



Annual Report

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

For the Year of April 1, 2011 to March 31, 2012

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Submitted: April 2, 2012

Table of Contents

Section 1: Executive Summary.....	2
Section 2: Student Chapter Summary.....	3
Section 3: Professional Development	5
Section 4: Transportation Engineering Program Development.....	9
Section 5: Service Activities	13
Section 6: Social Activities.....	15
Section 7: Chapter Coordination	17
Section 8: Member Awards / Publications	19
Section 9: Member Roster	20

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 also volunteer at the ExploreUT and Introduce a Girl to Engineering Day Events on the University of Texas campus. At these events, we set up computers with several traffic simulation activities, which were very successful at encouraging young people to take an interest in transportation engineering. 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 Eisenhower Transportation Fellowship, Kolodzey Travel Grant, 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, 2012

President:	Mason Gemar
Vice President, Activities:	Aria Berliner
Vice President, Membership Coordination:	Mubassira Khan
Secretary:	Matt Pool
Treasurer:	Ravi Venkatraman
Advisor:	Dr. Chandra Bhat

UT Austin Chapter Membership as of March 31, 2012

Number of student chapter members:	31
Number of students in the department:	47
Number of faculty ITE members:	7

Transportation Engineering Enrollment

There are approximately 550 enrolled students, as of April 2012, 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 and emails. This year was successful in the sense that undergraduates participated in several of our activities including the speaker presentations as well as the intern program.

Our Graduate Transportation Engineering Program is part of the Civil Engineering Department, and it offers Masters of Science in Civil Engineering (MSCE) 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 (TxDOT) and other noteworthy organizations. In addition to our challenging transportation curriculum, the Transportation Engineering Program encourages all of the students to also pursue courses in the community and

regional planning, operations research, policy, and economics departments. In demonstration of our graduate students' devotion to professional development, we currently have three members who are registered Professional (Civil) Engineers.

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, 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. Lectures were advertised campus-wide to relevant

departments, as well as to local 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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- **Christian Sax**, Kimley-Horn and Associates, Inc., and **Eric Bollich**, City of Austin,
Topic: City of Austin Strategic Mobility Plan
June 24, 2011
 - **Rachel Price**, Reid Middleton,
Topic: Roundabouts
October 19, 2011
 - **Elise Miller-Hooks**, University of Maryland,
Topic: Transportation System Resilience
November 11, 2011
 - **Nick Wood**
Topic: Mileage-Based User Fees
March 2, 2012
 - **Jared Heiner and David Huter**, HNTB Corporation,
Topic: Financing Options for Engineering Projects
March 23, 2012

Transportation Research Board (TRB) Annual Conference

Almost all of our ITE members attended the 2012 Transportation Research Board Annual Conference



from January 21-25, 2012. The experience was wonderful and we were proud to represent our chapter and program well. In total, ITE members presented research from a total of more than 15 papers and 30 posters. In addition to the conference, the ITE Chapter sponsored our fourth annual UT Alumni Happy Hour at Maddy's Bar and Grill.

The event gave us all a chance to both 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 the fall and spring Texas ITE (TexITE) Conferences this past school year. These included the Fall 2011 meeting in Garland, Texas (September 14-16, 2011) and the Spring 2012 meeting in San Marcos, Texas (March 28-30, 2012). We participated in discussions, presented research during student poster sessions, participated in the Traffic Bowl competition, 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 UTA building just south of the main campus block. The 2011 Symposium was held on April 6, 2011, and its theme was "Texas Freight: Beyond 2014". Speakers included Dr. Zhanmin Zhang, UT transportation professor,

Dr. Todd Helwig, UT professor, among many others. Several students attended this symposium and had the opportunity to display their research on posters for the symposium attendees. 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 12-16, 2011 and the upcoming Dynamic Traffic Assignment Symposium, June 4-6. Members from our ITE chapter also attended the Southwest Region University Transportation Center (SWUTC) Student Symposium in Winedale, Texas on April 15, 2011. Our ITE student members additionally recognized at these events for receiving scholarships, fellowships, leadership, and paper-writing awards sponsored by these organizations.

Section 4: Transportation Engineering Program Development

The UT Austin ITE Student Chapter is very proud of our many contributions to the Transportation Engineering Program. Not only are we making an already excellent department more exciting today, but we know our efforts will have a lasting effect for years to come.

Promotional Materials

The Transportation Engineering Program faculty and employees, as well as our student chapters of ITE, Intelligent Transportation Society (ITS), and Women's Transportation Seminar (WTS) are

TRANSPORTATION ENGINEERING AND PLANNING AT THE UNIVERSITY OF TEXAS AT AUSTIN
THE 91st ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD: JANUARY 2012
LONGHORN PRESENTATION SCHEDULE

CONTENTS
Page 1 Workshops
Page 1 Committee Meetings
Pages 2-3 Poster Sessions
Pages 4-5 Conference Sessions

Workshops

Event No.	Participant(s)	Time	Location	Title
104	Bhavin, Anil, presiding	9:00AM-12:00PM	Marietta	Doctoral Student Research in Asphalt Materials and Mixtures
116	Lufusa Obway, Lisa	9:00AM-12:00PM	Ossati	Integrated Public and Private Sector Freight Rail Planning
132	Rule Jari, Natalia	9:00AM-12:00PM	Hilton	Pulling Back the Layers of Dynamic Traffic Assignment Modeling Approaches
133	Bhat, Chandra	9:00AM-12:00PM	Hilton	Emerging Estimation Methods for Heterogeneity and Spatial-Social Temporal Interactions
149	Sidharthan, Raghuprasad	1:00PM-5:00PM	Hilton	On Integrating Models of Household Vehicle Fleet Composition and Evaluation with Activity Based Travel Models for Improved Transportation Energy and Green House Gas Emissions Analysis
149	Jiang, Nan	1:00PM-5:00PM	Hilton	Concentrated Traffic Equilibria: Impact of Electric Vehicles
152	Hilwig, Todd	1:30PM-4:30PM	Marietta	Bracing Details for Steel Bridges with Skewed Supports

Thursday, January 26, 2012

Event No.	Participant(s)	Time	Location	Title
763	Bhat, Chandra, presiding	8:00AM-12:00PM	Hilton	Building the 21st Century Workforce: State of the Research in Assessing Effectiveness of Transportation Programs Aimed at Knowledge and Skill Building and Enhancement

Committee Meetings

Event No.	Participant(s)	Time	Location	Title
A0110	Probst, Jorge A., presiding	1:30PM-3:30PM	Hilton	International Activities Committee
A0110	Probst, Jorge A., presiding	7:00PM-8:30PM	Hilton	International Participants' Reception

Monday, January 23, 2012

Event No.	Participant(s)	Time	Location	Title
A0000	Walton, C. Michael, presiding	10:15AM-12:00PM	Marietta	Transportation Research Record Publication Board
AFK01(1)	Bhavin, Anil, presiding	7:30PM-10:00PM	Marietta	Advanced Models to Understand Behavior and Performance of Asphalt Mixtures Subcommittee

Tuesday, January 24, 2012

Event No.	Participant(s)	Time	Location	Title
AFK20	Bhat, Chandra B., presiding	1:30PM-5:30PM	Hilton	Transportation Education and Training Committee
AFK60	Barrett, Michael	7:30PM-9:30PM	Marietta	Water Quality Subcommittee

Wednesday, January 25, 2012

Event No.	Participant(s)	Time	Location	Title
AFK20	Faul, Jeremiah David Hilwig, Todd Wood, Sharon L. Somaras, Venilo Reichenbach, Matt	8:00AM-12:00PM	Marietta	Use of Strain Data to Estimate Remaining Fatigue Life in a Fracture-Critical Bridge

Page 1 of 5

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. Two efforts we undertake to promote this information is the creation of the Department Fact Sheet and the annual 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 TRB UT Presentation Program Schedule lists authors, titles, locations, and times of each presentation, workshop, and committee meeting given by UT faculty and students.

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 Program. 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 lodging 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 via 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 engineering. In some cases, our members are paired with interns and mentor them as they work together on the same faculty appointed projects for the duration of the program. ITE sponsors many activities with the interns over the summer, including a monthly series of presentation luncheons. At each of these sessions, a current graduate student shares their research with the group and the attendees engage in informal discussions about related topics. Also, members are encouraged to attend the mid-summer and final project presentations given by the undergraduates. We enjoy 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 members, 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



In August of 2011, the Transportation Engineering Program at UT Austin welcomed 16 new graduate students. In addition, the department gained 8 new students in January. ITE took an active role in welcoming the new students into the program on both of these occasions. 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 Program, and the city of Austin. The orientation included lunch at a nearby pizza parlor, dinner at a local Tex-Mex restaurant, bowling, 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.

Transportation Engineering Endowed Excellence Fund

This semester we began contacting alumni to ask for contributions to the newly established Transportation Engineering Endowed Excellence Fund, a resource intended to provide support for graduate student enrichment activities, such as conference travel and prospective student recruitment. We felt that in this way we could help the department reach its goal of being able to provide funding for more students to attend the TRB conference.

Transportation Department Faculty Search

Last spring, the Transportation Engineering Program at UT Austin carried out a search to replace a distinguished faculty member, Dr. S. Travis Waller, who departed for an opportunity to start a transportation program at the University of New South Wales in Sidney, Australia. As such, members of our student chapter participated in the process by meeting with three candidates who were chosen to interview on campus. This afforded our students the opportunity to meet and become acquainted with each candidate, including our new faculty member, Dr. Stephen Boyles.

Local Transportation Inquiry

In May of 2011, a number of our student members participated in a detailed review of a transportation problem reported by a fellow graduate student at the university on behalf of the staff at a local apartment complex. Our students volunteered to investigate traffic operations and safety issues described by the apartment residents and staff. As part of the review, our students, including two professional engineers, identified likely causes of the reported problems and provided recommendations for resolving the situation. The results of the review and recommendations were well received by the staff at the apartment complex.

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 students to seek a career in transportation related fields.

Introduce a Girl to Engineering Day

Introduce a Girl to Engineering Day is celebrated during Engineers Week each year at the University of Texas at Austin. On Saturday, February 25, 2012, thousands of girls in grades one through eight arrived at the UT College of Engineering to learn about engineering through hands on activities. ITE once again volunteered at this event by hosting an activity room to teach the girls about transportation engineering. We shared several traffic operations simulators that were very well received by the students. The girls learned about driving safety and basic traffic operations, as well as how transportation engineers make transportation safer and more efficient. Our volunteers answered questions about transportation and offered plenty of engineering pointers.

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 3, 2012 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 gain some insight about transportation engineering.

Bastrop County Fire Recovery

On Saturday, February 11th, 2012 the UT ITE and ITS chapters partnered with the Texas A&M ITE chapter to provide relief to a family in Bastrop County whose property was damaged by terrible wild fires that occurred this past



year. This effort consisted mainly of removing stray brush and limbs of trees that had been burned in the fires. It was a challenging sight to see the vast amount of destruction that had occurred in the area, but everyone was encouraged after we looked at how much progress was made during our 4 hours together.

Section 6: Social Activities

The UT Austin ITE Chapter isn't solely about professional growth, we love to have fun too! Something our chapter really enjoys is 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 spirit.

Intramurals

UT ITE was actively involved in intramural sports during the past year. We participated in the UT Intramural soccer competition, where we had a great time and managed to be competitive in our division.

Commuter Train Ride

Over this year's spring break, several members of the UT ITE student chapter participated in a train ride along Austin's commuter rail line. At this fun event, participants traveled by train between stations near a selection of Austin's well-known restaurants, breweries, and shops. Those who attended enjoyed the opportunity to socialize and check out Austin's new commuter rail line, which had an extended schedule to accommodate the South by Southwest Festival.

Potlucks

Throughout the year, ITE members have participated in many lunches, potlucks and other gatherings. Some of these were in celebration of special events, such as the student Thanksgiving feast for all of those in town over the holiday weekend. ITE members also organized many potlucks during the year where we enjoyed cuisine from all around the world. These are great events for everyone to connect with each other and to welcome new interns and students.



Football Games

Our ITE members continued the tradition of forming a tailgating group to attend the University of



Texas football games. Football games are the UT way of encouraging school spirit and having a good time. Members cheered on the Longhorns during the whole season, and 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 the ITE conferences, have students present their research during the student poster presentations, participate in the Traffic Bowl Competition, compose the UT ITE Student Resume CDs, and collaborate with other chapters.

TexITE Conferences

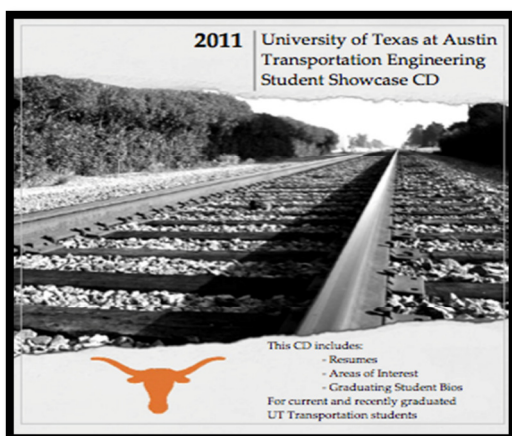
The UT Austin ITE Chapter was present at all of the TexITE conferences this past year. They included the Fall 2011 meeting in Garland, Texas (September 14-16, 2011) and the Spring 2012 meeting in San Marcos, Texas (March 28-30, 2012). We participated in discussions, presented research during student presentation sessions, participated in this year's Traffic Bowl competition, and gave updates on our Chapter to the division. Our members appreciate being able to meet with students from other ITE Chapters, interact with professionals in our area, and obtain real-world perspectives on topics we discuss in the classroom during the TexITE conferences.

ITE Traffic Bowl Competition

For this year's spring TexITE meeting, the UT ITE student chapter formed a Traffic Bowl team composed of four of our members (including one alternate). The team advanced past the first round of the competition after defeating the student chapter at UT San Antonio and finished second overall to Texas A&M. We plan to improve for next year and build on this year's participation.

UT ITE 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 projected graduation. 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.

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 and at the annual TRB Conference. Also, we have participated with the Texas A&M ITE chapter this semester in a joint service event.

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:

- Eisenhower Transportation Fellowship
- ITS Texas Scholarship
- Kolodzey Travel Grant
- WTS Scholarship
- Eno Fellowship
- Thrust Fellowship
- Advanced Institute 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
Aria	Berliner	New York	Mount Holyoke College	Vice President, Activities
Christina	Bernado	Colorado	Northwestern University	
Jack	Bringardner	Ohio	Ohio State University	
Migdalia	Carrion	Puerto Rico	University of Puerto Rico at Mayagüez	
Meredith	Cebelak	Florida	University of Florida	
Donna	Chen	Arkansas	Texas A&M	
Michael	De Gaspari	New York	The Cooper Union	
Daniel	Evans	Alabama	Auburn University	
Daniel	Fagnant	Alaska	Gonzaga University	
Mason	Gemar	Iowa	Iowa State University	President
Shadi	Hakimi	Iran	University of Texas at Austin	
Nan	Jiang	China	Tongji University	
Mobashwir	Khan	Bangladesh	Harvey Mudd University	
Mumbassira	Khan	Bangladesh	Bangladesh Univ. of Eng. & Tech.	Vice President, Membership
Katherine	Kortum	Pennsylvania	University of Pittsburgh	
Katherine	Larsen	Texas	University of Texas at Austin	
Ruoyu	Liu	China	Beijing University of Technology	
Mark	McCollum	Arkansas	University of Arkansas	
Chris	Melson	Wyoming	University of Wyoming	
Arash	Motamed	Iran	University of Mazandaran	
Naga	Palvadi	India	National Institute of Technology Warangal	
Travis	Owens	Texas	University of Texas at Austin	
Matt	Pool	Texas	University of Texas at Austin	Secretary
Eric	Porter	Ohio	University of Michigan	
Tarun	Rambha	India	IIT Madras	
Pedro	Serigos	Argentina	Universidad de Buenos Aires	
Yanfei	Sui	China	Jilin University	

Ravi	Venkatraman	India	IIT Madras	Treasurer
Yiyi	Wang	China	Beijing University of Technology	
Weiyuan	Yuwen	China	Tsinghua University	
Ti	Zhang	China	Shanghai Jiaotong University	
