

Transportation Institute UNIVERSITY of FLORIDA

Annual Report
July 2016 - June 2017

# **UFTI VISION STATEMENT**

To conduct and foster impactful, cross-cutting, multimodal transportation research; to educate the next generation of transportation leaders; and to facilitate technology transfer.

# **UFTI MISSION STATEMENT**

To lead the profession in shaping a better transportation future by functioning as a preeminent center of multidisciplinary transportation research, students' top choice for transportation education, and a provider of stateof-the-art analysis and decision-support tools.

# TABLE OF CONTENTS

- 3 Director's Message
- **UFTI By The Numbers** 4
- Research Highlights 4
- Education 8
- Alumni Highlights 9
- 9 **UFTI Student Chapters**
- **Technology Transfer** 10
- 13 **UFTI in the News**
- 14 Internal Steering Committee
- 15 External Advisory Board
- 16 **UFTI Core Centers**
- Selected Projects 18
- Selected Publications 20
- 22 Selected Presentations

#### MANAGING EDITOR

Lily Elefteriadou, Ph.D. Professor & Director University of Florida Transportation Institute (UFTI) elefter@ce.ufl.edu

#### ASSISTANT EDITOR

Ines Aviles-Spadoni, M.S. **UFTI/STRIDE** Center Coordinator iaviles@ce.ufl.edu

## **COPY EDITORS**

**Charles Brown** UFTI/T2 Center

Elaine Khoo, B.S. UFTI/STRIDE. Marketina & Communications Coordinator

## **GRAPHIC ARTIST**

Christina Cozart, B.F.A. Consultant

# **DIRECTOR'S MESSAGE**



Dear friends and colleagues,

Advanced transportation technologies including the development of Autonomous and Connected Vehicles continue to disrupt the transportation system operations. This trend will only intensify as market penetration

increases. At the UFTI we are working closely with the Florida Department of Transportation, the City of Gainesville and other partners to take advantage of these technologies in order to improve mobility and safety. This past year we initiated I-STREET (http://www. transportation.institute.ufl.edu/research-2/istreet-aboutus/), a real-world testbed which will develop, evaluate, and implement advanced transportation technologies at the University of Florida campus and the surrounding transportation network. Several projects related to I-STREET are now underway, ranging from signal control optimization with autonomous and connected vehicles to truck platooning, and from big data analytics and visualization to transit operations. As part of I-STREET, an autonomous shuttle will begin operations in April 2018, connecting the UF campus to downtown Gainesville. The UFTI will be evaluating the shuttle operations, and will work with the selected company in further research and development related to autonomous vehicle operations. In parallel to on-going projects, we have issued a Request for Information to identify industry partners interested in participating in I-STREET. Participation may involve a variety of potential activities, ranging from implementation and evaluation of existing technologies, to development of new applications and traffic management strategies. Stay tuned to learn more about our findings, opportunities for collaboration, and suggestions for improving the transportation system in your community.

This past year the UFTI was also awarded the US DOT's Regional University Transportation Center for Region 4. The STRIDE (Southeastern Transportation Research Innovation Development and Education ) Center award, expected to provide funding up to \$2.754 million per year for the next 5 years will develop novel strategies on reducing congestion. Additional information on STRIDE and its partners in the region is provided at https:// stride.ce.ufl.edu/. Under this grant, we will build on the previous STRIDE successes, and continue to produce relevant and timely research and educational products, as well as align our educational programs to prepare our students for a changing transportation ecosystem.

As always, I look forward to hearing from you and collaborating on enhancing our transportation system and our research, education, and technology transfer programs.

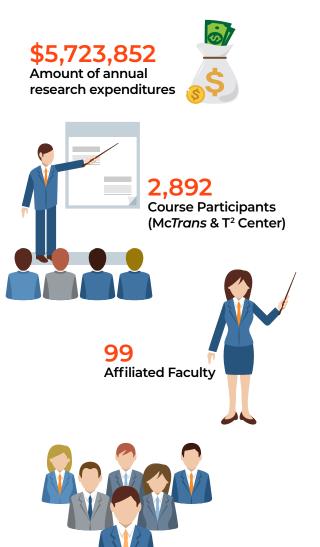
Professor & UFTI Director

Haffen In



The Fall 2016 UFTI group photo taken in front of Weil Hall, H.W. College of Engineering.

# **UFTI BY THE NUMBERS**



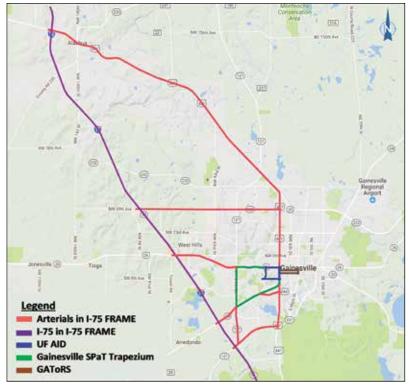
# RESEARCH HIGHLIGHTS

# Implementing Solutions from Transportation Research and Evaluation of **Emerging Technologies (I-STREET)**

Florida Department of Transportation (FDOT), City of Gainesville (CoG) I-STREET Manager: Clark Letter, Ph.D., Department of Civil & Coastal Engineering

I-STREET is a collaboration between the FDOT, the CoG, and the University of Florida. The testbed will deploy and evaluate numerous advanced technologies, including connected and autonomous vehicles, smart devices, and sensors. It will also develop and apply novel applications to enhance mobility and safety. These technologies and their application will work within the existing network and will accommodate the presence of conventional vehicles.





**Internal Steering** 

**Committee Members** 

**External Advisory Board Members** 

# Research Highlights

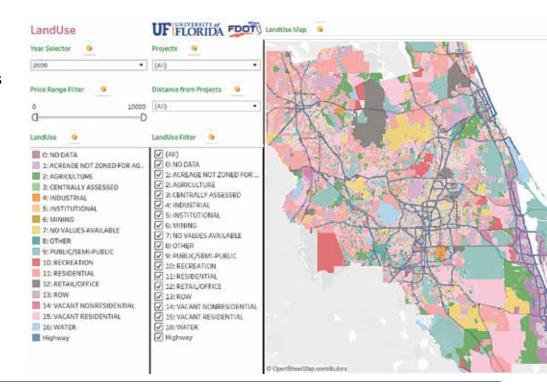
# **Big Data Pilot for Transportation Applications**

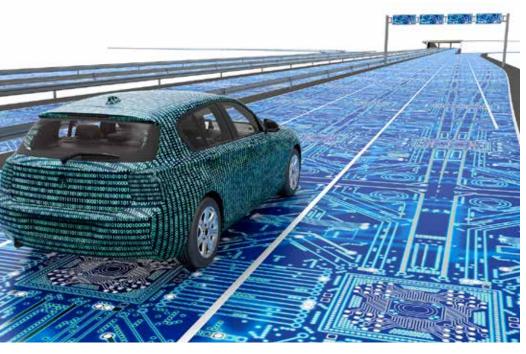
Florida Department of Transportation

PI: Sanjay Ranka, Ph.D., Computer & Information Science & Engineering

Co-PIs: Dr. Siva Srinivasan, Department of Civil & Coastal Engineering; and Dr. Ilir Bejleri, Department of Urban & Regional Planning

The purpose of this project is to demonstrate the usefulness and benefits of utilizing big data sets that are available along with data analytics to analyze, model and solve important challenges in traffic operations and transportation industry. This pilot project will apply the key steps of big data lifecycle processes and tools for the following five well defined use cases: 1) Pedestrian Fatalities, 2) Impact of Sun Rail on Regional Transportation, 3) Effectiveness of Road Ranger Patrols, 4) Assessing Public Perception of Central Florida Regional Transportation and 5) Evaluating the Effectiveness of Investments in Transportation.





## **Data Management and Analytics for UF Smart** Testbed

Florida Department of Transportation

PI: Sanjay Ranka, Ph.D., Computer & Information Science & Engineering

Co-PIs: Dr. Siva Srinivasan, Department of Civil & Coastal Engineering; and Dr. Ilir Bejleri, Department of Urban & Regional Planning

The University of Florida Transportation Institute (UFTI), the Florida Department of Transportation (FDOT) and the City of Gainesville (CoG) are coordinating the development of a smart testbed on the UF campus and adjoining city streets. The testbed is established to deploy and evaluate numerous advanced technologies including connected and autonomous vehicles, smart devices, and sensors, as well as to develop novel applications for their use. These technologies and their application will work within the existing network and will accommodate the presence of conventional vehicles. The goal of this project is to develop data management and analytics for this testbed.

# Research Highlights



# Improved Analysis of Two-Lane Highway Capacity and **Operational Performance**

National Cooperative Highway Research Program (NCHRP Project 17-65) PI: Scott Washburn, Ph.D., Department of Civil & Coastal Engineering

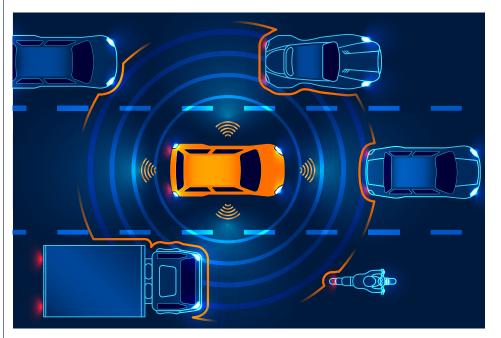
This project addressed gaps and limitations in the current two-lane highway analysis methodology for the Highway Capacity Manual, and identified various modern simulation tools that could be used for two-lane highway modeling. Highlights from this report include the following: the development of a more realistic speed-flow relationship; the introduction of a new service measure - follower density; the reduction of follower status threshold from 3.0 to 2.5 to better identify following status when headway and speed were considered for trailing vehicles; the abandonment of passenger car equivalents (PCE) use of percentage of heavy vehicle in the models for estimating follower density service measures; the inclusion of a quantitative adjustment based on posted speed limit for the estimation of base free-flow speed (BFFS); the development of a new function for estimating length of passing lanes value; and the development of a method for combining the analysis of multiple contiguous segments into a facilitylevel analysis. This project also introduced features to improve the ease of use of the methodology in the HCM such as elimination of tables requiring interpolation, treating trucks explicitly instead of through passenger car equivalent values, using a single service measure, and eliminating the PTSF measure. And finally, two modern simulation tools were identified that are capable of accurately modeling two-lane highways: SwashSim and TransModeler. The former simulation tool was used to generate the data for model development, while the latter tool was used to test the results of the former tool for a sampling of the experimental design scenarios.t the results of the former tool for a sampling of the experimental design scenarios.

## **Transportation Safety Center**

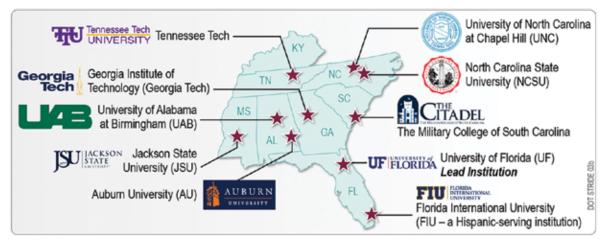
Florida Department of Transportation (FDOT), Office of Safety PI: Maria Cahill, AICP, UFTI/T2 Center

Co- PIs: Dr. Nithin Agarwal, UFTI/T2 Center; Dr. Siva Srinivasan, Department of Civil & Coastal Engineering; and Dr. Ilir Bejleri, Department of Urban & Regional Planning

The Transportation Safety Center (TSC) is a collaboration between University of Florida Transportation Institute (UFTI) and the Florida Department of Transportation (FDOT) to provide technical assistance to local agencies throughout Florida. The TSC assists local agencies by identifying road safety problems and developing projects eligible for federal funding. The TSC has worked with three counties to date: Hendry, Union, and Gadsden.



# Research Highlights



## **UFTI Awarded \$14 Million Grant for the** STRIDE Center

STRIDE Center (USDOT)

PI: Lily Elefteriadou, Ph.D., Department of Civil & Coastal Engineering/ESSIE

The Southeastern Transportation Research, Innovation, Development and Education Center (STRIDE), led by the UFTI, was named the Region 4 (Southeast) University Transportation Center by the U.S. Department of Transportation, and provided with \$14M in funding to develop novel strategies for reducing congestion over the next five years. The consortium consists of nine university partners in the region: Auburn University, The Citadel, Florida International University, Georgia Institute of Technology, Jackson State University, North Carolina State University, Tennessee Technological University, University of Alabama at Birmingham, and the University of North Carolina at Chapel Hill.

# Florida Driver Assistive Truck Platooning Analysis

Florida Department of Transportation

PI: Carl Crane, Ph.D., Department of Mechanical and Aerospace Engineering

The objective of this study is to provide research that will assist the Florida Department of Transportation (FDOT) and Florida's Turnpike Enterprises (FTE) in the development of an analysis of Driver Assistive Truck Platooning (DATP) in Florida and guidelines for implementation. The study will also provide coordination and communication, research, investigation, and reporting on DATP in support of legislative requirements. More specifically, the study will focus on those issues that are relevant to creating a Florida DATP policy. A significant amount of work has been conducted over the past few years regarding the underlying technologies associated with DATP and with the benefits to the trucking industry. This study will reference prior work but is not intended to repeat those prior analyses. Researchers will focus on investigating methods and measures for inclusion in the DATP pilot project so that FDOT can receive data necessary for: 1) informed planning and policy decisions regarding DATP; 2) studying DATP effects on transportation infrastructure; 3) studying use and safe operation of DATP, particularly in terms of how DATP may impact the traveling public.



# **EDUCATION**

# **Faculty and Student Awards**

#### Sherrilene Classen. Ph.D.

Department of Occupational Therapy

Dean's Citation Paper Award, College of Public Health and Health Professions, University of Florida, Gainesville, FL

Barbara A. Rider Colloquium. Keynote Speaker. University of Western Michigan, Kalamazoo, MI

#### Ahmed Helmy, Ph.D

Department of Computer & Information Science & Engineering Best Poster Award, IEEE

International Conference on Computer Communications, for poster: En Route Towards Tracebased Simulation of Vehicular Mobility

2017 August, Wilhelm Scheer Honorary Fellow of TUM Institute for Advanced Study, Technical University of Munich (TUM), Germany

University Term Professor, August 2017-August 2019

## Deja Jackson

Ph.D. Candidate. Department of Civil and Coastal Engineering USDOT Certificate of Recognition for Contributions and Successful Completion of the 2016 Summer Transportation Internship Program for Diverse Groups 2016 Conference of Minority Transportation Officials

(COMTO) WSP|Parsons

Brinckerhoff Women in Leadership Scholarship

2017 UF Office of Multicultural and Diversity Affairs Dr. J. Michael Rollo Diversity Impact Award 2017 Lifesavers Conference Traffic Safety Scholar Award

## Kyle Riding, Ph.D.

Department of Civil and Coastal Enaineerina

2017 Best Student Paper, from TRB Standing Committee on Basic Research and Emerging Technologies Related to Concrete (AFN10), and 2017 Concrete Materials Section Best Paper Award, after further review by the committee chairs in the Concrete Materials Section (AFN00) for Paper: Risk of Thermal Cracking from Use of Lightweight Aggregate in Mass Concrete

## Ruth Steiner, Ph.D.

Department of Urban and Regional **Planning** 

University of Florida Research Professorship for 2017-2019

#### Don Watson

Ph.D. Candidate, Department of Civil and Coastal Engineering Student of the Year 2017 Southeastern Transportation Research, Innovation, Development and Education Center (STRIDE)

#### **UF SURF**

The University of Florida launched Summer Undergraduate Research at Florida (SURF), a 10-week program that provides students who excel in their studies at their home institutions with the opportunity to work with premier faculty at UF on active research projects. Learn more about the SURF program here: www. eng.ufl.edu/graduate/campus-visits/summerundergraduate-research-at-florida-surf/. The following students were participants in this year's UF SURF program and worked with UFTI faculty:



#### Asean Davis.

undergraduate in civil engineering at Jackson State University, studied with Dr. Scott Washburn on a project testing and verifying a two-lane highway analysis methodology which is

under development for the Highway Capacity Manual. He worked with two traffic simulation programs, TransModeler and SwashSim, to prepare simulation input files, run simulations, and perform analysis of simulation outputs.



**Jabari Wilson** from the University of Alabama is an undergraduate in civil engineering. He worked with Dr. Lily Elefteriadou's Autonomous Vehicles at **Intelligent Intersections** and Advanced Networks

(AVIAN) team, assisting in the testing of new algorithms developed to optimize connected and highly automated vehicle trajectories when approaching a signal.

# Iva and Norman Tuckett Fellowship for the UFTI

The UFTI offered four fellowships through the Herbert Wertheim College of Engineering. Students from any department in the College were eligible. The following students were recipients of the Iva and Norman Tuckett Fellowship for the UFTI:



**Gretchen Dietz** Department of **Environmental** Engineering Sciences



Josh Peeples Department of Electrical and Computer Engineering



**Revnerio Sanchez** Department of Industrial and Systems Engineering



Megan Voss Department of Civil Engineering

# **ALUMNI HIGHLIGHTS**

#### Gaurav Sultania, M.S. (UF 2017)

Transportation Planner PTV Group

"Being a part of UFTI and ITE, I got to network with many professionals in the industry and researchers from other universities. If you are interested to see how technology can affect daily life, transportation engineering is something to get excited about. Make the most of your time at school to grow intellectually and professionally."

#### Ria Kontou, Ph.D. (UF 2016)

Postdoctoral Researcher National Renewable Energy Laboratory "I have been very fortunate to work under the advisement of preeminent UFTI faculty and collaborate with some of the sharpest students and staff as a PhD candidate at UF. Research work at UFTI aims at enabling efficient, safe, and sustainable transportation systems through partnerships within UF and other academic institutions, government and industry stakeholder's connections, and community outreach. The UFTI collegiate environment prepared me to pursue my research career ambitions in the fields of transportation energy and planning."

#### Clark Letter, Ph.D. (UF 2017)

I-STREET Testbed Manager University of Florida Transportation Institute

"Working at the UFTI has been a great experience. I have had the opportunity to work on cutting edge technology and advance the transportation industry. In my role as I-STREET testbed manager, I have been able to collaborate with members of the City of Gainesville, State of Florida, University of Florida, and different industry partners."

## Kiarash Faribozi, M.S. (UF 2016)

Transportation Modeler Stantec

"During my master's program at UF, I gained knowledge and skills that serve as a great foundation for my career as a transportation modeler. I am always indebted to my professors and alumni at UF who helped me find my way to the transportation industry."

### Liteng Zha, Ph.D. (UF 2017)

Research Scientist Last Mile Technology Team at Amazon "My experience at UFTI is fun and inspiring. I enjoyed the annual BBQ and the invited talks."

# **UFTI STUDENT CHAPTERS**

## **WTS Florida Gator Student Chapter**

The WTS Florida Gator student chapter participated in various events this past year, ranging from technical transportation-related events and service to the community to career and leadership building activities. Events included: the UF Sustainable Transportation Fair, Eastside High School STEM careers event, a symposium on the "Old Florida Heritage Highway", attending the Annual WTS International Conference in New York City, a mentoring event with the WTS Central Florida.



Deja Jackson giving the opening remarks during the WTS Symposium on the Old Florida Heritage Highway, Panelists included, Kathleen Pagan, AICP; James Perran Ross, Ph.D.; Steve Scanlan, PE; James Sipes, Ph.D.; and Ruth Steiner, Ph.D.



Staff and graduate students from the UFTI at the 2016 FSITE Summer Meeting in Daytona Beach City, Fla.

# **UF ITE Student Chapter**

The ITE student chapter at the University of Florida held multiple events, seminars, and workshops this year including the FSITE Summer Meeting and 2016 Traffic Bowl, Transpo 2016, the UF Sustainability Transportation Fair, the "Internet of Things" Summit, and the Dedicated Short Range Communications (DSRC) workshop.

# **TECHNOLOGY TRANSFER**

# Transportation Technology Transfer (T2) Center: A Year in Review

This year, the T2 Center was awarded another year of funding for Florida's Local Technical Assistance Program (LTAP). Additionally, the Center won three Federal Highway Administration (FHWA) Accelerating Safety Activity Program awards, and was one of the seven winners of UF-City of Gainesville's Strategic Development Plan awards. The award will fund research to assess "Public Acceptance of Autonomous Vehicle (AV) Technology."

The T2 Center increased grant funding by over 20%. With new resources, the Center was able to provide hundreds of hours of technical assistance to local government representatives. The T2 Center hosted 125 transportation training sessions to over 2,500 individuals across Florida, and expanded technical training opportunities to include topics such as Traffic Signal Systems, Florida Greenbook, and Manual on Uniform Traffic Control Devices. The T2 Center continues to house the statewide safety resource centers, including the Florida Pedestrian and Bicycling Safety Resource Center and the Florida Occupant Protection Resource Center. For more information about the T2 Center and the activities and projects housed at the Center, please visit https://www.techtransfer.ce.ufl.edu/t2ctt/default.asp.

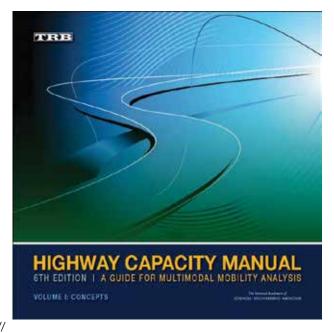


## McTrans Center: A Year in Review

The McTrans Center released a major upgrade to the Highway Capacity Software (HCS7) to implement the new Highway Capacity Manual 6th Edition (HCM6). While many new analysis features are included, alternative intersections, travel time reliability and managed lanes are probably the most significant. Most modules were rebuilt in a new underlying architecture to expand capabilities and improve user interfaces. New graphics were introduced for Signals results, Streets summaries, Alternative Intersections origin-destination mapping, Freeways facility diagrams, and Heat Map reports for Streets and Freeways. The Highway Safety Manual (HSM) procedures were implemented in a tool included within the HCS7 package.

Mc*Trans* presented over twenty webinar series and live training courses on these new HCM6 procedures and HCS7 applications. The webinars were each attended by national audiences, while the training courses were typically for state DOTs or

professional organization regional, state, or local sections or chapters. McTrans participated in, and exhibited at, both the Institute of Transportation Engineers (ITE) and Transportation Research Board (TRB) Annual Meetings. McTrans developed software prototypes in parallel with the research process for projects on Alternative Intersections and Interchanges, Signal Timing Optimization for Emissions and Safety, and Freeway-Arterial Interchange Systems. For more information visit http:// mctrans.ce.ufl.edu.



## **Technology Transfer**



# **WTS Transportation** Symposium on "The Old Florida Heritage Highway"

The WTS Florida Gator Student Chapter hosted their annual Transportation Symposium on October 19, 2016. This year's topic was the "Old Florida Heritage Highway." The purpose of this event was to make the community aware of the state-designated scenic highway, its needs as related to resource protection and infrastructure improvements, and its Master Plan, including a discussion on protecting this corridor, its beauty, wildlife, and infrastructure. Panelists included Kathleen Pagan, AICP, Sr. Planner, Growth Management, Alachua County; Dr. James Perran Ross, President, Friends of Paynes Prairie; Steve Scanlan, PE, Operations Program Engineer (Gainesville), FDOT; and Dr. Ruth Steiner, Professor, Urban & Regional Planning, University of Florida.

# **Full-Car Simulator Upgrade at the UFTI Creating Opportunities for Interdisciplinary Driving** Research

The UFTI inaugurated the UF Driving Simulator on October 28, 2016. The driving simulator was enhanced with up-to-date technology to study humanvehicle interactions. Such studies aspire to keep people safe, improve their driving performance and quality of life, or help them adapt to new technology, e.g., advanced driver assistance systems such as automatic cruise control or collision avoidance systems.



The UF Driving Simulator is located at the Smart House at Oak Hammock, which is a University of Florida affiliated retirement community in Gainesville, Fla.

# Dr. Lily Elefteriadou Named Interim Chair for the UF Department of **Industrial & Systems Engineering**

Dr. Lily Elefteriadou, director of the UFTI, was named the Interim Chair of the Industrial and Systems Engineering (ISE) Department in the Herbert Wertheim College of Engineering. Dr. Elefteriadou oversees the ISE Department, which offers B.S., M.S., and Ph.D. degree programs and has an enrollment of about 560 full-time undergraduate students, 160 masters' students, and 24 Ph.D. candidates.

# **UFTI Faculty Co-Authors Textbook Principles of Highway Engineering & Traffic Analysis, 6th Edition**

The best-selling, newly updated Principles of Highway Engineering and Traffic Analysis, 6th Edition provides the depth of coverage necessary to solve the highwayrelated problems that are most likely to be encountered in engineering practice. The focus on highway transportation is appropriate in light of the dominance of the highway mode in the U.S. and available employment opportunities. The textbook is co-authored by Dr. Scott Washburn, a member of the transportation group at UFTI.

## Faculty and Students Attend the 4th **Annual Florida Automated Vehicles** Summit

Faculty and students from the UFTI attended the 4th Annual Florida Automated Vehicles Summit in Tampa, FL, which was held November 29-30, 2016. With Florida as one of five states in the nation allowing the testing of automated vehicles on its roads, the state has been hosting this summit for the past four years to prepare for the eventual implementation and deployment of autonomous and connected vehicle technologies.

## **Technology Transfer**



Tom Creasy, Robert Bertini and Lily Elefteriadou

# **Highway Capacity & Quality of Service Committee Receives Blue Ribbon Award at TRB**

The Highway Capacity & Quality of Service Committee received the Blue Ribbon Award for promoting and sponsoring transportation research. The committee promulgates a broad range of tools applied by practitioners, researchers, educators, and public policy makers. Dr. Elefteriadou of the UFTI is past chair of the committee.



# Workshop on DSRC and Other Communication Options for Transportation Connectivity

The UFTI hosted a workshop on May 3, 2017, which focused on communications options for connected vehicles and connected infrastructure. Four invited experts presented and discussed various implementation and communication applications from around the world, providing their perspective on future trends for smart cities, IoT, and ITS. For more information, visit: http://www.transportation.institute.ufl.edu/2017/04/dsrc-and-other-communication-optionsfor-transportation-connectivity.



# **UFTI Participates** in FDOT Research **Program Peer Exchange**

The UFTI participated in a peer exchange on April 25-27, 2017, in Tallahassee, FL, which provided a review of research, development, and technology programs at various state departments of transportation. Information gleaned from the peer exchange will also be taken into consideration for the UF Testbed for Advanced Transportation Technologies project.

# **UFTI IN THE NEWS**

The UFTI was featured in the following news outlets, publications, and social media:

**CBS-4 Gainesville** 

Florida High Tech Corridor Council

**UF News** 

Gainesville Sun

The Alligator

**The Tribune Content Agency** 

**Government Technology** 

**WUFT** 

**Traffic Technology Today** 

**ITS America Smart Brief** 

State University System of Florida Board of Governors

The Transportation Research Board



# INTERNAL STEERING COMMITTEE



Lily Elefteriadou, Ph.D. **UFTI Director & Kisinger** Campo Professor of Civil Engineering Engineering School of Sustainable Infrastructure & Environment (ESSIE)



Jennifer Bridge, Ph.D. Associate Professor Civil Engineering/ Engineering School of Sustainable Infrastructure & Environment (ESSIE)



Maria Cahill, AICP Director UFTI Technology Transfer Center (T2)



Carl Crane, Ph.D. Professor Mechanical & Aerospace Engineering



Evangelos Christou, Ph.D. Associate Professor Applied Physiology and Kinesiology



Myoseon Jang, Ph.D. Associate Professor Environmental Engineering Sciences



Sanjay Ranka, Ph.D. Professor Computer & Information Science & Engineering



Bill Sampson, P.E. Director McTrans



Siva Srinivasan, Ph.D. Associate Professor Civil Engineering/ Engineering School of Sustainable Infrastructure & Environment (ESSIE)



Ruth Steiner, Ph.D. Professor Urban & Regional Planning

# SUPPORT STAFF



Ines Aviles-Spadoni, M.S. Coordinator, Research Programs STRIDE Center



Jennifer Gomez Administrative Assistant UFTI



Elaine Khoo, B.S. Marketing and Communications Coordinator UFTI



**Dona Moss Grants Administrator** Department of Civil & Coastal Engineering/ **ESSIE** 



**Regan Tillery Grants Specialist** Department of Civil & Coastal Engineering/ **ESSIE** 

# **EXTERNAL ADVISORY BOARD**

### Vassili Alexiadis. Ph.D.

Executive Vice President Cambridge Systematics, Inc.

#### Marsha Anderson Bomar, AICP, **ENV SP**

**Executive Director** Gwinnett Village Community Improvement District

# Chimay J. Anumba, Ph.D., P.E.

Professor and Dean UF College of Design, Construction & Planning

## Tom Byron, P.E.

Assistant Secretary of Intermodal Systems Development Florida Department of Transportation

## Milton Carrasco, P.Eng., M.Eng.

President and CEO Transoft Solutions, Inc.

## Michael Meyer, Ph.D.

Senior Advisor Parsons Brinkerhoff, Inc.

## Ananth Prasad, M.S., P.E.

Senior Vice President **HNTB** Corporation

#### Matt Ubben

President

Confianza Consulting, Inc.

#### **Alex Bond**

Director

Center for Transportation Leadership, Eno Center for Transportation

### Ann Brach, Ph.D., P.E.

Director

Transportation Research Board, Technical Activities Division

## Grady Carrick, Ph.D.

Principal

Enforcement Engineering, Inc.

#### Laura Kelley

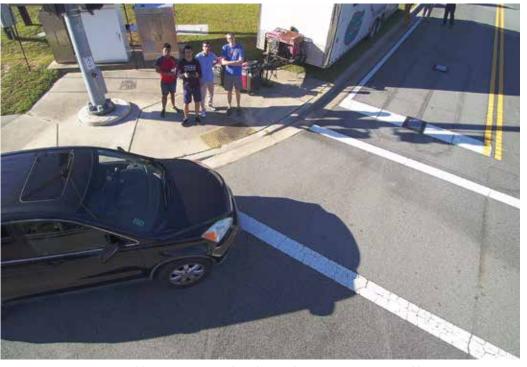
**Executive Director** 

Central Florida Expressway Authority

#### Debora M. Rivera, P.E.

Operations Manager

City of Gainesville



UFTI students utilize a drone to assist with testing at FDOT's TERL facility.



UFTI students at the Engineering School of Sustainable Infrastructure & Environment (ESSIE) research showcase event.

# **UFTI CORE CENTERS**

#### **STRIDE**

The Southeastern Transportation Research, Innovation, Development and Education (STRIDE) Center is a USDOT/RITA grant-funded, regional University Transportation Center (UTC) headquartered at the University of Florida that conducts transportation-related research in the areas of safety, livable communities, and economic competitiveness.

Website: https://stride.ce.ufl.edu

#### **McTrans**

The McTrans Center at the University of Florida distributes and supports software programs for traffic engineering and transportation planning applications, including the Highway Capacity SoftwareTM (HCS 2010™), TSIS-CORSIM™ and TRANSYT-7F™, with training courses and the highest level of technical support provided for these packages. Website: http://mctrans.ce.ufl.edu/mct

# **Technology Transfer Center (T2)**

As an umbrella organization for many national and state-based programs, T2 provides training, technical assistance, technology transfer services, and safety information to transportation, public works, and safety professionals as well as the general public. Website: https://www.techtransfer.ce.ufl.edu/t2ctt/default.asp

## **AFFILIATED CENTERS**

## Center for Health and the Built Environment

The Center for Health and the Built Environment is a research center focused on teaching, research, and service to address the relationship of the built environment to health outcomes, with special attention to vulnerable populations. (Director: Dr. Ruth Steiner, Urban & Regional Planning)

# **Center for Intelligent Machines and Robotics** (CIMAR)

CIMAR is an interdisciplinary research center conducting research on autonomous ground vehicle navigation, screw theory as applied to position and force control of robotic manipulators, three dimensional geometry and kinematic analysis of robotic systems, real-time computer graphics simulation, hardware/software system development and integration. (Director: Dr. Carl Crane, Materials Science Engineering)

## **Digital Worlds Institute**

The Digital Worlds Institute exists to nurture leading-edge research and education among the arts, communications, engineering and the sciences, focusing on advanced media systems and digital culture. (Representative: Dr. Angelos Barmpoutis, Computer Science & Engineering)



# **Geo-Facilities Planning and Information Research Center** (GeoPlan Center)

The UF GeoPlan Center works to support land use, transportation, and environmental planning in the Florida by providing geospatial and planning expertise, data, training, and education to the stakeholders involved in the planning process. The center is housed in the Department of Urban & Regional Planning. (Director: Dr. Alexis Thomas, Urban & Regional Planning)

# **Human-Experience Research Lab** (HXRL)

The Human-Experience Research Lab (HXRL) is focused on designing, building, and evaluating computational technologies as they relate to the human condition and reflecting on how these technologies affect society. (Director: Dr. Juan Gilbert, Professor and Chair of the Computer & Information Science & Engineering Department)

# **Neuromuscular Physiology Lab**

The lab's mission is to better understand movement deficits and to develop rehabilitation protocols to enhance functional independence. (Director: Dr. Evangelos Christou, Professor, Department of Applied Physiology and Kinesiology)

# **Smart Infrastructure Management** Laboratory

Research conducted in this lab is focused on advancing technological and analytical strategies to enable effective monitoring and management of civil infrastructure. (Director: Dr. Jennifer Bridge, Associate Professor, Department of Civil & Coastal Engineering)

# **University of Florida's Institute for** Mobility, Activity, and Participation (I-MAP)

I-MAP focuses on mobility and transportation throughout the lifespan. Mobility and transportation enable activity, facilitate participation in society, promote access to goods and services, and enhance quality of life. (Director: Dr. Sherrilene Classen, Professor and Chair, Department of Occupational Therapy)

# **Efficient Transportation Decision** Making (ETDM)

ETDM process incorporates environmental considerations into transportation planning to inform project delivery. (Director: Dr. Alexis Thomas, Urban & Regional Planning)

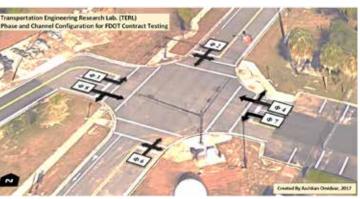
# Florida Traffic and Bicycle Safety **Education Program (FTBSEP)**

FTBSEP employs the diverse skills of a Regional Training Team composed of teachers and other professionals around the state to encourage walking and bicycling as healthy and environmentally responsible transportation choices. Program Director: Dr. Dan Connaughton, Professor and Associate Dean, Department of Tourism, Recreation & Sport Management)



# SELECTED PROJECTS





Transportation Safety Center Florida Department of Transportation Maria Cahill, AICP & Dr. Siva Srinivasan, Civil & Coastal Engineering

Data Management and Analytics for UF Smart Testbed Florida Department of Transportation Dr. Siva Srinivasan & Dr. Sanjay Ranka, UFTI

Local Technical Assistance Program, 2016-2017 Florida Department of Transportation Maria Cahill, AICP, UFTI T2 Center

Occupant Protection Resource Center, 2016-2017 Florida Department of Transportation Maria Cahill, AICP, UFTI T2 Center

Florida Task Force on Occupant Protection, 2016-2017 Florida Department of Transportation Maria Cahill, AICP, UFTI T2 Center

Florida Pedestrian & Bike Safety Resource Center, 2016-2017 Florida Department of Transportation Maria Cahill, AICP, UFTI T2 Center

Safe Routes to School Technology Assistance, 2017 Florida Department of Transportation Maria Cahill, AICP, UFTI T2 Center

Before and After Implementation Studies of Advanced Signal Technologies in Florida Florida Department of Transportation Dr. Lilv Elefteriadou & Dr. Scott Washburn, Civil & Coastal Engineering

Evaluation of Arterial Corridor Improvements and Traffic Management Plans in Florida Florida Department of Transportation Dr. Lilv Elefteriadou, Civil & Coastal Engineering

Development and Testing of Optimized Autonomous and Connected Vehicle Trajectories at Signalized Intersections Florida Department of Transportation Dr. Lily Elefteriadou, Civil & Coastal Engineering

Big Data Management Pilot Florida Department of Transportation Dr. Lily Elefteriadou and Dr. Siva Srinivasan, Civil & Coastal Engineering

Highway Capacity Methodologies for Corridors National Cooperative Highway Research Program Transportation Research Board Dr. Lilv Elefteriadou, Civil & Coastal Engineering

UF Advanced Technologies Campus Florida Department of Transportation Dr. Lily Elefteradou, UFTI

Southeastern Transportation Research, Innovation, Development & Education Center, 2017 US Department of Transportation/ OST-R Dr. Lily Elefteriadou, UFTI

The Use of Small, Unmanned Vehicles to Inspect Bridges Florida Department of Transportation Dr. Jennifer Bridge, Civil & Coastal Engineering

Loading on Coastal Bridges in Windstorms using Rapidly Deployable Sensor Network National Science Foundation Career Award Dr. Jennifer Bridge, Civil & Coastal Engineering

Sunshine Skyway Bridge Monitor Phase II Florida Department of Transportation Dr. Jennifer Bridge, Civil & Coastal Engineering

Florida Driver Assistive Truck Platooning Analysis Florida Department of Transportation Dr. Jennifer Bridge, Civil & Coastal Engineering, & Dr. Carl D. Crane, Mechanical and Aerospace Engineering

Improved Analysis of Two-Lane Highway Capacity and Operational Performance National Academy of Sciences/USDOT Dr. Scott Washburn, Civil & Coastal Engineering

Freight Mobility Research Institute Florida Atlantic University Dr. Scott Washburn, Civil & Coastal Engineering

LiDAR Sensor – Future Data Collection Process Florida Department of Transportation Dr. Carl D. Crane, Mechanical and Aerospace Engineering

Energy Aware Time Change Detection using Synthetic Aperture Radar on High-Performance Heterogeneous Architectures: A DDDAS Approach Air Force Research Laboratory, AFOSR Dr. Sanjay Ranka, Computer Information Science and Engineering

Traffic Signal Control with Connected and Autonomous Vehicles in the Traffic Stream National Science Foundation Dr. Lily Elefteriadou, Civil & Coastal Engineering



Dr. Lily Elefteriadou and Matt Ubben, a member of the UFTI's External Advisory Board, at Gator Day showcasing the Institute's research, education and technology transfer activities. Gator Day is an annual event that brings together students, alumni, faculty, staff and administration from the University of Florida with the primary purpose of advocating for the University with legislators and other leaders in Florida.



The University of Florida Autonomous Vehicles at Intelligent Intersections and Advanced Networks (AVIAN) team at the Traffic Engineering Research Lab (TERL) testing site in Jacksonville, FL.

# SELECTED PUBLICATIONS

- Ahrentzen, S., and Steiner, R. "Housing Models for Aging in Community." In Anacker, K., Nguyen, M., and Varady, D. (eds.), Routledge Handbook of Housing Policy and Planning. Abingdon, UK; Routledge. Forthcoming.
- Bejleri, I., Steiner, R., Yoon, S., Harman, J., and Neff, F. D., (2017). "Exploring Transportation Networks Relationship to Healthcare Access and as Affected by Urban Form." Transportation Research Procedia, Vol. 25, pp. 3066-3078.
- Bessa Jr., J. E., Setti, J. R., and Washburn, S. S. (2017) "Evaluation of Models to Estimate Percent Time Spent Following on Two-Lane Highways." Journal of Transportation Engineering, Part A: Systems, Vol. 143, No. 5: 04017010, 9 pp. DOI: http://dx.doi. org/10.1061/JTEPBS.0000032.
- Carrick, G., Jermprapai, K., Srinivasan, S., and Yin, Y. (2017). "Development of Guidance for Deployment Decisions on Safety Service Patrols in Florida." Transportation Research Record, No. 2660, pp. 48-57.
- Carrick, G., Jermprapai, K., Srinivasan, S., and Yin, Y. (2017). "Development of Guidance for Safety Service Patrol Deployment Decisions in Florida." Transportation Research Record, o. 2660, pp. 48-57.
- Chen, X., Hadi, M., Xiao, Y., and Elefteriadou, L. (2017) "Development of Macroscopic Emission Estimation Model Based on Microscopic Operatin g Modes." Transportation Research Record, No. 2570, pp. 39-47.
- Chen, Z., DeAndrade, G., Yin, Y., and Elefteriadou, L. (2017). "Multiclass Traffic Assignment Problem with Flow-Dependent Passenger Car Equivalent (PCE) Value of Trucks." Transportation Research Record. Accepted for publication.

- Chen, Z., He, F., and Yin, Y. (2016) "Optimal Deployment of Charging Lanes for Electric Vehicles in Transportation Networks." Transportation Research Part B, Vol. 91, pp. 344-365.
- Chen, Z., He, F., Zhang, L., and Yin, Y. (2016) "Optimal Deployment of Autonomous Vehicle Lanes with Endogenous Market Penetration." Transportation Research Part C, Vol. 72, pp. 143-156.
- Chen, Z., He. F., Yin, Y., and Du, Y. (2017). "Optimal Design of Autonomous Vehicle Zones in Transportation Networks." Transportation Research Part B, Vol. 99, pp. 44-61.
- Chen, Z., Liu, W., and Yin, Y. (2017). "Deployment of Stationary and Dynamic Charging Infrastructure for Electric Vehicles along Traffic Corridors." Transportation Research Part C, Vol. 77, pp. 185-206.
- De Andrade, G., Chen, Z., Elefteriadou, L., and Yin, Y. (2017). "Multiclass Traffic Assignment Problem with Flow-Dependent Passenger Car Equivalent Value of Trucks." Transportation Research Record. Accepted for publication.
- Elefteriadou, L., (2016). "The Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis." TR News, No. 306, pp. 16-21.
- Emami, P., Elefteriadou, L., and Ranka, S. (2017). "Tracking Vehicles Equipped with Dedicated Short-Range Communication at Traffic Intersections." In Proceedings of the Seventh ACM International Symposium on Design and Analysis of Intelligent Vehicular Networks and Applications (DIVANet'17), Nov. 21-25, 2017, Miami Beach, FL. Forthcoming.

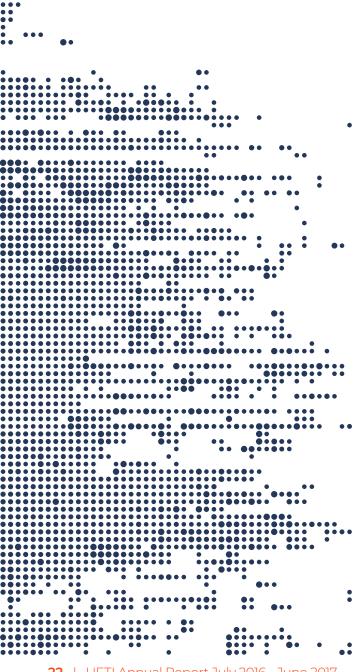
- Hu, J., Frey, C., and Washburn, S. S. "Comparison of Vehicle-Specific Fuel Use and Emissions Models Based on Externally and Internally Observable Activity Data." Transportation Research Record, No. 2570, pp. 30-38. DOI: 10.3141/2570-04.
- Jafari, A., Al-Kaisy, A., and Washburn, S. (2017). "Measuring Performance on Two-Lane Highways: Empirical Investigation." Transportation Research Record, No. 2615. DOI: 10.3141/2615-08.
- Kondyli, A., St. George, B. and Elefteriadou, L. (2017). "Comparison of Travel Time Measurement Methods along Freeway and Arterial Facilities." Transportation Letters. Accepted for publication.
- Kondyli, A., St. George, B., Elefteriadou, L., and Bonyani, G. (2017) "Defining, Measuring, and Modeling Capacity for the Highway Capacity Manual." ASCE Journal of Transportation Engineering. Accepted for publication.
- Kontou, E., Yin, Y., and Ge, Y. (2017). "Cost-efficient and Eco-friendly Plug-in Hybrid Electric Vehicle Charging Management." Transportation Research Record, No. 2628, pp. 87-98.
- Kontou, E., Yin, Y., Lin, Z., and He, F. (2017). "Socially Optimal Replacement of Conventional with Electric Vehicles for the U.S. Household Fleet," International Journal of Sustainable Transportation, Vol. 11, No. 10, 749-763.
- Leistner, D., and Steiner, R. (2017). "Uber for Seniors? Exploring Transportation Options for the Future." Transportation Research Record, No. 2660, pp. 22-29. DOI: https://doi.org/10.3141/2660-04.
- Letter, C., and Elefteriadou, L. (2017). "Efficient Control of Fully Automated Connected Vehicles at Freeway Merge Segments." Transportation Research Part C. Accepted for publication.

- Lim, K., and Srinivasan S. (2017) "Modeling the Choice of Time-of-Day for Joint Social-Recreational Activities." KSCE Journal of Civil Engineering, Vol. 21, No. 7, pp 1-9.
- Manjunatha, P., Kondyli, A., and Elefteriadou, L. "How Has Driver Behavior Been Considered in Traffic Microsimulation and How Can We Use Cognitive Sciences and Psychology Studies to Enhance Them?" Presented at the Annual Transportation Research Board Meeting, Washington, D.C., Jan., 2017.
- Mannering, F. L., and Washburn, S. S. (2016) Principles of Highway Engineering and Traffic Analysis, 6th Edition. Hoboken, NJ: John Wiley and Sons. 399 pp.
- McDonald, N., Palmer, M., and Steiner, R. (2015) School Siting: An Introduction to School Transportation and Land Use Nexus (website). http://schoolsiting.web.unc. edu/.
- McDonald, N., Palmer, M., and Steiner, R. (2015). The School Travel Cost Calculator (online decision support tool). http://schoolsiting.web.unc.edu/cost-calculator/ decision-support-tool-intro/.
- McDonald, N., Steiner, R., and Palmer, W. M. (2016). School Transportation: Development of an Education Module and Workshops on Multimodal Costs (Project Nos. 2013-32s and 2015-002; Final Report). Gainesville, FL: Southeastern Transportation Research, Innovation, Development, and Education (STRIDE) Center. http://stride.ce.ufl.edu/uploads/ docs/STRIDE 2013-32S Final-Report.pdf.
- McDonald, N., Steiner, R., Sisiopiku, V., Palmer, W. M., Lytle, B., Tsai, J., and Cook, T. (2015). Quantifying the Costs of School Transportation (Project No. 2012-022S; Final Report). Gainesville, FL: Southeastern Transportation Research, Innovation, Development, and Education (STRIDE) Center. http://www. stride.ce.ufl.edu/uploads/docs/STRIDE\_QSTC\_ FinalReport2015\_Main.pdf.

- Michalaka, D., Xu, R., Page, J. J., Steiner, R. L., Washburn, S., and Elefteriadou, L. (2016). "Roundabouts as a Form of Access Management." Transportation Research Record, No. 2556, pp. 1-9.
- Moreno, A. T., Llorca, C., Washburn, S. S., Bessa Jr., J. E., Hale, D., and Garcia, A. G. (2016) "Modification of the Highway Capacity Manual Two-Lane Highway Analysis Procedure for Spanish Conditions." Journal of Advanced Transportation, Vol. 50, No. 8, pp. 1650--1665. DOI: 10.1002/atr.1421.
- Pourmehrab, M., Elefteriadou, L., and Ranka, S. (2017). "Smart Intersection Control Algorithms for Automated Vehicles." In Proceedings of the Tenth International Conference on Contemporary Computing (IC3 2017), Aug. 10-12, 2017, Noida, India. Forthcoming.
- Riggs, W., and Steiner, R. L. (2016). "The Built Environment and Walking." In Mulley, C., Gebel, K., and Ding, D., (eds.), Walking: Connecting Sustainable Transport with Health. Bingley, UK: Emerald Publishing Ltd.
- Srinivasan, S., Lugo, M., Spana, S., Maldonado, P., Steiner, R., Elefteriadou, L., Yin, Y., and Crane, C. (2016). Surveying Florida MPO Readiness to Incorporate Innovative Technologies into Long-Range Transportation Plans (FDOT Research Project BDV32-977-06). Gainesville, FL: University of Florida. http://www.fdot.gov/research/Completed Proj/Summary\_PL/FDOT-BDV32-977-06-rpt.pdf.
- Sun, L., and Yin, Y. (2017). "Discovering Themes and Trends in Transportation Research Using Topic Modeling." Transportation Research Part C, Vol. 77, pp. 49-66.

- Watson, D. C., Crim, M. G., Kurtis, R., and Washburn, S. S. "Probabilistic Modeling of Single and Concurrent Truck Loads on Bridges." Transportation Research Record, No. 2609, pp. 11-18. DOI: 10.3141/2609-02.
- Xu, H., Yang, H., Zhou, J., and Yin, Y. (2017). "A Route Choice Model with Context-dependent Value of Time." Transportation Science, Vol. 51, No. 2, 536-548.
- Yang, Y., Steiner, R. L., and Srinivasan, S. (2016). "The Impact of Flexible Work Hours on Trip Departure Time Choices in Metropolitan Miami." Presented at the International Conference of Transportation Professionals (CICTP2016) in Shanghai, China, July 6-9, 2016. Refereed.
- Zha, L., Yin, Y., and Yang, H. (2016). "Economic Analysis of Ride-sourcing Markets." Transportation Research Part C, Vol. 71, pp. 249-266.
- Zheng, Y., and Elefteriadou, L. (2017) "A Model of Pedestrian Delay at Unsignalized Intersections in Urban Networks." Transportation Research Part B, Vol. 100, pp. 138-155.
- Zheng, Y., Chase, T., Elefteriadou, L., Sisiopiku, V., and Schroeder, B. (2017) "Driver Types and Their Behaviors within a High Level of Pedestrian Activity Environment." Transportation Letters, Vol. 9, No. 1.
- Zheng, Y., DeAndrade, G., Armstrong, M., and Elefteriadou, L. "Proposed Framework for Evaluating Spillback in the HCM." Transportation Research Record. Accepted for publication.

# **SELECTED PRESENTATIONS**



- Agarwal, N., Srinivasan, S., Bejleri, I., and Santos, J. (2017). "Integrated Framework for Safety Analysis in Florida." Presentation at the Florida ITE Summer Meeting, June 21-23, 2017, Naples FL.
- Al-Kaisy, A., Jafari, A., and Washburn, S. S. "Following Status and Percent Followers on Two-Lane Two-Way Highways: Empirical Investigation." Poster presentation at the 96th Transportation Research Board Annual Meeting, January 8-12, 2017, Washington, D.C.
- Carrick, G., Jermprapai, K., Srinivasan, S., and Yin, Y. (2017). "Development of Guidance for Safety Service Patrol Deployment Decisions in Florida." Presentation at the 96th Transportation Research Board Annual Meeting, January 8-12, 2017, Washington, D.C.
- Elefteriadou, L. "An Overview of the US HCM Update - The Highway Capacity Manual (HCM) 6th Edition: A Guide for Multimodal Mobility Analysis." Presentation at the International Symposium on Enhancing Highway Performance (ISEHP), July 1, 2016, Berlin, Germany. Invited.
- Elefteriadou, L. "Autonomous, Automated, connected vehicles: When are they coming to Gainesville?" Presentation to the Rotary Club, May 24, 2017, Gainesville, FL. Invited.
- Elefteriadou, L. "Developing a transportation testbed in Gainesville, Florida: From concept to implementation." Presented at SUNTOWNS Conference, April 12, 2017, Gainesville, FL. Invited.
- Elefteriadou, L. "STRIDE: Regional Center, Federal Region 4 (Southeast)." Presentation to US Congress staff, November 30, 2016.

- Elefteriadou, L. "Traffic Signal Control with Connected and Autonomous Vehicles in the Traffic Stream." Presented University of South Florida, CUTR Seminar, April 21, 2017. Invited.
- Elefteriadou, L. "Transportation Research at the UFTI." Presentation to the INFORMS UF Student Chapter, February 17, 2017, Gainesville, FL. Invited.
- Fariborzi, K., and Srinivasan S. (2017). "An Analysis of the Time-of-Day Choices of the Elderly for Non-Work Travel." Presentation at the 96th Transportation Research Board Annual Meeting, January 8-12, 2017, Washington, D.C.
- Jafari, A., Al-Kaisy, A., and Washburn, S. S. "Measuring Performance on Two-Lane Highways: Empirical Investigation." Poster presentation at the 96th Transportation Research Board Annual Meeting, January 8-12, 2017, Washington, D.C.
- Leistner, D., and Steiner, R. (2017). "Uber for Seniors? Exploring Transportation Options for the Future." Presented at the 96th TRB Annual Meeting, Jan. 8-12, 2017, Washington, D.C.
- McDonald, N., Palmer, W. M., and Steiner, R. (2016). STRIDE School Siting and School Travel Workshops. Conveners for series of practitioner-focused workshops and presentations held Nov. 2016 to Mar. 2017, Raleigh, NC.
- Ozkul, S., and Washburn, S. S. "Enhanced Vehicle Dynamics Modeling in Traffic Microsimulation." Presentation at the International Symposium on Enhancing Highway Performance (ISEHP), June 14-16, 2016, Berlin, Germany.
- Srinivasan, S., Bejleri, I., and Hakim, N. (2017). "GIS-Based Instructional Tools for Crash Prediction Models." Presentation at the STRIDE Research Summer Seminar, June 2, 2017, Gainesville, FL.

- Steiner, R. (2016) Moderator, "Research Needs Regarding Children" Breakout Session. 10th University Transportation Centers Spotlight Conference: Pedestrian and Bicycle Safety, Dec. 1-2, 2016, Washington, D.C.
- Steiner, R. (2016). "Bicycling across the World: A Planning Perspective on Global Bicycling Trends." Pecha Kucha Presentation at the University of Florida Fulbright Association, Oct., 2017, Gainesville, FL. Invited.
- Steiner, R. (2016). "Emerging Transportation Options to Enhance Access for Older Adults." Presented at the University of North Carolina, Chapel Hill, Department of City and Regional Planning Research Symposium, Nov., 2016, Chapel Hill, NC. Invited.
- Steiner, R. (2016). "Legislating Consistency, Concurrency, Compact Growth: The Case of Florida. Presented at Planning for a More Sustainable Future: Symposium on the Integration of Transportation, Land Use and Environmental Planning for Equity, Economic Development and a Healthy Environment." Oct., 2016, Berkeley, CA. Invited.
- Steiner, R. (2016). "Millennial Decision Making and the Implications for Future Transportation and Residential Location Needs." Presented to the San Francisco Metropolitan Transportation Authority, Oct., 2016, San Francisco, CA. Invited.
- Steiner, R. (2016). "National and Scenic Highways: A Broader Perspective." Presented at the Florida Gator Student Chapter of Women's Transportation Seminar (WTS) Symposium on the Old Florida Heritage Highway, Oct., 2017. Invited.
- Steiner, R. (2016). "School Siting in Florida." Presented at the STRIDE School Siting and School Travel Workshop, Raleigh, NC.

- Steiner, R. (2016). "Transportation Options to Enhance Access and Health for Older Adults." Presented at Aging in Places 2.0 Forum, Oct., 2017, sponsored by the American Institute of Architecture (AIA) Design & Health Research Consortium, University of Florida, and HOK Atlanta. Invited.
- Steiner, R. (2017). "School Siting and School Transportation Impacts." STRIDE-Funded Research Summer Seminar, June 2, 2017, Gainesville, FL.
- Steiner, R. (2017). "Planning for Redevelopment of Old Industrial Sites: A Case Study of the Cabot-Koppers Superfund Site." Presented at the College of Design, Construction, and Planning (DCP) 9th Annual Research Symposium, January, 2017, Gainesville, FL.
- Steiner, R. L., and Brown, L. (2016). "Investigating Bicycling Behaviors and Crash Prevalence in a Florida Active Retirement Community." Presented at the 56th Annual Conference of ACSP, Nov. 3-6, 2016, Portland, OR.
- Steiner, R., and Palmer, W. M. (2017). "Workshop on School Siting and Collaboration." Conveners and presenters for workshops held in June, 2017, in Tallahassee and Orlando, FL.
- Yoon, S., Bejleri, I., and Steiner, R., (2016). "Spatial Clustering of Health Outcomes and Its Relation to Urban Form: Florida Case Study." Presented at the 56th Annual Conference of the ACSP, Nov. 3-6, 2016, Portland, OR.

- Yoon, S., Bejleri, I., Steiner, R., Harman, J., Neff, D. F., Lutz, B., and Bumbach, M. (2016). "Determining the Shortage of Primary Care Providers: A Florida Case Study." Poster presentation at the Annual Meeting of American Public Health Association (APHA), Oct. 29-Nov. 2, Denver, CO.
- Zheng, Y., and Manjunatha, P. "Empirical Assessment of Adaptive Signal Control Technologies in Florida." Presented at the Annual Transportation Research Board Meeting, Washington, D.C., Jan., 2017.





University of Florida Transportation Institute 512 Weil Hall P.O. Box 116580 Gainesville, FL 32611-6580

www.transportation.institute.ufl.edu









