



Yu Zhang, Ph.D.

Associate Professor

Department of Civil & Environmental Engineering

yuzhang@usf.edu, <http://www.sum-lab.org>



Dr. Zhang directs Smart Urban Mobility Laboratory (SUM-Lab) at USF and is a co-director of Center for Transportation, Environment, and Community Health (CTECH), one of the US DOT Tier 1 UTC. Dr. Zhang specializes on transportation systems; air traffic management; resilient infrastructure systems, and sustainability issues in transportation. Her recent research mainly focuses on the following four areas:

1. Shared mobility:
 - a. Free-floating bike sharing operation and management
 - b. E-scooter sharing performance evaluation
 - c. Equity analysis of shared mobility
 - d. Micromobility design and operation management
 - e. Behavior analysis of bikesharing, e-scooter sharing, and ridesourcing
 - f. Public's acceptance of peer-to-peer carsharing and shared automated vehicles
2. New users of shared airspace:
 - a. Collision free 4D path planning and risk estimation for multiple unmanned aerial vehicles (UAVs)
 - b. Infrastructure systems for supporting on-demand urban air mobility (UAM)
 - c. Airspace design and trajectory planning for high density UAM operations
3. Resilient cities:
 - a. Criticality analysis of roadway network
 - b. Restoration optimization of roadway network after disruptive events
 - c. Understanding and modeling the interdependence of transportation and stormwater/water infrastructure systems, the interdependence of transportation and cybernetwork infrastructure systems
4. Emerging technologies in transportation:
 - a. Understand the consumers' perceptions towards emerging automated vehicles (AV) and intended adoption
 - b. Estimate how AV would impact household vehicle ownership in the future and how AV would affect air transportation
 - c. Multi-stage planning with multi-format charging facilities for transit bus electrification

Dr. Zhang published the first paper in solving the rebalancing problem of free-floating bike sharing. The paper published in 2017 has been cited more than 130 times. Two of Dr. Zhang's 2019 publications on shared AVs and mode substitution of bike sharing are placed in the top 1% of the academic field of social sciences on the Web of Science, based on a highly cited threshold for the field and publication year. Dr. Zhang is also pioneering in studying new users of shared airspace and is leading several studies exploring different aspects of emerging UAVs and UAM. Besides scientific research, Dr. Zhang also contribute to local community by working with transportation agencies to implement developed tools and methodologies.

Experience

- Years of Academic Appointment: 12
- Director, Smart Urban Mobility Lab
- Co-Director, Center for Transportation, Environment, and Community Health (CTECH)
- Associate Professor, USF (2015-present)
- Assistant Professor, USF (2008-2015)

Educational Background

Ph.D., Civil and Environmental Engineering, University of California Berkeley, 2008;

M.S., Civil and Environmental Engineering, University of California Berkeley, 2003;

B.Eng., Transportation Engineering, Southeast University, 1997

Appointments/Affiliations

- Affiliated Faculty, Center for Urban Transportation Research
- Affiliated Faculty, Patel College of Global Sustainability
- Committee Chair, TRB Airfield and Airspace Capacity and Delay (AV060), 2017-present
- President, Women in Transportation Seminar Tampa Bay Chapter, 2020-present

Research Summary

- Total funding: \$6.07 million
- Total PI funding: \$3.13 million
- h-index 14
- i10-index 22
- Citation > 800 (google scholar)
- Major Sponsors: USDOT, NSF, FHWA, FAA, TRB, Florida DOT, City of Tampa.

Education Summary

- Advise 16 PhD Students (10 graduated, 6 women, 3 entered into academia)
- Students received national and state level awards

CURRICULUM VITAE

Yu Zhang, Ph.D.
Associate Professor
Department of Civil and Environmental Engineering (CEE)
University of South Florida (USF)
Address: 4202 E. Fowler Ave. ENB 118| Tampa, FL 33620
Tel: 813-974-5846 | Fax: 813-974-2957
Office: ENC 3211
Email: yuzhang@usf.edu
URL: <http://cee.eng.usf.edu/faculty/YuZhang/>
<http://www.sum-lab.org>

(updated in June 2020)

PERSONAL DATA

1. EDUCATIONAL BACKGROUND

Ph.D.	University of California Berkeley	Civil and Environmental Engineering	2008
M.S.	University of California Berkeley	Civil and Environmental Engineering	2003
B.E.	Southeast University, Nanjing, China	Transportation Engineering	1997

2. EMPLOYMENT

University of South Florida, Civil and Environmental Engineering	Associate Professor	Aug. 2015 – Present
University of South Florida, Civil and Environmental Engineering	Assistant Professor	Aug. 2008 – July 2015
USF, Center for Urban Transportation	Courtesy Faculty	Aug. 2008 – present
USF, Clean Energy Research Center	Affiliate Faculty	Jan. 2009 – Present
USF, Patel School of Global Sustainability	Affiliate Faculty	Nov. 2010 – Present
Jacobs Consultancy (Leigh Fisher Airport Management Consulting)	Finance & Business Consultant	Sep. 2007 – July 2008
CSSI Inc.	System Engineer	Jun. 2006 – Aug. 2006
NEXTOR, University of California Berkeley	Research Assistant	Jan. 2003 – Aug. 2007
University of California Berkeley	Teaching Assistant	Aug. 2005 – Dec. 2005
Nanjing Highway Administration, China	Assistant Engineer	Jul. 1997 – Dec. 2000

EDUCATION ACTIVITIES

3. GRADUATE COMMITTEE ACTIVITIES

Ph.D. Student:

Role	Ph.D. Student	Research Topic	Degree	Complete Date
Major Advisor	Mohammed Almasabi	TBD	Ph.D. (CEE)	Expected in May 2024
	Pengli Zhao	TBD	Ph.D. (CEE)	Expected in May 2024
	Huang Feng	Leverage Deep Learning in Improving Airfield and Airspace Efficiency	Ph.D. (CEE)	Expected in May 2023
	Yujie Guo	Sharing Mobility	Ph.D. (CEE)	Expected in May 2021
	Zhiqiang Wu	Urban Air Mobility – Multimodal Perspective	Ph.D. (CEE)	Expected in May 2021
	Hualong Tang	Airspace design and trajectory planning for high density UAM operations	Ph.D. (CEE)	Expected in May 2021
	Yuan Wang	Dynamic Prediction of Runway Configuration and Airport Acceptance Rate for Efficient Air Traffic Management	Ph.D. (CEE)	May 2020
	Natalia Barbour	Adoption and Acceptance of Shared Mobility: From Now to Future	Ph.D. (CEE)	May 2019 (co-advised by Dr. Fred Mannering)
	Aritra Pal	Improve the Service Level of Free-Floating Bike Sharing Systems	Ph.D. (IMSE)	Dec. 2018 (co-advised by Dr. Changyong Kwon)
	Nikhil Menon	User Perception and Acceptance of Autonomous Vehicles	Ph.D. (CEE)	May 2017 (co-advised by Dr. Abdul Pinjari)
	Rui Guo	Eco-Friendly Traffic Signal Timing Design for Coordinated Semi-Actuated Corridors	Ph.D. (CEE)	May 2015
	Yu An	Resilient Hub-Spoke Network Design	Ph.D. (IMSE)	Dec. 2014 (co-advised by Dr. Bo Zeng)
	Qing Wang	Practical Algorithms for Improving the Efficiency of Airport Surface Operations	Ph.D. (CEE)	Dec. 2014
	Bing Huang	Understanding Operating Speed Variation of Multilane Highways with New Access Density Definition and Simulation Outputs	Ph.D. (CEE)	May 2012 (co-advised by Dr. John Lu)
	Nagesh Nayak	Estimation the Impact of Single Airport and Multi-Airport System Delay on the National Airspace System using Multivariate Simultaneous Models	Ph.D. (CEE)	May 2012
Hongyun Chen	Comparison of Safety Performance by Design Types at Freeway Diverge Areas and Exit Ramp Sections	Ph.D. (CEE)	Dec. 2010 (co-advised by Dr. John Lu)	
Committee Member	Zulqarnain Haider,	Using Optimization Methods for Solving Problems in Sustainable Urban Mobility and Conservation Planning	Ph.D. (IMSE)	May. 2020 (Major Advisor, Changhyun Kwon)

Chengcheng Mou	Visual Analytics Processing in Database Management Systems	Ph.D. (CSE)	Expected in May 2020
Mahdi Takaloo	Game theory approaches for transportation problems	Ph.D. (IMSE)	May 2020 (Major Advisor, Changhyun Kwon)
Yan Wang	Identification of patterns and disruptions in ambient sensor data from private homes	Ph.D. (IMSE)	May 2020 (Major Advisor, Ali Yalcin)
Sujan Sikder	Spatial Transferability of Activity-Based Travel Forecasting Models	Ph.D. (CEE)	Dec. 2013 (Major Advisor, Abdul Pinjari)
Gummada Murthy	Development and Application of DMS Operations Evaluation Models	Ph.D. (CEE)	Dec. 2012 (Major Advisor, Jian Lu)
Isidro Delgado	Modeling Roadside Safety Hazards to Predict Annual Crash Cost to Encroaching Vehicles in Rural Road Networks	Ph.D. (CEE)	Dec. 2011 (Major Advisor, Jian Lu)
Prony Bonnaire Fils	Modeling Travel Time and Reliability on Urban Arterials for Recurrent Conditions	Ph.D. (CEE)	Dec. 2011 (Major Advisor, Jian Lu)
Enrique Gonzalez-velez	Safety Evaluation of Roadway Lighting Illuminance Levels and its Relationship with Nighttime Crashes Injury Severity for West Central Florida Region	Ph.D. (CEE)	Dec. 2011 (Major Advisor, Jian Lu)
Linjun Lu	Operational Performance Evaluation of Four Types of Exit Ramps on Florida's Freeways	Ph.D. (CEE)	May 2011 (Major Advisor, Jian Lu)
Achilleas Kourtellis	Operational Evaluation of Advanced Safety Enhancement Devices: Rearview Video System	Ph.D. (CEE)	Dec. 2009 (Major Advisor, Jian Lu)

M.S. Students:

Faculty Member's Role	M.S. Student	Research Topic	Home Dept.	Complete Date
Major Advisor or co-Advisor	Arjun Chauhan	Modeling and Predicting Taxi Times at Airports	M.S (CEE)	May 2010
	Jacob Mirabella	Understanding Pedestrian Compliance and Safety Impact of Different Walk Modes at Signalized Intersections	M.S (CEE)	Dec. 2013
	Kai Liao	Intra-state Air Service for Floridians	M.S (IMSE)	Dec. 2015
Committee Member	Qing Wang	Study on crash characteristics and injury severity at roadway work zones	M.S (CEE)	May 2009 (Major Advisor, Jian Lu)
	Lei Zhang	Development of Optical Rut Measure System	M.S (CEE)	May 2010 (Major Advisor, Jian Lu)
	Caleb Van Nostrand	A Discrete-Continuous Modeling Framework for Long Distance, Leisure travel demand analysis	M.S (CEE)	May 2011 (Major Advisor, Abdul Pinjari)
	Joseph Nicholas Samus	Preparing for the Next Generation of Senior Population: An Analysis of Changes in Senior Travel Behavior over the Last Two Decades	M.S. (CEE)	Dec. 2013 (Major Advisor, Abdul Pinjari)

Others:

Role	M.S. Student	Research Topic	Home Dept.	Complete Date
Dissertation Defense Chair	Ahmad Alagil	Randomized Positioning DSSS for Anti-Jamming Wireless Communications	Ph.D. (CSE)	May 2020
	Mona Haghighi	Rule-based Risk Monitoring Systems for Complex Datasets	Ph.D. (MISE)	May 2017
	Dongping Du	Modeling and Predicting Taxi Times at Airports	Ph.D. (IMSE)	May 2015

4. AWARDS BY ADVISEES

- Hualong Tang, Florida Airport Council Scholarship, 2019
- Natalia Barbour, Eno Foundation Leadership Fellowship, 2018.
- Yuan Wang, National Academies of Science Transportation Research Board (TRB) Airport Cooperative Research Program (ACRP) Graduate Research Award, 2017-2018.
- Natalia Barbour, 2017 University Transportation Center Outstanding Student of the Year Award.
- Yuan Wang, 2017 Georgia Brosch Memorial Transportation Scholarship.
- Hualong Tang, 2017 CUTR Student Poster Competition, Second Place.
- Yuan Wang, 2017-2018 Transportation Research Board Airport Cooperative Research Program Graduate Research Award.
- Natalia Barbour, 2016-2017 USF Graduate Student Success Fellowship.
- Nikhil Menon, 2015 Georgia Brosch Memorial Transportation Scholarship.

- Makarand Gawade, National Academies of Science Transportation Research Board (TRB) Airport Cooperative Research Program (ACRP) Graduate Research Award, 2014-2015.
- Makarand Gawade, 2013 Georgia Brosch Memorial Transportation Scholarship.
- Rui Guo, Intelligent Transportation System (ITS) Society of Florida's Anne Brewer Scholarship, 2012.
- Qing Wang, 2012 Georgia Brosch Memorial Transportation Scholarship.
- Makarand Gawade (as the second author with Dr. Yu Zhang), Best Paper Award for the airline operations, quality of service and marketing track in 5th International Conference on Research in Air Transportation (ICRAT 2012)
- Nagesh Nayak, National Academies of Science Transportation Research Board (TRB) Airport Cooperative Research Program (ACRP) Graduate Research Award, 2010-2011.
- Nagesh Nayak, Intelligent Transportation System (ITS) Society of Florida's Anne Brewer Scholarship, 2009.

RESEARCH ACTIVITIES

5. RESEARCH INTERESTS

Transportation networking modeling
 Air traffic management
 Airport operations and management
 Multimodal transportation planning and operations
 Sustainable transportation

Key words: optimization, algorithm, environment, energy, sustainability, intermodal transportation, air cargo, freight movement, autonomous vehicle, next generation air transport system, intercity transport.

6. SPONSORED RESEARCH PROJECTS

1. USDOT Tier 1 University Transportation Center: Center for Transportation, Environment, and Community Health (CTECH), Sponsored by US. Department of Transportation, 1/2017-1/2022, \$7,000,000 (Institutional PI, Dr. Zhang: \$1,600,000 plus 50% local match)
 - The Center for Transportation, Environment, and Community Health (CTECH) pursues research and innovation to support sustainable mobility of people and goods while preserving the environment and improving community health. It leverages behavioral and economic sciences, epidemiology, information technology, and environmental and transportation sciences and technologies to address critical issues falling under the FAST Act's priority area of Preserving the Environment: greenhouse gas reduction, use of alternative fuels and energy technologies, environmentally responsible planning, and impacts of freight movement.
 - Research topics that Dr. Zhang leads under this award:
 - Analysis of Free-Floating Bike Sharing and Insights on System Operations
 - Health Perception on Adoption and Acceptance of Shared Mobility: From Now to Future
 - Reducing Airport Pollution and Consequent Health Impacts to Local Community
 - Design of a Hybrid Rebalancing Strategy to Improve Level of Service of Free-Floating Bike Sharing Systems
 - Modeling and Evaluating Multimodal Urban Air Mobility

2. Corridor-Wide Surveillance Using Unmanned Aircraft Systems, Sponsored by National Center of Congestion Relief, USDOT National UTC, 02/2020-08/2021, \$221,046 (PI: Yu Zhang; co-PI: Achilles Kourtellis): To develop a protocol for the use of UAS to monitor freeway traffic conditions that complement Part 107 of FAA regulations. Design and conduct an experiment aimed at establishing the protocols, standards, and guidance for the effective and safe use of drones for monitoring corridor-wide traffic conditions. Aspects such as suitable flying positions relative to the location of bottlenecks or potential bottlenecks, the effective and safe location of the operator with respect to live traffic conditions, weather factors, and suitable formats for processing video data collected by drones will be considered. Using the proposed protocol, conduct trials of corridor-wide surveillance of freeway conditions to validate the effectiveness and safety aspects of UAS.
3. Leveraging Deep Learning in Understanding the Impact of Convective Weather to Airfield Efficiency, Sponsored by FAA NextGen Office, 09/2019-09/2020, \$82,512 (PI: Dr. Yu Zhang)
 - Although there is extensive research in quantifying how convective weather affect section and airfield capacity, at tactical operational level, how convective weather in TRACON and terminal areas affect the airfield efficiency in terms of utilization of runway capacity has not been well studied. This research project proposes to leverage learning-based method to tackle this problem and take Atlanta International Airport as the case study to demonstrate the proposed method.
4. Scenario Analysis of Future Roadway Network of Tampa Bay Area, Sponsored by Florida Department of Transportation, 10/2019 - 12/2020, \$225,321 (PI: Dr. Yu Zhang)
 - Transportation infrastructure in Tampa Bay Area carries the travel demand needs of the growing population and contribute significantly to economic development of the region. To prepare for the future, this study proposes a comprehensive analysis to research possible future roadway networks of Tampa Bay Area and explore alternatives of improving the mobility and livability of the Tampa Bay Area.
5. Multi-stage Planning for Electrifying Transit Bus Systems with Multi-format Charging Facilities, Sponsored by TRB Transit IDEA Program, 11/2019-1/2021, \$100,000 (PI: Yu Zhang; co-PI: Tingting Zhao)
 - The objective of this proposed study is to provide a decision support tool to public transit authorities for facilitating the process of electrifying their transit buses. Specifically, given the periodical budget and transit network and features, the tool will provide outcomes at different stages including (1) which routes the acquired electric buses should serve; (2) where to deploy charging facilities (both plug-in at stations and dynamic wireless charging facilities embedded in road pavement); and (3) what should be the right size of on-board battery for a specific route.
6. Performance Evaluation of e-Scooter Sharing Pilot Program in the City of Tampa, Sponsored by the City of Tampa, 5/2019-7/2020, \$73,061 (PI: Yu Zhang; co-PI: Jason Jackman)
 - The objectives of this research project are: (1) constructing suitable performance metrics for e-scooter sharing; (2) perform different data collection methods to generate database for performance metrics computation, visualization, and operational reporting; (3) apply advanced method for determining the weights of performance metrics across and within different categories; (4) conclude the comparison of performance measurement across different service providers and offer recommendations to the City on e-scooter sharing.

7. Doctoral Fellowships in Civil Engineering for Redesigning Resilient Transportation and Water Critical Infrastructure, Sponsored by Department of Education, 10/2018-9/2023, \$746,250 (PI: Jim Mihelcic; Co-PI, Dr. Zhang, \$248,650)
 - The primary objective is to recruit, select, train, and mentor six doctoral students with excellent academic records, who demonstrate financial need and are from diverse backgrounds, preparing them for impactful career paths in higher education and/or research that influence how we design and manage two *critical* and *interdependent infrastructures*, transportation and water. The two areas that Dr. Zhang focuses are (1) Optimization problems in emergency management of interdependent transportation and water infrastructure; (2) Planning of infrastructure needs of emerging mobility services, including shared mobility and urban air mobility.

8. CRISP Type 2: Integrative Decision Making Framework to Enhance the Resiliency of Interdependent Critical Infrastructures, Sponsored by NSF, 9/1/2016-8/31/2020, \$1,963,542(Co-Investigator Dr. Zhang: \$273,668)
 - This CRISP project will advance our understanding of the effects of different types of interdependencies on the resiliency of critical infrastructures (CIs), targeting water, transportation and cyber infrastructures. Instead of focusing on different infrastructures, this project focuses on different interdependencies including physical-based (primarily co-location), virtual-based (primarily information), and socioeconomic-based (primarily resource management). The project will enhance the resiliency of interdependent critical infrastructures and transform infrastructure management by the integrative decision framework developed for the evaluation of design, operational and organizational strategies. The integrated research and education provide a fun self-learning environment and wide dissemination of project findings and products through the interactive website hosting the competition-based learning game.

9. Impacts of Automated Vehicles to Airport Landside Terminal Planning, Design, and Operation, sponsored by Transportation Research Board Airport Cooperative Research Program Graduate Research Award, 10/2017-9/2018, \$12,000 (Advisor Dr. Zhang: \$0)
 - This study will discuss the comprehensive impacts of emerging automated vehicles to airports and develop a simulation framework to quantitatively evaluate AVs' impacts to airport, and deliberate on pro-actively adjusting airport terminal planning and design so as to provide flexibility for preparing for the changing operational environment.

10. Florida Airport Sustainability Tracking/Monitoring System, Sponsored by FDOT Aviation and Spaceports Office, 2/2017-1/2019, \$200,000 (PI, Dr. Yu Zhang, \$150,000)
 - This research project, based on the outcomes of existing studies in related areas, proposes to explore the unique needs of Florida's airport system and produce a Florida Airport Sustainability Performance Tracking/Monitoring System that can be easily used by airport sponsors and related transportation agencies.

11. Florida Aviation Activity Forecast Methodologies and Tools Development, Sponsored by FDOT Aviation and Spaceports Office, 1/2017-7/2018, \$150,000 (PI, Dr. Zhang, \$89,000)
 - This study proposes to develop new user-friendly tools for airport aviation activity forecast for FDOT, and furthermore, to explore the uncertainties of aviation activity and seek the ways of incorporating them into the forecasting.

12. Measuring Metroplex Performance in Convective Weather, Sponsored by FAA NextGen Office, 9/15/2016-9/14/2017, \$92,500 (PI, Dr. Zhang, \$92,500)

- The objective of this research is to understand how the airspace changes support more efficient operations during convective events by evaluating differences in performance of the airspace in terms of trajectory efficiencies and airport throughput under convective weather conditions with and without Metroplex airspace re-design implementations. The study area is DFW Metroplex.
13. Improving Safety in Pavement Field Testing, Sponsored by federal fund flow through FDOT, 4/12/2016-10/1/2017, \$140,769 (Co-PI, Dr. Zhang, \$14,381)
 - The objective of this project is to determine the state-of-the-practice for collecting pavement condition and performance data at highway speeds or within maintenance of traffic or work zone or at slow speeds, to develop and standardize a practical method for improved safety during testing, and to develop a Computer Based Training (CBT) course and handbook to properly educate operators on best practices and safer testing protocols.
 14. Application of Demographic Analysis to Pedestrian Safety, Sponsored by FDOT, 8/1/2016-7/31/2017, \$102,000 (Co-PI, Dr. Zhang, \$20,000)
 - The objectives of this research project are to (1) to develop a demographics-based methodology that identifies low-income areas that possess a combination of “pre-conditions” for greater pedestrian hazard, and (2) produce recommendations for both engineering countermeasures and pedestrian safety education/outreach plans that will resonate with a given area’s demographics.
 15. Verification and Recommended Improvement to International Guidance on Performance Metrics, 7/1/2015-6/30/2017, \$165,000 (PI Dr. Zhang: \$165,000)
 - The purpose of this research is to provide support in validating and verifying the procedures for metric development for the operational performance measures recommended by CANSO and ICAO to determine if there are gaps or shortfalls. Given world traffic trends, the research team will work to build collaborative work partnerships with ANSPs in the Asia-Pacific region.
 16. ACRP 02-50, Deriving Benefits from Alternative Aircraft-Taxi Systems, sponsored by Transportation Research Board Airport Cooperative Research Program, 7/2014-12/2015, \$300,000 (Institutional PI Dr. Zhang: \$13,000)
 - The objective of this research is to develop a resource guide for airport practitioners in three sections that includes: (1) Section 1—an introduction to existing and near-term alternative aircraft-taxi systems; (2) Section 2—a compendium of defensible benefits, impacts, and considerations related to each system; and (3) Section 3—a summary and vision to maximize future potential of these systems given anticipated advances in technology, equipage, and infrastructure.
 17. Airport Users’ Perception towards “Remote and Virtual” Control Towers at Small Airports, sponsored by Transportation Research Board Airport Cooperative Research Program Graduate Research Award, 10/2013-9/2014, \$10,000 (Advisor Dr. Zhang \$0)
 - The objective of this study are to gain insights in technical aspects of RVT operations and its expected influence on the operations and safety of future at “no control tower” airports in the U.S. and to understand small airport users’ perceptions on no-control tower and RVTs and their possible reactions in small airport usage due to the changes of air traffic control
 18. The Role of Air Cargo in Tampa Bay Regional Goods Movement, sponsored by Florida Department of Transportation, 1/2014-12/2015, \$81,789 (PI Dr. Zhang: \$55,286)

- The objectives of this research are to understand the air cargo market and airport operations in Tampa Bay Region and to identify issues hindering efficient air cargo movement in the region and explore solutions and provide recommendations.
19. Bull Bikes (Share-A-Bull)- A Smart Bike Sharing Program for USF Bulls, sponsored by Student Green Energy Fund of USF, 8/2013-8/2016, \$446,879 (PI Dr. Zhang: \$446,879)
 - The objective of this project is to design and implement a smart bike sharing program that can be used by students, staff and faculty of USF Tampa campus. The purpose is to reduce across-campus auto trips and consequent excessive fuel consumption and emissions.
 20. ACRP 02-38, Guidebook for Energy Facilities Compatibility with Airports and Airspace(Institutional PI), 2012-2013, \$450,000 (Institutional PI Dr. Zhang: \$55,440)
 - The objective of this study is to produce a guidebook for aviation safety associated with planning, developing and constructing energy production and transmission technologies at and around airports.
 21. Understanding Pedestrian Compliance and Safety Impact of Different Walk Modes at Signalized Intersections for Livable Community, sponsored by Albeck Gerken Inc. 1/2013-12/2013, \$26,638 (PI Dr. Zhang: \$26,638)
 - The objectives of this study are the follows: To survey and understand pedestrian compliance on alternative walk modes; To evaluate the consequent pedestrian safety impact of alternative walk modes; To model pedestrian crossing behavior and advance the basic research in traffic psychology and behavior
 22. Bulls Walk and Bike Week Campaign for Improving Pedestrian and Bicyclist Safety , sponsored by Florida Department of Transportation, 2012, 2013, 2014, \$48,000, \$50,000, \$55,000 (Co-PI Dr. Zhang: \$12,000, \$15,000, \$16,000)
 - The purpose of the campaign is to promote the awareness of pedestrian and bicycle safety at the USF Tampa campus. Dr. Zhang leads the before and after comparison study for evaluating the effectiveness of the campaign.
 23. Design of Advanced Traffic Responsive Signal System, sponsored by Albeck Gerken Inc. and Florida High Tech Corridor, 1/2012-12/2012, \$44,800 (PI Dr. Zhang: \$44,800)
 - The objective of this study is to design and improve advanced Traffic Responsive Signal System (TRSS). TRSS is an ITS system responding to dynamic traffic patterns by collecting and processing traffic data and optimizing the day plan of signal systems. By doing so, it will lead to effective operation of traffic signal system by reducing travel time, alleviating travelers' delay, increasing level of service of intersections, mitigating Green House Gas emissions, and improving the reliability of transportation network.
 24. Tampa Bay, FL In-Vehicle Driving Behavior Field Study, sponsored by Strategic Highway Research Program (SHRP2) , 2010-2013, \$1,900,000 (Investigator Dr. Zhang: \$38,000)
 - The objective of this study is to mitigate traffic injuries and fatalities by preventing, or reducing the severity of collisions. The entire research plan includes two tracks: a large field study of driving behavior and performance using volunteer drivers and a comprehensive, state-of-the-art instrumentation package installed in the volunteers' vehicles; and a video system to record the movements of all vehicles at specific road sites such as an intersection. This study focuses on the in-vehicle passenger behavior field data collection and management.

25. Graduate Scholarships to Achieve Sustainable Infrastructure at the Water-Energy-Global Nexus, sponsored by National Science Foundation (NSF), 2010-2014, \$600,000 (Co-PI Dr. Zhang: \$120,000)
- The objective of this program is to provide a full-circle mentoring plan implemented between faculty and doctoral students, as well as between PhD students and MS students. Efforts are being made to recruit and retain a diverse cohort of graduate students (with and without first degrees in engineering) into advanced engineering programs and to prepare students to be globally competitive by promoting knowledge transfer between students and faculty that have different global perspectives while integrating the most appropriate knowledge, methodologies, techniques, and practices from both the developed and developing worlds.
26. Research on FAA Performance Indicators, sponsored by Federal Aviation Administration (FAA) Air Traffic Organization (ATO), 2009-2010, \$70,000 (PI Dr. Zhang: \$70,000)
- The objectives of this study are to develop an approach based on consistent data sources and methodologies to measure and compare airport ATM operational performance in the U.S. and EU, and to identify ATM-related best practices that could possibly help in raising the level of performance in a relatively short term, with today's technology and operational concepts.
27. Performance Metrics Development and Analysis Support (PI), sponsored by Federal Aviation Administration (FAA) Air Traffic Organization (ATO), 2009-2010, \$30,000 (PI Dr. Zhang: \$30,000)
- The objective of this study is to specify tasks, deliverables, and resources needed to support the FAA ATO-P International with Performance Metrics development and assessment and with Operational Performance Assessments supporting Next Generation Air Transportation development.
28. Estimation and Comparison of the Impact of Single Airport Delay to the National Airspace System using Multivariate Simultaneous Models, sponsored by Transportation Research Board Airport Cooperative Research Program Graduate Research Award, 10/2009-9/2010, \$10,000 (Advisor Dr. Zhang: \$0)
- The objectives of this study are to understand the delay propagation at macroscopic level and to quantify the effects of different delay attributes and the interactions between single airport and National Airspace System (NAS).
29. Demand Management of LaGuardia Airport in New York, sponsored by Federal Aviation Administration, 2006-2007
- The objective of this study is to develop market-based mechanism and administrative mechanism for demand management at LGA airport. It was used to support FAA's decisions on demand management rules to replace High Density Rule implemented at LGA since 1968.
 - Dr. Zhang worked as a Graduate Student Researcher on this project and was in charge of developing new administrative rules for air traffic demand management.
30. Statistically Modeling Inter-arrival Time and Airport Capacity, sponsored by Federal Aviation Administration, 2005-2006
- The objective of this study is to introduce a new methodology to estimate airport capacity by analyzing inter-arrival time in PDARS data.
 - Dr. Zhang worked as a Graduate Student Researcher on this project and led the statistically modeling to estimate the airport capacity.

31. Research on Air Traffic Controller Operational Error, sponsored by Federal Aviation Administration, 2003-2004
- The objective of this study is to develop a controller load factor indicator with outputs from flight simulation in FACET, software developed by NASA and analyze the relationship between controller load factor and controller operational errors. The outcomes of this study provide guidance on managing sector capacity and improving air traffic safety.
 - Dr. Zhang worked as a Graduate Student Researcher on this project and performed most of the technical parts of this study.

7. INTERNATIONAL COLLABORATIVE SPONSORED PROJECTS

1. Multimodal, Efficient Transportation in Airports and Collaborative Decision Making (Advisory Board Committee Member), 2012-2014, US-EU collaborative project
 - This study will deliver a broad understanding of systems strengths and weaknesses, the areas where co-ordination can be improved and an assessment of the implications of disruptive events from many perspectives. Clear messages in these areas will help scope the frame for new EU research that can deliver the tools and procedures to ensure greater system resilience and a better passenger experience when crises strike.
 - Dr. Yu Zhang is serving on the advisory board for this project.
2. Towards Sustainable Transportation and Development: Applying Advanced Econometrics Theory in Multimodal Public Transportation Studies, 2012-013, US-China collaborative project, \$12,000 (PI Dr. Zhang: \$12,000)
 - Sponsored by USF Global Academic Partners (GAP) Program for Innovation in Collaborative Research, Teaching and Creative Activities
3. Air Traffic Demand Analysis between U.S. and China (PI), 2010-2011, US-China collaborative project
 - The objective of this study is to model the passenger and freight traffic demand between U.S. and China and provide suggestions on new service launching at Chinese airport.

8. PUBLICATIONS

* indicates my graduate students

** indicates other researchers working under my supervision for this specific research

^ indicates corresponding author

Refereed Journal Articles

1. Rong Hu**, Jialin Zhu, Yu Zhang, Junfeng Zhang**, and Frank Witlox (2020). Spatial characteristics of aircraft CO₂ emissions at different airports: Some evidence from China, *Transportation Research Part D* 85(2020), <https://doi.org/10.1016/j.trd.2020.102435>.
2. Tingting Zhao**, Yu Zhang^ (2020). Transportation Infrastructure Restoration Plan Optimization Considering Unmet Demand in Resilience Measures after Disruptive Events, *Transportation Research Part C: Emerging Technologies*, in press.
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Manuscripts under Review with Journals

^ indicates Corresponding Author

1. Rocio Frej Vitale, Bruce Normann, Ni Shen, **Yu Zhang**, Route Design for the Integration of Vertical Takeoff and Landing (VTOL) Vehicles in Non-Segregated Airspace
2. Zhiqiang Wu, **Yu Zhang**^, Network Design, Performance Analysis, and Potential Demand Exploration of eVTOL On-Demand Service for Urban Air Mobility.
3. Fang Sun, Hong Liu, **Yu Zhang**^, Integrated Aircraft and Passenger Recovery with Modified Time-Band Network and Candidate Passenger Itinerary Generation.

4. Yuan Wang, **Yu Zhang**[^], Prediction of Runway Configurations and Airport Acceptance Rates for Multi-Airport System Using Gridded Weather Forecast.
5. Vahid Mahmoodian, **Yu Zhang**[^], Hadi Charkhgard, Hybrid Rebalancing with Dynamic Hubbing for Free-floating Bike Sharing Using Multi-objective Simulation Optimization.
6. Rong Hu, Lin Chen, **Yu Zhang**, Junfeng Zhang, Measures for airlines to reduce airport congestion fees: scheme design and performance assessment.
7. Tingting Zhao, **Yu Zhang**[^]. Restoration Sequencing of Multi-site Traffic Signal Failure with Bi-objective Simulation-based Optimization.

Working Papers:

[^] indicates Corresponding Author

1. Hualong Tang, **Yu Zhang**[^], Vahid Mahmoodian, Hadi Charkhgard, Trajectory Planning for High Density Urban Air Mobility.
2. Huang Feng, **Yu Zhang**[^], Safety Initiatives for Airport Ground Transportation Operations in the Era of Automated Vehicles
3. **Yu Zhang**[^], Rui Dai, Tingting Zhao, Zhiqiang Wu, Multi-Objective Optimization of Integrated Design of Dynamic Wireless Inductive Charging Location and On-Board Battery Size for Electric Bus Systems.
4. Yujie Guo, **Yu Zhang**[^], Understand the Factors Influence Shared e-Scooter Usage and its Impact on Auto Mode Substitution.
5. Ming Zhang, **Yu Zhang**, Zhifeng Qiu, Hanlin Wu, and Yifan Zhang, Two-stage Covering Location Model for Air-Ground Medical Rescue System.
6. Ming Zhang, **Yu Zhang**, Evaluation Method for Fuel Oil Consumption in Aircraft Departure Based on an Analysis of Flight Data.
7. Yujie Guo, **Yu Zhang**[^], Yujie Hu, Mobility Pattern Analysis of Free-Floating Bike Sharing in a Mega City of China.
8. Ang Li, Mark Hansen, **Yu Zhang**, Capacity Scenarios Analysis and Flight Shift Model for Improving Operational Performance of Regional Airport Systems.
9. Rui Guo, **Yu Zhang**, Zhiqiang Wu, Measurement of Indirect Economic Benefit of Airlines from Sustainable Aircraft Taxiing.
10. Yuan Wang, **Yu Zhang**. Airport Efficiency Measurement using Two-Stage DEA Model.
11. Yigang Huang, **Yu Zhang**, Air Traffic Controllers Training and Performance Evaluation: case study of China air traffic control system

Referred Conference Proceedings

1. Qing Wang* and Yu Zhang, Real-Time Integrated Airport Surface Operations Management, 6th International Conference on Research in Air Transportation (ICRAT 2014), May 26-30, Istanbul, Turkey.
2. Yu Zhang, Makarand Gawade*, Pei-Sung Lin, Trena McPherson, Educational Campaign for Improving Pedestrian Safety: A University Campus Study, Proceeding from the 13th COTA International Conference of Transportation Professionals (CICTP2013), Shenzhen, China.

3. Yu Zhang, Makarand Gawade* and Wei Da (2012), Where to Launch A New Passenger Air Route Between China and The U.S. The Proceeding of 5th International Conference on Research in Air Transportation — ICRAT 2012, Best Paper Award, Airline Operation, Quality of Service and Marking.
4. Shen Dong**, Yu Zhang, Ruishan Sun, State Transition of Gaze during Flight Simulation, under revision, The proceedings of the 92th TRB annual meeting, January 2013, Washington DC.
5. Yu Zhang, Makarand Gawade*, and Da Wei (2011), Analysis of Air Passenger Demand between the U.S. and China, The proceedings of the 90th TRB annual meeting, January 2011, Washington DC.
6. Yu Zhang, Qing Wang* (2011), “Methods for Determining Airport Unimpeded Taxi Times”, The proceedings of the 90th TRB annual meeting, January 2011, Washington DC.
7. Bing Huang*, Yu Zhang, Linjun Lu, John Lu (2011), “Proposed New Access Density Definition and Its Correlation with Crash Rates”, The proceedings of the 90th TRB annual meeting, January 2011, Washington DC.
8. Yu Zhang, Arjun Chauhan*, and Xing Chen (2010), “Modeling and Predicting Taxi out Times at Airports, The Proceeding of 4th International Conference on Research in Air Transportation, June 01-04, 2010, Budapest, Hungary.
9. Yu Zhang, Nagesh Nayak*, and Tony Diana (2010), “Estimation and Comparison of the Impact of Single Airport Delay to the National Airspace System using Multivariate Simultaneous Models”, The Proceeding of 4th International Conference on Research in Air Transportation, June 01-04, Budapest, Hungary.
10. Bo Zeng, Yu An*, Yu Zhang (2010), “A Reliable Hub-Spoke Model in Transportation Systems”, International Symposium on Transportation Network Reliability, July 22-23, 2010, University of Minnesota, Minneapolis, Minnesota.
11. Yu Zhang, Mark Hansen (2009), “Regional GDP — Extending Ground Delay Programs to Regional Airport Systems”, 8th Air Traffic Management R&D Seminar, 2009. Online publication is available on ATMseminar.org.
12. Yu Zhang, Cristiano Facanha (2009), “Repositioning of Empty Containers in the Transpacific Market: A Case Study”, The Proceeding of International Conference of Chinese Transportation Professionals (ICCTP) 2009, August 4-10, 2009, Herbin, China.
13. Jasenka Rakas, Yu Zhang, and Vivek Ramamurthy, “Airport Performance Predictability Model”, 9th AIAA Aviation Technology, Integration, and Operations Conference, Sep. 2009, South Carolina.
14. Yu Zhang, Jasenka Rakas, and Mark Hansen (2006), “Methodology for Estimating Airport Capacity and Throughput Performance with PDARS”, The Proceeding of 8th World Conference of Air Transport Research Society, Nagoya, Japan, May, 2006.
15. Yu Zhang, Mark Hansen (2005), “The Link between Operational Performance and Operational Errors in the National Airspace System”, 6th Air Traffic Management R&D Seminar, 2005. Online publication is available on ATMseminar.org.
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17. DianHai Wang and Yu Zhang (2003) “The Study of Platoon Dispersion”, the Proceeding of Transportation Research Board Annual Meeting, January 2003, Washington D.C.

Presentations

1. Yu Zhang, Aritra Pal, Changhyun Kwon (2017). Analyzing Mobility Patterns and Imbalance of Free-Floating Bike Sharing Systems, presented at 2017 INFORMS annula meeting Houston, Oc. 22-25, 2017.
2. Yu Zhang, Aritra Pal, Changhyun Kwon (2017). Strategies to Mitigate and Prevent Damage of Bikes in Free-Floating Bike Sharing System, presented at 2017 INFORMS annula meeting Houston, Oc. 22-25, 2017.
3. Tingting Zhao, Yu Zhang (2017), Transportation Infrastructure Restoration Optimization after Disruptive Events Considering Unmet Demand in Resilience Measure, presented at 2017 INFORMS annula meeting Houston, Oc. 22-25, 2017.
4. Aritra Pal, Yu Zhang, Changhyun Kwon (2016). Exploring Mobility Patterns of a Free-Floating Bike Sharing System, HKSTS annual meeting, Hong Kong, December 12, 2016.
5. Yu An*, Bo Zeng, Yu Zhang (2014). Reliable Hub and Spoke Design: Modeling and Algorithm, presented at CICTP2014, Changsha, China, Jul. 4-7, 2014.
6. Yu Zhang, Makarand Gawade*, Pei-Sung Lin, Trena McPherson (2013). Educational Campaign for Improving Pedestrian Safety: A University Campus Study, presented at 93rd Transportation Research Board Annual Meeting, Washington D.C., Jan. 13-17, 2013.
7. Yu Zhang, Tony Diana (2012). "Evaluation of the Incremental Benefit of NextGen Programs", presented at INFORMS2012, October 14-17, 2012, Phoenix Convention Center, Phoenix, AZ.
8. Yu Zhang, Dipasis Bhadra (2012). Airport Capacity Benchmarking and Terminal Performance Evaluation using Data Envelopment Analysis, presented at INFORMS2012, October 14-17, 2012, Phoenix Convention Center, Phoenix, AZ.
9. Qing Wang*, Yu Zhang (2012). Real-Time Integrated Airport Surface Movement Controlling, presented at INFORMS2012, October 14-17, 2012, Phoenix Convention Center, Phoenix, AZ.
10. Yu An*, Bo Zeng, Yu Zhang (2012). Robust Hub-and-Spoke System Design with Congestion, presented at INFORMS2012, October 14-17, 2012, Phoenix Convention Center, Phoenix, AZ.
11. Yu Zhang, Makarand Gawade*, and Da Wei (2011). Analysis of Air Passenger Demand between the U.S. and China, presented in the 90th TRB annual meeting, January 2011, Washington DC.
12. Yu Zhang, Qing Wang* (2011), Methods for Determining Airport Unimpeded Taxi Times, presented in the 90th TRB annual meeting, January 2011, Washington DC.
13. Bing Huang*, Yu Zhang, Linjun Lu, John Lu (2011), Proposed New Access Density Definition and Its Correlation with Crash Rates, presented in the 90th TRB annual meeting, January 2011, Washington DC.
14. Yu Zhang, Arjun Chauhan*, and Xing Chen (2010), Modeling and Predicting Taxi out Times at Airports, presented in the 4th International Conference on Research in Air Transportation, June 01-04, 2010, Budapest, Hungary.
15. Yu Zhang, Nagesh Nayak*, and Tony Diana (2010), Estimation and Comparison of the Impact of Single Airport Delay to the National Airspace System using Multivariate Simultaneous Models, presented in the 4th International Conference on Research in Air Transportation, June 01-04, Budapest, Hungary.

16. Bo Zeng, Yu An*, Yu Zhang (2010), A Reliable Hub-Spoke Model in Transportation Systems, presented in the International Symposium on Transportation Network Reliability, July 22-23, 2010, University of Minnesota, Minneapolis, Minnesota.
17. Yu Zhang, Mark Hansen (2009), Regional GDP — Extending Ground Delay Programs to Regional Airport Systems, presented in the 8th Air Traffic Management R&D Seminar, 2009. Online publication is available on ATMseminar.org.
18. Yu Zhang, Cristiano Facanha (2009), Repositioning of Empty Containers in the Transpacific Market: A Case Study, presented in the 9th International Conference of Chinese Transportation Professionals (ICCTP) 2009, August 4-10, 2009, Herbin, China.
19. Jasenka Rakas, Yu Zhang, and Vivek Ramamurthy, Airport Performance Predictability Model, presented in 9th AIAA Aviation Technology, Integration, and Operations Conference, Sep. 2009, South Carolina.
20. Yu Zhang, Jasenka Rakas, and Mark Hansen (2006), Methodology for Estimating Airport Capacity and Throughput Performance with PDARS, presented in the 8th World Conference of Air Transport Research Society, Nagoya, Japan, May, 2006.
21. Yu Zhang, Mark Hansen (2005). Inter-modal Substitution for Airline Collaborative Decision Making, Presented at INFORMS annual meeting, Nov. 14-16, 2005, San Francisco and NEXTOR Research Seminar, Jan. 21, 2006, FAA, Washington D.C.
22. Mark Hansen, Yu Zhang, (2005), The Link between Operational Performance and Operational Errors in the National Airspace System, presented in 6th Air Traffic Management R&D Seminar, 2005. Online publication is available on ATMseminar.org.
23. Mark Hansen, Yu Zhang (2004). The Safety of Efficiency: the Link between Operational Performance and Operational Errors in the National Airspace System, presented at the TRB 83th Annual Meeting, January 11-15, 2004 in Washington D.C. Presented in Moving Metrics Workshop, January 27 – 30, 2004 at Asilomar in California.
24. Yu Zhang, Monica Menendez and Mark Hansen (2004), Analysis of De-peaking Strategies Implemented by American Airlines, presented in 83th Transportation Research Board Annual Meeting, January 2003, Washington D.C.
25. DianHai Wang and Yu Zhang (2003) The Study of Platoon Dispersion presented in 82th Transportation Research Board Annual Meeting, January 2003, Washington D.C.

9. INVITED TALKS

1. Trend of Multi-Airport Systems and their Impacts to Regional Development, 2nd Future Transportation Conference, Hangzhou, China, December 2019.
2. Planning of Urban Air Mobility for Future Transportation System, 2nd Future Transportation Conference, Hangzhou, China, December 2019.
3. Empirical Analysis on how Emerging Automated Vehicles and Shared Automated Vehicles affect Future Travel Behavior (International Conference on Transportation Innovation), University of Alberta, September 2018.
4. Improve the Level of Service of Free-Floating Bike Sharing, Florida Atlantic University, November 8, 2017.
5. Station-less Bike-Sharing: Chinese and American Applications, Transportation Research Center, University of Minnesota, August 7, 2017.

6. Real-time Intermodalism: A Strategy for Reducing Passenger Delay and Airline Disruption Cost, COTA-SCUT Workshop, Guangzhou, July 4th, 2017.
7. Regional GDP – Extending Ground Delay Program to Regional Airport Systems, Civil Aviation University of China, Tinajin, June 15, 2017.
8. Modeling Aircraft Taxi Time and Determining Unimpeded Taxi Time, Civil Aviation University of China, Tinajin, June 14, 2017.
9. Overview of Aviation Research at Next Generation of Transportation System Lab at USF, Nanjing Aeronautics and Astronautics University, Nanjing, June 9, 2017.
10. Shared Mobility's Today and Tomorrow, Southeast University, Nanjing, June 8, 2017.
11. Trend of Air Transportation and Research Needs, National Key Laboratory of Air Traffic Management of China, Nanjing, April 13, 2017.
12. Static Reblancing for Free-Floating Bike Sharing, Tsinghua University, March 10, 2017.
13. Environmental Comparison of Alternative Aircraft-Taxiing Systems (AATS), Global Workshop on Aviation System Performance (GWASP2016), Plenary Session, Tianjin, July 21, 2016.
14. Comparison of Airport Capacity and Analysis of Airport Acceptance Rate (AAR) - Ongoing U.S. and China Collaborative Efforts, Global Workshop on Aviation System Performance (GWASP2016), Plenary Session, Tianjin, July 22, 2016.
15. The Mode and Method of Training American Traffic Engineers, 2nd Transportation Engineering Education Symposium, Tongji University, July 16, 2016.
16. Implication of Autonomous Vehicle to Airport Terminal Planning and Design, COTA International Conference of Transportation Professionals (CICTP2016), Plenary Session, July 7, 2016.
17. TNC: FAD or Future: What can we learn from Uber?, Chang'an University, Xi'an July 2, 2016.
18. Free-Floating Bike Sharing: Solving large-scale real life static rebalancing problems, The 2015 International Workshop on Sustainable Urban Transportation, Plenary Session, Beijing University of Technology, August 1, 2015.
19. Integrated Solutions for Transportation Systems, Beijing Jiaotong University, March 5, 2015.
20. Exploration of correlation between environmental factors and mobility at signalized intersections, Tongji University, China, July 8, 2014.
21. Real-Time Intermodal Substitution: Strategy for Airline Recovery from Schedule Perturbation and for Mitigation of Airport Congestion, Beijing University of Technology, Jul. 10, 2014.
22. Overview of Methodologies to Estimate Airspace Capacity, Civil Aviation University of China, Jun. 4, 2014.
23. Real-Time Integrated Airport Surface Operations Management, Civil Aviation University of China, Jun. 4, 2014.
24. Reliable Hub-Spoke System: Modeling and Algorithm, Swiss Federal Institute of Technology (ETH), May 12, 2014.
25. Design of Reliable Hub and Spoke Network, DCL/SIAC Seminar, Georgia Institute of Technology, Sep. 21, 2012.

26. A Macroscopic Tool For Estimating the Impact of Individual Airport and Multi-Airport System Delay on the National Airspace System, University of Maryland, Transportation Seminar, Mar. 29, 2012.

SERVICE ACTIVITIES

10. UNIVERSITY GOVERNANCE AND SERVICE

- Chair, USF Research Council, Aug. 2020
- Member, USF Research Council, Jan. 2019 – Present
- Chairperson, Alumni-Survey Sub-Committee of the Curriculum and Assessment Committee in CEE Department, Aug. 2014 – Aug. 2016
- Graduate Committee for Civil and Environmental Engineering Department, Aug. 2010 – Present
- Search Committee for Civil and Environmental Engineering Department, Sep. 2011 – May. 2013, Oct. 2014 – Mar. 2015.
- CEE Transportation Research Seminar Coordinator, Fall Semester 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2018, 2020
- USF Sustainability Committee Transportation Subcommittee, Aug. 2009 – Present
- Search Committee for senior faculty position (Transportation), Sep. 2012 – May. 2013
- Search Committee for faculty position (Structure), Sep. 2011 – May. 2012

11. PROFESSIONAL ORGANIZATION LEADERSHIP

- President, Women in Transportation Seminar Tampa Bay Chapter, Jan. 2020 – Present
- Chair, National Academies of Science, Transportation Research Board standing committee AV060 Airfield and Airspace Capacity and Delay, Apr. 2017 – Present
- President, Chinese Overseas Transportation Association (COTA), Jan. 2016- Jan. 2018.
- WTS USF Student Chapter, Faculty Advisor, Oct. 2017 – Present
- Committee Research Coordinator and Paper Review Coordinator for Transportation Research Board standing committee AV060 Airfield and Airspace Capacity and Delay of National Academies, Jan. 2012 – Apr. 2017
- Vice President of Chinese Overseas Transportation Association (COTA), Jan. 2013 – Dec. 2015

12. ORGANIZOR OF PROFESSIONAL CONFERENCES AND SYMPOSIUM

International Academic Committee

- International Symposium on Emerging Trends in Transportation, Oct. 3-5, 2019, Rome, Italy.
- International Symposium on Emerging Trends in Transportation, Oct. 4-6, 2018, Honolulu, Hawaii, USA.

Conference Chair

- 17th COTA International Conference for Transportation Professionals, Jul. 7-9, 2017 Beijing, China.
- 16th COTA International Conference for Transportation Professionals, Jul. 6-8, 2016 Shanghai, China.

Organizing Committee Chair

- International Conference for Research in Air Transportation, Jun. 23-26, 2020, University of South Florida, Tampa, FL, USA.
- Global Workshop on Aviation System Performance, Jul. 21-23, 2016, Tianjin, China.

- 15th COTA International Conference for Transportation Professionals, Jul. 25-27, 2015 Beijing, China.
- 1st US-China Symposium on Sustainable Transportation and Development, December 19-21, 2011, Tampa, Florida
- 15th COTA/WCTA Annual Symposium, Towards Sustainable Transportation and Development: Policies, Technologies, and Implementations, January 22, 2012, Embassy Room, Omni Shoreham, Washington DC.

Organizing committee

- 2012 Transportation Research Forum Annual Conference, March 15-17, 2012, Doubletree Hotel West Shore, Tampa, Florida.

13. EDITOR OF A SCHOLARLY JOURNAL, SERVICE ON AN EDITORIAL ADVISORY BOARD OR REVIEWER FOR A SCHOLARLY JOURNAL

Editorial Board

- Transportation Research Part C: Emerging Technologies
- International Journal of Sustainable Transportation
- Journal of Air Transport Management
- International Journal of Transportation Science and Technology

Guest Editor

- Special Issue on Transportation Research Part C: Emerging Technologies: Embracing Emerging Urban Air Mobility, 2020
- Special Issue on Transportation Research Part C: Emerging Technologies: Improving the Efficiency of Airport Surface Operations, 2015

Editor

- Area Editor, Proceedings of 11th International Conference of Chinese Transportation Professionals, Nanjing, August 2011, American Society of Civil Engineers
- Area Editor, Proceedings of 10th International Conference of Chinese Transportation Professionals, Beijing, August 2010, American Society of Civil Engineers
- Area Editor, Proceedings of 9th International Conference of Chinese Transportation Professionals, Harbin, August 2009, American Society of Civil Engineers

Reviewer for Scholarly Journals

Transportation Science, Transportation Research Part A, B, C, D, E, G, Journal of Air Transport Management, Transport Policy, IEEE Transaction on Intelligent Transportation Systems, Networks and Spatial Economics, Aerospace Science and Technology, Accident Analysis & Prevention, Journal of Urban Planning and Development, European Journal of Operational Research, AIAA Journal of Guidance, Control, and Dynamics, Journal of Clean Production, Chinese Journal of Aeronautics, Transportation, Engineering, International Journal of Transportation Science and Technology, International Journal of Sustainable Transportation, The Aeronautical Journal, Transportation Research Record: Journal of the Transportation Research Board, World Review of Intermodal Transportation Research, Journal of Advanced Transportation, and others

Sessions Chairs/Moderator at Professional Conferences

1. Urban Air Mobility, 2020 INFORMS annual meeting, National Harbor, MD, November 8-11, 2020.
2. Design of Transportation Infrastructure and Services, 2017 INFORMS annual meeting, Houston, Oct. 22-25, 2017.
3. Plenary session of Multimodal Transportation at COTA International Conference of Transportation Professionals (CICTP2015).

4. Session 6.3 Passenger Transportation - Air and Surface, 2012 TRF Annual Forum, March 15-17, 2012, Doubletree Hotel West Shore, Tampa, Florida.
5. 15th COTA/WCTA Annual Symposium, Towards Sustainable Transportation and Development: Policies, Technologies, and Implementations, January 22, 2012, Embassy Room, Omni Shoreham, Washington DC.
6. COTA Contributed Session IV: Multimodal and Sustainable Transportation, 11th International Conference of Chinese Transportation Professionals, Nanjing, China, Aug. 14-17, 2011
7. Intercity Multimodalism: Gauging Environmental Capacity Tradeoffs (Session 692), Transportation Research Board 90th Annual Meeting, Jan. 23-27, Washington D.C., USA
8. INFORMS 2008 in Washington D.C., and INFORMS 2009 in San Diego.
9. 6th USA/Europe Seminar on Air Traffic Management, Jun. 27-30, 2005, Baltimore, Maryland, USA
10. Moving Metrics Workshop, a nation-wide workshop for aviation professionals (January 27, 2004).
11. Secretary of Nanjing Highway Association and organized the 8th National Highway Association Conference (June 1999 to May 2000).

14. PROFESSIONAL COMMITTEE MEMBERSHIP

Organization	Committee	Status	Dates
Women in Transportation Seminar	Tampa Bay Chapter Southeast Region Faculty Advisor of Student Chapter	Active	2017 – Present
Transportation Research Board	AV060: Airfield and Airspace Capacity and Delay	Active	2010 – Present
Transportation Research Board	AV020: Aviation Systems Planning	Past	2010 – 2017
INFORMS	Transportation Science and Logistics, Aviation Application Session	Active	2015 – Present
American Institute of Aeronautics and Astronautics (AIAA)		Active	2016 – Present
American Society of Civil Engineers (ASCE)	TD&I	Active	2015 – Present
Council of University Transportation Center	Award Committee	Active	2009 – Present
Transportation Research Board	ABE20: Transportation Economics	Friend	2006 – Present

15. HONORS AND AWARDS

- 2012, Best Paper Award in Airline Operations, Quality of Service and Marketing track, Paper Title: Where to Launch a New Passenger Air Route between China and the U.S., 5th International Conference on Research in Air Transportation, May 22- May 24, 2012- University of California, Berkeley.

- 2010 Fred Burggraf Award, Aviation, for excellence in transportation research by researchers 35 years of age or younger, presented by Transportation Research Board (TRB) of the National Academies of Science (NAS)
- Robert Horonjeff Memorial Grant, presented by the College of Engineering at University of California Berkeley, 2007
- Chinese Government Award for Outstanding Self-financed Students Abroad, for excellence in academic performance, presented by the Ministry of Education, China, 2006
- UCTC Dissertation Grant (2006-2007)
- UCTC fellowship (2005-2006)
- Graduate Scholarship, UC Berkeley (2003-2004)
- Departmental Block Grant Fellowship, UC Berkeley (2002-2003)
- James H. Kell Student Competition Award, Institute of Transportation Engineer (2003)
- Best paper of Nanjing Transportation Bureau, China, (1999)
- Employee of the year, Nanjing Highway Administration, China (1998)
- Honored Graduate, Southeast University, China (1997)
- Undergraduate Fellowship, Southeast University, China (1993-1997)