

**WINTER 2006 NEWSLETTER**

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**UMASS ITE STUDENT CHAPTER  
ATTENDS TRB ANNUAL MEETING**

Fifteen students from the UMass Amherst ITE Student Chapter attended the Transportation Research Board's 2007 Annual Meeting in Washington, DC from January 21-January 24. Students had the opportunity to attend presentations and poster sessions as well as to meet with other students and potential employers attending the event

Two members of the student chapter were invited to present at the conference. Kevin Moriarty gave a presentation on his paper titled "Modeling Traffic Flow Under Emergency Evacuation Situations: Current Practice and Future Directions." Heather Rothenberg presented

*"Analysis of Injury Crash Outcomes Based on Age and Gender Using Linked Crash and Hospital Data."*

While at TRB, students also attended the annual ITE Student Dinner and Information session held at ITE Headquarters. At this event students had opportunity to meet students from other chapters as well as listen to presentations from members of the ITE International Board.

With more than 11,000 attendees at this year's TRB Annual Meeting, this event proved to be an excellent opportunity to meet professionals from a variety of transportation disciplines.



Student chapter members at ITE Headquarters with Earl Newman, ITE International President.



Kevin Moriarty discusses his research with TRB poster session attendees.

**STUDENTS EXPERIENCE  
CRASH TEST FIRST-HAND**

On January 25, members of the UMass Amherst ITE Student Chapter visited the Insurance Institute for Highway Safety (IIHS) Vehicle Research Center in Ruckersville, Virginia.

In addition to touring the facility and learning more about the crash tests conducted by IIHS, they were given the opportunity to observe a 40 mph 40% offset front end crash test of a 2007 Ford Edge. This crash test was conducted using a 50th percentile male crash test dummy. Students also watched a simulated 20 mph rear impact test of a seat from a 2007 Ford Edge.

This test, which also used a 50th percentile male dummy, tests the effectiveness of the seat and headrest in reducing the effect of a rear impact collision.

Following the crash test, researchers from IIHS explained vehicle damage and findings.



**Order Your UMass  
Transportation  
Engineering Polo Shirt!**



**Please indicate cut (standard or women's), size, and quantity.**

**\$35 + \$5 Shipping each**

Checks should be made payable to ITE Student Chapter and sent to Elsa Chan, UMass ITE Treasurer, 139 Marston Hall, Amherst, MA 01003.

Info: echan@student.umass.edu

## STUDENT CHAPTER ATTENDS NEITE ANNUAL MEETING—FORMER PRESIDENT RECEIVES YOUNG PROFESSIONAL AWARD

Members of the UMass ITE Student Chapter attended the NEITE Annual Meeting held in Warwick, RI on December 4. This was an opportunity for students to meet employers, and participate in NEITE official business. Members of the student chapter also had the opportunity to catch up with recent UMass alumni to learn more about their work since graduating.

In addition to networking, students participated in the annual holiday gift exchange that takes place at the NEITE Annual Meeting.

At this event, Michelle Langone, UMass ITE Student Chapter President for the 2005 calendar year, was awarded the NEITE Young Professional Award. The award was presented to Michelle by Neil Boudreau, NEITE President, for her "outstanding contributions to the New England Section of ITE as recent chapter president at UMass and as a Chronicle Staffer while emerging as a transportation professional."

Michelle currently works as a Transportation Engineer at Howard Stein Hudson in Boston, MA.



Current and former UMass ITE chapter members enjoy dinner.



Neil Boudreau presents Michelle Langone's award.

## UPS DISTRIBUTION CENTER FIELD TRIP GIVES STUDENTS A GLIMPSE INSIDE SHIPPING GIANT

Members of the Student Chapter visited the West Springfield UPS Distribution Center on November 10, 2006. Students were invited to the facility to watch the morning departure of 140 package carrying trucks in a roughly 15 minute window. Following the departure of the vehicles, Susan Pare, of UPS, took the time to describe the

logistics of that departure as well as discuss and answer questions on the package receipt and sorting processes, general logistics, preloading systems driver training, international package management, technology used to monitor package and driver locations, and other related topics.



*Students attending the UPS Distribution Center field trip watched the departure of 140 package carrying trucks in a 15-minute window.*

## UMASS ITE STUDENT CHAPTER ELECTS OFFICERS FOR 2007

Members of the UMass ITE Student Chapter elected new officers who will serve the chapter for the 2007 calendar year.

The new group of officers include some who have served as officers to the Chapter in the past as well as some newcomers. This combination should provide a good balance of experience and dynamic new energy. Special thanks to the

outgoing officers who made 2006 a successful year!



2007 ITE Officers: Jenn, Elsa, Kevin, Heather, David, & Dwayne.

Newly elected officers are:

**President:**

Heather Rothenberg

**VP for Public Outreach:**

David Hurwitz

**VP for University Outreach:**

Dwayne Henclewood

**Secretary:** Kevin Moriarty

**Treasurer:** Elsa Chan

**Webmaster:** Jenn Kennedy

## RESEARCH PUTS STUDENTS OUT IN THE FIELD

During the fall semester, members of the UMass ITE Student chapter participated in a variety of research projects above and beyond their individual academic research.

Students provided assistance for two projects being conducted by the UMass Human Performance Lab (HPL).

**Work Zone Safety:** The Student Chapter assisted with a research project on driver behavior in work zones during a simulated cell phone task. Driver behavior was analyzed through eye movement and brake response. Members of

the chapter were drivers for the lead vehicle, pedestrians/workmen in the work zones, and marshals for the subjects.

**Midblock Crosswalks:** The Student Chapter assisted in a research project to understand driver comprehension of mid-block crosswalks. Students mounted cameras and assisted in staging for subjects who were asked to negotiate pedestrian interaction while wearing an eye-tracking device.

**Dilemma Zones:** In addition to the HPL projects, students

assisted in a project sponsored by the Vermont Department of Transportation evaluating dilemma zone conflicts at high speed intersections. The Student Chapter helped with data collection by mounting video cameras, installing road tubes, and staking out approaches to the intersections. Read more about the Vermont dilemma zone project in the "Student Research Corner" (pg 4).



Elsa Chan participates in the midblock crosswalk project.

## STUDENTS & ITE FACULTY ADVISOR ENTER TECHNOLOGY INNOVATION CHALLENGE

Members of the student chapter, along with Faculty Advisor Dr. Knodler, participated in the UMass Technology Innovation Challenge sponsored by the College of Engineering and School of Management.

The team's submission was the use of traffic sensor technology for a home security application. The team had to prepare a busi-

ness executive summary and present an elevator pitch to a panel of venture capitalists who provided feedback on the concept and delivery. The team finished in the top 4 for this part of the competition.

Participating in the competition proved to be a valuable learning experience for the team.



Members of the Safe Driveways team: David Hurwitz, Heather Rothenberg, and Dr. Knodler.

*The Technology Innovation Challenge team had to prepare a business executive summary and present an elevator pitch to a panel of venture capitalists.*

## STUDENT CHAPTER SOCIAL ACTIVITIES: INTRAMURAL VOLLEYBALL TEAM AND HOLIDAY PARTY

**INTRAMURAL VOLLEYBALL:** During the Fall 2006 semester, the Student Chapter formed a team to participate in the UMass intramural volleyball league. As part of the "Just for Fun" league, the team included seasoned pros and first-timers. The team even qualified for playoffs which took place the week after Thanksgiving.

Members of the ITE volleyball team after game 1.



Members enjoy a game of pool at the holiday party.

### HOLIDAY PARTY:

Students celebrated the end of the semester with a holiday party held on December 12. Student chapter members and faculty advisor, Dr. Knodler, enjoyed the opportunity to participate in a little competition at the pool and air hockey tables. The annual "Yankee Swap" gift exchange also took place at the party.

# CALLING ALL UMASS ALUMNI



**Send us your  
contact  
information!**

Email to:  
kdmoriar@  
student.umass.edu

The UMass ITE Student Chapter is currently in the process of compiling a database of all UMass alumni currently working as transportation professionals. This list will be used to keep UMass alumni up-to-date on ITE Student Chapter activities, announcements, etc. This list will also be used to put graduates in touch with potential employers, and to help employers recruit from the pool of UMass transportation students.

## **Sends us your...**

Name  
Year of Graduation  
Degree (Bachelors, Masters, or PhD)  
Program (Civil Eng., Planning, etc)  
Company  
Address  
Phone Number  
Email  
Web Address

## **STUDENT RESEARCH CORNER— DAVID HURWITZ: DILEMMA ZONES**



One of the most critical elements at signalized intersections is the design of detection equipment and timing of clearance intervals. When these

elements are designed incorrectly, drivers may encounter dilemma zones. Dilemma zone issues become even more prevalent at high speed intersections where there is greater potential for serious crashes and more variability in vehicle operating speeds.

The primary purpose of this research project is to assist the Vermont Agency of Transportation (VTTrans) in evaluating dilemma zone conflicts at high-speed signalized intersections in the state of Vermont. The project involves

three components: the completion of a comprehensive national survey of transportation agency approaches to minimizing dilemma zone issues, an extensive field study consisting of 600 cumulative hours of video observation, and speed data collection at 5 high speed signalized intersections, as well as an analysis of the results.

To fully describe the behavior of a driver during a yellow light incursion, characteristics such as speed, distance from stop bar, and reaction to the indication need to be determined. Video cameras were installed approximately 15 ft off the ground to observe each of the 10 high-speed intersection approaches. The approaches were staked at 50ft intervals for the purpose of identifying the location of the vehicle.

Automated traffic Recorders (ATR) were also installed at the detectors to determine aggregate speed data.

To date significant progress has been made with the literature review, and approximately 250 hours of field observation has been completed.



*David Hurwitz is a PhD student in the Transportation Engineering Program at UMass Amherst.*

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