Challenges and Opportunities in Deploying Connected and Autonomous Vehicles

Autonomous and connected vehicle technologies are advancing at a rapid pace and hold the promise of delivering substantial benefits to the society by reducing fatalities, crashes, congestion, fuel consumption, and pollution while significantly enhancing mobility. Major companies are investing heavily in the development of autonomous vehicles so that they can reap the benefits of what may soon be recognized as the most disruptive technology of the first half of this century. The emergence of these new technologies will have a profound effect on jobs and businesses based on public transportation, auto-body and auto repair, and auto insurance since these might slowly become obsolete. This presentation provides an overview of the current status and the needs in the areas of technology, infrastructure, and regulations to implement automated driving. The challenges and risks associated with autonomous vehicles, the specific needs in the Gulf South Region, and a look into the future are discussed.

Dr. Vijaya (VJ) Gopu is a Professor of Civil Engineering at the University of Louisiana at Lafayette and Associate Director for External Programs at Louisiana Transportation Research Center (LTRC). Dr. Gopu is a recipient of several awards for teaching, research and professional service. He has supervised the research work of 48 graduate students and served as the principal or co-principal investigator of over 60 projects with total expenditures exceeding $20M and dealing with heavy engineered timber structures, FRP repair of concrete structures, bridge condition assessment, hazard mitigation of light-frame structures, recycled polymer composites, engineering education, and research administration. He is active in several technical committees and has served as a member of several federal interagency working groups. Dr. Gopu serves as the Vice-Chair of the Industrial Advisory Board for the NSF Center on Integration of Composites in Infrastructure. Over the past 17 years, he has been heavily involved in the management of TIER 1 and Regional University Transportation Center sites funded by the U.S. Department of Transportation. Dr. Gopu has served on over 70 NSF Research Centers/Facilities Site Review Teams and Proposal Review Panels in just the past decade. He is a registered professional engineer in the State of Louisiana and a life member of ASCE.

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1-Hour PDH Provided