

Pengfei (Taylor) Li, Ph.D., P.Eng.

Assistant Professor, Department of Civil Engineering,
University of Texas Arlington, 402 Nedderman Hall, 416 Yates
St., Box 19308, Arlington, TX 76019
Tell: (817) 272-3416; E-mail: Taylor.Li@uta.edu

Education

Ph.D. in Civil Engineering (Transportation)	Virginia Tech	2009
M.S. in Systems Engineering	Beijing Jiaotong University	2002
B.S. in Mechanical Engineering and Control	Beijing Jiaotong University	1999

Research areas

- Inclusive Traffic signal control strategy development, prototype, and deployment
- Innovative traffic/ITS sensor design and prototype (embedded system development)
- Transportation Internet of Things (IOT) system prototype and proof of concept
- Adaptive traffic signal control and automated traffic signal performance metrics (ATSPM)
- Connected and automated vehicles

Academic Appointments

Assistant Professor (sep-2019~present): Department of Civil Engineering, University of Texas
Arlington, Arlington, TX

(Total funded amount as PI at UTA: **\$1,319,309**; Total funded amount at UTA: **\$2,129,123**)

Awarded projects (PI):

- **USDOT UTC Center NITC:** Deploy LiDAR Systems at intersections to improve equitable mobility, PI, \$74988, 03/15/2023~06/30/2024
- **Texas Department of Transportation:** Utilizing Telematics to Understand Driving Behavior During Missed Exits and Wrong Turns, PI at UTA, \$100,800, Sep-2023~Aug-2025
- **Utah Department of Transportation:** Identifying Near-Misses Using LiDAR, PI at UTA, \$110,000, Sep-2022~Dec-2023
- **City of Arlington:** Developing a Deep-Learning Tool to collect traffic data from city cameras, PI, \$25,813, Aug-2022~ Jan-2023
- **Texas Department of Transportation:** Improving traffic signal system planning, design, and management with big-data-enhanced Automated Traffic Signal Performance Monitoring (ATSPM) system, PI, \$292,013.50, Sep-2022~Aug-2024
- **North Central Transportation Council of Governments (NCTCOG):** Explore the potential of Internet-connected vehicle data (ICV data) in travel demand modeling, ITS data fusion and congestion management, \$55,000. Dec-15-2021~Sep-2022, PI

Pengfei (Taylor)Li

- **Utah Department of Transportation:** Utilizing LIDAR sensors to detect pedestrian movements at signalized intersections, PI, \$30,000, Sep-2021~Dec-2022
- **City of Frisco:** Assisting Performance Evaluations of an Adaptive Traffic Signal system (“SynchroGreen”) at five signalized intersections on and near Preston Road in City of Frisco, \$40,000.00, PI, August 3, 2020 - December 31, 2021
- **USDOT UTC CTEDD,** “Embracing emerging Internet-based traffic big data in smart city applications to improve transportation systems efficiency, safety and equity”, \$214,673.56, PI, Jan-2021~Aug-2022
- **USDOT UTC CTEDD:** Exploring a Novel Public-Private-Partnership Data Sharing Policy Through a Collaborative Arterial Traffic Management System, USDOT CTEDD UTC, funded: \$254,748.14, January 13, 2020 - June 30, 2021
- **USDOT UTC Center NITC:** Using LIDAR sensors to study pedestrian behaviors and safety improvement at signalized intersections, \$121,273.00, PI, September 1, 2020 - November 30, 2020

Awarded projects (Co-PI):

- **TxDOT:** analyze the Use of Green Pavement Markings - Intersection Safety for Non-Motorized Users, Co-PI (30%), \$596,256, Sep-2019~Aug-2024
- **Harris County Toll Road Authority (HCTRA), Tx:** Sustainable AET Deployment, Co-PI (50%), \$157,558.61
- **USDOT UTC Tran-SET:** Network analysis to identify critical links for relief activities during extreme weather events, Louisiana State University, funded: \$56,000.00 Co-PI, Dates Funded: August 1, 2020 - January 31, 2022

Assistant Professor (Jan-2017~Aug-2019): Department of Civil and Environ Engineering, Mississippi State University, Mississippi State, MS

(Total funded amount: **\$1,081,101.00**, Total PI share: **\$931,101.00**)

Awarded projects (PI and Co-PI):

- **U.S. Army Engineer Research and Development Center:** “Large-Scaled Network Simulation and Data Analytics in Graphics Processing Units (GPU) Environment”, \$600,000, PI, 2019~2022 (terminated because the PI moved to UTA)
- **Institute of Systems Engineering Research at Mississippi State University:** “Development of cross-domain high performance computing simulation engine”, \$83,101, PI, 2018~2019
- **Mississippi DOT:** “Development and Evaluation of Wi-Fi Highway Performance Evaluation System on Highways”, \$180,000 PI, 2018~2019
- **MSU Institute of Systems Engineering Research:** “Brown Water Port Analytics”, PI, \$68,000, 2018~2019
- **Mississippi DOT:** “Development of Performance measures for traffic signal systems”, \$150,000, Co-PI (30%), 2018~2019

Pengfei (Taylor)Li

Research Appointments

Associate Research Scientist (April-2014~Dec-2016): Schools of CIDSE and SEBE, Arizona State University, Tempe, AZ

- Development of awarded proposals and conduct research

Research project manager (May 2012~March 2014): Centre for Smart Transportation, Department of Civil and Environmental Engineering, University of Alberta, Edmonton, AB, Canada

- Proposal development and project management

ITS Research Engineer (Oct 2010 –April 2012): Kentucky Transportation Center at the University of Kentucky

Awarded projects:

- Traffic operation and traffic signal control in Kentucky (\$50,000)
- **Kentucky Transportation Cabinet:** Commercial vehicle management projects, Co-PI (\$100,000)

Publication

Journal papers: (22)

1. *Chowdhury, F.R., Wang, P.S. and Li, Pengfei (Taylor)., 2023. *Developing a tracking-based dynamic flash yellow arrow strategy for permissive left-turn vehicles to improve pedestrian safety at intersections.* Journal of transportation engineering, Part A: Systems, 149(4).
2. *Khadka, S., *Wang, P.S., Li, Pengfei (Taylor), and Torres, F.J., 2023. *A New Framework for Regional Traffic Volumes Estimation with Large-Scale Connected Vehicle Data and Deep Learning Method.* ASCE Journal of Transportation Engineering, Part A: Systems, 149(4).
3. *Khadka, S., Li, Pengfei (Taylor) and Wang, Q., 2022. *Developing Novel Performance Measures for Traffic Congestion Management and Operational Planning Based on Connected Vehicle Data.* ASCE Journal of Urban Planning and Development, 148(2)
4. Wang, Peirong (Slade)*, Pengfei Li, and Farzana Rahman Chowdhury. "Development of an Adaptive Traffic Signal Control Framework for Urban Signalized Interchanges Based on Infrastructure Detectors and CAV Technologies." ASCE Journal of Transportation Engineering, Part A: Systems 148.4 (2022): 04022004.
5. Chowdhury, F.R*., Wang, P*. and Li, P., 2021. Congestion-aware heterogeneous connected automated vehicles cooperative scheduling problems at intersections. Journal of Intelligent Transportation Systems, pp.1-16.
6. Li Pengfei (Taylor), Chowdhury FR*, Wang P (Slade)*, Imtiaz SM*. Actuated Traffic Signal Performance Evaluation along Arterials using Wi-Fi Travel Time Samples and High-Resolution Traffic Signal Events Data. Transportation Research Record. 2020;2674(6):268-280.
7. Wang, P.S*., Li, P.T., Chowdhury, F.R.*, Zhang, L. and Zhou, X., 2020. A mixed integer programming formulation and scalable solution algorithms for traffic control coordination across multiple intersections based on vehicle space-time trajectories. Transportation research part B: methodological, 134, pp.266-304.

Pengfei (Taylor)Li

8. Li, Pengfei. (Taylor), Wang, P. (Slade)*, Chowdhury, F*., Zhang, L. (2019). Scalable Computing Architecture for Time-Dependent Transportation Optimization Problems Based on High-Performance Computing Techniques. *Transportation Research Record*, 2673(4), 205-216. <https://doi.org/10.1177/0361198119838267>
9. Yang, Xianfeng (Terry), Gang-Len Chang, Zhao Zhang, and Pengfei (Taylor) Li. "Smart Signal Control System for Accident Prevention and Arterial Speed Harmonization under Connected Vehicle Environment." *Transportation Research Record*, (March 2019). doi:10.1177/0361198119837242.
10. Wei, Y., Avci, C., Liu, J., Belezamo, B., Aydın, N., Li, Pengfei (Taylor), Zhou, X., 2017. Dynamic programming-based multi-vehicle longitudinal trajectory optimization with simplified car following models. *Transportation Research Part B: Methodological* 106, 102-129.
11. Li, Pengfei (Taylor), Zhou, X., 2017. Recasting and optimizing intersection automation as a connected- and-automated-vehicle (CAV) scheduling problem: A sequential branch-and-bound search approach in phase-time-traffic hypernetwork. *Transportation Research Part B: Methodological* 105, 479-506.
12. Li, Pengfei, Pitu Mirchandani, 2016 "A New Hardware-in-the-loop Traffic Signal Simulation Framework to Bridge Traffic Signal Research and Practice", *IEEE the Transactions on Intelligent Transportation Systems* 17(9), 2430-2439
13. Li, Pengfei, Reginald Souleyrette, 2016., "A Generic Approach to Estimate Freeway Traffic Time Using Vehicle ID-matching Technologies", *Computer-Aided Civil and Infrastructure Engineering* Volume 31, Issue 5, 351-365
14. Li, Pengfei, Pitu Mirchandani, Xuesong Zhou, 2015. "Solving Simultaneous Route Guidance and Traffic Signal Optimization Problem Using Space-Phase-Time Hypernetwork", *Transportation Research Part B: Methodological*, 81, 103–130
15. Li, Pengfei, Pitu Mirchandani and Xuesong Zhou, 2015., "MetroSim: A Hierarchical Multi-Resolution Traffic Simulator for 1 Metropolitan Areas: Architecture, Challenges and Solutions" *Transportation Research Record, Journal of Transportation Research Board: Network Modeling* 2497(1), 63-72
16. Li Pengfei, M. Abbas, R. Pasupathy, 2015., "A Stochastic Dilemma Zone Protection Algorithm Based On the Vehicles' Trajectories" *Journal of Intelligent Transportation Systems*, 19 (2), pp 181-191
17. Xu Han*, Pengfei Li, Rajib Sikder, Tony Qiu, Amy Kim, 2014, "Development and Evaluation of Adaptive Transit Signal Priority Control with Improved Transit Delay Model", *Transportation Research Record: Journal of Transportation Research Board: Traffic Signal Systems*, 2438(1), 45-54. (*: supervised student)
18. Li Pengfei, Y Li, X Guo, "A Red-light Running Prevention System Based on Artificial Neural Network and Vehicle Trajectory Data", *Computational Intelligence for Social Neuroscience*, Volume 2014.
19. Li Pengfei, J. Walton, "Evaluation of Freeway Service Patrol in Low-traffic Areas Using Discrete-Event Simulation", *ASCE Journal of Transportation Engineering*, 139(11), 2013

Pengfei (Taylor)Li

20. Li Pengfei, M. Abbas, R. Pasupathy and H. Larry, 2010“Simulation-based Optimization of Maximum Green Setting Under Retrospective Approximation Framework”, *Transportation Research Record: Journal of Transportation Research Board*, 2192, 1-10
21. Li Pengfei and M. Abbas, “Stochastic Dilemma Hazard Model at High-speed Signalized Intersections”, *ASCE Journal of Transportation Engineering*, 136(5), 2010
22. Zain Adam, M. Abbas and Pengfei Li, 2009, “Evaluating Green-Extension policies with Reinforcement Learning and Markovian Traffic State Estimation”, *Transportation Research Record: Journal of Transportation Research Board*, 2128, 217-225
23. Montasir Abbas, G. Pesti, N. Chaudhary and Pengfei Li, 2008“Illustrative Field Configuration and Evaluation of Traffic-Responsive Control”, *ASCE Journal of Transportation Engineering*, 135(9), pp. 591- 599
24. Li Pengfei and J. Wang, 2005“The NTCIP-based Communicating Bandwidth Calculation for Beijing Future Traffic Signal Control System” (In Chinese), *Journal of Transportation Systems Engineering and Information Technology* 2005, No. 4, pp. 134-157

(*: Supervised students)

Proceedings of Referred Conferences (32)

1. Chowdhury, F.R., Wang, P.S. and Li, P.T., 2021, September. A Coordinated Adaptive Traffic Control Strategy Based on Phase-Time Network. In *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)* (pp. 3865-3870). IEEE.
2. Wang, P. and Li, P., 2021, September. An Integer Programming Formulation for Heterogeneous Traffic Dynamics and Assignment Modeling: A Multicommodity Network Flow Model in Space-Time Networks. In *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)* (pp. 3857-3864). IEEE.
3. Peirong Wang* and Pengfei (Taylor) Li, “An Integer Programming Formulation for Vehicle Routing Problem with Pickup Time Windows in Capacitated Space-Time Networks and Scalable Solution”, (20-01091), TRB annual conference, Washington DC, January, 2020
4. Pengfei (Taylor) Li, Farzana Chowdhury*, Peirong (Slade) Wang*, Sayem M. Imtiaz, “Multi-Objective Performance Evaluation for Actuated Traffic Signal Systems Using Probe Vehicle Data and High-resolution Traffic Signal Events Data”, (20-01456), TRB annual conference, Washington DC, January 2020
5. Farzana Chowdhury*, Peirong (Slade) Wang* and Pengfei (Taylor) Li, “On-line Multimodal Traffic Signal Priority Scheduling at Signalized Intersections Based on the Phase-Time Network Models” (20-01078), TRB annual conference, Washington DC, January 2020
6. Pengfei (Taylor) Li, Peirong (Slade) Wang*, Farzana R. Chowdhury*, Li Zhang, “A Scalable Computing Architecture For Solving Time-Dependent Transportation Problems Based On High-Performance Computing Techniques”, *Transportation Research Board 98th Annual Meeting (Paper # 19-05027)*, 2019
7. Farzana R. Chowdhury*, Peirong (Slade) Wang*, Pengfei (Taylor) Li, Li Zhang and Xianfeng Yang, “Resilient Mixed Integer Linear Programming Formulation for

Pengfei (Taylor)Li

- Heterogeneous Traffic Signal Priority Scheduling Problem”, Transportation Research Board 98th Annual Meeting (Paper# 19-06026), 2019
8. Lei Zhang*, Li Zhang Zhitong Huang, Pengfei Li and Jizhan Gou, “Distributed Traffic Signal Timing Optimization at Connected Vehicles Corridors”, Transportation Research Board 98th Annual Meeting (Paper # 19-03960), 2019
 9. Xianfeng Yang, Gang-len Chang, Zhao Zhang and Pengfei Li, “Smart Signal Control System for Accident Prevention and Arterial Speed Harmonization Under Connected Vehicle Environment”, Transportation Research Board 98th Annual Meeting (Paper # 19-05811), 2019
 10. Li Zhang, Lei Zhang*, Zhitong Huang, Deborah Curtis, Gene McHale, Pengfei Li, “Benefits of Early
 11. Deployment of Connected Vehicles at Signalized Intersections”, Transportation Research Board 97th Annual Meeting (Paper # 18-04938), 2018
 12. Pengfei Li and Xuesong Zhou, “Multimodal Traffic Signal Control at Intersections: How much can we push the envelope to serve all special vehicles? A theoretical analysis based on phase-time network”, Transportation Research Board 97th Annual Meeting (Paper # 18-06291), 2018
 13. Yuguang Wei, Jiangtao Liu, Pengfei Li and Xuesong Zhou, “Longitude Trajectory Optimization for Autonomous Vehicles: An Approach based on Simplified Car-following Model”, Transportation Research Board 95th Annual Meeting (paper # 16-6895), Washington DC, January 2016
 14. Pengfei Li and Pitu Mirchandani, “A field-ready Hardware-in-the-loop Traffic Signal Simulation Framework to Evaluate Traffic Signal Systems in ATMS”, Transportation Research Board 95th Annual Meeting (paper # 16-3014), Washington DC, January 2016
 15. Pengfei Li, Pitu Mirchandani and Xuesong Zhou “Simulation-based Traffic Signal Optimization to Minimize Fuel Consumption and Emission: A Lagrangian Relaxation Approach” Transportation Research Board 94rd Annual Meeting(paper # 15-2358), Washington DC, January 2015
 16. Li, Pengfei, Pitu Mirchandani and Xuesong Zhou, “MetroSim: A Hierarchical Multi-Resolution Traffic Simulator for 1 Metropolitan Areas: Architecture, Challenges and Solutions” Transportation Research Board 94th Annual Meeting(paper # 15-3201), Washington DC, January 2015
 17. Liu, G., Xu. Han, Li, Pengfei, and Tony. Qiu, “Adaptive Model-Based Offset Optimization for Congested Arterial Network”. Transportation Research Board 93rd Annual Meeting(paper # 14-1559), Washington DC, January 2014
 18. Yin, E., Li, Pengfei, Jie Fang, and Tony Qiu, “Evaluation of Vehicle Positioning Accuracy by Using GPS- Enabled Smartphones”, Transportation Research Board 93rd Annual Meeting (paper#14-1551), 2014
 19. Xu, X., Jiang, T., Li, Pengfei, Qiu, T., and Hu, Y. A High-Level Architecture SimIVC for

Pengfei (Taylor)Li

- Simulating the Traffic Network. ASCE ICTIS 2013: pp. 40-48
20. Li, Pengfei and Qiu, Z., A Hybrid Control Delay Model Combining Control Delay and Queuing Profile at Uncongested Signalized Intersections. ASCE ICTIS 2013: pp. 868-873
 21. Liu, G., Li, Pengfei, Qiu, T. Z., & Han, X. Development of a Dynamic Control Model for Oversaturated Arterial Corridor, ASCE COTA 2013
 22. Li, Pengfei, J. Walton, W. Hayes “Data-driven Evaluation of Freeway Service Patrol in Low-traffic Areas Using Discrete-Event Simulation”, Proceedings of the 92th Transportation Research Board Annual Meeting, January 2013 (paper # 13-2263), Transportation Research Board, Washington, DC, January 2013
 23. Yan, Li; Hou, Jia; Guo, Xiucheng; Yang, Jie; Li, Pengfei, “Route Priority Analysis Method for Intersection Group”, Proceedings of the 92nd Transportation Research Board Annual Meeting, January 2012 (paper # 12-2507), Transportation Research Board, Washington, DC, January 2012
 24. Li, Pengfei, N. Zhu, P. Furth, X. Guo, “A Stochastic Off-line Offsets Tuning Procedure with Advanced Transportation Management System Data” 14th International IEEE Conference on Intelligent Transportation Systems, Washington, DC, October 2011
 25. Li, Pengfei, M. Abbas, R. Pasupathi and Z. Li, “New Dilemma Zone Protection Algorithm Based on Vehicle Trajectory Prediction and Markov Process”, Proceedings of the 89th Transportation Research Board Annual Meeting, January 2010 (paper # 10-3416), Transportation Research Board, Washington, DC, January 2010
 26. Li, Pengfei and M. Abbas, “A Markov Process Based Dilemma Zone Protection Algorithm”, Proceedings of the 2009 Winter Simulation Conference, Austin, TX, December 2009
 27. Li, Pengfei and M. Abbas, “A Generic Evaluation Method for Traffic Signal Phase Truncation Installation at Signalized Intersections”, 12th International IEEE Conference on Intelligent Transportation Systems, St Louis, MO, October 2009
 28. Abbas Montasir and Li, Pengfei, “Advanced Real-time Intersection Data Collection System for Safety Evaluation”, 12th International IEEE Conference on Intelligent Transportation Systems, St Louis, MO, October 2009
 29. Li, Pengfei and M. Abbas, “Optimal Advance Detectors Design for Multi-detector Green Extension System at High-speed Signalized Intersections”, Proceedings of the Transportation Research Board Annual Meeting, January 2009. Transportation Research Board, Washington, DC, January 2009
 30. Adam Zain, M. Abbas and Li, Pengfei, “Modeling the Complexity of Driving Behavior during the Signal Yellow Interval using Reinforcement Learning”, Proceedings of the Transportation Research Board Annual Meeting January 2009, Transportation Research Board, Washington, DC, January 2009
 31. Abbas M., G. Pesti, N. Chaudhary, and Li, Pengfei. “Configuration Procedure of Traffic-Responsive Plan Selection on an Arterial Network. Proceedings of the Transportation Research Board Annual Meeting, January 2008. Transportation Research Board,

Pengfei (Taylor)Li

Washington, DC, January 2008.

32. Abbas M., H. Rakha, and Li, Pengfei. "Multi-objective Strategies for Timing Signal Systems under Oversaturated Conditions", Proceedings of the 18th conference on Proceedings of the 18th IASTED International Conference: modeling and simulation. PP 580-585, Montreal, Canada, June 2007.

Invited Oral and Poster Presentations

- Pengfei (Taylor) Li, K. Wang, IMPROVING EQUITABLE SAFETY WITH LIDAR TECHNOLOGY AT INTERSECTIONS, ITS America Conference &Expo, Grapevine, Texas, April-2023
- Slade Wang, Pengfei (Taylor) Li, *AI-Empowered Vehicle Analytics for Smart Transportation (AVAST)*, ITS Texas, San Marcos, Sep 2022
- Li, Pengfei (Taylor), *Exploring the potential of connected vehicles for transportation planning and management*, ITS Texas, San Marcos, Sep 2022
- Li, Pengfei (Taylor), Peirong (Slade) Wang, *Development of new performance measures for ATSPM with AI and connected vehicle data*, TexITE, Denton, Sep 2022
- Li, Pengfei (Taylor), Importance of continuously collecting pedestrian behavior data to build a smart transportation system with equitable safety, explain the roadmap of pedestrian safety improvements, the basics of Lidar sensing, and downfalls of pedestrian data collection at intersections., BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE MEETING, NCTCOG, Nov-2021
- Li, Pengfei (Taylor), Schedule Heterogeneous Connected Automated Vehicles Scheduling Problems at Intersections Considering the congestion, Austin, Tx June-2021
- Li, Pengfei (Taylor), Big-data-driven Automated Traffic Signal Performance Metrics (ATSPM) system for the era of mobile computing, Austin, Tx June-2021
- Li, Pengfei (Taylor), An Integer Programming Formulation for Heterogeneous Traffic Dynamics and Assignment Modeling: A Multicommodity Network Flow Model in Capacitated Space-Time Networks, Austin, Tx June-2021
- Li, Pengfei (Taylor), A Scalable Solution Framework for Cooperative Passenger Pickups with Time Windows Among Ride-sharing Vehicles Within a Capacitated Road Network, Austin, Tx June-2021
- Li, Pengfei (Taylor), A new traffic control coordination model for CAV-featured traffic: Let's go beyond the traditional Cycle-Offset-Split coordination framework, ASCE International Conferences on Transportation and Development, Austin, Tx June-2021
- Li, Pengfei (Taylor): ATSPM-in-the-loop simulation for traffic design and operations, Transportation Research Board Traffic Signal Systems Committee 2020, mid-year meeting, Online
- Li, Pengfei (Taylor), "How much can we push the envelope to serve all special vehicles? A theoretical analysis based on phase-time network", Lectern Session 686 (Transportation Research Board 97th Annual Meeting), 2018

Pengfei (Taylor)Li

- Li, Pengfei (Taylor), “Development of an easy and safe cabinet in the loop traffic signal simulation with ATC traffic signal cabinet”, Transportation Research Board annual meeting, Traffic Signal Committee (AHB 25), Jan-2017, Washington DC
- Li, Pengfei (Taylor), “Potential of Wi-Fi Passive Sensing in Arterial Management”, Transportation Research Board annual meeting, Traffic Signal Committee (AHB 25), Jan-2016, Washington DC.
- Li, Pengfei (Taylor), “A new hardware-in-the-loop (HILS) traffic signal simulation framework to bridge gap between signal research and practice—an Internet-Of-Things approach”, Transportation Research Board annual meeting, Traffic Signal Committee (AHB 25), Jan-2016, Washington, DC
- Li, Pengfei (Taylor), Pitu Mirchandani, Xuesong Zhou, “Solving Simultaneous Route Guidance and Traffic Signal Optimization Problem Using Space-Phase-Time Hypernetwork”, INFORMS Annual meeting, Nov 1-4, 2015
- Li, Pengfei (Taylor), Pitu Mirchandani, Xuesong Zhou, “Solving Simultaneous Route Guidance and Traffic Signal Optimization Problem Using Space-Phase-Time Hypernetwork”, Automated Vehicles Symposium, Ann Arbor, MI, USA, 2015
- Li, Pengfei (Taylor), Pitu Mirchandani, “A “Field-Ready” Hardware-in-the-Loop Traffic Signal Simulation Framework for Innovative Signal Control Strategies Development”, ITS Arizona Annual Conference, 2014, Mesa, AZ, USA, 2014

Student advising

- As the major supervisor
 - Sijan Shrestha, Ph.D. (2023~2028) at UTA Arlington
 - Farzana Chowdhury, Ph.D., (2019~2022) at UT Arlington
 - Peirong Slade Wang, Ph.D., (2019~2023) at UT Arlington
 - Swastik Khadka, Ph.D. student, (2021~2026) at UT Arlington
 - Peirong Slade Wang, Master of Engineering, (2017~2019) at Mississippi State University
 - Farzana Chowdhury, Master of Science, (2017~2019) at Mississippi State University
- As the co-supervisor
 - Lei Zhang, Ph.D. (June 2018) at Mississippi State University, Dissertation topic: “*Network Wide Signal Control Strategy Base on Connected Vehicle Technology*”
- As an advisory committee member
 - Zannatulferdous Labony, Ph.D., at University of Texas at Arlington
 - Mohammad Hossein Rashidi, Ph.D., at University of Texas at Arlington
 - Miah Mdmintu, Ph.D., at University of Texas at Arlington
 - Maniel Farzin, Ph.D., at University of Texas at Arlington
 - Khademi Sheida, Ph.D. at University of Texas at Arlington
 - Erinne Jacquelyn, Master of Science at Mississippi State University

Pengfei (Taylor)Li

- Sarah Henke, Ph.D. (2018) at Mississippi State University
- Paul Moore, Master of Engineering (2018) at Mississippi State University
- Amos Hou, Master of Engineering (2018) at Mississippi State University
- As a research mentor
 - Gang Liu, Ph.D. (2015) at the University of Alberta
 - Xu Han, Master of Science (November 2013) at the University of Alberta
 - Michael Ge, Master of Science (September 2012) at the University of Alberta

Teaching

At the University of Texas at Arlington:

- Traffic Engineering and Operations (CE 4313/5331): Fall, 2019, 2020, 2021,2022, 2023
- Traffic Characteristics: (CE 5330), Spring 2020, 2021, 2022, 2023

At Mississippi State University

- CEE 8143 Traffic Simulation and management, Fall, 2018
- CEE 4163/6163 Urban Transportation Planning, Fall, 2017
- CEE 3113 Transportation Engineering, Spring 2017,2018

Awards and honors

- One of the four finalists for the best paper award of TRB network modeling committee in 2015
- Winner of “Best Paper Award” of the 2009 International Road Federation Student Essay Competition in ITS category, \$1,000
- The Second Prize recipient of the 2009 ITS America National Student Paper Competition, \$1,000
- Invited to present in PTV Vision User Group Meeting 2009 (VISSIM)
- Selected to present in the doctoral student’s session in Transportation Research Board Annual Conference 2009
- Winner of “Best Paper Award” in the student paper contest at 56th Virginia Transportation Conference, 2007, \$1,000
- Second Place of “Excellent Graduate Award”, Beijing Jiaotong University 2001

Membership and services

- Professional certificate:
 - Professional Engineer in Alberta, Canada (No. 163721) (2013~)
- Academic services:
 - Associate editor of ASCE Journal of Urban Planning and Development (2022~)
 - Editorial Member (handling editor) for Transportation Research Record (TRR), 2019~present
 - Editorial member (Journal of Internet-of-things, Springer, 2020~2021)
- Membership of national and international professional organizations
 - Member of ITE (2021~present)
 - Member of ASCE (2016~)

Pengfei (Taylor)Li

- Member of TRB traffic simulation committee (ACP80): 2020~2026
- Member and Subcommittee chair (simulation) of TRB traffic signal committee (ACP 25): 2020~2026
- Technical Director of ITS Midwest, USA, 2011~2012
- Panel member for NCHRP Projects 03-137 “Algorithms to Convert Basic Safety Messages into Traffic Measures”, (2019~2022)
- Associated Member of ASCE ICTD AI committee (2020~
- Volunteer conference services:
 - Moderator for TRB webinar “State-of-the-Art Traffic Signal Simulation Tools and Platforms” on behalf of TRB Traffic Signal Systems Committee (ACP25), March-2023
 - Session Chair for the 20th and 21st Joint COTA International Conference of Transportation Professionals (virtual), Xi’an, China, Dec 17-20, 2021
 - Session chair for the Transportation Research Congress Conference 2021 (virtual), Hangzhou, China, Nov-5-7, 2021
 - Session Chair for the IEEE ITS Conference, Washington, DC, 2011
- Campus Service:
 - Faculty advisor for ITE and ITS student chapters at UTA (2021~)