Md Shahadat Iqbal, Ph.D. Candidate

- **Research Interests:**
  - Intelligent Transportation Systems
  - Connected Vehicle
  - Traveler Information System
  - Traffic Simulation

- **Dissertation Title:**
  Assessment of Traveler Information System Processes with the Consideration of Connected Vehicle Technologies

- **Selected Honors / Awards:**
  - Anne S. Brewer Scholarship Award, ITS Florida, 2015
  - STRIDE Best Poster Award, 2014
Problem Statement

• Future market penetration of connected vehicle

Wright et al. (2014)
Vehicle age distribution (Miller et al., 2002)
Methodology

• Determination of Zone Specific MP
Methodology

MP at zonal level ➔ CV trips and non-CV trips from each zone ➔ MP variation at link level ➔ Traffic Assignment
Result

- Links CV percentage is lognormally distributed
Result

- Variation of CV market penetration
Application

NGSIM

- Vehicle Trajectory Data

TCA

- A tool developed by FHWA
- Modified to incorporate stochasticity

CV Data

- BSM data

Travel Time

- Further processed to get travel time
Application

- Travel time error at different MP of CV

![Graph showing MAPE of Travel Time vs Market Penetration of CV]
Application

- Travel time error at different year