

QIAN WANG

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EDUCATION

- Ph.D. Transportation Engineering. Rensselaer Polytechnic Institute. August 2008.
- M.S. Transportation Engineering. Tongji University. March 2003.
- B.S. Transportation Engineering. Southwest Jiaotong University. July 2000.

PROFESSIONAL EXPERIENCE

- Assistant Professor of Teaching, Civil, Structural & Environmental Engineering, University at Buffalo, the State University of New York, January, 2016 – Present.
- Assistant Professor, Civil, Structural & Environmental Engineering, University at Buffalo, the State University of New York, August, 2008 – January, 2016.
- Research and Teaching Assistant, Civil & Environmental Engineering, Rensselaer Polytechnic Institute, August, 2003 – August, 2008.
- Traffic Analyst, Goldway Intelligent Transportation Systems Co., Ltd., Shanghai, China, March 2003-August 2003.
- Research Assistant, College of Traffic and Transportation Engineering, Tongji University, July 2000 – March 2003.

AREAS OF PROFICIENCY

Transportation Planning/Travel Demand Forecasting

- ***Strong background in developing travel demand forecasting models to facilitate transportation planning and policy making:*** developed integrated modeling frameworks that are capable to address the interrelationships among economic development, land use, and travel choices; developed innovative travel demand forecasting procedures that capture trip chaining behavior of travelers and the linkage between travel demand forecasting and activity-based micro-simulation; developed travel demand forecasting approaches that are capable of forecasting both passenger travel demand and freight activities. Teach classes related to transportation systems analysis, travel demand forecasting, and transportation network analysis.

Freight System Modeling

- ***Strong background in modeling, forecasting and managing freight travel demand, and extremely interested in freight behaviour research, commercial vehicle flow operations,***

and intermodal transportation: developed the first closed-form urban freight travel demand models that explicitly consider trip chaining behavior of commercial vehicles in urban areas; developed modeling approaches that capture travel demand changes of freight transportation under extreme events and hazard situations; mathematically represented the intercorrelations among trade flows, commodity flows, and vehicular flows that shape the profile of freight systems; assessed truck travel patterns under inclement weather such as snow storms and extreme cold weather; evaluated the impact of the built environment on freight travel demand; analyzed the spatial distribution patterns of freight transportation establishments in mega cities; and examined the parking violation behavior of commercial vehicles in urban areas.

Travel Choice Behavior

- ***Strong interest and background in travel choice behavior modeling***: used various survey methods and discrete choice modeling techniques to quantify the relationship between travel choices and various affecting factors such as trip makers' socio-economic characteristics, human factor, transportation network performance measures, and travel purposes among others; focused on both freight transportation related travel choices (e.g., tour making, mode choices, and travel choice adjustment in response to pricing) and passenger transportation related choices (such as residential location choices, route choices, mode choices, and coordinated travels involving multiple household members); and applied these approaches to facilitate land use planning and congestion pricing evaluation. Teach behavior choice related courses such as discrete choice analysis.

Smart Land Use

- ***Strong interest in developing and applying modeling and decision making tools to promote smart land use***: assessed the role of road pricing in affecting residential location choices and land use patterns of urban areas; developed a GIS-based remote sensing-data-powered performance measurement system to help assess and monitor the role of transportation systems in smart land use; used GIS tools to assess landscapes of Freight Transportation and Warehousing Establishments in Six Metropolitan Areas in the U.S.

Transportation Economics

- ***Strong background in transportation economics***: performed the economic evaluation in more than ten transportation projects, including land use, transit, freeways, primary arterials, rail, truck routes, and toll road related implementations; conducted research on two large-scale congestion pricing evaluation projects in New York City and New Jersey, funded by the FHWA and NYDOT.

TEACHING EXPERIENCE

Instructor for

Undergraduate-level Mandatory Courses:

- *CIE 308: Engineering Statistics*, a mandatory undergraduate course (enrollment 120-180), University at Buffalo, the State University of New York, since Fall 2017.
- *CIE 439: Transportation Systems Analysis*, a mandatory undergraduate course (enrollment 100-160), University at Buffalo, the State University of New York, Fall 2014 through Spring 2020.
- *CIE 416: Civil Engineering Capstone Design*, service as a co-instructor in charge of the transportation design components (enrollment for all tracks 120-140; enrollment for the transportation track 28-32), since Spring 2020.

Undergraduate-level Technical Electives:

- *CIE 436: Traffic Operations and Design*, a combined undergraduate and graduate course (enrollment 30-40), University at Buffalo, since Spring 2019.
- *CIE 437: Pavement Design and Materials*, a combined undergraduate and graduate course (enrollment 30-40), University at Buffalo, since Spring 2013.
- *CIE 440: Travel Demand Forecasting*, a combined undergraduate and graduate course (enrollment 5-12), University at Buffalo, Fall 2008 through Fall 2013.
- *CIE 475: Geometric Design of Highways*, a technical elective for undergraduate students (enrollment 20), University at Buffalo, since Fall 2020.

Graduate-level Courses:

- *CIE 429: Pavement Design and Materials*, a combined undergraduate and graduate course, University at Buffalo, since Spring 2013.
- *CIE 539: Travel Demand Forecasting*, University at Buffalo, Fall 2008 through Fall 2013.
- *CIE 555: Discrete Choice Analysis*, University at Buffalo, since Spring 2009.
- *CIE 631: Transportation Network Analysis*, University at Buffalo, since Spring 2010.

FUNDED EDUCATIONAL ACTIVITIES

- Director and Principal Investigator. *The 2021 National Summer Transportation Institute (NSTI)*. Funded by the U.S. Department of Transportation. Proposed time: August 2 – August 6, 2021. Funding: &18,000. Note: The proposal was submitted on October 30, 2020. The revised budget in response to the sponsor's request was submitted on November 23, 2020.
- Director and Principal Investigator. *The 2020 National Summer Transportation Institute (NSTI)*. Fund approved by the USDOT through NYSDOT. Proposed time: August 3 – August 7, 2020. Funding: \$15,506. Note: The institute was cancelled due to COVID-19.

- Director and Principal Investigator. *The 2019 National Summer Transportation Institute (NSTI)*. Funded by the Stephen Still Institute for Sustainable Transportation and Logistics (SSISTL) at UB. August 5 – August 9, 2019. Funding: \$10,799 (not including overhead).
- Instructor. *The National Summer Transportation Institute (NSTI)* in year 2013, 2014, 2015, 2016, 2017. Funded by the U.S. Department of Transportation.

ACADEMIC ADVISING

Ph.D. Students Supervised as the Primary Advisor

1. Shuai Tang. Research/Teaching Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2012-May, 2016.
2. Jinge Hu. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009- May, 2014.
3. Lei Lin. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2010-Spring 2015 (Co-advising with Dr. Adel W. Sadek).

PhD Dissertation Committee Member for

1. Yunpeng Shi. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2016-2020.
2. Faeze Ghofrani. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2015-2020.
3. Yu Cui. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2014-2019.
4. Zhenhua Zhang. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2012-2016.
5. Yunjie Zhao. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2011-2015.
6. Carlos A. Gonzalez-Calderon. PhD student in the Department of Civil and Environmental Engineering. Rensselaer Polytechnic Institute. 2011-2015.
7. Ivan Sanchez-Diaz. PhD student in the Department of Civil and Environmental Engineering. Rensselaer Polytechnic Institute. 2011-2015.
8. Liya Guo. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2010-2012.
9. Shan Huang. PhD student in the Department of Civil, Structural and Environmental Engineering. University at Buffalo. 2009-2011.

Master Students Supervised as the Primary Advisor)

1. Nikhil Nitin Choudhari. Master student (project option) in the Department of Civil, Structural and Environmental Engineering. Fall 2017 – Summer 2019.

2. Li Tang. Master student (thesis option) in the Department of Civil, Structural and Environmental Engineering. Spring 2015-Summer 2016.
3. Saman Dabiri Zanjani (thesis option) in the Department of Civil, Structural and Environmental Engineering. Spring 2015-Summer 2016.
4. Yahya Kenarangi (project option) in the Department of Civil, Structural and Environmental Engineering. Spring 2015-Summer 2016.
5. Runwei Li (project option) in the Department of Civil, Structural and Environmental Engineering. Fall 2014 – Spring 2016.
6. Satyavardhan Gogineni (thesis option) in the Department of Civil, Structural and Environmental Engineering. Fall 2013-Spring 2015.
7. Tao Zhou (project option) in the Department of Civil, Structural and Environmental Engineering. Fall 2013-Spring 2015.
8. Hai Tran. Master student (partially funded) in the Department of Civil, Structural and Environmental Engineering. Fall 2012-Fall 2013.
9. Thai Truong. Master student (partially funded) in the Department of Civil, Structural and Environmental Engineering. Fall 2012-Fall 2013.
10. Sai Meing. Master student in the Department of Civil, Structural and Environmental Engineering. Fall 2012-Fall 2013.
11. Jinge Hu. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Spring 2011.
12. Peng Su. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Spring 2011.
13. Antonio Miceli. Master student in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Spring 2010.
14. Peng Zhang. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Summer 2010.
15. Zhiyong Wang. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Summer 2011 (Co-advising with Dr. Adel W. Sadek)
16. Andrew Tracy. Research Assistant in the Department of Civil, Structural and Environmental Engineering. Fall 2009-Fall 2010 (Co-advising with Dr. Adel W. Sadek).
17. Haohui Lin. Research Assistant in the Department of Urban and Regional Planning. January 2009- June 2009.

M.S. Thesis Committee Member for

1. Ramya Kamineni. The Department of Civil, Structural and Environmental Engineering. 2015.
2. Zhiyong Wang. The Department of Civil, Structural and Environmental Engineering. 2011.

3. Jay Ring. Master student in the Department of Civil, Structural and Environmental Engineering. 2010

Undergraduate Student Advisory

1. Advise 12 to 21 students per year for course enrollment, academic performance review and so on. Spring 2009.
2. Supervise three undergraduate students in research projects with credits.

PROFESSIONAL SERVICES

Service at University at Buffalo

- Co-Director of the Undergraduate Study Committee in the Department of Civil, Structural and Environmental Engineering (since January 2021)
- Co-Director of the Lab Expenditure Committee in the Department of Civil, Structural and Environmental Engineering (since January 2021)
- Member of the Undergraduate Study Committee in the Department of Civil, Structural and Environmental Engineering (August 2012 – August 2018; August 2019 – December 2020)
- Graduate Study Committee in the Department of Civil, Structural and Environmental Engineering (August 2008 – May 2012; August 2018 – August 2019)
- Faculty Search Committee for the joint faculty position in the Civil, Structural, and Environmental Engineering (CSEE) Department and the Industrial Systems Engineering (ISE) Department (Spring 2018)
- Faculty Search Committee for the faculty position in the Civil, Structural, and Environmental Engineering (CSEE) Department (Spring 2017)
- Faculty Search Committee for the transportation faculty position in the Civil, Structural, and Environmental Engineering (CSEE) for the Institute for Sustainable Transportation and Logistics (Spring 2013)
- Faculty Search Committee for the joint faculty position in the Civil, Structural, and Environmental Engineering (CSEE) Department and the Industrial Systems Engineering (ISE) Department (Spring 2012)
- UB Grievance Committee (since October 2008)

International and National Committees and Memberships

- Member of Transportation Research Board (TRB) Committee on Freight Transportation Planning and Logistics (since May 2013)
- Member of International Association for China Planning (IACP) (since 2014)
- Member of the Chinese Overseas Transportation Association (COTA) (since 2006)

- Member of Transportation Research Board (TRB) Committee on Urban Freight Transportation (March 2012 to March 2019)
- Member of the Institute of Transportation Engineers (ITE) Freight Mobility Council (April 2012 to May 2018)
- Panel Member of the National Cooperative Freight Research Program (NCFRP) Project Panel on Guidebook for Sharing Freight Transportation Data (February 2010 – April, 2013)
- Friends of TRB Committees: Congestion Pricing Committee (since 2004), Travel Behavior and Value Committee (since 2007); Transportation Demand Forecasting Committee (since 2007)

Editors

- Associate Editor for the 15th International IEEE Conference on Intelligent Transportation Systems. Anchorage, AK, USA. September 2012.
- English Editing Chair for the 12th COTA International Conference of Transportation Professionals. Beijing, China. August 2012.
- Area Paper Review Coordination Chair for the 11th International Chinese Conference of Transportation Professionals (ICCTP 2011). Nanjing, China. August 2011.
- Associate Area Paper Review Coordination Chair for the 10th International Chinese Conference of Transportation Professionals (ICCTP 2010). Beijing, China. August 2010.
- English Editor for the ASCE Conference Proceedings from the 2009 International Conference of Chinese Transportation Professionals (ICCTP 2009). Harbin, China. August 2009.

Journal and Conference Article Reviewer

International and National Journal Article Reviewer

- Networks and Spatial Economics (since 2008)
- Annals of Operations Research (since 2010)
- Journal of Urban Planning and Development (since 2011)
- Journal of Transportation Engineering (since 2011)
- Journal of Intelligent Transportation Systems (since 2012)
- Transportation Research Part A: Policy and Practice (since 2012)
- Transportation Research Part C: Emerging Technologies (since 2013)

International and National Annual Conference Article Reviewer

- The Transportation Research Board Annual Meetings (since 2004)
- The Pan American Society of Transportation Research (PANAM) Conference (since 2004)
- The Pan-American Conference of Traffic and Transportation Engineering (since 2005)

- The IEEE Conference on Intelligent Transportation Systems (since 2009)
- The COTA International Conference of Transportation Professionals (CICTP) (previously called the International Conference of Chinese Transportation Professionals (ICCTP)) (since 2009)
- The International Conference on Sustainable Urbanization (ICSU) (since 2010)
- The 12th World Conference on Transportation Research (WCTR) (2010)
- The Journal of Eastern Asia Society for Transportation Studies 2009 Conference (EASTS) (2009)

Research Proposal Reviewer

- Research Proposal Reviewer for Transportation Northwest, the University Transportation Research Center in Washington State (since March 2010)

RESEARCH ACTIVITIES

Funded Research Projects

1. Center Member and Principal Investigator at UB (PI: Dr. Genevieve Giuliano at University of Southern California (USC)). *Volvo Research and Educational Foundations (VREF) Center of Excellent: METROFREIGHT: The Local/Global Challenge of Urban Freight*. Funded by the Volvo Research and Educational Foundations. March 1, 2013 – February 28, 2018. Funding: \$3,700,000.
2. Co-Principal Investigator (PI: Dr. Adel W. Sadek at University of Buffalo). *USDOT Tier I Transportation Informatics University Transportation Center* (Host institute: University at Buffalo, the State University of New York; Sub-grantees: Rensselaer Polytechnic Institute, George Mason University, University of Puerto Rico, Mayaguez). October 2013 – September 2017. Funding: \$2,828,100
3. Principal Investigator. *Freight Demand Forecasting in the Context of the Built Environment: An Integrated Land Use and Travel Demand Modeling Approach*. Funded by the University Transportation Research Center (UTRC) Region II. February 1, 2014 – August 31, 2015. Funding: \$24,438.
4. Principal Investigator. *A GIS-based Performance Measurement System for Assessing Transportation Sustainability and Community Livability*. Funded by the University Transportation Research Center (UTRC) Region II. October 1, 2012-March 31, 2014. Funding: \$150,225 (fund to UB: \$75,000; matching from UB: \$75,225).
5. Principal Investigator. *Exploring Novel Applications of Archived Transportation Data: Predicting Freeway Crash Risk, Border Crossing Delay and Inclement Weather Impacts*. Funded by the University Transportation Research Center (UTRC) Region II. March 15, 2012- January 31, 2014. Total project cost: \$182,879.

6. Co-Principal Investigator (PI: Dr. Changhyun Kwon at University of Buffalo). *Towards Socially and Economically Sustainable Urban Developments*. Funded by the University Transportation Research Center (UTRC) Region II. January 01, 2012- May 31, 2013. Total project cost: \$61,641 (fund to UB: \$30,000; matching from UB: \$31,641).
7. Principal Investigator. *Freight Travel Demand Modeling under Multiple Hazard Situations*. Phase II. Funded by Federal Highway Administration (FHWA) through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). July 2010- March 2012. Funding: \$25,000.
8. Principal Investigator. *Freight Travel Demand Modeling under Multiple Hazard Situations*. Phase I. Funded by Federal Highway Administration (FHWA) through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). July 2009-June 2010. Funding: \$35,000.
9. Co-Principal Investigator (PI: Dr. Adel W. Sadek at University of Buffalo). *A Prototype Decision Support System for Optimally Routing Border Crossing Traffic Based on Predicted Border Crossing Times*. Funded by the University Transportation Research Center (UTRC) Region II. December 31, 2009- August 31, 2011. Funding: \$100,000.
10. Co-Principal Investigator (PI: Dr. Adel Sadek at University of Buffalo). *Reducing Vehicle Miles Traveled Through Smart Land-Use Design*. Funded by New York State Energy Research and Development Authority (NYSERDA). July 2009- December 2011. Total project cost: \$106,000.
11. Co-Principal Investigator (PI: Dr. Adel W. Sadek at University of Buffalo). *Transportation Systems Risk Management under Multiple Hazard Situations*. Phase III, Funded by Federal Highway Administration (FHWA) through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). July 2010-March 2012. Funding: \$20,000.
12. Co-Principal Investigator (PI: Dr. Adel W. Sadek at University of Buffalo). *Transportation Systems Risk Management under Multiple Hazard Situations*. Phase II, Funded by Federal Highway Administration through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). July 2009-June 2010. Funding: \$65,000.
13. Co-Principal Investigator (PI: Dr. Adel W. Sadek at University of Buffalo). *Transportation Systems Risk Management under Multiple Hazard Situations*. Phase I, Funded by Federal Highway Administration (FHWA) through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). June 2008-June 2009. Funding: \$55,500.

Project Involvement

1. *Landscapes of Freight Transportation and Warehousing Establishments in Six Metropolitan Areas in the U.S.* Funded by the Volvo Research and Educational

- Foundations through the *Volvo Research and Educational Foundations (VREF) Center of Excellent*. July 1, 2016 – June 30, 2017.
2. *Empirical Analysis of Commercial Vehicle Parking Violations in New York City*. Funded by the Volvo Research and Educational Foundations through the *Volvo Research and Educational Foundations (VREF) Center of Excellent*. July 1, 2015-June 30, 2016.
 3. *Assessment of Freight Transportation Bottlenecks in New York City*. Funded by the Volvo Research and Educational Foundations through the *Volvo Research and Educational Foundations (VREF) Center of Excellent*. July 1, 2014-June 30, 2016.
 4. *USDOT Tier 1 Transportation Informatics University Transportation Center* (Host institute: University at Buffalo, the State University of New York; Sub-grantees: Rensselaer Polytechnic Institute, George Mason University, University of Puerto Rico, Mayaguez). October, 2013-September, 2017.
 5. *A GIS-based Performance Measurement System for Assessing Transportation Sustainability and Community Livability*. Funded by the University Transportation Research Center (UTRC) Region II. December 1, 2012-March 31, 2014.
 6. *Exploring Novel Applications of Archived Transportation Data: Predicting Freeway Crash Risk, Border Crossing Delay and Inclement Weather Impacts*. Funded by the University Transportation Research Center (UTRC) Region II. March 15, 2012- January 31, 2014.
 7. *Towards Socially and Economically Sustainable Urban Developments*. Funded by the University Transportation Research Center (UTRC) Region II. January 01, 2012- November 30, 2013.
 8. *The City of Lockport Truck Route Study*. The City of Lockport. August 2011 – June 2012.
 9. *Freight Travel Demand Modeling under Multiple Hazard Situations*. Funded by Federal Highway Administration through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). July 2009-March 2012.
 10. *Reducing Vehicle Miles Traveled Through Smart Land-Use Design*. Funded by New York State Energy Research and Development Authority (NYSERDA). July 2009- December 2011.
 11. *A Prototype Decision Support System for Optimally Routing Border Crossing Traffic Based on Predicted Border Crossing Times*. Funded by the University Transportation Research Center (UTRC) Region II. December 2009- August 2011.
 12. *Transportation Systems Risk Management under Multiple Hazard Situations*. Funded by Federal Highway Administration through the Multidisciplinary Center of Earthquake Engineering Research (MCEER). June 2008-March 2012.
 13. *Tour-Based Urban Freight Travel Demand Models*. Funded by NSF-CAREER-0245165. 2005-2008.
 14. *Evaluation Study of Port Authority of New York and New Jersey's Time of Day Pricing Initiative*. Funded by Federal Highway Administration Value Pricing Program. 2003-2005.

15. *Evaluation Study of New Jersey Turnpike Authority's Time of Day Pricing Initiative*. Funded by Federal Highway Administration Value Pricing Program. 2003-2005.
16. *Development Plan of the State Key Fundamental Research – “Advanced Urban Traffic Control and Management System.”* China. 2002-2003.
17. *Planning of Urban Adaptive Traffic Control System in Xiamen*, Funded by Xiamen Urban Planning and Design Department. China. 2002-2003.
18. *Traffic Adaptability Analysis and Treatments of Design and Operation on Urban Streets of China*. Funded by National Science Foundation of China through General ‘Science Research Foundation’ Funded Program. China. 2001-2002.
19. *Design Regulations for At-grade Intersections on Urban Streets in Shanghai*. Funded by the Roadway Design Department of Shanghai Government. China. 2001-2002.

PUBLICATIONS

Scientific Publications

1. Ph.D. Dissertation: *Tour-Based Urban Freight Travel Demand Models*. Rensselaer Polytechnic Institute. July 2008. Advisor: Professor José Holguín-Veras.
2. Master Thesis: *Analysis of Characteristic Parameters in Urban Traffic Control Systems*. Tongji University. February 2003. Advisor: Professor Xiaoguang Yang.
3. Bachelor Thesis: *Optimal Signal Setting and the Signal Coordinate Control Plan for the Arterial Roads in Large Cities*. June, 2000. Southwest Jiaotong University. Advisor: Professor Jin Zhang.

Book Chapters

1. Holguín-Veras, J., E. Thorson, **Q. Wang**, N. Xu, C. González-Calderón, I. Sánchez-Díaz, and J. Mitchell (2013). Chapter 17: Urban Freight Tour Models: State of the Art and Practice. *Freight Transport Modelling*. Editor: Ben-Akiva, M., H. Meersman, and E. van de Voorde. Publisher: the Emerald Group Publishing Limited. ISBN-13: 978-1781902851.

Refereed Journal Publications

(Note: student authors supervised are marked underline)

1. Lin, L., **Wang, Q.**, and Sadek, A. W. (2016). A combined M5P tree and hazard-based duration model for predicting urban freeway traffic accident durations. *Accident Analysis and Prevention*. Volume 91. pp.114-126.
2. **Wang, Q.**, S. Tang, X. Chen, and L. Wang (2016). Performance Measurement System for Assessing Transportation Sustainability and Community Livability. *Transportation*

- Research Record: Journal of the Transportation Research Board*. Volume 2531. pp. 113–120.
3. Lin, L., **Wang, Q.**, and Sadek, A. W. (2015). A novel variable selection method based on frequent pattern tree for real-time traffic accident risk prediction. *Transportation Research Part C: Emerging Technologies*, Volume 55. pp. 444-459.
 4. Lin, L., **Wang, Q.**, Huang, S., and Sadek, A.W (2014). On-line prediction of border crossing traffic using an enhanced Spinning Network method. *Transportation Research Part C: Emerging Technologies*. Volume 43, Part 1. pp. 158–173.
 5. Lin, L., **Q. Wang**, and A.W. Sadek (2014). Data Mining and Complex Networks Algorithms for Traffic Accident Analysis. *Transportation Research Record: Journal of the Transportation Research Board*. Accepted for publication. Acceptance date: October 01, 2013.
 6. Lin, L., **Q. Wang**, and A.W. Sadek (2013). Short-Term Forecasting of Traffic Volume: Evaluating Models Based on Multiple Data Sets and Data Diagnosis Measures. *Transportation Research Record: Journal of the Transportation Research Board*. No. 2392. pp. 40–47.
 7. **Wang, Q.** and J. Hu (2012). Behavioral Analysis of Decisions in Choice of Commercial Vehicular Mode in Urban Areas. *Transportation Research Record: Journal of the Transportation Research Board*. Volume 2269. pp. 58-64.
 8. Tracy, A., P. Su, A. W. Sadek, and **Q. Wang** (2011). Assessing the Impact of the Built Environment on Travel Behavior: Case Study of Buffalo, New York. *Transportation*, Vol. 38, Issue. 4, pp. 663-678.
 9. Holguín-Veras, J., **Q. Wang**, N. Xu, K. Ozbay, and M. Cetin (2011). The Impacts of Time of Day Pricing on Car User Behavior: Findings from the Port Authority of New York and New Jersey's Initiative. *Transportation*, Volume 38, Issue 3, pp. 427-443.
 10. Holguín-Veras, J., **Q. Wang** (2011). Behavioral investigation on the factors that determine adoption of an electronic toll collection system: Freight carriers. *Transportation Research Part C: Engineering Technologies*, Volume 19, Issue 4, pp. 593-605.
 11. **Wang, Q.**, and J. Holguín-Veras (2009). Tour-based Entropy Maximization Formulations of Urban Commercial Vehicle Movements. The Book Proceedings of the 18th International Symposium on Transportation and Traffic Theory (*ISTTT18*).
 12. **Wang, Q.**, and J. Holguín-Veras (2008). Investigation of Attributes Determining Trip Chaining Behavior in Hybrid Microsimulation Urban Freight Models. *Transportation Research Record: Journal of the Transportation research Board*, Volume. 2066, pp. 1-8.
 13. Holguín-Veras, J., N. Xu, **Q. Wang**, K. Ozbay and J.C. Zorrilla (2007). New Jersey Turnpike Time-of-Day Pricing Initiative's Behavioral Impacts: Observed Role of Travel Distance on Underlying Elasticities. *Transportation Research Record: Journal of the Transportation research Board*, Volume. 2010, pp. 53-61.

14. Holguín-Veras, J., **Q. Wang**, N. Xu, K. Ozbay and J. Polimeni (2006). The impacts of time of day pricing on the behavior of freight carriers in a congested urban area: Implications to road pricing. *Transportation Research Part A: Policy and Practice*, Volume. 40, Issue 9, pp. 744-766.
15. **Wang, Q.**, and X. Yang (2002). Impact of Bus Stops on the Delay and Capacity of Shared Approaches at Signalized Intersections (in Chinese: 信号控制交叉口进口道公共汽车停靠影响分析). *China Civil Engineering Journal*, Volume. 10 (Traffic Engineering Fascicule).

Conference Proceedings (Full Papers and Abstracts with Review)

1. **Wang, Q.**, S. Tang, T. Zhou, and L. Yin (2015). Geography of Warehousing in Urban Areas: Spatial Analysis and Findings of Transportation Warehouses and Distribution Centers in New York Metropolitan Region. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
2. **Wang, Q.**, T. Zhou, S. Tang, and L. Yin (2015). Landscape of Motor Freight Transportation and Warehousing: Analysis and Findings from Six Large Metropolitan Areas in the U.S. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
3. **Wang, Q.** and S. Gogineni (2015). Empirical Investigation of Commercial Vehicle Parking Violations in New York City. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
4. **Wang, Q.**, S. Tang, X. Chen, and L. Wang (2015). Multinomial Logistic Regression for Land Use Classification with Remote Sensing. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
5. **Wang, Q.**, S. Tang, X. Chen, and L. Wang (2015). A GIS-Based Performance Measurement System for Assessing Transportation Sustainability and Community Livability. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
6. Lin, L., **Q. Wang**, A.W. Sadek, and Gregory Kott (2015). Android Smartphone Application for Collecting, Sharing, and Predicting Border Crossing Wait Time. *The Proceedings of the Transportation Research Board 94th Annual Meeting*. Washington, D.C., USA. January, 2015. (Acceptance rate: 50%)
7. Lin, L., **Q. Wang**, and A.W. Sadek (2014). Data Mining and Complex Networks Algorithms for Traffic Accident Analysis. *The Proceedings of the Transportation Research Board 93rd Annual Meeting*. Washington, D.C., USA. January, 2014. (Acceptance rate: 50%)

8. **Wang, Q.**, and **J. Hu** (2013). Impact of Inclement Winter Weather on Border Crossing Traffic: Findings and Implications from the Niagara Frontier Border. *The Proceedings of the Transportation Research Board 92nd Annual Meeting*. Washington, D.C., USA. January, 2013. (Acceptance rate: 50%)
9. **Hu, J.**, **Q. Wang**, A.W. Sadek, and Z. Wang (2013). Transportation System Performance under Inclement Winter Weather: Perspectives from Weather-induced Multiple Hazard Situations and Traveler Information. *The Proceedings of the Transportation Research Board 92nd Annual Meeting*. Washington, D.C., USA. January, 2013. (Acceptance rate: 50%)
10. **Lin, L.**, **Q. Wang**, and A.W. Sadek (2013). Evaluating Short-term Traffic Volume Forecasting Models Based on Multiple Datasets and Data Diagnosis Measures. *The Proceedings of the Transportation Research Board 92nd Annual Meeting*. Washington, D.C., USA. January, 2013. (Acceptance rate: 50%)
11. **Wang, Q.** and **J. Hu** (2012). Behavioral Analysis of Commercial Vehicle Mode Choice Decisions in Urban Areas. *The Proceedings of the Transportation Research Board 91st Annual Meeting*. Washington, D.C., USA. January, 2012. (Acceptance rate: 50%)
12. **Lin, L.**, **Q. Wang**, and A.W. Sadek (2012). A Multi-model Combined Forecasting Method for the On-line Prediction of Border Crossing Traffic at the Peace Bridge. *The Proceedings of the Transportation Research Board 91st Annual Meeting*. Washington, D.C., USA. January, 2012. (Acceptance rate: 50%)
13. **Hu, J.**, and **Q. Wang** (2011). Commercial Vehicle Travel Patterns in Urban Areas: Findings and Implications from the Denver Metropolitan Area. *The Proceedings of the Transportation Research Board 90th Annual Meeting*. Washington, D.C., USA. January, 2011. (Acceptance rate: 50%)
14. **Tracy, A.**, **P. Su**, A. Sadek, and **Q. Wang** (2011). Assessing the Impact of the Built Environment on Travel Behavior: Case Study of Buffalo, New York. *The Proceedings of the Transportation Research Board 90th Annual Meeting*. Washington, D.C., USA. January, 2011. (Acceptance rate: 50%)
15. **Wang, Q.** and **J. Hu** (2011). Commercial Vehicle Travel Patterns in Urban Areas: Findings and Implications from the Denver Metropolitan Area. *The Proceedings of the 11th International Conference of Chinese Transportation Professionals (ICCTP)*, pp. 4361-4371. Nanjing, China. August 14-17, 2011.
16. **Wang, Q.**, and **P. Su** (2011). Modeling the Impact of Smart Growth on Travel Choices: An Enhanced Travel Demand Forecasting Approach. *The Proceedings of the 11th International Conference of Chinese Transportation Professionals (ICCTP)*, pp. 4372-4384. Nanjing, China. August 14-17, 2011.
17. **Hu, J.**, and **Q. Wang** (2011). The Attitudinal Analysis of Freight Mode Choice Decisions in Urban Areas And Implication on Smart Freight. *The 3rd TRANSLOG Conference*, Hamilton, Ontario, Canada. June 15-16, 2011.

18. **Wang, Q.**, and J. Holguín-Veras (2010). A Tour-Based Urban Freight Transportation Model Using Entropy Maximization. *Innovations in Freight Demand Modeling and Data: A Transportation Research Board SHRP 2 Symposium*. Herndon, VA, USA. (Acceptance rate: 20%)
19. Holguín-Veras, J., **Wang, Q.**, Xu, N., and Ozbay, K. (2009). Impacts of time-of-day pricing: findings from port authority of New York and New Jersey initiative. *The Proceedings of the 88th Annual Meeting of the Transportation Research Board*, Washington, DC. January, 2009. (Acceptance rate: 50%)
20. **Wang, Q.**, and J. Holguín-Veras (2009). Tour-based Entropy Maximization Formulations of Urban Commercial Vehicle Movements. *The Proceedings of the 88th Annual Meeting of the Transportation Research Board*, Washington, DC. January, 2009. (Acceptance rate: 50%)
21. **Wang, Q.**, M. Jaller, and W. Bequette (2008). Solving Dynamic Traffic Routing Problems Using Advanced Process Control Algorithms. *The Proceedings of the XV Panamerican Conference of Traffic and Transportation Engineering*. September 14-17, 2008.
22. **Wang, Q.**, and Holguín-Veras, J. (2008). Tour-based entropy maximization formulations of urban commercial vehicle movements. *The Proceedings of the European Transport Conference*, Leiden, Netherlands, October 06-08, 2008.
23. **Wang, Q.**, and J. Holguín-Veras (2008). Investigation of Attributes Determining Trip Chaining Behavior in Hybrid Microsimulation Urban Freight Models. *The Proceedings of the 87th Annual Meeting of the Transportation Research Board*, Washington, DC. January, 2008. (Acceptance rate: 50%)
24. Holguín-Veras, J., **Q. Wang**, N. Xu , K. Ozbay, M. Cetin, J. Polimeni, and J.C. Zorrilla (2007). Impacts of Time of Day Pricing on Travel Behavior: General Findings from the Port Authority of New York and New Jersey's Initiative. *The Proceedings of the 86th Annual Meeting of Transportation Research Board*, Washington, DC, USA. January, 2007. (Acceptance rate: 50%)
25. Holguín-Veras, J., N. Xu, **Q. Wang**, K. Ozbay, M. Cetin and J. Polimeni, J.C. Zorrilla, and M. Silas (2006). The Behavioral Impacts of the New Jersey Turnpike's Time of Day Pricing Initiative and the Observed Role of Travel Distance on the Underlying Elasticities. *The Proceedings of the 85th Annual Meeting of Transportation Research Board*, Washington, DC, USA. January, 2006. (Acceptance rate: 50%)
26. Holguín-Veras, J., and **Q. Wang** (2005). On the Attitudinal Factors Explaining the Use of Electronic Toll Collection Technologies by Freight Carriers. CD-ROM. *The Proceedings of the 84th Annual Meeting of Transportation Research Board*, Washington, DC, USA. January, 2005. (Acceptance rate: 50%)
27. **Wang, Q.**, and J. Holguín-Veras (2004). Attitudinal Analysis of Trucking Companies towards the Use of Electronic Toll Collection (E-ZPass), *the XIII Pan-American*

(PANAM XIII) Conference of Traffic and Transportation Engineering (CD ROM).
Albany, New York. September 27-29, 2004.

Conference Presentations (Abstracts with Review)

1. **Wang, Q.** and **S. Gogineni** (2015). An Empirical Investigation of Parking Violation Behavior of Commercial Vehicles in New York City. *The 6th METRANS International Urban Freight Conference (I-NUF)*. Long Beach, CA. October 21-23, 2015.
2. **Wang, Q.** and **S. Tang** (2015). Geography of Motor Freight Transportation and Warehousing: Analyses and Findings from Six Metropolitan Areas in the United States. *The 6th METRANS International Urban Freight Conference (I-NUF)*. Long Beach, CA. October 21-23, 2015.
3. **Wang, Q.** and **S. Tang** (2014). Spatial Analysis of Transportation Warehouses. *The 2014 Pan-American Advanced Studies Institute on Sustainable Urban Freight Systems (PASI-SUFS)*. Bogotá and Cartagena, Columbia. August 04- 15, 2014.
4. **Tang, S.** and **Q. Wang** (2014). Landscapes and Location Choice Problems of Warehouses. *The 2014 Pan-American Advanced Studies Institute on Sustainable Urban Freight Systems (PASI-SUFS)*. Bogotá and Cartagena, Columbia. August 04- 15, 2014.
5. **Wang, Q.** and **J. Hu** (2014). Is Smart Growth Land Development Smart for Freight?- A Perspective from the Destination Choice Behavior of Freight Vehicles. *The 8th International Association for China Planning (IACP)*. Guangzhou, China. June 21-22, 2014.
6. **Wang, Q., S. Tang,** and **J. Hu** (2014). A Performance Measurement System for Assessing Transportation Sustainability and Community Livability. *The 8th International Association for China Planning (IACP)*. Guangzhou, China. June 21-22, 2014.
7. **Wang, Q.** and **J. Hu** (2013). Destination Choice of Urban Commercial Vehicle Trips: Perspective from the Built Environment. *The 5th METRANS International Urban Freight Conference (I-NUF)*. Long Beach, CA. October 8-10, 2013.
8. **Lin, L., Q. Wang** and Adel Sadek (2012). A Two-step Modeling Approach for Predicting Border-Crossing Delay at the Peace Bridge. *The 4th Annual TRANSLOG 2012 Conference*. Hamilton, Canada. October 15th-16th, 2012.
9. **Hu, J.,** and **Q. Wang** (2011). The Attitudinal Analysis of Freight Mode Choice Decisions in Urban Areas. *The 3rd Annual TRANSLOG 2011 Conference*. Hamilton, Ontario, Canada. June 15-16, 2011.
10. **Wang, Q.,** and **J. Hu** (2011). Modeling the Freight Mode Choice Decisions in Urban Areas. *The 4th METRANS National Urban Freight Conference*, Long Beach, CA, U.S.A. October 12-14, 2011.
11. **Wang, Q.,** and **J. Hu** (2011). Impact of Snow Events on Truck Movement. *The 4th METRANS National Urban Freight Conference*, Long Beach, CA, U.S.A. October 12-14, 2011.

12. **Wang, Q.**, and **P. Su** (2011). Modeling the Impact of Smart Growth on Travel Choices: An Enhanced Travel Demand Forecasting Approach. *The Institute of Transportation Engineers (ITE) New York Update Section 2011 Annual Meeting*. Buffalo, New York. September 21-23, 2011.
13. **Wang, Q.** (2011). Transportation Systems Risk Management under Multiple Hazard Situations. *The Quake Summit 2011*. Buffalo, NY. June 8-11, 2011.
14. **Wang, Q.**, **J. Zhuang**, **P. Zhang** (2010). Congestion Pricing under Travel Time Uncertainty: A Game Theory Perspective. *The INFORMS 2010 Annual Meeting*. November 1-10, 2010.
15. **Wang, Q.**, and **P. Su** (2010). A Travel Demand Forecasting Framework for Assessing Smart Growth Strategies. *Transportation for Livable Communities Conference*. Washington D.C., October 18-19, 2010.
16. **Wang, Q.**, **P. Zhang**, and **J. Zhuang** (2010). Congestion Pricing under Travel Time Uncertainty: A Game Theory Perspective. *Innovations in Pricing of Transportation Systems: Workshop and Conference*. May 13-14, 2010.
17. **Wang, Q.**, and **J. Holguín-Veras** (2010). Modeling Freight Carriers' Responses to Time of Day Pricing in a Competitive Urban Freight Market. *Innovations in Pricing of Transportation Systems: Workshop and Conference*. May 13-14, 2010.
18. **Wang, Q.** (2010). Behavioral Analysis of Freight Carriers' Attitudes to Toll Pricing: Insights and Implications from the PANYNJ's Time of Day Pricing Initiative. *The 2010 TRANSLOG Conference. McMaster University, Canada*. June 15-16, 2010.
19. **Wang, Q.**, and **J. Holguín-Veras** (2009). Tour-Based Origin-Destination Synthesis Formulations of Urban Commercial Vehicle Movements. *The 3rd METRANS National Urban Freight Conference*, Long Beach, CA, U.S.A.
20. **Wang, Q.** (2009). Transportation System Risk Management under Multiple Hazard Situations. *The Institute of Transportation Engineers (ITE) New York Update Conference*. Canandaigua, NY, U.S.A.
21. **Wang, Q.** (2005). Impact of the Port Authority of New York and New Jersey (PANYNJ) Time of Day Pricing Initiative on Carriers' Travel Behavior. *The Pan-American Advanced Studies Institute on Transportation Sciences (PASI-TS)*. Toluca and Queretaro, Mexico, July 24-August 7 2005.
22. **Wang, Q.** (2004). Travelers' Behavioral Responses towards the Use of Electronic Toll Collection (E-ZPass). The Best Student Paper in *the ITS-NY 11th Annual Meeting and Technology Exhibition*. May, 2004. (Winning rate: 10%)

Published Technical Reports

1. *Assessment of Freight Transportation Bottlenecks in New York City*. Technical report submitted to the *MetroFreight Volvo Research and Educational Foundations (VREF) Center of Excellent*. January 2017

2. *A GIS-based Performance Measurement System for Assessing Transportation Sustainability and Community Livability* (2015). Technical report submitted to Region II University Transportation Research Center (UTRC). January 2015.
3. *A Prototype Decision Support System for Optimally Routing Border Crossing Traffic Based on Predicted Border Crossing Times* (2012). Technical report submitted to Region II University Transportation Research Center (UTRC). January 2012.
4. *Reducing Vehicle Miles Travelled Through Smart Land Use Design* (2011). Technical Report No. C-08-29. Prepared for The New York State Energy Research and Development Authority (NYSERDA) and New York State Department of Transportation (NYSDOT). December 2011.
5. *Evaluation Study of Port Authority of New York and New Jersey's Time of Day Pricing Initiative* (2005). Technical Report No. FHWA/NJ-2005-005. Funded by USDOT Value Pricing Program. Play major role in analysis and writing for Chapter V and VII. May 2005.
6. *Evaluation Study of New Jersey Turnpike Authority's Time of Day Pricing Initiative* (2005). Technical Report No. FHWA/NJ-2005-0012. Funded by USDOT Value Pricing Program May 2005. Work on the data analysis and report preparation.

Invited Seminars

1. **Wang, Q.**, 2011. Modeling the Impact of Smart Growth on Travel Choices: An Enhanced Travel Demand Forecasting Approach. The Center for Infrastructure, Transportation, and the Environment. Rensselaer Polytechnic Institute. December 16, 2011.
2. **Wang, Q.**, 2010. Behavioral Impacts of the Port Authority of New York and New Jersey's Time of Day Pricing Initiative. Department of Civil Engineering, University at Toronto. October 08, 2010.
3. **Wang, Q.**, 2009. Tour-based Urban Freight Travel Demand Models. Department of Industrial and Systems Engineering, University at Buffalo. November 13, 2009.

HONORS AND AWARDS

- Selected participant and travel grant awardee of *the 2014 Pan-American Advanced Studies Institute on Sustainable Urban Freight Systems (PASI-SUFS)*, Sponsored by the National Science Foundation, August 04-15, 2014.
- Selected participant and travel grant awardee of the C-20 Freight Modeling and Data Improvement Implementation Workshop. The Transportation Research Board (TRB) Strategic Highway Research Program 2 (SHRP2), January 21, 2012.
- United University Professions (UUP) Individual Development Award, 2009.
- Selected participant of NSF funded PASI-TS (Pan-American Advanced Studies Institute on Transportation Sciences), 2005.

- Best Student Paper in the ITS-NY Eleventh Annual Meeting and Technology Exhibition, June 17-18, 2004.
- Science and Technology Progress Award in Shanghai for the research project “Design Regulations for At-grade Intersections on Urban Streets in Shanghai,” China, 2001.
- Research Assistant Scholarship and Teaching Assistant Scholarship, Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, 2003-08.
- Research Assistant Scholarship, School of Traffic and Transportation Engineering, Tongji University, China, 2000-03.