



Northeastern

Department of Civil and Environmental Engineering Distinguished Seminar Series

Real Time Traffic Congestion Dashboards for Decision Makers

Darcy Bullock

Professor of Civil Engineering and Director of the Joint Transportation Research Program
Purdue University

Thursday, September 28, 2017 12:00 pm-1:00pm
135 Shillman Hall

Abstract

Traffic incidents, work zones and winter weather has a large impact on both mobility and safety nationwide. Crowdsourced probe vehicle data provide an outcome oriented measure that can be used to calculate the impact on traffic of storms in near-real time as well as in after action review. This talk presents a series of Indiana case studies derived from after action analysis of major traffic crashes and winter storms on Indiana interstates. The talk includes a summary of quantitative incident performance measures used to prioritize capital investments as well as graphics and recorded audio from public safety dispatch system for action incident review. The talk will conclude with some interactive real-time web pages that track conditions on adjacent interstates I-90, I-94 and I-69

Biographical Sketch

Dr. Darcy Bullock is a Professor of Civil Engineering at Purdue University and serves as the director of the Joint Transportation Research Program. Bullock is a Registered Professional Engineer in Indiana and has 25 years of experience in the industry working closely with vendors, state agencies, and USDOT, and colleagues at other universities. Bullock's teaching, research and consulting interests have been in the general area of traffic engineering. He received a B.S. in Civil Engineering from the University of Vermont, and a M.S. and a Ph.D. in Civil Engineering from Carnegie Mellon University. Over the past two decades, Bullock has completed several projects with the Federal Highway Administration, Federal Aviation Administration, National Cooperative Highway Research Program, National Science Foundation, Department of Homeland Security, Houston Airport System (Houston Intercontinental Airport), Kenton County Airport Board (Cincinnati Airport) as well several state and local transportation agencies. The results of those projects are published in over 200 journal articles, conference proceedings, and technical reports, several of which have received national awards from ASCE, TRB and ITE. You can see some of the activities his students are currently working on by following his twitter account: <https://twitter.com/darcybullock>



Darcy Bullock, Ph.D., P.E.

Prof. of Civil Engineering

Director of the Joint Transportation Research Program

Lyles School of Civil Engineering

PURDUE UNIVERSITY



Education

- **PhD in Civil Engineering, *CARNEGIE MELLON UNIVERSITY***
- **MS in Engineering Management, *CARNEGIE MELLON UNIVERSITY***
- **BS in Civil Engineering, *UNIVERSITY OF VERMONT***

Research Interests

- **Traffic engineering**
- **Intelligent transportation systems**
- **Real time traffic control**
- **Image based vehicle detection**
- **Traffic operations & safety**

Selected Service and Awards

- **ASCE Walter L. Huber Civil Engineering Prize, 2002**
- **ASCE Wellington Prize, 2010**
- **Best Paper Award, Transportation Research Board, 2006, 2007, 2010, 2011, 2013, 2014, 2016, 2017**