METRANS RESEARCH SEMINAR

Development of Micro Wireless Sensor Platforms for Collecting Data of Passenger-Freight Interactions

Traditionally, pavement inductive loop sensors are used to collect real time traffic data for passenger-freight movement in roadways. This method, however, is expensive to install and maintain. In the last decade, significant improvements have been achieved in MEMS sensors domain with respect to size, cost and accuracy. Motivated by these novel advances, we proposed a wireless MEMS sensor based passenger-freight interactions detection framework for Intelligent Transportation Systems (ITS). Our proposed solution will be significantly cost effective in comparison to traditional induction loop approach and it is scalable to cover millions miles of roadways all over the US.

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Mohammad Mozumdar has been working as a full time faculty in the Electrical Engineering Dept. of California State University at Long Beach (CSULB) since August 2012. Before joining CSULB, he was a postdoctoral scholar in the Electrical Engineering & Computer Sciences department of the University of California, Berkeley for two and a half years. He received his Ph.D. in electronics and communication engineering from Politecnico di Torino, Italy; his M.Sc in software system engineering from Aachen Technical University in Germany; and his B.Sc in computer science and engineering from Bangladesh University of Engineering Technology. Dr. Mozumdar's research interests include methodologies and tools for embedded systems, especially in the domain of sensor networks; energy efficient building information and control system design; cyber physical systems; methodology for the design of distributed embedded systems typically subjected to high real time, safety and reliability constraints.

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