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Orlando, FL 32816-2450, USA

## **Dr. Jaeyoung Lee**

Assistant Professor & Safety Program Director  
Center for Advanced Transportation Systems Simulation (CATSS)  
Department of Civil, Environmental and Construction Engineering  
University of Central Florida

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### **Education**

**Doctor of Philosophy**, Civil Engineering (Transportation Engineering), University of Central Florida, Florida, USA, Aug 2011- May 2014

- Dissertation: Development of Traffic Safety Zones and Integrating Macroscopic and Microscopic Safety Data Analytics for Novel Hot Zone Identification (Advisor: Dr. Mohamed Abdel-Aty)

**Graduate Certificate**, Crime Analysis, University of Central Florida, 2012-2014

**Graduate Certificate**, SAS Data Mining, University of Central Florida, 2011-2014

**Master of Engineering**, Transportation Engineering, Ajou University, South Korea, Mar 2007-Feb 2009

- Thesis: Estimation of Value of Travel Time by Time Periods (Advisor: Dr. Keechoo Choi)

**Bachelor of Engineering**, Transportation Engineering, Ajou University, Korea, Mar 2000-Feb 2007

**High School Diploma**, Chinese Language, Daewon Foreign Language High School, Mar 1997-Feb 2000.

## **Awards and Fellowships**

### **Outstanding Contribution in Reviewing**

- Accident Analysis & Prevention, 2015

### **Excellent Student Paper Award**

- Korean Transportation Association in America (KOTAA), 2014
- Paper Title: Macroscopic Multivariate Crash Modeling for Motor Vehicle, Bicycle and Pedestrian Crashes

### **Outstanding Contribution in Reviewing**

- Accident Analysis & Prevention, 2013

### **Travel Grant for WCTR, Rio de Janeiro, Brazil**

- College of Graduate Studies, University of Central Florida, 2013

### **Travel Grant for TRB Annual Meeting, Washington, DC**

- The Korean Transportation Association in America (KOTAA), 2013

### **Travel Grant for TRB Annual Meeting, Washington, DC**

- College of Graduate Studies, University of Central Florida, 2013

### **Graduate Research Excellence Fellowship**

- Fellowship stipend (\$1,000 per year), tuition waiver for two years, University of Central Florida (Ph.D. course), 2013

### **Graduate Dean's Fellowship**

- Fellowship stipend (\$4,000 per year), tuition waiver, and health insurance for four years, University of Central Florida (Ph.D. course), 2011

### **Special Scholarship**

- Tuition waiver, Ajou University (Bachelor's course), 2000

## Research Interests

- Macroscopic zonal level traffic safety analysis
- Microscopic traffic crash analysis with roadway facility conditions
- Pavement management and safety analysis
- Transportation planning and travel demand forecasting
- Statistical modeling / data mining
- GIS (Geographic Information Systems) analysis
- Design of traffic control devices

## Publications

- Nashad, T., Yasmin, S., Eluru, N., **Lee, J.**, and Abdel-Aty, M. (2016). Joint modeling of pedestrian and bicyclist crashes: copula-based approach. Transportation Research Record: Journal of the Transportation Research Board, to be published.
- Jiang, X., Abdel-Aty, M., Hu, J., **Lee, J.** (2015). Investigating Macro-level Hotzone Identification and Variable Importance Using Big Data: A Random Forest Approach. Neurocomputing, In Press.
- Shi, Q., Abdel-Aty, M., **Lee, J.** (2015). A Bayesian Ridge Regression Analysis of Congestion's Impact on Urban Expressway Safety. Accident Analysis & Prevention, 88, 124-137.
- **Lee, J.**, Nam, B., and Abdel-Aty, M. (2015). Effects of pavement conditions on traffic crash severity. ASCE Journal of Transportation Engineering, Journal of Transportation Engineering, 04015020.
- **Lee, J.**, Abdel-Aty, M., and Jiang, X. (2015). Multivariate crash modeling for motor vehicle and non-motorized modes at the macroscopic level. Accident Analysis & Prevention, 78, 146-154.
- Ryu, I., **Lee, J.**, Park, G. C., and Choi, K. (2015). Analysis of highway traffic indices using internet search data. Journal of Korean Society of Transportation Engineers, 33, 14-28.
- **Lee, J.**, Abdel-Aty, M., Choi, K., and Huang, H. (2015). Multi-level hot zone identification for pedestrian safety. Accident Analysis & Prevention, 76, 64-73.

- Park, J., Abdel-Aty, M., and **Lee, J.**, and Lee, C. (2015). Developing crash modification functions to assess safety effects of adding bike lanes for urban arterials with different roadway and socio-economic characteristics. *Accident Analysis & Prevention*, 74, 179-191.
- **Lee, J.**, Abdel-Aty, M., and Jiang, X. (2014). Development of zone system for macro-level traffic safety analysis. *Journal of Transport Geography*, 38, 13-21.
- **Lee, J.**, Abdel-Aty, M., and Choi, K. (2014). Analysis of residence characteristics of at-fault drivers in traffic crashes. *Safety Science*, 68, 6-13.
- **Lee, J.** (2014). Development of traffic safety zones and integrating macroscopic and microscopic safety data analytics for novel hot zone identification (Ph.D. dissertation). University of Central Florida, Orlando, Florida, USA.
- Ahmed, M. M., Abdel-Aty, M., **Lee, J.**, and Yu, R. (2014). Real-time assessment of fog-related crashes using airport weather data: a feasibility analysis. *Accident Analysis & Prevention*, 72, 309-317.
- Abdel-Aty, M., **Lee, J.**, Siddiqui, C., & Choi, K. (2013). Geographical unit based analysis in the context of transportation safety planning. *Transportation Research Part A: Policy and Practice*, 49, 62-75.
- **Lee J.**, and Choi, K. (2011). Estimation and application of value of travel time by time periods: a case study of downtown highway expansion project, *Korean Society of Civil Engineers*, Vol. 31(1), pp.7-15.
- **Lee J.**, and Choi, K. (2011). A Study of Korean-English legend configuration for guide signs, *Korean Society of Civil Engineers*, Vol. 31(1), pp.17-24.
- Lee, S., **Lee, J.**, and Choi, K. (2010). Estimation of road user costs caused by work zones and economic analysis in the feasibility study, *Korean Society of Civil Engineers*, Vol. 30(5D), pp.461-465.
- **Lee, J.**, Choi, K., Kim, D., and Lee, H. (2010). A study on effectiveness of enhanced expressway guide signs with route numbers, *Korean Society of Civil Engineers*, Vol. 30(3), pp.199-204.
- Park, B., **Lee, J.**, Choi, K., and Song, P. (2010). Development of route choice model with fuel cost factor by travel distance, *Korean Society of Civil Engineers*, Vol. 30(6), pp.599-604.
- **Lee, J.** (2008). Estimation of value of time by time periods (Master's thesis). Ajou University, Suwon, Korea.

## Proceeding/Presentations

- **Lee, J.**, and Abdel-Aty, M. (2016). Exploring zonal level bicycle traffic crashes and hot zone identification. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, Yasmin, S., Eluru, N., Abdel-Aty, M., and Cai, Q. (2016). Macroscopic analysis of crash proportion by mode: fractional split multinomial logit modeling approach. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Cai, Q., **Lee, J.**, Eluru, N., and Abdel-Aty. (2016). Macrolevel pedestrian and bicycle crash analysis incorporating spatial spillover effects in dual-state count models. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Wu, Y., Abdel-Aty, M., **Lee, J.**, and Wilson, M.C. (2016). Crash risk analysis under fog conditions on full access controlled highways using real-time traffic data. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Wang, J.H., Abdel-Aty, M., and **Lee, J.** (2016). Examination of the transferability of safety performance functions for developing crash modification factors using empirical Bayes method. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Amili, S., Abdel-Aty, M., **Lee, J.**, and Shi, Q. (2016). Dynamic hotspot identification for expressways using real-time traffic data. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Farid, A., Abdel-Aty, M., **Lee, J.**, Eluru, N., and Wang, J.H. (2016). Exploring transferability of safety performance functions: a case study of rural multilane divided highway segments. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Yasmin, S., Eluru, N., **Lee, J.**, and Abdel-Aty, M. (2016). An Ordered Fractional Split Approach for Aggregate Injury Severity Modeling. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Dong, N., Huang H., **Lee, J.**, Gao, M., and Abdel-Aty, M. (2016). Macroscopic hotspots identification: a Bayesian spatio-temporal interaction approach. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Nashad, T., Yasmin, S., Eluru, N., **Lee, J.**, and Abdel-Aty, M. (2016). Joint modeling of pedestrian and bicyclist crashes: copula-based approach. Presented at the 95th TRB Annual Meeting, Washington DC, USA.
- Abdel-Aty, A., **Lee, J.**, and Cai, Q. (2015). Exploring EMS report and arrival time in fatal traffic crashes with crash, roadway, environmental and zonal socio-economic factors. Presented at the 143rd American Public Health Association Annual Meeting, Chicago, Illinois, USA.

- **Lee, J.**, Abdel-Aty, A., and Lee, H. (2015). Investigation of microscopic and macroscopic factors and screening counties with respect to fatal crashes due to drowsiness: a nationwide study in the United States. Presented at the 143rd American Public Health Association Annual Meeting, Chicago, Illinois, USA.
- Abdel-Aty, Y., **Lee, J.**, and Park, J. (2015). Traffic crashes caused by driving under the influence adjacent to colleges/universities: GIS analysis and Bayesian Poisson gamma modeling. Presented at the 143rd American Public Health Association Annual Meeting, Chicago, Illinois, USA.
- **Lee, J.**, and Cai, Q. (2015). Statewide County-level Traffic Crash Modeling Using Land-use Data: A Case Study of the State of Florida in the United States. Presented at the 25th World Road Congress, Seoul, Republic of Korea.
- **Lee, J.** and Abdel-Aty, Y. (2015). Macroscopic Bicycle Crash Analysis: Focusing on Crash Locations and Residence. Presented at the 25th World Road Congress, Seoul, Republic of Korea.
- **Lee, J.**, Choi, K., and Kuo, P.F. (2015). Comprehensive Data Analytics of Pedestrian Involved Hit-and-Run in Road Crashes. Presented at the 25th World Road Congress, Seoul, Republic of Korea.
- **Lee, J.**, and Cai, Q. (2015). Forecasting of the Future Traffic Safety Risks Using Demographic, Socio-economic, and Trip Generation Predictors. Presented at the 25th World Road Congress, Seoul, Republic of Korea.
- **Lee, J.**, Abdel-Aty, M., and Huang, H. (2015). Pedestrian safety data analytics: modeling and screening for residence and crash zones. Presented at the 2015 Road Safety & Simulation International Conference, Orlando, Florida, USA.
- **Lee, J.**, Nam, B., and Abdel-Aty, M. (2015). Examining the relationship between pavement surface conditions and the crash injury severity. Presented at the 2015 Road Safety & Simulation International Conference, Orlando, Florida, USA.
- **Lee, J.**, Abdel-Aty, M., and Shi, Qi. (2015). Comprehensive DUI crash analysis using data from multiple sources. Presented at the 2015 Road Safety & Simulation International Conference, Orlando, Florida, USA.
- **Lee, J.**, Kuo, P.F., and Abdel-Aty, M. (2015). Comparative analysis of hot zone identification methods at the macroscopic level. Presented at the 2015 Road Safety & Simulation International Conference, Orlando, Florida, USA.
- Shi, Q., Abdel-Aty, M., and **Lee, J.** (2015). Analysis of congestion's impact on urban expressway safety: a Bayesian ridge regression approach. Presented at the 2015 Road Safety & Simulation International Conference, Orlando, Florida, USA.
- **Lee, J.**, Nam, B., and Abdel-Aty, M. (2015). Exploring the relationship between pavement surface condition and traffic crash injury severity: a case study of state

maintained highways in Florida. Presented at the 1st Annual Florida Regional Conference on Sciences and Technology, Orlando, Florida, USA.

- **Lee, J.**, Cai, Q., and Abdel-Aty, M. (2015). Statistical modeling and screening for pedestrian traffic safety at the macroscopic level. Presented at the 1st Annual Florida Regional Conference on Sciences and Technology, Orlando, Florida, USA.
- **Lee, J.**, Nam, B., and Abdel-Aty, M. (2015). Investigation of the effect of pavement conditions on crash injury severity. Presented at the 94th TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, Abdel-Aty, M., and Jiang, X. (2015). Traffic safety analysis zones for the macroscopic crash investigation. Presented at the 94<sup>th</sup> TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, Abdel-Aty, M., Choi, K., and Huang, H. (2015). Multi-level hot zone identification for pedestrian safety. Presented at the 94th TRB Annual Meeting, Washington DC, USA.
- Kuo, P. F., **Lee, J.**, Abdel-Aty, M. (2015). Comparing hotspot identification methods at the macroscopic safety analysis level. Presented at the 94th TRB Annual Meeting, Washington DC, USA.
- Peng, Y., Abdel-Aty, M., **Lee, J.** (2015). Analysis of impact of fog-related reduced visibility on traffic parameters. Presented at the 94th TRB Annual Meeting, Washington DC, USA.
- Park, J., Abdel-Aty, M., **Lee, J.**, and Lee, C. (2015). Evaluation of the safety effectiveness of adding a bike lane for urban arterials with different roadway and socio-economic characteristics. Presented at the 94th TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, and Abdel-Aty, M. (2014). Traffic crashes under low visibility due to fog in Florida. Presented at 2014 ESRI User Conference, San Diego, California, USA.
- **Lee, J.**, Shi, Q., and Abdel-Aty, M. (2014). Comprehensive data analytics of driving under the influence of alcohol using Bayesian and GIS techniques. Presented at 2014 Graduate Research Forum of the University of Central Florida, Orlando, Florida, USA.
- Jiang, X., Abdel-Aty, M., and **Lee, J.** (2014). Investigating macrolevel hotzone identification and variable importance using random forest models. Presented at the 93<sup>rd</sup> TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, Abdel-Aty, M., and Jiang, X. (2014). Macroscopic multivariate crash modeling for motor vehicle, bicycle and pedestrian crashes. Presented at the 93<sup>rd</sup> TRB Annual Meeting, Washington DC, USA.

- Abdel-Aty, M., **Lee, J.**, Ahmed, M., and Radwan, E. (2013). Improving visibility detection systems on highways. Presented at the 17<sup>th</sup> International Road Federation Meeting, Riyadh, Saudi Arabia.
- **Lee, J.**, Choi, K., and Abdel-Aty, M. (2013). Safety implications of young drivers' attitudes, perceptions and behavior in Korea. Presented at the 2013 World Conference of Transport Research, Rio de Janeiro, Brazil.
- Abdel-Aty, M., **Lee, J.**, Siddiqui, C., and Choi, K. (2013). Analysis of zonal characteristics of drivers involved in traffic crashes. Presented at the 2013 World Conference of Transport Research, Rio de Janeiro, Brazil.
- **Lee, J.**, Abdel-Aty, M., Choi, K., and Siddiqui, C. (2013). Demographic and socioeconomic factors associated with traffic crash involvement in Florida. Presented at the 16<sup>th</sup> Road Safety on Four Continents International Conference, Beijing, China.
- **Lee, J.**, and Abdel-Aty (2013). Residence characteristics of unsafe drivers in Central Florida, Presented at 2013 Graduate Research Forum of the University of Central Florida, Orlando, Florida, USA.
- **Lee, J.**, Abdel-Aty, M., and Ahmed, M. (2013). Traffic safety under reduced visibility. Presented at 2013 UTC Symposium, Orlando, Florida, USA.
- **Lee, J.**, Abdel-Aty, M., and Choi, K. (2013). Analysis of residence characteristics of drivers, pedestrians and bicyclists involved in traffic crashes. Presented at the 92<sup>nd</sup> TRB Annual Meeting, Washington DC, USA.
- **Lee, J.**, Choi, K., and Abdel-Aty, M. (2013). Investigation into young drivers' attitudes, perceptions, and behavior in Korea. Presented at the 92<sup>nd</sup> TRB Annual Meeting, Washington DC, USA.
- Ahmed, M., Abdel-Aty, M., **Lee, J.**, and Yu, R. (2013). Exploring the feasibility of using airport data in real-time risk assessment. Presented at the 92<sup>nd</sup> TRB Annual Meeting, Washington DC, USA.
- Ko, S., Lee, S., Kim, J, **Lee, J.**, Kim, K, and Choi, K. (2011). State-of-the-art pavement marking technology and the future development. Presented at the 64<sup>th</sup> Korean Society of Transportation Conference, Seoul, Korea.
- **Lee, J.**, and Choi, K. (2010). Recent new improvements of expressway sign system in Korea. Presented at International Road Federation Seminar, Hwaseong, Korea.
- Lee, S. **Lee, J.**, Choi, K. (2010). Comparison between legibility of guide signs in diverse weather conditions. Presented at the 17<sup>th</sup> ITS World Congress, Busan, Korea.
- **Lee, J.**, Lee, H., Lee, S., Choi, K., and Lee, S. (2010). Development of tunnel guide sign system. Presented at the 36<sup>th</sup> Korean Society of Civil Engineers Conference, Incheon, Korea.



- Lee, S., **Lee, J.**, and Choi, K. (2010). Enhancement of guide sign system for expressway interchanges. Presented at the 36<sup>th</sup> Korean Society of Civil Engineers Conference, Incheon, Korea.
- Lee, S., **Lee, J.**, and Choi, K. (2010). Measuring luminance of guide signs in nighttime and adverse weather conditions using digital image. Presented at the 36<sup>th</sup> Korean Society of Civil Engineers Conference, Incheon, Korea.
- Park, B., **Lee, J.**, and Choi, K. (2009). Development of route choice model with fuel cost factor by travel distance. Presented at the 61<sup>st</sup> Korean Society of Transportation Conference, Incheon, Korea.
- Lee, S., **Lee, J.**, and Choi, K. (2009). Estimation of road user costs caused by work zones and economic analysis in the feasibility study. Presented at the 61<sup>st</sup> Korean Society of Transportation Conference, Incheon, Korea.
- Jeon, K., **Lee, J.**, and Choi, K. (2009). Estimation of value of travel time and reliability for passenger trip. Presented at the 60<sup>th</sup> Korean Society of Transportation Conference, Seoul, Korea.
- **Lee, J.**, and Jeong, W. (2008). Improvement of toll impedance application for travel demand analysis. Presented at the 59<sup>th</sup> Korean Society of Transportation Conference, Ilsan, Korea.
- **Lee, J.**, Jeong, W., and Choi, K. (2008). Travel demands and benefits changes by volume delay functions, Presented at the 58<sup>th</sup> Korean Society of Transportation Conference, Seoul, Korea.
- **Lee, J.**, Jeong, W., and Choi, K. (2007). Car-sharing in overseas and introduction to Korea. Presented at the 57<sup>th</sup> Korean Society of Transportation Conference, Gwangju, Korea.

## **Research/Working Experience**

**Assistant Professor (Research Track)**, Department of Civil, Environmental and Construction Engineering, University of Central Florida, Orlando, Florida, USA, Dec 2015-

**Safety Program Director**, Center for Advanced Transportation Systems Simulation (CATSS), University of Central Florida, Orlando, Florida, USA, Jun 2014-

- Utilizing micro simulation to evaluate the safety and efficiency of the expressway system, Safer-SIM UTC, 2015- (Principal Investigator)
- MRI 4: Big data for safety monitoring, assessment, and improvement, Southeastern Transportation Center (STC), 2014- (Co-Principal Investigator)
- Improved prediction models for crash types and crash severities. National Cooperative Highway Research Project (NCHRP) 17-62, 2014-
- Phase II: Enhancing and generalizing the two-level screening approach incorporating the Highway Safety Manual (HSM) methods, Florida Department of Transportation, 2014-
- Real time monitoring and prediction of reduced visibility events on Florida's highways, Florida Department of Transportation, 2014-
- A comprehensive investigation of visibility problems on highways: developing real time monitoring and prediction system for reduced visibility and understanding traffic and human factors implications, National Center for Transportation Systems Productivity and Management (NCTSPM), 2013-

**Post-doctoral Research Associate**, Department of Civil, Environmental and Construction Engineering, University of Central Florida, Orlando, Florida, USA, Jun 2014-Oct 2015.

**Research Assistant**, Department of Civil, Environmental, and Construction Engineering, University of Central Florida, Orlando, Florida, USA, Aug 2011-May 2014

- Two level approach to safety planning incorporating the Highway Safety Manual (HSM) network screening, Florida Department of Transportation, 2012-2014
- Synthesis of visibility detection systems, Florida Department of Transportation, 2012

**Researcher**, Ajou Transportation Research Institute (ATRI), Ajou University, Suwon, Korea, May 2009-Jul 2011

- SMART highway project: development of efficient guidance technology for drivers, Korea Expressway Corporation, 2009-2011

- Feasibility study on GTX railway construction project, Gyeonggi Province, 2010-2011
- Preliminary feasibility study on Bukbu Expressway (Taerung-Guri), Korea Development Institute, 2009

**Research Assistant**, Department of Transportation Systems Engineering, Ajou University, Suwon, Korea, Mar 2007-Feb 2009

- Preliminary feasibility study on highway construction for Chungcheongnamdo government office, Korea Development Institute, 2009
- Research of guide sign system for the urban expressway, Korea Transport Institute, 2008-2009
- Development of Decision Support System for Expressway Traffic Policy, Korea Expressway Corporation, 2008-2009
- Preliminary feasibility study on highway construction (Daegu Sangdonggyo-Gachang), Korea Development Institute, 2008.
- Enhancement of expressway guide sign system, Korea Expressway Corporation, 2008-2009
- Establishing Bus Information System for Jeju Island, 2007.
- Preliminary feasibility study on adding lanes on the National Highway 5 (Hongcheon-Chuncheon), Korea Development Institute, 2007.

**Air Defense and Control Agent**, Republic of Korea Air Force, South Korea, Jan 2003-Jun 2005

- Air traffic surveillance and control (final rank: Staff Sergeant)

## **Teaching/Advising Experience**

**Instructor**, Department of Civil, Environmental, and Construction Engineering, University of Central Florida, May 2015-Aug 2015

- Geometric design of transportation systems (TTE 5805)

**Advisory Committee Member**, University of Central Florida, May 2014-

- Ph.D. dissertation: Wang, L. (2015- ). Short time safety evaluation and prediction for special expressway segments based on microscopic data.
- Ph.D. dissertation: Wang, J. H. (2014- ). Evaluating the impact of intersection related treatments and developing crash modification functions based on time and traffic volume trends.
- Master's thesis: Selby, R. (2015). The impact of dynamic message signs on driver behavior under variable visibility conditions.
- Master's thesis: Carroll, K. (2015-2016). Evaluation of real world toll plazas using driving simulation.
- Master's thesis: Farid, A. (2015). Transferability of safety performance functions for rural multilane highways between states in the United States.
- Ph.D. dissertation: Park, J. (2014-2015). Exploration and development of crash modification factors and functions for single and multiple treatments.
- Ph.D. dissertation: Al Kaaf, K. (2014). Transferability and calibration of the Highway Safety Manual safety performance functions and development of new models for urban four-lane divided roads.
- Master's thesis: Wu, Y. (2014). A comparative analysis of different dilemma zone countermeasures at signalized intersections based on cellular automaton model.

**Teaching Assistant**, Department of Transportation Systems Engineering, Ajou University, Suwon, Korea, Mar 2007-Feb 2008

- Traffic information and GIS for transportation, 2008
- Transportation project, 2008
- Travel demand forecasting practice, 2007
- Travel demand forecasting, 2007

## Professional Activities

### Professional Societies

- **Member**, American Public Health Association (APHA), 2015-
- **Member**, Association of Transportation Safety Information Professionals (ATSIP), 2015-
- **Member**, American Society of Civil Engineers (ASCE), 2014-
- **Member**, Institute of Transportation Engineers (ITE), 2014-

### Journal Reviewer

- **Reviewer**, Accident Analysis and Prevention, Elsevier, 2012-
- **Reviewer**, KSCE Journal of Civil Engineering, Springer, 2013-
- **Reviewer**, Transportmetrica A: Transport Science, Taylors & Francis, 2015-
- **Reviewer**, Journal of Transportation Engineering, American Society of Civil Engineers, 2015-
- **Reviewer**, Journal of Transportation Safety and Security, Taylors & Francis, 2015-
- **Reviewer**, Journal of Traffic and Transportation Engineering, Elsevier, 2015-

### Conference Activities

- **Invited Session Chair**, Road Safety and Simulation International Conference, Orlando, Florida, 2015.

### Lectures/Seminars

- **Invited Lecture**, “Basic Statistics for Traffic Safety”, Ajou University, South Korea, 2015.
- **Invited to International Seminar on Road Safety Research toward Safer and More Livable Cities**, “Macroscopic Safety Analysis”, Korea Research Institute of Human Settlements (KRIHS), South Korea, 2015.
- **Invited Seminar**, “Current Approaches in Highway Safety Research”, Suwon Research Institute, South Korea, 2015.
- **Invited Lecture**, “Introduction to Macroscopic Traffic Safety Research (宏觀交通安全研究)”, Central Police University, Republic of China (Taiwan), 2015.

- **Invited Lecture**, “Discrete Choice and Count Modeling”, Ajou University, South Korea, 2012.

## **Certificate/Training**

### **ASCE Training**

- A Closer Look at Road Diets (AWI091412), 2015.
- Analysis and Assessment of Roundabouts (AWI062311), 2015.
- Complying with the MUTCD - Traffic Signing for Horizontal Curves (AWI101811), 2015.
- Engineering Treatments and Design Development Strategies for Creating Safe Routes to Schools (AWI61813), 2015.
- Regulatory and Warning Signs - Providing Answers to Common Citizen Requests (AWI050914), 2015.

### **ESRI Training Certificate**

- Getting Started with GIS (for ArcGIS 10), 2013
- Basics of Geographic Coordinate Systems (for ArcGIS 10), 2013
- Using ArcMap in ArcGIS Desktop 10, 2013
- Introduction to GIS Data ReViewer, 2013
- Teaching with GIS: Introduction to Using GIS in the Classroom, 2013
- Turning Data into Information Using ArcGIS 10, 2013
- Preparing to Implement ArcGIS Online, 2013
- Python for Everyone, 2013
- Using Python in ArcGIS Desktop 10, 2013
- Mobile GIS: Creating Web Maps for Lightweight Mobile Apps, 2013
- Mobile GIS: Using the ArcGIS for iOS Application, 2013
- Field GIS: Collecting and Editing Data Using ArcPad 10, 2013
- Editing in ArcGIS Desktop 10, 2013

- Creating Web Applications Using ArcGIS Online, 2013
- Sharing GIS Contents Using an ArcGIS Online Subscription, 2013
- Creating and Sharing Locator Packages (for ArcGIS 10.1), 2013
- Authoring Web Maps Using ArcGIS Online, 2013
- ArcGIS Data Interoperability Basics, 2013

### **Collaborative Institutional Training Initiative (CITI) Certification**

- Conflict of Interest, 2015
- Responsible Conduct of Research for Engineers, 2014
- Social / Behavioral Research Investigators and Key Personnel, 2014

### **Other Activities**

#### **President**

- American Society of Highway Engineers (ASHE), University of Central Florida Chapter, 2013-2014

#### **Vice President**

- American Society of Highway Engineers (ASHE), University of Central Florida, 2012-2013

#### **President**

- Society of Science Technology Discussion, Ajou University, 2001-2002