Railroad grade-level street crossings present serious potential safety hazards for people traveling in cars, buses, and trucks, as well as those using non-motorized ways of getting around—like by foot or on bicycle. Most research to date has focused on accidents between trains and motorized vehicles, which have decreased over the past decade.

New research released by the Urban Transportation Center in April shed insight regarding collisions between trains and pedestrians and cyclists. The study is titled, “Pedestrian/Bicyclist Warning Devices and Signs at Highway-Rail and Pathway-Rail Grade Crossings.”

Principal researchers Paul Metaxatos and P.S. Sriraj, through a grant from the Illinois Center for Transportation, employed five components to study the potential causes of accidents between trains and pedestrians and bicyclists at highway-rail and pathway-rail grade crossings.

“Not much attention has been given to what happens on the sidewalks at rail grade crossings,” Metaxatos said. “Also, some intersections have dedicated crossings that are used by pedestrians and other non-motorists.”

The objectives of the research were twofold: To determine best practices for providing effective warnings to pedestrians and bicyclists that they were approaching a crossing, and to reinforce the need to take appropriate action to avoid getting struck by a passing train. A key finding: Passing motorists at times caused a distraction to those who were walking or riding a bike.

The study was divided into these areas: 1) Literature review; 2) Survey of state agencies and industry professionals; 3) Identification of 10 so-called survey location “hot spots” in Chicago and the suburbs; 4) Surveys of non-motorized users and analysis of pedestrian behavior; and 5) Video surveillance of non-motorized users and analysis of observed behavior.

“We placed video cameras when appropriate at 10 locations to observe pedestrian behavior as it pertained to any violations,” Sriraj said. “We conducted surveys typically in the mornings to better collaborate with the availability of our trained survey personnel.”

Metaxatos and Sriraj said feedback to the research to date has been very positive. The researchers will continue the study this year and focus only on Chicago Transit Authority grade crossings. The complete report can be found here: http://www.utc.uic.edu/research/projects/GradeCrossingSafety.html
The Urban Transportation Center is well into over a year’s worth of research stemming from three USDOT-funded transportation research consortia we partnered with in 2011: The National Center for Transit Research; (NCTR) the National University Rail Center (NuRail); and the National Center for Freight & Infrastructure Research & Education (CFIRE).

Projects that are advancing are focused in the areas of public transportation, rail engineering and technology, and freight and infrastructure; additional details on those projects can be found in the box below.

Our research in these areas continues as a result of FY2011 federal grant funding we were awarded 2011, for our collaboration in the three research consortia. We are now proceeding to program FY2012 federal funding, and are happy to report we were able to match that funding at about $2 million. Because of this funding, we’re growing, and have added one new research assistant professor, Nady Moini, who began work at the UTC on June 1 (a full article about Nady is available on page 7). We have also hired a coordinator of public information.

The UTC overall is moving forward to achieve its goal to grow and become more prominent in the field of urban transportation research.

National Center for Transit Research (NCTR).
Two projects are underway through the NCTR, located at the University of South Florida: a survey of human services transportation users and a project about extreme weather events and transit.

National University Rail Center (NuRail).
Two projects are underway: 1. Research to increase effectiveness and efficiency of the environmental impact of rail infrastructure. 2. Research on safety at rail crossings.

National Center for Freight & Infrastructure Research & Education (CFIRE).
Research from this study will advance the understanding of land use and transportation infrastructure and movement of freight.
A group of student researchers from the Urban Transportation Center had a rare chance to meet former U.S. Department of Transportation Secretary of Ray LaHood during the annual UIC Urban Forum held Thursday, Dec. 6, 2012 at the University of Illinois at Chicago Forum Building.

LaHood was the keynote speaker at the forum, the theme of which was “Metropolitan Resilience in a Time of Economic Turmoil.”

The 30-minute informal meeting between transportation center students and LaHood covered current federal transportation initiatives, future funding sources for transportation, and issues that might be prominent in transportation as the students grow into their careers.

“Sec. LaHood was particularly passionate in his defense of high-speed rail and assertion that it will be an American reality,” said Jenny Kane, a graduate research assistant and first-year student in UIC’s Master of Urban Planning and Policy program.

LaHood’s encouraging remarks on high-speed rail proved eye-opening to research assistant Adam Barnum, also a first-year student in Urban Planning and Policy.

“He stated that he believed it would become our generation’s legacy, just like the interstate highway system was more or less his generation’s legacy,” Barnum said.

“I never thought to compare the interstate system with high speed rail, but if that becomes a reality, the U.S. will have a very different transportation infrastructure system in the future,” Barnum added. “The secretary seemed extremely optimistic about the progress made so far, making me more confident that it can be done.”

A number of the students who participated in the conversation with LaHood are working on U.S. DOT-funded research projects. The students discussed their work with LaHood and thanked him for the funding that supports their research.

“The previous generation brought the interstates and large streetscapes, and we are bringing something entirely new, innovative, and hopefully more efficient,” Wilberding said. “It is both empowering and motivating to be part of such a legacy, and I am excited to see where it takes me in the future.”

UTC Executive Director Steve Schlickman moderated the main event of the forum titled “MAP-21 and What’s Next for Urban Transportation Funding: A Conversation with U.S. Transportation Secretary Ray LaHood.”
APTA President and CEO Melaniphy Offers Industry Forecast

The Urban Transportation Center hosted a standing room only seminar event featuring Michael Melaniphy, President and CEO of the American Public Transportation Association (APTA) on Thursday, Jan. 31.

Melaniphy’s presentation, “The State of the Public Transportation Industry and Livability,” was sponsored by URS Corporation.

In his presentation, Melaniphy provided an overview of the transit industry, and discussed the mission of APTA as well as its membership and leadership structures. Melaniphy’s forecast of transit was optimistic, generally, according to Jenny Kane, a Research Assistant at the Urban Transportation Center and graduate student in Urban Planning and Policy.

Melaniphy reported that 2012 was a record-breaking year in terms of ridership, and said demographic and social trends point toward even more ridership in the future. The aging population, a preference for livable communities and high gas prices were all considered influential factors.

Melaniphy also discussed industry trends including an increase in new starts in light rail, especially streetcar lines.

The importance of information technology was also addressed, with Melaniphy highlighting the transformative power of smart phone apps and signage to communicate arrival times and service disruptions. In an open question and answer session, Melaniphy discussed where future transit funding would come from, and whether public-private partnerships (PPPs or P3s) might play a major role. Melaniphy said P3s are a useful tool and can be successful, though transit funding remains a major challenge.

Melaniphy’s primary take-away point was that whatever a student’s interest or expertise, there is a place for them in the transit industry. Opportunities lie in operations, planning, engineering, accounting and finance, media/public relations, human resources and more, Melaniphy told the crowd.

UTC Hosts 2013 Transportation Research Board Reception in Washington

The Urban Transportation Center continued its tradition of hosting a reception at the Annual Meeting of the Transportation Research Board (TRB), with approximately 60 transportation industry professionals in attendance.

The 92nd annual TRB meeting was held January 13–17, 2013, in Washington, D.C., and was attended by transportation professionals from around the world. The theme for the 2013 Annual Meeting was “Deploying Transportation Research - Doing Things Smarter, Better, Faster.”

Graduate student researchers from the UTC, as well as UTC alumni, were among those to attend TRB and the reception.

“The reception was well-attended by a mixture of students, professors, and industry professionals,” Kane said. “It was great to meet and interact with folks in a more relaxed setting outside the conference sessions. For us students, it was a chance to learn more about what the future may hold after graduation,” Kane said.

Kyle Bardo, another UTC student researcher and graduate student in Urban Planning and Policy, also attended TRB and the reception.

“The caliber of guests at the reception, such as Federal Railroad Administrator Joe Szabo, was very impressive and definitely made me appreciate the continuing hard work UTC collectively performs in order to garner the interest and support of such prominent officials,” Bardo said.

Prominent TRB Reception Attendees

| Joe Szabo, Federal Railroad Administrator |
| Doug Whitley, Executive Director of the Illinois Chamber |
| Luann Hamilton, Deputy CDOT Commissioner |
| Joel Volinski, NCTR |
| Mary Kay Christopher, UIC/CUPPA affiliate Alumnus |
| Ed Christopher, UIC/CUPPA affiliate Alumnus |
| Grace Gallucci, Metro. Planning Org. for Greater Cleveland |
| Jacky Grimshaw, Center for Neighborhood Technology |
| Michael Shiffer, UIC/CUPPA |
Two UTC Student Researchers Awarded Krambles Scholarship

Two UTC graduate student researchers were among the three recipients of the 2012 UIC George Krambles Transportation Scholarship Award. Adam Barnum and Jake Rueter each received a $500 scholarship for their transportation-related academic work.

The program is endowed by the George Krambles Transportation Scholarship Fund. Krambles, the former Executive Director of the Chicago Transit Authority, served the regional transit system for 43 years. He passed away in 1999 and has been inducted into the American Public Transit Association Hall of Fame.

Barnum and Rueter both study Urban Planning and Policy at UIC. They said they were honored to have been selected for the scholarship, and feel encouraged to continue their pursuit of transportation-related careers.

As part of the scholarship application, students were required to submit original research on a topic related to transportation.

Barnum submitted a paper on Transit Signal Priority (TSP).

“The paper is generally a literature review that discusses different types of TSP and their applications,” Barnum said. “I also looked at specific case studies including a project I worked on while I was an intern at Pace Suburban Bus, the Harvey TSP Demonstration project.”

Reuter’s research paper focused on the global history of bicycle-sharing systems and their implementation and success in North American cities.

“As part of the paper, I studied the usage patterns of the Nice Ride Minnesota bike-sharing system in the Twin Cities of Minneapolis and Saint Paul,” Reuter said. “In the end I found that, at least to this point, people utilize bike sharing mostly for recreational pursuits.”

Career-wise, Barnum is interested in planning routes and systems of different transit modes, as well as transit efficiency and accessibility. Reuter plans to study how transportation systems enable interaction between people and their environment.

Highlights from the Spring 2013 UTC Diversity Lunch Series

The goal of the ongoing UTC Diversity Lunch Series is to educate and enlighten guests on diversity topics such as ethnicity, culture, age and gender, and how they relate to transportation. Speakers are invited to talk about how their work, life and career are affected by these topics. Included here are brief descriptions of recent speakers, and summaries of their presentations. Contact Edward Bury at ebury@uic.edu or 312-413-1967 to speak at the UTC 2013-2014 Diversity Lunch Series.

Dr. Teresa Córdova, Ph.D. “Roadway Improvement in Diverse Communities.” December 3, 2012.

Dr. Córdova’s research includes economic development, local governance and public infrastructure. The subject of her presentation was the improvement process of a roadway in New Mexico. She explained how to coordinate between multiple agencies to walk through the process of planning, designing and implementing a successful project that provided the highest amount of social benefit. The planning and engineering teams received significant input from the local, diverse community. The coordination effort, with the help of Dr. Córdova, resulted in a successful roadway improvement project.


Dr. Barlow began his presentation with a reminder that when thinking about how to address complex issues in planning and transit, the way we think is as important as the ideas we come up with. He pointed out that project stakeholders and designers will differ in objectives and communication styles, and said it is important to recognize these diverse perspectives. Dr. Barlow also addressed diversity by presenting a well-known study by Dutch researcher Geert Hofstede that describes and ranks countries by cultural dimensions such as collectivism versus individualism, and long-term versus short-term orientation. The goal is to respect cultural differences while working toward a common objective. Barlow concluded with advice to managers: Hire people who have learned the value of appreciating diverse perspectives and are not afraid to seek out others for advice.


Joshulynn White began her career with CTA as a summer student in 1990, and eventually worked her way up to transportation manager. Joshulynn balanced family life with work life, while completing her education. She spoke about how transit has impacted her career, challenges faced by women and African Americans in transit, safety issues, and the importance of having field experience as a manager.
METSI Update

The METSI project continues to provide UTC with funding for research, and is crucial to both the breadth and depth of research topics that UTC faculty, staff and students undertake.

These topics include Transportation Planning, Land Use and Economic Impact of Transportation, Operations, Management and Finance, and Traffic Engineering, among others.

The current theme of METSI is “Livability and Sustainable Transportation.” Specific Projects within METSI include: Development of Sustainability Indicators; Development of a Land Use Model Using Urbanism; Understanding the Impacts of Built Environment on Freight Delivery; Development of a Parking Guidance System; and Demographic Analysis of the Northeast Illinois Region.

METSI was created in 1999 with a grant from the Illinois Department of Transportation. The program is administered by UTC faculty and staff and faculty from other UIC units. The educational component of METSI includes workshops, conferences, training courses, presentations, seminars and webinars plus student assistantships and development.

New UTC Hire: Research Assistant Professor Nadereh Moini

The Urban Transportation Center this June welcomed a new research assistant professor, Nadereh “Nady” Moini, to its staff.

Moini brings 15 years of diverse scholarly and field experiences in the planning, design and assessment of transportation systems, as well as the application of the state-of-the-art technologies in transportation. She has conducted and managed several studies for the New Jersey Department of Transportation through her work at both the Center for Advanced Infrastructure and Transportation, and at Rutgers University in its Transportation Safety Resource Center.

Moini describes the Urban Transportation Center as “a bridge between scholars and professionals.”

“The focal point is that they understand practical needs as they have close ties to transport agencies and have intellectual capacity to solve them,” she said.

Projects in freight movement, ITS, port management, transportation planning, traffic simulation, rail transit, and highway and transit safety have been areas of major focus in Moini’s prior work.

Attracting new projects at the state and regional levels is a top priority for Moini in her new role at UTC, and she hopes to draw projects focused in her areas of expertise. Moini has additional experience in the management and design of various ITS/Computer application projects and data analysis and mining, as well as technical projects in real time system design, dynamic traffic simulation, freight transportation planning, and GIS application in transportation systems.

Moini holds a Ph.D. degree in Civil & Environment Engineering from Rutgers, The State University of New Jersey, as well as a Master’s in Civil Engineering from the City University of New York, New York, and a B.S. in Computer Engineering (hardware) from Beheshti University, Tehran, Iran.

Alumni Update: Mark Minor

Mark Minor received his master’s degree in Urban Planning and Policy, with a concentration in transportation, in 2006. Upon graduation, Mark served as a Senior Transportation Planner at Metra, where he worked on major capital projects and helped communities across the region develop transit-oriented development plans. In 2009, Mark joined the Regional Transportation Authority where he manages multi-agency projects involving RTA, CTA, Metra and Pace.

Mark managed the development of the Chicago Regional Green Transit Plan, the first sustainability and climate action plan for the region’s transit system. The plan was published in 2012. He is currently managing the implementation of a regional energy management system, as well as the transition of seniors and people with disabilities to Ventra™, the CTA’s and Pace’s new fare payment system scheduled to roll out in August.
UTC congratulates the graduates from 2012 for their hard work and determination. We wish them great success in all of their future endeavors.

<table>
<thead>
<tr>
<th>Student, Degree</th>
<th>Title, Advisor</th>
<th>Employer</th>
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<tbody>
<tr>
<td>Michael Alvino</td>
<td>Neighborhood Walkability: From Measurement to Planning.</td>
<td>National Mall</td>
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<tr>
<td>Ming Yan Fu</td>
<td>Thesis: Evaluating the Economic Impact of Freight Investment in Chicago Using Computable General Equilibrium. Advisor: Dr. Kazuya Kawamura.</td>
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<td>Lu Gan MUPP</td>
<td>Project: Bicycle Injury Safety in Bicycle/Motor Vehicle Crashes: A Case Study of the City of Chicago. Advisor: Dr. Piyushimita Thakuriah.</td>
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<td>Rebecca Geissler</td>
<td>Project: Mapping Safe Crossings and Bus Stops: A case study in Chicago to improve pedestrian safety. Advisor: Dr. P.S. Sriraj.</td>
<td>Chicago Transportation Authority</td>
</tr>
<tr>
<td>William Gillespie</td>
<td>Project: Chicago Mobility: On-demand personal transit for a complete multi-modal network. Advisor: Dr. P.S. Sriraj.</td>
<td>Chicago Transportation Authority</td>
</tr>
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<td>Ricardo Herbert</td>
<td>Using Bus Rapid Transit (BRT) to promote Job Access for Reverse Commuters in Newark, New Jersey. Advisor: Dr. Kazuya Kawamura.</td>
<td>Rutgers, The State University of New Jersey, Business School</td>
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<td>Andrew Keller</td>
<td>Creating a Transit Service Index. Advisor: Dr. P.S. Sriraj.</td>
<td>Appiphony, LLC</td>
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<tr>
<td>Meredith Klekotka</td>
<td>Analysis of the Protect Selection Process For Transportation Improvement Plans in Chicago. Advisor: Dr. Piyushimita Thakuriah.</td>
<td>Trailnet</td>
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<td>Lok Kwan MUPP</td>
<td>Harlem Avenue Corridor: The Identification of Potential Bus Riders and Understanding Influential Motivators Which Encourage the Usage of Pace Bus. Advisor: Dr. Piyushimita Thakuriah.</td>
<td>Chicago Transit Authority</td>
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<tr>
<td>Caitlin Lisa MPA</td>
<td>No thesis required for this degree.</td>
<td>PAWS</td>
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<tr>
<td>Steven Mannella</td>
<td>Thesis: Effective Approaches to Increase Public Benefits of Freight Intermodal Terminals – Interviews of Stakeholders. Advisor: Dr. Kazuya Kawamura.</td>
<td>METRA</td>
</tr>
<tr>
<td>Emi Nakamura MBA, MSA</td>
<td>No thesis required for this degree.</td>
<td>Deloitte, Chicago</td>
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<tr>
<td>Nabil Nazha MUPP</td>
<td>Project: Increasing bike and pedestrian safety in Chicago’s most dangerous intersections. Advisor: Dr. Kher Al Kodmany.</td>
<td>PhD student, University of Illinois at Chicago</td>
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Researchers at the UTC are working on a wide range of research projects that will keep them busy through year-end 2013 and into 2014. Projects underway will address these and other subjects: Intermodal; how transportation relates to urban sprawl; ways to mitigate traffic problems caused by truck parking; improving public transportation safety, development of transit modes; exploring the benefits of close by rapid transit to residential real estate development; the environmental impact of rail infrastructure; and, relieving congestion through integration of transit types.

Here’s a summary of five projects:

**Chicago Urban Sprawl Revisited:** This report analyzes data that contributes to urban sprawl throughout metropolitan Chicago. The findings are expected to convey that there are factors beyond transportation that result in sprawl and offer this insight to local municipalities: Reconsider planning massive redevelopment projects once the economy shows more signs of recovery.

**Value Capture:** The goal of this research is to explore best practices between transit capital planners, municipalities and regional taxing authorities, and private real estate developers using value capture, a type of public financing that recovers some or all of the value that public infrastructure – including mass transit -- generates for private landowners. Sponsored by the University of Illinois and University of South Florida, the report is set to be completed in January of 2016.

**Environmental Impact Assessment of Rail Infrastructure in Illinois:** Development of a “Sustainable Rail Scorecard” that covers efficiency, safety, public health, ecological stress, emissions and socioeconomic impacts is a key outcome from this research. The research also is expected to identify high priority and sensitive areas for sustainable rail planning and management throughout Illinois. The project is sponsored by NuRail; significant work has been completed, and a final report is slated for January 2014.

**TRANPRO Information Management System:** Sponsored by the Illinois Department of Transportation, TRANPRO (http://www.utc.uic.edu/tranpro/) is an online resource that hosts information on public and specialized transportation providers. Users can conduct searches by region or individual transportation company, and the site offers links and information on human service transportation grants and related programs. TRANPRO lets users access detailed information on statewide transportation providers and geo-coded socioeconomic data. Human Services Transportation Plan coordinators in Illinois can get access to applications and guidance for Federal Transit Administration funding.

**Transit Agency Adaptation to Extreme Weather Events:** The results of this research will help members of the engineering and construction industries and possibly help minimize the construction timeframe for some transportation projects. The project goals are twofold: Gather more information about the decision process, costs, perceived risk and tradeoffs that planners and managers consider regarding potentially damaging extreme weather events; and, develop decision tools and approaches to better respond to future weather-related challenges often associated with climate change. The findings of this research present a way of conceptually mitigating traffic disruption caused by lengthy bridge construction duration. Tools needed to facilitate implementation of the research products from this study include the training of bridge engineers and contractors via workshops to demonstrate the usefulness of this research. The research, sponsored by the University of South Florida, is scheduled for completion at year-end 2014.