

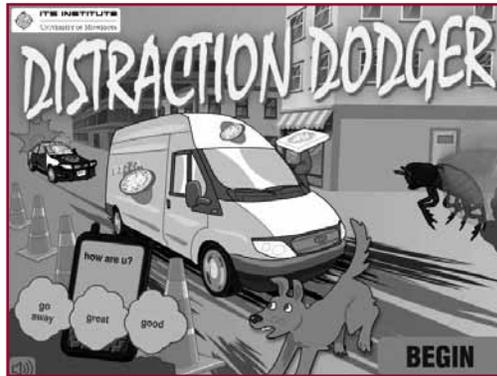


New online game teaches risks of distracted driving

The Intelligent Transportation Systems (ITS) Institute continues to push the envelope in the development of “serious games” with the launch of *Distraction Dodger*, a new online game designed to help teens and young adults understand the risks of distracted driving. Serious games engage learners through entertainment while providing training and education. They can also reach a wide audience at low cost.

In *Distraction Dodger*, players get behind the wheel of a pizza delivery van and have to avoid obstacles and obey traffic laws. As they progress through the game’s levels, they receive feedback on their driving—and how it is affected by their level of distraction.

Developed by Web Courseworks for the ITS Institute, the game has already received international attention with an award at the 2011 International Serious Play Conference. **Mike Manser** and **Chris Edwards** of the Institute’s HumanFIRST program, along with consultant



David Glick, contributed to the game’s development.

Distraction Dodger builds on the success of *Gridlock Buster*, another online game from the ITS Institute. *Gridlock Buster* provides a fun way to teach students about traffic grid management and make transportation interesting and relevant. Since its original posting online, *Gridlock Buster* has received more than

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Computer vision system for truck stop parking receives FHWA grant

The Federal Highway Administration (FHWA) selected the Minnesota Department of Transportation (MnDOT) to receive \$2 million for a University of Minnesota research project designed to use intelligent transportation systems (ITS) technology to give truck drivers real-time information about parking availability at highway truck stops.



Nikolaos
Papanikolopoulos

The University research team includes lead investigator **Nikolaos Papanikolopoulos**, professor in the Department of Computer Science and Engineering (CSE); **Vassilios Morellas**, program director with CSE; **Max Donath**, director of the ITS Institute; **Panos**

Michalopoulos, professor in the Department of Civil Engineering; and **Ted Morris**, lab manager of the Institute’s Minnesota Traffic Observatory.

The project is being directed by **John Tompkins**, MnDOT manager of freight planning and development. The American Transportation Research Institute (ATRI), part of the American Trucking Associations Federation, is also a partner. **Dan Murray**, ATRI vice president, will be the liaison to the research team. The results of the study are expected to be of interest to the public and private sectors.

The funding is provided through the FHWA’s Truck Parking Facilities Discretionary Grants Program. The program helps improve safety on the nation’s interstates by promoting

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Symposium, luncheon in December

This year’s Freight and Logistics Symposium will focus on the impacts of economic change on freight transportation. At the December 2 event, **Christopher Caplice**, executive director of the Center for Transportation and Logistics at the Massachusetts Institute of Technology, will present “Future Freight Flows” in the keynote presentation. Two panels will follow Caplice: one will explore the implications of economic trends for Minnesota, and the other will focus on the intersection of transportation and economic development.

The CTS Fall Luncheon on December 8 will feature **Patrick Condon**, a professor and senior researcher with the Design Centre for Sustainability at the University of British Columbia. In a presentation titled “Flat City: The Streetcar City and the Revival of the American Dream,” Condon will argue that the Streetcar City is again desirable for our future quality of life.

For more information about both events, see www.cts.umn.edu/Events. **CTS**

TERRA activities draw record numbers from multiple states, Norway

Researchers shared results of several pooled-fund and other research studies from MnROAD's Phase Two Initiative during a daylong research conference October 4 in Minneapolis. Many of the research findings on pavement materials, design, construction, and rehabilitation are ready to be implemented in Minnesota and around the country.

The event was part of a larger organizational undertaking over three days that included a quarterly board meeting of the Transportation Engineering and Road Research Alliance (TERRA) and technical advisory panel (TAP) meetings for seven MnROAD pooled-fund projects. Combining meetings with the conference afforded unprecedented regional, national, and international opportunities for networking and collaboration among TERRA members and friends.

The research conference—a TERRA Innovation Series event—featured 22 research presentations and bus tours of MnROAD. TERRA hosted the conference in cooperation with the Minnesota Department of Transportation (MnDOT) and the Minnesota Local Road Research Board, both TERRA members. CTS, which administers the TERRA program, assisted with logistical support.

More than 160 people from at least 13

states and Norway participated in the activities, including state DOT engineers and technicians, city and county engineers, Federal Highway Administration officials, Norwegian Public Roads Administration representatives, consulting engineers, contractors, and others interested in pavement research and implementation.

The conference emphasized how lessons learned from research at MnROAD have been and can be implemented to build better, more cost-effective pavements. Sessions focused on recycled materials, pavement rehabilitation, preventive maintenance, long-life pavements, surface characteristics, and other pavement innovations.

Two bus tours guided by MnROAD engineers **Ben Worel** and **Tim Clyne** visited test sections on the mainline, the low-volume road, and the farm loop. Attendees viewed projects studying full-depth reclamation, innovative diamond grinding of road surfaces, porous and pervious pavements, composite pavements, the effects of farm implements on low-volume roads, and other areas. In addition, unique and leading-edge non-destructive testing



The TERRA research conference featured tours of MnROAD.

equipment was demonstrated as part of the tour.

The broad involvement in the MnROAD research conference and related meetings marks a milestone in the growth of the TERRA organization, with interest, participation, and partnering activity reaching a new high. Nearly 40 participants in the TAP meetings for the MnROAD pooled-fund projects held in conjunction with the conference came from outside Minnesota. Each of those research projects was initiated through TERRA. In addition, the TERRA board meeting drew 31 attendees in person—the most ever—with the remaining member representative joining via teleconference.

The event was the fifth in the TERRA Innovation Series. For more about TERRA, see www.terraroadalliance.org. **CTS**

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projects that allow trucks to park safely and securely in areas away from moving traffic, instead of alongside the road itself or on ramps.

Although only 53 percent of parking spaces at truck stops are occupied on any given night, 90 percent of truck drivers perceive a shortage of parking. Drivers unable to locate empty spaces may become fatigued, which is thought to be a contributing factor in a number of crashes.

The new project will implement and deploy findings from ITS Institute-funded research completed this year by Papanikolopoulos and Morellas. In that work, the researchers developed an automated parking space identification system that can compute occupancy at stops. This

information could then be used to notify drivers about the availability of parking spots using variable message displays miles ahead of stops. The final report is available for download at www.its.umn.edu/Research. **CTS**



Variable message sign notifying truck drivers about parking availability

In memoriam: Judith Martin

Professor **Judith Martin**, director of the urban studies program since 1989, passed away October 3. She was the founding co-director of the University Metropolitan Consortium and served on the program management team of the Transitway Impacts Research Program.

Martin was a 15-year member of the Minneapolis Planning Commission, serving seven years as president. She contributed to the development of plans for land use, downtown development, light-rail stations, and new zoning codes. She was widely sought for her expertise on urban planning, policy, and governance; historic preservation; urban sprawl; and landscape and culture. **CTS**

Roundabouts, sustainability are topics of CTS seminars; more seminars on tap

The CTS Fall Seminar Series kicked off in September and continues into December. The seminars, held from 3:30 to 4:30 p.m. CST on most Thursdays on the Minneapolis east bank campus, are open to anyone interested in learning more about transportation research at the University of Minnesota. The seminars are broadcast live on the web and available for later viewing. Each seminar qualifies for one Professional Development Hour.

Safety at roundabouts was the topic of the September 29 seminar by **John Hourdos**, director of the University's Minnesota Traffic Observatory (MTO). Responding to reports that pedestrians and cyclists were finding it difficult to cross roundabout intersections, the Minnesota Department of Transportation asked MTO researchers to take a close look at interactions between motor vehicles, pedestrians, and cyclists.

Two sites were selected for the project—one in a suburban setting with high vehicle traffic volume, and another near a public park in Minneapolis. The City of Richfield, where the suburban site is



John Hourdos



Carissa Schively Slotterback

located, was a key partner in the project. The two sites differ in terms of road geometry, traffic control features, and traffic characteristics, allowing the researchers to compare and contrast different roundabout situations.

Hourdos explained that identifying factors that affected drivers' decisions to yield was one of the project's principal objectives. The researchers looked at a wide variety of possible influencing factors, including whether the driver was entering or leaving the roundabout, the presence of other vehicles behind and in front of a target vehicle, the positions of other vehicles in the roundabout, time of day, volume of traffic, and the number and location of pedestrians and cyclists waiting for an opportunity to cross.

Several factors appeared to influence the willingness of a driver to yield. Drivers who were exiting a roundabout were significantly less likely to yield. However, drivers at both sites were more likely to yield to pedestrians standing in the center of the roundabout than to those waiting outside the intersection. In addition, drivers were more likely to yield to larger groups of pedestrians and cyclists. Overall, drivers at the Richfield site—where traffic volumes are higher and there are fewer pedestrians and cyclists—were far less likely than drivers in Minneapolis to yield the right of way.

The October 6 seminar featured **Carissa Schively Slotterback**, associate professor in the Humphrey School of Public Affairs, who discussed her research team's efforts to create a model for regional sustainability planning and implementation. "We were interested in creating something that organizations and stakeholders can adapt to their own contexts all around the country," she said.

The research is based on a case study analysis of a diverse set of regional sustainability plans. After selecting the case studies, the researchers reviewed planning documents, interviewed key participants, and collaborated with a diverse research advisory committee. Once they completed this process, the researchers identified emerging best practices in three key areas: plan content, planning process, and implementation and monitoring.

Researchers are working with the project's advisory committee to develop a final planning framework that can be used to inform decisions in a wide variety of regional environments across the nation.

For more seminar coverage and news of upcoming seminars, please see the CTS Events page. You may also sign up to receive e-mail notifications or follow us on Facebook and Twitter. **CTS**

Humphrey School announces Oberstar Fellowship

On September 19 the University's Humphrey School of Public Affairs announced the creation of the **James L. Oberstar** Fellowship, in partnership with the Minnesota Forest Industries (MFI), an association representing the state's forest products companies. The scholarship will annually support one student in public policy or urban planning.

Oberstar, a former Minnesota congressman, joined the Humphrey School in January as a visiting scholar and chair of the Center for Excellence in Rural Safety's national advisory panel.

Oberstar, Humphrey School associate dean **Greg Lindsey**, and **Wayne Brandt**, MFI executive vice president, spoke at the September event.

The first recipient of the fellowship is **Jonathan Creed**, an urban and regional planning graduate student.

"I am truly humbled to be the first recipient of this great honor," Creed said. "It is my hope to fully realize my

educational and professional aspirations at the Humphrey School of Public Affairs and utilize that newfound education for the greater public good." **CTS**



Greg Lindsey, fellowship recipient Jonathan Creed, James Oberstar, and Wayne Brandt

CTS promotes transportation careers at recent events

CTS used *Gridlock Buster* and *Distraction Dodger* to promote transportation degrees and careers at two recent events in Minneapolis.

The first was the University of Minnesota Urban Research and Outreach-Engagement Center (UROC) Community Day on September 20. UROC is home to 10 University programs committed to research and problem-solving in engaged partnership with individuals and organizations in Northside communities in Minneapolis (www.uroc.umn.edu).

The second event was the United Negro College Fund (UNCF) Empower Me Tour on October 8. Now in its fourth year, the

tour is a traveling career- and college-readiness road show created by UNCF in partnership with Wells Fargo. Minneapolis was one of nine cities on the itinerary this year. More than a thousand Minnesota students (mostly high school age) plus their parents participated.

The ITS Institute also displayed its careers video—*Intelligent Transportation Systems: Your Road to the Future*—at the 18th World Congress on Intelligent Transport Systems in Orlando in October. Highlights from the 10-minute video are online at www.its.umn.edu/Education/careers/video. **CTS**



Students playing Gridlock Buster

Research Partnership Award: nominees sought

CTS is accepting nominations for the 2012 Research Partnership Award. The award honors research projects within the CTS program that have resulted in significant impacts on transportation.

An evaluation committee will review the nominations and recommend a winning partnership to the CTS director for approval.

The award will be presented at the CTS annual awards ceremony on April 18, 2012.

Please submit your nomination to **Shawn Haag** of CTS by January 27. Criteria and submission instructions are on the web at www.cts.umn.edu/awards/researchpartnership and in the attached flyer. **CTS**

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3 million game plays and has garnered national interest.

CTS and the ITS Institute use *Gridlock Buster* and *Distraction Dodger* to introduce players to the field of transportation at outreach activities such as summer camps, technology fairs, public engagement events, and campus tours (see related article).

Try your hand at both games at www.its.umn.edu. **CTS**

Upcoming events *To see other events or publicize yours, visit www.cts.umn.edu/Events.*

Dec. 2	Freight and Logistics Annual Symposium, Minneapolis, Minn. See www.cts.umn.edu/Events/FLOGSymposium .	Feb. 2	Annual Road Salt Symposium, Chaska, Minn. See www.mnltap.umn.edu/training/roadsalt .
Dec. 7	58th Annual Asphalt Conference, St. Louis Park, Minn. See www.asphaltisbest.com .	Feb. 9	TERRA Pavement Conference, St. Paul, Minn. See www.cts.umn.edu/Events/PavementConf .
Dec. 8	Annual Concrete Conference, Minneapolis, Minn. See www.cce.umn.edu/concrete .	Feb. 28	Transportation Career Expo, Minneapolis, Minn. See www.cts.umn.edu/Events/CareerExpo .
Dec. 8	CTS Fall Luncheon with Patrick Condon , Minneapolis, Minn. See www.cts.umn.edu/Events/Luncheon .	March 6	56th Annual Asphalt Contractors' Workshop/Quality Initiative Workshop, Brooklyn Center, Minn. See info@mnapa.org .
Jan. 17–20	Minnesota County Engineers Association Annual Conference, Gull Lake, Minn. See www.mncountyengineers.org .	March 8–9	Concrete Paving Association of Minnesota 51st Annual Concrete Paving Workshop, Mankato, Minn. See www.concreteisbetter.com .
Jan. 25–27	City Engineers Association of Minnesota Annual Conference, Brooklyn Center, Minn. See www.ceam.org .	May 23–24	23rd Annual CTS Transportation Research Conference, Saint Paul RiverCentre. See www.cts.umn.edu/Events . CTS