Sharing our expertise and research results with local, national, and international audiences for use in real-world applications is essential to achieving our goals. Technology transfer also raises the profile of our research and educates students, practitioners, policymakers, and the general public about ITS issues and solutions.

Our efforts in this area are far ranging to reach a broad and diverse audience. Over the past year, we have provided tours and demonstrations of our research and facilities, sponsored seminars, created videos showcasing our research, sent electronic newsletters and announcements, published printed pieces, and enhanced our website.

The use of our research results and products by practitioners is critical to improving the transportation system and to ensuring public- and private-sector support for future research. Our collaboration with a variety of state, local, federal, and private-sector partners maximizes the potential for adoption of innovative research developed through our programs.

Highlighted activities

**Practitioners learn about vehicle-based ITS technologies at short course**

One of the ways the ITS Institute helps put research into practice is to incorporate new findings into courses and training. An example of this was a short course offered by the Institute in July.

The new daylong course—ITS Technologies for Improving Highway Vehicle Safety and Crash Prevention—provided a detailed overview of the latest vehicle-based ITS technologies for improving highway safety and preventing crashes.

Practitioners from MnDOT, the City of St. Paul, and several consulting firms learned how sensing and control technologies keep vehicles in their lanes, help avoid collisions, and prevent rollovers; how such technologies are being deployed; and what impact they will likely have on road safety and mobility. Attendees also used 3-D graphic simulations to experience the direct effects of these sensing and control technologies.

Mechanical engineering professors Max Donath (who is also the Institute’s director) and Rajesh Rajamani led the course, with support from Ted Morris. The course met the continuing education requirements for Professional Development Hour (PDH) units for engineers.

**Innovations in road safety are focus of forum with national leaders**

Technology and policy innovations have helped reduce traffic fatalities in recent years, but even more can be done. On August 23, national and state leaders gathered at a forum in Minneapolis to discuss innovations in road safety, including research at the University of Minnesota.
The forum also included presentations of U of M research by Institute director Max Donath and Tom Horan, research director with the University’s Center for Excellence in Rural Safety (CERS). The forum was hosted by former Congressman James L. Oberstar and sponsored by CERS, CTS, and MnDOT.

New startup companies arise from transportation research

Innovative technologies developed by Institute researchers were used to launch two new startup companies over the last fiscal year: Smart Signal Technologies Inc. and Drive Power LLC.

The SMART Signal (Systematic Monitoring of Arterial Road Traffic Signals) system reduces congestion on roads controlled by traffic lights. It automatically collects and processes data from traffic signal controllers at multiple intersections and then creates performance measures, which traffic engineers can use to determine whether signals are properly timed. Civil engineering associate professor Henry Liu led the research team that developed SMART Signal, which has been deployed at more than 30 intersections in Minnesota and six intersections in Pasadena, California. Funding and in-kind support for the SMART Signal system have been provided by MnDOT, the ITS Institute, the Minnesota Local Road Research Board, Hennepin County, and the National Cooperative Highway Research Program.

Drive Power makes web- and smartphone-based products that leverage emerging measurement technologies and predictive analytics to help people make more informed driving decisions. For example, a mobile app—DriveScribe—bloks calls, e-mails, and text messages while the vehicle is in operation and provides real-time coaching to novice drivers. The app was developed by U of M mechanical engineering department researchers.

Researcher Alec Gorjestani now serves as Drive Power’s vice president for technology. The research behind DriveScribe was funded by the Minnesota Department of Transportation and the ITS Institute.

Media coverage brings Institute research to wider audience

Institute research was featured numerous times in national media, including the *New York Times* and the History Channel, as well as in local television news, print, and radio outlets. News stories help the traveling public understand how research can positively affect their daily lives. Among the headlines:

- Distracted-driving video game aims to teach teens  *WCCO 4 TV*, August 29, 2012
- Smart snowplows keep the highway to Valdez, Alaska, clear *Government Technology*, March 15, 2012
- App to help parents track their teen’s driving habits *KARE 11 TV*, March 7, 2012
- “Modern Marvels: Alaska” (episode featuring ITS Institute and Intelligent Vehicles Lab technology) *History Channel*, February 27, 2012
- U of M researchers tap into smartphones to help visually impaired *KARE 11 TV*, February 16, 2012
- New video game aims to scare young drivers safe *Minnesota Public Radio*, February 1, 2012
- Interstates fastest during snowy commute—or not *Star Tribune*, January 29, 2012
- Collision in the making between self-driving cars and how the world works *New York Times*, January 23, 2012
- University researcher presents at conference on self-driving cars *Mercury News*, January 19, 2012