

INDOT Traffic Engineers Earn “Best Paper Award”



The authors, pictured from left: Purdue University Graduate Research Assistant Steve Remias, Purdue University Graduate Research Assistant Alex Hainen, INDOT Traffic Management Director Jim Sturdevant, Joint Transportation Research Program Director and Purdue University Professor Darcy Bullock, Purdue University Senior Research Scientist Chris Day, INDOT Senior Field Engineer Amanda Stevens. Not pictured: Purdue University Graduate Research Assistant Howell Li.

Red traffic lights couldn't stop two INDOT employees from collecting a national award in January. Quite the opposite: The lights propelled them to victory lane.

INDOT Traffic Management Director Jim Sturdevant and INDOT Senior Field Engineer Amanda Stevens, along with Purdue University colleagues, were bestowed the Traffic Signal System Committee's Best Paper Award at this year's Transportation Research Board (TRB) 92nd annual meeting in Washington, D.C. The group authored the traffic signal-oriented research paper "[Revisiting the Cycle Length—Lost Time Question with Critical Lane Analysis.](#)"

The research paper documents a collaborative field study of an intersection at U.S. 36 (Pendleton Pike) and 56th Street on the northeast side of Indianapolis, measuring the relationship between traffic-flow rate efficiency and varying signal lengths. The results are important to help engineers select the appropriate signal cycle length to provide efficient synchronization and minimize motorist delay.

INDOT Research & Development Traffic Engineer and Project Adviser Shuo Li notes this is just one of many joint-effort research projects on traffic operations.

"Results from these studies keep traffic successfully moving on Indiana highways," said Li.

[Joint Transportation Research Program](#) Director and Purdue University Professor Darcy Bullock also touts the outstanding relationship between INDOT and the program's graduate students.

"INDOT Traffic Management Center staff members have been outstanding collaborators with dozens of our students over the past 15 years," said Bullock. "This collaboration not only provides experienced-based learning for our students, but accelerates implementation when INDOT colleagues are actively engaged throughout the research project."

Sturdevant has participated as a co-author on three previous TRB Best Paper Awards in the past eight years. To view those papers, click on the links below:

- [Evaluation of the Accuracy of Stop Bar Video Detection at Signalized Intersections \(2005\)](#)
- [Track Clearance Performance Measures for Railroad-Preempted Intersections \(2010\)](#)
- [Visual Education Tools to Illustrate Coordinated System Operation \(2011\)](#)