Developing & Transferring Knowledge
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<td>36</td>
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Dear Colleagues,

An important purpose of research is to make its way into practice. Over the past year and as our research projects are being completed, we are preparing workshops and webinars and setting the gears in motion for the Center’s technology transfer activities in 2015 and beyond.

A listing of STRIDE ongoing and completed projects, including those funded through cost-sharing, are provided in Pages 11 – 16 of this annual report. We are planning tech transfer events for many of these to disseminate the findings and products of our work. Our tech transfer activities during 2014 are summarized on Page 20. These include the annual UTC Conference for the Southeastern Region, the WTS Transportation Symposium at the University of Florida, and the STRIDE Student Poster Showcase and Competition during TRB.

Our educational efforts are summarized on Pages 18-19 and include an overview of our Transportation Research Internship Program (TRIP), as well as spotlights on various students from the STRIDE-affiliated universities. On Page 29, find out where some of our STRIDE alumni are now.

Congratulations to Dr. Louis Merlin, formerly of the University of North Carolina at Chapel Hill, for being selected as the STRIDE Center’s Student of the Year for 2014! Congratulations also to Dr. Virginia Sisiopiku, associate professor at the University of Alabama, for being named an ITE Fellow!

As always, we welcome your feedback, and please contact us if you’d like to collaborate in any way with the STRIDE Center.

Regards,

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

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## Notable Accomplishments

- STRIDE Student Poster Showcase & Competition at TRB, Jan. 13, 2014
- Webinar by FDOT Secretary Ananth Prasad on Autonomous & Connected Vehicles in Florida, March 13, 2014
- UTC Conference for the Southeastern Region Hosted by GaTech, March 24-25, 2014
- University of Florida ITE Student Chapter wins 2nd Place in Intercollegiate Traffic Bowl Championship, Aug. 12, 2014
- 2014 STRIDE student of the Year selected, Dr. Louis Merlin, Nov. 10, 2014
- Transportation Symposium on the Future of Transportation hosted by WTS Florida Gator Student Chapter, Nov. 13, 2014

## By the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tr>
<td>M.S. and Ph.D. students supported by STRIDE</td>
<td>39</td>
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<tr>
<td>Undergraduate students</td>
<td>42</td>
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<tr>
<td>Graduate students</td>
<td>40</td>
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<td>Leadership positions in regional, national and international organizations</td>
<td>103</td>
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<tr>
<td>Undergraduates</td>
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<tr>
<td>Graduates</td>
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<tr>
<td>Participants in K-12 events</td>
<td>2353</td>
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<tr>
<td>Summer interns</td>
<td>4</td>
</tr>
<tr>
<td>STRIDE-funded educational course modules developed</td>
<td>8</td>
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<tr>
<td>Cost share research projects completed at UF</td>
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<tr>
<td>Transportation-related advanced degree programs that utilize grant funds to support graduate students</td>
<td>10</td>
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<tr>
<td>Undergraduate and graduate students participating in transportation research projects funded by STRIDE</td>
<td>8</td>
</tr>
<tr>
<td>Total number of STRIDE projects completed in 2014</td>
<td>4</td>
</tr>
<tr>
<td>Students supported by this grant who received degrees in 2014</td>
<td>8</td>
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<tr>
<td>Agencies participating in center activities</td>
<td>71</td>
</tr>
<tr>
<td>Funds in cost sharing for 2014</td>
<td>1.65 million</td>
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*STRIDE Annual 2014 | 5*
Financial Report

STRIDE Expenditures and Cost Share from April 2014 to March 2015

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Cost Share</th>
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<tr>
<td>46%</td>
<td>54%</td>
</tr>
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Staff

STRIDE Key Staff

Lily Eleftheriadou, Ph.D.
STRIDE Director & Professor of Civil Engineering
University of Florida

Ines Aviles-Spadoni, M.S.
STRIDE Coordinator of Research Programs/Services
University of Florida

Richard Long
STRIDE Outreach Coordinator
University of Florida

Alison Tillman, B.A.
STRIDE Assistant
University of Florida

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

Sharon Henry, B.S.
Sr. Fiscal Assistant

Timothy Talley
IT Computer Support

Ragen Tillery
Grants Specialist
Organizational Chart & Partner Institutions

USDOT / OST-R

STRIDE Center Director
Lily Elefteriadou

STRIDE Center Coordinator
Ines Aviles-Spadoni

External Advisory Board (EAB)

Internal Steering Committee (ISC)

Auburn University
Al Giffin

Florida International University
Mohammed Hadi

Georgia Tech
Randall Guensler

Mississippi State University
John Usher

North Carolina State University
Downey Brill

University of Alabama at Birmingham
Virginia Sisiopiku

University of Florida
Ruth Steiner

University of North Carolina at Chapel Hill
Noreen McDonald
Developing & Transferring Knowledge

The STRIDE Center is gearing up to produce webinars and workshops to transfer the results of work produced by funded projects to the transportation community. The following pages provide a snapshot of such projects. If you would like us to produce a webinar or workshops related to one of these projects, we'd like to hear from you!

For our scheduled, upcoming events, past and recorded, visit our Tech Transfer page at: http://stride.ce.ufl.edu/technology-transfer
2012 STRIDE Funded Projects

2012 Projects (Year 1)

2012-022S – 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; Thomas Cook, Ph.D., North Carolina State University
(Draft final report under peer-review)

2012-076S – Signalized Intersection Simulation Program for Education
PI: Scott Washburn, Ph.D., University of Florida
(ongoing)

2012-022S – 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; Thomas Cook, Ph.D., North Carolina State University
(Draft final report under peer-review)

2012-016S – 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, Ph.D., University of Alabama at Birmingham
(Completed)

2012-089S – Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes
PI: Mohammed Hadi, Ph.D., Florida International University
Co-PI: Lily Elefteriadou, Ph.D., University of Florida
(Draft final report under peer-review)

2012-042S – 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
(Draft final report under peer-review)

2012-051S – 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-PIs: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham; Adjo Amekudzi, Ph.D., Georgia Institute of Technology
(On-going)

2012-029S – 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
(Draft final report under peer-review)

2012-085S – Engaging Engineering Students with Transportation Safety: An Educational Module
PI: Lesley Strawderman, Ph.D., Mississippi State University
(Completed)

2012-095S – A Naturalistic Driving Study Across the Lifespan
Co-PIs: Despina Stavrinos, Ph.D. and Lesley Ross, Ph.D., University of Alabama at Birmingham
(Completed)

2012-067S – Automated Sidewalk Quality and Safety Assessment System
PI: Randall Guensler, Ph.D., Georgia Institute of Technology
(On-going)

2012-028S – 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
(Completed)

2012-009S – Engineering: It’s for Girls, Too!
PI: James Martin, P.E., North Carolina State University
Co-PIs: Nina Barker, Florida T2 Center; Lily Elefteriadou, Ph.D., University of Florida
(Completed)

2012-036S – 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, University of Alabama at Birmingham
(On-going)

2012-003S – 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 Huey, Ph.D., North Carolina State University
(Draft final report under peer-review)

2012-004S – 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
(On-going)

2012-024S – Development of Graduate Level Course on Sustainable Asphalt Pavements
PI: James Richard Willis, Ph.D., Auburn University
(Completed)

2012-014S – Emissions Modeling and Integration Into Traffic Micro-Simulation
PI: Scott Washburn, Ph.D., University of Florida
Co-PIs: Nagui Rouphail, Ph.D., University of California, Davis
(Completed)
2013 Projects (Year 2)

2013-009S – 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
(Ongoing)

2013-022S – Signal Timing Optimization With Consideration of Environmental and Safety Impacts
PI: Mohamed Hadi, Ph.D., Florida International University
Co-PI: Lily Elefteriadou, Ph.D., University of Florida
(Ongoing)

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
(Ongoing)

2013-083S – 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
(Ongoing)

2013-062S – 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
(Ongoing)

2013-030S – 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
(Ongoing)

2013-051S – 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
(Ongoing)

2013-018S – Applying Livability Performance Measures to Transportation Plans and Projects
PI: Leigh Blackmon Lane, Ph.D., North Carolina State University
(Ongoing)

PI: James Martin, Ph.D., North Carolina State University
Co-PI: Ruth Steiner, Ph.D., University of Florida
(Ongoing)

2013-032S – 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
(Ongoing)

Final reports on these projects are posted on the STRIDE website at http://stride.ce.ufl.edu/completed-projects. The STRIDE Center is currently in the process of creating webinars and workshops related to the products from the completed projects.
**STRIDE Cost Share Projects**

**North Carolina State University**

Delay and User Cost Estimation for Work Zones on Urban Arterials
Bastian Schroeder, Ph.D.
NCDOT # RP-2013-09

Economic Performance Measures
Leigh Lane
NCDOT # RP-2013-19

SmartLink Baseline for Measurement of Benefits
Nagui Rouphail, Ph.D.
NCDOT # RP-2013-08

Trip Making Patterns of NC’s University Students
Joseph Huegy, Ph.D.
NCDOT # RP-2013-32

Interagency Coordination Protocol
Leigh Lane
NCDOT # HWY-56330

**Florida International University**

Decision Support Systems for Transportation System Management and Operations (TSM&O)

PI: Mohamed Hadi, Ph.D., Florida International University
FDOT BDV29 977

Decision Support Systems for Transportation System Management and Operations (TSM&O)

PI: Mohamed Hadi, Ph.D., Florida International University
FDOT BDK80TWO 977-09

Integrated Corridor Management and Advanced Technologies

PI: Mohamed Hadi, Ph.D., Florida International University
FDOT BDK80TWO 977-11

Integrated Corridor Management and Advanced Technologies

PI: Mohamed Hadi, Ph.D., Florida International University
FDOT BDK80TWO #977-24

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
Cost Match with FIU E&G
Cost Share project 800002547
UF-EIES-1200011-FIU

Towards a Holistic Understanding of Quality of Life: An Analysis of Activity-Travel Patterns on Non-Mid-Week Days

PI: Xia Jin, Ph.D., Florida International University
Cost Match with FIU E&G
Cost Share project 800002381
UF-EIES-1200011-FIU

**Georgia Institute of Technology**

Analysis of Dynamic Pricing and Ramp Metering
Jorge Laval, Ph.D.
GDOT #12-17

Automated Sidewalk Quality & Safety Assessment System
Randall Guensler, Ph.D.
GDOT #12-16

Using Crowdsourcing to Prioritize Bicycle Route Networks
Kari Watkins, Ph.D.
GDOT #14-39

K-12 Workforce Development Activities: Engaging in Engineering Initiative With Centennial Elementary School
Yanzhi Ann Xu, Ph.D.
GDOT #14-08

**University of Alabama at Birmingham**

Modeling Empirically Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossing
Virginia Sisiopiku, Ph.D.
ALDOT # 930-843

UAB Administration and Project Management for STRIDE
Virginia Sisiopiku, Ph.D.
ALDOT # 930-843

Development of Educational and Professional Training Modules on Green/Sustainability Design and Rating Systems for Neighborhood Development and Transportation
Robert Peters, Ph.D.
ALDOT # 930-843

**University of Florida**

Planning for Incorporating Ancillary Demands in the Next Generation FSUTMS
Siva Srinivasan, Ph.D.
FDOT #BDK-77-931-16

Lifting HOV/HOT Lane Eligibility and Shoulder Use Restrictions for Traffic Incident Management
Yafeng Yin, Ph.D.
FDOT #BDK-77-977-23

Towards a Holistic Understanding of Quality of Life: An Analysis of Activity-Travel Patterns on Non-Mid-Week Days

PI: Xia Jin, Ph.D., Florida International University
Cost Match with FIU E&G
Cost Share project 800002381
UF-EIES-1200011-FIU

Georgia Institute of Technology

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ALDOT # 930-843

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FDOT #BDK-77-931-16

Lifting HOV/HOT Lane Eligibility and Shoulder Use Restrictions for Traffic Incident Management
Yafeng Yin, Ph.D.
FDOT #BDK-77-977-23
Roundabouts and Access Management
Ruth Steiner, Ph.D. and Scott Washburn, Ph.D.
FDOT #BDK-77-977-22

Estimation of Capacities on Florida Freeways
Lily Elefteriadou, Ph.D.
FDOT #BDV32-977-03

Comparison of Methods for Measuring Travel Time at Florida Freeways and Arterials
Lily Elefteriadou, Ph.D.
FDOT #BDV32-977-02

Comparison of Methods for Measuring Travel Time at Florida Freeways and Arterials
Yafeng Yin, Ph.D. and Siriphong “Toi” Lawphongphanich, Ph.D.
FDOT #BDV32-977-01

Deployment Strategies of Managed Lanes on Arterials
Siva Srinivasan, Ph.D.
FDOT #BDV32-977-04

Comparative Methods for Measuring Travel Time at Florida Freeways and Arterials
Lily Elefteriadou, Ph.D.
FDOT #BDV32-977-02

Crash Prediction Method for Freeway Facilities with High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) Lanes
Siva Srinivasan, Ph.D.
FDOT #BDV-32-977-04

Local Technical Assistance Program for Transportation Agencies 2013
Nina Barker
FDOT #BDV33-977-01

Local Technical Assistance Program for Florida Transportation Agencies 2014
Chris LeDew, P.E.
FDOT #BDV33-977-02

Before and After Implementation Studies of Advanced Signal Control Technologies in Florida
Lily Elefteriadou, Ph.D.
FDOT #BDV32-977-05

Policy Implications of Automated Vehicle Technology
Siva Srinivasan, Ph.D., Carl Crane, Ph.D., and Ruth Steiner, Ph.D.
FDOT #BDV32-977-06
**Completed K-12 Projects**

LEGO® Robot Vehicle Afterschool Workshops: Transportation Engineering Problem Solving (Modules 1-5) (YR 2012)
PI: James Martin, P.E., North Carolina State University (Completed)

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

Transportation Workforce Development at UAB (YR 2013)
PI: Virginia Sisiopiku, Ph.D., University of Alabama at Birmingham (Completed)

Family Engineering Night STRIDE for K-12 Workforce Transportation Workforce Development at Mississippi State University (YR 2012)
PI: Eric Heiselt, Ph.D., Mississippi State University (Completed)

K-12 Workforce Development in Transportation Engineering at UF (YR 2012)
PIs: Nina Barker and Leslie Washburn, P.E., University of Florida (Completed)
Education

STRIDE 2014 Summer Interns

Four students participated in the STRIDE Center’s Transportation Research Internship Program (TRIP). Students in this program worked on research projects with a faculty adviser and graduate students and presented the results of their work at the end of the internship. TRIP runs from mid-May to early August each year.

Kory Harb (UF)
Adviser: Dr. Yafeng Yin, Transportation Program, Civil Engineering, UF
Project: Developing agent-based simulation models to learn about the impact and implementation of real-time parking services via smartphone applications

Megan McGinley (UF)
Adviser: Dr. Scott Washburn, Transportation Program, Civil Engineering, UF
Project: Analyzing a new active traffic demand management (ATDM) software

Brian Pitman (UF)
Adviser: Dr. Scott Washburn, Transportation Program, Civil Engineering, UF
Project: Creating software to simulate emissions given off by cars using CORSIM

William Woolery (Georgia Tech)
Adviser: Dr. Mike Hunter, School of Civil and Environmental Engineering, GaTech
Project: Working on research to identify changes in visual search patterns of drivers as environments around become more complex

Pictured at top is William Woolery. Pictured at left, from left to right is Megan McGinley, Brian Pitman and Kory Harb.
David Farris (Auburn University)
In January 2013, Dr. James Willis launched a sustainable pavements graduate course at Auburn University through a STRIDE-funded project. Out of the six graduate students involved in the pilot program, some decided to focus on this topic for their theses, including David Farris, who was completing a master’s degree in civil engineering with a focus on pavement and materials engineering. For his graduate research, David is investigating the use of Recycled Asphalt Shingles (RAS) with the main goal of drawing conclusions about the activation of RAS in Asphalt Mixtures. David completed his master’s degree in May 2014. He is now a graduate research assistant at the National Center for Asphalt Technology in Auburn, as well as working as a corporate technical manager at Recovery Technology Solutions. In his spare time, he dabbles in photography and amateur programming and tinkers with electronics and microcontrollers.

Don Watson (University of Florida)
Don Watson is a fourth year Ph.D. student in Civil Engineering at UF, focusing on transportation engineering. As part of his Ph.D. project, he is working with Dr. Scott Washburn on the NCHRP 17-65 project titled “Improved Analysis of Two-Lane Highway Capacity and Operational Performance.” His task in this project is to evaluate current methods for incorporating the effect of trucks in two-lane highway operational analyses. The Highway Capacity Manual (HCM) currently uses passenger car equivalent (PCE) values to account for the effect of trucks. This approach has been subject of criticism, due to PCEs not being sensitive enough to the characteristics of truck performance and interactions with geometry. This issue can be even more profound on two-lane highways, where geometric alignments can be widely varying. In addition, truck performance characteristics have improved considerably since the last update to the HCM two-lane highway analysis methodology. At the very least, new PCE values based on current truck performance are needed. Using both field and simulation data, Don will compare the HCM PCE approach to other alternatives used to capture the effect of trucks. He will utilize two simulation tools to generate the simulation data—TransModeler and SwashSim. TransModeler is a commercial simulation tool, maintained and distributed by Caliper Corporation, while SwashSim is a custom tool developed and maintained by Dr. Washburn. One of the key features of SwashSim is the ability to model individual vehicle characteristics and dynamics in great detail; thus, being able to account for the effects of roadway design features on vehicle performance with more accuracy than other simulation tools. Don is currently helping Dr. Washburn incorporate the vehicle movement logic specific to two-lane highway operations (such as passing in the oncoming lane) in SwashSim.

Jack Halsburg (University of Florida)
Jack graduated from UF with his master’s degree in civil engineering focusing on transportation engineering. He worked on a STRIDE project with Dr. Scott Washburn titled “Emissions Modeling and Implementation into Traffic Micro-Simulation,” researching the various ways in which vehicle emissions are measured. Currently, Jack works as an analyst in transportation planning and traffic operations for Kimley-Horn and Associates, Inc., in West Palm Beach, Fla.

Gökçe Palak (Mississippi State University)
Gökçe studied in the Ph.D. program of the Industrial and Systems Engineering department at Mississippi State University. Having completed her Ph.D. dissertation in August 2013, she graduated in December 2013. During the last year of her graduate program, she worked with Dr. Sandra Eksioglu on a STRIDE funded project titled “Analyzing the Impact of Carbon Regulatory Mechanisms on Supply Chain Management,” which aims to develop models that minimize replenishment related costs in the supply chain, while accounting for the carbon emissions due to transportation and inventory holding. Gökçe is currently working as a visiting assistant professor of quantitative methods in the Harry F. Byrd, Jr. School of Business at Shenandoah University for the 2013-2014 academic year, after which, she would like to continue a career in academia. She has been taking lessons to learn the flute and loves theater.

Bahareh Inanloo (Florida International University)
After completing a bachelor’s degree in civil engineering and a master’s degree in water resources and environmental engineering, Bahareh turned to a Ph.D. in environmental engineering to continue focusing on research. Now as a Ph.D. student in the Department of Civil and Environmental Engineering at Florida International University, Bahareh is working under the supervision of Dr. Berrin Tansel on the STRIDE project titled “Consequence Based Route Selection for Hazardous Material Caro: GIS-Based Time Progression of Environmental Impact Radius of Accidental Spills.” The project aimed to assess hazardous material cargo routing options to reduce potential risks due to spills and ultimately provide tools for developing strategies to minimize risks of transportation accidents which impact human health and safety as well as environmental quality.
Technology Transfer Activities

STRIDE Student Poster Showcase & Competition, TRB 2014
Twenty-two students participated in the STRIDE Student Poster Competition held in conjunction with the University of Florida Transportation Institute (UFTI) Reception during the 93rd Annual Meeting of the Transportation Research Board in Washington, D.C., in January. Winners of the poster competition included (see image at bottom) GaTech graduate student Hyun Woong Cho, who came in 1st Place for his poster titled “Real-Time Congestion Pricing Strategies for Toll Facilities;” 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 the University of Florida 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.”

UTC Conference for the Southeastern Region Held in Atlanta, Ga.
The University Transportation Center (UTC) Conference for the Southeastern Region was held March 24-25, 2014, and hosted by the National Center for Transportation Systems Productivity and Management (NCTSPM), a Tier-1 UTC at GaTech. Approximately 160 people attended the conference. There were 36 papers and 47 posters presented. Sessions included Operations and Management, Bike/Pedestrians, Transit, Safety, Infrastructure, and Economics and Freight, and a state DOT panel titled “How Can Universities Better Assist State Highway Agencies (SHA) With Deployment of Research Results” was held with DOT participation from Alabama, Florida, Georgia, North Carolina, and Mississippi. Student participation was also part of the conference with a special session set aside for student chapters of WTS and ITE. The first UTC conference was conceptualized by STRIDE, a regional UTC housed at the University of Florida, which hosted the first conference in March 2013.

Webinar by FDOT Secretary Ananth Prasad on Autonomous & Connected Vehicles in Florida
FDOT Secretary Ananth Prasad spoke on “The Future of Transportation in Florida and Beyond: Autonomous and Connected Vehicles” at the University of Florida campus on March 13, 2014. The seminar was also offered as a live webcast and was hosted by the University of Florida Transportation Institute (UFTI), STRIDE, and the UF College of Engineering. Secretary Prasad addressed an audience of more than 50 students, faculty and staff. He said Florida legislation now allows for testing of automated vehicles, and it is one of four other states, including California, Michigan and Nevada that will serve as a test bed for connected vehicle infrastructure.

Mohammed Hadi of FIU Speaks at USDOT/OST-R on Students & ITS Careers
Associate Professor Mohammad Hadi from Florida International University in Miami, was one of the guest speakers during the Educating Students for ITS Careers: Are Universities Meeting the Challenge? webinar hosted by USDOT/OST-R on Feb. 6, 2014, in Washington, D.C. Dr. Hadi spoke about his experience teaching ITS to graduate students.

WTS Transportation Symposium on the Future of Transportation
Guest panelists Alex Bond of the Eno Center for Transportation, Anoch Whitfield of Tindale Oliver and Debbie Leistner of the City of Gainesville were invited to speak on the Future of Transportation and other issues during the 4th WTS Transportation Symposium on Nov. 13, 2014, at the University of Florida campus. The event was well attended with more than 40 guests comprised of students and transportation professionals.
(Top picture) Panelists at the UTC Conference for the Southeastern Region in Atlanta, Ga. (Middle picture) UF students at the STRIDE Student Poster Showcase and Competition during TRB 2014. (Bottom picture) WTS Florida Gator Student Chapter members.
Congratulations to Louis Merlin, STRIDE Student of the Year!

Dr. Louis Merlin has been selected as the STRIDE Student of the Year for 2014. Dr. Merlin graduated in 2014 from the City and Regional Planning program at the University of North Carolina (UNC) Chapel Hill, a STRIDE consortium member. Currently, Dr. Merlin is the Dow Sustainability Postdoctoral Fellow at the University of Michigan. He holds an undergraduate degree in math from Yale, a master’s degree in city planning from GaTech and was a practicing planner before pursuing doctoral studies at UNC.

Dr. Virginia Sisiopiku

Associate Professor
University of Alabama at Birmingham
Named ITE Fellow, Fall 2014

Gauen Alexander
2014 ALSITE Billy T. Jones Memorial Scholarship (UAB)

Margaret-Avis Akofio-Sowah
Leadership Legacy Graduate Scholarship (GaTech)

Thomas Chase
Pruthvi Manjunatha
Don Watson
2nd Place, UF Traffic Bowl Team, 2014

Xuanwu Chen
Henry P. Boggs Student Paper Award, 2014 (FIU)

Ramadan Ossama
Outstanding Graduate Student Engineer in Civil, Construction, and Environmental Engineering, 2014 (UAB)

Seckin Ozkul

Somaye Fakharian Qom
ITS Florida Anne S. Brewer Scholarship (FIU)

Atiyya Shaw
Helene M. Overly Graduate Scholarship (GaTech)

Kristen Schneider
Sharon D. Banks Memorial Scholarship, WTS South Florida Chapter, 2014 (UF)

Mamidipalli Shrikanth
2014 GAFP Scholarship, UAB Graduate School and CCEE (UAB)

Kelly Smulovitz
Sharon D. Banks Memorial Undergraduate Scholarship (GaTech)

Ruoying Xu
Eisenhower Award 2014 (UF)

Yinan Zheng
Helene M. Overly Memorial Scholarship, WTS South Florida Chapter, 2014 (UF)
Clockwise: The WTS Florida Gator Student Chapter during the Transportation Symposium at UF, fall 2014; A student with his poster at the STRIDE Student Poster Showcase and Competition; Dr. Ruth Steiner (middle) with Alex Bond of Eno (former UF student) and Ed Mierzejewski (former director at CUTR/USF) during the UF Reception at TRB.
Activities at STRIDE Consortium Universities

Dr. Daniel Rodriguez Hosted Former Mayor of Bogota, Colombia at UNC Chapel Hill

Enrique Peñalosa Londoño, who served as Bogota’s mayor from 1998 to 2001, was invited by UNC Chapel Hill to give a public talk on “Cities, Equity and Quality of Life.” Mr. Peñalosa Londoño believes that, “An advanced city is not a place where the poor move about in cars, rather it’s where even the rich use public transportation” and that, “A bikeway is a symbol that shows that a citizen on a $30 bicycle is equally important as a citizen on a $30,000 car.” The former mayor interacted with UNC and Duke University graduate students and with local leaders to discuss decision-making related to sustainable transportation topics. Mr. Peñalosa Londoño worked as a journalist and consultant on urban and transportation policy. He is a politician who co-founded the Green Party of Colombia and a presidential candidate for the country’s elections.

Former STRIDE Researcher is Vice-Chair of Safe Mobility for Older Person TRB Committee

Dr. Lesley Ross, formerly at UAB, is Vice-Chair of Safe Mobility for Older Persons Committee at TRB. Dr. Ross, who is the co-PI on the STRIDE funded project titled “A Naturalistic Driving Study Across the Lifespan,” will once again serve as the vice-chair of the Safe Mobility for Older Persons Committee TRB Committee. She is now an assistant professor of Human Development and Family Studies at Penn State University.

STRIDE Funded Pedestrian Safety Virtual Reality Prototype Featured in Local Media

Dr. David Schwebel, a psychology professor at the University of Alabama at Birmingham, is using a Virtual Reality prototype to teach children how to safely cross the street. The project is now complete and in the peer-review stage. The prototype, which was placed at the YMCA Youth Center in Birmingham, Ala., in summer 2014, has been featured on various local media sources in the Birmingham area. The STRIDE-funded project is titled “Teaching School Children Pedestrian Safety: A Pragmatic Trial Using Virtual Reality.” Below are two of the news articles as examples:

UAB psychologist develops simulator to help kids learn how to safely cross a street (WNCN, Birmingham, Ala.)

Walk this way: UAB professor creates simulator for pedestrian safety (bizjournals.com)
Clockwise from left: Enrique Peñalosa; Alex Bond (middle) with Jessica Wallet (at left) and panelists at the WTS Transportation Symposium at UF; Dr. Lily Elefteriadou at the UF Reception with her book on Traffic Flow Theory; Dr. Randall Guensler and Dr. Kari Watkins with Dr. Mike Hunter (in the back), all from GaTech during the UTC Conference for the Southeastern Region hosted by GaTech in 2014.
WTS & ITE Student Chapters

Florida International University (FIU)
As a newly established chapter, the Florida International University (FIU) Women’s Transportation Seminar (WTS) Student Chapter focused on promotion. A variety of academic and social activities were held, such as the Engineering Expo in February, where members presented in the IITS (Integrated Intelligent Transportation System) lab and the Driving Simulator lab, introducing transportation engineering to grade school children. In fall 2014, the chapter received official recognition from WTS International. The student chapter, in collaboration with FDOT, started a project titled “Evaluation of Downtown Pedestrian Priority Zone Strategies” in October 2014.

The ITE Student Chapter at FIU hosted 10 distinguished professionals from both the academia and industry as guest speakers in the spring and fall of 2014. The chapter members attended the TRB 93rd Annual Meeting in Washington D.C., in January 2014, participating in poster presentations and technical sessions. Members also attended the 2014 FSITE/SFWTS Annual Meeting in Boca Raton in November 2014, and participated in poster presentations and other technical sessions. The chapter won the “ITE District 10: Student Chapter Award” for outstanding activities throughout the previous year. Chapter member Xuanwu Chen received two awards: “District 10: Henry P. Boggs Student Paper Award” and “Bill McGrath Scholarship.” In February, the chapter hosted a webinar on Talking Technology and Transportation (T3): “Educating Students for ITS Careers: Are Universities Meeting the Challenge?” The speakers and participants discussed ITS education programs in FIU as well as the educational needs for the delivery of ITS learning.

North Carolina State University (NCSU)
The focus for NCSU’s ITE Student Chapter for the 2014 school year was on increasing participation among undergraduate students and all members at regular chapter meetings. NCSU ITE worked with transportation professors on sharing the benefits of ITE with their undergraduate students. Members actively sought input on speakers for monthly business meetings. A frequent request was to highlight how research can be beneficial outside of an academic setting. Additional topics include a focus on the public outreach phase of projects, the difference between working in the private sector versus the public sector versus academia, and disseminating real-time transportation information through smart phone applications. In addition to meetings, students also participated in a semi-annual adopt-a-highway project.
Georgia Institute of Technology (GaTech)

In January 2014, WTS@GT convened at the WTS Annual Winter Reception at TRB in Washington D.C. In Spring 2014, the chapter volunteered with Cool Girls Atlanta, an organization that is dedicated to the empowerment of girls – mostly at risk teens in the Atlanta area. WTS@GT continued volunteer work with Introduce a Girl to Engineering Day at Chamblee Charter High School in February. In September, WTS@GT hosted its first general body meeting – a scholarship panel. Six scholarship winners shared their experience of applying for scholarships in transportation. In October, four of the top female transportation leaders in Atlanta formed a panel to share their experiences and insights from working in the transportation industry. The discussion offered perspectives from a variety of transportation career pathways including transit, county and city government, and engineering and planning consulting.

University of Alabama at Birmingham (UAB)

UAB ITE chapter members participated in the 93rd Annual TRB meeting, where three representatives presented posters at the STRIDE student poster competition. Members participated in the spring and fall 2014 ALSITE meetings where they attended technical sessions, and took advantage of networking opportunities. Three chapter members participated in the Traffic Bowl Competition at the Spring ALSITE Meeting. In October, the UAB ITE Student Chapter hosted a presentation by Dr. Julie Price on “UAB Efforts Toward a Sustainable Campus.” On Oct. 10, 2014, Dr. Virginia P. Sisiopiku, ITE Student Chapter Faculty Advisor, offered a Career Information Session focusing on transportation engineering.
University of Florida (UF)

The WTS Florida Gator Student Chapter attended the UTC Conference for the Southeastern Region in Atlanta, Ga., on March 2014. They also hosted a booth with the ITE chapter during UF’s Engineering Week, and a workshop with Marsha Anderson-Bomar titled “The Language of Leadership.” In fall 2014, the WTS student chapter at UF held its annual transportation symposium with guest panelists from the Eno Center for Transportation, Tindale Oliver and the City of Gainesville, where speakers addressed the future of transportation and funding.

UF’s ITE student chapter hosted three transportation seminars in 2014 featuring work conducted by transportation professionals: “Developing Traffic Signal Control in a Developing World” presented by Dr. Gregory Brodski, President of AGA Group, Inc.; “Intelligent Transportation Systems in Alachua County” co-hosted with WTS, presented by Matt Weisman, a UF graduate and now current Traffic Operations Manager for the City of Gainesville; and “Florida’s Program for Automated Vehicle Highways (AVH) and Engineering Education Considerations for AVH” presented by UFTI faculty Dr. Scott Washburn. ITE also hosted a webinar on Adaptive Traffic Control Systems (ATCS) in October. ITE members attended the 2014 Florida Section of ITE Annual Meeting in November, in Boca Raton, Fla., where ITE member Miguel Lugo received the 2nd place prize of $100 for his poster titled, “Definitional Issues: What Is a Self-Driving Car?”

Alumni: Where are they now?

Natalia Barbour, M.S.
Doctoral Teaching/Research Assistant
University of South Florida, Tampa, Fla.
Attended University of Alabama at Birmingham

Shilpa Boppana, B.A.
Graduate Student, Clinical Psychology
University of Mississippi, Oxford, Miss.
Attended University of Alabama at Birmingham

Candace Brakewood, Ph.D.
Assistant Professor of Civil Engineering
City College of New York, New York, N.Y.
Attended Georgia Institute of Technology

Donielle Curry, B.S.
Master's Degree Student, Clinical Psychology
Auburn University, Auburn, Ala.
Attended University of Alabama at Birmingham

Yingfei Huang, MAURP
Transportation Analyst
Cambridge Systematics, Ft. Lauderdale, Fla.
Attended University of Florida

Ben Lytle, MAURP
Transportation Planner
AECOM, Orlando, Fla.
Attended University of Florida

Ann McGrane, M.C.R.P.
Leadership Fellow
Port Authority of N.Y. & N.J.
Attended University of North Carolina at Chapel Hill

Yiqiang Ouyang, Ph.D.
Associate Engineer
Lexis/Nexis Risk Solutions, Houston, Tex.
Attended University of Florida

Jiabin Shen, Ph.D.
Postdoctoral Researcher
Nationwide Children's Hospital, Ohio State University, Columbus, Ohio
Attended University of Alabama at Birmingham

Suwan Shen, Ph.D.
Assistant Professor
Department of Urban and Regional Planning, University of Hawaii, Manoa, Hawaii
Attended University of Florida

David Wasserman, MAURP
Planner/GIS Programmer Intern
Fehr & Peers, San Francisco, Calif.
Attended University of Florida

Sarah Wright, B.A. (not pictured)
M.S./Ph.D. Program Student, Psychology
University of Southern Mississippi, Hattiesburg, Miss.
Attended University of Alabama at Birmingham

Ruoying Xu, M.S., MAURP
Ph.D. student
Department of City and Regional Planning, University of California at Berkeley
Attended University of Florida

Shanty Yulianti Rachmat, Ph.D. (not pictured)
Lecturer
Bandung Institute of Technology, Bandung, Indonesia
Attended University of Florida
K-12 Workforce Development

Engaging in Transportation Engineering Initiatives with K-12 Students

Overview
The Georgia Institute of Technology is involved in several K-12 outreach initiatives in the metro Atlanta area. Transportation researchers and students at Georgia Tech strongly believe it is important to be involved in the larger community and enrich young talent and shape the future workforce. Transportation engineering is an exciting field with a large impact on society and the economy of today and tomorrow, and it is critical to spark interest early. These programs and initiatives are especially important for providing support and contact with members of underserved groups in transportation engineering such as women and minorities.

Elementary & Middle School

Overview
Georgia Tech researchers and students are working with 6th and 7th graders at the local public elementary school to introduce students to transportation engineering. The lessons include history, evolution, evolution, reasons for, and implementation of transportation engineering. Students are exposed to transportation engineering by identifying ways to get people and objects from point A to point B.

About Centennial Place Academy
- Demographics: 89% African American, 3% Caucasian, 1% Hispanic, 2% Asian, 4% Other
- 77% of students are eligible for federally subsidized lunch.
- Grade 8 graduation rates from the Centennial Place neighborhood are below state averages.

Opening Session
The primary event of Summer 2014 was a large event that included a workforce development component for older and younger K-12 students.

Hands-On Research Sessions
Transportation Research: "A Day in the Life of Transportation Engineering" - Students explored various aspects of transportation engineering, including transportation system design, transportation engineering job functions, and transportation engineering projects.

Middle School Summer Camps

University Transportation Center

Overview
For two years, NTSIPM has partnered with Chamblee Middle School, Fretwell Park High School, and Georgia Tech Transportation Int. to host Transportation for Students (T4S) programs focused on developing transportation-related curriculum for use in middle and high school classrooms.

Summer Camps
- Two-week long summer camps were held in 2013 and 2014.
- Students are exposed to transportation principles in the classroom and in hands-on activities.
- Students participated in various transportation-related activities, including the development of transportation-related projects.
- Students learned about transportation planning, safety, and infrastructure.
- Students learned about transportation careers and the importance of transportation.

Curriculum Development
- Transportation Curriculum is developed at Chamblee High School and Fretwell Park High School.
- Teachers from Chamblee High School and Fretwell Park High School lead the transportation curriculum for Transportation for Students (T4S) program.
- Transportation for Students (T4S) program is implemented in 8th-grade classrooms at Chamblee High School and Fretwell Park High School.

High School Outreach

Decatur & Kennsaw Mountain High School

Overview
The Georgia Tech transportation team has a long history of education initiatives aimed at the high school level. This year, the team focused on outreaching to high school students and engaging them in transportation engineering. The team worked with high school students as part of the outreach program.

Goals and Objectives
- Introduce high school students to transportation engineering, its impact on society, and the career opportunities in transportation engineering.
- Engage high school students in transportation-related activities, such as simulations, hands-on projects, and field trips.
- Provide high school students with opportunities to explore transportation engineering as a potential career.

Kennsaw Mountain High School
- A high school located in the Atlanta area.
- The school is involved in transportation engineering activities.
- The school has developed a partnership with Georgia Tech to provide transportation engineering education to students.
- The school has implemented a transportation engineering curriculum for high school students.

Workforce project PIs from across five STRIDE universities collaborated on a poster showcasing workforce development activities which was presented at the 2nd Annual University Transportation Center (UTC) Conference for the Southeast Region March 2014. (Poster image at top right.)

In 2012 and 2013, the STRIDE Center provided funding to five consortium members to establish K-12 activities at their home institutions: Florida International University, Georgia Institute of Technology, Mississippi State University, North Carolina State University, University of Alabama at Birmingham and the University of Florida. The primary focus of these projects was to increase interest of grade-level students in science, technology, engineering and mathematics. Below is a snapshot of some of the activities that took place in 2014. Across all STRIDE universities, there were 2,353 participants in STRIDE Workforce Development (WFD) events.

North Carolina State University (NCSU)

NCSU presented their “Introduce a Girl to Engineering” workshops across the state in 2014, and co-sponsored multiple “Transportation YOU” events. Their “LEGO® Robot Vehicle Afterschool Workshops: Transportation Engineering Problem Solving” final report was submitted in March 2014. LEGO® robot vehicles were purchased, and graduate students were enlisted to present the STRIDE LEGO® curriculum downloaded from UF to middle school students.

University of Alabama at Birmingham (UAB)

The UAB K-12 Workforce Development Project draft final project report was submitted for external review on December 2014. The UAB WFD personnel conducted “Kids in Engineering Day” and “Girls in Science and Engineering” programs at multiple venues to youth across the state. A booth presented WFD topics at a University Career Fair in May 2014 to K-4th grade students.

Florida International University (FIU)

FIU K-12 Workforce Development Project personnel collaborated with WTS and ITE student chapters for outreach at local middle and high schools and during a February 2014 Engineering EXPO. Also in 2014 was the development of a resource book for compilation of hands-on educational activities focusing on transportation.

Georgia Institute of Technology (GaTech)

GaTech’s “Engaging in Engineering Initiative with Centennial Elementary School” project saw much success in 2014, with multiple two-hour sessions with 5th grade students, as well as a two-day immersive program. GaTech ITE and WTS graduate students volunteered to assist with the site visits. The team submitted a paper to the 2015 American Society for Engineering Education (ASEE) Southeast Section Conference, “Introducing Transportation Engineering to Diverse K-8 School Students.”
University of Florida (UF)
UF’s K-12 Workforce Development Project personnel published curriculum for “LEGO® Robot Vehicle Lesson Plans for Secondary Education,” which was downloaded all over the country in 2014. LEGO® courses, “Engineers Change the World” workshops, and SimCity modules were conducted at several local schools and youth programs. Two-hour traffic simulations, lab tours, and a Family Engineering Night were completed throughout the year to high school aged youth, with the assistance of UF student chapters of ASCE, ITE, and WTS.
Clockwise from left: Dr. Lily Elefteriadou and Dr. Daniel Rodriguez at the UF Reception during TRB; Judges for the STRIDE Student Poster Competition at TRB; Students who participated in the STRIDE Student Poster Showcase and Competition.


Khazraeian, S., Xiao, Y., Hadi, M., and Aghdashi, S. “Application of the Upcoming HCM Managed Lane Procedure to Pylon-Separated Managed Lane Analyses,” Accepted for presentation at the 94th TRB Annual Meeting and being considered for publication at the Journal of Transportation Research Board.


Sisiopiku, V. “A Probit-Based Pedestrian Gap Acceptance Model for Mid-Block Crossing Locations,” Submitted in July 2014 to Journal of the Transportation Research Board.


Presentations


Amekudzi, A. Presentations on STRIDE project “Livability Performance Measures to Transportation Plans and Projects” delivered at Broward County MPO Workshop, August 2014.


LaMondia, J., Moore, N., and Damghani, B. “Comparing Bicycle LOS with Cyclists’ Perceived Level of Safety,” 2nd Annual University Transportation Center (UTC) Conference for the Southeastern Region, Atlanta, Ga., March 24-25, 2014.


Michalaka, D., Zangui, M., Yin, Y., and Lawphongpanich, S. “Deployment Strategies of Managed Lanes on Arterials,” Transportation Research Board 93rd Annual Meeting,
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Smith, T., Becerra, Z., Corso, G., and Kelling, N. “Detecting Changes in the Direction of


