

UTC Project Information	
Project Title	Real-Time Data-Based Decision Support System for Arterial Traffic Management (Project J2)
University	Florida International University
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Funding Source(s) and Amounts Provided (by each agency or organization)	STRIDE: \$130,506 FDOT: \$55,506 (FIU) + \$75,000 (UF)
Total Project Cost	\$130,506
Agency ID or Contract Number	69A3551747104
Start and End Dates	October 15, 2018 – August 31, 2020
Brief Description of Research Project	Traffic congestion along arterial streets is increasingly becoming a critical issue that needs to be addressed by transportation agencies. Compared to the relatively mature management of freeways, arterial traffic operations and management are lagging behind. To address such a gap, Intelligent Transportation System (ITS) devices, such as traffic detectors, Bluetooth/Wi-Fi readers, and so on, are installed or planned to be installed along a number of arterial streets. The data generated from these devices provide an enriched source for monitoring arterial traffic and estimating performance measures. However, these measures are usually estimated offline to check arterial street performance and to verify the effectiveness of traffic operations. The real-time traffic operations of urban streets still rely more on visual examination of the videos generated from closed circuit television (CCTV) cameras at traffic management centers. To mitigate congestions during incidents or special events, some transportation agencies manually adjust signal timing based on operator's observations of queues. A robust and automated decision support system is needed to help transportation agencies to better manage arterial traffic in real time.

	<p>The goal of this project is to develop a real-time data-based decision support system for arterial management. The developed system will not only automatically estimate system performance and identify the traffic state based on data from multiple sources, but also predict the short-term traffic conditions using advanced machine learning techniques. Recommendations will be further provided by the system based on predicted traffic condition as well as agencies' past operational experience to assist agencies in determining optimal arterial traffic management and control strategies.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>Not available. Research is in progress.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Not available. Research is in progress.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>https://stride.ce.ufl.edu/project-j2/</p>