

Program Progress Performance Report for University Transportation Centers

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Research and Innovative Technology Administration
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Project Title: Transportation, Research, Innovation Development and Education Center (STRIDE)

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Signature of Submitting Official: _____
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Accomplishments

What are the major goals of the program?

The STRIDE Center is devoting its energies to three major areas that are deemed critical in Region 4: safety, livable communities and economic competitiveness. More specifically, the major goals of the Center are:

- a) To develop, implement and maintain a comprehensive research program that addresses critical needs related to safety, livable communities and economic competitiveness
- b) To serve as the focal point for transportation research, education and outreach in the region
- c) To strengthen the collaboration between the partner universities as well as between the consortium and federal, state, and local agencies
- d) To develop ties with other University Transportation Centers (UTCs) and USDOT's research clusters to create opportunities for collaborative activities across centers
- e) To disseminate research results to government, academia and private sectors through publication in peer-reviewed journals, conference papers and presentations at transportation-related industry events
- f) To establish additional communication mechanisms, including the use of social media, by which important research findings are made available to researchers and others with an interest in transportation matters
- g) To utilize research activities to promote transportation-related education as well as careers and employment opportunities
- h) To support and encourage the identification, development, and implementation of inventions and discoveries with the potential to address challenges in the core focus areas.

What was accomplished under these goals?

Accomplishments are listed below under each of the program's major goals:

a) To develop, implement and maintain a comprehensive research program that addresses critical needs related to safety, livable communities and economic competitiveness

Accomplishments:

Research projects awarded during the first year of the grant have been completed or are nearing completion. Three projects have provided draft final reports, which are under external review. Four educational course modules have been completed and are being used in advance of the delivery of draft final reports. Another 15 research and three workforce development/education projects have been approved for no-cost extensions. Quarterly reports received show satisfactory progress on all projects. All projects along with short descriptions are posted on the STRIDE website at www.stride.ce.ufl.edu/current-projects. A second call for proposals was announced on February 22, 2013. A total of 88 pre-proposals were received for a total requested amount of \$10,932,880. The pre-proposals were evaluated by external peer reviewers, and 12 were invited to proceed to the full proposal stage for a total of \$1,555,896.

The full proposals were received on June 21, 2013, and went through a thorough peer-review process. A total of 11 full proposals were selected for funding in August 2013 in the amount of \$1,209,385. Those projects began around October 1, 2013.

b) To serve as the focal point for transportation research, education and outreach in the region

Accomplishments:

- **UFTI/STRIDE Reception and Student Poster Competition, TRB 2014:** A STRIDE Student Research Poster Competition was held during a reception hosted by the University of Florida (UF) at the 93rd Annual Meeting of the Transportation Research Board. Twenty-two posters from students representing partner institutions were selected for presentation. The winners of the student poster competition were: Mr. Hyun Woong Cho, GaTech graduate student who came in 1st Place for his poster titled "Real-Time Congestion Pricing Strategies for Toll Facilities"; Mr. Mohammad Ilbeigi, also of GaTech, who won 2nd Place for his poster on "Analysis of the Effects of Offering Price Adjustment Clauses on Highway Construction Bid Prices in Georgia"; and in 3rd Place, Seckin Ozkul from UF for his work on "CORSIM-NG: A Simulation Platform for Reporting On-Board-Diagnostics (OBD) Data, Estimating Fuel and Emission Rates, and Modeling Automated Vehicles". The students received an award certificate and respective monetary awards of \$500, \$250 and \$100.
- **Plans for a second UTC Conference for the Southeastern Region:** The first UTC Conference for the Southeastern Region was organized by STRIDE and held in Orlando, Fla., on April 4-5, 2013. Following this very successful conference, Georgia Institute of Technology, a STRIDE partner, will host the 2nd UTC Conference for the Southeastern Region, which will take place in Atlanta, Ga., on March 24-25, 2014. This conference will bring together faculty, students, practitioners and public agencies to disseminate and showcase research, education and technology transfer activities of UTCs in the Southeast. One of the goals of the conference is to enhance collaboration among the academic community as well as the private and public sector agencies in the region.
- **WTS Transportation Symposium:** The WTS student chapter at UF hosted their annual signature event, the WTS Transportation Symposium, on November 12, 2013 at the Arredondo Room located in the Reitz Union on the UF campus. The topic of this year's symposium was "Communication between Women and Men in the Workplace". The panelists this year were: Dan Plonk, Director of Transportation Planning at Norfolk Southern and UF graduate in Mechanical & Aerospace Engineering (MAE); Dr. Angela Lindner, Associate Dean for Undergraduate Student Affairs at UF; Jamie Breme of Fluor, an engineering, procurement, construction, maintenance (EPCM) and project management company; and Jessica Grant, Engineer with the Florida Department of Transportation (FDOT) and UF graduate in Civil and Coastal Engineering (CCE). About 35 students attended the event.

- **WTS Chapter Development in the Southeast:** The STRIDE Center continues to work with WTS International to create additional student chapters in the Southeast and the partnership has accomplished two important milestones: 1) The WTS student chapter at UF has been invited by to become part of a WTS International task force to create student chapters, and 2) A new student chapter has been created at Florida International University in Miami, Fla, a STRIDE university partner. There are plans this year to once again have a WTS student chapters meeting at the 2nd Annual UTC Conference for the Southeastern Region where students from GaTech, NCSU, FIU, USC, USF, UAB and other institutions are anticipated to meet and discuss regional efforts and activities.

c) To strengthen the collaboration between the partner universities as well as between the consortium and federal, state, and local agencies

Accomplishments:

- To encourage collaboration among the STRIDE partner universities, the Center's second call for proposals continued to require partnerships and gave preference and additional points to those proposals that involved researchers from two or more partner universities. Of the 11 proposals selected for funding under STRIDE 2, all but one are multi-university efforts.
 - STRIDE organized a panel discussion with State DOT representatives during the first UTC Regional Conference in Orlando, Florida. A follow up to these discussions is planned at the 2nd UTC Conference in Atlanta, Ga. The STRIDE Center will continue to actively engage state and local agencies in discussions and potential collaborations, and is reaching out to the State DOTs in the region to increase their participation and involvement in STRIDE activities.
 - It is expected that once again, the STRIDE Center's External Advisory Board will meet during the 2nd UTC Regional Conference in Atlanta, Ga.
- d) To develop ties with other UTCs and USDOT's research clusters to create opportunities for collaborative activities across centers.**

Accomplishments:

- As indicated above, STRIDE spearheaded the organization of the first regional UTC conference in Spring 2013 to bring together researchers, students, State DOT representatives and transportation professionals across the region. A total of eight universities participated in that spring conference, which included all STRIDE partners: Auburn University, Florida International University, Georgia Institute of Technology, Mississippi State University, North Carolina State University, University of Alabama at Birmingham, the University of Florida, and the University of North Carolina at Chapel Hill (UNC Chapel Hill). This year, STRIDE partnering institution Georgia Tech, is spearheading the organization of the second UTC conference for the southeast region, to take place in Atlanta, Ga., on March 24-25, 2014. In addition to the eight institutions representing the STRIDE Center, seven other UTCs will be participating, representing 31 universities listed below:

- a. **National Center for Intermodal Transportation for Economic Competitiveness (NCITEC)** – Partners: Mississippi State University, University of Denver, University of Mississippi, Hampton University, Louisiana State University
 - b. **National Center for Transportation Systems Productivity and Management (NCTSPM)** – Partners: Georgia Institute of Technology, University of Alabama at Birmingham, Florida International University, University of Central Florida
 - c. **National Center for Transit Research (NCTR)** - Partners: University of South Florida, North Dakota State University, Florida International University, University of Illinois, Chicago Texas A&M University
 - d. **Southeastern Transportation Center** – Partners: Clemson University (South Carolina), North Carolina A&T State University, University of Alabama, Birmingham, University of Alabama Tuscaloosa, University of Central Florida, University of Kentucky, University of North Carolina, University of South Florida
 - e. **Electric Vehicle Transportation Center (Environmental Sustainability)** – Partners: University of Central Florida, Tuskegee University (Alabama), University of Hawaii, Honolulu
 - f. **Center for Safe and Accessible Transportation for an Aging Population (Safety)** – Partners: Florida State University, Florida A&M University, University of North Florida
 - g. **Accelerated Bridge Construction University Transportation Center (State of Good Repair)** – Partners: Florida International University, Iowa State University, University of Nevada, Reno
- e) **To disseminate research results to government, academia and private sectors through publication in peer-reviewed journals, conference papers and presentations at transportation-related industry events**

Accomplishments:

- Several students affiliated with the STRIDE consortium showcased their Center-funded projects during the STRIDE Student Poster Showcase and Competition held at the University of Florida Transportation Institute’s reception during the 93rd TRB.
- Several faculty and students presented STRIDE-funded and match projects during the 93rd TRB and participated in TRB Committee meetings.
- Several STRIDE-funded educational course modules have been completed and are posted at www.stride.ce.ufl.edu/fall-2013-educational-products#trans_safety. These modules are available to students, instructors and the general public.
- We are continuing to create workshops, webinars and conferences from completed CMS (Tier-1 UTC at UF) and STRIDE-funded projects and will continue this process as the first group of STRIDE projects are completed.
- Several publications, presentations and course modules were produced, and are listed below under “Products” starting on page 11.

- f) **To establish additional mechanisms, including the use of social media, by which important research findings are made available to researchers and others with an interest in transportation matters**

Accomplishments:

We continue to use our website (stride.ce.ufl.edu), Facebook and Twitter pages to announce events, webinars, conference, completed projects and other important information related to UTC activities.

- g) **To utilize research project activities to promote transportation-related careers and employment opportunities for education and workforce development**

Accomplishments:

- The following STRIDE-funded educational projects have been completed and can be found at www.stride.ce.ufl.edu/fall-2013-educational-products#trans_safety (some of the modules also can be found at their own websites as specified below):
 - A Transportation Safety Module for Undergraduate Students (STRIDE Projects Number 2012-085s) - ergo.research.ise.msstate.edu/stride-classroom-module
 - Developing a New Course for Public Transportation Education (STRIDE Project Number 2012-029s) - www.stride.ce.ufl.edu/public-transportation-course-modules
 - Development of Graduate Level Course on Sustainable Asphalt Pavements (STRIDE Project Number 2012-049s) - www.stride.ce.ufl.edu/sustainable-pavements-course-modules
 - Development of Pedestrian and Bicycle Transportation Course Modules (STRIDE Project Number 2012-028s) - www.pedbikeinfo.org/training/courses.cfm
- Five STRIDE interns were selected and placed to work with researchers at STRIDE partner schools as part of the Transportation Research Internship Program (TRIP):
 - Andrew Fell, UF civil engineering, Adviser: Dr. Yafeng Yin, UF
Andrew worked on a project titled *Deployment Strategies of Managed Lanes on Arterials*, which involved examining managed-lane deployment strategies on arterials, identifying tools to evaluate their performance, and investigating ways to coordinate the deployment and operations of managed lanes on both limited-access facilities and arterials. Working closely with Mahmood Zangui, a Ph.D. student at UF, his main duties on the project were researching relevant articles regarding the implementation of managed lanes on arterials, and organizing that research into a coherent outline.
 - Cory Dorman, UF civil engineering, Adviser: Dr. Siva Srinivasan, UF
Cory assisted with the *Crash Prediction Method for Freeway Facilities with Managed Lanes* project, which investigated the safety on freeway facilities with managed lanes with the ultimate goal of developing

equations to be implemented into the Highway Safety Manual. His first task was to assist with a related literature review by compiling a bibliography documenting all existing research concerning a safety and managed lanes facilities. He then created reference tool for all existing HOV and HOT facilities in the United States, complete with relevant characteristics such as segment length, segment location, and number of lanes. Finally, he conducted a case study on the I-95 Express Lanes in Miami, Fla., using Signal Four Analytics software to collect crash records from 2006-2012 on the observed segment, and IBM SPSS Statistics 21 software to import and analyze these crash records to develop charts and graphs that could help identify trends and patterns over a multi-year period.

- Sarah Huestis, UF civil engineering, Adviser: Dr. Toi Lawphongpanich, UF
Sara worked on a project titled *Deployment Strategies of Managed Lanes on Arterials*, which involved examining managed-lane deployment strategies on arterials, identifying tools to evaluate their performances, and investigating ways to coordinate the deployment and operations of managed lanes on both limited-access facilities and arterials.
- Amarius Ramirez, University of Delaware civil engineering, Adviser: Dr. Mohammed Hadi, FIU
Amarius worked on a project titled, *Impact Of Modeling Parameters On The HCM-Based Procedure To Estimate Reliability Of Freeway Corridors*. This project analyzed the functionality of a newly-developed software called FREEVAL, a computational engine for Freeway Facilities Analysis in the US Highway Capacity Manual.
- Britton Hammit, University of Wyoming civil engineering, Adviser: Daniel Findley, NCSU
Britton worked on a project titled *Retaining Wall Assessment Management*, which was contracted through North Carolina DOT and aims to design and develop a database archival and retrieval system for electronic documentation, management, qualitative analysis, and display of retaining walls, especially critical walls such as those adjacent to bridges.

New workforce development activities:

- In early Fall 2013, the STRIDE Center issued a call for K-12 workforce development proposals. Four partner institutions submitted proposals and all four were selected (Georgia Tech, North Carolina State University, University of Alabama at Birmingham and the University of Florida). Georgia Tech's work will focus on working with 5th grade students at Centennial Place Elementary School to introduce Engineering elements such as measurements, data collections, data analysis, presentation and group work, focusing on examples from topics in Transportation Engineering. North Carolina State University will continue to use LEGO® Mindstorms NXT robots in eight outreach activities at two locations in North Carolina. These workshops will provide a hands-on experience that will encourage students to look at science, technology, engineering and math (STEM) topics in a new light and foster interest in transportation engineering as a career choice.

The University of Alabama at Birmingham will continue to use interactive activities, presentations, and workshops such as Family Engineering Night to introduce girls to engineering in hopes that these activities will spark an interest in considering Transportation Engineering as a career path. The University of Florida will continue to offer the very successful K-12 activities initiated in the past year, including: the LEGO® Mindstorms NXT robots program, which teaches programming to middle and high school students; Transportation Career Day, which is designed for high school-aged students to introduce them, their school counselors and possibly their parents/caregivers to Transportation careers; Family Engineering Night, which actively engages elementary school children and their families in fun, hands-on engineering activities at local elementary schools; workshops for middle and high school girls, which introduce them to career opportunities in Engineering and Transportation (*Transportation You!*); and utilizing the computer game, SimCity, to develop Transportation-specific modules for middle school students to foster interest in the transportation profession as a career choice.

- MSU and UF hosted several Family Engineering Nights at local elementary schools. FIU utilized the Family Engineering Night activities in their middle school outreach program and collaborative outreach efforts with the FIU-WTE chapter.
- MSU has been refining the current Family Engineering Night concept and adding activities to the events. These additional events were created through a cooperative effort between the Bagley College of Engineering Outreach Office and the Department of Mechanical Engineering as a service learning project. All of the activities were required to have a Transportation theme in order to promote the STRIDE objectives.
- MSU hosted three additional Family Engineering Night events as school-year kickoff events in Conehatta, MS; Corinth, MS; and Hollandale, MS.
- The UF ITE, WTS and ASCE student chapters hosted a family engineering booth at the PK Yonge Research School Carnival on October 18 in Gainesville, FL, where UF students guided approximately 85 students through hands-on activities.
- The UF ASCE student chapter also presented the Family Engineering Night activities in a weekly afterschool program at Lincoln Middle school in October and November 2013.
- The UF WTS student chapter hosted activities at a local church called "Learning from Failure", "Let's Communicate", as well as a straw bridge competition on January 12, 2014. NCSU and UF continue their partnership with the North Carolina Department of Transportation (NCDOT) and WTS for the STRIDE-funded *Engineering: It's for Girls, Too* project, which includes a series of one-day workshops targeted at girls in middle school and high school. The groups held several events in both states and have planned several more.
- As part of the Transportation Career Day effort, 11 school students participated in a full day workshop, "Exploring Careers in Transportation Engineering", on October 12th at the UF campus. Dr. Kondyli, a postdoctoral researcher at UF gave a presentation, a signal lab tour and a hands-on traffic simulation exercise. Students set up and ran a traffic simulation of a signalized intersection where they experimented with various signal timing strategies to optimize the intersection performance.
- In Summer 2013, Arlington Middle School in Jacksonville, Fla., contacted UF for help encouraging middle school girls to join a robotics team. UF staff provided a workshop on October 19 for 11 girls to learn more about careers in Transportation Engineering and

LEGO® Robotic programming. The girls watched videos and presentations, and worked through LEGO® Robot Vehicle Lesson Plans for Secondary Education.

- NCSU has been working with the outreach coordinator/AIG resource teacher at Centennial Campus Magnet Middle School (CCMMS) on the campus of NCSU to introduce the LEGO® lesson plans to eight students at CCMMS for a 5-day after school workshop. These workshops were held the second week in October 2013.
- The UF ITE student chapter hosted a morning workshop for students in K-12 to learn more about transportation engineering on September 28 with approximately 55 students in attendance. The student chapter provided a presentation and the ever-popular LEGO® car building supplies and large wooden ramp for small scale Transportation Engineering application.
- The UF WTS student chapter organized a symposium on “Communication between Women and Men in the Workplace” on November 12, 2013. The symposium focused on ways to listen and interact with professional men and women and featured guest panelists from the private, public and academic sectors who shared their experiences on this topic and offered advice to students.
- UAB-affiliated faculty participated in a number of workforce development activities not directly sponsored by STRIDE. Examples include the 2013 Summer Enrichment Program, mentoring of summer interns, and preparing and launching the 2013 UAB Blazer BEST Robotics competition. The Blazer BEST Robotics began on September 12 with a six-week training period, and continued with a Mall Day on October 13 and a Game Day on October 26.

How have results been disseminated?

- Research results have been disseminated through the UTC Regional conference as well as workshops, publications such as the annual report and the STRIDE E-Newsletter, the STRIDE Student Poster Competition during the 93rd Annual TRB meeting, and through the publications and presentations listed starting on page 11. Also, some results have been posted on the STRIDE website and Twitter page, and via other events described in the previous section.
- Four educational projects are complete and the products have been posted at www.stride.ce.ufl.edu/fall-2013-educational-products#trans_safety.
- Project research results disseminated include the following efforts associated with CMS, which was a Tier-1, grant-funded UTC at UF:
 - A workshop on Parking Management is being organized to present the results from previously completed research projects under the CMS, a Tier-1UTC.
 - Principal investigators of CMS projects are in the process of developing additional courses and workshops related to recently completed projects. The STRIDE Center expects to disseminate research products in the same way.
 - The LEGO® Robot Lesson Plans, created from a project funded by the CMS and incorporated into the STRIDE workforce development activities, have been downloaded 65 times as of November 2013. Agencies that have downloaded the lesson plans range from UTCs and other universities, to K-12 and after-school programs across the US and as far away as Alaska and California. Chamblee Middle School in Atlanta, Ga.,

implemented the lesson plans into their curriculum in Spring 2013, in their effort to become an accredited STEM school. The lesson plans were utilized by over 300 students in their school science program.

- With respect to STRIDE, the following events helped disseminate Center findings:
 - Educational products developed by STRIDE researchers have been disseminated via the STRIDE website and on industry websites such as the Pedestrian and Bicycle Information Center (PBIC).
 - Findings from STRIDE-related projects have been presented at various venues.
 - Additional courses, workshops and webinars are being developed and will be offered during the next academic year.

What do you plan to do during the next reporting period to accomplish the goals?

1. Monitor the ongoing projects from STRIDE 1 (began January 2012) via quarterly reports to ensure they are progressing on schedule, and products and results are disseminated as expected.
2. Monitor the newly selected STRIDE 2 projects (began October 2013) via quarterly reports to ensure they are on schedule.
3. Monitor the K-12 Workforce Development projects via quarterly reports.
4. Monitor the number of downloads of STRIDE products from our website.
5. Continue efforts to provide Family Engineering Nights, Transportation Career Day and LEGO® Vehicle Lesson plans. NCSU and UF will continue to provide workshops for girls aged 13-18 to encourage and introduce them to careers in Transportation.
6. Continue to interface with Georgia Tech during the planning of the 2nd Annual UTC Regional Conference for the Southeast. Plan to hold the second meeting of the External Advisory Board for STRIDE in conjunction with the conference.
7. Continue to publish the STRIDE E-Newsletter twice a year (Spring and Fall).
8. Publish annual reports online and in print.
9. Continue to engage in discussions with State DOTs in the region and nationwide for potential collaborations.
10. Continue to engage in discussions with WTS International to create student chapters in the region, and coordinate activities with these chapters as they are created.
11. Continue planning for technology transfer opportunities (including webinars and short courses) such as the events based on completed CMS and STRIDE research projects.
12. Continue posting events and products on the STRIDE website, Facebook and Twitter.

Products

List any products resulting from the program during the reporting period

- The UF ITE student chapter developed a traffic simulation exercise for CORSIM for high school students that will be utilized on March 26, 2014 during a workshop held at UF.
- Auburn University has developed a graduate level course on sustainable asphalt pavements (STRIDE Project Number 2012-049s). The materials are posted at www.stride.ce.ufl.edu/sustainable-pavements-course-modules.
- UNC Chapel Hill and Auburn University have produced educational modules that can be used in introductory Transportation courses for undergraduates in Civil Engineering, Planning and Policy: Pedestrian and Bicycle Data and Performance Analysis, Pedestrian and Bicycle Facilities, and Planning for Pedestrians and Bicycles (STRIDE Project Number 2012-028S). All three modules are available at www.pedbikeinfo.org/training/courses.cfm.
- Georgia Tech and Auburn University are finalizing course materials for Introduction to Transportation and Transit Planning and Operations classes to better integrate transit into classroom curriculum (STRIDE Project Number 2012-029S). The materials are posted at www.stride.ce.ufl.edu/public-transportation-course-modules.
- Leslie Strawderman at Mississippi State University (STRIDE Project Number 2012-085s) has created a course module to teach students about transportation safety. The materials can be found at ergo.research.ise.msstate.edu/stride-classroom-module.
- Researchers at UF and UAB have completed two K-12 Workforce Development projects and drafts of final reports are currently under external peer review.
- Presentations and posters based on STRIDE-funded projects are listed below (**note:** Item 66 represents eight presentations):
 1. Aditi M., K. Watkins. "Cycle Atlanta: Mapping the Ride to a Better Atlanta," Georgia transportation Institute poster session, Sept 2013
 2. Akanser, A., F. Castrillon, V. Elango, R. Guensler. "Estimation of Sidewalk Grade and Roughness using Accelerometers on Wheelchairs," Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session, Atlanta, GA, September, 2013
 3. Amekudzi, A., A. Kennedy. "Value-Focused Thinking in Civil Infrastructure Development," Keynote Speech, International Symposium on Next Generation Infrastructure, Wollongong, Australia, October 1-4, 2013
 4. Amekudzi, A., S. Brodie. "A Review of Sustainability Rating Systems for Transportation Systems and Neighborhood-Level Developments," T&DI Green Streets, Highways and Development Conference, Austin, TX, November 2013
 5. Amekudzi, A., S. Brodie. "Sustainability Evaluation of Transportation Systems and Neighborhood-Level Development," University Transportation Center (UTC) Conference for the Southeastern Region, Orlando, FL, April 2013
 6. Amekudzi, A., S. Brodie. "Sustainability Evaluation of Transportation Systems and Neighborhood-Level Development," TRB Annual Meeting, STRIDE Reception, Washington, DC, January 2013
 7. Chase, T. "Instrumented Vehicle Study and Micro-simulation Models of Pedestrian-Vehicle Interaction at Midblock Crosswalks," UTC Conference for the Southeast Region, Orlando, FL, April 4-5, 2013

8. Doustmohammadi, E., R.W. Peters, V. Sisiopiku. "Green Design and Rating Systems for Neighborhood Development," Conference Poster Paper presented at 92nd Annual Meeting of the Transportation Research Board (TRB) conference. Washington DC, January 13–17, 2013
9. Frackelton, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to Neighborhood Planning Unit M, Atlanta, GA, July 22, 2013
10. Frackelton, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the Inman Park Neighborhood Association, Atlanta, GA, February 11, 2013
11. Frackelton, A. and A. Grossman. "Sidewalk data in the Age of the App: Tools for Asset Management," American Planning Association National Planning Conference, Chicago, IL, April 2013
12. Frackelton, A., A. Grossman, K. Kamiya, R. Sadana, F. Castrillon, E. Palinginis, V. Elango, Y. Xu, K. Watkins R. Guensler. "Development of an Automated Sidewalk Quality Assessment System," STRIDE Reception at the 92nd Annual Transportation Research Board Meeting, Washington, DC., January 2013
13. Frey, H.C., B. Yazdani-Boroujeni, J. Hu, B. Liu. "Contribution of Cold-Starts to Real-World Total Trip Emissions for Light Duty Gasoline Vehicles," 106th Annual Conference, Air & Waste Management Association, Chicago, IL, June 25-28, 2013
14. Frey, H.C., B. Yazdani-Boroujeni, J. Hu, B. Liu., W. Jiao. "Field Measurements of 1996 to 2013 Model Year Light Duty Gasoline Vehicles," Proceedings, 106th Annual Conference, Air & Waste Management Association, Chicago, IL, June 25-28, 2013
15. Frey, H.C., J. Hu, B. Yazdani. "Contribution of Cold Starts to Real-World Total Trip Emissions for Light-Duty Gasoline Vehicles," 23rd Coordinating Research Council Real World Emissions Workshop, San Diego, CA, April 7-10, 2013
16. Grossman, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to Neighborhood Planning Unit E, Atlanta, GA, March 5, 2013
17. Grossman, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to Neighborhood Planning Unit N, Atlanta, GA, February 28, 2013
18. Grossman, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the Candler Park Neighborhood Association, Atlanta, GA, March 18, 2013
19. Grossman, A. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the West End Neighborhood Association, Atlanta, GA, June 4, 2013
20. Grossman, A., A. Frackelton, E. Palinginis, A. Akanser, R. Sadana, F. Castrillon, V. Elango, R. Guensler. "Innovative Technology for Sidewalk Assessment: Development and Field Deployment," Association of Pedestrian and Bicycle Professionals Professional Development Seminar, Best Poster Award, Boulder, CO, September, 2013
21. Grossman, A., A. Frackelton, E. Palinginis, A. Akanser, R. Sadana, F. Castrillon, V. Elango, Y. Xu, K. Watkins Guensler, R. "Sidewalk Quality Assessment," STRIDE Reception at the 93rd Annual Transportation Research Board Meeting, Washington, DC., January 2014
22. Grossman, A., V. Elango, A. Frackelton R. Guensler. "The Use of a Sidewalk Quality Assessment Survey in Developing Sidewalk Ratings," Georgia Department of Transportation and Georgia Transportation Institute Transportation Research Poster Session, Atlanta, GA, September, 2013
23. Guensler, R. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to Neighborhood Planning Unit F, Atlanta, GA, February 18, 2013

24. Guensler, R. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the Atlanta Regional Commission, Atlanta, GA, March 15, 2013
25. Guensler, R. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the CDC Built Environment Workgroup, Emory University, Atlanta, GA, June 4, 2013
26. Guensler, R. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the Midtown Neighborhood Association, Atlanta, GA, February 11, 2013.
27. Guensler, R. "An Overview of the Automated Sidewalk Quality Assessment Program," Presentation to the Virginia Highlands Neighborhood Association, Atlanta, GA, February 11, 2013
28. Hadi, M., L. Eleferiadou, A. Kondyli, Y. Xiao, C. Letter, A. Darroudi. "ATDM Strategies for Reducing the Probability of Breakdown," UTC Conference for the Southeastn Region, Orlando, FL, April 2013.
29. Hale, D.K. "Automation for Sensitivity Analysis, Self-Calibration, and Optimization," TRB SimSub Calibration task group meeting (Washington CD), January 12th, 2014
30. Hale, D.K. "Automation for Sensitivity Analysis, Self-Calibration, and Optimization," TRB Traffic Signal Systems Simuation task group mtg (Wash. DC), January 13th, 2014
31. Hale, D.K. "Automated Self-Calibration and HCM-Based Genetic Algorithm Optimization," ITE National SimCap Meeting (Boston, MA), August 7th, 2013
32. Hale, D.K. "Self-Calibration and Sensitivity Analysis in TSIS-CORSIM," Penn State TESC (State College, PA), December 11th, 2013
33. Hu, J., H.C. Frey. "Comparison of Real World Light-Duty Gasoline Vehicle Emissions for High Altitude Mountainous Versus Low Altitude Piedmont Study Areas," Paper 14-1267, For presentation at the 93rd Annual Meeting of the Transportation Research Board, January 12-16, 2014
34. Hunter, E. "Observational Study and Intercept Survey Approach for Modeling Pedestrian Behavior at Midblock Crosswalks," TRB 93rd Annual Meeting, Washington, DC, January 2014
35. Hunter, E., S. Mamidipalli. "Observational Study and Intercept Survey Approach for Modeling Pedestrian Behavior at Midblock Crosswalks," UTC Conference for the Southeast Region, Orlando, FL, April 4-5, 2013
36. Inanloo, B., B. Tansel, X. Jin, A. Bernardo Bricker. "Cargo Specific Air Dispersion and Impact Zone Analysis after Accidental Release of Hazardous Materials," TRB 93rd Annual Meeting, Washington, DC, January 12-16, 2014.
37. Inanloo, B., B. Tansel, X. Jin, A. Bernardo Bricker. "Explosion Impact Analysis of Accidental Ammonia Releases during Transport," TRB 93rd Annual Meeting, Washington, DC, January 12-16, 2014
38. Kondyli, A., C. Letter, A. Elefteriadou. "Incorporating the Breakdown Probability Concept for ATDM Strategies," Poster presentation, TRB 2013 Freeway & Managed Lane Operations Meeting and Conference, Atlanta, GA, June 23-26, 2013
39. Kondyli, A., V. Sisiopiku, A. Barmpoutis. "A 3D Experimental Framework for Exploring Drivers' Body Activity Using Infrared Depth Sensors," (Best Paper Award Finalist), 2nd International Conference on Connected Vehicles & Expo (ICCVE 2013), Las Vegas, NV, December 2013
40. McManus, B., D. Stavrinou, S. Wittig, E. Odom, R. Patel, L. Underwood, E. Schmidt, L.A. Ross. "A systematic review of driving safety in naturalistic studies," Poster presented at

the 92nd Annual Meeting of the Transportation Research Board, Washington, DC,
January 13-17, 2013

41. Mei, B. "Development of a New Commercial Vehicle Travel Model for the Triangle Region," TRB Planning Applications Conference, Columbus, OH, May 7 2013
42. Michalaka, D., M. Zangui, Y. Yin, S. Lawphongpanich. "Deployment Strategies of Manged Lanes on Arterials," Transportation Research Board 93rd Annual Meeting, Washington DC, January 2014
43. Ozkul, S., S. Washburn, D. McLeod. "Revised Version of HCM 2010 Urban Streets Automobile LOS Methodology," Transportation Research Board 92 Annual Meeting, Washington DC, January 2013
44. Palak, G., S.D. Eksioglu, J. Geunes. "Algorithms for Multi-Mode Economic Lot-Sizing Models for Perishable Products with Carbon Emission Considerations," Annual INFORMS Meeting, Minneapolis, MN, Oct 6-9, 2013
45. Palak, G., S.D. Eksioglu, J. Geunes. "Models for Cost Efficient and Environmentally Friendly Inventory Replenishment Decisions of Perishable Products," ISERC Annual Meeting, San Juan, Puerto Rico, May 18-22, 2013
46. Palak, G., S.D. Eksioglu, J. Geunes. "Transportation Mode Selection under Carbon Emission Considerations," International Conference on Industrial Engineering and Operations Management, Istanbul, Turkey, January 27-28, 2014
47. Palmer, W.M. "Quantifying the Costs of School Transportation," 2013 STRIDE Conference, Orlando, FL, April 2013
48. Poros, J. "Houston Existing Development", Houston Civic Center, Houston, Mississippi, December 18, 2013
49. Poros, J. "New Albany Existing Development", Magnolia Civic Center, New Albany, Mississippi, August 12, 2013
50. Ramadan, O.E.M., V.P. Sisiopiku, R.W. Peters. "Sustainability Design and Rating System for Transportation: A Synthesis of Practice," Conference Poster Paper presented at the 93rd Annual Meeting of the Transportation Research Board (TRB), Washington DC, January 13–17, 2014
51. Salamati, K. "Event-Based Modeling of Driver Yielding Behavior to Pedestrians at Two-Lane Roundabout Approaches," UTC Conference for the Southeast Region, Orlando, FL, April 4-5, 2013
52. Schmidt, E., L.A. Ross, E.X. Caamano, D. Stavrinos. "Development of a Comprehensive Physical, Sensory, and Cognitive Assessment Battery for Driving Safety and Behavior," University Transportation Center (UTC) Conference for the Southeastern Region. Orlando, Florida, April 4-5, 2013
53. Schroeder, B. "Empirically-Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossings," UTC Conference for the Southeast Region, Orlando, FL, April 4-5, 2013
54. Shirmohammadi, N., Y. Yin, Y. Nie. "A Tradable Credit Scheme for Managing Morning Commute," INFORMS Annual Meeting 2013, Minneapolis, October 2013
55. Sisiopiku V.P., I. Hosch, O. Smith. "UAB Transportation Engineering Workforce Development Programs," UTC Conference for the Southeastern Region, Orlando, FL, 2013
56. Sisiopiku V.P., S. Mamidipalli, S. "Modeling Pedestrian Behavior at Crossing Locations," SDITE 2013 Annual Meeting, Charlotte, NC, April 2013
57. Stavrinos, D., E. Schmidt, E.X. Caamano, S. Wittig, V. Sisiopiku, S. Classen, L. Ross, L. "Development of a Naturalistic Study of Driving Across the Lifespan," University

Transportation Center (UTC) Conference for the Southeastern Region, Orlando, Florida, April 4-5, 2013

58. Steiner, R. "The Full Cost of School Siting, School Transportation, and Children's Travel to School," ScienceWriters2013, Conference of the National Association of Science Writers and the Council for the Advancement of Science Writing, Gainesville FL, November 2013
 59. Steiner, R., N. McDonald, B. Lytle, M. Palmer, M. Clark. "The Full Cost of School Transportation," University Transportation Center (UTC) Conference for the Southeast, Orlando, FL, April 2013
 60. Steiner, R., S. Washburn, L. Elefteriadou, A. Gan, A. Cavaretta, R. Xu, S. Rachmat, P. Alluri, K. Haleem, D. Saha, A. Diaz. "Roundabouts and Access Management," University Transportation Center (UTC) Conference for the Southeast, Orlando, FL, April 2013
 61. Strawderman, L., C. Lewie, K. King, Y. Huang. "Engaging Engineering Students with Transportation Safety," Proceedings of the HFES 2013 International Annual Meeting, San Diego, CA, Sep 2013
 62. Tansel, B., X. Jin, A. Amekudzi, N. Uddin. "Consequence Based Route Selection for Hazardous Material Cargo: GIS-Based Time Progression of Environmental Impact Radius of Accidental Spills," UTC Conference for the Southeastern Region, Orlando, FL, April 4-5, 2013
 63. Terdalkar, S., D.S. Stavrinos, L. Ross, E.X. Caamano, V. Sisiopiku. "Validation of Data Acquisition Device for the use in Naturalistic Study of Driving across the Lifespan," The 93rd Annual Meeting of the Transportation Research Board. Washington, DC, January 12-16, 2014
 64. Wang, C. "Determining the Free-Flow Speeds in a Regional Travel Demand Model based on the Highway Capacity Manual," TRB Planning Applications Conference, Columbus, OH, May 6 2013
 65. Wang, C., J. Huegy. "Determining the Free-Flow Speeds in a Regional Travel Demand Model Based on the Highway Capacity Manual," TRB Annual Meeting Session 777, Washington, DC, January 2014
 66. Watkins, K. "Cycle Atlanta," **Eight** local events (Atlanta Regional Commission, Young Professionals in Transportation, City of Atlanta, etc.), 2013
- Conference Proceedings based on STRIDE-funded projects are listed below:
 1. Asad, M. C. Le Dantec, A. Guo, A. Misra, A. Poznanski, C. Southern, K. Watkins. "Cycle Atlanta," Bicycle Urbanism Symposium, June 2013
 2. Brodie, S., A. Ingles, A. Amekudzi, R.W. Peters, V. Sisiopiku. "A Review of Sustainability Rating Systems for Transportation and Neighborhood Level Developments," 2013 Green Streets, Highways and Development Conference (ASCE T&DI Conference), Austin, Texas, November 3 - 6, 2013
 3. Cui, X., Z. Li, L. Elefteriadou. "Travel Time Estimation for Signalized Arterials Using Probabilistic Modeling," 92nd Annual Meeting of the Transportation Research Board, Washington, DC, January 2013
 4. Frackelton, A., A. Grossman, E. Palinginis, F. Castrillon, V. Elango, R. Guensler. "Measuring Walkability: Development of an Automated Sidewalk Quality Assessment Tool," From the Outside In: Sustainable Futures for Global Cities and Suburbs, A Specialty Conference Sponsored by the National Center for Suburban Studies, Hofstra University, Hempstead, NY, March 2013

5. Grossman, A., V. Elango, A. Frackelton, R. Guensler. "The Use of a Sidewalk Quality Assessment Survey in Developing Sidewalk Ratings (14-4933)," 93rd Annual Meeting of the Transportation Research Board, Washington, DC, January 2014
6. Guensler, R., A. Frackelton, A. Grossman, E. Palinginis, R. Sadana, F. Castrillon, V. Elango, K. Watkins. "Building a Sidewalk Inventory and Prioritization System," University Transportation Center Conference for the Southeast Region, Orlando, FL, April 2013
7. Hadi, M., Y. Xiao, T. Wang. "IRISDS: a Web-Based System for Information Sharing and Decision Support," ITSA annual Meeting, Nashville, TN, April, 2013
8. Hill, C., L. Elefteriadou. "Lane Changing on Freeways," 92nd Annual Meeting of the Transportation Research Board, Washington, DC, January 2013
9. Inanloo, B., B. Tansel. "GIS-Based Explosion Impact Intensity Analysis of Accidental Ammonia Releases," 2014 World Environmental and Water Resources Congress, Portland, OR, June 1-5, 2014
10. Kondyli, A., V. Sisiopiku, A. Barmpoutis. "Comparative Analysis of Driving Maneuvers Using 3D Body Posture Data." Accepted for presentation at the 5th International Conference on Applied Human Factors and Ergonomics (AHFE 2014), Kraków, Poland, July, 2014.
11. Kondyli, A., V. Sisiopiku, A. Barmpoutis. "A 3D Experimental Framework for Exploring Drivers' Body Activity using Infrared Depth Sensors," International Conference on Connected Vehicles, Las Vegas, NV, December 2-6, 2013
12. Letter, C., L. Elefteriadou. "An Investigation of The Impact of Variable Speed Limit Algorithms Using Simulation," 92nd Annual Meeting of the Transportation Research Board, Washington, DC, January 2013
13. Li, Z., L. Elefteriadou, A. Kondyli, "Modeling Weather Impacts on Traffic Operations: Implementation into Florida's Travel Time Reliability Model," 93rd Annual Meeting of the Transportation Research Board, Washington, DC, January 2014
14. Mariam A., C. LeDantec. "Cycle Atlanta: Data-Driven Discourse in City Planning," Symposium on Urban Informatics, June 2013
15. McDonald, N.C., et al. "Assessing Multimodal School Travel Safety in North Carolina," 93rd Annual Meeting of the Transportation Research Board, STRIDE Poster Session, Washington, DC, January 2014.
16. Misra, A., K. Watkins, C. LeDantec. "Cycle Atlanta – Facilitating GPS Based Data Collection for Bicyclists in Atlanta," Submitted to North American Travel Monitoring Exposition and Conference, 2014
17. Palak, G., S.D. Eksioglu, J. Geunes. "Models for Cost Efficient and Environmentally Friendly Replenishment Decisions of Perishable Products," ISERC Annual Meeting, San Juan, PR, May 2013
18. Steiner, R., Elefteriadou, L., Srinivasan, S., Tice, P., and Lim, K. "Identification and Assessment of Transportation Performance Measures for Growth Management and Transportation Impact Assessment Applications," 13th World Conference on Transport Research in Rio de Janeiro, Brazil, July 2013.
19. Strawderman, L., C. Lewie, K. King, Y. Huang. "Engaging Engineering Students with Transportation Safety," Proceedings of the HFES 2013 International Annual Meeting, San Diego, CA, Sep 2013
20. Tansel, B., X. Jin, A. Amekudzi, N. Uddin. "Consequence Based Route Selection for Hazardous Material Cargo: GIS-Based Time Progression of Environmental Impact Radius of Accidental Spills," University Transportation Center Conference for the Southeastern Region, Orlando, FL, April 4-5, 2013

- Refereed Journal Articles submitted based on STRIDE-funded projects are listed below:
 1. Amekudzi, A. "Evaluating Sustainable Development: A Quality of Life Focus for Transportation Decision Making," TR News, No. 288, September-October 2013
 2. Frackelton, A., A. Grossman, E. Palinginis, F. Castrillon, V. Elango, R. Guensler. "Measuring Walkability: Development of an Automated Sidewalk Quality Assessment Tool," Journal of Suburban Sustainability, Volume 1, Number 1, March 2013
 3. Hadi, M., Y. Xiao, M. Rojas, "Estimation of Diversion Rate during Incidents based on Mainline Detector Data," Journal of Transportation Research Board, January 2013
 4. Hale, D.K. "Directed Brute Force Calibration (patent pending)," IEEE Transactions on Intelligent Transportation Systems, July 2013
 5. Hale, D.K. "Directed Brute Force Calibration (patent pending)," Submitted to Transportation Research Board for presentation only, August 2013
 6. Hale, D.K. "The SASCO Method of Sensitivity Analysis, Self-Calibration, and Optimization," Abstract Accepted by Opt-i in December 2013, full paper due in February 2014
 7. Inanloo, B., K. Shams, X. Jin, B. Tansel. "GIS Based Spatial Analysis of Hazardous Cargo Incidents: Cargo Specific Impact Zone and Intensity," Journal of Hazardous Materials (in review)
 8. Laval, J., H.W. Cho, J.C. Munoz, Y. Yin. "Real-Time Congestion Pricing Strategies for Toll Facilities," Submitted to Transportation Research Part B
 9. Li, Z., L. Elefteriadou. "Maximizing the Traffic Throughput of Turn Bays at a Signalized Intersection Approach," ASCE Journal of Transportation Engineering, Volume 139, Number 5, pp. 425-432, May 2013
 10. Lu, C., L. Elefteriadou. "An Investigation of Freeway Capacity Before and During Incidents," Transportation Letters: The International Journal of Transportation Research, Volume 5, No. 3, pp. 144-153, July 2013
 11. McDonald, N., R. Steiner. "Evaluation of the Safe Routes to School Program," American Public Health Association, Boston, MA, November 2013
 12. Mei, B., Huegy, J. "Peak Spreading Modeling in the Regional Model Setting: Challenges, Promises, and Limitations," submitted to TRB, August, 2013
 13. Misra, A., A. Gooze, K. Watkins, M. Asad, C. Le Dantec. "Crowdsourcing and Its Application to Transportation Planning," accepted for Transportation Research Record.
 14. Ozkul, S., S. Washburn, D. McLeod. "Revised Version of HCM 2010 Urban Streets Automobile LOS Methodology," Transportation Research Record: Journal of the Transportation Research Board, In Press
 15. Palak, G., S.D. Eksioğlu, J. Geunes. "Analyzing the Impact of Carbon Regulatory Mechanisms on Supplier and Mode Selection Decision: An Application in Biofuel Supply Chain," Under 2nd Review: International Journal of Production Economics
 16. Palinginis, E., R. Guensler. "An Automated Approach for Width Estimation: Application on Sidewalk," Transportation Research A
 17. "Salamatı, K., B. Schroeder, D. Gerschhat, N. Roupail. "Event-Based Modeling of Driver Yielding Behavior to Pedestrians and Two-Lane Roundabout Approaches," In Press, Transportation Research Record, Journal of Transportation Research Board. (Best Paper Award by TRB Roundabouts Committee)"

18. "Schroeder, B., N. Roupail (2012), "Event-Based Modeling of Driver Yielding Behavior at Unsignalized Crosswalks," ASCE Journal of Transportation Engineering (announced 2013), Best Paper of the Year for 2012
19. Sisiopiku, V.P., O. Ramadan, N.C. McDonald. "Development of a Cost Breakdown Structure for Quantifying School Transportation Costs for Various Modes," European International Journal of Science and Technology, July 2013, Vol. 2, No. 6, pp. 235-250
20. Soria, I., L. Elefteriadou, A. Kondyli. "Assessment of Car-following Models By Driver Type and Under Different Weather and Traffic Conditions Using Data from an Instrumented Vehicle," Simulation Modelling Practice and Theory 40 (2014) 208-220
21. Tansel, B. "Hydrologic Vulnerability and Preventing Domino Effect Consequences," Hydrology Current Research, Vol. 4, Issue 4, editorial, 1000e113, dx.doi.org/10.4172/2157-7587.1000e113, 2013
22. Tansel, B. "Propagation of impacts after oil spills at sea: Categorization and Quantification of Local vs Regional and Immediate vs Delayed Impacts," International Journal of Disaster Risk Reduction. Vol. 7, pp. 1–8, 2014
23. Wang, C., J. Huegy. "Determining the Free-Flow Speeds in a Regional Travel Demand Model Based on the Highway Capacity Manual," submitted to TRB, August, 2013

Participants and Other Collaborating Organizations

What organizations have been involved as partners?

Organization Name	Location	Contribution
University of Florida	Gainesville, FL	Lead University
Auburn University	Auburn, AL	Partner University
Georgia Institute of Technology	Atlanta, GA	Partner University
Mississippi State University	Mississippi State Univ., MS	Partner University
North Carolina State University	Raleigh, NC	Partner University
University of Alabama at Birmingham	Birmingham, AL	Partner University
University of North Carolina	Chapel Hill, NC	Partner University
Florida Department of Transportation (FDOT)	Tallahassee, FL	Matching funds commitment
Alabama Department of Transportation (ALDOT)	Montgomery, AL	Matching funds commitment
Georgia Department of Transportation (GDOT)	Atlanta, GA	Matching funds commitment
Mississippi Department of Transportation (MDOT)	Jackson, MS	Matching funds commitment
North Carolina Department of Transportation (NCDOT)	Raleigh, NC	Matching funds commitment

Other collaborators

Organization Name	Location	Contribution	Comments
Town of Carrboro (Jeff Brubaker)	North Carolina	Collaboration	
Town of Chapel Hill (Council member Jim Ward)	North Carolina	Collaboration	
Durham-Chapel Hill-Carrboro MPO (Andrew Henry and other staff)	North Carolina	Collaboration	
University of North Carolina Facilities Planning	North Carolina	Collaboration	
Carrboro Bicycle Coalition (Seth Lajeneuse North Carolina and other staff)	North Carolina	Collaboration	
Triangle J Council of Governments (John Hodges Copple and other staff)	North Carolina	Collaboration	
Federal Highway Administration	Washington, DC	Collaboration	
Federal Transit Administration	Washington, DC	Collaboration	
Woman's Transportation Seminar (WTS) International	Washington, DC	Collaboration in the creation of new chapters in the Southeast	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
WTS NC Triangle Chapter	Raleigh, NC	Collaboration	Various K-12 workforce development programs for STRIDE project Number 2012-009S
University of North Florida	Jacksonville, FL	Facilities, collaboration, personnel exchanges	K-12 workforce development program for STRIDE Project Number 2012-009S

21 st Century Community Learning Center of Alachua County	Gainesville, FL	Facilities, collaboration, personnel exchanges	Various K-12 workforce development programs for STRIDE project Number 2012-009S
North Florida WTS Chapter	Jacksonville, FL	Facilities, collaboration, personnel exchanges	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
WTS Central Florida Chapter	Orlando, FL	Facilities, collaboration	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
Center for Transportation and the Environment (CTE) at North Carolina State University	Raleigh, NC	Facilities, Collaborative research Personnel exchanges	Various K-12 workforce development programs for STRIDE Project Number 2012-009S
Highway Safety Research Center at North Carolina State University	Raleigh, NC	Facilities, Collaborative research personnel exchanges	For data extraction of injuries and crashes on STRIDE Project Number 2012-022S
Roybal Center for Translational Research on Aging and Mobility, University of Pennsylvania	Philadelphia, PA	Collaborative research, personnel exchanges	The director of the Roybal Center, Dr. Karlene Ball, is a member of the multidisciplinary Advisory Committee for STRIDE research project 2012-095 . The center has a vast expertise in cognitive research aimed to older adults
Safe Routes to School	Federal program, various states	Personnel exchanges, collaborative research on STRIDE project 2012-067S	Assisted in collecting sidewalk data for STRIDE Project Number 2012-067S
Atlanta Regional Commission	Atlanta, GA	Personnel exchanges, Facilities, collaborative research on STRIDE project 2012-067S	Transportation Division, bicycle and pedestrian planning for STRIDE Project Number 2012-067S

City of Atlanta	Atlanta, GA	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	Department of Public Works, Department of Planning and Community Development for STRIDE Project Number 2012-067S
Atlanta City Council Sidewalk Task Force	Atlanta, GA	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	Members of the research team on STRIDE Project Number 2013-067S participate in the Atlanta City Council Sidewalk Task Force, which involves attending general meetings and subcommittee meetings related to policy and funding for pedestrian facility maintenance. The full Sidewalk Task Force includes city staff from the department of Public Works and department of Planning, elected officials, and pedestrian advocates.
Atlanta Pedestrian Organization (PEDS)	Atlanta, GA	Personnel exchanges on STRIDE project 2012-067S	Staff and volunteers at PEDS participated in initial testing of the sidewalk survey instrument and provided feedback that was then incorporated into the instrument before full scale deployment.
Tulane University	New Orleans, LA	Personnel exchanges, collaborative research, financial support	Collaboration and as partial match for petroleum related releases

Cambridge Systematics	Tallahassee, Florida	Anita Vandervalk participates on the STRIDE External Advisory Board	
National Center for Transportation Systems Productivity and Management (NCTSPM), Georgia Institute of Technology	Atlanta, GA	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region
National Center for Intermodal Transportation (NCITEC), Mississippi State University	Miss. State, MS	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region
National Center for Transit Research (NCTR), University of South Florida,	Tampa, FL	Financial support	Co-sponsors for the UTC Conference for the Southeastern Region
Williams Elementary School	Gainesville, FL	Facilities	For K-12 activities
PK Yonge Research School	Gainesville, FL	Facilities	For K-12 activities
Lincoln Middle School	Gainesville, FL	Facilities	For K-12 activities
Mebane Middle School	Gainesville, FL	Facilities	For K-12 activities
Bishop Middle School	Gainesville, FL	Facilities	For K-12 activities
UF - Lawton Chiles Elementary School	Gainesville, FL	Facilities	For K-12 activities
Boone High School	Orlando, FL	Facilities	For K-12 activities
Arlington Middle School	Jacksonville, FL	Facilities	For K-12 activities
21st Century Community Learning Center, Alachua County Public Schools	Gainesville, FL	Facilities and Collaboration	For K-12 activities

MSU – St. Martins Middle School, Arthur Watson Elementary School; Jackson County Schools, Mississippi; St. Martins Elementary, Mississippi	Pascagoula, MS and St. Martins, MS.	Facilities	For K-12 activities at Mississippi State University
Centennial Campus Magnet Middle School	Raleigh, NC	Facilities	For K-12 activities at North Carolina State University
Cade Museum	Gainesville, FL	Facilities	For K-12 activities at UF
UF Center for Pre-collegiate Education and Training	Gainesville, FL	Facilities	For K-12 activities at UF
University of North Florida	Jacksonville, FL	Facilities and collaboration	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S
University of Florida LTAP	University of Florida, Gainesville, FL	Personnel exchanges, facilities, collaborative research on STRIDE project 2012-067S	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S
RPCGB - Darrell Howard, Deputy Director of Planning Franchesca Taylor, Active Transportation Planner	Birmingham, AL	Personnel exchanges	
North Carolina Local Technical Assistance Program (NC LTAP)	Raleigh, NC	Personnel exchanges	STRIDE K-12 workforce development activities at UF and on STRIDE project 2012-009S

Impact

What is the impact of the program? How has it contributed to transportation education, research, and technology transfer?

- What is the impact on the development of the principal discipline(s) of the program?*
Continued focus and increased emphasis on the safety, livability and economic competitiveness for the Southeast region of the U.S.; increased collaboration between the STRIDE partner universities; increased collaboration with the State DOTs in the region; production of

educational materials related to the research focus areas; production and delivery of various educational and workforce development activities and programs.

- *What is the impact on other disciplines?*
Interdisciplinary collaboration in research projects, education, workforce development and technology transfer. Collaboration between transportation researchers at the partner universities is likely to increase broader collaboration between the universities involved.
- *What is the impact on transportation workforce development?*
Five of out of the eight STRIDE consortium member universities are participating in workforce development programs geared toward K-12 students, and as a result have held various activities in each state. For example, NCSU, UF, and FIU have offered the LEGO® Robot Vehicle Lesson Plans for Secondary Education. The LEGO® Robot Vehicle Lesson Plans have been downloaded from the STRIDE website 65 times by individuals and organizations across the U.S. Engineering outreach activities geared toward young girls have been held at UF and at NCSU at various local schools and in collaboration with WTS chapters. Family Engineering Nights are ongoing at MSU, UAB, FIU and UF.
- *What is the impact on physical, institutional, and information resources at the university or other partner institutions?*
There is increased emphasis and awareness of the importance and breadth of transportation at all partner institutions, as well as other collaborating institutions in the region and nationwide. Availability of various products and reports on our website and distribution through social media will enhance the flow of information.
- *What is the impact on technology transfer?*
STRIDE organized a conference which brought together UTCs in the Southeast region in April 2013 and Georgia Tech is slated to host a second UTC conference in March 2014, which will bring together 39 universities across the country, participating in eight UTCs in the Southeast.
- *What is the impact on society beyond science and technology?*
Increased collaboration between academic institutions; increased collaboration between academia, public and private sectors; development and implementation of the path from research to technology transfer; development and implementation of workforce development activities.

Changes/Problems

- *Changes in approach and reasons for change* – Nothing to report.
- *Actual or anticipated problems or delays and action or plans to resolve them* – Nothing to report.
- *Changes that have a significant impact on expenditures* – Nothing to report.
- *Significant changes in use or care of human subjects, vertebrate animals and/or biohazards* – Nothing to report.
- *Change of primary performance site location from that originally proposed* – Nothing to report.

Special Reporting Requirements

(Award-specific reporting requirements)

- Federal Financial Report – This report is prepared by the grants specialist at UF responsible for managing all STRIDE related financial duties.
- Federal Financial Accountability and Transparency Act (FFATA) Sub-award and Executive Compensation Reporting Requirement – This report is prepared by the College of Engineering contracts office.

List of Selected Projects and PIs (STRIDE 2013)

(The following projects were selected for funding)

Dynamic Traffic Control Interventions for Enhanced Mobility and Economic Competitiveness

PI: Nagui Roupail, Ph.D., North Carolina State University

Co-PI: Mohamed Hadi, Ph.D., Florida International University

\$150,000

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

\$120,000

On-Board-Diagnostics (OBD) Data Integration into Traffic Microsimulation for Vehicle-Specific Fuel Use and Emissions Modeling and In-Vehicle App Testing

PI: Scott Washburn, Ph.D., University of Florida

Co-PIs: Christopher Frey, Ph.D., North Carolina State University; Nagui Roupail, Ph.D., North Carolina State University

\$150,000

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

\$100,000

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

\$150,000

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

\$89,961

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

\$132,972

Applying Livability Performance Measures to Transportation Plans and Projects

PI: Leigh Blackmon Lane, Ph.D., North Carolina State University

\$53,000

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

\$42,452

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

\$150,000

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

\$71,000

List of Selected Projects and PIs (STRIDE 2012)

(The following projects were selected for funding)

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

\$250,313

Empirically-Based Performance Assessment and 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, University of Alabama at Birmingham

\$315,148

Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes

PI: Jorge Laval, Ph.D., Georgia Institute of Technology

Co-PIs: Yafeng Yin, University of Florida; Yingyan Lou, University of Alabama

\$204,526

Signalized Intersection Simulation Program for Education

PI: Scott Washburn, Ph.D., University of Florida

\$34,212

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

\$190,792

Engaging Engineering Students with Transportation Safety: An Educational Module

PI: Lesley Strawderman, Ph.D., Mississippi State University

\$2,610

A Naturalistic Driving Study across the Lifespan

Co-PIs: Despina Stavrinos, Ph.D. and Lesley Ross, Ph.D., University of Alabama at Birmingham

\$125,071

Development of Educational and Professional Training Modules on Green/Sustainability Design and Rating Systems for Neighborhood Development and Transportation

PI: Robert W. Peters, Ph.D., University of Alabama at Birmingham

Co-PI: Adjo Amekudzi, Ph.D., Georgia Institute of Technology

\$45,809

Developing a New Course for Public Transportation Education

PI: Kari Edson Watkins, Ph.D., Georgia Institute of Technology

Co-PI: Jeffrey LaMondia, Ph.D., Auburn University

\$70,000

Automated Sidewalk Quality and Safety Assessment System

PI: Randall Guensler, Ph.D., Georgia Institute of Technology

\$196,667

Development of Pedestrian and Bicycle Transportation Course Modules

PI: Daniel Rodriguez, Ph.D., University of North Carolina at Chapel Hill

Co-PI: Rod Turochy, Ph.D., Auburn University

\$25,750

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