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Dr. Jaeyoung Lee

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Center for Advanced Transportation Systems Simulation (CATSS)
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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 94th 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 93rd 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 93rd 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 17th 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 16th 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 92nd 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 92nd 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 92nd 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 64th 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 17th 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 36th 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 36th 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 36th 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 61st 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 61st 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 60th 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 59th 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 58th 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 57th 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