Toyota Collaborative Safety Research Center Launches Seven New Projects and Four New Partnerships with Leading Academic and Research Institutions

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Washington, DC, September 13, 2012 – At a Safety Research Forum here yesterday, Toyota announced the expansion of its groundbreaking partner-based automotive safety initiative with the launch of seven new research programs in partnership with leading research institutions from across North America.

The seven new programs are being undertaken with four new partners; Stanford University, University of Toronto, University of California San Diego and Ohio State University.

The new projects build on the CSRC's efforts to help reduce the risk of driver distraction and help better protect vulnerable traffic populations, including children, teens, seniors and pedestrians. The seven new initiatives represent a broad expansion of Toyota's research into the interaction between drivers, vehicles and the traffic environment, as well as a new, more comprehensive effort to understand teen driver behavior.

"We are excited to welcome our new research partners, whose important work may ultimately benefit other automakers and safety professionals," said Chuck Gulash, CSRC Director. "Through our unique 'open source' research model and our commitment to sharing Toyota talent, technology and data with a broad range of institutions and agencies, we hope to drive new innovations and understanding that will benefit not just Toyota drivers but everyone on the road."

The seven new projects bring the CSRC's total research portfolio of joint research programs to twenty-six. Consistent with the Center's overall research focus, the new projects examine the interaction of vehicle technology with drivers, study the ability of technologies to support driver awareness and behavior, and track the causes of brain injuries in teens.

With today's announcement, the CSRC is now partnered in auto-safety research with sixteen research institutions and agencies across North America. The Center's existing partners are; Children's Hospital of Philadelphia (CHOP), George Washington University, Massachusetts Institute of Technology AgeLab, Transportation Active Safety Institute, University of Iowa, University of Michigan Transportation Research Institute, University of Virginia, Virginia Tech, Virginia Tech Transportation Institute, Washtenaw Area Transportation Study, Wake Forest University, and Wayne State University.

The CSRC's 2012 Safety Research Forum in Washington, DC provides policymakers, regulators, scientists, and others the opportunity to learn about and gain "hands-on" experience with the center's ongoing research projects. The Forum was the CSRC's second major technology demonstration for the public, having previously taken place at the Toyota Technical Center in Ann Arbor in September 2011.

BACKGROUND ON THE NEW CSRC RESEARCH PROGRAMS

CHOP Center for Child Injury Prevention Studies (CChIPS), NHTSA and SAFER

- *Mild Traumatic Brain Injury in Adolescents*

A season-long study of a youth ice hockey team to better understand the mechanisms of mild traumatic brain injury (mTBI) in adolescents, the most common injury to children in vehicular accidents. Researchers will quantify the head impacts sustained during hockey to occurrences of mental deficiencies, and with access to Toyota's Total HUman Model for Safety (THUMS), conduct a state-of-the-art analysis of head acceleration data to determine correlations between impacts and injury outcomes.

Stanford University

- *Driver Vehicle Interface for Partially Intelligent Vehicles*

A three-year project to develop a set of psychological principles that will guide the design of a driver vehicle interface that provides effective, real-time support for drivers of a partially intelligent vehicle (PIV). This research will culminate with the development of a driver vehicle interface for a fully operable automated vehicle to verify its effectiveness.

University of California San Diego

- *Automated Tools for Naturalistic Driving Study Data Analysis for Driving Assessment*

Research focused on developing systematic and automated tools for monitoring and analyzing driver behavior in full context, including the vehicle and environment, to better understand dangerous situations and to inform the design of effective counter-measures.

University of Iowa Aging Mind and Brain Initiative

- *Measuring Use and Impact of In-Vehicle Technologies on Senior Driver Safety*

A three-year study to determine how some senior drivers may have declining abilities relative to driving, potentially increasing driving risk, and how they may use in-vehicle technologies. It will help guide the development of new technologies, especially advanced driving assistance systems (ADAS), to help make them more appropriate and helpful for senior drivers.

University of Michigan Transportation Research Institute (UMTRI)

- *CSRC Teen Driver Survey*

A survey of 5,600 teens and adults to examine their distracting behaviors while driving, identify social norms for both teens and parents and develop effective recommendations to help change dangerous behaviors. This research will be presented to the scientific community and used to develop outreach programs.

University of Toronto

- *Designing Feedback to Help Induce Safer Driving Behaviors*

A three-year study to determine what types of feedback (individually and combined) are most effective in helping inhibit risky behaviors, when feedback can become a potential distraction, what types of individuals are more susceptible to feedback, how drivers adapt to feedback over time, and whether the safety benefits of feedback persist even when it is no longer available.

Virginia Tech, UMTRI, and Ohio State University

- *Development of Standard LDW & LDP Test Method*

A project to develop a detailed test procedure for Lane Departure Warning (LDW) and Lane Departure Prevention (LDP) systems. This procedure will be used to evaluate the performance of two test vehicles, a Toyota and another make, equipped with the LDW and LDP systems.