I-STREET: A TRANSPORTATION TESTBED IN GAINESVILLE, FLORIDA

A Collaboration of UF, Florida Department of Transportation (FDOT), and the City of Gainesville

Lily Elefteriadou
Director, UFTI

FAV Conference, Tampa FL, November 15, 2017
Overview

• UF, FDOT, CoG partnership
• Strong relevant research groups at UF
• Aligns well with UF strategic plan for campus

FDOT-Funded Project (completed Sept. 2017): Develop a plan for an advanced transportation technologies testbed at UF/CoG
I-STREET Infrastructure Projects

- FRAME – 150 RSUs along I-75 and around the city
- AID – 13 signalized intersections and 7 mid-block crossings
- Gainesville Trapezium (45 RSUs around the UF campus)
- GAToRS Autonomous Shuttle
Other I-STREET Activities

- Data analytics platform
- Sensor and sensor fusion development
- Bus bike rack sensors and app
- Ped and bike safety applications
- RFI for Industry participation
Request for Information – Industry Participation

- [http://www.transportation.institute.ufl.edu/research-2/istreet/](http://www.transportation.institute.ufl.edu/research-2/istreet/)
- First set of proposals under review
- Second set due January 15, 2018
- Flexibility in options:
  - Performance Evaluation
  - Equipment/algorithm testing
  - Joint development and implementation
Example: Multi-sensor Fusion

Cohda Wireless MK5 DSRC
GPS Error Analysis

GPS interference (multipath) in urban environments must be addressed to reduce uncertainty in DSRC.

\[
\mu = -2.8 \text{ meters}
\]

Example: Signal Control

- Traffic management by optimizing AV trajectories
- Most important at bottlenecks (intersections, on-ramps, etc.)
- Optimization methods used to increase throughput and reduce delay
Example: Freeway Operations

Autonomous Vehicles

Conventional Vehicles
Next Steps

- Industry Partnerships / RFI
- Vehicle/bus instrumentation
- Data analytics and evaluations
Questions?