the following report. Enjoy!

Section 2: Student Chapter Summary

Chapter Officers as of March 31, 2011

President:	Dan Fagnant
Vice President, Activities:	Mobashwir Khan
Vice President, Coordination:	Mason Gemar
Secretary:	Pedro A. Serigos
Treasurer:	Abdus Shakur Qazi
Advisor:	Dr. Chandra Bhat

UT Austin Chapter Membership as of March 31, 2011

Number of student chapter members:	32
Number of student members of Institute:	32 (100% eligibility)
Number of faculty ITE members:	7

Transportation Engineering Enrollment

There are 551 enrolled students as of April 2011 in The Undergraduate Civil Engineering Program at the University of Texas at Austin. One of our main goals as a chapter is to encourage undergraduates to get involved in our activities by advertising many of our professional and departmental activities through flyers, emails, and class visits. This year was clearly successful since several undergraduates participated in our field trips, classes, speakers, and intern programs.

Our Graduate Transportation Engineering Program is part of the Civil Engineering Program, and it offers Masters of Science in Engineering (MSE) and Doctor of Philosophy in Engineering (PhD) degrees. We are very proud of our strong reputation and track record of students who have gone on to be leaders in the public, consulting, and academic fields. Our faculty advisors are also worthy of recognition for their continued success in transportation research and education. Our students receive excellent backgrounds in transportation engineering, as we frequently work on technical research projects through the Texas Department of Transportation and other noteworthy organizations. In addition to our challenging transportation curriculum, the Transportation Engineering program encourages all of the students to also pursue classes in the community and regional planning, operations research, policy, and economics departments.

Section 3: Professional Development

Our ITE Chapter works exceptionally hard to offer a variety of professional development activities. Our members participate in discussions with prominent leaders in transportation through our distinguished speaker series, learn about transportation challenges in the technical series, receive hands on experience through technical tours, expand their speaking and networking skills at a variety of conferences (including ITE), and gain practical experience through technical projects.

Distinguished and Technical Speakers

We started our student-run Distinguished Lecture Series for the Transportation Engineering Program in 2005, and it has been growing ever since. Our goal in developing this series was to allow our students to listen to, learn from, and interact with nationally renowned transportation leaders from government, industry, and academia. In addition to scheduling a formal lecture, our



Chapter arranged informal discussion times, individual meetings, and small group meals with visiting lecturers to allow interested students, faculty, and researchers further interaction. These lectures were advertised campus-wide to relevant departments, as well as to local governments, consultants, and alumni. In addition to our Distinguished Lecturers, our ITE Chapter welcomed a number of national and local transportation consultants, academics, and industry advocates to speak to our students. These speakers expanded student knowledge of technical and political issues, as well as provided insight into careers in transportation. In addition, recent graduates have been introduced to their future employers through these presentations. Our Chapter hosted the following presentations:

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- **Joe Cantalupo** , executive director of CAMPO,
Topic: 2035 Regional Transportation Plan.
April 9, 2010
 - **Rob Spillar**, Transportation Director for the City of Austin,
Topic: Austin's Strategic Mobility Plan.
April 30, 2010
 - **Dave Tuttle**, PhD researcher,
Topic: Plug-in electric vehicles.
July 17, 2010
 - **Federico Mendoza**, Brown and Gay,
Topic: Interchange design.
September 10, 2010
 - **Rashed Islam**, VP at HDR,
Topic: Innovative intersection and interchange design.
October 8, 2010
 - **Tom Rioux**, PhD researcher and lecturer from UT,
Topic: His experiences in Haiti in the last few months and the transportation needs they have.
November 3, 2010
 - **Jim Dale**, PTV America,
Topic: BRT planning and operations.
November 12, 2010
 - **Nathan Wilks**, City of Austin's Bicycle and Pedestrian Program,
Topic: Bicycle and Pedestrian Program.
February 11, 2011
 - **Anna Martin**, HDR Engineering Project Manager and Capital Area TexITE Vice President,
Topic: Two recently designed continuous flow intersections for the "Y" in Oak Hill.
March 11, 2011

Transportation Research Board (TRB) Annual Conference

Almost all of our ITE members attended the 2011 Transportation Research Board Annual Conference



from January 23-27, 2011. The experience was wonderful and we were proud to represent our Chapter and program well. In total, ITE members presented their research in five oral presentations and five poster sessions. In addition to the conference, the ITE Chapter sponsored our third annual UT Alumni Happy Hour at

Buffalo Billiards. The event gave us all a chance to relax and reconnect with our alumni. During the conference students from the chapter attended the ITE open house and the ITE Distinguished Speaker Luncheon.

ITE Conferences

The UT Austin ITE Chapter was present at all of the Texas ITE (TexITE) Conferences this past year. These included the Summer 2010 meeting in Sugar Land, Texas (June 17-19, 2010) and the Spring 2011 meeting in Fort Worth, Texas (March 24-26, 2011). We participated in discussions, presented research during student presentation sessions, produced ITE Student Resume CDs, and gave updates on our Chapter to the division. Our members also got the chance to meet with the students from other ITE Chapters, interact with the professionals in our area and to get real perspectives on topics we discuss in the classroom during the TexITE Conferences.

CTR Symposium



The CTR (Center for Transportation Research) Annual Symposium is a yearly conference held at the University of Texas's Pickle Research Center in north Austin. The 2010 Symposium was held on April 7, 2010, and its theme was "Ideas @ Work". Speakers included Dr. Amit Bhasin, UT transportation professor, Dr. Kenneth H. Stokoe, UT professor

and chair of UT's College of Engineering, among many others. Several students attended this symposium and had the opportunity to display their research on posters for the symposium attendees to see. The students enjoyed an opportunity to chat with other attendees of the symposium over lunch.

Other Conferences

In addition to the TRB annual meeting and the TexITE conference, ITE student members traveled across North America to attend and present papers at a number of other transportation related conferences. These events included the Institute for Operations Research and the Management Sciences (INFORMS) Annual Conference, November 7-10, 2010, and the Women in Transportation Annual Gala on May 21, 2009. Our ITE student members were additionally recognized at these events for receiving scholarships, fellowships, and paper-writing awards sponsored by these organizations.

Section 4: Transportation Engineering Department Development

Our UT Austin ITE Student Chapter is very proud of our many contributions to the transportation engineering department. Not only are we making the department more exciting today, but we know our efforts will have a lasting effect for years to come.

Promotional Materials

The transportation engineering department, Student Chapters of ITE and ITS, the students, and the faculty are all engaged in a variety of educational, technical, and social endeavors. We feel it is very important to let not only current students and faculty know about these endeavors, but also prospective students, past students, and others involved and interested in the University of Texas at Austin transportation engineering program. As a result, we continue to create, write, and edit three types of promotional material for the department: Student, Faculty, and Alumni Fact Sheet and the Transportation Research Board UT Presentation Program Schedule. The Department Fact Sheet shares all of our accomplishments with prospective students and potential employers. It also contains the backgrounds of the current graduate students as well as lists awards and scholarships, national fellowships, and leadership programs current and past students have received or attended during the past four years. Finally, the UT TRB Presentation Schedule lists authors, title, location, and time of each presentation, workshops, and committee meetings given by UT faculty and students.

TRANSPORTATION ENGINEERING AND PLANNING AT THE UNIVERSITY OF TEXAS AT AUSTIN

THE 90TH ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD: JANUARY 2011
LONGHORN PRESENTATION SCHEDULE

CONTENTS				
Page 1	Workshops			
Page 2	Committee Meetings			
Pages 2-4	Poster Sessions			
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Workshops				
Monday, January 24, 2011				
Event No.	Participants	Time	Location	Title
103	Buddharwaga, Prasad	9:00AM-12:00PM	Marriott	Empirical Modeling of Fracture Parameters from Geotechnical Bonding Testing
112	Ferdous, Naureen	9:00AM-12:00PM	Marriott	New Estimation Approach for Activity-Based Behavior Modeling: Assessing the Performance and Application of the Composite Marginal Likelihood Estimation Approach in Multidimensional Choice Modeling Systems
128	Waller, S. Travis	9:00AM-12:00PM	Hilton	When the Only Tool in Your Toolbox is a Hammer, Everything Looks Like a Nail
139	Prent, Jorge A., presiding	9:00AM-4:30PM	Hilton	Transportation and Cross-National Borders
159	Zhu, Jingjing Kim, Seung-Rhoon Tsu, Yi-Ta	1:30PM-4:30PM	Marriott	Low-Cost Piezoelectric Sensors for Health Monitoring of Concrete Structures: From Construction to Maintenance
164	Williamson, Eric	1:30PM-4:30PM	Shoreham	NCHRP Report 645: Blast-Resistant Highway Bridges—Design and Detailing Guidelines
166	Walton, C. Michael	1:30PM-4:30PM	Shoreham	Roundtable Discussion: Capitalizing on Diverse International and Domestic High-Speed Rail Experiences
191	Ferdous, Naureen	1:30PM-4:30PM	Hilton	A New Estimation Approach for Modeling Activity-Based Behavior: Assessing the Performance and Application of the Composite Marginal Likelihood Estimation Approach in Multidimensional Choice Modeling Systems
Thursday, January 27, 2011				
Event No.	Participants	Time	Location	Title
732	Black, Claudia R.	8:00AM-12:00PM	Hilton	Welcome and Introduction, Moderator
764	Ferguson, Eric Mally Durbie, Jennifer Waller, S. Travis	8:00AM-12:00PM	Hilton	Minimizing Vehicle Emissions Through Transportation Road Network Design Incorporating Demand Uncertainty

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Graduate Student Recruitment

Along with the faculty and staff, ITE officers help to schedule productive and memorable visits for potential students in the Transportation Engineering Department. Both the social and academic aspects of these visits are priorities for ITE officers, who organize group dinners, lunches, and social activities, which allow the visiting recruit to meet as many current students as possible and have the opportunity to discuss classes, research, and extracurricular activities with those who share their interests. Officers also arrange campus and building tours, transportation to and from the airport, and sleeping accommodations. For potential students unable to visit in person, particularly international students, ITE officers work with staff to identify current students with common backgrounds and interests to communicate with recruits through email.

Undergraduate Summer Internship in Transportation (USIT)

The Undergraduate Summer Internship in Transportation (USIT) is an 11-week summer program for undergraduates interested in transportation. Many of our members are paired with interns and get to mentor them as they work together on the same projects for the summer. ITE sponsors many activities with the interns over the summer, including a monthly series of luncheon presentation practices. We love the opportunity to share our interest in transportation and help cultivate the new generation of transportation professionals.

Map Board & Picture Board

For several years, our Chapter's officers have been responsible for maintaining the department's "Map Board." This board, located on the transportation engineering floor of the civil engineering building, provides biographical information and a picture for each student in the department. Each student's biography is attached by string to a pin located at their hometown. At the beginning of the year, this board helps many students to learn about their new classmates, and throughout the year reminds

students, faculty, and visitors of the diverse backgrounds of our student population. Our Chapter also maintains and updates the department's "Picture Board" which provides a place for students, faculty, and staff to post pictures of exciting non-academic activities, including weddings, births, trips, social activities, and athletic events.

New Graduate Student Orientation



This past August, the transportation engineering department at UT Austin gained twenty new graduate students. ITE took an active role in welcoming the new students into the program. ITE was in charge of organizing the week-long new student orientation social events including a number of activities that allowed the new students to get to know other students and learn about ITE, the transportation engineering department, and the City of Austin. The orientation included lunch at DoubleDave's Pizzaworks, kayaking, dinner at local Tex-Mex location, bowling, barbeques, bat watching and an introduction to the famous 6th Street nightlife. By the end of the orientation, the new graduate students felt much more comfortable with their new surroundings and were excited to begin the next step in their academic lives.

Section 5: Service Activities

Service is an integral part of our ITE Chapter. Each year we participate in a variety of volunteer activities through the University of Texas at Austin and other organizations. We see service activities as not only a way to give back to the community but also to expand people's awareness of transportation and encourage more people to become involved in the field.

Introduce a Girl to Engineering Day

Introduce a Girl to Engineering Day (Girl Day) is celebrated during Engineers Week each year at the University of Texas at Austin. On Saturday, February 26, 2011, thousands of girls in grades first through eighth grade arrived at the UT College of Engineering to learn first-hand about engineering. ITE once again volunteered at this event by hosting an activity room to teach young girls about transportation engineering. We showed off a virtual driving test that has been a big success in years past, and was this year as well. The girls learned about driving safety as well as how transportation engineers make roads safer. Our volunteers answered questions about transportation engineering, and offered plenty of driving tips. If the student finished the driving test they received a handmade commemorative driver's license.

Explore UT



Explore UT, the biggest open house in Texas, provides the opportunity for Texas families to come and explore the campus and participate in fun and educational activities hosted by many organizations throughout campus. UT ITE volunteered on Saturday, March 5, 2011, to run a demonstration teaching hundreds of children and adults

about the role of transportation in everyday life. Our members used a simple traffic light simulation that allows the player to control the operation of traffic lights. It is fun and easy enough that people of all ages could give it a try and get a little insight into transportation engineering.

Section 6: Social Activities

The UT Austin ITE Chapter isn't solely about professional growth- we love to have fun too! We really enjoy getting together at our social activities. We are very proud of the sense of community among the graduate students and faculty in our department, and the social activities are a key component of fostering this community.

Intramurals

UT ITE was actively involved in intramural sports the past year. We have created volleyball, football, softball, soccer and basketball teams in the UT intramural program. We have had a great time and managed to win a few games along the way.

Parties and Barbecues



Throughout the year, ITE members have had many parties and barbecues. Some get-together even had themes such the grad Thanksgiving feast for all of those in town over the holiday weekend. ITE members also organized many pot-lucks during the year where we enjoyed cuisine from all around the world. We had barbecues for the Fourth of July and Memorial Day, as well as “just because”. In keeping with tradition, we hosted the third annual Horrible Music Party which lived up to its name. These are great events for everyone to connect with each other and to welcome new interns and students.

Holiday Party

In order to celebrate the end of the Fall 2010 semester, ITE members organized various parties and dinners throughout December. As students were excited to celebrate the end of the semester we had great turn outs at all of the gatherings. It was also a chance to give a send-off to graduating students.

Monthly Birthday Parties and Happy Hours

Each month, UT Austin ITE sponsors Birthday Parties for students, faculty, and staff in the transportation engineering department where everyone gets together to celebrate and eat cake or other sweet treats. We also continued the tradition of a monthly ITE Happy Hour at different bars around campus. These activities are quite popular and nearly the entire department participates in at least one of them.

Football Games



Our ITE members got together this past year to attend the University of Texas football games as a group. Football games are the UT way of to encourage school spirit and have a good time. Members cheered on the Longhorns during the whole season. Those not interested in the games were always welcomed

to the tailgate for tasty dips and grilled favorites.

Section 7: Chapter Coordination

Our ITE Chapter is active within Division 9 (TexITE). We attend all of the ITE conferences, have students present their research during the student presentations, participate in the TexITE newsletter, attend the Capital Area meetings, participate in the Texas ITE Student Resume CDs, and work with other Chapters.

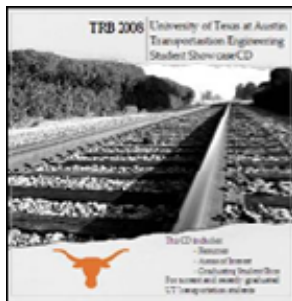
TexITE Conferences

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TexITE Capital Area Meetings

During the past year, we have continued to attend the TexITE Capitol Region meetings. These meetings are the first Friday of every other month at the One Texas Center in Austin, Texas. We are very pleased to be able to interact more with our local ITE members, and we are currently working on ways to build on these relationships.

TexITE Student Resume CDs



Throughout the year we collected resumes from our members and compiled them into a Resume CD database. The database is searchable based on students' interests and current location. We handed out the CDs to many of the transportation professionals during conferences such as the TexITE meetings and TRB. The Resume CD is not only good for networking, but it

also serves as an excellent means of highlighting our accomplishments. In fact, a few of our recent graduates connected with their current employers through these CDs.

TexITE Newsletter

We continued over the past year to share our UT Transportation Engineering Department Newsletter with the TexITE newsletter editors. We like the opportunity to let everyone know what we are up to during the year, and we look forward to continuing this relationship.

Communication with Other Student Chapters

Our Student Chapter enjoys working with the other ITE Chapters in Texas as well. We meet up with them during the seasonal TexITE conferences, at the annual TRB Conference.

Section 8: Member Awards/ Publications

We are very proud of how accomplished our ITE members are in their academic and research pursuits. Some of our members have received regional and national honors, awards, scholarships, and fellowships this past year and many of our members have presented and published their research at national conferences and in reputable journals.

Member Honors and Awards

This past year, ITE student members have been recognized for their academic and research excellence through a variety of awards and honors, including:

- ITS Texas Scholarship
- Graduate Student Professional Development Award
- Kolodzey Travel Grant
- American Planning Association Award for Outstanding Student Project,
- Mirzayan Policy Fellowship
- ENO Fellowship

Presentations and Publications

Most of our ITE members have presented their research at local, regional, and national conferences. Many of our ITE members presented at the TRB Annual Meeting this past January. Students also presented their research at this year's TexITE conference, INFORMS Annual Meeting and others. Many of these presentations have gone on to become papers in a number of journals.

Section 9: Member Roster

First Name	Last Name	State/Country of Origin	Undergraduate Institution	ITE Office
Jose Pablo	Aguiar	Costa Rica	Universidad de Costa Rica	
Lily	Aung	California	University of Southern California	
Bridget	Bienkowski	Michigan	University of Michigan	
Carey	Blackmar	North Carolina	North Carolina State University	
Migdalia	Carrion	Puerto Rico	University of Puerto Rico at Mayagüez	
Todd	Carroll	California	University of Texas, Austin	
Marisol	Castro	Chile	Univ. de Chile	
Donna	Chen	Arkansas	Texas A&M	
Daniel	Evans	Alabama	Auburn University	
Daniel	Fagnant	Alaska	Gonzaga University	President
Mason	Gemar	Iowa	Iowa State	Vice President, Coordination
Brian	Goldberg	New Jersey	Michigan State Univ.	
Epi	Gonzalez	Texas	Texas A&M	
Analissa	Icaza	Panama	Technological University of Panama	
Katherine	Kortum	Pennsylvania	University of Pittsburgh	
Jeff	Loskorn	Texas	University of Texas, Austin	
Taylor	Mansfield	Texas	University of Texas, Austin	
Jonathan	Markt	Nebraska	University of Nebraska - Lincoln	
Mark	McCollum	Arkansas	University of Arkansas	
Alison	Mills	Texas	University of Texas, Austin	
N	Nezamuddin	India	IIT Delhi	
Sundeep	Palvadi	India	National Institute of Technology	
Tarun	Rambha	India	IIT Madras	
Kanthimathi	Sathasivan	India	Madurai Kamaraj University	
Mobashwir	Khan	Bangladesh	Harvey Mudd University	Vice President, Activities
Abdus	Qazi	Bangladesh	Bangladesh Univ. of Engr. & Tech (BUET)	Treasurer

Brent	Selby	New Jersey	Carnegie Mellon University	
Saamiya	Seraj	Bangladesh	University of Texas, Austin	
Pedro	Serigos	Argentina	Universidad de Buenos Aires	Secretary
Palvinder	Singh	India	IIT Delhi	
Gaurav	Vyas	India	IIT Bombay	
Weiyuan	Yuwen	China	Tsinghua University	
