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Upcoming Events

National Highway Institute (NHI) Course No. 130053 - Bridge Inspection Refresher Training

January 24-26

TTEC 100

Project Management Seminar

February 8

TTEC 175

To view more events, please visit

<http://www.ltrc.lsu.edu>

LTRC Partners with a New Regional University Transportation Center to Support DOTD Research Needs

Louisiana Transportation Research Center will receive \$1.5 million in research funds over the next five years to tackle local infrastructure problems



As one of the sites for the newly awarded LSU-led Transportation Consortium of South-Central States (Tran-SET)—a regional University Transportation Center (UTC) funded by the U.S. Department of Transportation (USDOT)—LTRC will receive approximately \$300,000 a year for five years to conduct research projects of interest and value to DOTD.

LTRC is one of 11 Tran-SET sites scattered across Louisiana, Oklahoma, Texas, New Mexico, and Arkansas. "We will be receiving approximately \$1.5 million from the regional UTC [Tran-SET] over the next five years and will be able to fund approximately 15 or more projects valued at \$3 million over the same period. The excess funds will be generated through matching provided by participating universities and LTRC," said Associate Director of External Programs, Vijaya Gopu, Ph.D., P.E. "Tran-SET and its

cont. on pg. 5

Destination Zero Deaths Team Joins with AT&T to Use Virtual Reality Simulator to Remind Drivers Not to Text and Drive

In response to two national traffic safety weeks, the Louisiana's Destination Zero Deaths (DZD) Team partnered with AT&T through the Louisiana Center for Transportation Safety (LCTS)—a division at LTRC that is tasked with supporting the state's Strategic Highway Safety Plan (SHSP) efforts in highway safety research, training, and communication and outreach—to raise the public's awareness of the dangers of distracted driving and encourage safer and focused driving.



First, the team deployed a distracted driving virtual simulator called *It Can Wait* (provided by AT&T) at the Main Street Market on October 7 in time for Drive Safely Work Week™ (October 3-7), which was themed “Drowsy, Distracted, or Focused... Your Decisions Drive Your Safety.” Second, the team brought the simulator to two area high schools—Baton Rouge Magnet High School and Woodlawn High School—with Lexlee's Kids and the Capital Region Transportation Safety Coalition taking the lead during the National Teen Driver Safety Week (October 16-22).

“The Louisiana Department of Transportation and Development is proud to partner with AT&T and Main Street Market as well as our local and federal partners for the *It Can Wait* campaign,” said DOTD Secretary Shawn D. Wilson, Ph.D. “The public's safety is our chief concern, and it is safety campaigns like *It Can Wait* that bring attention to the dangers presented by distracted drivers and will help us reach our goal of zero deaths.”

Participants at the Main Street Market *It Can Wait* event and would-be and new drivers from the two local high schools, mostly ages 14 to 17, were stunned about the real dangers of distracted driving after using the simulator.

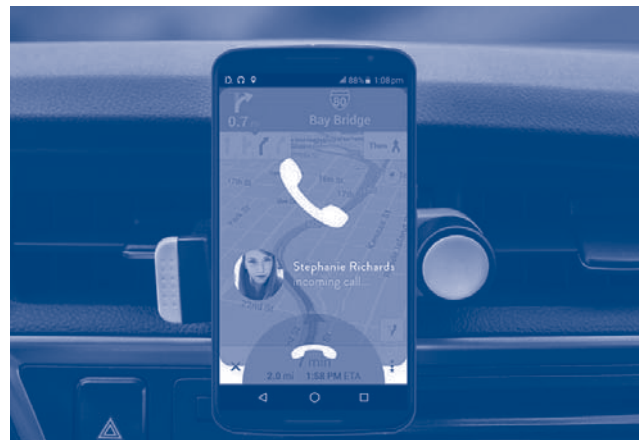


The virtual experience takes approximately 2 minutes and provides first-hand involvement of how distracted driving can impair your ability to drive safely and focused. It places the participant as a driver engaged in texting and reading cell phone messages while behind the wheel at various scenarios—on a busy highway, around a neighborhood, on a local street with pedestrians, etc. It concludes with the driver crashing as a consequence of their distracted driving.

For Louisiana, distraction and inattentiveness remain one of the top contributors to fatal and severe injury crashes. In 2015, the state saw an increase of 24.03% in fatal crashes

associated with distracted and inattentive drivers, according to data compiled by the Highway Safety Research Group (HSRG).

“Distracted driving is an increasingly concerning problem with 70% of people admitting to engaging in smartphone activities while behind the wheel,” said Berry Balfour, AT&T regional manager. “We encourage everyone who has AT&T to download and use the free DriveMode app. It activates once you’re going over 15 mph, and will auto-reply to any texts you receive, notifying the sender that you are driving and that you will call or text them back once you get to your destination.”



For more information on DZD, visit www.destinationzerodeaths.com or email lasafetycenter@la.gov. For more info on It Can Wait, visit www.itcanwait.com

Interview with LSU’s Student Chapter of the Institute of Transportation Engineers (ITE) President

President of ITE-LSU student chapter and Ph.D. Traffic Engineering graduate Nelida Herrera has been successfully running the local chapter since Spring 2014. Just in the past year, the student chapter has been gaining more attention and significantly grown in student membership and student involvement.

What is so unique about the LSU chapter?

Every semester, the ITE-LSU Student Chapter goes the extra mile to ensure that students explore and learn more about Transportation Engineering through site visits or tours to various facilities. ITE-LSU has toured facilities such as the Baton Rouge Advanced Management Center, the Port of the Greater Baton Rouge, and the City of Baton Rouge Traffic Sign and Signal Shop.

Every semester, ITE-LSU also organizes panel discussions to provide our members with the unique opportunity to learn from multiple guests and network with multiple companies/institutions. These discussions are highly interactive and informative. Each panelist describes their passion for the field of transportation engineering; responsibilities at their current job; and the transition from school to work among other topics. It is also unique opportunity to seek advice about career choice, private vs. public industry, and finding the ideal job.



How do students benefit from being a member?

The ITE Student Chapter at LSU is committed to igniting interest and promoting the Transportation Engineering profession. ITE-LSU also strives to build bridges between students and the professional community in this field. Any student is welcome to all the activities that ITE-LSU organizes. Members benefit by participating in scholarship programs and the annual Traffic Bowl Competition.

What does LTRC’s involvement look like?

Dr. Julius Codjoe has been serving as the ITE-LSU Student Chapter co-advisor for almost a year. His dedication, guidance, and continuous support for the Student Chapter has significantly helped the student officers to successfully

plan meetings, tours, panel discussions, and networking socials. He sets time aside to meet with the officers for board meetings, and responds to student chapter correspondence. He is an integral part of ITE-LSU.

The Student Chapter has also been honored to have Dr. Marie Walsh and Steve Strength attend and support our Student Chapter by giving presentations and providing meals for the meetings.

Pranjal Phaltane, a research assistant working at LTRC, has done an incredible job launching the ITE-LSU website, capturing photographs from all our events, and creating all flyers and graphic materials. His dedication and creativity has helped promote and advertise the Chapter.

How has being a member of ITE-LSU assisted students in their career once graduated?

Exposure to the transportation industry through tours, regular meetings, and open discussions gives students a general idea about this field. Important decisions in students' lives, such as continuing education or entering job market, and whether to select large corporation opportunities or small-scale jobs demand feedback from employers and experts. ITE-LSU also functions as a link to the world outside of school. It indirectly assists students to get input which will lead to life-changing decisions. The Student Chapter gives students an edge over their peers who do not have such opportunities.

What are some memorable events or speakers who have stood out?

ITE-LSU organizes two to three general meetings every semester. Memorable meetings include a presentation about traffic safety from Steve Strength—Louisiana Local Technical Assistance Program (LTAP). Students were engaged in the discussion and learned more about traffic safety analysis and countermeasures to address some of the safety problems we face in Louisiana. Another presentation about Red Light Running Cameras was given by Ingolf Partenheimer, chief traffic engineer for the city of Baton Rouge. Students learned about the functionality of the cameras and the criteria for selecting intersections to install them in Baton Rouge.

The chapter is heavily supported by staff of LTRC, including Marie Walsh, Steve Strength, and myself as the faculty co-advisor. The Student Chapter here shares the vision of LTRC in that it is committed to promoting the transportation engineering profession, and building bridges between students and the professional community.

— Julius A. Codjoe, Ph.D., LTRC ITS/Traffic Research Associate

With the continuous advancement in technology and its impact on transportation engineering, students had the opportunity to learn from the Chapter Co-advisor, Dr. Codjoe about Intelligent Transportation Systems (ITS). He gave a presentation about the purpose and applications of ITS and gave his perspective about the future of this technology.

How would you like to see the LSU chapter grow or evolve?

ITE-LSU has helped bring a more “in person” connection between transportation professionals and students which makes a positive impact on their lives. Regardless of these services available to students at their disposal, student attendance at meetings and company sponsorship can increase more. The reason behind low popularity among students and industry may be the publicity of the chapter.

The chapter needs financial support from the industry to publicize the efforts taken by the student chapter officers. A stable website integrated with the university, booths talking about the chapter at orientation programs, and media exposure through the universities' Facebook, Twitter, Instagram accounts promoting ITE-LSU are essential to keep the chapter running.

ITE-LSU would also like to be more active and represent LSU at various local, national, and/or international conferences, workshops, and competitions, as well as promote the profession and our organization among high-school students.



New Regional University Transportation Center *cont. from pg. 1*

sites in Louisiana will be supporting research activities that will address some critical research needs of Louisiana DOTD in particular and of the region in general. The specific projects that need to be conducted will be identified soon and will support DOTD research needs and the theme of the regional UTC.”

Awarded as a multimillion-dollar grant from USDOT, Tran-SET is spearheaded by LSU’s Bert S. Turner Department of Construction Management Professor Marwa Hassan, Ph.D., P.E., and the LTRC site principal investigators are Director Sam Cooper, Jr., Ph.D., P.E., and Associate Director of Research Tyson Rupnow, Ph.D., P.E.

“The vision, in partnership with major state authorities in Louisiana and the region and organization, including experts from state authorities and the private sector, will allow Tran-SET to become a transportation focal point in the region,” said Dr. Hassan. “The advisory board will guide the center’s leadership in prioritizing local and regional problems. DOTD Deputy Secretary Dr. Eric Kalivoda has graciously agreed to serve as the chair of the Tran-SET’s advisory board.”

Tran-SET will work to solve regional challenges resulting from tight economic conditions through an innovative approach focusing on cutting-edge materials, innovations, and construction methodologies as well as their applications to the different components of the transportation infrastructure (roads, ports, rails, and bridges). The center will address economic limitations by mainly considering research topics that carry out a viable plan to move the technology from research to implementation, including workforce training and specifications development.

“With limited funding and the downsizing of transportation agencies due to challenging economic conditions, the backlog of transportation projects in Louisiana and Region 6 as a whole has reached alarming levels and continues to grow. It is clear that addressing these challenges with a ‘business as usual’ approach will only cause the backlog to grow to unmanageable levels,” said Dr. Hassan. “The vision of the proposed center is to tackle the accelerated deterioration of the different components of the transportation infrastructure in Louisiana and Region 6 through the development, evaluation, and implementation of cutting-edge technologies, novel materials, and innovative construction management processes in current and future transportation projects.”

The consortium comprises Arkansas State University, Baton Rouge Community College, Louisiana State University (and LTRC), Navajo Technical University, New Mexico State University, Oklahoma State University, Prairie View A&M University, Texas A&M University, University of New Mexico, University of Texas at Arlington, and University of Texas at San Antonio.

Staff Updates and Accomplishments

LSU Professor and EMCRF Manager **Louay N. Mohammad, Ph.D.**, was recently elected chair of the American Society of Civil Engineers Louisiana Section Transportation and Development Institute, Louisiana Chapter

Leo Marretta joined LTAP as the new Local Road Safety Program Manager. Marretta brings years of experience working with local governments at the Metropolitan Planning Organization (MPO) level and is a welcome addition to the program.

LTAP Director **Marie Walsh, Ph.D.**, received the Women in Transportation Seminar Educator of the Year award at the group's inaugural gala in November.

Dr. Walsh and **Marretta** were also invited to participate in the FHWA sponsored peer exchange in Kansas City on Local Safety Circuit Rider Programs and at a separate peer exchange on Local Road Safety and Highway Safety Improvement Program Policy. Dr. Walsh made a presentation on behalf of the national Towards Zero Deaths Steering Committee at the National Road to Zero Kickoff Summit in Washington, D.C. in October. LTAP will be participating in the Every Day Counts Summit in Austin with 11 members of DOTD and the FHWA Division office in Austin next week.

Mary Leah Coco, Ph.D., became the Associate Director of Technology Transfer and Training for Section 33 in July.

Angela Rovaris has accepted the Section 33 – External Training Programs Director position. She will be responsible for the administration of DOTD specific programs and activities with a major objective of adhering to compliance standards required by both federal and state guidelines as it relates to programs listed below for the Louisiana transportation community. Rovaris will be responsible for directing the development and implementation of various programs in order to ensure departmental compliance.

Louisiana Center for Transportation Safety Director **Dortha Cummins** and Safety Initiatives Manager **Rudynah Capone** served as resource speakers for the Strategic Highway Safety Plan Data Dashboard Training last November 14, 2016. The training was aimed at equipping traffic safety leaders with basic navigation and data analysis skills using the SHSP Dashboards www.crashdata.lsu.edu developed and updated by LSU Highway Safety Research Group. It was attended by statewide SHSP leaders and regional coalition coordinators have a role in utilizing crash data to guide the team's implementation of traffic safety projects.

Recently Published



Project Capsule 16-IGT

Geotechnical Design Manual

Eduardo A. Tavera, P.E.

Project Capsule 16-2P

Transportation Infrastructure Asset Damage Cost Recovery Correlated with Shale Oil/Gas Recovery Operations in Louisiana

Zhong Wu, Ph.D., P.E.

Project Capsule 17-1P

Improving the Use of Crack Sealing to Asphalt Pavement in Louisiana

Mostafa Elseifi, Ph.D., P.E.

Project Capsule 17-2P

Implementation of a Localized Roughness Specification for Use on Louisiana Bridges

Mark Martinez, P.E.

Project Capsule 17-3P

A Decision-Making Tool for Incorporating Sustainability Measures into Pavement Design

Marwa Hassan, Ph.D., P.E. Civil (VA), LEED AP BD+C, M.ASCE

Project Capsule 17-ISA

Evaluating the Effectiveness of Regulatory and Warning Signs on Driver Behavior near Highway/Rail Crossings

Julius Codjoe, Ph.D.

Final Report and Technical Summary 384

Strengthening of Bridge Beams using Fiber Reinforced Polymers (FRP)

Vijay Gopu, Ph.D., P.E., and Paul H. Ziehl, Ph.D., P.E.

Final Report and Technical Summary 571

Investigation into Legislative Action Needed to Accommodate the Future Safe Operation of Autonomous Vehicles in the State of Louisiana

Chester Wilmot, Ph.D., and Marlon Greensword

Final Report and Technical Summary 573

Laboratory Evaluation of 100 Percent Fly Ash Cementitious Systems

Tyson D. Rupnow, Patrick Icenogle, E.I., Zachary Collier, Amar Raghavendra, P.E.



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