STRIDE | Southeastern Transportation Research, Innovation, Development and Education Center

# FINAL REPORT

January 2012 to June 2017

UF | Transportation Institute
UNIVERSITY of FLORIDA

## Center Theme

The Southeastern Transportation Research, Innovation, Development and Education (STRIDE) Center is a USDOT/OST-R grant-funded, regional University Transportation Center (UTC) headquartered at the University of Florida. Under this grant, STRIDE conducted transportation-related research in the areas of safety, livable communities and economic competitiveness. Through the strong interdisciplinary network of researchers, educators, state DOTs, private and public agencies, and professional organizations across the southeastern U.S. and nationally, the Center advanced the state-of-the art in transportation and enhanced the transportation workforce for designing, implementing and managing the transportation systems of the future.


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# DIRECTOR'S MESSAGE

Dear friends and colleagues,

I am very pleased to provide this final report for the STRIDE center activities from 2012 to 2017. For this first STRIDE award, we worked on building strong collaborative relationships within the consortium, with federal, state, and local partners, as well as with industry. As a result, we produced numerous research and educational products (additional information is provided in this report and on our website https://stride.ce.ufl.edu/) which are used extensively throughout the region and the nation, Many of the students recruited and funded by the consortium are now working as transportation professionals in the private and public sectors, and academia.

Under this grant, STRIDE conceptualized the first UTC conference for the Southeast, an annual event which continues to grow and attract more participants throughout the region. Our most recent conference, now in its 5th year, was the largest yet, and attracted nearly 250 participants, including representatives from most state DOTs in the region. This annual conference brings together faculty and students from universities throughout the southeast, along with other transportation professionals, to exchange information regarding on-going projects and to explore further opportunities for collaboration. It gives us an opportunity to showcase our work, disseminate our findings and facilitate implementation, and to learn about advances in transportation research and education from our colleagues in the region.

Our work on STRIDE and our strong collaborative relationship with FDOT and the City of Gainesville has led to the creation of I-STREET (http://www.transportation.institute.ufl.edu/research-2/istreet-about-us/), a real-world testbed which will develop, evaluate, and implement advanced transportation technologies at the University of Florida campus and the surrounding transportation network. As we are gearing up for the next phase of STRIDE through the 2017 award, we will continue to leverage our UTC funds to improve the transportation system. Stay tuned to learn more about our findings, opportunities for collaboration, and suggestions for improving the transportation system in your community. During the next several years we will be placing increased emphasis on congestion mitigation and the development and use of advanced technologies, such as automated and connected vehicles, which are expected to significantly impact the transportation system in the years to come. We will continue to strive to prepare students for these new challenges, and we are very excited to expand our collaborative network and establish industry partnerships and joint activities with our partners throughout the country.

I look forward to hearing from you,

Lily Elefteriadou
*Professor & UFTI/STRIDE Director*


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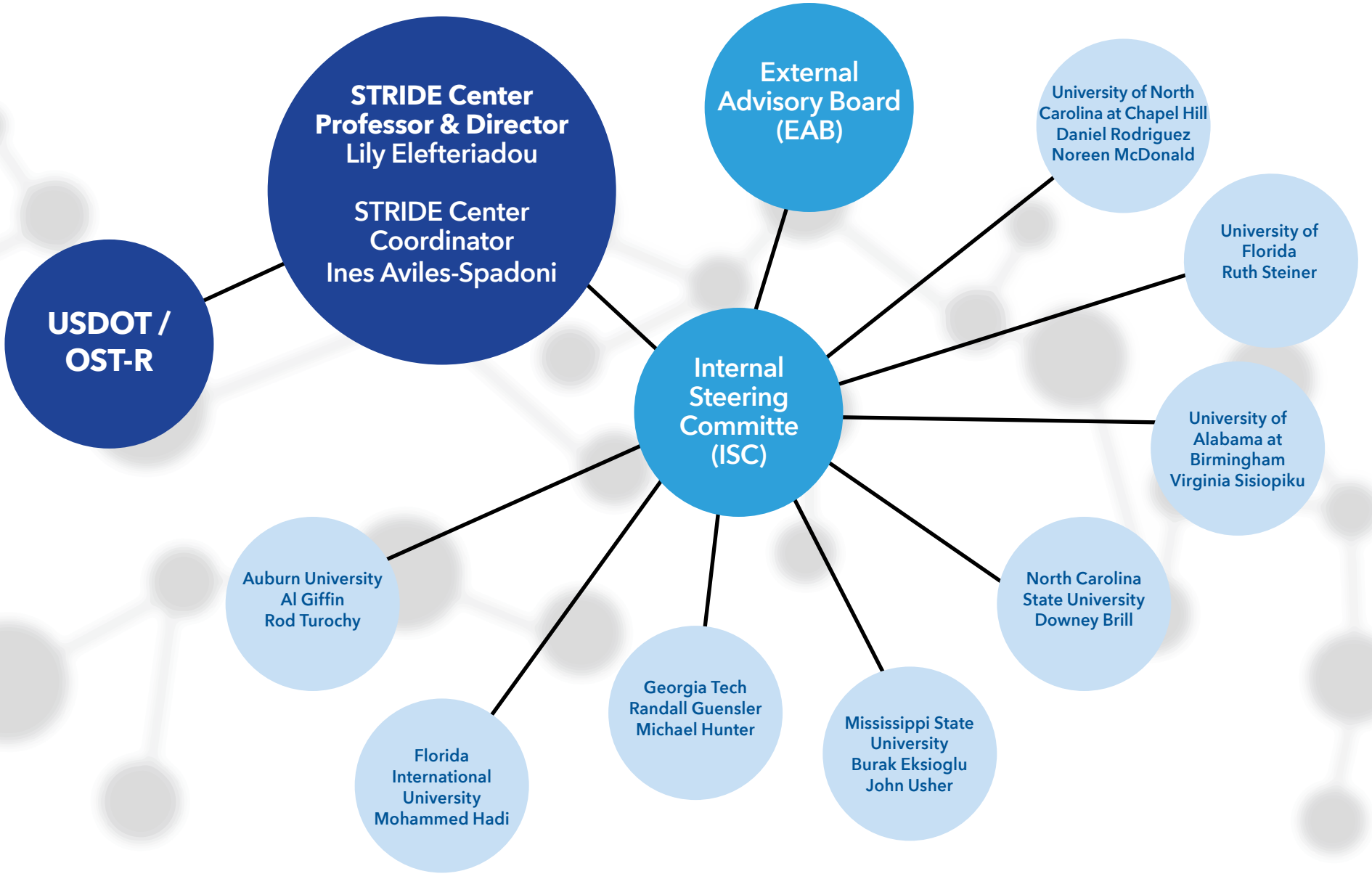
*Consultant*

# ORGANIZATIONAL CHART & PARTNER INSTITUTIONS



# INTERNAL STEERING COMMITTEE/EXTERNAL ADVISORY BOARD

## STRIDE Internal Steering Committee

**Lily Elefteriadou, Ph.D.**
*Professor & Director of STRIDE*
University of Florida

**Ines Aviles-Spadoni, M.S.**
*STRIDE Center Coordinator*
University of Florida

**Downey Brill, Ph.D.**
*Professor*
North Carolina State University

**Al Giffin**
*Director, Auburn Transportation Research Center*
Auburn University

**Randall Guensler, Ph.D. (2012-2016)**
*Professor*
Georgia Institute of Technology

**Michael Hunter, Ph.D.**
*Associate Professor*
Georgia Institute of Technology

**Mohammed Hadi, Ph.D.**
*Professor*
Florida International University

**Richard Long**
*(Retired)*
*STRIDE Outreach Coordinator*
University of Florida

**Noreen McDonald, Ph.D.**
*Professor*
University of North Carolina at Chapel Hill

**Daniel Rodriguez, Ph.D. (2012-2014)**
*Professor*
University of North Carolina at Chapel Hill

**Virginia Sisiopiku, Ph.D.**
*Associate Professor*
University of Alabama at Birmingham

**Ruth Steiner, Ph.D.**
*Professor*
University of Florida

**Rod Turochy, Ph.D.**
*Associate Professor & Director of Alabama Technology Transfer Center*
Auburn University

**John M. Usher, Ph.D., P.E.**
*Professor*
Mississippi State University

## STRIDE External Advisory Board

**Ronnie Baldwin**
*Chief Engineer*
Alabama Department of Transportation

**Randy Battey**
*Assistant Chief Engineer (Operations)*
Mississippi Department of Transportation

**Darryll Dockstader**
*Manager, Research Center*
Florida Department of Transportation

**Georgene M. Geary**
*State Research Engineer*
Georgia Department of Transportation

**Howard Glassman**
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North Carolina Department of Transportation

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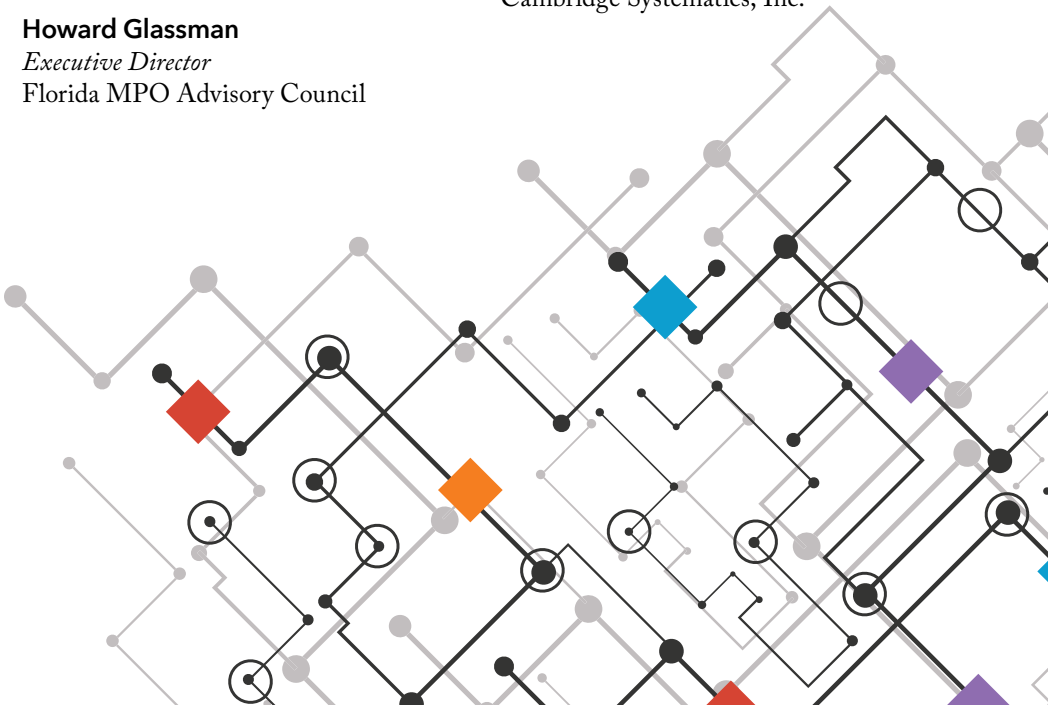
*ITS/Traffic Operations Specialist*
Federal Highway Administration
Florida Division Office

**Yvette Taylor**
*Regional Administrator*
Federal Transit Administration

**Anita Vandervalk**
*Principal*
Cambridge Systematics, Inc.



## Key Staff

**Lily Elefteriadou, Ph.D.**
*Professor & Director of STRIDE*

**Ines Aviles-Spadoni, M.S.**
*STRIDE Center Coordinator*

**Jennifer Gomez**
*Administrative Assistant*

**Elaine Khoo, B.S.**
*Coordinator, Communications & Marketing*

**Richard Long (2012-2014)**
*STRIDE Outreach Coordinator*

**Alison Tillman, B.A. (2014-2016)**
*STRIDE Assistant*

**Leslie Washburn, P.E. (2012-2013)**
*K-12 Workforce Development*

## STRIDE Support Staff
## UF Engineering School of Sustainable Infrastructure & Environment/College of Engineering

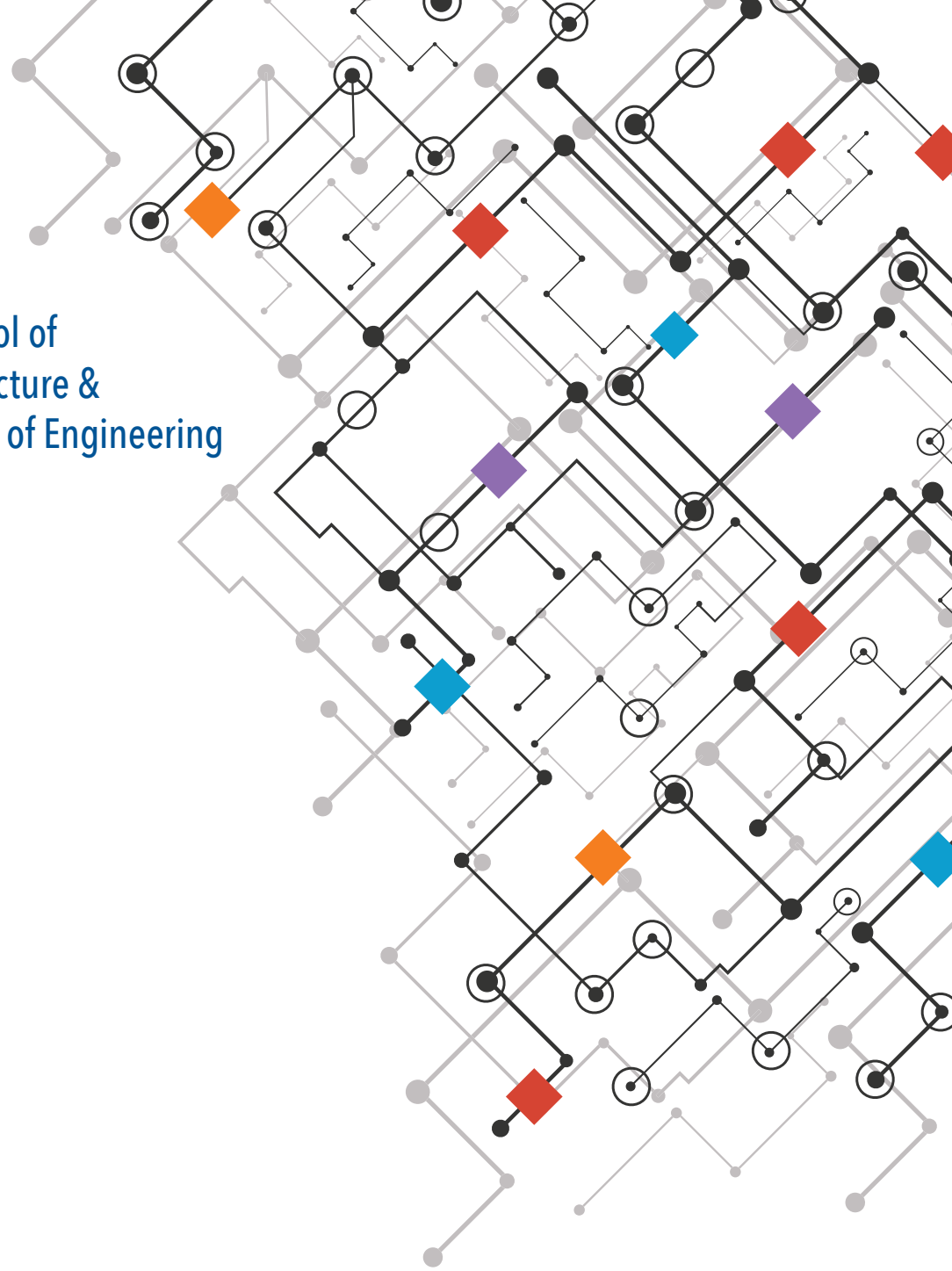
**Sharon Henry, B.S.**
*Senior Fiscal Assistant*

**Joan Marie McConnell**
*Senior Fiscal Assistant*

**Dona Moss**
*Grants Administrator*

**Timothy Talley**
*IT Computer Support*

**Ragen Tillery**
*Grants Specialist*



# REFLECTIONS FROM THE STRIDE PARTNERS

**Virginia Sisiopiku, Ph.D., UAB**
"As a PI of STRIDE-funded projects, I thoroughly enjoyed working with colleagues from partner universities on collaborative research. Using various locations across the Southeast as testbeds, we developed comprehensive transportation solutions to improve traffic operations and safety in the region and beyond. The STRIDE Center is a great facilitator for the development of strong bonds between researchers, state agency representatives, and other transportation professionals with long-lasting positive impacts for the transportation industry in the Southeast."

**Rod Turochy, Ph.D., Auburn**
"Auburn has been proud to be part of the STRIDE Center. Through our association with STRIDE, our faculty and graduate students have been able to work on projects that examine how the quality of bicycle facilities affects cyclists' route choice, improve the sustainability of pavement materials, and enhance the education that our undergraduates receive pertaining to human-powered transportation. STRIDE's policy on funding collaborative projects between universities in the region has been of tremendous benefit to our students and faculty. In addition to providing a regular means to exchange ideas and approaches, it encouraged innovation and enabled our students to broaden their perspectives beyond the gates of their university campus."


**John Usher, Ph.D., MSU**
"Across the years, STRIDE has done a remarkable job of supporting a wide variety of transportation-related research with an eye on practical applications of relevance today. I feel they have also maintained an excellent balance in their attention to supporting projects that address each of the categories: research, education, workforce development, and technology transfer."


**Nagui Rouphail, Ph.D., NCSU**
"STRIDE leaders should be applauded for their student-focused approach in running the regional center. From supporting student travel to key transportation conferences to conducting various student paper and poster competitions and awards, STRIDE has distinguished itself as a unique UTC whose primary mission is to develop the future transportation workforce."

**Noreen McDonald, Ph.D., UNC Chapel Hill**
"School transportation is part of the lives of most families in the southeastern region. The safety and cost-effectiveness of the system are incredibly important. Support from STRIDE has allowed our team from NC, FL, and AL to make path-breaking discoveries and connect with school districts, transportation planners, and school planners to provide them with new tools to better manage this critical work."



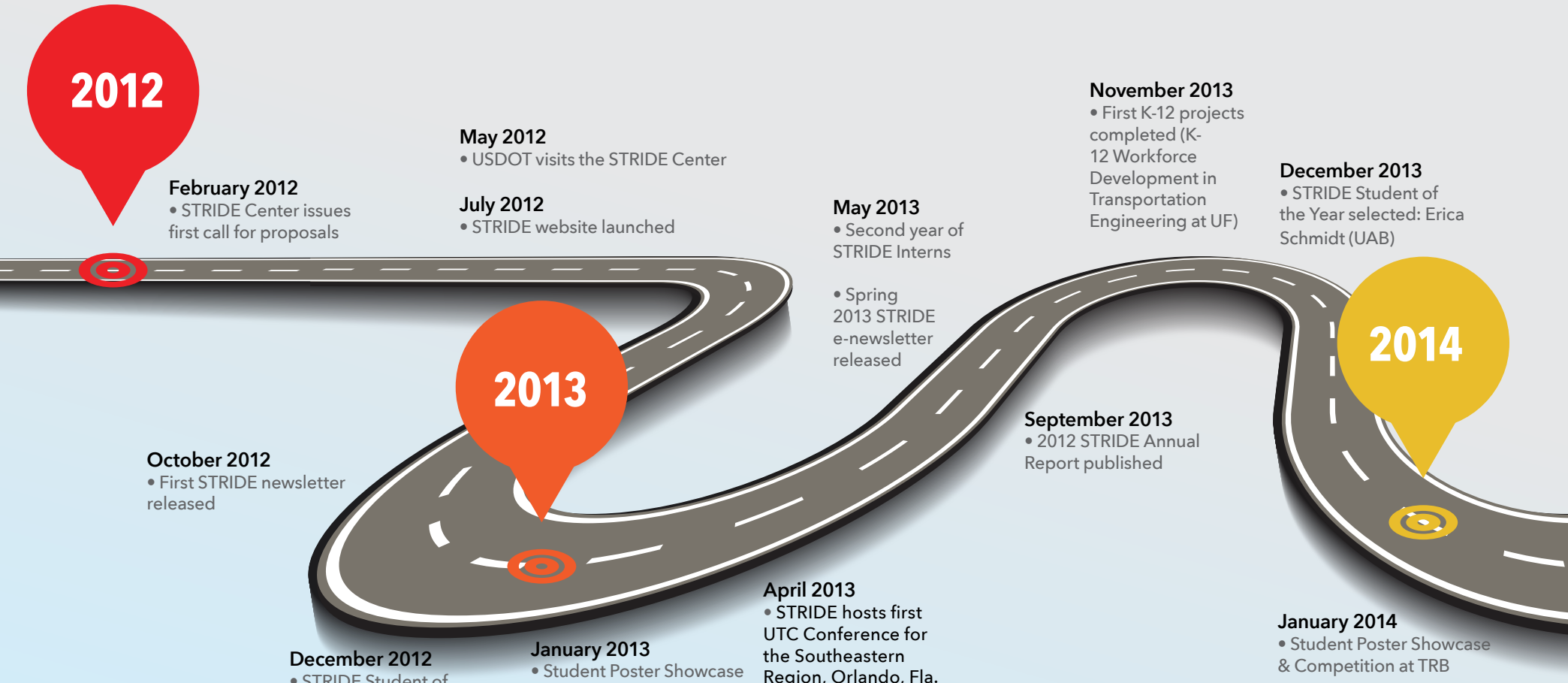
**Mike Hunter, Ph.D., GaTech**
"I have been impressed by STRIDE's ability to engage students, researchers, and faculty to improve the quality of life of people who live in the Southeast. Through its research, education, and technology transfer efforts, I believe STRIDE has raised the bar on what we can expect and hope for from University Transportation Centers."

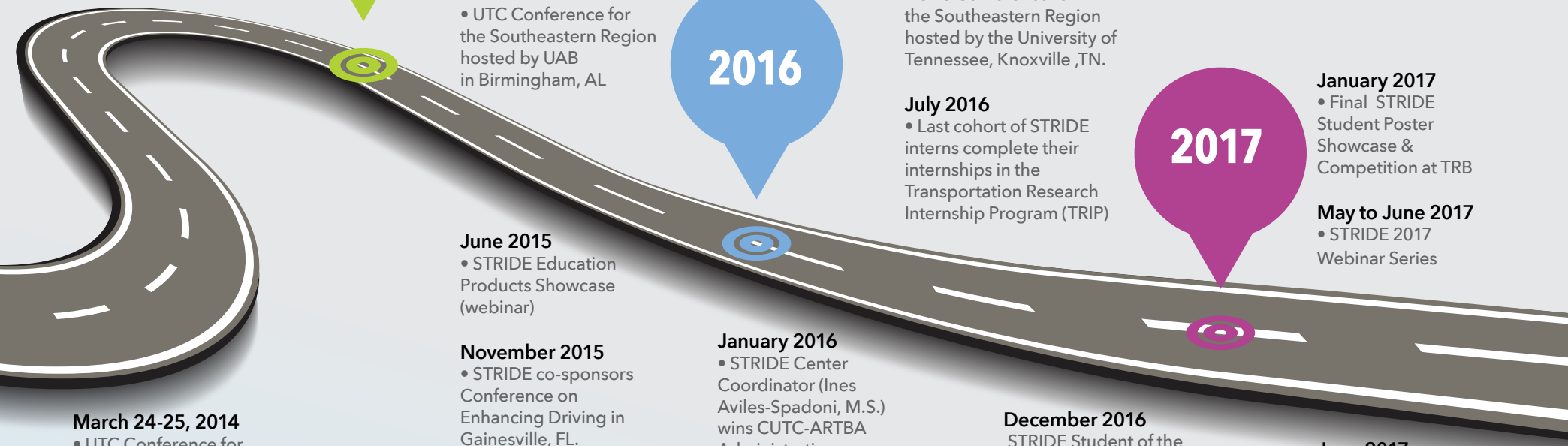


**Ruth L. Steiner, Ph.D., UF**
"STRIDE has offered a great opportunity to collaborate with researchers throughout the southeastern region and to challenge my assumptions about the implementation of various transportation policies based upon my experience in Florida."

**Mohammed Hadi, Ph.D., FIU**
"I think that the most valuable opportunity that STRIDE gave me and our students is to allow us to collaborate and interact with researchers and students from other universities on cutting edge research and teaching activities. The relationships between STRIDE faculty, researchers, and students and the processes that we built and applied together will provide a foundation for future collaborations on all aspects to address the many challenges and opportunities facing the transportation system in the 21st Century."

# MILESTONES & ACCOMPLISHMENTS/TIMELINE





**March 24-25, 2014**
- UTC Conference for the Southeastern Region hosted by GaTech in Atlanta, Ga.
- First of the 2012 projects completed (Development of Pedestrian & Bicycle Transportation Course Modules, 2012-028)

**November 2014**
- STRIDE Student of the Year selected: Dr. Louis Merlin (UNC)

**2015**

**January 2015**
- First of the 2013 projects completed (Livability Performance Measures to Transportation Plans and Projects, 2013-018)

**February 2015**
- First two (Year 1) K-12 projects completed at the UAB and UF

**March 2015**
- UTC Conference for the Southeastern Region hosted by UAB in Birmingham, AL

**June 2015**
- STRIDE Education Products Showcase (webinar)

**November 2015**
- STRIDE co-sponsors Conference on Enhancing Driving in Gainesville, FL.

**December 2015**
- STRIDE Student of the Year selected: Clark Letter (UF)

**2016**

**January 2016**
- STRIDE Center Coordinator (Ines Aviles-Spadoni, M.S.) wins CUTC-ARTBA Administrative Leadership Award

**February 2016**
- STRIDE releases funds for additional technology transfer projects, approves 18 projects

**March 2016**
- UTC Conference for the Southeastern Region hosted by the University of Tennessee, Knoxville ,TN.

**July 2016**
- Last cohort of STRIDE interns complete their internships in the Transportation Research Internship Program (TRIP)

**December 2016**
STRIDE Student of the Year selected: Clark Letter (UF)

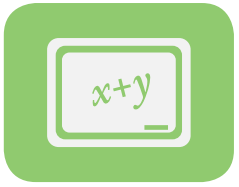
**2017**

**January 2017**
- Final STRIDE Student Poster Showcase & Competition at TRB

**May to June 2017**
- STRIDE 2017 Webinar Series

**June 2017**
- STRIDE Research Summer Seminar (a one-day event showcasing products from STRIDE-funded projects)

# PERFORMANCE MEASURES




238
Number of presentations

**114**
Refereed journal publications

MS 97

PHD **154**
Student years supported by STRIDE Grant

Graduate **68**

Undergraduate 37
Average number of students participating in projects funded by STRIDE grant

37
Total number of projects funded (Includes supplemental research and technology transfer projects awarded in 2015 and 2016)

40
Workshops and webinars related to research projects

**41**
Course modules developed

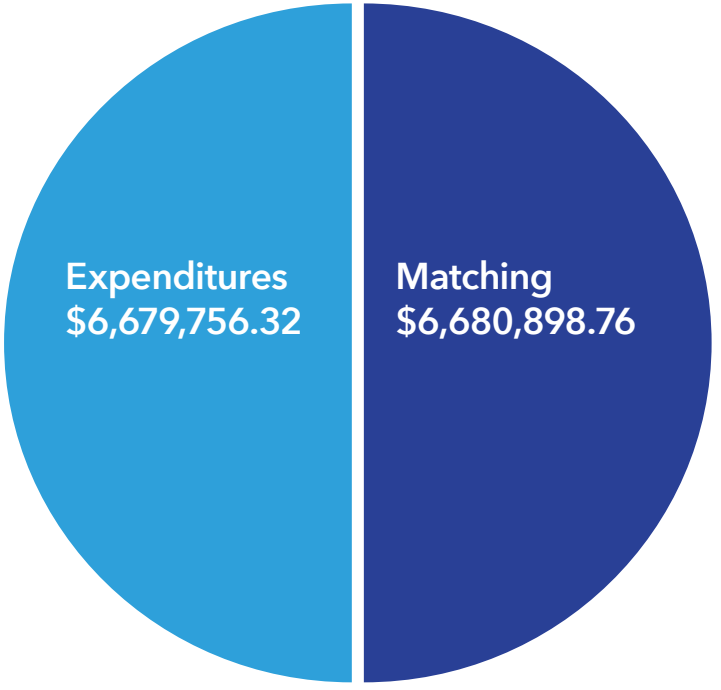

383
Times modules were used within courses

**9,162**
Participants in K-12 events

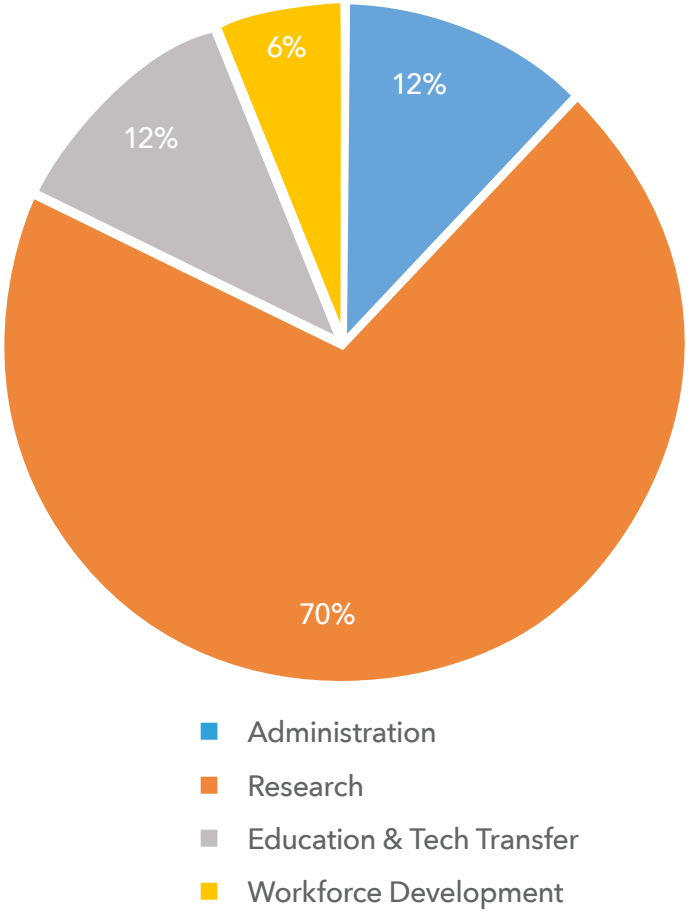

1,569
Students participating in seminars and conferences

20
Summer interns (TRIP)

# FINANCIAL REPORT




STRIDE expenditures and associated cost share funds from 2012 to 2017.

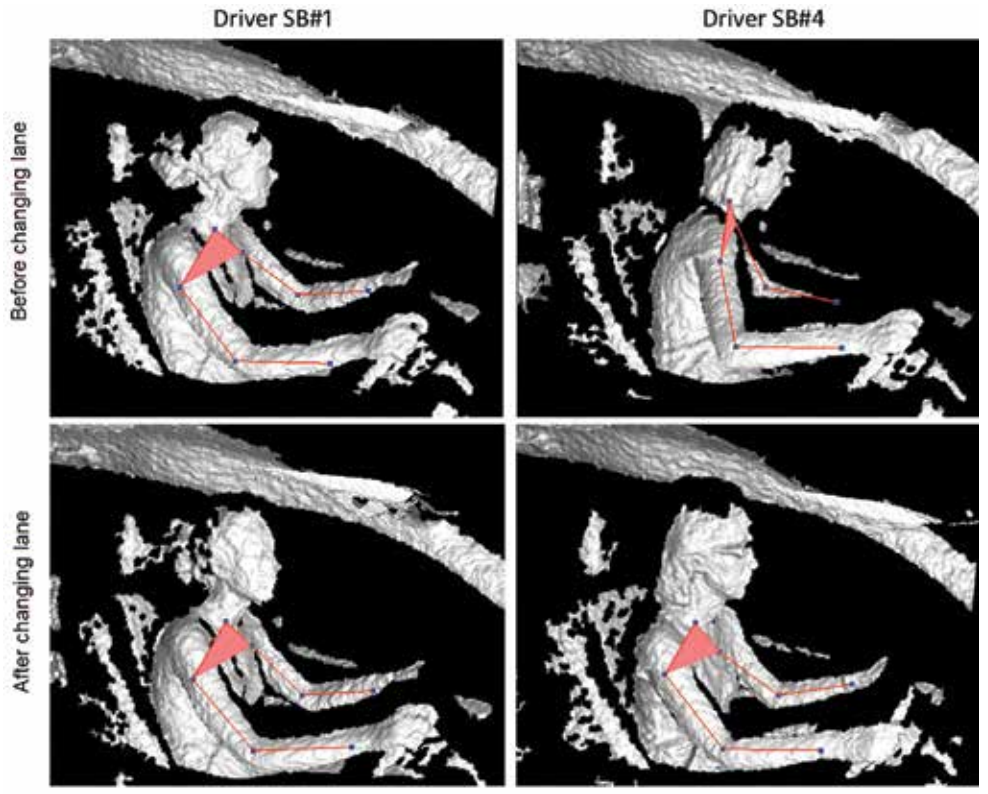



USDOT/STRIDE funds awarded from 2012 to 2017.

# RESEARCH PRODUCTS

### Investigating the Effect of Drivers' Body Motion on Traffic Safety

Angelos Barmpoutis, Ph.D., University of Florida; Alexandra Kondyli, Ph.D., University of Kansas; Virginia Sisiopiku, University of Alabama at Birmingham.
Researchers created and published an on-line, open-access scientific database that contains 523 depth video sequences of 27 drivers performing 236 merges and 287 lane changes. The database is called DMDDB (Driver's Motion Depth Database). The 3D motion of the drivers (see image below) was captured in the database in more than 300,000 depth frames, with 16 billion 3D points. The database is accessible from the website of the project at: http://research.dwi.ufl.edu/dmddb.




3D image of a driver's motion from the Driver's Motion Depth Database.

### Planning for Schools: An Educational Module & Cost Calculator to Support School Siting & Transportation Decision Making

Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill; Ruth Steiner, Ph.D., University of Florida.
A website and cost calculator were created to introduce planning concepts associated with public education land use and transportation in the United States. The module focuses on the interdisciplinary issue referred to as school siting. The module also articulates challenges and best practices within school siting and transportation planning and presents a selection of resources intended to aid planners and policy makers considering strategies for implementing school siting concepts. Visit the website at: http://schoolsiting.web.unc.edu/.

### Empirically Based Performance Assessment & Simulation of Pedestrian Behavior at Unsignalized Crossings

Bastian Schroeder, Ph.D., North Carolina State University; Lily Elefteriadou, Ph.D., University of Florida; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham.
Researchers developed a large database for pedestrian behavior at unsignalized crossings as well as a simulation algorithm that can be used to replicate vehicle and pedestrian behavior at these locations. The researchers published a series of related papers documenting the data collection and analysis, and the simulation tools developed.

Evaluation of a sidewalk in downtown Atlanta.

**Automated Sidewalk Safety Assessment System & ADA Transition Plan**
Randall Guensler, Ph.D., Georgia Institute of Technology.
The Automated Sidewalk Quality & Safety Assessment System developed in this project helps communities evaluate sidewalk condition and ADA compatibility. Results will help agencies to prioritize sidewalk improvements and improve pedestrian infrastructure.


Automated sidewalk scout datea for downtown Atlanta

**Dynamic Traffic Control Interventions for Enhanced Mobility & Economic Competitiveness**
Nagui Rouphail, Ph.D., North Carolina State University; Mohammed Hadi, Ph.D., Florida International University.
The research team created FREEVAL-DSS (Dynamic Strategy Selection), which assists decision makers to conduct benefit-cost analysis for different transportation solutions.

An elementary school-aged child experimenting with the virtual reality pedestrian safety tool.

**Teaching Schoolchildren Pedestrian Safety: A Pragmatic Trial Using Virtual Reality**
David Schwebel, Ph.D., University of Alabama at Birmingham.
Via the use of a virtual reality environment, the research team trained more than 305 children in pedestrian safety in Summer 2014 at the YMCA Youth Center in Birmingham, Ala. This training was reported in five local news outlets in Alabama.

**Planning Tools for Linking Rural Development & Transportation (Based on STRIDE Project #2012-003S, A Regional Land Use Transportation Decision Support Tool for Mississippi).**
Brian Morton, Ph.D., University of North Carolina at Chapel Hill; John Poros, AIA, Mississippi State University.
This is a suite of tools for planning for bicycle travel, preservation of community character, and regional development. Rural Transportation Planning Organizations may use this tool to gain insight into some of the most important consequences of economic development initiatives. The tool uses Community Viz®, photo-realistic visualizations of streetscapes, and an integrated land-use/travel-demand model.

Signal timing optimization example.

### Signal Timing Optimization with Consideration of Environmental & Safety Impacts

Lily Elefteriadou, Ph.D., University of Florida; Mohammed Hadi, Ph.D., Florida International University.

Models were developed that relate pollutant emissions and safety to macroscopic mobility measures. The results were published in journal papers and also included in the Highway Capacity Software, a product developed by UFTI/Mc*Trans* and distributed to thousands of users around the world.

### Livability Performance Measures to Transportation Plans & Projects

Leigh Blackmon Lane, North Carolina State University.

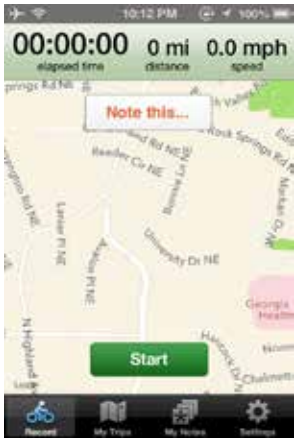
Workshops held in five states (Georgia, Florida, North Carolina, Alabama, Mississippi) focused on the development of performance measures that could be used as part of a transportation or comprehensive planning process. Working with livability-oriented outcomes, participants learned how to select performance measures using the FHWA Community Vision Metrics tool and evaluated performance measures according to criteria provided in the workshop.


ATDM study area

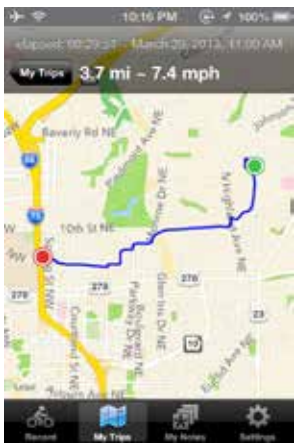
### Investigation of ATDM Strategies to Reduce the Probability of Breakdown

Mohammed Hadi, Ph.D., Florida International University; Lily Elefteriadou, Ph.D., University of Florida.

The goal of this project was to explore and assess methods to improve the operations at critical bottlenecks utilizing ramp metering and variable speed limit (VSL) algorithms that consider the probability of breakdown at recurrent bottleneck locations. The results showed that the VSL strategy examined can considerably decrease the maximum back of queue and the duration of breakdown.

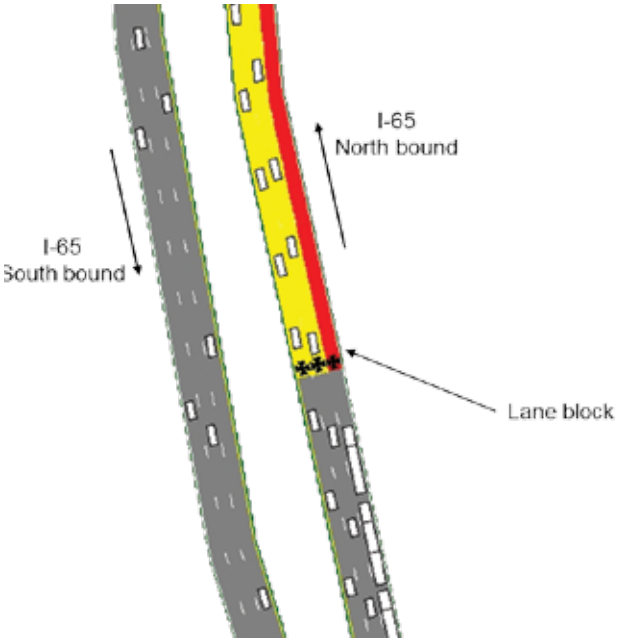





**Cycle Atlanta SWIFT Development**
Kari Watkins, Ph.D., Georgia Institute of Technology.
Cycle Atlanta (http://cycleatlanta.org/) is a mobile application that records a cyclist's bike route using the geolocation data in their phone. The app became outdated and needed an upgrade. The work conducted in the project updates their app to Apple's iOS. The components were rewritten in Swift, and core functions were re-worked to stabilize the app.

Naturalistic Driving - a screen shot of the interior coding interface used in the study.

**A Naturalistic Driving Study Across the Lifespan**
Despina Stavrinos, Ph.D., University of Alabama at Birmingham; Lesley Ross, The Pennsylvania State University; Virginia Sisiopiku, University of Alabama at Birmingham.
This study investigated real-world driving mobility, driving safety, and driving behavior in teen (16-19) and older (65+) at-risk drivers using a novel in-car naturalistic data collection device (N-DAD) to examine the associations between self-reported and objectively measured driving habits and identify predictors of unsafe driving. An overall lack of an association between self-reported and objectively measured driving variables were discovered. Teen and older drivers were generally satisfied with the devices and were agreeable to allowing others to review their habits to determine eligibility for an insurance discount.




**Evaluation of Traffic Control Options in Work Zones**
Virginia Sisiopiku, Ph.D., Ossama Ramadan, Ph.D., University of Alabama at Birmingham.
The purpose of this study was to identify alternative bottleneck merge control strategies with a potential to minimize congestion at interstate work zones and improve relevant construction practices. Results showed that (1) work zone length is insignificant to facility LOS, environmental impacts, and delays, (2) late merge and mainline merge metering could serve as alternates to the early merge control standard practice, (3) zones there are reasonable options for scheduling work zone during any period of the day, and (4) created a set of generalized performance indices for optimizing a work zone set up that will not interfere with traffic flow.

# EDUCATIONAL PRODUCTS

**A Transportation Safety Module for Undergraduate Students**
Leslie Strawderman, Ph.D., Mississippi State University.
http://ergo.research.ise.msstate.edu/stride-classroom-module

**Pedestrian and Bicycle Transportation Short Series**
Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill.
Visit the Pedestrian & Bicycle Information Center website at http://www.pedbikeinfo.org/training/courses_short.cfm

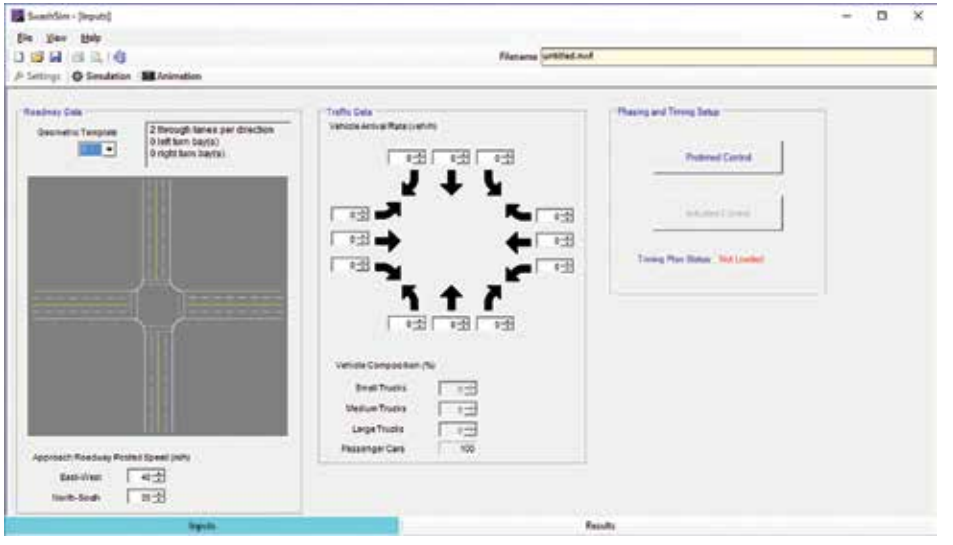
**Public Transportation Course Modules**
Kari Watkins, Ph.D., GaTech; Jeff LaMondia, Ph.D., Auburn.
https://stride.ce.ufl.edu/2017/04/public-transportation-course-modules

**School Transportation: Development of an Educational Module**
Noreen McDonald, Ph.D.; University of North Carolina at Chapel Hill; Ruth Steiner, Ph.D., University of Florida.
https://stride.ce.ufl.edu/2017/04/school-transportation-an-educational-module-cost-calculator-to-support-school-siting-transportation-decision-making/

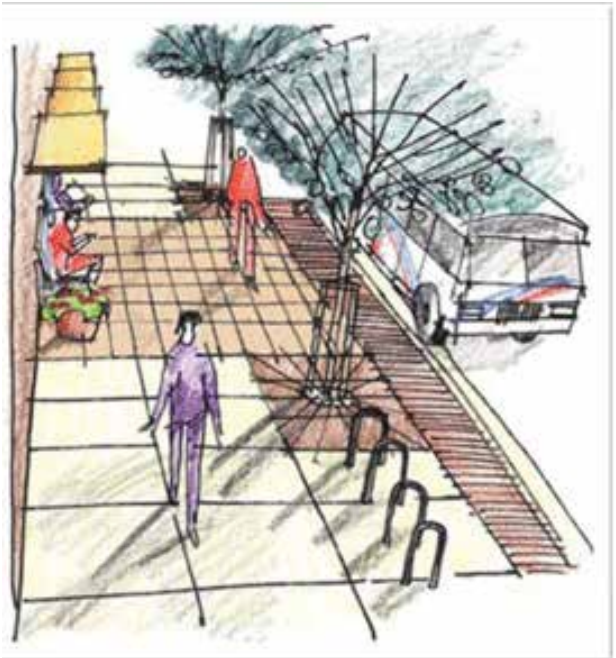
**Signalized Intersection Simulation Program for Education**
Scott Washburn, P.E., Ph.D., University of Florida.
http://209.191.183.30/signalized-intersection-simulation-program-for-education

**Sustainable Pavements Course**
J. Richard Willis, Ph.D., Auburn.
Visit the Pedestrian & Bicycle Information Center website at https://stride.ce.ufl.edu/2017/04/sustainable-pavements-course-modules/


A screen shot of the Pedestrian and Bicycle Information Center webpage created by Dr. Daniel Rodriguez, of UC Berkeley (formerly at UNC Chapel Hill).



A screen shot of the Signalized Intersection Simulation Program for Education tool created by Dr. Scott Washburn of the University of Florida.



**Training Modules on Green/Sustainability Design & Rating Systems for Neighborhood Development & Transportation**

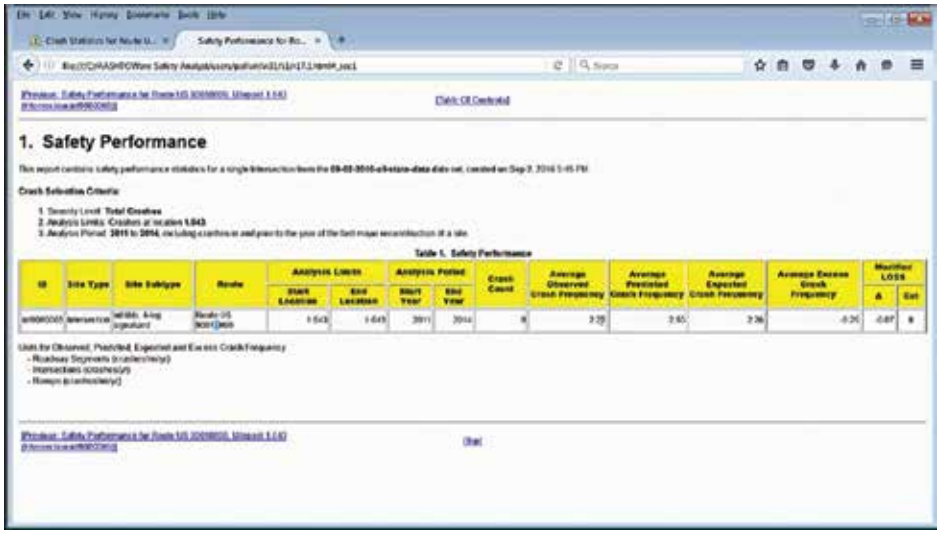
Robert Peters, Ph.D., University of Alabama at Birmingham; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham; Adjo Amekudzi, Ph.D., GaTech.

https://stride.ce.ufl.edu/2017/04/educational-training-modules-on-greensustainability-design-ratings-system-for-neighborhood-development-transportation/

**Development of Case Studies, Numerical Exercises, & Instructional Modules for Teaching Roadway Safety Analysis**

Siva Srinivasan, Ph.D., University of Florida.

https://stride.ce.ufl.edu/2017/07/instructional-modules-1-2-3-for-teaching-roadway-safety-analysis/




Screen shot from the Safety Analyst Training Video by Dr. Priyanka Alluri, Florida International University.

**Statewide Training for Safety Analyst in Florida**

Priyanka Alluri, Ph.D., PE, Florida International University.

To see training video, visit:

https://stride.ce.ufl.edu/wp-content/uploads/2017/03/STRIDE-Project-2015-003S-DRAFT-Safety-Analyst-Demo-06-17-2016.mp4

**Development of Support Systems, Instructional Modules, & a Case Study for the Enhanced Driving Simulator at the Gator Tech Smart House**

Siva Srinivasan, Ph.D., University of Florida.

Driving Simulator website:

http://drivingsim.phhp.ufl.edu/

# REFLECTIONS FROM CURRENT & FORMER STRIDE STUDENTS

**Ishtiak Ahmed, B.S. (NCSU)**
*Master's Student/Research Assistant*
"As a new research assistant, STRIDE provided me with a great opportunity to learn both research and industry-based tasks."

**Amy Dunham, MAURP (UF)**
*Senior Transportation Planner, WSP USA*
"Not only does STRIDE provide a wealth of opportunities to those interested in transportation, ranging from research to workforce development, but the Center attracts some of the brightest, most passionate, and innovative people I have ever worked with."

**Homa Fartash, M.S. (FIU)**
*Ph.D. Candidate*
"STRIDE provided a valuable opportunity to implement my knowledge, beyond the theories."

**Bahareh Inanloo, Ph.D., EIT (FIU)**
*Engineer, Atkins*
"STRIDE helped me focus on the path towards growing my professional future."

**Samaneh Khazraeian, M.S. (FIU)**
*Ph.D. Candidate*
"What I love about the STRIDE program is the UTC conferences and the provided opportunities for students such as networking, student chapter presentations, poster competitions, thesis competitions, and much more! I had the best experiences of my grad life in the UTC conferences! Thank you for letting me in! I feel privileged to be a part of STRIDE!"

**Miguel Lugo, Ph.D. (UF)**
*Planning Associate, RS&H*
"STRIDE faculty and projects allow students to develop research and writing skills of great use in the consulting world."

**Louis Merlin, Ph.D., AICP (UNC Chapel Hill)**
*Assistant Professor*
*Florida Atlantic University*
"STRIDE helped connect me to the research community and understand how to become a more effective member of the research community."

**Seckin Ozkul, Ph.D., P.E. (UF)**
*Research Associate Faculty*
*University of South Florida*
*CUTR*

"STRIDE gave me the opportunity to fulfill my dreams of being a researcher and solving the transportation problems of today's society."

**Ossama Ramadan, Ph.D. (UAB)**
*Postdoctoral Fellow, University of Alabama at Birmingham*

"I was involved in four STRIDE projects. All of them were challenging enough to encourage me to learn new tools, skills, or knowledge. Working on STIRDE projects and the recognition thereafter strengthened my professional profile and better prepared me for my academic career."

**Gustavo Riente de Andrade, M.S. (UF)**
*Ph.D. Candidate*
"I have been working on a STRIDE project to optimize mobility, safety, and emissions at urban intersections. Under the guidance of Dr. Lily Elefteriadou, STRIDE has enabled me to benefit from diverse work environments, from the research stage of the project to implementation to the final user at Mc*Trans Center*."

**Atiyya Shaw, M.S. (GaTech)**
*Ph.D. Student*
"Through my involvement with a STRIDE project, I've had the opportunity to forge highly valued connections with both faculty and students across the Southeast. The STRIDE UTC has achieved the delicate but critical goal of advancing both research and the people involved, and should serve as a model for UTCs across the country."

**Yinan Zheng, M.S., Ph.D. (UF)**
*Data Scientist, WSP USA*
"The STRIDE project begins my Ph.D. journey. It brings me not only the knowledge and technical skills, but also research and teamwork spirits, as well as professional connections."

# STRIDE-FUNDED K-12 RESEARCH

*View all projects at https://stride.ce.ufl.edu.*

**Florida International University (FIU)**
**K-12 Workforce Development Activities (2012)**
PI: Berrin Tansel, Ph.D.
Events included outreach efforts, a Transportation Career Day and fun, hands-on activities that addressed various aspects of transportation.

**Mississippi State University (MSU)**
**K-12 Workforce Development Activities (2012)**
PI: N. Eric Heiselt
Family Engineering Nights events were held at an elementary school attended by families and students.

**North Carolina State University (NCSU)**
**K-12 Workforce Development Activities (2012)**
PI: James Martin, P.E.
LEGO robots were used in various after-school workshops held at the Centennial Campus Magnet Middle School on the campus of NCSU to solve transportation engineering problems such as congestion. Students learned basic computer programming and mathematics.

**University of Alabama at Birmingham (UAB)**
**K-12 Workforce Development Activities (2012)**
PI: Virginia Sisiopiku, Ph.D.
The main goal of this project was to foster interest in transportation engineering by inviting K-12 students to participate in the "Kids in Engineering" event, in collaboration with the Society of Women Engineers (SWE) and the UAB Institute of Transportation Engineers (ITE).

**University of Florida (UF)**
**K-12 Workforce Development Activities (2012)**
PI: Leslie Washburn, P.E.
A series of activities were held geared toward middle school children, such as LEGO Robot Vehicle Lesson Plans for Secondary Education, Transportation Career Day, and Family Engineering Nights.

**Georgia Institute of Technology (GaTech)**
**Engaging in Engineering Initiative with Centennial Elementary School (2013)**
PI: Yanzhi "Ann" Xu, Ph.D.
An active, 2-day learning program utilizing cutting edge technology and STEM concepts was developed by Centennial Place Academy, a school in Metro Atlanta that serves a racially and economically diverse population of students. Access the project website for more information: http://transportation.ce.gatech.edu/node/2617.

**North Carolina State University (NCSU)**
**K-12 Workforce Development Activities (2013)**
PI: James Martin, P.E.
LEGO Robot Vehicle After School Workshops. Students used computers, basic computer programming, mathematics, and robots as tools.

**University of Alabama at Birmingham (UAB)**
**K-12 Workforce Development Activities (2013)**
PI: Virginia Sisiopiku, Ph.D.
This project focused on two events: (1) the "Kids in Engineering," which is a family engineering event for 4th through 6th grade students; and (2) the UAB "Girls in Science and Engineering Day," which was an all-female event promoting STEM careers.

**University of Florida (UF)**
**K-12 Workforce Development Activities at UF (2013)**
PI: Leslie Washburn, P.E.
Activities included LEGO Robot Vehicle Lesson Plans for Secondary Education, Transportation Career Day, Family Engineering Events. SIMCity was used to develop and pilot a transportation-specific module for middle school-aged children.

Elementary school children, guided by an instructor,count vehicles on smart tablets as part of their data collection exercises with students from GaTech.

# CONFERENCES & SYMPOSIA

## UTC Conferences

2013 – Hosted by the University of Florida in Orlando, STRIDE headquarters
http://209.191.183.30/utc-conference-for-the-southeast
2014 – Hosted by the Georgia Institute of Technology, Atlanta
http://www.nctspm.gatech.edu/2014Conference
2015 - Hosted by the University of Alabama at Birmingham (in collaboration with Mississippi State University) http://www.ncitec.msstate.edu/2015-utc/
2016 – Hosted by the University of Tennessee at Knoxville
http://www.stc.utk.edu/STCevents/2016-utc-conference.html

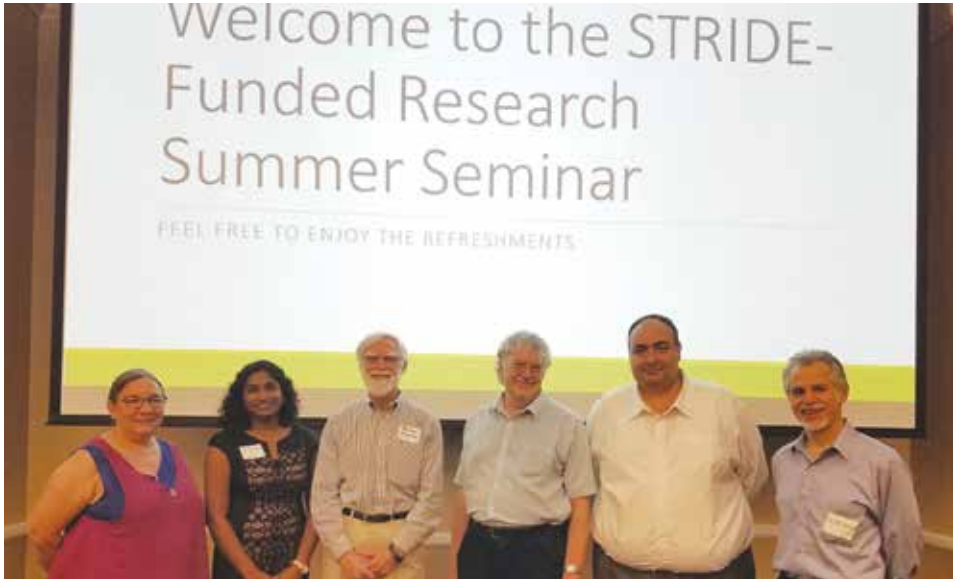
## Conference on Enhancing Driving: An Interdisciplinary Approach

November 2, 2015, University of Florida
Co-sponsored by the STRIDE Center, this one-day conference showcased the interdisciplinary nature of transportation research at UF. Faculty and students from engineering, computer science, applied physiology and kinesiology, occupational therapy, and the College of Medicine participated.

## STRIDE Research Summer Seminar

June 2, 2017, University of Florida
This one-day event showcased various products that resulted from STRIDE-funded research. Principal investigators from the University of Alabama at Birmingham, University of Florida, Florida International University and North Carolina State University participated in this event. Topics included: Training Modules on Green/Sustainability Design and Rating Systems, GIS-based Instructional Tool for Crash-Prediction Methods, Statewide Training of SafetyAnalyst in Florida, Using Interactive Virtual Presence to Help Parents Install Child Restraints Correctly, Bike&Place: A New Tool for Designing Active, Place-Making Transportation Networks, Evaluation of Traffic Control Options in Work Zones, and Quantifying the Cost of School Transportation and Development of an Education Module and Workshops on Multi-modal Cost. For more information, visit: https://stride.ce.ufl.edu/2017/04/stride-summer-research-seminar-june-2-2017/.

Dr. Michelle Porter of the University of Manitoba, Canada, speaking at the Conference for Enhancing Driving



STRIDE Summer Research Seminar

# AWARDS

## Student of the Year

Each year during the annual meeting of the Transportation Research Board, the U.S. Department of Transportation (USDOT) honors the best and brightest students from University Transportation Centers (UTC) in the nation for contributions to the transportation field. The students are selected for outstanding accomplishments in research, academics, professionalism, leadership, and technical merit. To the right are the students who were chosen as the STRIDE Center's Student of the Year from 2013 to 2017.

**2013**
**Amy Dunham, AICP (UF)**
(formerly Cavaretta)
MAURP, University of Florida
Senior Transportation Planner
WSP USA

**2014**
**Erica Schmidt, M.S. (UAB)**
Post Doctoral Fellow in Neuropsychology at the University of Nebraska Medical Center

**2015**
**Dr. Louis Merlin (UNC)**
Assistant Professor
Florida Atlantic University

**2016**
**Dr. Clark Letter (UF)**
Research Assistant Professor
University of Florida Transportation Institute

**2017**
**Don Watson, M.S. (UF)**
Ph.D. Candidate
Traffic Specialist
Florida Department of Transportation

## OTHER STUDENT AWARDS

*Awards for previous years can be found at https://stride.ce.ufl.edu/student-awards*

**Jack Cabe**
Georgia Institute of Technology
Third Place Student Paper, American Planning Association/Transportation Planning Division
Title: An Evaluation of "Road Diet" Projects on 5-Lane and Greater Roadways

**Chelsea Dyess**
Georgia Institute of Technology
3rd Place Winner, STRIDE Student Poster Competition, TRB 2016, Washington, D.C.
Poster Title: Pedestrian Access to Bus Stops in Atlanta

**Somaye Fakharian Qom**
Florida International University
Top Student Paper Award, 15th International Conference on Managed Lanes, TRB 2016
Outstanding Dissertation Year Fellowship, Spring-Summer 2016

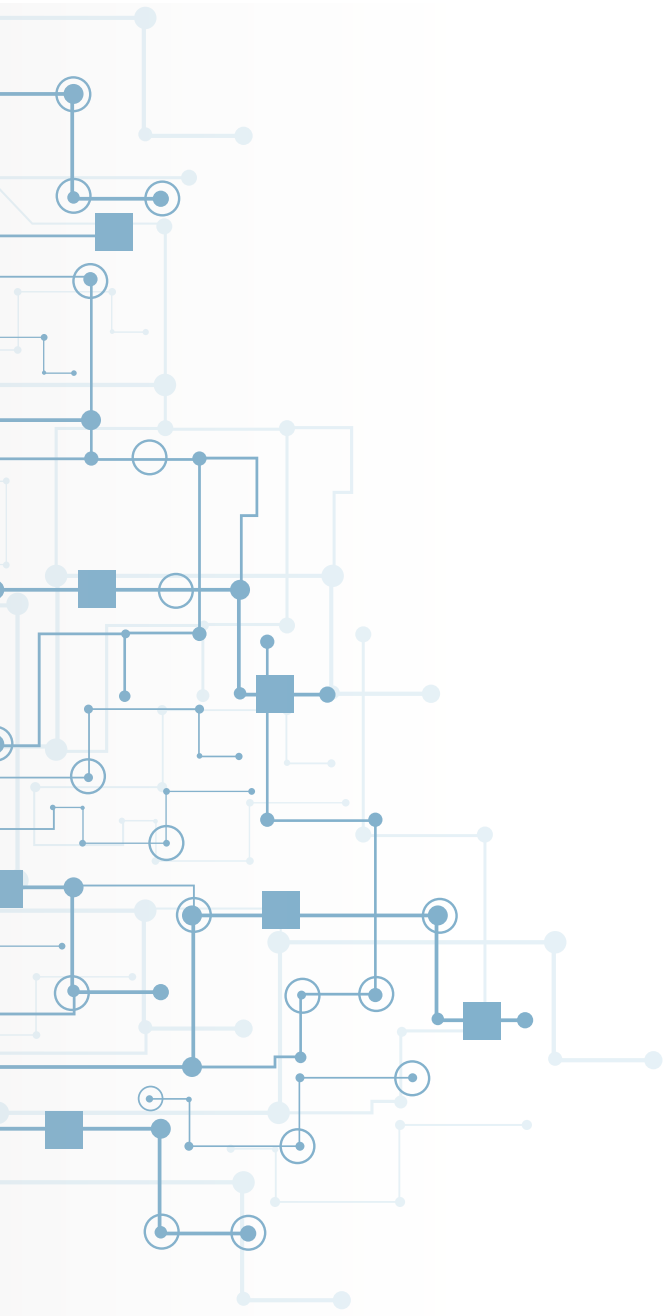
**Deja Jackson**
University of Florida
Best Oral Presentation, Dwight D. Eisenhower Transportation Fellowship Program, 2016 TRB, Washington, D.C.
Title: Today's Perception of Vehicle Safety and Its Impact on Preparing for Tomorrow's Autonomous Vehicles
Committee 200 (C200) Scholar Award, HW College of Engineering, University of Florida

**Ossama Ramadan**
University of Alabama at Birmingham
1st Place Winner, STRIDE Student Poster Competition, TRB 2016, Washington, D.C.
Poster Title: Impacts of Merge Control Strategies on Freeway Level of Service

**Yinan Zheng, Doctoral Candidate (UF)**
2nd Place Winner, STRIDE Student Poster Competition, TRB 2016, Washington, D.C.
Poster Title: A Model of Pedestrian Delay at Unsignalized Intersections in Urban Networks
Helene M. Overly Memorial Scholarship, WTS South Florida Group Award

**Zhibin Chen, Zhengtian Xu, Mahmood Zangui**
(with faculty adviser Dr. Yafeng Yin)
University of Florida
Stella Dafermos Best Paper Award, TRB 2016, Washington, D.C.
Title: Analysis of Advanced Management of Curbside Parking

# TECHNOLOGY TRANSFER



**Transportation Safety Symposium**
April 2, 2013, Orlando Florida
Orlando, Florida
Presenters: Dr. Priyanka Alluri, Ms. Ines Aviles-Spadoni, Ms. Nina Barker, Dr. Ilir Bejleri, Dr. Grady Carrick, Dr. Sherrilen Classen, Mr. Charles Goodknight, Dr. Vladimir Paramygin, Mr. Joe Santos, Dr. Ruth Steiner, Dr. Siva Srinivasan
The symposium featured presentations based on a variety of projects related to transportation safety. The topics covered included data, predictive methods, driving simulation, GIS-based analyses, computational methods, older driver needs, safe routes to school, evacuation modeling, and outreach to small agencies.

**Computer Lab Workshop/Webinar, Managed Lanes Operations & Simulation using CORSIM**
April 29-30, 2013
Presenter: Dr. Dimitra Michalaka, University of Florida

**Improved Timeliness and Accessibility to Crash Data & Tools for Safety Webinar**
November 29, 2012
Presenter: Dr. Ilir Bejleri, University of Florida

**Autonomous & Connected Vehicles in Florida Webinar**
March 13, 2014
Presenter: Mr. Ananth Prasad, Secretary, Florida Department of Transportation (2011-2015)

**Workshop on Active Traffic Management**
May 2015, Florida i3 Transportation Showcase
Presenters: Dr. Lily Elefteriadou, University of Florida; Dr. Nagui Rouphail, North Carolina State University; Dr. Mohammed Hadi, Florida International University

**Workshop on Engineering Statistics 101 Training for Safety Analyst**
June 11, 2015, Orlando, FL
Presenter: Dr. Priyanka Alluri, Florida International University

**Performance Measures in Transportation Planning Webinar**
June 11, 2015
Presenters: Jody McCullough, Federal Highway Administration (FHWA); Leigh Blackmon Lane, North Carolina State University (NCSU); Doug McLeod, Florida Department of Transportation (FDOT)

**Educational Products Showcase Webinar**
June 18, 2015
Presenters: Dr. Jeff LaMondia, Auburn University; Dr. Daniel Rodriguez, UNC Chapel Hill; Dr. Scott Washburn, University of Florida; Dr. Richard Willis, Auburn University

**Workshop on Managed Lanes on Arterials**
October 19, 2015, Miami, FL
Presenters: Dr. Yafeng Yin and Dr. Toi Lawphongpanich (University of Florida)

**Planning for Schools: An Education Module & Cost Calculator to Support School Siting & Transportation Decision Making Webinar**
November 2, 2015
Presenters: Dr. Ruth Steiner, University of Florida; Mathew Palmer, University of North Carolina at Chapel Hill

**Open Access Database for Investigating Body Movements while Performing Driving Tasks Webinar**
March 7, 2016
Presenter: Dr. Angelos Barmpoutis, University of Florida

**Workshop to Introduce Planning Tools for Linking Rural Development and Transportation**
June 13-15, 2016, Chattanooga, TN
Presenters: Dr. Brian Morton, University of North Carolina Chapel Hill; John Poros, Mississippi State University

**ATM Workshop on FREEVAL-DSS**
June 26, 2016, Chicago, IL
Presenters: Dr. Nagui Rouphail and Dr. Behzad Aghadshi, Institute for Transportation Research & Education (ITRE), North Carolina State University

**Safety Analyst Webinar**
Recorded in July 2016
Presenter: Dr. Priyanka Alluri, Florida International University

**Dynamic ATM Strategy Selection Tool (FREEVAL-DSS) Webinar**
May 12, 2017
Presenters: Dr. Nagui Rouphail and Dr. Behzad Aghadshi, Institute for Transportation Research & Education (ITRE), North Carolina State University

**Do's & Don'ts of Smartphone GPS Data Sources for Cyclist Travel Behavior Webinar**
May, 12, 2017
Presenter: Dr. Kari E. Watkins, Georgia Institute of Technology

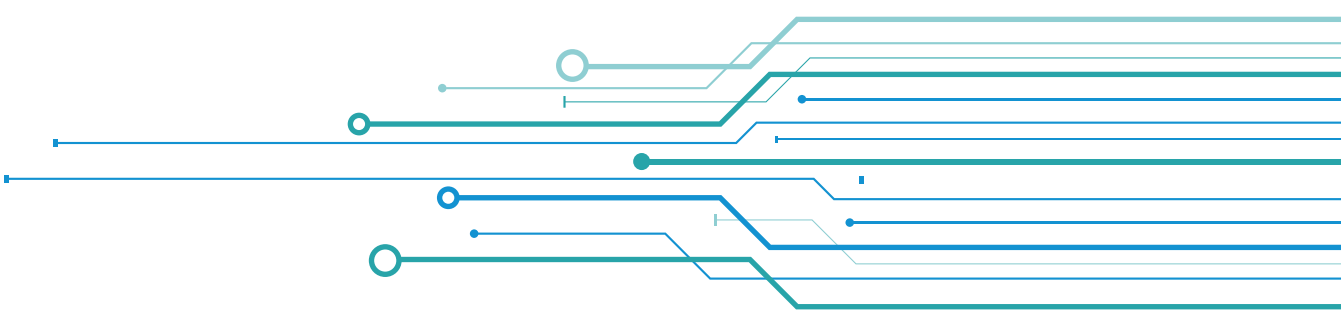
**STRIDE Research Summer Seminar/Showcase**
June 2, 2017, University of Florida
Presenters: Dr. Robert Peters, University of Alabama at Birmingham; Dr. Ilir Bejleri, University of Florida; Dr. Siva Srinivasan, University of Florida; Dr. Priyanka Alluri, Florida International University; Dr. David C. Schwebel, University of Alabama at Birmingham; Dr. Brian J. Morton, University of North Carolina at Chapel Hill; Dr. Virginia Sisiopiku and Dr. Ossama Ramadan, University of Alabama at Chapel Hill; Dr. Ruth Steiner, University of Florida

**The Evaluation of Traffic Control Options in Work Zones Webinar**
June 9, 2017
Presenters: Dr. Virginia Sisiopiku and Dr. Ossama Ramadan, University of Alabama at Birmingham

**Workshop on School Siting & Collaboration**
June 15 and June 16, 2017, Orlando and Tallahassee, FL
Presenters: Dr. Ruth Steiner, University of Florida, Mathew Palmer, doctoral candidate, North Carolina State University

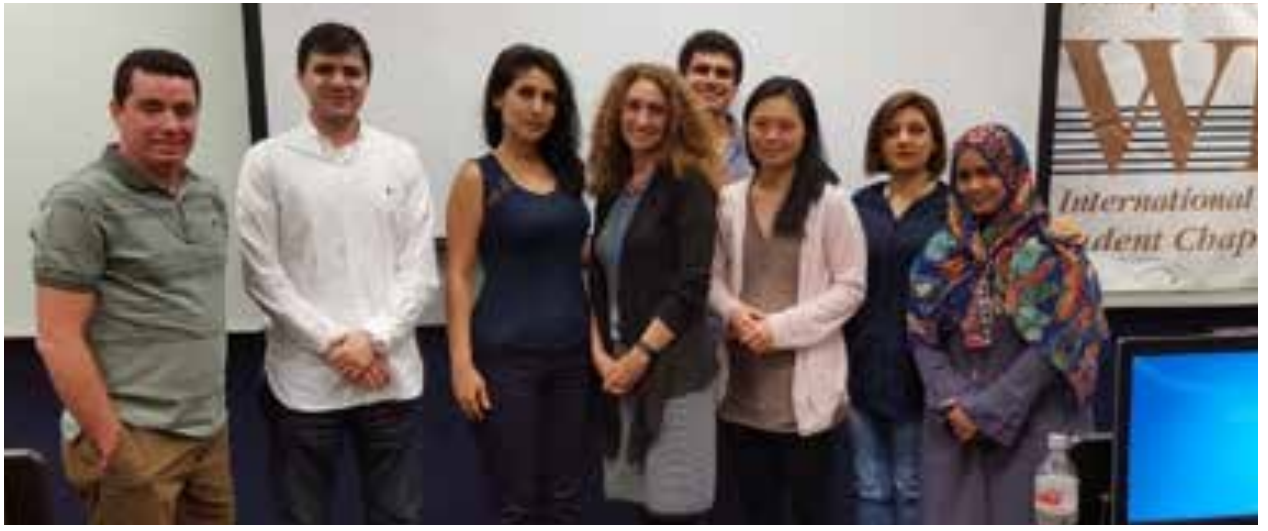
**From Rumble Strips to Text Stops: Infrastructure Solutions for Distracted Driving Webinar**
June 16, 2017
Presenters: Dr. Robert Peters, Dr. Despina Stavrinos, Mariah Stasiak University of Alabama at Birmingham

**Walking Space: Public Participation in Sidewalk Management & Repair Prioritization Webinar**
June 23, 2017
Presenter: Dr. Randall Guensler, Georgia Institute of Technology



# STRIDE-AFFILIATED WTS & ITE STUDENT CHAPTER ACTIVITIES

Alison Grossman (at right), who is a member of the WTS@GT student chapter, along with her fellow chapter members, participated in a *Transportation You* event. Local high school girls were introduced to transportation engineering and other STEM fields.



A highlight of FIU's WTS student chapter was working on a technical project in collaboration with FDOT in 2014. The project was titled "Evaluation of Downtown Pedestrian Priority Zone Strategies".

Members of NCSU's ITE student chapter attended the inaugural meeting of the Intelligent Transportation Society of the Carolinas, participating in the discussion sessions and networking events.

Members of the GaTech ITE student chapter host a tour of the Edgewood/Candler Park MARTA Station. The tour was given by Amanda Rhein of MARTA and Eric Kronberg of Kronberg Wall Architecture.

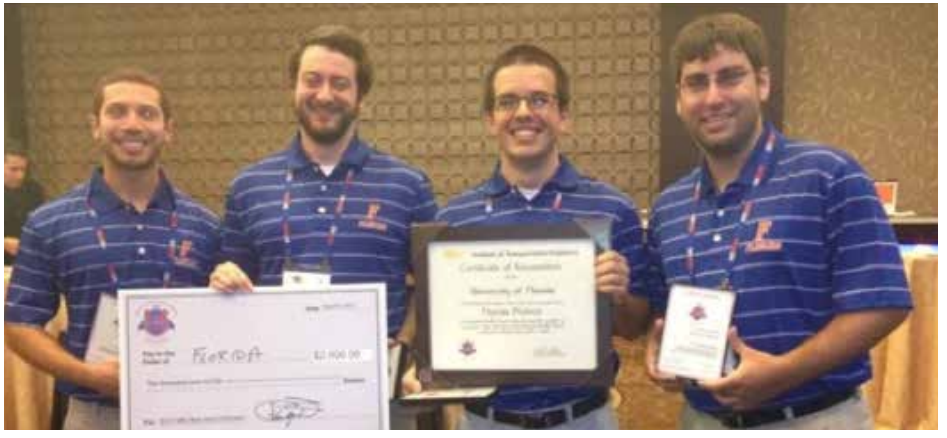
The UAB ITE student chapter was proud to have its treasurer, Jamieson Matthews, selected by the American Society of Civil Engineers as one of the ten talented early achievers featured in the 2014 College Edition of the New Faces of Civil Engineering. Jamieson is pictured above standing to the left of the rest of the current board members: Akash Chaudhari (Vice President), Natalia Barbour (President), Dr. Virginia Sisiopiku (Faculty Advisor), and Sunil Terdalkar (Secretary).

The WTS Florida Gator student chapter adopted a local road in Gainesville, FL. Here are some chapter members during a road cleanup day.

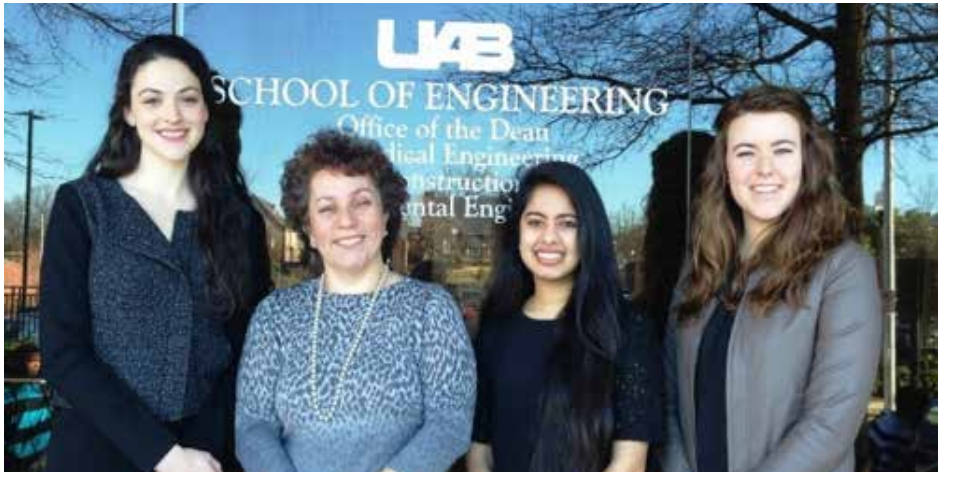
Several members of the NCSU ITE student chapter participate in the semiannual Adopt-a-Highway event.


The WTS Gator Student Chapter at UF invited Marsha Anderson-Bomar for a seminar on "The Language of Leadership." Anderson-Bomar (at right) is the executive director at Gwinnett Village in Gwinnett County, Georgia.


In 2016, UF WTS members Jessica Wallet (center left) and Megan McGinley (center right) traveled to Chicago for the WTS International Conference. Here they are pictured with Samaneh Khazraeian (at left) and Leila Azizi (at right), both at FIU.



The UF student chapter of the Institute of Transportation Engineers (ITE) won the 2013 International Collegiate Traffic Bowl Grand Championship at the ITE Annual Meeting and Exhibit in Boston. Members of the team were Thomas Chase, Miguel Lugo, Ben Reibach, and Don Watson.




Dr. Virginia Sisiopiku (second from left) along with members of the ITE student chapter. The chapter hosted a Girls in Science and Engineering Day that took place at UAB on May 7, 2016.

# TRANSPORTATION RESEARCH INTERNSHIP PROGRAM (TRIP)

## 2013

**Cory Dorman (UF)**
Internship Adviser: Dr. Siva Srinivasan (UF)
Project Title: Crash Prediction Method for Freeway Facilities with Managed Lanes

**Britton Hammit (University of Wyoming)**
Internship Adviser: Dr. Daniel Findley (NCSU)
Project Title: Retaining Wall Assessment Management

**Sarah Huestis (UF)**
Internship Adviser: Dr. Toi Lawphongpanich (UF)
Project Title: Deployment Strategies of Managed Lanes on Arterials

**Amarius Ramirez (University of Delaware)**
Internship Adviser: Dr. Mohammed Hadi (FIU)
Project Title: Impact of Modeling Parameters on the HCM-Based Procedure To Estimate Reliability Of Freeway Corridors

**Andrew Fell (UF)(NOT PICTURED)**
Internship Adviser: Dr. Yafeng Yin (UF)
Project Title: Deployment Strategies of Managed Lanes on Arterials

## 2014

Megan McGinley, Brian Pitman, and Kory Harb

**Kory Harb (UF)**
Internship Adviser: Dr. Yafeng Yin (UF)
Project Title: Developing Agent-Based Simulation Models to Learn about the Impact and Implementation of Real-Time Parking Services via Smartphone

**Megan McGinley (UF)**
Internship Adviser: Dr. Scott Washburn (UF)
Project Title: Analyzing a New Active Traffic Demand Management (ATDM) Software

**Brian Pitman (UF)**
Internship Adviser: Dr. Scott Washburn (UF)
Project Title: Creating Software to Simulate Emissions Given Off by Cars Using CORSIM

**William Woolery (GaTech)**
Internship Adviser: Dr. Mike Hunter (Georgia Tech)
Project Title: Working on Research to Identify Changes in Visual Search Patterns of Drivers as Environments Around Become More Complex

# TRANSPORTATION RESEARCH INTERNSHIP PROGRAM (TRIP)

## 2015

**Zoe Becerra (Morehead State University)**
Internship Advisers: Dr. Gregory Corso (Morehead) and Dr. Mike Hunter (GaTech)
Project Title: An Assessment of Auditory Stimuli to Return Distracted Attention to a Simulated Driving Task

**Mario Rojas (FIU)**
Adviser: Dr. Xia Jin, FIU
Project Title: Exploring the Potential of Cell Phone Data for Travel Pattern Analysis

**Bianca Farias de Souza (UF)**
Internship Adviser: Dr. Siva Srinivasan (UF)
Project Title: Analysis of Well-Being Measures of Sadness, Happiness and Stress on Travel Activities (Funded by the Brazilian Mobility Program)

**Stephen Spana (UF)**
Internship Adviser: Dr. Yafeng Yin, UF
Project Title: Developing a Simulation Program (NetLogo)

**Ethan Stoop (UF)**
Internship Adviser: Scott Washburn (UF)
Project Title: Development and Testing of SwashSIM ATDM Software

**William Wagner, (UAB)**
Internship Adviser: Dr. Despina Stavrinos (UAB)
Project Title: Road Users' Perception and Reaction to Conceptually Different Driving Hazards

**Tianfa Wu (UF)**
Internship Adviser: Dr. Lily Elefteriadou (UF)
Project Title: Algorithm for Optimizing Signal Control with Automated Vehicles in the Traffic Stream

**NOT PICTURED**
**Guilherme Moyses Pfeffer (UF)**
Internship Adviser: Dr. Siva Srinivasan, UF
Project Title: The Future of Driverless Cars (Funded by the Brazilian Mobility Program)

## 2016

**Fernando Dhabura (FIU)**
Internship Advisers: Dr. Albert Gan and Dr. Priyanka Alluri (FIU)
Project Title: Analysis of Bicycle High Crash Locations

**Alex Dixon, (ASU)**
Internship Adviser: Dr. Ruth Steiner (UF)
Project Title: Florida REDI Counties and Communities: GIS Analysis for Safe Routes to Schools

**Matthew Elias (UF)**
Internship Adviser: Dr. Mehrdad Shahabi (UF)
Project Title: Exploratory Data Analysis of Taxi Trips

**Taehyun Kim (UF)**
Internship Adviser: Dr. Scott Washburn (UF)
Projects: (1) Two-lane Highway Analysis (NCHRP 17-65) and (2) Commercial Truck Parking Detection Technology (FDOT)

**Daniel Royer (UF)**
Internship Adviser: Sarah O'Brien (ITRE, NCSU)
Project Title: Bicycle and Pedestrian Data Collection

# SELECTED PUBLICATIONS AND PRESENTATIONS

### 2015 Publications and Presentations


Barmpoutis, A., Sisiopiku, V.P., Zhao, L., & Kondyli, A. (2015). Computer-Assisted Analysis of Drivers' Body Activity Using a Range Camera. IEEE Intelligent Transportation Systems Magazine 7(3):18-28.

Barmpoutis, A., Yengera, G., Hosuri, S.R., Islam, M.M., Kondyli, A., Patil, S.S., Sisiopiku, V.P., Zhang, L., & Zhao, L. (2015). SHREC'15 Data Challenge Track: Driver's Motion Depth Database. Organized online as part of the 10th 3D Shape Retrieval Evaluation Contest, organized by Afzal Godil and Remco Veltkamp, Jan 3-Feb 20, 2015. http://research.dwi.ufl.edu/dmddb/shrec.

Chen, X., Hadi, M., Xiao, Y., & Elefteriadou, L. (2015). Vehicle Emission Models Based on Microscopic Performance Measures Derived Utilizing the MOVES Operating Mode Distribution Method. Accepted for inclusion in Proceedings of the 95th Annual Meeting of the Transportation Research Board, January 7–11, 2018, Washington, D.C.

Chen, X., Hadi, M., Xiao, Y., & Elefteriadou, L. (2015). Vehicle Emission Models Based on Microscopic Performance Measures Derived Utilizing the MOVES Operating Mode Distribution Method. Submitted for Publication in Transportation Research Record: Journal of the Transportation Research Board.

Decker, J.S., Stannard, S.J., McManus, B., Wittig, S.M.O., Sisiopiku, V.P., & Stavrinos, D. (2015). The Impact of Billboards on Drivers' Visual Attention: A Systematic Literature Review. Traffic Injury Prevention 16(3):234-239.

Elefteriadou, L. (2015). Signal Control Optimization for Automated Vehicles at Isolated Signalized Intersections. Presented at the 2015 COTA International Conferences of Transportation Professionals, July 25-27, 2015, Beijing, China. Dr. Elefteriadou was an invited plenary speaker.

Fartash, H., Hadi, M., & Xiao, Y. (2015). Utilization the HCM Urban Facility Procedures for the Estimation and Real-Time Prediction of Travel Time with Consideration of Rain Impacts. Accepted for inclusion in Proceedings of the 95th Annual Meeting of the Transportation Research Board, January 7–11, 2018, Washington, D.C.

Godbole, M., Rodríguez, D.A., Combs, T., Sisiopiku, V.P., & Schwebel, D.C. (2015). Effect of Training in Virtual Reality on Children's Self-Efficacy Regarding Pedestrian Behavior. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Hunter, E., Salamati, K., Elefteriadou, L., Sisiopiku, V., Rouphail, N., Phillips, B., & Schroeder, B. (2015). Driver Yielding at Unsignalized Midblock Crossings in Proceedings of the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Johnston, A., Sisiopiku, V.P., Rodríguez, D.A., Combs, T., Emeira, M., Severson, J., & Schwebel, D.C. (2015). Teaching Pedestrian Safety in Virtual Reality: A Community-University Collaboration. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Kondyli, A., Sisiopiku, V., Zhao, L., & Barmpoutis, A. (2015). Computer-Assisted Analysis of Drivers' Body Activity Using a Range Camera. IEEE Intelligent Transportation Systems Magazine 7(3):18-28.

Kondyli, A., Sisiopiku, V., & Barmpoutis, A. Analyzing 3D Body Posture Activity during Merging and Lane Changing Maneuvers in Proceedings of the 2015 International Conference on Road Safety & Simulation, Orlando, FL, October 6-8, 2015.

Kondyli, A., St. George, B., Elefteriadou, L.., & Bonyani, G. (2015). Are the Freeway Capacity Values Provided in the Highway Capacity Manual Accurate? Submitted for publication in the ASCE Journal of Transportation Engineering, August 2015.

Mamidipalli, S., Sisiopiku, V.P., Schroeder, B., Elefteriadou, L., & Salamati, K. (2015). A Probit-Based Pedestrian Gap Acceptance Model for Mid-Block Crossing Locations. Presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Mamidipalli, S., Sisiopiku, V.P., Schroeder, B., Elefteriadou, L., & Salamati, K. (2015). A Probit-Based Pedestrian Gap Acceptance Model for Mid-Block Crossing Locations. Accepted for publication in the Journal of the Transportation Research Board.

Mamidipalli, S., Sisiopiku, V.P., Schroeder, B., & Elefteriadou, L. (2015). A Review of Analysis Techniques and Data Collection Methods for Modeling Pedestrian Crossing Behaviors. Journal of Multidisciplinary Engineering Science and Technology 2(2):225-232.

Mamidipalli, S., Sisiopiku, V.P., Schroeder, B., Elefteriadou, L., & Salamati, K. (2015). A Probit-Based Pedestrian Gap Acceptance Model for Mid-Block Crossing Locations in Proceedings of the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Massahi, A., Hadi, M., & Xiao, Y. (2015). Improved Model for Estimation Incident Impact on Urban Street Travel Time with Consideration of Upstream Intersection Capacity Reduction. Accepted for inclusion in Proceedings of the 95th Annual Meeting of the Transportation Research Board, January 7–11, 2018, Washington, D.C.

Massahi, A., Hadi, M., & Xiao, Y. (2015). Improved Model for Estimation Incident Impact on Urban Street Travel Time with Consideration of Upstream Intersection Capacity Reduction. Submitted for publication in Transportation Research Record Journal of the Transportation Research Board.

McDonald, N.C., McGrane, A.B., Rodgman, E.A., Steiner, R.L., Palmer, W.M., & Lytle, B.F. (2015). Assessing Multimodal School Travel Safety in North Carolina. Accident Analysis & Prevention 74: 126-132.

McDonald, N., Steiner, R., Palmer, M., Bullock, A., Sisiopiku, V., & Lytle, B. (2015). Costs of School Transportation: Quantifying the Fiscal Impacts of Encouraging Walking and Bicycling for School Travel. Transportation. Transportation 43(1):159-175.

McManus, B., Ross, L.A., and Stavrinos, D. (2015). Do Adolescents Prioritize Advanced Vehicle Safety Features? Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

McManus, B., & Stavrinos, D. (2015). Do Adolescents Prioritize Advanced Vehicle Safety Features? Presented at 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Morton, B.J., Poros, J., & Huegy, J. (2015). Linking Rural Development and Transportation Using a Land Use-Transportation Decision Support Tool. Presented at the TRB National Transportation Planning Applications Conference, May 18, 2015, Atlantic City, NJ.

Palmer, W.M. (2015). Tools for Schools: Addressing the Intersection of School Siting and Pupil Transportation. Presented at the North Carolina American Planning Association Conference, October 21-23, 2015, Raleigh, NC.

Palmer, W M., & Steiner, R. (2015). Planning for Schools: An Education Module & Cost Calculator to Support School Siting & Transportation Decision Making. STRIDE Webinar, November 2, 2015.

Parr, M.N., Ross, L.A., McManus, B., Wittig, S.M., & Stavrinos, D. (2015). Differential Impact of Personality Traits on Distracted Driving Behaviors in Teens and Older Adults. Poster presented at the 2015 UAB Department of Psychology John W.P. Ost Undergraduate Research Competition, University of Alabama at Birmingham, Birmingham, AL. (First place prize in student poster competition.)

Parr, M.N., Ross, L.A., McManus, B., & Stavrinos, D. (2015). Differential Impact of Personality Traits on Distracted Driving Behaviors in Teen and Older Drivers. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Pope, C.N., Ross, L.A., & Stavrinos, D. (2015). Am I a Good Driver? Can Self-Ratings of Global Driving Experience and Quality Predict Risky Driving Behavior in Teen Drivers? Poster presented at 2015 University

Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Pope, C.N., Ross, L.A., McManus, B., & Stavrinos, D. (2015). Am I A Good Driver? Can Self-Ratings of Global Driving Experience and Quality Predict Risky Driving Behavior in Teen Drivers? Poster presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Pope, C.N., Ross, L.A., McManus, B., & Stavrinos, D. (2015). Can Self-Reported Executive Dysfunction Predict Increased Crash Involvement and Traffic Citations in Teen Drivers? Poster presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Ramadan, O., & Sisiopiku, V.P. (2015). Merge Control Strategies at Interstate Work Zones: Review of Practice. Presented at the 2015 Southern District ITE Annual Meeting, April 19-22, 2015, Biloxi, MS.

Rouphail, N., Aghdashi, B., Ko, K., Hadi, M., & Kharzaeian, S. (2015). Flow Allocation at Congested Freeway Ramp Merges. Presented at the 94th Annual Transportation Research Board Conference, January 11-15, 2015, Washington, D.C.

Rouse, J., Smith, R., Sessions, M., Combs, T., Rodríguez, D.A., Sisiopiku, V.P., & Schwebel, D.C. (2015). Are Safety Rules and Experience Sufficient to Make Children Safe Pedestrians? Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Schroeder, B., Kim, S., Hajbabaie, A., Aghdashi, B., Rouphail, N., Song, T.J., & Tambrizi, K. (2015). Estimating Saturation Headways at Work Zones on Urban Arterials. Presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Schwebel, D.C., McClure, L.A., & Severson, J. (2015). Implementing and Disseminating Virtual Reality to Train Child Pedestrians in Street Crossing. Paper presented at the Society of Pediatric Psychology National Conference, April 16-18, 2015, San Diego, CA.

Schwebel, D.C., Combs, T., Rodriguez, D., Severson, J., & Sisiopiku, V. (2015). Community-Based Pedestrian Safety Training in Virtual Reality: A Pragmatic Trial. Accident Analysis and Prevention 86:9-15.

Schwebel, D.C., Combs, T., Rodríguez, D.A., Sisiopiku, V.P., & Severson, J. (2015). Evaluating Virtual Reality to Teach Children Pedestrian Safety: Initial Results from a Pragmatic Trial. Paper presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Shen, J., Sisiopiku, V.P., Rodríguez, D.A., Combs, T., Godbole, M., & Schwebel, D.C. (2015). The Influence of Self-Efficacy and Perceived Safety in Neighborhood on Children's Frequency of Walking to/from School. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Sisiopiku, V.P. (2015). Career Information Session: Transportation Engineering. Presented September 17, 2015, to the UAB ITE Student Chapter, Birmingham, AL.

Sisiopiku, V.P. (2015). Transportation Research at UAB. Presented at the ALSITE Meeting, March 12, 2015, Montevallo, AL.

Sisiopiku, V.P., Mamidipalli, S. Elefteriadou, L., & Schroeder, B. (2015). Modeling Pedestrian Gap Acceptance at Mid-Block Crossings in the Southeast. Presented at the 2015 Southern District ITE Annual Meeting, April 19-22, 2015, Biloxi, MS.

Sisiopiku, V.P., & Mamidipalli, S. (2015). Visibility Sensitive Pedestrian Gap Acceptance Models for Two Way Stop Controlled Sections. Presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Sisiopiku, V.P., Peters, R.W., and Ramadan, O. (2015). Introducing Sustainability Design and Assessment Methods into the Civil Engineering Curriculum in Proceedings of the 122nd Annual Conference & Exposition of the American Society of Engineering Education (ASEE), June 14-17, 2015, Seattle, WA.

Stavrinos, D., & Schwebel, D.C. (2015). Behavioral Strategies to Understand and Prevent Pediatric Pedestrian Injuries. Presented at the 94th

Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Song, T.J., Kim, S., Williams, B., Hajbabaie, A., Rouphail, N., & List, G. (2015). A Novel Collision Classification Methodology Based on Temporal Link Speed Data and Congestion Thresholds. Presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Strawderman, L., Rahman, M., Huang, Y., & Nandi, A. (2015). Driver Speed Limit Compliance in School Zones: Assessing the Impact of Sign Saturation. Accident Analysis and Prevention 82:118-125.

Turner, M., McManus, B., & Stavrinos, D. (2015). Effect of Vehicle Interior Design on Adolescent Driver Safety. Poster presented at the 2015 Center for Community Outreach Development Symposium. Birmingham, AL.

Wells, H., Rouse, J., Johnston, A., Sisiopiku, V.P., Rodríguez, D.A., Combs, T., & Schwebel, D.C. (2015). Associations between Self-Efficacy and Children's Pedestrian Safety Following Training. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Wittig, S.M., & Stavrinos, D. (2015). Comparisons among Mother-Daughter and Mother-Son Self-Reported Driving Styles. Presented at the 2015 UAB Graduate Student Research Day, March 10, 2015, Birmingham, AL.

Wittig, S., Ross, L.A., & Stavrinos, D. (2015). Comparisons between Mother-Daughter and Mother-Son Self-Reported Driving Styles. Poster presented at the 2015 University Transportation Center (UTC) Conference for the Southeastern Region, March 26-27, 2015, Birmingham, AL.

Wittig, S.M.O., Ross, L.A., & Stavrinos, D. (2015). Impact of Gender and Age on Self-Reported Driving Styles in Drivers across the Lifespan. Poster presented at the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C

Zheng, Y., Chase, T., Elefteriadou, L., Schroeder, B., & Sisiopiku, V.P. (2015). Where Do Pedestrians Jaywalk and How Do Drivers React? – A Study within a Campus Environment in Proceedings of the 94th Transportation Research Board Annual Meeting, January 11-15, 2015, Washington, D.C.

Zheng, Y., Chase, T., Elefteriadou, L., Schroeder, B., & Sisiopiku, V.P. (2015). Where Do Pedestrians Jaywalk, and How Do Drivers React? – A Study within a Campus Environment. Submitted for publication in Transportation Letters: the International Journal of Transportation Research, July 2015.

Zheng, Y., Chase, R.T., Elefteriadou, L., Schroeder, B., & Sisiopiku, V.P. (2015). Modeling Pedestrian-Vehicle Interactions Outside of Crosswalks. Simulation Modeling Practice and Theory 59:89-101.

## 2016-2017 Publications and Presentations

Boppana, S., Shen, J., & Schwebel, D.C. (2016). Transportation-Related Safety Behaviors in Top-Grossing Children's Movies from 2008-2013. Journal of Developmental and Behavioral Pediatrics 37:306-313.

Chen, X., Hadi, M., Xiao, Y., & Elefteriadou, L. (2016). Vehicle Emission Models Based on Macroscopic Performance Measures Derived Utilizing the MOVES Operating Mode Distribution Method. Accepted for publication in Journal of the Transportation Research Board and presented at the 95th Transportation Research Board Annual Meeting, January 10-14, 2016, Washington, D.C.

Kondyli, A., Barmpoutis, A., & Sisiopiku, V.P. (2016). Safety-Related Analysis of the 3D Driver Body Posture Using Naturalistic Data in Proceedings of the 95th Transportation Research Board Annual Meeting, January 10-14, 2016, Washington, D.C.

Kondyli, A., St. George, B., Elefteriadou, L., & Bonyani, G. (2016). Are the Freeway Capacity Values Provided in the Highway Capacity Manual Accurate? Revised and re-submitted for publication in ASCE Journal of Transportation Engineering, December 2015.

Michalaka, D., Steiner, R., & Elefteriadou, L. (2016). Roundabouts as a Form of Access Management. Transportation Research Record: Journal of the Transportation Research Board 2556. DOI: 10.3141/2556-01.

Parr, M.N., Ross, L.A., McManus, B., Bishop, H.J., Wittig, S.M.O., & Stavrinos, D. (2016). Differential Impact of Personality Traits on Distracted Driving Behaviors in Teens and Older Adults. Accident Analysis and Prevention 92:107-112. DOI: 10.1016/j.aap.2016.03.011.

Ramadan, O.E., & Sisiopiku, V.P. (2016). Impact of Bottleneck Merge Control Strategies on Freeway Level of Service. Transportation Research Procedia 15:583-593.

Ramadan, O., & Sisiopiku, V.P. (2016). Evaluation of Merge Control Strategies at Interstate Work Zones under Peak and Off-Peak Traffic Conditions. Journal of Transportation Technologies (Special Issue on Transportation Planning and Management) 6(3):118-130.

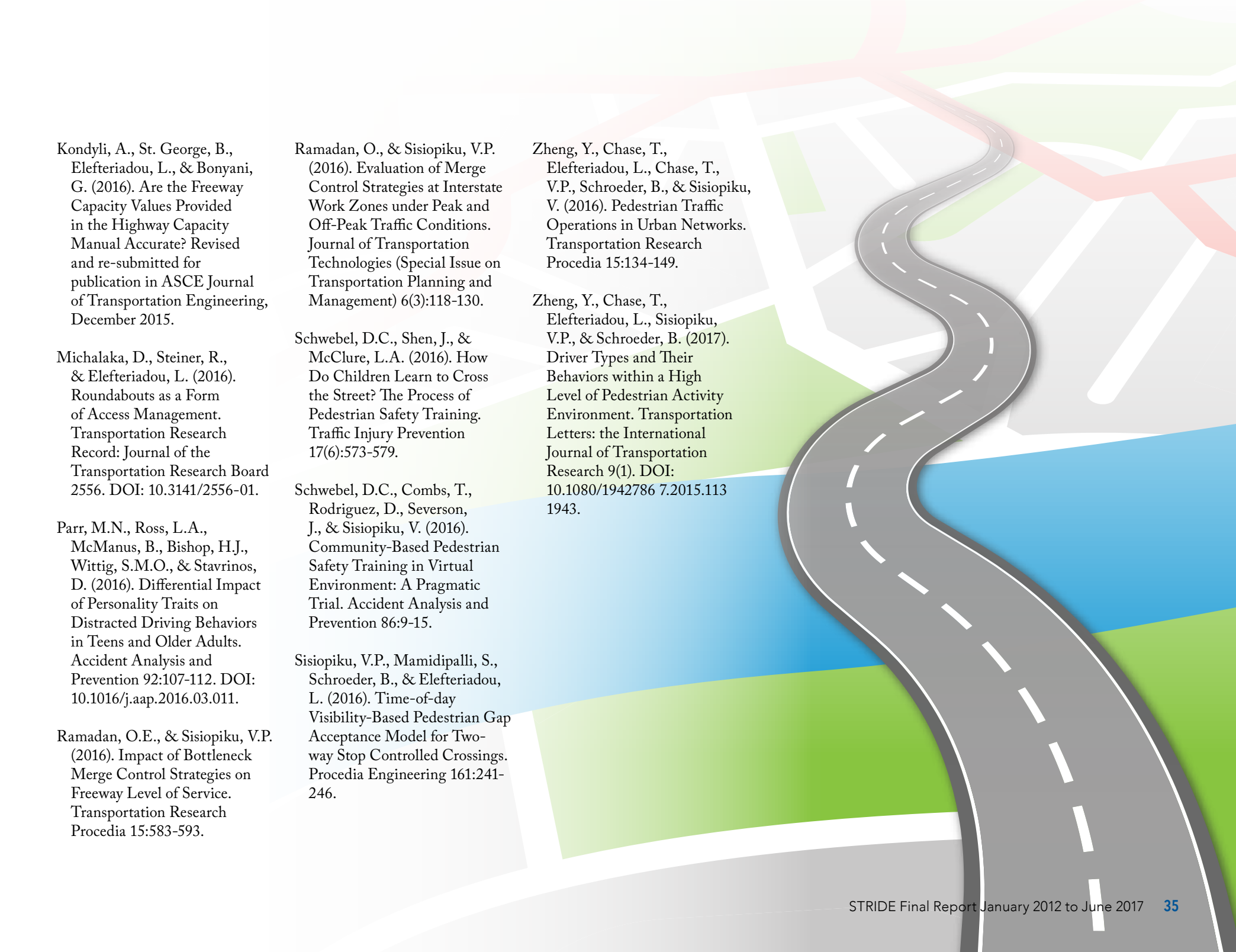
Schwebel, D.C., Shen, J., & McClure, L.A. (2016). How Do Children Learn to Cross the Street? The Process of Pedestrian Safety Training. Traffic Injury Prevention 17(6):573-579.

Schwebel, D.C., Combs, T., Rodriguez, D., Severson, J., & Sisiopiku, V. (2016). Community-Based Pedestrian Safety Training in Virtual Environment: A Pragmatic Trial. Accident Analysis and Prevention 86:9-15.

Sisiopiku, V.P., Mamidipalli, S., Schroeder, B., & Elefteriadou, L. (2016). Time-of-day Visibility-Based Pedestrian Gap Acceptance Model for Two-way Stop Controlled Crossings. Procedia Engineering 161:241-246.

Zheng, Y., Chase, T., Elefteriadou, L., Chase, T., V.P., Schroeder, B., & Sisiopiku, V. (2016). Pedestrian Traffic Operations in Urban Networks. Transportation Research Procedia 15:134-149.

Zheng, Y., Chase, T., Elefteriadou, L., Sisiopiku, V.P., & Schroeder, B. (2017). Driver Types and Their Behaviors within a High Level of Pedestrian Activity Environment. Transportation Letters: the International Journal of Transportation Research 9(1). DOI: 10.1080/1942786 7.2015.113 1943.



# STRIDE RESEARCH & COST SHARE PROJECTS

## Projects Funded by STRIDE

**Dynamic Traffic Control Interventions for Enhanced Mobility and Economic Competitiveness**
PI: Nagui Rouphail, Ph.D., North Carolina State University
Co-PI: Mohamed Hadi, Ph.D., Florida International University

**Signal Timing Optimization with Consideration of Environmental and Safety Impacts**
PI: Mohamed Hadi, Ph.D., Florida International University
Co-PIs: Lily Elefteriadou, Ph.D., University of Florida

**On-Board-Diagnostics (OBD) Data Integration into Traffic Microsimulation for Vehicle-Specific Fuel Use and Emissions Modeling & In-Vehicle App Testing**
PI: Scott Washburn, Ph.D., University of Florida
Co-PIs: Christopher Frey, Ph.D., North Carolina State University; Nagui Rouphail, Ph.D., North Carolina State University

**Using Crowdsourcing to Prioritize Bicycle Route Network Improvements**
PI: Jeffrey J. LaMondia, Ph.D., Auburn University
Co-PI: Kari Watkins, Ph.D., Georgia Institute of Technology

**Distracted Driving – It Is Not Always a Choice.**
PI: Mike Hunter, Ph.D., Georgia Institute of Technology
Co-PI: Gregory M. Corso, Ph.D., Morehead State University

**GIS-Based Instructional Tool for Crash Prediction Methods**
PI: Ilir Bejleri, Ph.D., University of Florida
Co-PI: Siva Srinivasan, Ph.D., University of Florida

**Investigating the Effect of Drivers' Body Motion on Traffic Safety**
PI: Angelos Barmpoutis, Ph.D., University of Florida
Co-PIs: Alexandra Kondyli, Ph.D., University of Florida; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

**Applying Livability Performance Measures to Transportation Plans & sProjects**
PI: Leigh Blackmon Lane, Ph.D., North Carolina State University

**Engineers Change the World: A Hands-on Workshop for 13- to 18-Year-Old Girls**
PI: James Martin, Ph.D., North Carolina State University
Co-PI: Nina Barker, University of Florida

**Teaching Schoolchildren Pedestrian Safety: A Pragmatic Trial Using Virtual Reality**
PI: David Schwebel, Ph.D., University of Alabama at Birmingham
Co-PIs: Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

**School Transportation: Development of an Education Module**
PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill
Co-PI: Ruth Steiner, Ph.D., University of Florida

**Quantifying the Costs of School Transportation**
PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill
Co-PIs: Ruth Steiner, Ph.D., University of Florida; Jeff Tsai, Ph.D., North Carolina State University

**Empirically-Based Performance Assessment & Simulation of Pedestrian Behavior at Unsignalized Crossings**
PI: Bastian Schroeder, Ph.D., North Carolina State University
Co-PIs: Lily Elefteriadou, Ph.D., University of Florida; Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

**Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes**
PI: Jorge Laval, Ph.D., Georgia Institute of Technology
Co-PIs: Yafeng Yin Ph.D., University of Florida; Yingyan Lou Ph.D., University of Alabama

**Signalized Intersection Simulation Program for Education**
PI: Scott Washburn, Ph.D., University of Florida

**Investigation of ATDM Strategies to Reduce the Probability of Breakdown**
PI: Mohammed Hadi, Ph.D., Florida International University
Co-PI: Lily Elefteriadou, Ph.D., University of Florida

**Engaging Engineering Students with Transportation Safety: An Educational Module**
PI: Lesley Strawderman, Ph.D., Mississippi State University

**A Naturalistic Driving Study across the Lifespan**
Co-PIs: Despina Stavrinos, Ph.D., and Lesley Ross, Ph.D., University of Alabama at Birmingham

**Development of Educational & Professional Training Modules on Green/Sustainability Design & Rating Systems for Neighborhood Development & Transportation**
PI: Robert W. Peters, Ph.D., University of Alabama at Birmingham
Co-PI: Adjo Amekudzi, Ph.D., Georgia Institute of Technology

**Developing a New Course for Public Transportation Education**
PI: Kari Edison Watkins, Ph.D., Georgia Institute of Technology
Co-PI: Jeffrey LaMondia, Ph.D., Auburn University

**Automated Sidewalk Quality & Safety Assessment System**
PI: Randall Guensler, Ph.D., Georgia Institute of Technology

**Development of Pedestrian & Bicycle Transportation Course Modules**
PI: Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill
Co-PI: Rod Turochy, Ph.D., Auburn University

**Consequence Based Route Selection for Hazardous Material Cargo: GIS-Based Time Progression of Environmental Impact Radius of Accidental Spills**
PI: Berrin Tansel, Ph.D., Florida International University
Co-PIs: Adjo Amekudzi, Ph.D., Georgia Institute of Technology; Nasim Uddin Ph.D., University of Alabama at Birmingham

**Analyzing the Impact of Carbon Regulatory Mechanisms on Supply Chain Management**
PI: Sandra Eksioglu, Ph.D., Mississippi State University
Co-PI: Joseph Geunes, Ph.D., University of Florida

**Engineering: It's for Girls, Too!**
PI: James Martin, PE, North Carolina State University
Co-PI: Lily Elefteriadou, Ph.D., University of Florida

**A Regional Land Use Transportation Decision Support Tool for Mississippi**
PI: Brian Morton, Ph.D., University of North Carolina at Chapel Hill
Co-PIs: John Poros, Ph.D., Mississippi State University; Joe Huegy, Ph.D., North Carolina State University

**Towards a Holistic Understanding of Quality of Life: An Analysis of Activity-Travel Patterns on Non- Mid-week Days**
PI: Siva Srinivasan, Ph.D., University of Florida
Co-PI: Xia Jin, Ph.D., Florida International University

**Development of Graduate Level Course on Sustainable Asphalt Pavements**
PI: James Richard Willis, Ph.D., Auburn University

**Emissions Modeling & Integration into Traffic Micro-simulation**
PI: Scott Washburn, Ph.D., University of Florida
Co-PIs: Nagui Rouphail, Ph.D., North Carolina State University; H. Christopher Frey, Ph.D., North Carolina State University

**Development of Case Studies, Numerical Exercises, & Instructional Modules for Teaching Roadway Safety Analysis**
PI: Siva Srinivasan, Ph.D., University of Florida

**Statewide Training for Safety Analyst in Florida**
PI: Priyanka Alluri, Ph.D., PE, Florida International University

**Workshops Related to STRIDE-funded Study of Multi-modal Costs of School Transportation**
PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill

**Workshop for Managed Lanes on Arterials**
PI: Yafeng Yin, Ph.D., University of Florida

**Technology Transfer: Distracted Driving – Overview Summary & Assessment of Ways to Alleviate**
PIs: Robert Peters, Ph.D., Despina Stavrinos, Ph.D., University of Alabama at Birmingham

**Educational & Professional Training Modules on Green Sustainability Design & Ratings Systems Workshop**
PI: Robert Peters, Ph.D., University of Alabama at Birmingham

**Sidewalk Survey Implementation for the Southeast Region**
PI: Randall Guensler, Ph.D., Georgia Institute of Technology

**Evaluating & Relationship between School Site Selection, Residential Developments & School Transportation in North Carolina**
PIs: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill; Ruth Steiner, Ph.D., University of Florida

**Practitioner Workshop on School Siting & School Transportation Impacts**
PI: Noreen McDonald, Ph.D., University of North Carolina at Chapel Hill

**Evaluating Child Restraint System (CRS) Installation using Interactive Visual Presence**
PI: David Schwebel, Ph.D., University of Alabama at Birmingham

**Cycle Atlanta SWIFT Development**
PI: Kari Watkins, Ph.D., Georgia Institute of Technology

**Infrastructure Adaptation Planning for Autonomous Vehicles**
PI: Yafeng Yin, Ph.D., University of Florida

**Workshops on Dynamic ATM Strategy Selection Tool (FREEVAL-DSS)**
PI: Nagui Rouphail, Ph.D., North Carolina State University

**Extension of Signal Timing Optimization with Consideration of Environmental & Safety Impacts (Extension from 2013 project)**
PI: Mohammed Hadi, Ph.D., PE, Florida International University; Lily Elefteriadou, Ph.D., University of Florida

**Evaluation of Traffic Control Options in Work Zone**
PI: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

**Empowering Girls in Science and Engineering**
PI: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham

**Bike & Place: A New Tool for Designing Active, Place-Making Transportation Networks – An Exploratory Study**
PI: Brian Morton, Ph.D., University of North Carolina at Chapel Hill

**Technology Transfer Workshops Based on A Regional Land Use Transportation Decision Support Tool for Mississippi**
PI: Brian Morton, Ph.D., University of North Carolina at Chapel Hill

**Development of Support Systems, Instructional Modules, & A Case Study for the Enhanced Driving Simulator at the Gator Tech Smart House**
PI: Siva Srinivasan, Ph.D., University of Florida

## Selected Cost Share Projects

**Modeling, Implementation, & Validation of Arterial Travel Time Reliability**
PI: Lily Elefteriadou, Ph.D., University of Florida
FDOT Project No: BDK77-977-20

**Planning for Incorporating Ancillary Demands in the Next Generation FSUTMS**
PI: Siva Srinivasan, Ph.D., University of Florida
FDOT Project No: BDK77-931-16

**Comparison of Methods for Measuring Travel Time at Florida Freeways & Arterials**
PI: Lily Elefteriadou, Ph.D., University of Florida
FDOT Project No: BDV32-977-02

**Before and After Implementation Studies of Advance Signal Technologies in Florida**
PI: Lily Elefteriadou, Ph.D., University of Florida
FDOT Project No: BDV32-977-05

**Policy Implications of Automated Vehicle Technology**
PI: Siva Srinivasan, Ph.D., University of Florida
FDOT Project No: BDV32-977-06

**Evaluation of Arterial Corridor Improvements & Traffic Management Plans in Florida**
PI: Lily Elefteriadou, Ph.D., University of Florida
FDOT Project No: BDV31-977-44

**Development and Testing of Optimized Autonomous & Connected Vehicle Trajectories at Signalized Intersections**
PI: Lily Elefteriadou, Ph.D., University of Florida
Co-PIs: Carl Crane, Ph.D., University of Florida; Sanjay Ranka, Ph.D., University of Florida
FDOT Project No: BDV31-977-45

**Local Technical Assistance Program (LTAP) 2015/2016**
PI: Maria Cahill, T2 Director, University of Florida Transportation Institute (UFTI)
FDOT Project No: BDV33-977-03

**Warrants, Design, & Safety of Road Ranger Service Patrols**
PI: Yafeng Yin, Ph.D., University of Florida
FDOT Project No: BDV31-977-52

**Improvements to the FDOT Travel Time Reliability Model for Freeway Analysis**
PI: Lily Elefteriadou, Ph.D., University of Florida
FDOT Project No: BDV32-934-01

## K-12 Workforce Development Projects

**K-12 Workforce Development in Transportation Engineering at Florida International University**
PI: Berrin Tansel, Ph.D., Florida International University
(2012)

**Family Engineering Nights**
PI: Eric Heiselt, Director of Outreach, Mississippi State University
(2012)

**LEGO Robot Vehicle After School Workshops: Transportation Engineering Problem Solving (part 1)**
PI: James B. Martin, PE, North Carolina State University
(2012)

**UAB Transportation Workforce Development**
PI: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham
(2012)

**UF Workforce Development Efforts**
PI: Leslie Washburn, PE, University of Florida
(2012)

**Engineering Initiative with Centennial Place Academy**
PI: Yanzhi "Ann" Xu, Ph.D., Georgia Institute of Technology
(2013)

**Lego Robot Vehicle After School Workshops: Transportation Engineering Problem Solving (part 2)**
PI: James B. Martin, PE, North Carolina State University
(2013)

**K-12 Workforce Development Activities**
PI: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham
(2013)

**UF Workforce Development Efforts**
PI: Leslie Washburn, PE, University of Florida
(2013)

**Empowering Girls in Science & Engineering**
PI: Dr. Virginia Sisiopiku, University of Alabama at Birmingham
(2016)

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