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 state-of-the-art analysis and decision-support tools.

VISION STATEMENT

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

Autonomous and connected vehicles are increasingly present in our highways. The significant advances in sensor technology, telecommunications, and vehicle automation that begin to materialize demand changes in our educational approach to transportation. Are our students prepared to design transportation systems that take advantage of these new and evolving technologies? Are they prepared to guide these technologies to save lives and improve mobility? Those of us in academia should expand our curricula to ensure our students are well versed in these disciplines and thoroughly prepared to work in a multidisciplinary environment. Transportation curricula should include an understanding of sensor types and their limitations, tools such as machine learning and data analytics techniques, and the basics of telecommunications software and hardware. Transportation students should be well versed in programming techniques and applications, while also being able to understand the functionality of autonomous and connected vehicles.

Through the I-STREET real-world testbed and the associated research projects, our undergraduate and graduate students are regularly challenged to communicate across several different disciplines and to integrate knowledge outside their own domain in order to make advances in their research. I-STREET is situated in a fully-functioning section of Gainesville along several roadways and freeways around the city. This testbed has been developed in collaboration with the Florida Department of Transportation (FDOT) and the City of Gainesville. As part of I-STREET, the network of roadside units (RSUs) and vehicles able to communicate with the infrastructure and each other has been expanding and is expected to reach more than 300 RSUs over the next year. It is imperative that the engineers of the future are well-versed in the technologies that make connected and autonomous vehicles possible and also understand the limitations and opportunities these technologies present to improve mobility and safety.

We have found that regular interaction between students from different disciplines and teams working in sponsored projects toward a common goal helps facilitate the learning process. This interaction of students and faculty also provides us, the researchers and instructors, with a better understanding of the key concepts that must be included in an interdisciplinary curriculum designed for the transportation systems of the future. Therefore, we are increasingly working toward incorporation of such concepts in our classes and strive to include in our curricula a diverse set of courses across several departments in engineering and other colleges.

For additional information on all I-STREET initiatives please visit our website using the QR code (which can be accessed using your phone’s camera).

This report briefly describes a small sample of on-going and recently completed projects for I-STREET and other initiatives. I look forward to hearing from you and working together to make a positive impact on our communities and the transportation network.

Sincerely,

[Signature]

Professor & UFTI Director
UFTI by the Numbers

- **$7.57 M** Annual Research Expenditures
- **$1.8 M** T2 and McTrans Revenue
- **$8.45 M** Research Dollars Awarded
- **109** Affiliated Faculty
- **16** External Advisory Board Members
- **1789** Course Participants T2 and McTrans
- **116** Courses (T2 and McTrans)
- **10** Internal Steering Committee Members
- **66** Active Research Projects
Research Highlights

MAKING SCHOOL ZONES SAFER WITH I-STREET’S REAL-WORLD TESTBED

I-STREET Initiative: Evaluation of Intelligent School Zone Beacon and Vehicle-Cyclist Detection and Warning System
PI: Dr. Eakta Jain (PI), and Dr. Siva Sirinivasan (Co-PI)
Funding Source: FDOT

The purpose of this project is to evaluate the safety performance of technologies that alert distracted drivers when they are speeding in a school zone. One such technology involves the use of GPS that sends a warning or alert to a driver’s cell phone if their vehicle does not slow down in a school zone. This project will also look at the potential for these technologies to alert drivers of nearby cyclists while at the same time alerting cyclists of approaching vehicles.

KEEPING PEDESTRIANS SAFE WITH A COLLISION AVOIDANCE SYSTEM

I-STREET Initiative: Alternative Transportation Safety Systems
PI: Dr. Nithin Agarwal
Funding Source: FDOT

This project evaluates the effectiveness of the Mobileye Shield+ collision avoidance system to reduce conflicts between transit buses and pedestrians/bicycles. Behavioral and infrastructure conditions that lead to incidents and near incidents between transit vehicles, pedestrians and cyclists will be identified and characterized to help transit drivers. The technology has been installed in 10 Regional Transit Service (RTS) buses in Gainesville, FL. Researchers will develop a framework that will provide guidance on feasibility and prioritization of the advanced driver assistance system (ASAS) for small- and mid-sized transit agencies.

IMPROVING QUALITY OF LIFE BY STUDYING OLDER DRIVERS’ PERCEPTIONS OF AUTONOMOUS VEHICLES

STRIDE Demonstration Study: Older Driver Experiences with Autonomous Vehicle Technology
PI: Dr. Sherrilene Classen
Funding Source: STRIDE/USDOT

Autonomous vehicles (AV) may be beneficial for older drivers, but the perceptions they hold about emerging technologies have only been solicited via surveys to date. The researchers believe that by exposing older drivers to a driving simulator in autonomous driving mode and evaluating their reactions, in combination with surveys, it may more accurately reveal the perceptions of older drivers before and after “driving” the autonomous simulator or the AV. Researchers expect driving perceptions and attitudes will change after exposure. The results of this study should help inform engineers, city managers and transportation officials of opportunities and barriers to improve older drivers’ interaction with AV, facilitate their ease-of-use practices, and potentially empower them to adopt these technologies.
HELPING COUNTIES IN FLORIDA IMPROVE THEIR TRANSPORTATION INFRASTRUCTURE

Transportation Safety Center 2018
PI: Dr. Nithin Agarwal (PI), Dr. Siva Srinivasan (co-PI), Dr. Ilir Bejleri (co-PI)
Funding Source: FDOT

Rural counties throughout Florida deal with unique traffic infrastructure challenges. Federal funding exists to help counties address their issues. However, these rural counties generally lack the staff and experience necessary to do the analyses needed to apply for these federal funding opportunities. The Transportation Safety Center, housed in the UFTI T2 Center, helps counties develop road safety plans and assist counties in applying for federal funding through the FDOT State Safety Office. To date, the Transportation Safety Center has completed safety studies in 5 Florida counties: Hendry, Union, Gadsden, Columbia, and Jackson.

SAVING LIVES BY STUDYING INTERSECTIONS WHERE NEAR-MISSES OCCUR

Video Based Machine Learning for Smart Traffic Analysis and Management
PI: Dr. Sanjay Ranke (PI), Dr. Anand Rangarajan (co-PI), Dr. Sivaramakrishna Srinivasan (co-PI), Dr. Lily Elefteriadou (co-PI), and Daniel Hoffman (co-PI)
Funding Source: NSF

This project explores a fairly new area of research: looking at near-misses as a metric of safety. Researchers at the UFTI are collaborating with the City of Gainesville Department of Mobility to apply advanced video processing and artificial intelligence to produce predictive risk models – which have not been used yet in the United States – focused on near-misses at intersections. One of the goals of this project is to create a replicable, low-cost solution that can be used to help communities across the country address dangerous intersections and improve traffic.

MAINTAINING A SMOOTH TRAFFIC FLOW

Before and After-Implementation Studies of Advanced Signal Control Technologies in Florida
PI: Dr. Lily Elefteriadou
Funding Source: FDOT

Adaptive Signal Control Technologies (ASCT) use sensors to provide signal control based on prevailing traffic conditions. An FDOT project led by Dr. Lily Elefteriadou evaluated the effectiveness of the technology along 8 corridors in Florida. The research team identified advantages and disadvantages of ASCT and provided recommendations for state-wide implementation. Based on a comprehensive evaluation, they concluded that ASCT generally perform better and have a higher return on investment when implemented on corridors with lower intersection density, low-volume side streets, and high demand but not oversaturated traffic conditions. Based on interviews with local agency staff, ASCT is not a “set it and forget it” system. Maintenance, training, and appropriate staffing are some of the key factors contributing to their success.
Education

TRANSOFT SOLUTIONS SCHOLARSHIP FOR UNDERGRADUATE STUDENTS IN TRANSPORTATION

The Transoft Solutions Scholarship was generously created by the UFTI’s external advisory board member and former chairman Milton Carrasco. This scholarship is for junior or senior civil engineering undergraduate students specializing in transportation.

UF SURF

Summer Undergraduate Research at Florida (SURF) is 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.

Zachary Jerome participated in the UF SURF program during the summer of 2019. During the program his faculty advisor was Dr. Lily Elefteriadou. Zachary worked on two projects, “Autonomous Vehicles at Intelligent Intersections and Advanced Networks” and “Highway Capacity Manual Methodologies for Corridors Involving Freeways and Surface Streets.”

STRIDE HOSTS TEACHER WORKSHOP ON EXPLORING TRANSPORTATION AND SCIENCE TECHNOLOGY ENGINEERING AND MATH (STEM)

Teachers from Alachua County attended a one-day workshop in June at UF that focused on science and technology concepts for grades levels 4 – 7 and explored transportation as a career option for students. They heard about the latest in transportation research taking place at UF from faculty and student researchers. STEM activities were the focus of the afternoon session, and were led by the STRIDE Center’s K-12/Technology Transfer coordinator, Ondine Wells, who was also the organizer of the workshop.
Education

RECENT GRADUATES

ZUAIR ALMAGHRABI, M.S.
ABDUL ALRASHIDY, M.S.
JESSE ANDERSON, PH.D.
MARIAN ANKOMAH, PH.D.
XUEYIN BAI, PH.D.
RYAN CASBURN, M.S.
NATHANIEL CHAN, MURP
GUSTAVO RIENTE DE ANDRADE, PH.D.
AUSTEN DOLE, MURP
JEFFREY GORDON, M.E.
MENGJIE HAN, PH.D.
GENESIS DENISE HARROD, MURP & M.S.
DEJA JACKSON, PH.D.
KHAIJONSAK JERMPRAPATI, PH.D.
ISAIAH KINDER, M.S.
PRUTHVI MANJUNATHA, PH.D.
BROOKE PETERS, MURP
MAHMoud POURMEHRAB, PH.D.
WEI SUN, PH.D.
NING WANG, M.S.
XINCHENG WANG, M.S.
DONALD WATSON, PH.D.
SETH WOOD, MURP
BOHAN XING, MURP
XINYUAN YANG, PH.D.
ABRAHAM YARNEY, PH.D.
HAITAO YU, M.S.
A resolution passed by the UF Student Senate on August 9, 2018 acknowledged the UF Transportation Institute’s efforts regarding self-driving vehicles through “I-STREET.” Senators Benjamin Elazar and Jessica Jesurajan, who authored the resolution, felt the efforts of the institute needed to be recognized by the Student Senate and in extension the entire student body. The bill was passed unanimously when put onto the floor during the meeting.

Awards

**ABULAMAJJID ALRASHIDY**
UF International Center Certificate of Excellence

**MARILO MARTIN GASULLA**
UF International Center Certificate of Excellence

**DEJA JACKSON**
- AAW Emerging Scholar Honorable Mention Award
- 2019 Traffic Safety Scholar
- Scholarship to attend the 37th Annual Lifesavers National Conference on Highway Safety Priorities

**PEDRO MALDONADO**
Service to the Global Community Award, part of the H.W. College of Engineering Attribute of a Gator Engineer Recognition Award for the 2019-2020 academic year

**ASCHKAN OMIDVAR**
First Place Scholarship from ITS Florida and FSITE Poster Competition and Shark Tank

**SAGAR PATNI**
Glenn and Deborah Renwick Engineering Scholarship

**DR. LILY ELEFTERIADOU**
- Recognized for Service as CUTC Past President
- Received the ASCE 2019 Harland Bartholomew Award for “contributions in enhancing mobility using advanced transportation technologies in Gainesville, Florida”

**MARILO MARTIN GASULLA**
UF International Center Certificate of Excellence

**PEDRO MALDONADO**
Service to the Global Community Award, part of the H.W. College of Engineering Attribute of a Gator Engineer Recognition Award for the 2019-2020 academic year

**SAGAR PATNI**
Glenn and Deborah Renwick Engineering Scholarship

**STEPHEN SPANA**
Third Place – Florida Automated Vehicles Summit Poster Competition and Shark Tank

**ASCHKAN OMIDVAR**
First Place Scholarship from ITS Florida and FSITE Poster Competition and Shark Tank

**FABIO SASAHARA**
FSITE William McGrath Scholarship Award

**DEJA JACKSON**
- AAW Emerging Scholar Honorable Mention Award
- 2019 Traffic Safety Scholar
- Scholarship to attend the 37th Annual Lifesavers National Conference on Highway Safety Priorities

**MARILO MARTIN GASULLA**
UF International Center Certificate of Excellence

**PEDRO MALDONADO**
Service to the Global Community Award, part of the H.W. College of Engineering Attribute of a Gator Engineer Recognition Award for the 2019-2020 academic year

**SAGAR PATNI**
Glenn and Deborah Renwick Engineering Scholarship

**STEPHEN SPANA**
Third Place – Florida Automated Vehicles Summit Poster Competition and Shark Tank

INSTITUTE OF TRANSPORTATION ENGINEERS
GatorITE won the Florida Traffic Bowl Competition as well as Best Student Chapter Award, the Bill McGrath Scholarship Award, 1st Place for the Research and Shark Tank Award, and the Put a Break on Fatalities Social Media Contest at the Annual FSITE Meeting in 2018.
UFTI Student Chapters

UF INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) STUDENT CHAPTER

This year the Gator ITE Student Chapter worked on two strategic goals; increasing student membership with a focus on non-civil engineering students and undergraduates while also increasing a focus on professional development. To grow the membership of the organization ITE hosted several activities that saw a significant increase in attendance. Focusing on professional development, ITE funded a record number of students to attend several conferences such as the TRB Annual Meeting, FSITE Meetings, and the 2nd Florida ITE Student Leadership Summit. Additionally, the organization offered our students free of charge, two professional-level workshops on traffic simulation software. This amazing achievement was only made possible by ITE’s long lasting collaboration with the UFTI team. As part of ITE’s commitment to give back to the community, they continued working with the Adopt a Highway program. Adding to their charitable work this year ITE collected funds to donate rain jackets for people in need around Gainesville.

WOMEN’S TRANSPORTATION SEMINAR (WTS) FLORIDA GATOR STUDENT CHAPTER

WTS is an international organization that was founded in 1977 by a group of women in transportation who realized that women’s careers in the field would benefit from professional development, encouragement, and recognition. The WTS Student Chapter at UF strives to establish a college-based student community (that welcomes all people regardless of gender expression) focusing on advancing women in transportation through professional workshops, networking, and community service. This year the WTS Gator Student Chapter held their 9th Annual WTS Symposium in March 2019 focusing on Big Data in Transportation. They also hosted webinars aimed at giving attendees skills to help them in their future careers. The chapter also co-sponsored events with the Gator Institute of Transpiration Engineers (ITE) Student Chapter.
Technology Transfer

DR. ELEFTERIADOU PRESENTS AT THE UF-CITY OF GAINESVILLE STRATEGIC DEVELOPMENT PLAN RESEARCH AWARDS SHOWCASE

The University of Florida, in partnership with the City of Gainesville, hosted the Strategic Development Plan Research Awards Showcase on October 9, 2018. This event showcased the year-long efforts of the seven UF-City of Gainesville research award recipients, including Dr. Lily Elefteriadou’s research award on the Public Acceptance of Autonomous Vehicle Technology and the broader community impacts.

Left to right: Dr. Lily Elefteriadou, UFTI; Jesus Gomez, RTS; Dr. Pruthvi Manjunatha, UFTI; Lauren Poe, Mayor, City of Gainesville

DR. LILY ELFTERIADOU SERVES AS THE 2019 UTC SPOTLIGHT CONFERENCE CHAIR

The Council of University Transportation Centers (CUTC) hosted a Spotlight Conference in Washington D.C. May 14, 2019 to showcase the research, education, and technology transfer activities supported by grant-funded UTCs and other transportation centers in the U.S. Dr. Elefteriadou was the conference chair working along with the American Road and Transportation Builders Association (ARTBA), and the Research, Education and Training Reauthorization Coalition (RETRC) to organize the event. This was the first event of its kind scheduled to coincide with Infrastructure Week.

UFTI AT THE 2019 AUTOMATED VEHICLE SYMPOSIUM (AVS) CONFERENCE

UFTI students and faculty attended the Florida Automated Vehicles (FAV) Summit in Tampa November 27-28, 2018. The conference technologies, operations, and policy issues. Stephen Spana and Aschkan Omidvar, UFTI students, presented during the summit in the exhibitor/poster reception and the Shark Tank competition where students pitched research ideas to a panel of industry professionals. Spana won 3rd place in the poster competition. Dr. Clark Letter and Dr. Sanjay Ranka presented during the Strategic Initiatives Around Connected Vehicles session. Dr. Lily Elefteriadou gave a presentation titled “Traffic Signal Control with Connected and Autonomous Vehicles in the Traffic Stream” during the Connected Vehicle Breakout Session.

Left to right: Dr. Sanjay Ranka, Stephen Spana, Aschkan Omidvar, Dr. Lily Elefteriadou

Left to right: Dr. Lily Elefteriadou, UFTI; Jesus Gomez, RTS; Dr. Pruthvi Manjunatha, UFTI; Lauren Poe, Mayor, City of Gainesville
The T2 Center continues to serve communities throughout Florida, helping them to develop local road safety plans through the T2 Center’s Transportation Safety Center (TSC). This past year, the TSC developed local road safety plans for Columbia and Jackson counties and identified safety projects along local roadways that qualify for federal funding programs.

In addition to their focused work in Columbia and Jackson Counties, the T2 Center provided training courses and technical assistance to local agencies on Temporary Traffic Control, Pilot/Escort and Flagging, Rural County Road Safety, and OSHA Roadway Construction.

The T2 Center also houses Florida’s Occupant Protection Resource Center (OPRC) and Pedestrian & Bicycling Safety Resource Center (PedBike SRC). These centers provide training in the proper installation and use of car seats and bicycle helmets to hundreds of Florida residents.

In collaboration with UF’s Department of Occupational Therapy, the T2 Center worked to develop a teen distracted driving course for the FDOT Safety Office. The goal of this web-based course is to increase the safety of less experienced drivers and reduce the number of distracted teen drivers. The Center also received three Federal Highway Safety Administration (FHWA) Accelerating Safety Activities Program (ASAP) awards to provide training opportunities to local agencies on local road safety plans, intersection control evaluation, and roundabouts.

Additionally, the T2 Center supports Florida’s Safe Routes to School (SRTS) Program by providing engineering technical assistance and conducting an evaluation study to quantify the benefits of the program. SRTS is a nationwide program to make walking and biking to school safer and more accessible in communities while at the same time promoting the health and well-being of grade-school students and their families. The program encompasses multiple disciplines within communities to meet the goal of increased walking and biking to and from school.

In the past year, T2 staff members have served in a variety of leadership roles. A T2 Center staff member has been nominated and served on two National Cooperative Highway Research Program (NCHRP) project panels and serves as the Chair for the Transportation Research Board’s Traffic Signal Timing Subcommittee. T2 staff members have also contributed as subject matter experts to the development of several national level courses including participation with the American Association of State Highway and Transportation Officials (AASHTO)’s Transportation Curriculum Coordination Council. The Center staff have also served on the Lifesavers Occupant Protection Committee to assist in planning and implementing the Occupant Protection track during the Lifesavers nationwide conference.

The McTrans Center continued to add functionality and features to the Highway Capacity Software (HCS7) that implements the Highway Capacity Manual 6th Edition (HCM6). New tools added to HCS7 include integration with TransModeler SE from Caliper Corporation (free for a year) for animation and simulation, addition of metric unit support for Freeway and Highway modules, inclusion of geometry graphic on the formatted report in the Roundabout module, and free access to McTurns as a signalized intersection traffic counting and data collection web application and the HSS that implements the Highway Safety Manual (HSM) procedures.

McTrans presented about twenty-five webinar series and live training courses on the HCM6 procedures and HCS7 applications. The webinar series 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 continues to develop software prototypes in parallel with the research process for the NCHRP 15-57 project and work with the Southwest Research Institute on the Integrated Corridor Management System for Florida DOT District Five.
New Faces at UFTI
NEW TO THE EXTERNAL ADVISORY BOARD

AMANDA DAY, MBA
President
Day Communications, Inc.

RON BOENAU
International Transportation Research Advisor

MALISA MCCREEDY, AICP
Director of Mobility City of Gainesville

DAVID WANTMAN
CEO
Wantman Group

NEW UFTI HIRES

RONNIE BARTON
Fiscal Team Lead UFTI/T2 Center

ROOZBEH RAHMANI, PH.D.
Postdoctoral Associate for the Transportation Safety Center UFTI/T2 Center

PATRICIA TURNER, MPA
Education & Outreach UFTI/T2 Center

ONDINE WELLS, M.S.
K-12 & Technology Transfer Coordinator STRIDE Center

NEW FACULTY AFFILIATES

DAVID KABER, PH.D.
Professor & Chair Industrial & Systems Engineering

EAKTA JAIN, PH.D.
Assistant Professor Computer & information Science & Engineering

ZOLEIKHA BIRON, PH.D.
Assistant Professor Electrical & Computer Engineering
Internal Steering Committee

NITHIN AGARWAL, PH.D.
Director
T2 Center

JENNIFER BRIDGE, PH.D.
Associate Professor
Civil Engineering/ESSIE

CARL CRANE, PH.D.
Professor
Department of Mechanical & Aerospace Engineering

LILY ELEFTERIADOU, PH.D.
UFTI Director & Barbara Goldsby Professor of Civil Engineering
Engineering School of Sustainable Infrastructure & Environment (ESSIE)

MYOSEON JANG, PH.D.
Associate Professor
Department of Environmental Engineering Sciences/ESSIE

DAVID KABER, PH.D.
Department Chair & Dean’s Leadership Professor
Industrial and Systems Engineering

SANJAY RANKA, PH.D.
Professor
Computer & Information Science & Engineering

BILL SAMPSON, P.E.
Director
McTrans

SIVA SRINIVASAN, PH.D.
Associate Professor
Civil Engineering/ESSIE

RUTH STEINER, PH.D.
Professor
Department of Urban & Regional Planning

Support Staff

INES AVILES-SPADONI, M.S.
Coordinator, Research Programs III Programs/Services, STRIDE Center

AMY FU, B.S.
Student Assistant/STRIDE Center

JENNIFER GOMEZ
Administrative Assistant
UFTI

ELAINE KHOO, B.S.
Marketing and Communications Assistant
UFTI

DONA MOSS
Grants Administrator
Department of Civil & Coastal Engineering/ESSIE

ONDINE WELLS, M.S.
K-12 & Technology Transfer Coordinator
STRIDE Center
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Executive Vice President
Cambridge Systematics, Inc.

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Assistant General Manager for Capital Program Delivery at MARTA

CHIMAY J. ANUMBA, PH.D., P.E.
Professor and Dean
UF College of Design, Construction & Planning

AMANDA DAY, MBA
President
Day Communications, Inc.

RON BOENAU
International Transportation Research Advisor

ALEX BOND, M.A.
Transportation Policy Analyst
Office of the Secretary for Policy at U.S. DOT

ANN BRACH, PH.D., P.E.
Director
Transportation Research Board, Technical Activities Division

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.

GRADY CARRICK, PH.D.
Principal Enforcement Engineering, Inc.

LAURA KELLY, B.S.
Executive Director
Central Florida Expressway Authority

MALISA MCCREEDY, AICP
Director of Mobility
City of Gainesville, Fla.

MICHAEL MEYER, PH.D.
Senior Advisor
WSP USA

ANANTH PRASAD, P.E.
President
Florida Transportation Builders Association, Inc.

MATT UBBEN, B.A.
President
Confianza Consulting, Inc.

DAVID WANTMAN
CEO
Wantman Group
McTrans develops, distributes, and supports software programs and training for traffic engineering and transportation planning applications, including the Highway Capacity Software™ (HCS 2010™), TSIS-CORSIM™ and TRANSYT-7F™.

The Southeastern Transportation Research, Innovation, Development and Education (STRIDE) Center is a USDOT grant-funded, regional (Southeast) University Transportation Center (UTC) headquartered at the University of Florida that along with nine other partners conducts research and offers educational and technology transfer programs related to reducing congestion.

T2 provides training, technical assistance, technology transfer services, and safety information to transportation, public works, and safety professionals as well as the general public.
Center for Applied Optimization
The Center for Applied Optimization at the University of Florida is an interdisciplinary center which encourages joint research and applied projects among faculty from engineering, mathematics and business. (Co-Directors: Dr. Panos Pardalos and Dr. William Hager)

Center for Health & 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, Professor, Department of Urban & Regional Planning)

Efficient Transportation Decision Making (ETDM)
ETDM process incorporates environmental considerations into transportation planning to inform project delivery.

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. (Director: Dr. Dan Connaughton, Professor, Department of Tourism, Recreation & Sport Management)

Geo-Facilities Planning & Information Research Center (GeoPlan Center)
The UF GeoPlan Center works to support land use, transportation, and environmental planning in the State of 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, Department of Urban & Regional Planning)

University of Florida’s Institute for Mobility, Activity, and Participation (I-MAP)
I-MAP focuses on mobility and transportation through the lifespan. Mobility and transportation enable activity, facilitate participation in society, promote access to goods and services, and enhances quality of life. (Director: Dr. Sherrilene Classen, Professor and Chair, Department of Occupational Therapy)

Supply Chain and Logistics Engineering Center
The Supply Chain and Logistics Engineering Center at the University of Florida is an interdisciplinary center that encourages joint research and applied projects among faculty from Engineering, Computer Science, and Business Administration in conjunction with industry participants. (Co-Directors: Dr. Elif Akcali and Dr. Yongpei Guan)
Selected Projects

Dynamic Intersection Machine Learning
FDOT
PI: Dr. Nithin Agarwal

UF Testbed Initiative
FDOT
PI: Dr. Nithin Agarwal

Florida’s Occupant Protection Coalition
FDOT
PI: Dr. Nithin Agarwal

Florida’s Pedestrian & Bicycle Safety Resource Center
FDOT
PI: Dr. Nithin Agarwal

Technology Transfer Support for 2019
FDOT
PI: Dr. Nithin Agarwal

Teen Distracted Driving Education Program
FDOT
PI: Dr. Nithin Agarwal

CAREER: Loading on Coastal Bridges in Windstorms
National Science Foundation
PI: Dr. Jennifer Bridge

Sunshine Skyway Bridge Monitoring Phase II
FDOT
PI: Dr. Jennifer Bridge

Track Structure Modification to Reduce Track Pressure
USDOT / Federal Railroad Administration
PI: Dr. Jennifer Bridge

CAREER: Integrated Online Coordinated Routing
NSF
PI: Dr. Lili Du

STRIDE Project F2: Discovering Potential Market
USDOT
PI: Dr. Lili Du

Curriculum Development for Highway Freight Transportation
FAU
PI: Dr. Lili Du

Sustainable Urban Freight Mobility through Optimization
FAU
PI: Dr. Lili Du

Smart Vehicle Platooning Built Upon Real-Time Learning
NSF
PI: Dr. Lili Du

CPS: TTP Option: Synergy: Traffic Signal Control
NSF
PI: Dr. Lily Elefteriadou

Evaluation of Arterial Corridor Improvements
FDOT
PI: Dr. Lily Elefteriadou

Highway Capacity Manual Methodologies for Corridors NCHRP
PI: Dr. Lily Elefteriadou

STRIDE 2017 Main Project
USDOT
PI: Dr. Lily Elefteriadou

Dynamic Intersection Learning Machine
FDOT
PI: Dr. Lily Elefteriadou

STRIDE: Project D Evaluation of Advanced Vehicle
USDOT
PI: Dr. Lily Elefteriadou

STRIDE: Project J2 Real-Time Data-Based Decision Support System for Arterial Traffic Management
USDOT
PI: Dr. Lily Elefteriadou

STRIDE Project K2 Assessing & Addressing
USDOT
PI: Dr. Lily Elefteriadou

Testing & Evaluation of Traffic Detection Devices
SMARTMICRO
PI: Dr. Lily Elefteriadou

Extended Development & Testing
FDOT
PI: Dr. Lily Elefteriadou

Video Based Machine Learning for Smart Traffic
NSF
PI: Dr. Lily Elefteriadou

Dynamic Intersection Learning Machine
FDOT
PI: Dr. Lily Elefteriadou

Transportation Mobility Assessment Smart City
FDOT
PI: Dr. Lily Elefteriadou

Data Analysis & Evaluation of Gainesville Trapezium
USDOT
PI: Dr. Lily Elefteriadou

Bigdata Analytics & Artificial Intelligence for Smart Intersections
USDOT
PI: Dr. Lily Elefteriadou

Before and After Study of Gainesville Pedestrian-Bicyclists Connected Vehicle Pilot
FDOT
PI: Dr. Lily Elefteriadou

Enhanced Characterization of RAP
FDOT
PI: Dr. Reynaldo Roque

Evaluation of Cracking Performance for Polymer-Modified Asphalt Mixtures with High RAP Content
FDOT
PI: Dr. Reynaldo Roque

Investigation of the Impact of Milling & Construction
FDOT
PI: Dr. Reynaldo Roque

Safe Routes to School Tech Asst 2017
FDOT
PI: Bill Sampson

HCS7 Consulting Services SRI
PI: Bill Sampson
Selected Projects

Data Management & Analytics for UF Smart Testbed
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Dynamic Intersection Learning Machine
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

STRIDE: Project C: Performance Measurement
USDOT
PI: Dr. Sivaramakrishnan
Srinivasan

STRIDE: Project H: Strategies for Mitigating Congestion
USDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Traffic-event Unification System Highlighting
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Machine Learning Algorithms for Demand
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

I-Street Initiative-Evaluation of Intelligent School Zone
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Video Based Machine Learning for Smart Traffic
NSF
PI: Dr. Sivaramakrishnan
Srinivasan

Transportation Mobility Assessment Smart City
PI: Dr. Sivaramakrishnan
Srinivasan

Bigdata Analytics & Artificial Intelligence for Smart
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Before & After Study of Gainesville Pedestrian
FDOT
PI: Dr. Sivaramakrishnan
Srinivasan

Mitigation of Cracking in Florida’s
FDOT
PI: Dr. Mang Tia

Planning, Design, Testing, and Analysis in Support of the FDOT Accelerated Pavement Testing (APT) Program
FDOT
PI: Dr. Mang Tia

Rodrigo Antunes Service Contract
FDOT
PI: Dr. Mang Tia

Planning Design Testing & Analysis APT Program
FDOT
PI: Dr. Mang Tia

Phase II - Reducing Portland Cement Content
FDOT
PI: Dr. Mang Tia

Freight Mobility Research Institute
FAU
PI: Dr. Scott Washburn

Interchange Design to Accommodate
FDOT
PI: Dr. Scott Washburn

Commercial Heavy Vehicle Impacts on Signalized
USF
PI: Dr. Scott Washburn

Fundamentals of Travel Time Reliability Guide
LEIDOS
PI: Dr. Scott Washburn

Two-lane Highway Analysis Methodology Enhancements
FAU
PI: Dr. Scott Washburn

Older Driver’s Experiences with Autonomous Vehicle Technology
USDOT
PI: Dr. Sherrilene Classen

Effectiveness of a Driving Intervention on Safe Community Mobility for Returning Combat Veterans
USDOD
PI: Dr. Classen

Aging Road User Information System 2019-2020
FDOT
PI: Dr. Sherrilene Classen

Perceptions of Individuals Living with Spinal Cord Injury and Disease regarding Autonomous Vehicles
Paralyzed Veterans of America
PI: Dr. Sherrilene Classen

Improving OEF/OIF/OND Veterans’ Driver Fitness and Community Mobility: Effects of a One-Day Driving and Community Mobility Approach for Rural Settings
North Florida/ South Georgia Region Veterans Administration
PI: Dr. Classen

UF and UAB’s Phase 2 Demonstration Study: Developing a Model to Support Transportation System Decisions considering the Experiences of Drivers of all Age Groups with Autonomous Vehicle Technology
USDOT
PI: Dr. Sherrilene Classen
Selected Publications


Selected Publications

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