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Application of Automated Sensor Data for Development of Estimation Models for Real Time Traffic Management

Presentation Topic

The application of automated sensor data for development of estimation models for various traffic variables in the homogeneous as well as heterogeneous (mixed) traffic conditions will be discussed in the seminar as two case studies. The first case study will discuss the development of a model-based queue estimation scheme using the Kalman filtering technique, taking into account the statistical properties of detector errors, for homogeneous traffic conditions. The second case study will discuss the suitability of Bluetooth and RFID (Radio Frequency Identifier) sensors for data collection and development of travel time estimation models using ARIMA modeling method under mixed traffic conditions, as prevailing in India. The developed estimation schemes can be used as part of travel time information applications in real time Intelligent Transportation System (ITS) implementations.

About the Speaker



Anusha S.P., Ph.D.

Assistant Professor
APJ Abdul Kalam Technological University
Department of Civil Engineering
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Dr. Anusha S.P. is an assistant professor at the APJ Abdul Kalam Technological University in India. She received her bachelor's degree in Civil Engineering at Mahatma Gandhi University and her master's and Ph.D. in Transportation Engineering from IIT Madras. Her areas of interest include Intelligent Transportation Systems, signalized intersections, bus arrival time predictions, and vehicular emissions. Her research has been published in several national and international journals. As part of a student exchange program at IIT Madras, she conducted research at the University of Nebraska-Lincoln's Nebraska Transportation Center while working on her Ph.D. She has recently been selected as the 2019 recipient of the Arthur M. Wellington Prize for the paper, "Cycle-by-Cycle Analysis of Signalized Intersections for Varying Traffic Conditions with Erroneous Detector Data."

**Monday, October 14, 2019
11:00 AM CT**

This event will be livestreamed from Florida Atlantic University. To view long distance, connect by link, phone, or join us in room **344A** of the Prem S. Paul Research Center at Whittier School (2200 Vine Street, Lincoln, NE).

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