

Mohamed A. Abdel-Aty, Ph.D., P.E.

<http://www.cece.ucf.edu/people/aty/>

CURRICULUM VITAE**OFFICE:**

Civil, Environmental & Construction Engineering Department

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FIELDS OF INTEREST

Traffic Safety Analysis, Intelligent Transportation Systems, Traffic Simulation, Transportation Demand Analysis, Transportation Planning Concepts and Methods, Computer, Statistical and Econometrics Applications in Transportation Engineering.

EDUCATION

Ph.D. in Civil Engineering (Transportation), September 1995, University of California, Davis.

M.Sc. in Civil Engineering (Transportation), July 1991, Alexandria University.

B.Sc. in Civil Engineering (Honors, Ranked in top 1%), June 1985, Alexandria University.

EMPLOYMENT

- *Professor* of Civil Engineering (8/2006 – present): Civil, Environmental & Construction Engineering Dept., University of Central Florida
Deputy Director (1/2012 – present): Center for Advanced Transportation Systems Simulation, UCF.
Graduate Program Director (8/2009 – 8/12): Civil, Environmental & Construction Engineering Dept., University of Central Florida
Program Director (8/2004 – 1/2012), Transportation Safety and Operations, Center for Advanced Transportation Systems Simulation, UCF.
- *Associate Professor* (8/2000-8/2006): Civil & Environmental Engineering Dept., University of Central Florida
- *Assistant Professor* (7/95 – 8/2000): Civil & Environmental Engineering Dept., University of Central Florida. (promoted and tenured 5/2000)
- *Post Graduate Research Engineer* (9/91 - 7/95): Institute of Transportation Studies, University of California at Davis.
- *Assistant Lecturer* (10/85 - 9/91): Civil Engineering, Alexandria University.

HONORS AND AWARDS

- College of Engineering and Computer Science, Dean's Advisory Board award, UCF, November 2012.
- College of Engineering and Computer Science Distinguished Researcher Award, UCF, January 2010.
- Research Incentive Award (RIA), College of Engineering & Computer Science, Aug. 2008.
- Teaching Incentive Program (TIP) Award for the College of Engineering & Computer Science, UCF, Aug. 2008.
- College Excellence in Professional Service, College of Engineering and Computer Science, Feb. 2008.
- **University Excellence in Graduate Teaching**, UCF, 2007.
- Distinguished Professional Service Award, Civil & Environmental Engineering Department, UCF, 2007.
- Excellence in Graduate Teaching Award, College of Engineering & Computer Science, UCF, February 2007.
- **University Distinguished Researcher**, University of Central Florida, 2003.
- Research Incentive Award (RIA), College of Engineering & Computer Science, Aug. 2003.
- Teaching Incentive Program (TIP) Award for the College of Engineering & Computer Science, UCF, Aug. 2003.
- College of Engineering and Computer Science Distinguished Researcher Award, UCF, January 2003.
- Outstanding Researcher, Civil, Environmental & Construction Engineering Department, UCF, 2002, 2008, 2009.
- CECS Distinguished Research Lecturer, College of Engineering, UCF, April 2003.
- Teaching Incentive Program (TIP) Award, College of Engineering, UCF, Aug. 1998.
- Outstanding Graduate Teacher Award for the Civil & Environmental Engineering Department, UCF, 1997/98, 1999/2000, 2004/05 and 2006/07 academic years.
- Member Chi Epsilon, Civil Engineering Honor Society (initiated Fall 2007)
- Member Tau Beta Pi, National Engineering Honor Society (initiated as eminent engineer, Spring 2000)
- Member Phi Kappa Phi Honor Society (initiated Spring 2000)
- Dissertation Award for outstanding Ph.D. dissertation from the University of California Transportation Center -- UCTC (academic year 1994/95).
- Tuition Fellowship Awards, University of California, Davis (5 quarters for the 1992/93, 1993/94 and the 1994/95 academic years).
- Outstanding Academic Performance Grants throughout five years of undergraduate studies.
- B.Sc. Graduation Grade (1985): Very Good with the Degree of Honor. Ranked 5/703.

LEADERSHIP SUMMARY

- Deputy Director (1/2012 – present): Center for Advanced Transportation Systems Simulation, UCF.
- Graduate Program Director (8/2009 – 8/2012): Civil, Environmental & Construction Engineering Dept., University of Central Florida.
Responsibilities include: managing graduate programs, programs' assessment, programs' review, programs' modifications, catalog changes, advising, mentoring, admission, certification, serve on college GPCC committee.
- Program Director (2004 – 2012), Transportation Safety and Operations, Center for Advanced Transportation Systems Simulation, UCF.
- Editor-in-Chief (July 2013 – present), Accident Analysis and Prevention, Elsevier, Ranked no. 1 journal in safety research, top 3 in Transportation, 2nd out of 83 journals. Five years Impact factor 2.367.
- Associate editor (2006 – 2013), Accident Analysis and Prevention, Elsevier.
- Intelligent Transportation Systems Program Director (2008 – 2009 sabbatical year), Nile University, Cairo.
Responsibilities included: Establishing the program, preparing academic curriculum, recruit faculty, recruit students, promote program, organized an international conference in March 2009.
- Co-Chair (2004-2011), Transportation Research Board, Joint Subcommittee on Advanced Traveler Information Systems.
- Chair, CECS Honors (2005 -2008)
Responsibilities included: advising and recruiting honor in the major students, honors scholarship selection, honors in the major thesis awards

PROFESSIONAL SOCIETY MEMBERSHIPS & ACTIVITIES

- Transportation Research Board, National Research Council, National Academy of Sciences
 - Joint Subcommittee on ATIS (AND20 (2)) – CO-CHAIR – (2004- 2011)
 - Subcommittee on Route Choice and Spatial behavior (ADB10 (2))- CHARTER MEMBER
 - Committee on Safety Data, Analysis, and Evaluation (ANB20) – MEMBER (2003 – ongoing)
 - Committee on User Information Systems (AND20) – MEMBER (1998 – 2002, and 2004 – 2011)
- Associate editor, Accident Analysis and Prevention, Elsevier, Five year Impact factor 2.367 (2006 – ongoing) – Editor-in-Chief starting January 2014
- Member, Journal's Editorial Advisory Board, Accident Analysis and Prevention (2001 – 2006)
- Member, Editorial Board, ITS Journal, Taylor & Francis (2003 – ongoing)
- Member, Editorial Board, International Journal of Sustainable Transportation, Taylor & Francis (2013 – present).
- Member International Road Federation Group of Experts on Road Safety (2011-ongoing)
- Visiting scholar and International Research Board Member, MOELAB, Beijing Jiaotong University, China (2011-ongoing)
- Member, World Conference on Transport Research Society – WCTRS (2004 – ongoing)
- Member, American Society for Engineering Education – ASEE (2002-2004 and 2010 - current)

- American Society of Highway Engineers
Faculty Advisor for Student Chapter at UCF
- Paper reviewer for TRB, Transportation, Transportation Research A, C & D, Accident Analysis and Prevention, ASCE Journal of Transportation Engineering, ASCE Journal of Infrastructure Systems, ITS Journal, Journal of Public Transportation, IEEE transactions on Intelligent Transportation Systems, International Journal of Sustainable Transportation and the Journal of Safety Science (ongoing)
- Committee Chair, SHRP 2 Expert Task Group for the Roadway Measurement Van Project (S03), Transportation Research Board, National Academy of Sciences, 2007
- Chair expert panel, Mobility, Environmental Sustainability and Energy Efficiency, Egyptian Information Technology Industry Development Agency (ITIDA), 2008.
- Board Member, Southeastern Transportation Center (2007-ongoing)
- Expert Panel member for the driving simulator project, Tongji University, China (2007-current)
- Research proposal panel, National Institutes of Health (NIH), September 2009 & Feb. 2011
- Peer reviewer for scientific reports for the Federal Motor Carrier Safety Administration (FMCSA), 2010, 2011.
- External reviewer, Portuguese Foundation for Science and Technology (FCT), 2012.
- Member, Committee of Experts, Road Safety & Environment Engineering Research Center of Ministry of Education (RERC), Tongji University, Shanghai, China.
- Research proposal reviewer for the Connecticut Cooperative Highway Research (Fall 2004)
- Research Proposal Reviewer for the National Sciences and Engineering Research Council of Canada (Fall 2004)
- Committee on Transportation and Housing, Orange County, Florida (past member)

Assessment for Promotion of Faculty

- Evaluation of material and writing assessment letter for the promotion case for the rank of Professor for Dr. John Ivan, University of Connecticut, 2006.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of associate professor for Dr. Sunanda Dissanayake, Kansas State University, 2007.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of professor for Dr. Bruce Hellinga, University of Waterloo, Canada, Fall 2009.
- Reference letter for Dr. Baher Abdulhai, University of Toronto, for Canada Research Professor, 2009.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of associate professor for Dr. Mecit Cetin, Old Dominion University, August 2011.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of professor for Dr. Amer Shalaby, University of Toronto, December 2011.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of associate professor for Dr. Thobias Sando, University of North Florida, 2012.
- Evaluation of Professor Tarek Sayed's record for the Killam Research Prize, University of British Columbia, July 2012.
- Evaluation for promotion of Dr. Tom Brijs to the rank of Professor, Hasselt University, Belgium, July 2012.
- Evaluation of material and writing assessment letter for the tenure and promotion to the rank of professor for Dr. Venky Shankar, Penn State University, September 2012.

- Evaluation of material and writing assessment letter for associate professor for Dr. Lina Kattan, University of Calgary, Canada, Spring 2013.
- Writing an assessment letter for Research Engineer Position at UC Berkeley for Professor Dr. Venky Shankar, February 2013.
- Evaluation of material and writing an assessment letter for tenure and promotion to associate Professor for Dr. Tova Rosenbloom, Bar-Ilan University, Israel, Summer 2013.

International Agreements

- Established an agreement between UCF and Beijing Jiaotong University, China, 2012.
- Established an agreement between UCF and Tongji University, China, 2009.
- Contributed to establishing an agreement between UCF and Nile University, Egypt, 2008.
- Founded the Intelligent Transportation Systems graduate program at Nile University, 2008.

RESEARCH PROJECTS AT UCF

(total funding at UCF \$6,333,045, of which \$5,030,000 as **Principal Investigator (PI)** or sole (PI)

1. “Real Time Monitoring and Prediction of Reduced Visibility Events on Florida’s Highways (PI), Funded by Florida Department of Transportation, 2013-2014, \$671,000.
2. “Improved Prediction Models for Crash Types and Crash Severities, NCHRP 17-62”, PI at UCF with a team of Univ. of Connecticut, University of North Carolina & Persaud & Lyon, Funded by the Transportation Research Board of the National Academies, 2013-2015, UCF’s share \$130,000.
3. “Two Level Approach to Safety Planning Incorporating the Highway Safety Manual (HSM) Network Screening”, sole (PI), Funded by Florida Department of Transportation, 2012-2014. \$197,545.
4. “Efficient Utilization of the Existing ITS System and the Viability of a Proactive Traffic Management System for the Orlando-Orange County Expressway Authority”, (PI), Funded by OOCEA and the UTC National Center for Transportation System Productivity and Management, 2012-214, \$224,037
5. “Integrating Safety in Developing a Variable Speed Limit System”, (PI), Funded by and the UTC National Center for Transportation System Productivity and Management, 2012-214, \$50,000.
6. “Validation and Application of Highway Safety Manual Part D in Florida”, sole (PI), Funded by Florida Department of Transportation, 2012-2014. \$217,920
7. “Synthesis of Visibility Detection Systems”, (sole PI), Funded by Florida Department of Transportation, 2012. \$36,876
8. “Center for Transportation System Performance and Management” (Co-PI), Research and Innovative Technology Administration (RITA), U.S. Department of Transportation, 2012-2014, \$200,000 (PI:Radwan, Co-PIs Aty)
9. “Developing Advanced Spatial Analysis Tools in Transportation Safety Planning: Examining Planning Zones and Trip Data” (sole PI). Federal Highway Administration’s (FHWA) program for Transformational Changes and Revolutionary Advances for Transportation Planning, 2011-2012. \$138,876

In addition \$33,590 internal funding

10. "Developing an Active Traffic Management System for I-70 in Colorado" (sole PI). Approved by Colorado DOT for 3 years, 2011-2013. First year funding \$125,000
In addition \$12,000 internal funding
11. "Young Drivers Safety Study" (sole PI). Funded by FDOT District 5, 2010-2011. \$50,000
12. "Developing an Early Detection System for Reduced Visibility from Fog/Smoke and Means to Effectively and Timely Warn Drivers" (PI). Funded by Florida Department of Transportation, match from CATSS, 2008-2010. \$255,000 (PI : Abdel-Aty, Co-PI Oloufa)
13. "UCF/CATSS-NU: Cooperative Design of Academic Programs" (Co-PI) Funded by Nile University, Egypt, 2008-2010. \$35,000
14. "Identification of Intersections' Crash Profiles/Patterns to Include Unsignalized Intersections and Expand the Safety/Traffic Database" (sole-PI). Funded by Florida Department of Transportation, 2007-09. \$370,911
15. "Reducing Fatalities and Severe Injuries on Florida's High-Speed Multi-Lane Arterial Corridors" (sole PI), Funded by the Florida Department of Transportation. 2007-2009. \$286,000
16. "Expanding the scope of the Identification of Intersections' Crash Profiles/Patterns to include a Client/Server Computer Application" (PI), Funded by Florida Department of Transportation. 2005-07. \$170,000
17. "Acquisition of Fully Instrumented Vehicle for Driving Simulator Validation and Gathering of Field Test Data" (Co-PI), UCF Presidential Major Equipment Award, 2005. \$54,718
(PI: Harold Klee, Co-PI: Radwan, Weeks, Abdel-Aty)
18. "Linking Crash Patterns to ITS-Related Archived Data (PHASE II): Developing a Hybrid Detailed Crash Prediction System Using ITS Data on I-4 and Evaluating the Application Strategies" (PI), Funded by Florida Department of Transportation. 2004-07. \$507,966
(PI : Abdel-Aty, Co-PI Uddin)
19. "Emergency Evacuation Plan Simulation for Orlando International Airport & Vulnerability Assessment and Test (VA)/Continuance of Operations (COOP) for the Security Command and Control Center at Orlando International Airport" (Co-PI). Funded by Federal Transit Administration/Florida Atlantic University. 2004-05. \$248,527
(PI: Radwan, Co-PI: Abdel-Aty and Mollaghasemi)
20. "Frequency Analysis Technique Applied to Transportation Freight, Goods, and Services Data", (Co-PI). Funded by Florida Department of Transportation. 2004-06. \$119,644
(PI: Li, Co-PI: Abdel-Aty)
21. "Relating Crash Occurrence to Freeway Loop Detectors Data, Weather Conditions and Geometric Factors", (PI). Funded by Florida Department of Transportation. 2003-05. \$122,650
(PI: Abdel-Aty, Co-PI: Uddin)
22. "Phase II: Extension of the Identification of Intersections' Crash Profiles/Patterns", (sole PI). Funded by Florida Department of Transportation. 2003-05. \$127,563 (PI: Abdel-Aty)
23. "Using the UCF Driving Simulator as a Test Bed for High Risk Locations, Part I: Signalized Intersections and Toll Plazas", (PI). Funded by Florida Department of Transportation, 2003-04, \$149,881 (PI: Abdel-Aty, Co-PI: Radwan and Klee)
24. "Evaluation of Red-light Running and Visibility around LTVs Using UCF Driving Simulator, (Co-PI). Funded by Florida Department of Transportation, 2003-04, \$150,000
(PI: Radwan, Co-PI: Abdel-Aty and Klee)
25. "An Integrated Emergency Management Decision Support System for Evacuation", (Co-PI). Funded by the Greater Orlando Aviation Authority (GOAA) and the Center for Advanced Transportation Systems Simulation (CATSS). 2003-2004. \$125,000

- (PI: Mollaghasemi, Co-PI: Abdel-Aty)
26. "Identification of Intersections' Crash Profiles/Patterns", (sole Principal Investigator). Funded by Florida Department of Transportation. 2002-04. \$165,233 (PI: Abdel-Aty)
 27. "Linking Crash Patterns to ITS-Related Archived Data and Investigating the Potential of ITS in Reducing Safety Problems", (Principal Investigator). Funded by Florida Department of Transportation. 2002-04. \$220,000 (PI: Abdel-Aty, Co-PI: Al-Deek and Radwan)
 28. "Post-Disaster Dynamic Routing of Emergency Vehicle", (Co-PI). Funded by Florida Department of Transportation. 2002-2003. \$71,327 (PI: Mollaghasemi, Co-PI: Abdel-Aty)
 29. "Creating a Technical Clearinghouse for Auto Clubs", (sole PI). Funded by AIT/FIA Foundation for Mobility in Society (international). 2001-02. \$76,115 (PI: Abdel-Aty)
 30. "The Impact of Real Time and Predictive Information on I-4 Travelers" (Co-PI). Funded by Florida Department of Transportation. 2001-2003. \$120,000 (PI: Al-Deek, Co-PI: Abdel-Aty)
 31. "The Impact of Real-Time Predictive Traffic Information on Travelers' Behavior in the I-4 Corridor" (Co-PI). Funded by TCSP/FDOT. 2001-2003. \$52,393 (was originally funded for \$150,000) (PI: Al-Deek, Co-PI: Abdel-Aty and Radwan)
 32. "Design and Development of a Computer Simulation Experiment to Support Mode/Route/Destination Choice Modeling in the Presence of ATIS" (sole PI). Funded by the Florida Department of Transportation. 2001-02. \$35,051 (PI: Abdel-Aty)
 33. "Effects of Telematics on Driver's Workload", (Co-PI). Funded by the AIT/FIA/AAA foundation for highway safety. 2001-02. \$118,210 (PI: Mouloua, Co-PI: Hancock, Abdel-Aty and Rinalducci)
 34. "Nested Logit Mode Choice Model Universal Calibration Factors" (sole PI). Funded by the Florida Department of Transportation. 1999-2001. \$155,000 (PI: Abdel-Aty)
 35. "Origin/Destination Study for the OOCEA" (PI). Funded by HDR/Transportation Consulting Group. 1999-2000. \$194,895 (PI: Abdel-Aty, Co-PI: Radwan)
 36. "Crash Simulation and Animation: A New Approach for Traffic Safety Analysis" (sole PI). Funded by the Center for Advanced Transportation Systems Simulation. 1999-2001. \$40,000
 37. "Roundabouts Design, Modeling and Simulation" (PI). Funded by the Center for Advanced Transportation Systems Simulation. 1999-2000. \$15,000 (PI: Abdel-Aty, Co-PI: Hosni)
 38. "Application of Differential Global Positioning System for Collision Avoidance in Intelligent Transportation System in a Wireless Environment" (Co-PI). Funded by FDOT. 1999-2000. \$45,150 (PI: Oloufa, Co-PI: Abdel-Aty)
 39. "Identification of Intersections' Crash Profiles" (sole PI). Funded by the University of Florida. 1998-1999. \$97,500 (PI: Abdel-Aty)
 40. "Demographic Factors, Roadway Design and Traffic Crashes: An Analytical Investigation" (PI). Funded by the Florida Department of Transportation. 1996-1998. \$103,510 (PI: Abdel-Aty, Co-PI: Radwan)
 41. "Identifying the Transportation Needs for the Elderly and Disabled" (sole PI). Funded by the University of California. 1996 - 1997. \$15,000 (PI: Abdel-Aty)

RESEARCH PROJECTS BEFORE JOINING UCF

42. "Modeling Route Choice Behavior Using Revealed and Stated Preferences Data" (sole PI). Funded by the California Department of Transportation through the University of California Transportation Center. 1994 - 1995. \$15,000 (wrote proposal and was awarded as dissertation grant)

43. "Using Advanced Technologies to Increase Mobility and Acceptability of Special Needs Travelers" (Co-PI). Sponsored by the California Partners for Advanced Transit and Highways (PATH) and the California Department of Transportation. 1994 - 1995. \$200,000 (wrote proposal while working for UCDavis)
44. "Impact of ATIS on Travel Demand". Sponsored by the California Partners for Advanced Transit and Highways (PATH) and the California Department of Transportation. 1991 - 1994. \$750,000 (worked on as a research assistant with Professor Kitamura)

CONSULTING ACTIVITIES

- "Evaluation of Innovative Safety Treatments", jointly with HNTB, FDOT 2002-07.
- NCHRP 3-70, Multimodal Level of Service Analysis for Urban Streets, 2003.
- "UCF campus traffic study", office of the VP at UCF. 2001.

TEACHING

Developed lectures, syllabus, home works, and exams, and currently teaching the following courses at the *University of Central Florida* (taught each course several times, with many modifications introduced every time – 1995-2012):

Transportation Engineering (TTE4004)

This is an undergraduate course that provides a broad base of transportation and traffic knowledge to civil engineering students. The course covers transportation modes, geometric design, vehicular flow models, capacity of intersections, highway capacity, transportation planning, demand forecasting models, air quality and energy impacts of transportation. Taught as ITV in Spring 2000 and 2001.

Transportation Safety Analysis (TTE6315)

This is a graduate course that introduces the students to the concepts underlying traffic safety. The course addresses several topics, among these topics are risk and exposure, driver and roadway factors, highway safety improvements, and modeling accident occurrence. This course was introduced for the first time by Dr. M. Abdel-Aty in Fall 1996 as TTE 5315.

Geometric Design of Highways and Streets (TTE5805)

This is an undergraduate/graduate course that covers all aspects of the highway and street design. Topics covered include the design elements (horizontal and vertical alignment), design controls and criteria, functional classification of highways, the relation between highway capacity and geometric design, grade separations and interchanges, and intersections. The course promotes both qualitative and quantitative methods of reasoning and analysis.

Regional Planning (CGN6655)

This is a graduate course that mainly covers the four steps planning process in transportation. Lectures cover trip generation, distribution, modal split, and traffic assignment methods. The course also looks at the inter-relation between land use and transportation planning. Several analytical and computer applications are used in the course.

Other Teaching activities

Guest lecturer EGN 4931 Honors Seminar, March 2006

Judge, Graduate Research Forum, UCF, March 29, 2006

FE review in Transportation and Probability and Statistics (twice yearly since October 2006)

Taught the following courses at Alexandria University (1985-1991):

Railroad Engineering a comprehensive undergraduate that cover the design, planning, and operation of railways.

Introduction to Transportation and Traffic Engineering an undergraduate course in civil engineering that introduces the students to a several aspect of transportation and traffic engineering.

CONTINUING EDUCATION (WORKSHOPS)

- Scholarship of Teaching and Learning (SoTL) Research Designs, May 4, 2005
- Handling Negative Student Feedback, UCF Faculty Center for Teaching and Learning (FCTL) – Sep. 2004.
- The Summer Institute for faculty development, UCF, 2001 (32 hours)
- IDL6543 (techniques for effective teaching) – Fall 2000
- WebCT (using the Internet to enhance teaching) – Summer 2000
- Successful collaboration and teamwork in the classroom and online
- Problem-based approaches to learning
- Active listening and reading activities: strategies for focusing students attention
- Involvement and accountability: setting expectations for in-class, on-line, and the home learning environments

SUPERVISION OF GRADUATE STUDENTS

Supervised (*as chairman*) the following **Ph.D. Dissertations**:

- Hassan Abdelwahab, Exploring the Viability of Non-Conventional Accident Modeling Techniques in Enhancing Traffic Safety Research (graduated - Spring 2002). Currently, Associate Professor: Cairo University
- M. Fathy Abdalla, Modeling Multiple Route Choice Paradigms Under Different Types and Levels of ATIS Using Correlated Data (graduated - Fall 2003): Consultant Tampa
- Anurag Pande, Applying Hybrid Models for Real-Time Crash Risk Assessment on Freeways (graduated – Fall 2005). Currently, Assistant Professor: CalPoly, San Luis Obispo, CA
- Xuesong Wang, Safety Analysis at Signalized Intersections considering Spatial, Temporal and Site Correlation (graduated – Fall 2006). Currently, Associate Professor: Tongji University, Shanghai
- Abhishek Das, Analyses of Crash Occurrence and Injury Severities on Multilane Arterials using Machine Learning Algorithms (graduated -- Fall 2009). Consultant, Cambridge Systematics, Washington DC
- Kirolos Haleem, Comprehensive Analytical Investigation of the Safety of Unsignalized

- Intersections (graduated Fall 2009). Research Associate, Florida International University
- Hany Hassan, Improving Traffic Safety and Driver Behavior in Reduced Visibility (graduated Summer 2011). Assistant Professor: King Saud University, Riyadh
- Chowdhury Siddiqui, Macroscopic Crash Analysis and its Implications for Transportation Safety Planning and Management (graduated Spring 2012). Las Cruces Metropolitan Planning Organization in New Mexico
- Mohamed Ahmed, Multi-Level Safety Performance Functions for High Speed Facilities, (graduated Spring 2012).
- Rongjie Yu, Real-Time Traffic Safety Evaluation Models and their Application for Variable Speed Limits, (Summer 2013). Assistant Professor, Tongji University, China.

Currently supervising as chairman 10 PhD students, of which 1 PhD candidate.

RECOGNITION FOR DISSERTATIONS & PHD RESEARCH

- Best paper by young researcher, Transportation Research Board, Committee on Safety Data, Analysis, and Evaluation, January 2013
Ahmed M., Abdel-Aty M. and Yu R. (2012) A Bayesian Updating Approach for Real-time Safety Evaluation Using AVI Data, *Journal of the Transportation Research Board*, Vol. 2280, pp. 60-67.
- Best paper by young researcher, Transportation Research Board, Committee on Safety Data, Analysis, and Evaluation, January 2007
Pande A. and Abdel-Aty M. (2006) A Comprehensive Analysis of the Relationship between Real-time Traffic Surveillance data and Rear-end Crashes on Freeways, *Journal of the Transportation Research Board*, No. 1953, pp. 31-40.
- Ph.D. student Anurag Pande's dissertation won the University level Award for Outstanding Dissertation, UCF, March 2006 (Dr. Pande is currently a faculty at CalPoly)
- Ph.D. student Anurag Pande's dissertation won the College level Award for Outstanding Dissertation, CECS, UCF, February 2006
- Ph.D. student Anurag Pande, Second place engineering week research poster competition, CECS, UCF, February 2005.
- Ph.D. student Anurag Pande invited to Chair a session in the IEEE Conference on Intelligent Transportation Systems, ITSC 05.
- PhD student Rongjie Yu, selected for the 2012 IRF Road Scholar Program, International Road Federation.
- Ph.D. student Mohamed Ahmed won one of two ITS Florida scholarships, 2011.
- Ph.D. student Hany Hassan won one of three ITS Florida scholarships, 2010.
- Ph.D. student Chowdhury Siddiqui won one of three ITS Florida scholarships, 2010.
- Ph.D. student M. Fathy Abdalla's dissertation won the College level Award for Outstanding Dissertation, CECS, UCF, February 2004
- Ph.D. student M. Fathy Abdalla, Second place paper presentation Florida Section Institute of Transportation Engineers (FSITE), November 2003
- Ph.D. student Hassan Abdelwahab's dissertation won the best dissertation by Cairo University, 2005 (Dr. Abdelwahab is currently a faculty at Cairo University)
- Ph.D. student H. Abdelwahab, Second place paper competition winner "Florida Section ITE Past President Award Competition", 2001

Mentoring PhD Students

- Transportation Research Forum, student paper at the 54th Forum, by 2 of my PhD students: Lee J. and Park J., Relationship between Dwelling Characteristics and Traffic Crashes in Aspect of Transportation Safety Planning, Annapolis, March 2013.
- College of Engineering and Computer Science, Award for Excellence in Graduate Student Teaching, Mohamed Ahmed, PhD under my supervision (Spring 2011)
- College of Engineering and Computer Science, Award for Excellence by a Graduate Teaching Assistant, Chowdhury Siddiqui, PhD under my supervision (Spring 2011)

Supervised until completion (*as chairman*) the following **M.S. theses**:

1. Chien Chen (1997), Statistical Analysis of the Effect of Demographic and Roadway Factors on Traffic Crash Involvement.
2. Ayman Saidi (1997), Using Geographic Information Systems to Investigate Demographic Characteristics of Drivers Involved in Traffic Crashes.
3. Brian Vitteta (1999), Analysis of the Effect of Driver Characteristics on Accident Involvement Using Quasi-Induced Exposure.
4. Mounir Mejdoub (1999), Modeling Severe Traffic Accidents at Intersections.
5. A. Remadna (2000), Transportation Sensitivity Analysis in Development of Regional Impact (DRI).
6. Hicham Aiouche (2000), Analysis of Travel Patterns Including Origin-Destination Models for Central Florida's Expressway System.
7. Yile Huang (2001), Ramp and Route Choice Analysis for the Expressway System Using GIS.
8. Jose Aguilar (2002), Assessing the Effects of Daily Traffic on the Safety of Orlando Metropolitan Intersections.
9. Amr Maarouf Mohammed (2002), Modeling the Effect of Driver Distraction on Traffic Safety.
10. Anurag Pande (2003), Classification of real-time traffic speed patterns to predict crashes on the freeways.
11. Om Kanike (2003), Development of Emergency Response Model for Orlando International Airport Using Paramics.
12. Smitha Kowdla (2004), Modeling crash frequencies at signalized intersections in Central Florida.
13. Joanne Keller (2004), Analysis of Type and Severity of Traffic Crashes at Signalized Intersections Using Tree-Based Regression and Ordered Probit Models.
14. Jeremy Dilmore (2005), Implementation Strategies for Real-Time Traffic Safety Improvements on Urban Freeways. FDOT District 5
15. Raja Pemmanaboina (2005) Assessing crash occurrence on urban freeways using static and dynamic factors by applying a system of interrelated equations.
16. Piyush Nawathe (2005) Neural Networks Trees and Simulation Databases: New Approaches for Traffic Crash Classification and Prediction.
17. Sai Chundi (2005) Applying Log-linear Models and GIS to study the Safety of Pedestrians and Bicyclists: A Case Study of Orange County School Children
18. Albinder Dhindsa (Spring 2006) Evaluating Ramp Metering and Variable Speed Limits to Reduce Crash Potential on Congested Freeways using Micro-Simulation (defended Fall 2005)
19. Daniel Dawson (Spring 2006) Developing Emergency Preparedness Plans for Orlando International Airport Using WatSim
20. Yuqiong Bai (Spring 2006) Analysis of Aircraft Arrival Delay and Airport on-Time Performance
21. Hari Salkapuram (Summer 2006) A New Approach to Identify the Expected Crash Patterns based on Signalized Intersection Size and Analysis of Vehicle Movements
22. Christopher LeDew (Summer 2006) Safety Effects of Traffic Signal Installations on State Road Intersections in Northeast Florida. FDOT District 2
23. Praveen Chilakapati (Fall 2006) Driving Simulator Validation and Rear-end Crash Risk Analysis at a Signalized Intersection
24. Vikash Gayah (Fall 2006) Examining Route Diversion and Multiple Ramp Metering Strategies for Reducing Real-Time Crash Risk on Urban Freeways.

25. Cristina Dos Santos (Spring 2007) Assessment of the Safety Benefits of VMS and VSL using the UCF Driving Simulator. FL Turnpike Enterprise
26. Ryan Cunningham (Summer 2007) Examining Dynamic Variable Speed Limit Strategies for the Reduction of Real-Time Crash Risk on Freeways. Kittleson
27. Kirolos Haleem (Fall 2007) Exploring the Potential of Combining Ramp Metering and Variable Speed Limit Strategies for Alleviating Real-Time Crash Risk on Urban Freeways.
28. Alexis Nevarez-Pagan (Spring 2008) Severity Analysis of Driver Involvements on Multilane High Speed Arterial Corridors. Puerto Rico FDOT
29. Premchand Devarasetty (Summer 2009) Safety Improvements on Multilane Arterials: A Before and After Evaluation using the Empirical Bayes Method.
30. Ana Maria Almonte (Spring 2009) Level of Service and Safety Relationship: An Exploratory Analysis of Signalized Intersections and Multilane High Speed Arterial Corridors.
31. Ali Darwiche (Spring 2009) A GIS Safety study and a County level Spatial Analysis of Crashes in the State of Florida.
32. Chowdhury Siddiqui (Fall 2009), Macroscopic Traffic Safety Analysis Based on Trip Generation Characteristics
33. Al-Ahad Ekram (Fall 2009), Reduced Visibility Related Crashes in Florida: Crash Characteristics, Spatial Analysis and Injury Severity.
34. Muamer Abuzwida (Fall 2011), Evaluation and Modeling of the Safety of Open Tolling Road System.
35. Haluk Laman (Fall 2012), A Comprehensive Severity Analysis of Large Vehicle Crashes.

RECOGNITION FOR MS THESIS & RESEARCH

- MS student Ali Darwiche's thesis won the University level Award for Outstanding Thesis, UCF, March 2010.
- MS student Ali Darwiche's thesis selected as best in the College of Engineering and Computer Science in 2009, February 2010.
- MS student Chowdhury Siddiqui, Dwight D. Eisenhower Award, Federal Highway Administration, 2009.
- MS student Cristina Dos Santos, Second place engineering week research poster competition, "Freeway Real-time Traffic Crash Mitigation under High-speed and Low-speed Conditions using Micro Simulation", CECS, UCF, February 2006.
- MS student Cristina Dos Santos, First Place Technical Paper Prize at the 2006 ETCC (Eastern Technical & Career Conference) Technical Paper Competition in Philadelphia, PA. "Using a Driving Simulator to Assess the Safety Benefits of Variable Speed Limit", October 2006.
- MS student Vikash Gayah, 2006 Civil Engineering Outstanding Graduate Student of the Year for the ASCE Florida Section
- MS student Viskash Gaya won one the ITS Florida scholarships, 2005.
- MS student Cristina Santos won one the ITS Florida scholarships, 2006.

Supervised the following MS non-thesis

- Jaber Jaber (2002), MS in Transportation Engineering
- Claudio Senra (2002), MS in Transportation Engineering

- Ronald Bodhoo (2004), MS in Transportation Engineering
- Abhishek Das (2009), MS in Transportation Engineering
- Mohamed Ahmed (2009), MS in Transportation Engineering
- Todd Jorgenson (2009), MS Civil Engineering
- Nicholi Arnio (Spring 2010), MS in Transportation Engineering
- Daniel Eisman (Spring 2010), MS in Transportation Engineering
- Daniel Walle (Spring 2010), MS in Structures and Geotech
- Brenda Young (Spring 2010), MS in Transportation Engineering
- Carlos Estrella (Spring 2010), MS Civil Engineering
- Kevin Edwards (Fall 2010), MS in Transportation
- Kelly Daacon (Fall 2010), MS in Transportation
- Ronald Schoen (Fall 2010), MS in Transportation
- Janey Walls (Fall 2010), MS in Transportation
- Micolos Leon (Fall 2010), MS in Transportation
- Fraya Cassier (Fall 2010), MS in Transportation
- Chris Webb (Fall 2010), MS in Transportation
- Angela Cardona (Spring 2011), MS in Transportation
- Will Heikkinen (Fall 2011), MS Civil Engineering
- Yameli Herchekman (Spring 2012), MS in Transportation
- Luz Phillip (Spring 2012), MS in Transportation
- Kimberly Raymond (Spring 2012), MS in Transportation
- Gustavo McQuattie (Spring 2012), MS in Transportation
- Ryan Pellarin (Spring 2012), MS Civil Engineering
- Carlos Dawson (Spring 2012), MS Civil Engineering
- Hatem Aguib (Fall 2012), MS in Transportation

Committee member for the following Ph.D. Dissertations:

- Sherif Ishak (1998), Application of Artificial Neural Networks to Automatic Freeway Incident Detection.
- Marguerite Zarrillo (1998), Analytical Queuing Models for Electronic Toll Collection Facilities
- Ayman Mohamed (2000), A Microscopic Simulation and Animation Model for Electronic Toll Plazas.
- Jack Klodzinski (2001), Methodology for Evaluating the Level of Service (LOS) of Toll Plazas on a Toll Road Facility.
- Khaled Shabaan (2005), Right Turn Split: A New Concept to Alleviate Weaving On Arterial Streets
- Xuedong Yan (2005), Safety Issues of Red-Light Running and Unprotected Left-Turn at Signalized Intersections
- Emam Emam (2006), Utilizing a Real Life Data Warehouse to Develop Freeway Travel Time Reliability Stochastic Models
- Steven Mitchell (2006), Heuristic Prioritization of Emergency Evacuation Staging to Reduce Clearance Time

- Ghada Moussa (2006), Using Augmented Reality for Studying Left Turn Maneuver at Unsignalized Intersection and Horizontal Visibility Blockage
- Abeer Sharawi (2007), Optimization Models for Emergency Relief Shelter Planning for Anticipated Hurricane Events
- Vinayak Dixit (2008), Hurricane Evacuation: Origin, Route and Destination
- Amani Saleh (Spring 2008), Modeling Lane-Based Traffic Flow in Emergency Situations in the Presence of Multiple Heterogeneous Flows.
- Rami Harb (Summer 2009), Safety and Operational Evaluation of Dynamic Lane Merging in Work Zones.
- Noor El Metiny (Summer 2009), Providing a better understanding for the motorist behavior towards signal change.
- Jeanne Bowie (Fall 2011), Development of a Weigh-in-Motion System Using Acoustic Emission Sensors.

Committee member for Ph.D. Dissertations at other Universities:

- Co-advisor, Ma Ming, Predicting Crash Frequency and Modeling the Probability of Crash Occurrence at Signalized and Non Signalized Intersections, Wuhan University of Technology, China (graduated Spring 2010)
- Co-advisor, Weifeng Wang, Influencing Mechanism of Asphalt Pavement Micro-Topography against Skid Resistance Performance, Wuhan University of Technology, China (graduated Fall 2010).
- Karim El-Basyouny (2010) Robust Models for Road Safety Analysis, External Committee member, University of British Columbia, Canada.
- Taimur Usman (2011), Winter Road Safety, External Committee member, University of Waterloo, Canada.
- Ali Pirdavani (2012), External, Hasselt University, Belgium.
- Aine Kusumawati (2006), Traffic Safety at Road Junctions, Nanyang Technological University, Singapore.
- Chris Lee (2004), Proactive Vehicle Crash Prevention on Instrumented Freeways Using Real-Time Traffic Control, University of Waterloo, Canada
- Review of Dissertation Proposal: "Investigating Route Choice and Driver Behavior," by Jianhe Du (2003), University of Connecticut.

Committee member for the following MS Theses:

- Clayton Bennett (1996), Computer Automated Bridge and Pavement Evaluation.
- Habib Mostofa (1998), Modeling of Traffic Accidents on Principal Arterial.
- Maha Al-Baghly (2001), Validation of the TP Model.
- Shankar Ramasamy (2002), Simulation of the UCF Campus.
- Xuedong Yan (2003), Gap Acceptance Modeling Using Driving Simulators.
- Hatem Abou-Senna (2003), Investigating The Potential of Route Diversion Through ITS Application on an Orlando Transportation Network Using PARAMICS Simulation Model.
- "Chilakamarri" Ravi Chandra (2003), Data Filtering Algorithms and Imputation Schemes for Real-time Traffic Data From Dual Loop Detectors on Interstate-4.
- Yueliang Zuo (2004), Evaluation of the Impacts of ITS Strategies on I-4 Corridor.

- Rami Harb (2005), The use of the UCF Driving Simulator to test the Contribution of Larger Size Vehicles (LSV's) in Rear-End Collisions and Red Light Running on Intersections.
- Kamal Goyal (Fall 2005) Quality of Service Measures at Signalized Intersections.
- Noor ElMitiny (Summer 2006) Simulation and Continuance of Operation for the use of Transit (LYNX) to be used in Emergency Evacuation Incidents.
- Anjoli Martin (Summer 2006) Verification of FAA's Emissions and Dispersion Modeling System (EDMS).
- Kranthi Mannila (Fall 2006) Analysis of Various Car-Truck Crash Types Based on GES And FARS Crash Databases Using Multinomial And Binary Logit Model
- Vasu Persaud (Fall 2007) Dynamic Speed Monitoring System Effectiveness on Sharp Curves.
- John Rogers (Fall 2007) Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience Using the Pre-Deployment Survey.
- Dina ElNashar (Summer 2008) Characteristics of Red Light Running Crashes in Florida.
- Seema Jagtab (Summer 2008) Impact of Construction on Freeway Traffic Operations.
- Jason Flick (Summer 2008) Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience Using a Pre and Post-Deployment Survey
- Diana Rey (Spring 2009) A Gasoline Demand Model for the United States Light Vehicle Fleet.
- Jeremy Crowe (Summer 2009) The Calibration, Validation and Comparison of VISSIM Simulations using the Two-Fluid Model.
- Taylor Lochrane (Summer 2009) Evaluating the Impact of OOCEA's Dynamic Message Signs (DMS) on Travelers' Experience Using Multinomial and Ordered Logit for the Post-Deployment Survey.
- Jingyu Liu (Fall 2009) Work Zone Effects on Performance of Toll Plazas.
- Syed Zaidi (Fall 2010) Mobility and Safety Evaluation of Integrated Dynamic Merge and Speed Control Strategies in Work Zones.
- Joseph DeFrancisco (Spring 2012) Sustainable Transportation at the University of Central Florida: Evaluation of UCF Rideshare Program, ZIMRIDE

Committee member for MS Thesis at other Universities:

- Toka Sabry, Intelligent GIS for Commercial Vehicle routing: A modeling framework, Nile University, Egypt (graduated Summer 2010)
- Tamer Azzony, A micro simulation-based test bed for pre-deployment evaluation of U-turns in Egypt's urban corridors, Nile University (graduated Spring 2011)

Honors in the Major

- Nicholas Colon, Temporary Barriers to Reduce Rubbernecking, Spring 2013.

Supervised the following Undergraduate Honors theses

- Joseph Molinaro (2005) Modeling Intelligent Transportation Systems: Applications and Improvements in Hurricane Evacuations.
- Vikash Gayah (2005) Confirming the Effect of Variable Speed Limits on Active Accident Prevention.

Supervision of Post Doctoral Researchers:

- Dr. Ximiao Jiang (August 2012-current)
- Dr. Mohamed Ahmed (May 2012-current)
- Dr. Helai Huang (August 2008 – August 2010), (currently Professor, China South Central University)
- Dr. Xuesong Wang (currently Associate Professor, Tongji University, China)
- Dr. Anurag Pande (currently Assistant Professor, CalPoly)
- Dr. Chris Lee (currently Assistant Professor, University of Windsor, Canada)
- Dr. Jeong Yu (currently Associate Professor, Ajou University, South Korea)
- Dr. Hassan Abdelwahab (currently Associate Professor, Cairo University, Egypt)

Visiting Scholars

- Dr. Yixuan Wu, 2012, Associate Professor, Beijing Jiaotong University
- Dr. Yuren Chen, 2009, Associate Professor, Tongji University
- Valerio Gamberini, 2011, City of Paris
- Qing Fang, 2011, Doctoral student, Tongji University
- Lingling Xie, 2011, Doctoral student, Wuhan University of Technology

COMPUTER EXPERIENCE

Developed computer software for Traffic Accident Animation and Simulation

Traffic simulation, e.g. Paramics, VISSIM, Watsim.

Several statistical and econometrics Packages.

UCF COMMITTEE SERVICE

- College Dean's Research Professorship Award (DRPA)
- CECE graduate program director (2009 – 2012)
- College Graduate GPCC Committee (2009 – 2012)
- College Tenure and Promotion Committee (2010-2012)
- Chair, College Sabbatical (2010/2011)
- College Sabbatical (2009/2010)
- College Graduate Performance and Assessment Committee (2009 – ongoing)
- Search committee, 3 Infrastructure Engineering Faculty (2008/09)
- University Honors Committee, 2007/08.
- Chair, Civil, Env. & Construction Eng. Dept. Committee Cumulative Process of Tenured Faculty, 2008
- Faculty Representative, Spring 2007 commencement.
- Represented College of Engineering and Computer Science in the National Merit reception, March 23rd, 2007.
- Chair, CECS Honors (2005/06, 2006/07, 2007/08)
- Chair Civil & Env. Eng. ABET assessment outcome subcommittee (2006-ongoing)
- Civil & Environmental Engineering ABET Committee (2007/08)
- Civil & Environmental Engineering Vision Committee (2006)

- Search committee, Assistant Professor of Construction Engineering (2005/06)
- Faculty selections committee, Astronaut's Scholarship, The Burnett Honors College (2006 and 2007)
- Search committee, Chair of the Civil & Environmental Engineering Department (2004/05)
- Search committee, Assistant Professor of Construction Engineering (2004/05)
- College of Engineering Research Incentive Award (RIA) selection (2004/05)
- University Environmental Management Committee (2004/05)
- Civil & Env. Engineering Graduate Students Committee (2002/03, 2003/04, 2004/05, 2005/06, 2006/07, 2007/08)
- Civil & Env. Engineering Tenure & Promotion Committee (2002/03)
- Civil & Env. Engineering Department Institutional Effectiveness (2001/02)
- College of Engineering TIP selection (2000/01, 2006/07)
- College of Engineering TIP Criteria (1999/2000, 2005/2006)
- Department Awards Committee (2000, 2003, 2007)
- Search committee assistant director of the Center for Advanced Transportation Systems Simulation (2000)
- Department of Civil & Environmental “Strategic Planning” Committee (1997/98)
- Post-Graduate Certificate Program Coordinator for Transportation in the CEE Department (ongoing)
- Department Transportation Faculty Committee (ongoing)
- College of Engineering “Honors Program” Committee (1998/99, 1999/00, 2000/01, 2001/02, 2002/03, 2003/04)
- College “TAP Incubator” (1998/99)
- University “Communication” Committee (1998/99)
 - Cross College Collaboration Committee
- University “Parking Appeal” Committee (1998/99 and 1999/2000)
- University “Metropolitan Center ad hoc” Committee (1999/2000)
- Served as the United Way Coordinator for the Civil Engineering Department in Fall 1995

PROFESSIONAL REGISTRATION

- P.E. Florida No. 55986

COMMUNITY SERVICE

Evaluating the safety of school Children in Orange County (Spring 2005). Produced the following reports:

- Traffic Safety Evaluation of Orange County School Children
- Evaluation of Traffic Safety at Avalon Elementary School

RECOGNITION

TV Appearance

- “Expressway 2000”, WMFE Public Television, Central Florida, aired June 25 and 27, 2000, and July 2001.
- Channel 13 news, Traffic safety trends of LTVs, aired several times March 12, 2003.
- UCF nightly news, Channel 21 (2/21/03) and Channel 98 Time Warner (2/25/03)
- UCF Metro, WMFE Public Television, July 2003
- Interviewed by Nile News TV (Egypt), Feb 3, 2005 to talk about new technologies in transportation, aired multiple times on February 4, 2005.
- Zenith News Update, UCF Channel, aired for 3 weeks (multiple times per week), February 2005.
- Interviewed on Fox Channel 35, I-4, aired November 4, 2005
- Interviewed 15 minutes on Egyptian National TV “Good Morning Egypt” to talk about ITS and solutions to Egypt’s Transportation problems, March 17, 2009.
- Interview with WESH-TV Channel 2, Visibility related safety problems on Highways, Jan. 2013

Radio

- Predicting Traffic Crashes on I-4, Morning Edition, Public Radio WMFE 90.7 FM, June, 2003.
- Study Suggests Drivers at Risk when SUV Directly Ahead of them, WNDB news, March 12, 2003. http://www.whog.fm/news_html2/1047462023.shtml
- Safety of the Central Florida Expressway System, interview to News Talk 540 AM radio, April 19, 2006, aired April 19 and 20.

News

- Spotting Trends to Anticipate Traffic Crashes, Tampa Tribune, January 12, 2003.
- Professor’s research may predict traffic accidents on I-4, The Central Florida Future, April 21, 2003.
- Driving Behind Light Trucks Increases Probability of Rear-End Crash, Ward's Automotive Reports, April 2003.
- UCF Builds a Better, Safer Trip from Here to There, UCF news, December 2002. <http://news2.ucf.edu/FY2002-03/021216.html>
- Even Behind an SUV is Dangerous, UCF news, March 10, 2003. <http://news2.ucf.edu/FY2002-03/030310.html>
- Safety First, UCF Alumni, July 11, 2003. <http://www.ucfalumni.com/Main/Articles.asp?ArticleID=307&CategoryID=2&SectionID=3&>
- Why Driving Behind An SUV Is A Dangerous Place To Be, Science Daily, March 12, 2003. <http://www.sciencedaily.com/releases/2003/03/030312071737.htm>
- Why driving behind an SUV is a dangerous place to be, Science Blog, March 2003. <http://www.scienceblog.com/community/older/2003/A/20035985.html>
- Stay Back From SUVs, United Press International, March 13, 2003.

<http://www.upi.com/view.cfm?StoryID=20030312-074809-3473r>

- UCF, Office of Research, Research News.
<http://www.research.ucf.edu/newsletter/highways.htm>
- La I-4, una trampa mortal, El Nuevo dia (Orlando Spanish Newspaper), February 5, 2004
- Designs standards proposed for toll plazas, interview to the Associated Press, April 17, 2006. Published in 160 newspapers including the NY Times, Washington Post, Boston Globe, Los Angeles Times, London Guardian, and the Seattle Post Intelligencer, April 18, 2006
<http://www.nytimes.com/aponline/us/AP-Toll-Plaza-Crashes.html>
http://seattlepi.nwsourc.com/national/1155AP_Toll_Plaza_Crashes.html
- Interview Sep. 8, 2008, safety of toll roads, The Star-Ledger, New Jersey's largest newspaper
- Potential of ITS, Multiple newspaper interviews and appearances in Egyptian newspapers (2008).
- Research about Toll Plaza Safety cited in "Traffic: Why we drive the way we do", NY Times Best seller book (2008)
- Multiple articles in Egyptian news papers during my sabbatical 2008/09.
- Inside Magazine, June 2009, interview on 5/11/09
- Gainesville Sun, I-75 warning signs on prairie a year off? August 5, 2012 (Interview)
<http://www.gainesville.com/article/20120805/ARTICLES/120809802?p=1&tc=pg>
- Interview with the Gainsville Sun about the Paynes Prarie 2012 multi vehicle crash on I-75, Jan. 27, 2013 "What has changed since I-75 carnage?"
<http://www.gainesville.com/article/20130127/ARTICLES/130129665?p=5&tc=pg>

Conference Activities

- Co-Chair, 2nd International Symposium on Traffic Safety, Tongji University, Shanghai, May 19, 2013.
- Member, Scientific Committee, 16th International Conference Road Safety on Four Continents, conference organized by the Swedish National Road and Transport Research Institute, Beijing, May 2013.
- Chair session 16, Road Safety on Four Continents, Beijing, May 2013.
- Invited speaker at the Transportation Research Board's 92nd Annual Meeting, session 741: Emerging Issues in Crash Severity Modeling, Washington DC, January 2013.
- Keynote speech, ICTCT safety conference, Hasselt, Belgium, Nov. 9, 2012.
- Speaker in Plenary session, 3rd Chinese-German Symposium on Urban Road Traffic Safety, Shanghai, October 2012.
- Member of the International Scientific Committee, 9th International Transportation Specialty Conference in conjunction with the 2012 CSCE (Canadian Society of Civil Engineering) Annual Conference in Edmonton, June 6-9, 2012.
- International Academic Committee of 2011 International Conference on Transportation Information and Safety (ICTIS), Wuhan, China, June 2011.
- Organized and chaired session, Next Generation 511, TRB Annual Meeting, January 2011.
- Distinguished Presenter, 2nd IRF Middle East Regional Congress, Abu Dhabi, Nov. 30, 2010.
- Panelist, ATM Deployment, Active Traffic Management Summit, Denver June 16, 2010.
- Chair Panel Session and Track, Managing Transportation Technology, 19th International Conference on Management of Technology, Cairo, March 2010
- Invited speaker at the Transportation Research Board's 89th Annual Meeting, session: Innovations in Freeway Operations, Washington DC, January 2010.
- Speaker in Plenary session, Chinese-German Symposium on Urban Road Traffic Safety, Shanghai, October 2009
- Associate Editor ICCTP 2010, Beijing, China, August 2010
- Associate Editor IAMOT 2010, Cairo, March 2010
- Speaker in Plenary Session, 2nd International Symposium on Freeway and Tollway Operations, Honolulu, Hawaii, June 2009.
- Session moderator, 2nd International Symposium on Freeway and Tollway Operations, Hawaii, June 2009.
- Conference Chair, International Conference on Intelligent Transportation Systems, Cairo, March 2009.
- Invited speaker, Mobility, Environmental Sustainability and Energy Efficiency, Conference organized by the Egyptian Information Technology Industry Development Agency (ITIDA), Cairo, December 2008.
- Invited session Chair, Road Safety on Four Continents Conference, Bangkok, 2007.
- Session Chair, 11th International Conference of the Hong Kong Society of Transportation Studies, HK, December 2006.
- Served on the International Program Committee for the 9th International IEEE Conference on Intelligent Transportation Systems, Toronto, September 2006.
- Associate Editor (Advanced vehicle safety systems & Intelligent Vehicles Technologies

and other topics), IEEE Intelligent Transportation Systems Council Conference, ITSC2006, Toronto, September 2006.

- Session chair, International Symposium of Transport Simulation 2006 (ISTS06), Lausanne, Switzerland, September 2006.
- Organized and chaired session, New Developments in ATIS, TRB Annual Meeting, January 2006.
- Session Chair, DSC 2005 North America - Orlando - November 2005
- Paper reviewer for the Driving Simulator Conference, DSC 2005 North America, Orlando, November 2005.
- Paper reviewer for the 8th International IEEE Conference on Intelligent Transportation Systems, Vienna, September 2005.
- Invited by the deputy minister of Transport in Egypt to give a presentation about ITS applications, The International Telecommunication, and Information Technology Conference, Cairo ICT, February 2005.
- Paper reviewer for the Second Gulf Conference on Roads, Abu Dhabi, March 2004
- Session Co-Chair, Government & Industry Cooperate on Data to Assess Driver Risk, International Truck & Bus Safety Research & Technology Symposium, CATSS, UCF, April 2003.
- Session Chair, 4th Transportation Specialty Conference, Canadian Society of Civil Engineers, Montreal, Quebec, June 2002.
- Session Chair, 9th World Conference on Transport Research, Seoul, Korea, July 2001.
- Session Chair, 3rd Transportation Specialty Conference, Canadian Society of Civil Engineers, London, Ontario, June 2000.
- Session Chair, session 326 TRB79th Annual Meeting, Washington D.C., January 2000.
- Organized and developed a monthly seminar series for the student chapter of the American Society of Highway Engineers (1996 – 2010)

Other Recognition

- Invited speaker, International Road Federation Group of Experts on Road Safety, Geneva, November 2011.
- Keynote speaker, First Road Safety Forum, Dammam, Saudia Arabia, December 2011.
- Keynote speaker, International Conference on Transportation Information and Safety (ICTIS), Wuhan, China, June 2011.
- Two papers presented at the 2010 World Conference on Transport Research, Lisbon July 2010, were among the 6 top ranked out of more than 60 safety papers.
- Invited distinguished presenters at IRF Middle East Regional Congress in Abu Dhabi, UAE November 28 - December 1, 2010.
- Keynote speaker, 7th International Conference of Chinese Transportation Professional, and Tongji University Centennial Celebration, Shanghai, May 21, 2007.
- Keynote speaker, International Conference on Intelligent Transportation Systems, Cairo, March 2009.
- Plenary session presentation, 2nd International Symposium on Freeway and Tollway Operations, Honolulu, June 2009.

- Invited to speak at the plenary session, Chinese-German Symposium on Urban Road Traffic Safety, Shanghai, Oct. 2009.
- Keynote Speaker, Workshop on Road Safety Research Program, National Research Council, Oman, 2009.
- Played an important role in the nomination, application and selection of the Center for Advanced Transportation Systems Simulation at UCF as the Central Florida's Engineers' Week 2007 **Outstanding Organization of the Year (Public Sector)**, Received the award on behalf of CATSS and UCF, February 24, 2007

JOURNAL PUBLICATIONS

1. Jiang X., Abdel-Aty M., and Alamili S. (2014) Application of Poisson Random Effect Models for Highway Network Screening, *Accident Analysis & Prevention*, Volume 63, February 2014, Pages 74-82.
2. Yu R. and Abdel-Aty M. (2014) Analyzing Crash Injury Severity for a Mountainous Freeway Incorporating Real-time Traffic and Weather Data, *Journal of Safety Science*, Volume 63, March 2014, Pages 50-56.
3. Wang X., Xie K., Abdel-Aty M., Chen X. and Tremont P. (2014) A Systematic Approach for Hazardous Intersection Identification and Countermeasure Development, *ASCE Journal of Transportation Engineering*, In Press (accepted Jan. 2014)
4. Abuzwidah M., Abdel-Aty M., and Ahmed M. (2014) Safety Evaluation of Hybrid Open Road Tolling Plazas, *Journal of the Transportation Research Board*, (accepted Sep. 2013).
5. Wu J., Abdel-Aty M., Yu R. and Gao Z. (2013) A Novel Visible Network Approach for Freeway Crash Analysis, *Transportation Research C*, Volume 36, November 2013, Pages 72-82.
6. Yu R., Abdel-Aty M., Ahmed M. and Wang X. (2013) Utilizing Microscopic Traffic and Weather Data to Analyze Real-Time Crash Patterns in the Context of Active Traffic Management, *IEEE Transactions on Intelligent Transportation Systems*, In Press (accepted July 2013).
7. Yu R. and Abdel-Aty M. (2014) Using Hierarchical Bayesian Binary Probit Models to Analyze Crash Injury Severity on High Speed Facilities with Real-time Traffic Data, *Accident Analysis & Prevention*, Volume 62, January 2014, Pages 161-167.
8. Ahmed M., Abdel-Aty M., Shi Q. and Abuzwidah M (2013), Synthesis of State-of-the-Art in Visibility Detection Systems' Applications and Research, *Journal of Safety and Security*, In Press (accepted July 2013).
9. Huang H., Hu S. and Abdel-Aty M. (2014) Indexing Crash Worthiness and Crash Aggressivity by Major Car Brands, *Journal of Safety Science*, Volume 62, February 2014, Pages 339-347.
10. Yu R. and Abdel-Aty M. (2013) Investigating the Different Characteristics of Weekday and Weekend Crashes, *Journal of Safety Research*, Vol. 46, pp. 91-97.
11. Yu R. and Abdel-Aty M. (2013) Multi-level Bayesian Analyses for Single- and Multi-Vehicle Freeway Crashes, *Accident Analysis & Prevention*, Vol. 58, pp. 97-105.
12. Yu R. and Abdel-Aty M. (2013) Investigating Different Approaches to Develop Informative Priors in Hierarchical Bayesian Safety Performance Functions, *Accident Analysis & Prevention*, Vol. 56, pp. 51-58.
13. Yu R., Shi Q. and Abdel-Aty M. (2013) Feasibility of Incorporating Reliability Analysis in Traffic Safety Investigation, *Journal of the Transportation Research Board*, (accepted Feb. 2013).
14. Ahmed M. and Abdel-Aty M. (2013) Application of Stochastic Gradient Boosting Technique to Enhance Reliability of Real-Time Risk Assessment Using Automatic Vehicle Identification and Remote Traffic Microwave Sensor Data, *Journal of the Transportation Research Board*, (accepted Feb. 2013).
15. Abdel-Aty M., Lee J., Siddiqui C. and Choi K. (2013) Geographical Unit Based Analysis in the context of Transportation Safety Planning, *Transportation Research Part A: Policy and Practice*, Vol 49 (2013), pp. 62-75.
16. Wang X., Wu X., Abdel-Aty M. and Tremont P. (2013) Investigation of Road Network Features and Safety Performance, *Accident Analysis & Prevention*, Vol. 56, pp. 22-31.

17. Hassan H. and Abdel-Aty M. (2013) Predicting Reduced Visibility Related Crashes on Freeways Using Real-Time Traffic Flow Data, *Journal of Safety Research*, Volume 45, June 2013, pp. 29-36.
18. Yu R. and Abdel-Aty M. (2013) Utilizing Support Vector Machine in Real-time Crash Risk Evaluation, *Accident Analysis & Prevention*, Vol.51, pp.252-259.
19. Yu R., Abdel-Aty M. and Ahmed M. (2013) Bayesian Random Effect Models Incorporating Real-time Weather and Traffic Data to Investigate Mountainous Freeway Hazardous Factors, *Accident Analysis & Prevention*, Vol. 50, pp.371-376.
20. Ahmed M. and Abdel-Aty M. (2013) A Data Fusion Framework for Real-Time Risk Assessment on Freeways, *Transportation Research Part C, Emerging Technologies*, Volume 26, January 2013, Pages 203-213.
21. Hassan H. and Abdel-Aty M. (2013) Exploring the Safety Implications of Young Drivers' Behavior, Attitudes and Perceptions, *Accident Analysis & Prevention*, Volume 50, January 2013, Pages 361-370.
22. Siddiqui C., Abdel-Aty M. and Choi K. (2014) Implications of Pedestrian Safety Planning Factors in Areas with Minority and Low Income Populations, *International Journal of Sustainable Transportation*, Volume 8, Issue 5, September 2014, pages 360-381.
23. Abdel-Aty M., Hassan H., Ahmed M. and AlGhamdi A. (2012) Real-Time Prediction of Visibility Related Crashes, *Transportation Research Part C, Emerging Technologies*, Volume 24, pp. 288-298.
24. Hassan H., Abdel-Aty M., Choi K. and AlGadhi S. (2012) Drivers' Behavior and Preferences of CMS and VSL Under Reduced Visibility Conditions, *Journal of Intelligent Transportation Systems*, Volume 16, Issue 3, pp.132-146.
25. Siddiqui C. and Abdel-Aty M. (2012) On the Nature of Modeling Boundary Crashes at Zones, Preprint No. TRB 12-0242, *Journal of the Transportation Research Board*, No. 2299, pp. 31-40.
26. Ahmed M., Abdel-Aty M. and Yu R. (2012) A Bayesian Updating Approach for Real-time Safety Evaluation Using AVI Data, *Journal of the Transportation Research Board*, Vol. 2280, pp. 60-67.
27. Ahmed M., Abdel-Aty M. and Yu R. (2012) Assessment of the Interaction between Crash Occurrence, Mountainous Freeway Geometry, Real-Time Weather and AVI Traffic Data, *Journal of the Transportation Research Board*, Vol. 2280, pp. 51-59.
28. Wang X., Jin Y, Abdel-Aty M. and Tremont P. (2012) Macro Level Model Development for Safety Assessment of Road Network Structures, *Journal of the Transportation Research Board*, Vol. 2280, pp. 100-109.
29. Haleem K and Abdel-Aty M. (2012) Association between Access Management and Traffic Safety: Median Classification and Spatial Effect, *ITE Journal*, Vol 82, No. 4, pp. 22-27.
30. Siddiqui C., Abdel-Aty M. and Anjuman T. (2012) Parking Related Crash Characteristics, *ITE Journal*, Vol. 82 No. 3, pp. 33-35.
31. Persaud V., Oloufa A. and Abdel-Aty M. (2012) Dynamic Speed Monitoring on Sharp Curves Utilizing a 3 Wireless Solar Powered Dynamic Speed Monitoring System, *ITE Journal*, Vol. 82, No. 7, pp. 24-29.
32. Haleem K. and Abdel-Aty M. (2012) Application of GLASSO in Variable Selection and Crash Prediction at Unsignalized Intersections, *ASCE Journal of Transportation Engineering*, Jul 2012, Vol. 138, No. 7, pp. 949-960.
33. Ahmed M. and Abdel-Aty M. (2012) The Viability of Using Automatic Vehicle Identification

- Data for Real-Time Crash Prediction, *IEEE Transactions on Intelligent Transportation Systems*, Vol 13, No. 2, pp. 459-468.
34. Siddiqui C., Abdel-Aty M. and Choi K. (2011) Macroscopic Spatial Analysis of Pedestrian and Bicycle Crashes, *Accident Analysis & Prevention*, Elsevier, Volume 45, pp 382-391.
 35. Hassan H. and Abdel-Aty M. (2011) Analysis of Drivers' Behavior under Reduced Visibility Conditions Using a Structural Equation Modeling Approach, *Transportation Research Part F*, Vol. 14, Issue 6, pp. 614-625.
 36. Siddiqui C., Abdel-Aty M. and Huang H. (2011) Aggregate Non Parametric Safety Analysis of Traffic Zones, *Accident Analysis & Prevention*, Volume 45, pp. 317-325.
 37. Yan X., Abdel-Aty M., Guo D. and Radwan E. (2011) Visualization of Signalized Intersections in Driving Simulator and Validity of Driving Behaviors in Virtual Environments, *Advances in Transportation Studies an International Journal*, Volume 26, 2012, pp 17-28.
 38. Abdel-Aty M., Ekram A., Huang H. and Choi K. (2011) A Study on Crashes Related to Visibility Obstruction Due to Fog and Smoke, *Accident Analysis & Prevention*, Elsevier, Vol. 43, Issue 5, Sep. 2011, pp. 1730– 1737.
 39. Ahmed M., Huang H., Abdel-Aty M. and Guevara B. (2011) Exploring a Bayesian Hierarchical Approach for Developing Safety Performance Functions for a Mountainous Freeway, *Accident Analysis & Prevention*, Elsevier, Volume 43, Issue 4, July 2011, Pages 1581-1589.
 40. Yan X., Ming M., Huang H., Abdel-Aty M., Wu C. (2011) Motor Vehicle-Bicycle Crashes in Beijing: Irregular Maneuvers, Crash Patterns, and Injury Severity, *Accident Analysis & Prevention*, Elsevier, Volume 43, Issue 5, September 2011, Pages 1751-1758.
 41. Das A. and Abdel-Aty M. (2011) A Combined Frequency-Severity Approach for the Analysis of Rear End Crashes on Urban Arterials, *Safety Science*, Vol. 49, Issues 8-9, October 2011, pp. 1156–1163.
 42. Abdel-Aty M., Siddiqui C., Huang H. and Wang X. (2011) Integrating Trip And Roadway Characteristics In Managing Safety At Traffic Analysis Zones, *Journal of the Transportation Research Board*, No. 2213, pp. 20-28.
 43. Huang H., Siddiqui C and Abdel-Aty M. (2011) Indexing Crash Worthiness and Crash Aggressivity by Vehicle Type, *Accident Analysis & Prevention*, Elsevier, Volume 43, Issue 4, July 2011, Pages 1364-1370.
 44. Pande A., Das A., Abdel-Aty M. and Hassan H. (2011) Real-time Crash Risk Estimation: Are All Freeways Created Equal?, *Journal of the Transportation Research Board*, No. 2237, pp. 60–66.
 45. Park P. and Abdel-Aty M. (2011) A Stochastic Catastrophe Model using Two-Fluid Model Parameters to Investigate Traffic Safety on Urban Arterials, *Accident Analysis & Prevention*, Elsevier, Vol. 43, Issue 3, pp. 1267-1278.
 46. Dixit V., Pande A., Abdel-Aty M., Das A. and Radwan E. (2011) Quality of Traffic Flow on Urban Arterial Streets and its Relationship with Safety, *Accident Analysis & Prevention*, Elsevier, Volume 43, Issue 5, September 2011, Pages 1610-1616.
 47. Abdel-Aty M. and Gayah V. (2011) Using Traffic Micro-simulation to Test Route Diversion as a Real-Time Crash Prevention Strategy on Freeways, *Advances in Transportation Studies an International Journal*, Vol. XXIII, April 2011, pp. 15-28.
 48. Lee C, Park P. and Abdel-Aty M. (2011) Lane-by-lane Analysis of Crash Occurrence Based on Driver's Lane-Changing and Car-Following Behavior, *Journal of Transportation Safety & Security*, Volume 3 Issue 2, pp. 108-122.

49. Wang W., Yan X., Huang H., Chu X. and Abdel-Aty M. (2011) Design and Verification of a Laser Based Device for Pavement Macrotecture Measurement, *Transportation Research C*, Vol 19, pp. 682-694.
50. Abdel-Aty M. and Haleem K. (2011) Analyzing Angle Crashes at Unsignalized Intersections Using Machine Learning Techniques, *Accident Analysis & Prevention*, Elsevier, Volume 43, Issue 1, pp. 461-470.
51. Pande A., Abdel-Aty M. and Das A. (2010) A Classification Tree Based Modeling Approach for Segment Related Crashes on Multilane Highways, *Journal of Safety Research*, Volume 41, Issue 5, pp. 391-397.
52. Almonte A. and Abdel-Aty M. (2010) Exploring the “Level-of-Service & Traffic Safety” Relationship at Signalized Intersections, *ITE Journal*, Volume 80, Issue 6, pp 18-24
53. Harb R., Radwan E., Abdel-Aty M. and Su X. (2011) Two Simplified Intelligent Transportation System-Based Lane Management Strategies for Short Term Work Zones, *Journal of Intelligent Transportation Systems*, Volume 15, Issue 1, pp. 52-61.
54. Haleem K. and Abdel-Aty M. (2010) Examining Traffic Crash Injury Severity at Unsignalized Intersections, *Journal of Safety Research*, Volume 41, Issue 4, pp 347-357.
55. Huang H and Abdel-Aty M. (2010) Multilevel Data in Traffic Safety: a Five-level Hierarchical Spatiotemporal Model, *Accident Analysis & Prevention*, Elsevier, Volume 42, Issue 6, pp. 1556-1565.
56. Huang H., Abdel-Aty M. and Darwiche A. (2010) County-level Crash Risk Analysis in Florida: Bayesian Spatial Modeling, *Journal of the Transportation Research Board*, No. 2148, vol.2, pp. 27-37.
57. Haleem K. and Abdel-Aty M. (2010) Multiple Applications of the Multivariate Adaptive Regression Splines Technique in Predicting Rear-end Crashes at Unsignalized Intersections, *Journal of the Transportation Research Board*, No. 2165, pp 33-41.
58. Das A., Abdel-Aty M. and Pande A. (2010) Using Genetic Programming to Investigate the Design Parameters Contributing to Crash occurrence on Urban Arterials, *Journal of the Transportation Research Board*, No. 2147, Vol. 1, pp. 25-32.
59. Ma M., Yan X., Abdel-Aty M., Huang H. and Wang X., (2010) Analysis of Urban Arterial Safety in Developing Countries: Case of China, *Journal of the Transportation Research Board* No. 2193, pp. 105-115.
60. Ma M., Yan X., Huang H. and Abdel-Aty M. (2010) Occupational Driver Safety of Public Transportation: Risk Perception, Attitude, and Driving Behavior, *Journal of the Transportation Research Board*, No. 2145, Vol 3, pp. 72-79.
61. Haleem K., Abdel-Aty M. and Mackie K. (2010) Using a Reliability Process to Reduce Uncertainty in Predicting Crashes at Unsignalized Intersections, *Accident Analysis & Prevention*, Elsevier, Volume 42, Issue 2, pp. 654-666.
62. Das A. and Abdel-Aty M. (2010) A Genetic Programming Approach to Explore the Crash Severity on Multi Lane Roads, *Accident Analysis & Prevention*, Elsevier, Volume 42, Issue 2, Pages 548-557.
63. Abdel-Aty M. and Gayah V. (2010) Real-time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, *ASCE Journal of Transportation Engineering*, Volume 136, No. 5. pp. 410-423.
64. Guo F., Wang X. and Abdel-Aty M. (2010) Modeling Signalized Intersection Safety with Corridor Level Spatial Correlations, *Accident Analysis & Prevention*, Elsevier, 42(1), 84-92.

65. Abdel-Aty M., Pande A. and Hsia L. (2010) The Concept of Proactive Traffic Management for Enhancing Freeway Safety and Operation, *ITE Journal*, Volume 80, Issue 4, pp 34-41.
66. Nevarez A., Abdel-Aty M., Wang X. and Santos J. (2009) Multi-Level Analysis of Severe Crashes Along Arterials Including the Effect of Road Entity and Collision Type, *Journal of Transportation Safety & Security*, Vol. 1, No. 3, pp. 203-223.
67. Pande A. and Abdel-Aty M. (2009) A Novel Approach for Analyzing Severe Crash Patterns on Multilane Highways, *Accident Analysis & Prevention*, Elsevier, Vol. 41, pp. 985-994.
68. Das A., Abdel-Aty M. and Pande A. (2009) Using Conditional Inference Forests to Identify the Factors Affecting Crash Severity on Arterial Corridors, *Journal of Safety Research*, Vol. 40, pp. 317-327.
69. Abdel-Aty M., Devarasetty P. and Pande A. (2009) Safety Evaluation of Multilane Arterials in Florida, *Accident Analysis & Prevention*, Elsevier, Vol 41, issue 4, pp. 777-788.
70. Wang X., Abdel-Aty M., Almonte A. and Darwiche A. (2009) Incorporating Traffic Operation Measures in Safety Analysis at Signalized Intersections, *Journal of Transportation Research Board*, No 2103, Vol. 2, pp. 98-107.
71. Pande A. and Abdel-Aty M. (2009) Market Basket Analysis of Crash Data from Large Jurisdictions and its Potential as a Decision Support Tool, *Safety Science*, Elsevier, 47 (1), p.145-154.
72. Abdel-Aty M., Yan X., Radwan E. and Wang X. (2009) Assessing Rear-End Crash Risk at Signalized Intersections Based on the Driving Behavior. *Journal of Transportation Safety & Security*, Volume 1, Issue 2 June 2009, pp. 85-100.
73. Lee C. and Abdel-Aty M. (2009) Analysis of Crashes on Freeway Ramps by Location of Crash and Presence of Advisory Speed Signs, *Journal of Transportation Safety & Security*, Volume 1, Issue 2 June 2009, pp. 121 - 134.
74. Abdel-Aty M., Wang X. and Santos J. (2009) Identifying Intersection Related Traffic Crashes for Accurate Safety Representation, *ITE Journal*, Vol. 79 (12), pp. 38-44.
75. Lee C. and Abdel-Aty M. (2008) Presence of passengers: Does it increase or reduce driver's crash potential? *Accident Analysis & Prevention*, Elsevier, Vol. 40, issue 5, pp 1703-1712.
76. Wang X. and Abdel-Aty M. (2008) Analysis of Left-Turn Crash Injury Severity by Conflicting Pattern Using Partial Proportional Odds Models, *Accident Analysis & Prevention*, Elsevier, Volume 40, issue 5, pp. 1674-1682. Cited 30 times.
77. Lee C. and Abdel-Aty M. (2008) Two-Level Nested Logit Model to Identify Traffic Flow Parameters Affecting Crash Occurrence on Freeway Ramps, *Journal of the Transportation Research Board* No. 2083, pp.145-152.
78. Pande A. and Abdel-Aty M. (2008) A Computing Approach Using Probabilistic Neural Networks for Instantaneous Appraisal of Rear-End Crash Risk, *Computer-Aided Civil and Infrastructure Engineering*, Vol. 23, issue 7, pp. 549-559.
79. Abdel-Aty M., Pande A., Das A. and Knibbe W. (2008) Assessing Safety on Dutch Freeways with Data from Infrastructure-Based Intelligent Transportation Systems, *Journal of the Transportation Research Board* No. 2083, pp.153-161.
80. Pande A. and Abdel-Aty M. (2008) Discovering Indirect Associations in Crash Data Using Probe Attributes, *Journal of the Transportation Research Board*, No. 2083, pp.170-179.
81. Das A., Pande A., Abdel-Aty M. and Santos J. (2008) Characteristics of Urban Arterial Crashes Relative to Proximity to Intersections and Injury Severity, *Journal of the Transportation Research Board*, No. 2083, pp.137-144.
82. Wang X., Abdel-Aty M., Nevarez A. and Santos J. (2008) Investigation of Safety Influence Area

- For Four-legged Signalized Intersections: Nationwide Survey and Empirical Inquiry, *Journal of the Transportation Research Board*, No. 2083, pp. 86-95.
83. Lee C. and Abdel-Aty M. (2008) Testing Effects of Warning Messages and Variable Speed Limits on Driver Behavior Using Driving Simulator, *Journal of the Transportation Research Board*, No. 2069, pp. 55-64.
 84. Dixit V., Pande A., Radwan E. and Abdel-Aty M. (2008) Understanding the Impact of a Recent Hurricane on Mobilization Time During a Subsequent Hurricane, *Journal of the Transportation Research Board No. 2041*, pp. 49-57.
 85. Abdel-Aty M., Cunningham R., Gayah V. and Hsia L. (2008) Considering Dynamic Variable Speed Limit Strategies For Real-time Crash Risk Reduction On Freeways, *Journal of the Transportation Research Board*, No. 2078, pp. 108-116.
 86. Harb R., Radwan E., Yan X., Pande A. and Abdel-Aty M. (2008) Freeway Work-Zone Crash Analysis and Risk Identification Using Multiple and Conditional Logistic Regression, *ASCE Journal of Transportation Engineering*, Vol. 134 No. 5, pp 203-214.
 87. Wang X. and Abdel-Aty M. (2008), Modeling Left-Turn Crash Occurrence at Signalized Intersections by Conflicting Patterns, *Accident Analysis and Prevention*, Elsevier, Vol 40/1 pp 76-88.
 88. Yan X., Abdel-Aty M., Radwan E., Wang X. and Chilakapati P. (2008) Validating a Driving Simulator Using Surrogate Safety Measures, *Accident Analysis and Prevention*, Elsevier, Vol 40/1 pp 274-288.
 89. Harb R., Radwan E., Yan. X., Abdel-Aty M., and Pande A. (2008) Environment, Drivers, and Vehicles' Risk Analysis for Freeway Work-Zone Crashes, *ITE Journal*, Vol 78(1), pp. 26-30.
 90. Abdel-Aty M., Lee C., Bai Y., Li X. and Michalak M. (2007) Detecting periodic patterns of arrival delay, *Journal of Air Transport Management*, Elsevier, 13(6), pp. 355-361.
 91. Abdel-Aty M., Chundi S. and Lee C. (2007) Geo-Spatial and Log-linear Analysis of Pedestrian and Bicyclist Crashes Involving School-aged Children, *Journal of Safety Research*, Elsevier, Volume 38, Issue 5, pp. 571-579.
 92. Abdel-Aty M. and Pande A. (2007) Crash Data Analysis: Collective vs. Individual crash Level Approach, *Journal of Safety Research*, Elsevier, Volume 38, Issue 5 pp 581-587.
 93. Pande A. and Abdel-Aty M. (2007) Multiple-Model Framework for Assessment of Real-Time Crash Risk, *Journal of the Transportation Research Board No. 2019*, pp. 99-107.
 94. Wang X. and Abdel-Aty M. (2007) Investigation of Right-Angle Crash Occurrence at Signalized Intersections, *Journal of the Transportation Research Board No. 2019*, pp. 156-168.
 95. Abdel-Aty M., Pande A., Lee C., Gayah V. and Dos Santos C. (2007) Crash Risk Assessment using Intelligent Transportation Systems Data and Real-time Intervention Strategies to Improve Safety on Freeways, *ITS Journal*, Vol 11, issue 3, pp. 107-120.
 96. Abdel-Aty M., Dhindsa A. and Gayah V. (2007) Considering Various ALINEA Ramp Metering Strategies for Crash Risk Mitigation on Freeways under Congested Regime, *Transportation Research C: Emerging Technologies*, Elsevier, Volume 15, Issue 2, pp.113-134.
 97. Harb R., Radwan E., Yan X. and Abdel-Aty M. (2007) Light Truck Vehicles (LTVs) Contribution to Rear End Collisions, *Accident Analysis and Prevention*, Elsevier, Vol 39, issue 5, pp. 1026-1036.
 98. Wang X. and Abdel-Aty M. (2006) Temporal and Spatial Analyses of Rear-end Crashes at Signalized Intersections, *Accident Analysis and Prevention*, Elsevier, Volume 38, issue 6, pp. 1137-1150.
 99. Abdel-Aty M. and Nawathe P. (2006) A Novel Approach for Signalized Intersection Crash

- Classification and Prediction, *Advances in Transportation Studies, An International Journal* Vol IX, pp. 67-80.
100. Pande A. and Abdel-Aty M. (2006) Assessment of freeway traffic parameters leading to lane-change related collisions, *Accident Analysis and Prevention*, Elsevier, Volume 38, No. 5, pp 936-948.
 101. Abdel-Aty M. and Abdalla F. (2006) Examination of Multiple Mode/Route Choice Paradigms under ATIS, *IEEE Transactions on Intelligent Transportation Systems* Vol. 7, No. 3, pp. 332-348.
 102. Pande A. and Abdel-Aty M. (2006) A Comprehensive Analysis of the Relationship between Real-time Traffic Surveillance data and Rear-end Crashes on Freeways, *Journal of the Transportation Research Board*, No. 1953, pp. 31-40.
 103. Lee C. and Abdel-Aty M. and Hsia L. (2006) Potential Real-Time Indicators of Sideswipe Crashes on Freeways, *Journal of the Transportation Research Board*, No. 1953, pp. 41-49.
 104. Abdel-Aty M., Pemmanaboina R. and Hsia L. (2006) Assessing Crash Occurrence on Urban Freeways by Applying a System of Interrelated Equations, *Journal of the Transportation Research Board*, No. 1953, pp. 1-9.
 105. Abdel-Aty M., Dilmore J. and Hsia L. (2006) Applying Variable Speed Limits and the Potential for Crash Migration, *Journal of the Transportation Research Board*, No. 1953, pp. 21-30.
 106. Wang X., Abdel-Aty M. and Brady P. (2006) Crash Estimation at Signalized Intersections: Significant Factors and Temporal Effect, *Journal of the Transportation Research Board*, No. 1953, pp. 10-20.
 107. Abdel-Aty M. and Wang X. (2006) Crash Estimation at Signalized Intersections along Corridors: Analyzing Spatial Effect and Identifying Significant Factors, *Journal of the Transportation Research Board*, No. 1953, pp. 98-111.
 108. Abdel-Aty M. and Pande A. (2006) ATMS Implementation System for Identifying Crash Conditions Leading to Potential Crashes, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 7, No. 1, pp. 78-91.
 109. Abdel-Aty M., Dilmore J. and Dhindsa A. (2006) Evaluation of Variable Speed Limits for Real-Time Freeway Safety Improvement, *Accident Analysis and Prevention*, Elsevier, Volume 38, issue 2, pp. 335-345.
 110. Abdel-Aty M., Salkapuram H., Lee C and Brady P. (2006) A Simplistic Practical Approach to Identify Traffic Crash Profiles at Signalized Intersections, *ITE Journal*, Vol. 76 No. 4, pp 28-33.
 111. Abdel-Aty M. and Pemmanaboina R. (2006) Calibrating a Real-Time Traffic Accident Prediction Model Using Archived Weather and ITS Traffic Data, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 7, No. 2.
 112. Keller J., Abdel-Aty M. and Brady P. (2006) Type of Collision Analysis and Data Evaluation at Signalized Intersections, *ITE Journal*, Vol. 76 No. 2, pp 30-39.
 113. Abdel-Aty M. (2005) Using Generalized Estimating Equations to Account for Correlation in Route Choice Models, *Journal of Transportation and Statistics*, Vol. 8, No. 1, pp.85-101.
 114. Pande A. and Abdel-Aty M. (2005) A Freeway Safety Strategy for Advanced Proactive Traffic Management, *Journal of Intelligent Transportation Systems*, Vol. 9 Issue 3, pp. 145-158.
 115. Yan X., Radwan E. and Abdel-Aty M. (2005) Characteristics of Rear-end Accidents at Signalized Intersections Using Multiple Logistic Regression Model, *Accident Analysis and Prevention*, Elsevier, Volume 37, issue 6, pp. 983-995.

116. Lee C. and Abdel-Aty M. (2005) Comprehensive Analysis of Vehicle-Pedestrian Crashes at Intersections in Florida, *Accident Analysis & Prevention*, Elsevier, Vol 37, No. 4, pp. 775-786.
117. Abdalla F. and Abdel-Aty M. (2006) Modeling Travel Time Under ATIS using Mixed Linear Models, *Transportation*, Volume 33 No 1, pp. 63 – 82.
118. Abdel-Aty M., Keller J. and Brady P. (2005) Analysis of the Types of Crashes at Signalized Intersections using Complete Crash Data and Tree-Based Regression, *Journal of the Transportation Research Board*, No. 1908, pp. 37-45.
119. Pande A., Abdel-Aty M. and Hsia L. (2005) Spatio-Temporal Variation of Risk Preceding Crash Occurrence on Freeways, *Journal of the Transportation Research Board*, No. 1908, pp.26-36.
120. Abdel-Aty M., Uddin N. and Pande A. (2005) Split Models for Predicting Multi-Vehicle Crashes during High-Speed and Low-Speed Operating Conditions on Freeways, *Journal of the Transportation Research Board*, No. 1908, pp.51-58.
121. Yu J. and Abdel-Aty M. (2005) A Combined Approach to Determine the Location and Time of Freeway Crashes using Loop Detectors, *Journal of Infrastructure Planning and Management*, Japan Society of Civil Engineers, No. 786, pp. 157-166.
122. Abdel-Aty M. and Keller J. (2005) Exploring the Overall and Specific Crash Severity Levels at Signalized Intersections, *Accident Analysis and Prevention*, Elsevier, Vol. 37, Issue 3, pp. 417-425.
123. Abdel-Aty M. and Pande A. (2005) Identifying crash propensity using specific traffic speed conditions, *Journal of Safety Research*, Elsevier, Vol. 36 No.1, pp. 97-108.
124. Abdel-Aty M. and Pemmanaboina R. (2005) Assessing Crash Occurrence on Urban Freeways Using Static and Dynamic Factors, *Advances in Transportation Studies, An International Journal*, Vol 5, pp. 39-51.
125. Abdel-Aty M., Pande A., Hsia L. and Abdalla F. (2005) The Potential for Real-Time Traffic Crash Prediction, *ITE Journal*, Vol. 75 No. 12, pp 69-75.
126. Abdel-Aty M. and Abdalla F. (2004) Understanding Drivers' Route Choice Under Long-Term Pre-Trip and Short-Term En-Route Traffic Information Using Generalized Estimating Equations, *ASCE Journal of Transportation Engineering*, Vol. 130, No. 6, pp. 777-786.
127. Abdel-Aty M. and Abdalla F. (2004) Modeling Drivers' Diversion from Normal Routes Under ATIS Using Generalized Estimating Equations and Binomial Probit Link Function, *Transportation*, Vol 31 No 3, pp 327-348.
128. Abdel-Aty M., Uddin N., Pande A., Abdalla F. and Hsia L. (2004). Predicting Freeway Crashes Based on Loop Detector Data Using Matched Case-Control Logistic Regression, *Journal of the Transportation Research Board*, No. 1897, pp. 88-95.
129. Abdel-Aty M. and Abdalla F. (2004) Modeling Repeated Multinomial Route Choices Under ATIS Using Generalized Estimating Equations with Polytomous Logit Function, *Journal of the Transportation Research Board*, No. 1882, pp. 61-69.
130. Abdel-Aty M. and Abdalla F. (2004) Linking Roadway Geometrics and Real-Time Traffic Characteristics to Model Daytime Freeway Crashes Using Generalized Extreme Equations for Correlated Data, *Journal of the Transportation Research Board*, No. 1897, pp. 106-115.
131. Abdel-Aty M. and Abdelwahab H. (2004) Analysis and Prediction of Traffic Fatalities Resulting from Angle Collisions Including the Effect of Vehicles' Configuration and Compatibility, *Accident Analysis and Prevention*, Elsevier, Volume 36, Issue 3, pp 457-469.
132. Abdel-Aty M. and Abdelwahab H. (2004) Predicting Injury Severity Levels in Traffic Crashes: A Modeling Comparison, *ASCE Journal of Transportation Engineering*, Vol 130, No.2.

133. Abdel-Aty M. and Huang Y. (2004) An Exploratory Spatial Analysis of Expressway Ramps and its Effect on Route Choice, *Journal of Transportation Engineering, ASCE*, Vol 130, No. 1.
134. Abdel-Aty M. and Abdelwahab H. (2004) Modeling Rear-End Collisions Including the Role of Drivers Visibility and Light Truck Vehicles Using a Nested Logit Structure, *Accident Analysis and Prevention*, Elsevier, Volume 36, Issue 3, pp 447-456.
135. Abdelwahab H. and Abdel-Aty M. (2004) Investigating the effect of LTV percentages on Rear-End fatal crashes (Part I), *ASCE Journal of Transportation Engineering*, Vol.130, No. 4.
136. Abdelwahab H. and Abdel-Aty M. (2004) Investigating the effect of LTV percentages on head-on fatal traffic crashes (Part II), *ASCE Journal of Transportation Engineering*, Vol. 130, No. 4.
137. Abdel-Aty M. (2003) Analysis of Driver Injury Severity Levels at Multiple Locations Using Ordered Probit Models, *Journal of Safety Research*, Elsevier, Vol 34, No. 5, pp. 597-603.
138. Abdel-Aty M. (2003) Investigating the Relationship between Cellular Phone Use and Traffic Safety, *ITE Journal*, Vol 73, No. 10, pp 38-42.
139. Abdel-Aty M. and Abdelwahab H. (2003) Configuration Analysis of Two-Vehicle Rear-End Crashes, *Journal of the Transportation Research Board* No. 1840, pp. 140-147.
140. Abdel-Aty M. (2003) Hybrid Distribution and Response Techniques for an O-D Travel Survey, *ITE Journal*, Vol 72, No. 2, pp 22-27.
141. Abdelwahab H. and Abdel-Aty M. (2002). Investigating Driver Injury Severity in Traffic Accidents Using Fuzzy ARTMAP, *Journal of Computer-Aided Civil and Infrastructure Engineering* **17**, pp. 396-408.
142. Abdelwahab H. and Abdel-Aty M. (2002). Traffic Safety Analysis for Toll Plazas using Artificial Neural Networks and Logit Models, *Journal of the Transportation Research Board*, Vol **1784**, pp. 115-125.
143. Abdelwahab H. and Abdel-Aty M. (2002). Investigating the Travel and User Characteristics of Toll Roads Based on a Travel Survey of the Central Florida Expressway System, *Journal of the Transportation Research Board*, Vol. **1807**, pp. 43-50.
144. Abdel-Aty, M. and Abdelwahab H. (2001). Toll Road Origin-Destination Travel Survey: Internet and Mail-back Response Analysis and the Implications for Future Surveys, *Journal of the Transportation Research Board*, Vol. **1768**, pp 61-70.
145. Abdelwahab H. and Abdel-Aty M. (2001). Development of Artificial Neural Networks Models to Predict Driver Injury Severity in Traffic Accidents at Signalized Intersections, *Journal of the Transportation Research Board*, Vol. **1746**, pp. 6-13.
146. Abdel-Aty, M. (2001). Using Ordered Probit Modeling to Study the Effect of ATIS on Transit Ridership, *Transportation Research C*, Elsevier, **Vol. 9, No. 4**, pp 265-277.
147. Mohamed A., Abdel-Aty, M. and Klodzinski J. (2001). Safety Considerations in Designing Electronic Toll Plazas: Case Study, *ITE Journal*, Vol. 71, No. 3, pp 20-24.
148. Abdel-Aty M., Abdelwahab H., Aiouche H. and Huang Y. (2000) The Design and Administration of an Origin/Destination Survey for the Central Florida Expressway System, *Al-Azhar University Engineering Journal* (Special Issue), Vol. 4, pp. 597-606.
149. Abdelwahab H. and Abdel-Aty M. (2000) Applying MLP Neural Networks to Predict Driver's Injury Severity in Traffic Accidents, *Al-Azhar University Engineering Journal* (Special Issue), Vol. 4, pp.607-615.
150. Abdel-Aty M. and Radwan E. (2000). Modeling Traffic Accident Occurrence and Involvement, *Accident Analysis & Prevention Journal*, Elsevier, **Vol. 32, No. 5**, pp. 21-30.
151. Abdel-Aty M. and Abdelwahab H. (2000). Exploring the Relationship between Alcohol and

- the Driver Characteristics in Motor Vehicle Accidents, *Accident Analysis & Prevention Journal*, **Vol. 32, No. 4**, pp. 473-482.
152. Abdel-Aty M. (1999). A Simplified Approach for Developing a Multi-Modal Travel Planner, *ITS Journal*, **Vol. 5 No. 3**.
 153. Abdel-Aty M. (1999). Modeling Senior Travelers' Acceptance of New Transit Systems, *Journal of Public Transportation* **Vol. 2, No. 3**.
 154. Abdel-Aty M., Chen C. and Radwan E. (1999). Using Conditional Probability to find the Driver Age Effect in Crashes, *Journal of Transportation Engineering, ASCE*, **Vol. 125, No. 6**.
 155. Abdel-Aty M., Chen C., Radwan E. and Brady P. (1999). Analysis of Crash-Involvement Trends by Drivers Age in Florida, *ITE Journal*, **69** (2), pp. 69-74.
 156. Vaughn K., Abdel-Aty M. and Kitamura R. (1999). A Framework for Developing a Daily Activity and Multimodal Travel Planner, *International Transactions in Operations Research*, **Vol. 6 (1)**, pp. 107-121.
 157. Abdel-Aty M., Chen C. and Schott J. (1998). An Assessment of the Effect of Driver Age on Traffic Accident Involvement Using Log-Linear Models, *Accident Analysis & Prevention Journal*, Elsevier, **Vol. 30, No. 6**, pp. 851-861.
 158. Abdel-Aty M. (1998). Modeling Incident-Related Routing Decisions by Using a Nested Logit Structure, *Transportation Research Record* **1645**, *Journal of the Transportation Research Board*, pp. 103-110.
 159. Abdel-Aty M., Kitamura R. and Jovanis P. (1997) Using Stated Preference Data for Studying the Effect of Advanced Traffic Information on Drivers' Route Choice, *Transportation Research*, Elsevier, **Vol. 5C, No. 1**.
 160. Abdel-Aty M., Jovanis P. and Kitamura R. (1996) The Impact of Advanced Transit Information on Commuters' Mode Changing, *ITS Journal*. **Vol. 3(2)**.
 161. Abdel-Aty M., Kitamura R. and Jovanis P. (1996) Investigating the Effect of Advanced Traveler Information on Commuters' Tendency to Use Transit, *Transportation Research Record* **1550**, *Journal of the Transportation Research Board*, pp. 65-72.
 162. Abdel-Aty M., Kitamura R. and Jovanis P. (1995). Investigating the Effect of Travel Time Variability on Route Choice Using Repeated-measurement Stated Preference Data, *Transportation Research Record* **1493**, *Journal of the Transportation Research Board*, pp 39-45.
 163. Abdel-Aty M., Kitamura R. and Jovanis P. (1995). Exploring Route Choice Behavior Using GIS-based Alternative Routes and Hypothetical Travel Time Information Input, *Transportation Research Record* **1493**, *Journal of the Transportation Research Board*, pp. 74-80.
 164. Abdel-Aty M., Kitamura R., Jovanis P., Reddy P. and Vaughn K. (1995) A New Approach To Route Choice Data Collection: Multi-phase, CATI Panel Surveys Using A Geographic Information Systems Database, *Transportation Research Record* **1493**, *Journal of the Transportation Research Board*, pp. 159-169.
 165. Abdel-Aty M. and Jovanis P. (1995) The Effect of ITS on Transit Ridership. *ITS Quarterly*, Vol 3 Issue: 2, pp. 21-25.
 166. Vaughn K., Reddy P., Abdel-Aty M., Kitamura R. & Jovanis P. (1995). Route Choice and Information Use: Initial Results from Simulation Experiments, *Transportation Research Record* **1516**, *Journal of the Transportation Research Board*.
 167. Reddy P., Yang H., Vaughn K., Abdel-Aty M., Kitamura R. & Jovanis P. (1995). Design of an Artificial Simulator for Analyzing Route Choice Behavior in the Presence of Information

- System, in *Journal of Mathematical and Computer Modeling*, Vol. 22, No. 4-7, pp. 119-147.
168. Abdel-Aty M., Vaughn K., Kitamura R., Jovanis P. & Mannering F. (1994). Models of Commuters' Information Use and Route Choice: Initial results Based on a Southern California Commuter Route Choice Survey, *Transportation Research Record* **1453**, *Journal of the Transportation Research Board*.
 169. Yang H., Kitamura R., Jovanis P., Vaughn K. & Abdel-Aty M. (1993). Exploration of Route Choice Behavior with Advanced Traveler Information using Neural Network Concepts", *Transportation*, Vol. **20**, pp. 199-223.
 170. Vaughn K., Abdel-Aty M., Kitamura R., Jovanis P. & Yang H. (1993). Experimental Analysis and Modeling of Sequential Route Choice Behavior under ATIS in a Simplistic Traffic Network", *Transportation Research Record* **1408**, *Journal of the Transportation Research Board*, pp. 75-82.
 171. Salem M., Hassan A. & Aty M. (1991). Optimizing the Running Performance Over Railway Tracks Using Simulation Technique, *Alexandria Engineering Journal*, Vol. **30**, No. 4, pp. C241-C254.

REFEREED CONFERENCE AND OTHER REFEREED PUBLICATIONS

172. Yu R. and Abdel-Aty M. (2014) Optimal Variable Speed Limit System to Ameliorate Traffic Safety Risk, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0539, Washington DC, January 2014.
173. Wang JH and Abdel-Aty M. (2014) Comparison of Safety Evaluation Approaches for Intersection Signalization in Florida, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0374, Washington DC, January 2014.
174. Yu and Abdel-Aty M. (2014) A Correlated Random Parameter Approach to Investigate the Effects of Weather Conditions on Crash Risk for a Mountainous Freeway, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0540, Washington DC, January 2014.
175. Jiang X., Abdel-Aty M. and Alamili S. (2014) Application of Poisson Random Effect Models for Highway Network Screening, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0289, Washington DC, January 2014.
176. Shi Q., Abdel-Aty M. and Yu R. (2014) Identifying risk factors for urban expressway traffic crashes using Multi-level Bayesian models with unprocessed Automatic Vehicle Identification data, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0303, Washington DC, January 2014.
177. Jiang X. and Abdel-Aty M. (2014) Investigating Macro-level Hotzone Identification and Variable Importance Using Random Forest Models, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0337, Washington DC, January 2014.
178. Lee J. and Abdel-Aty M. (2014) Macroscopic Multivariate Crash Modeling for Motor Vehicle, Bicycle and Pedestrian Crashes, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0424, Washington DC, January 2014.
179. Yu R. and Abdel-Aty M. (2014) Analyzing Crash Injury Severity on Multiple Facilities with Real-time Weather and Speed Data, accepted for presentation at 92nd Annual Meeting of the

- Transportation Research Board*, TRB No. 14-1036, Washington DC, January 2014.
180. Wu J., Abdel-Aty M., Yu R., and Gao Z. (2014) Novel Visible Network Approach for Freeway Crash Analysis, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0760, Washington DC, January 2014.
 181. Ahmed M. and Abdel-Aty M. (2014) Evaluation and Spatial Analysis of the Safety Effectiveness of Red-Light Running Enforcement Cameras, accepted for presentation at 92nd Annual Meeting of the *Transportation Research Board*, TRB No. 14-0397, Washington DC, January 2014.
 182. Abdel-Aty M. (2013) Improving Visibility Detection Systems on Highways, 17th IRF World Meeting, November, Riyadh, Saudi Arabia.
 183. Abdel-Aty M. and Yu R. (2013) State-of-Practice of Variable Speed limits System, 20th ITS World Congress, October, Tokyo, Japan.
 184. Abdel-Aty M., Lee J., Choi K. and Siddiqui C. (2013) Analysis of Zonal Characteristics of Drivers Involved in Traffic Crashes, World Conference on Transportation Research (WCTR), Rio de Janiro, Brazil, July 2013.
 185. Lee J., Choi K. and Abdel-Aty M. (2013) Safety Implications of Young drivers Attitudes, Perceptions and Behavior in Korea, World Conference on Transportation Research (WCTR), Rio de Janiro, Brazil, July 2013.
 186. Abdel-Aty M., Lee J, Choi K and Siddiqui C. (2013) Demographic and Socioeconomic Factors Associated with Traffic Crash Involvement in Florida, 16th International Conference Road Safety on Four Continents, Beijing, China 15-17 May 2013.
 187. Yu R. and Abdel-Aty M. (2013) Developing Safety Performance Functions for a Mountainous Freeway, 16th International Conference Road Safety on Four Continents, Beijing, China 15-17 May 2013.
 188. Yu R. and Abdel-Aty M. (2013) Developing Hierarchical Bayesian Safety Performance Functions Using Real-Time Weather and Traffic Data, 16th International Conference Road Safety on Four Continents, Beijing, China 15-17 May 2013.
 189. Yu R, Abdel-Aty M., Ahmed M. and Wang X. (2013) Crash Type Propensity Analysis with Bayesian Models using Microscopic Traffic and Weather Data, TRB No. 13-0718, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 190. Ahmed M., Abdel-Aty M., Shi Q. and Abuzwidah M (2013), Synthesis of State-of-the-Art in Visibility Detection Systems' Applications and Research, TRB No. 13-0832, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 191. Lee J., Choi K. and Abdel-Aty M. (2013) An Investigation into Young Drivers' Attitudes, Perceptions and Behavior in Korea, TRB No. 13-0655, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 192. Ahmed M, Abdel-Aty M., Lee J. and Yu R. (2013) Exploring the Feasibility of Using Airport Data in Real-Time Risk Assessment, TRB No. 13-0834, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 193. Yu R. and Abdel-Aty M. (2013) Formulating Informative Priors and the Effects on Bayesian Hierarchical Crash Models, TRB No. 13-0222, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line

- compendium of papers.
194. Huang H., Hu S. and Abdel-Aty M. (2013) Indexing Crash Worthiness and Crash Aggressivity by Major Car Brands, TRB No. 13-1754, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 195. Wang X., Xie K., Abdel-Aty M., Tremont P. and Chen X. (2013) A Systematic Approach for Hazardous Intersection Identification and Countermeasure Development, TRB No. 13-2698, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 196. Lee J., Abdel-Aty M., Choi K. and Siddiqui C. (2013) Analysis of Residence Characteristics of Drivers, Pedestrians and Bicyclists Involved in Traffic Crashes, TRB No. 13-2228, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 197. Hassan H., Dimitriou L., Abdel-Aty M. and Al-Ghamdi A. (2013) Analysis of Risk Factors Affecting the Size and Severity of Traffic Crashes in Riyadh, TRB No. 13-2333, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 198. Huang H. and Abdel-Aty M. (2013) Transportation Safety Planning: a Spatial Analysis Approach, , TRB No. 13-1855, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 199. Dimitriou L. and Abdel-Aty M. (2013) A Genetically Optimized Fuzzy Resource Allocation Model for Improving Road Safety in Interurban Highways Networks, TRB No. 13-3646, presented at 91st Annual Meeting of the *Transportation Research Board*, Washington DC, January 2013. Included in the TRB on-line compendium of papers.
 200. Ahmed M., Abdel-Aty M. and Yu R. (2012) Linking crash occurrence to real-time weather conditions and AVI traffic data: ensemble data-mining approach, 19th ITS World Congress, October, Vienna, Austria.
 201. Abdel-Aty M., Ahmed M. and Yu R. (2012) Exploring the Safety Application of Automatic Vehicle Identification Data, Annual General Conference of the Canadian Society of Civil Engineers, Edmonton, Alberta, June 6-9, 2012.
 202. Siddiqui C., Abdel-Aty M. and Choi K. (2012) A Comparison of Geographical Unit-Based Macro-Level Safety Modeling, Preprint No. TRB 12-0243, presented at 90th Annual Meeting of the *Transportation Research Board*, Washington DC, January 2012. Included in the TRB on-line compendium of papers.
 203. Abdel-Aty M., Hassan H. and Ahmed M. (2012) Real-time Analysis of Visibility Related Crashes: Can Loop Detector and AVI Data Predict them Equally, Preprint No. TRB 12-0113, presented at the 90th Annual Meeting of the *Transportation Research Board*, January 2012. Included in the TRB on-line compendium of papers.
 204. Haleem K. and Abdel-Aty M. (2012) Examining the Median Types Near Unsignalized Intersections to Identify the Interplay Between Safety and Access Management, Preprint No. TRB 12-0419, presented at the 90th Annual Meeting of the *Transportation Research Board*, January 2012. Included in the TRB on-line compendium of papers.
 205. Hassan H., Abdel-Aty M., Oloufa A. and Morrow R. (2011) Use and Content of CMS and VSL Under Low Visibility Conditions, 18th ITS World Congress, October 18, Orlando, Florida.

206. Ahmed M., Yu R. and Abdel-Aty M. (2011) Safety Applications of Automatic Vehicle Identification and Weather Data on Freeways, 18th ITS World Congress, October 17, Orlando, Florida.
207. Abdel-Aty M., Siddiqui C. and Huang H. (2011) Managing Roadway Safety at the Traffic Analysis Zones' Level, *1st International Conference on Transportation Information and Safety (ICTIS 2011)*, June 30th ~July 2nd 2011, Wuhan, China
208. Huang H., Abdel-Aty M. and Siddiqui C. (2011) Development of Crash Worthiness Index and Crash Aggressivity Index, *1st International Conference on Transportation Information and Safety (ICTIS 2011)*, June 30th ~July 2nd 2011, Wuhan, China
209. Hassan H., Abdel-Aty M. and Oloufa A. (2011) The Effect of Warning Messages And Variable Speeds In Different Visibility Conditions, Preprint No. TRB 11-0354, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
210. Hassan H. and Abdel-Aty M. (2011) Exploring Visibility Related Crashes on Freeways based On Real-time Traffic Flow Data, Preprint No. TRB 11-0920, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
211. Siddiqui C., Abdel-Aty M. and Huang H. (2011) Zonal Level Safety Evaluation Incorporating Trip Generation Effects, Preprint No. TRB 11-0104, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
212. Haleem K. and Abdel-Aty M. (2011) The Group Least Absolute Shrinkage and Selection Operator "GLASSO" Technique: Application in Variable Selection and Crash Prediction At Unsignalized Intersections, Preprint No. TRB 11-0091, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
213. Park P. and Abdel-Aty M. (2011) Development of a Proactive Hotspot Identification Method for Urban Arterials Using a Stochastic Catastrophe Model, Preprint No. TRB 11-0519, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
214. Wang W., Yan X., Huang H., Chi X. and Abdel-Aty M. (2011) Design of a Laser Technique Device for Pavement Macrotecture Measurement, Preprint No. TRB 11-1053, 89th Annual Meeting of the *Transportation Research Board*, January 2011.
215. Abdel-Aty M. and Pande A. (2010) Enhancing Safety through Advanced Proactive Traffic Management, 17th ITS World Congress, October 25-29, Pusan, Korea.
216. Abdel-Aty M., Oloufa A., Hassan H., Ahmed M. and Siddiqui K. (2010) Portable Visibility Warning System for the Safety of Highways, 17th ITS World Congress, October 25-29, Pusan, Korea.
217. Abdel-Aty M., Ekram A. and Huang H. (2010) A Study on Visibility Obstruction Related Crashes Due to Fog and Smoke, 12th World Conference on Transport Research (WCTR), June 11-15, Lisbon, Portugal.
218. Abdel-Aty M. and Haleem K. (2010) Analysis of the Safety Characteristics of Unsignalized Intersections, 12th World Conference on Transport Research (WCTR), June 11-15, Lisbon, Portugal.
219. Huang H., Abdel-Aty M., Ekram A., Oloufa A., Chen Y. and Morrow R. (2010) Fog and Smoke Related Crashes in Florida: Identifying Crash Characteristics, Spatial Distribution and Injury Severity, Preprint No. TRB 10-1323, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
220. Abdel-Aty M., Haleem K., Kerr P. and Santos J. (2010) Web-Based Application for Providing Crash Profiles at Intersections, Preprint No. TRB 10-0947, 89th Annual Meeting of the *Transportation Research Board*, January 2010.

221. Chen Y., Abdel-Aty M., Huang H. and Ma M. (2010) Full Bayesian Classifier of Driver Scene Aesthetics Based on Ordered Models, Preprint No. TRB 10-0918, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
222. Persaud V., Oloufa A. and Abdel-Aty M. (2010) Dynamic Speed Monitoring on Sharp Curves utilizing Green Technologies, Preprint No. TRB 10-2766, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
223. Huang H. and Abdel-Aty M. (2010) Multilevel Data in Traffic Safety: A 5 X ST-Level Hierarchy, Road safety on four continents: 15th international conference, Abu Dhabi, United Arab Emirates, 28-30 March 2010. s 305-318
224. Abdel-Aty M., Siddiqui C., Darwiche A. and Huang H. (2010) Macroscopic Safety Investigation at the Traffic Analysis Zone Level, Road safety on four continents: 15th international conference, Abu Dhabi, United Arab Emirates, 28-30 March 2010. s 519-531
225. Abdel-Aty M. and Gayah V. (2009) Using Traffic Micro-simulation to Test Route Diversion as a Real-Time Crash Prevention Strategy on Freeways, Proceedings of the *International Conference on Road Safety and Simulation RSS 2009*, October 2009, Paris, France.
226. Huang H. and Abdel-Aty M. (2009) Traffic crash hotspot identification: State-of-the-art and future directions, 18th International Conference on Management of Technology, Orlando, April 2009.
227. Ezzat H., Abdel-Aty M., Selter J and Radwan E. (2009) Spreading Technology through Education: Intelligent Transportation Program Between UCF-CATSS and NU, 18th International Conference on Management of Technology, Orlando, April 2009.
228. Nevarez A., Abdel-Aty M., Wang X. and Santos J. (2009) Large Scale Injury Severity Analysis For Arterial Roads: Modeling Scheme And Contributing Factors, Preprint No. TRB 09-0348, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
229. Abdel-Aty M., Devarasetty P., Pande A. and Santos J. (2009) Evaluating Resurfacing Projects On Multilane Arterials And Identifying Best Practices, Preprint No. TRB 09-1884, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
230. Dixit V., Pande A., Abdel-Aty M., Radwan E. and Das A. (2009) Relationship of Two-fluid Model Parameters With Safety On Arterials With Partially Limited Access, Preprint No. TRB 09-0880, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
231. Pande A. and Abdel-Aty M. (2009) Patterns in Severe Crashes On Segments of Multi-lane Arterials With Partially Limited Access, Preprint No. TRB 09-0552, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
232. Guo F., Wang X. and Abdel-Aty M. (2009) Corridor Level Signalized Intersection Safety Analysis Using Bayesian Spatial Models, Preprint No. TRB 09-1163, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
233. Das A., Abdel-Aty M., Pande A. and Santos J. (2009) Severity Analysis Of Crashes On Multilane Arterials Using Conditional Inference Forests, Preprint No. TRB 09-1511, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
234. Lee C., Park P. and Abdel-Aty M. (2009) Real-Time Estimation of Lane-Change and Car-Following-Related Traffic Flow Parameters and Their Effects on Crash Occurrence by Lane, Preprint No. TRB 09-1909, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
235. Harb R., Radwan E., Ramasamy S., Abdel-Aty M. and Pande A. (2009) Two Simplified Dynamic Lane Merging System (SDLMS) for Short Term Work Zones, Preprint No. TRB 09-1668, 88th Annual Meeting of the *Transportation Research Board*, January 2009.

236. Abdel-Aty M. and Pande A. (2008) The Viability of Real-time Prediction and Prevention of Traffic Accidents, the Fourth International Gulf Conference on Roads, Doha, November 2008.
237. Gayah V., Abdel-Aty M. and Pande A. (2008) Evaluating Route Diversion as a Strategy for Reduction of Real-Time Crash Risk on Freeways Using Microscopic Simulation, 10th International Conference on Applications of Advanced Technologies in Transportation (AATT), Athens, May 2008.
238. Abdel-Aty M., Pande A., Das A. and Knibbe W. (2008) Exploration of Crash Prone Traffic Conditions on Freeways in the Netherlands using Random Forests, 10th International Conference on Applications of Advanced Technologies in Transportation (AATT), Athens, May 2008.
239. Abdel-Aty M. and Pande A. (2008) Proactive Traffic Management using ITS data from Uninterrupted Flow Facilities, Transportation Planning and Implementation Methodologies for Developing Countries, IIT Bombay, Dec. 3-6, 2008.
240. Das A., Abdel-Aty M. and Pande A. (2008) Severity Analysis of Crashes on Multilane Arterials Using Conditional Inference Forests, Transportation Planning and Implementation Methodologies for Developing Countries, IIT Bombay, Dec. 3-6, 2008.
241. Abdel-Aty M. and Gayah V. (2008) Comparison of Two Different Ramp Metering Algorithms For Real-time Crash Risk Reduction, Preprint No. TRB 08-0020, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
242. Abdel-Aty M. and Gayah V. (2008) Considering Route Diversion As A Real-time Crash Prevention Strategy On Urban Freeways , Preprint No. TRB 08-0019, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
243. Yan X., Abdel-Aty M., Radwan E., Wang X. and Chilakapati P. (2008) Assessing Rear-End Crash Risk at Signalized Intersections Based on the Driving Behavior, Preprint No. TRB 08-0044, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
244. Wang X. and Abdel-Aty M. (2008) Left-turn Crash Injury Severity Analyses Using Partial Proportional Odds Models: Significant Factors and Varying Effects, Preprint No. TRB 08-0297, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
245. Abdel-Aty M. and Pande A. (2007) Framework for Real-Time Crash Estimation: Implications of Random and Matched Sampling Schemes, 14th International Conference Road Safety on Four Continents, Bangkok, Thailand, November 2007.
246. Lee C. and Abdel-Aty M. (2007) Relationship Between Presence of Passengers and Freeway Crash Characteristics, 14th International Conference Road Safety on Four Continents, Bangkok, Thailand, November 2007.
247. Dos Santos C. and Abdel-Aty M. (2007) Assessing the Traffic Safety Effects of Variable Speed Limits Using Microscopic Traffic and Driving Simulations, Transport Science and Technology Congress (TRANSTEC), Prague, September 2007.
248. Wang X. and Abdel-Aty M. (2007) Using GEE to Model Right-Angle Crashes at Intersections, Transport Science and Technology Congress (TRANSTEC), Prague, September 2007.
249. Wang X. and Abdel-Aty M. (2007) Temporal and Spatial Safety Analyses of Signalized Intersections, 11th World Conference on Transport Research, Berkeley, California, June 2007.
250. Abdel-Aty M. and Gayah V. (2007) Exploring the Crash Severity Along an Urban Freeway Based on Temporal, Spatial, and Real-Time Traffic Conditions, 11th World Conference on Transport Research, Berkeley, California, June 2007.
251. Lee C. and Abdel-Aty M. (2007) Impact of Presence of Passengers on Freeway Crash Potential, Preprint No. TRB 07-0589, 86th Annual Meeting of the *Transportation Research*

- Board*, January 2007.
252. Pande A. and Abdel-Aty M. (2007) Market Basket Analysis: A Novel Way to Find Patterns In Crash Data From Large Jurisdictions, Preprint No. TRB 07-0055, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 253. Abdel-Aty M. and Dhindsa A. (2007) Coordinated use of Variable Speed Limits and Ramp Metering for Improving Traffic Safety on Congested Freeways, Preprint No. TRB 07-0008, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 254. Yan X., Abdel-Aty M., Radwan E., Wang X. and Chilakapati P. (2007) Using Traffic and Safety Measures for Driving Simulator Validation, Preprint No. TRB 07-0053, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 255. Pande A. and Abdel-Aty M. (2007) Analysis of Output from Crash prediction Models and Their Amalgamation in A Proactive Traffic Management Framework, Preprint No. TRB 07-0529, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 256. Abdel-Aty M., Lee C., Bai Y., Li X. and Michalak M. (2007) A Two-Stage Approach to Identify Flight Delay Patterns, Preprint No. TRB 07-0005, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 257. Abdelawahab H. and Abdel-Aty M. (2007) Nested Logit Mode Choice Models Using Full Information Weighted Exogenous Maximum Likelihood, Al-Azhar Engineering 9th International Conference, Cairo, April 12-14, 2007.
 258. Abdel-Aty M. and Pande A. (2006) Properties of Freeway Rear-end Crash Clusters, Proceedings of the 11th International Conference of the Hong Kong Society of Transportation Studies, HK, December 2006.
 259. Dos Santos C., Abdel-Aty M. and Yan X. (2006) Using a Driving Simulator to Assess the Safety Benefits of Variable Speed Limits, Proceedings of the 11th International Conference of the Hong Kong Society of Transportation Studies, HK, December 2006.
 260. Gayah V., Dos Santos C., Abdel-Aty M., Dhindsa A. and Dilmore J. (2006) Evaluating ITS Strategies for Real-Time Freeway Safety Improvement, *9th International IEEE Conference on Intelligent Transportation Systems (ITSC2006)*, Toronto, September 2006.
 261. Abdel-Aty M. and Dhindsa A. (2006) Evaluation of ITS alternatives targeting crash mitigation on Freeways using Micro-simulation, Applications of Advanced Technologies in Transportation, AATT 2006, ASCE, Chicago, August 2006.
 262. Lee C. and Abdel-Aty M. (2006) Real-Time Prediction of Ramp-Related Crash Risk, Applications of Advanced Technologies in Transportation, AATT 2006, ASCE, Chicago, August 2006.
 263. Pande A. and Abdel-Aty M. (2006) Application of data mining techniques for real-time crash risk assessment on freeways, Applications of Advanced Technologies in Transportation, AATT 2006, ASCE, Chicago, August 2006.
 264. Harb R., Radwan E., Yan X and Abdel-Aty M. (2006) Light Truck Vehicles (LTVs) Contribution to Rear-End Collisions, Preprint No. TRB 06-0995, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 265. Chundi S., Abdel-Aty M., Radwan E., Klee H. and Birriel E. (2005) A Conceptual Approach for Using the UCF Driving Simulator as a Test Bed for High Risk Locations, DSC 2005 North America - Orlando - November 2005
 266. Pande A. and Abdel-Aty M. (2005) Identification of Rear-end Crash Patterns on Instrumented Freeways: A Data Mining Approach, *8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005)*, Vienna, September 2005.

267. Abdel-Aty M., Pande A. and Uddin N. (2005) Traffic Surveillance from a Safety Perspective: An ITS Data Application, *8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005)*, Vienna, September 2005.
268. Abdel-Aty M. and Abdalla F. (2005) Simulation Experiments to Investigate Drivers Adherence with Traffic Information, *8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005)*, Vienna, September 2005.
269. Wang X. and Abdel-Aty M. (2005) Modeling Longitudinal Crash Frequencies at Signalized Intersections Using Generalized Estimating Equations with Negative Binomial Link Function, *13th International Conference, Road Safety on Four Continents*, Warsaw, October 2005.
270. Abdel-Aty M., Pande A. and Uddin N. (2005) Proactive Real-Time Safety Implementation Strategy on Freeways, *13th International Conference, Road Safety on Four Continents*, Warsaw, October 2005.
271. Abdel-Aty M. and Abdalla F. (2005) Analysis of ATIS Effect on Mode and Route Choices, *12th World Congress on Intelligent Transportation Systems*, San Francisco, November 2005.
272. Abdel-Aty M. and Pemmanaboina R. (2005), An ATMS Accident Prediction Model using Traffic and Rain Data, *12th World Congress on Intelligent Transportation Systems*, San Francisco, November 2005.
273. Abdel-Aty M., Uddin N. and Pande A. (2005) Improving safety and security by developing a traffic accident prevention system, *Proceedings of the First International Conference on Safety and Security Engineering*, Rome, Italy, June 2005.
274. Abdel-Aty M. and Pande A. (2004) Classification of Real-Time Traffic Speed Patterns to Predict Crashes on Freeways, Preprint No. TRB 04-2635, 83rd Annual Meeting of the *Transportation Research Board*, January 2004.
275. Abdalla F. and Abdel-Aty M. (2004) Modeling Long- and Short-Term Travel Time under ATIS Using Mixed Linear Models for Correlated Data, Preprint No. TRB 04-4839, 83rd Annual Meeting of the *Transportation Research Board*, January 2004.
276. Abdel-Aty M. and Pande A. (2004) Predicting Traffic Crashes Using Real-Time Traffic Speed Patterns, *10th World Conference on Transport Research*, Istanbul, Turkey, July 2004.
277. Abdel-Aty M. and Abdalla F. (2004) Modeling Drivers' Diversion from Normal Route, Link Choice and Compliance Under ATIS Using Generalized Estimating Equations, *10th World Conference on Transport Research*, Istanbul, Turkey, July 2004.
278. Abdel-Aty M. and Mohammed A. (2004) Exploring the Safety Risks of Cellular Phone Use While Driving, *10th World Conference on Transport Research*, Istanbul, Turkey, July 2004.
279. ElAarag H. and Abdel-Aty M. (2003) Traffic Accident Simulation and Animation, *Proceedings of the Summer Computer Simulation Conference (SCSC'03)*, Montreal, July 2003.
280. Abdel-Aty M. (2003) Spatial Analysis of Expressway Ramps, *8th International Conference on Computers in Urban Planning and Urban Management (CUPUM'03)*, Sendai, Japan, May 2003.
281. Abdel-Aty M. and Abdalla F. (2003) Computer Simulation and Animation Tool for Realistic Route Choice Data Collection, *8th International Conference on Computers in Urban Planning and Urban Management (CUPUM'03)*, Sendai, Japan, May 2003.
282. Abdel-Aty M., Aiouche H., Abdelwahab H, Cooper C.D., and Miller R. (2001) Investigating Car Occupancy Rates on Toll Roads: Empirical Results From an Origin-Destination Study and Its Implication on Air Quality, *Proceedings of the 94th Annual Conference of the Air and Waste Management Association*, Orlando.

283. Abdel-Aty M. and Mejdoub M. (2001) Modeling Severe Traffic Crashes at Intersections, Proceedings of the 9th World Conference on Transport Research (WCTR), Seoul, July 2001.
284. Abdelwahab H. and Abdel-Aty M. (2001) Applying Fuzzy ARTMAP Neural Networks to Predict Driver's Injury Severity in Traffic Accidents, Proceedings of the 9th World Conference on Transport Research (WCTR), Seoul, July 2001.
285. Abdel-Aty M., Abdelwahab H., Aiouche H., and Huang Y. (2001) The Design and Administration of an Origin/Destination Survey for The Central Florida Expressway System, Proceedings of the 9th World Conference on Transport Research (WCTR), Seoul, July 2001.
286. Abdel-Aty M. and Abdelwahab H. (2000) Application of Differential GPS for Collision Avoidance in a Wireless Environment, *Proceedings of the 10th Annual Meeting of ITS America (ITS 2000)*, Boston.
287. Abdel-Aty M. and Jovanis P. (1998) A Survey of the Elderly: An Assessment of their Travel Characteristics, Preprint No. TRB 980001, 77th Annual Meeting of the *Transportation Research Board* (TRB).
288. Abdel-Aty M., Abdallah M. and As-Saidi A. (1997). A Methodology for Route Selection and Guidance Using GIS and Computer Network Models, Preprint No. TRB 970016, 76th Annual Meeting of the *Transportation Research Board*.
289. Abdel-Aty M. (1997). Using Travel Surveys and Experiments to Explore the Potential Impact of Transit Information Systems on Mode Choice, Proceedings of the 30th *International Symposium on Automotive Technology and Automation*, Florence, Italy.
290. Abdel-Aty M. and Jovanis P. (1997). Using New Technologies to Meet the Transportation Demand of the Special Needs Travelers: A Framework, Proceedings of the 30th *International Symposium on Automotive Technology and Automation*, Florence, Italy.
291. Garib A., Abdel-Aty M. and Radwan E. (1997). Investigating the Factors Influencing the Motor Vehicles' Fire Accidents, Proceedings of the 30th *International Symposium on Automotive Technology and Automation*, Florence, Italy.
292. Abdel-Aty M., Kitamura R. and Jovanis P. (1995) Understanding the Effect of ATIS on Commuters' Route Choice Decisions, Published in the *Proceedings of the 5th Annual Meeting of ITS America*, Vol. 1.
293. Reddy P., Vaughn K., Abdel-Aty M., Kitamura R. & Jovanis P. (1995). Design of a Recurrent Neural Network for Analyzing Route Choice Behavior in the Presence of an Information System, Published in the *Proceedings of the 5th Annual Meeting of ITS America*.
294. Abdel-Aty M., Vaughn K., Jovanis P., Kitamura R. & Mannering F. (1994). Impact of Traffic Information on Commuters' Behavior: Empirical Results from Southern California and their Implications for ATIS", Published in the *Proceedings of the 4th Annual Meeting of IVHS America*, Vol. 2.
295. Abdel-Aty M., Vaughn K., Jovanis P. & Kitamura R. (1993) Understanding Traveler Responses to ATIS, *Proceedings of the 26th ISATA Conference*, Aachen, Germany, 13-17th September, pp. 245-252.

INVITED PAPERS

296. Abdel-Aty M. (2004) Linking Crash Patterns to ITS-Related Archived Data, Sunguide Disseminator, State Traffic Engineering and Operations Newsletter, FDOT, Tallahassee, Florida, December 2004 edition.

297. Abdel-Aty M. and Abdalla F. (2004) A Computer Simulation and Animation Tool to Collect Driver Behavior under Different Types and Levels of Traffic Information/Advice, *Modeling and Simulation Magazine*, Vol. 3 No. 2.
298. Abdelwahab H. and Abdel-Aty M. (2003) Use of the Internet to Enhance Transportation Data Collection, proceedings of the Institute of Transportation Engineers 2003 Annual Meeting and Exhibit, Seattle, Washington, August 2003.
299. Abdel-Aty M. (2002) Calibration of a Florida Nested-logit Mode Choice Model, *Florida Transportation Modeling*, Vol. 19, April 2002.

BOOK CHAPTERS

300. Kitamura, R., P.P. Jovanis, M. Abdel-Aty, K.M. Vaughn and P. Reddy (1999) Impacts of pre-trip and en-route information on commuters' travel decisions: Summary of laboratory and survey-based experiments from California. In R. Emmerink and P. Nijkamp (eds.) Behavioural and Network Impacts of Driver Information Systems, *Ashgate Publishing*, Alershot, pp. 241-267.

NON REFEREED CONFERENCE PROCEEDINGS

301. Abdel-Aty M., Huang H., Ekram A. and Oloufa A. (2010) Roadway Safety Analysis of Fog Related Crashes and Development of a Visibility Warning System, Proceedings of the 2nd IRF Middle East Regional Congress, Abu Dhabi, Nov. 30, 2010.
302. ElAzzony T., Talaat H. and Abdel-Aty M. (2010) A Microsimulation-based test bed for pre-deployment evaluation of U-turns in Egypt's urban corridors, Accepted for the proceedings of the 19th International Conference on Management of Technology, Cairo, March 2010.
303. Huang H. and Abdel-Aty M. (2009) Traffic crash hotspot identification: State-of-the-art and future directions, 18th International Conference on Management of Technology, Orlando, April 2009.
304. Abdel-Aty M., Haleem K., Cunningham R. and Gayah V. (2009) Application of Variable Speed Limits and Ramp Metering To Improve Safety and Efficiency of Freeways, 2nd International Symposium on Freeway and Tollway Operations, Hawaii, June 2009.
305. Wang X., Cheng W. and Abdel-Aty M. (2009) Intersection Related Crash Identification for Accurate Safety Representation. 35th International Forum on Traffic Records & Highway Safety Information Systems, July 12-16, 2009, Phoenix, AZ.
306. Guo F., Wang X., and Abdel-Aty M. (2008) Safety Analyses of Signalized Intersections Using Hierarchical Bayesian Spatial Models, Joint Statistical Meeting 2008 (JSM 2008, American Statistical Association, The International Biometric Society, the Institute of Mathematical Statistics, and the Statistical Society of Canada), Denver, August 3 - 7, 2008.
307. Abdel-Aty M., Yan X., Radwan E., Wang X. and Chen X. (2007) Exploring Driving Simulator as a Traffic Safety Test Tool at Signalized Intersections, the 7th International Conference of Chinese Transportation Professionals, Shanghai, May 2007.
308. Wang X., Abdel-Aty M. and Chen X. (2007) Safety Analyses at Signalized Intersections: Research Strategies, Modeling Techniques, and Significant Factors, the 7th International

- Conference of Chinese Transportation Professionals, Shanghai, May 2007.
309. Yan X., Radwan E., Abdel-Aty M., Harb R. and Dos Santos C. (2007) UCF Driving Simulator's Research and Application in Traffic Safety and Operation, the 7th International Conference of Chinese Transportation Professionals, Shanghai, May 2007.
 310. Abdel-Aty M., Dos Santos C., Gayah V., Dhindsa A. and Dilmore J. (2006) The Potential of ITS Applications to Reduce Crash Potential on Urban Freeways using Micro-Simulation, Proceedings of the International Symposium of Transport Simulation 2006 (ISTS06), Lausanne, Sep 2006.
 311. Abdel-Aty M. (2003) Exploring the Viability of Non-Traditional Injury Severity Modeling Methods, Proceedings of the Canadian Multidisciplinary Road Safety Conference, Banff, Alberta, June 2003.
 312. Abdel-Aty M. (2003) A Preliminary Investigation into the Impact of the Increase in Minivans, Light-duty Trucks, and SUVs on Future Traffic Fatality Trends, Proceedings of the Canadian Multidisciplinary Road Safety Conference, Banff, Alberta, June 2003.
 313. Abdel-Aty M. and Abdalla F. (2002) Design and Development of a Computer Simulation Tool to Collect Data that Support Hybrid Travel Models Under ATIS, Proceedings of the 4th Transportation Speciality Conference, Canadian Society of Civil Engineers, Montreal, June 2002.
 314. Abdel-Aty M. and Abdelwahab H. (2002) Calibration of Nested-Logit Mode-Choice Models for Florida, Proceedings of the 4th Transportation Speciality Conference, Canadian Society of Civil Engineers, Montreal, June 2002.
 315. Vitetta B. and Abdel-Aty M. (2000). Using Induced Exposure to Investigate the Effect of Driver Factors in Traffic Safety, Proceedings of the 3rd Transportation Speciality Conference, Canadian Society of Civil Engineers, London.
 316. Abdelwahab H. and Abdel-Aty M. (2000). Log-Linear Analysis of the Relationship Between Alcohol Involvement and Driver Characteristics in traffic Crashes, Proceedings of the 3rd Transportation Speciality Conference, Canadian Society of Civil Engineers, London, Ontario.
 317. Abdel-Aty M. and As-Saidi A. (1999). Using GIS to Locate High Risk Driver Population, Proceedings of the International Conference "Traffic Safety on Two Continents", Vol. 2, pp.111-126, Malmo, Sweden.
 318. Abdel-Aty M. and Radwan E. (1999). Developing Crash Predictive Models for a Principal Arterial, Proceedings of the International Conference "Traffic Safety on Two Continents", Vol. 1, pp. 179-194, Malmo, Sweden.
 319. Radwan E., Mostofa H. and Abdel-Aty M. (1998). Traffic Crash modeling on Urban Arterial, Proceedings of the International Conference on Transportation Into the Next Millennium, Singapore.
 320. Abdel-Aty M., Chen C. and Radwan E. (1998). Exploring the Relationship Between Drivers Age and Crash Involvement, Proceedings of the 2nd Transportation Speciality Conference, Vol. IVc, Canadian Society of Civil Engineers, Halifax.
 321. Mohamed A. and Abdel-Aty M. (1998). Safety Aspects at a Toll Plaza Equipped with Automatic Vehicle Identification Technology, Proceedings of the 2nd Transportation Speciality Conference, Vol. IVc, Canadian Society of Civil Engineers, Halifax.
 322. Jovanis P., Abdel-Aty M. and Kowshik R. (1996). Improving the Mobility of the Elderly and Disabled Using Advanced Transportation Technologies, Proceedings of the Rural ITS Conference, Spokane, Washington, Sep. 30 - Oct. 1.
 323. Abdel-Aty M., Kitamura R. & Jovanis P. (1995) Impact of ATIS on Route Choice, the

Proceedings of the ASCE Transportation Congress, Volume I, San Diego, October 22-26. pp. 304-314.

324. Abdel-Aty, M., Jovanis, P., Reddy, P., Vaughn, K. and Kitamura, R. (1995) A New Approach to Route Choice Data Collection: Multi-Phase, CATI Panel Surveys using a GIS Database, Fifth National Conference on Transportation Planning Methods Applications-Volume II: A Compendium of Papers Based on a Conference Held in Seattle, Washington in April 1995.
325. Abdel-Aty M., Kitamura R., Jovanis P., Reddy P & Vaughn K. (1994) Studying Route Choice Behavior Using Computer Aided Telephone Interviews and GIS, In *Computing in Civil Engineering: Proceedings of the First Congress Held in Conjunction with A/E/C Systems 1994*, American Society of Civil Engineers, Washington D.C., June, pp. 1343-1348.
326. Vaughn K., Reddy P., Kitamura R., Jovanis P. & Abdel-Aty M. (1994) Design of a Network and Travel Simulator: A Tool Box for the Analysis of Route Choice Behavior in the Presence of Information, In *Computing in Civil Engineering: Proceedings of the First Congress Held in Conjunction with A/E/C Systems 1994*, American Society of Civil Engineers, Washington D.C., June, pp. 1743-1750.
327. Vaughn K., Abdel-Aty M., Kitamura R. & Jovanis P. (1993) Analysis of Sequential Route Choice Under ATIS, In L.F. Cohn (ed.), the *Proceedings of the Fifth International Conference on Computing in Civil Engineering*, ASCE, Anaheim, CA, June 7-9, pp. 825-832.

RESEARCH REPORTS

More than 70 technical reports.

CITATIONS

H-Index Search in January 2014 produced the following:

Citations for "'Mohamed Abdel-Aty'" : 4255

H-Index: 34

i10-index: 93

SELECTED PRESENTATIONS

1. Non-Governmental and Societal Organizations and their Role in Improving Traffic Safety in the United States, Keynote speech, 2nd Forum on Traffic Safety, Dammam, Saudi Arabia, November 2013.
2. College of Engineering and Computer Science at UCF, Seminar at the American University of Dubai, October 2013.
3. Road Safety Experience in the United States: Overview of the State of the art and practice, Seminar at Bahcesehir University, Istanbul, June 2013.
4. State-of-the-Art and Practice in Road Safety, Seminar at Ege University, Izmir, July 2013.
5. Demographic and Socioeconomic Factors Associated with Traffic Crash Involvement in Florida, 16th International Conference Road Safety on Four Continents, Beijing, China 15-17 May 2013.
6. Visibility Warning Systems for the Safety and Efficiency of Highways, 2nd International Symposium on Traffic Safety, Tongji University, China, May 19, 2013.
7. Current Traffic Safety Research Initiatives and the Future Opportunities for Practice, Central South University, Changsha, China, May 29, 2013.
8. Multilevel Crash Injury Severity Analysis Using Parametric and Nonparametric Approaches, 92nd Annual Meeting of the *Transportation Research Board*, January 2013.
9. Changing the Way we think about Traffic Safety: Current Traffic Safety Research Initiatives, Hellenic Institute of Transportation Engineers and National Technical University of Athens, Seminar, Athens, November 12, 2012.
10. Pro-Active Roadway Safety and the Future of Research and Practice, Keynote speech, ICTCT safety conference, Hasselt, Belgium, Nov. 9, 2012.
11. An Overview of the Multi-Level Analysis in Traffic Safety, Seminar, IFSTTAR, Paris, October 23, 2012.
12. State-of-the-Art in Road Safety Research and Practice in the U.S., Plenary session, 3rd Chinese-German Symposium on Urban Road Traffic Safety, Shanghai, October 2012.
13. Exploring the Safety Application of Automatic Vehicle Identification Data, Annual General Conference of the Canadian Society of Civil Engineers, Edmonton, Alberta, June 6-9, 2012.
14. Overview of Current Traffic Safety Research and Future Opportunities, Seminar, Tongji University, China, April 28, 2012.
15. Road Safety in the United States : Overview of the State-of-the-art and practice, International Seminar on Public Transportation, TOD and Traffic Operation for Better Mobility, Ajou University, Korea, April 26, 2012.
16. The College of Engineering and Computer Science at UCF, Seminar, Ajou University, Korea, April 2012.
17. An Overview of Road Safety Practice, Gyeonggi Research Institute, Korea, April 2012.
18. Real-time Analysis of Visibility Related Crashes: Can Loop Detector and AVI Data Predict them Equally, 91st Annual Meeting of the *Transportation Research Board*, January 2012.
19. A Bayesian Updating Approach For Real-time Safety Evaluation Using AVI Data, 91st Annual Meeting of the *Transportation Research Board*, January 2012.
20. Road Safety Experience in the United States: Overview of the State of the art and practice, Keynote Speech, First Road Safety Forum, Dammam, Saudia Arabia, Dec. 12, 2011.
21. The Future of Road Safety: Overview of State-of-the-Art and Practice, International Road Federation Group of Experts on Road Safety, Geneva, November 3, 2011.
22. Use and Content of CMS and VSL under Low Visibility Conditions, 18th ITS World Congress,

- October 18, 2001, Orlando, Florida.
23. Young Drivers Safety, Florida DOT, District 5, October 5, 2011.
 24. Pro-Active Traffic Safety and the Future of Roadway Safety Research, Keynote Speech, *1st International Conference on Transportation Information and Safety (ICTIS 2011)*, June 30th ~July 2nd 2011, Wuhan, China
 25. New Research Direction: Pro-Active Roadway Safety, Tongji University, Shanghai, China, June 2011.
 26. Transportation Safety Planning, Workshop for Urban Transportation Research, organized by MOELAB, Beijing Jiaotong University, China, June 2011.
 27. Thoughts on the Future of Traffic Safety Research, Korea Transportation Institute, Seoul, May 2011.
 28. Transportation Safety Planning, International Seminar on TOD: Rail + Property and Safety Planning, TODERC, Ajou University, Suwon, Korea, May 24, 2011.
 29. Integrating Trip And Roadway Characteristics In Managing Safety At Traffic Analysis Zones, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 30. The Effect of Warning Messages And Variable Speeds In Different Visibility Conditions, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 31. Exploring Visibility Related Crashes on Freeways based On Real-time Traffic Flow Data, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 32. Zonal Level Safety Evaluation Incorporating Trip Generation Effects, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 33. The Group Least Absolute Shrinkage and Selection Operator "GLASSO" Technique: Application in Variable Selection and Crash Prediction At Unsignalized Intersections, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 34. Real-time Crash Risk Estimation: Are All Freeways Created Equal, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 35. Development of a Proactive Hotspot Identification Method for Urban Arterials Using a Stochastic Catastrophe Model, 90th Annual Meeting of the *Transportation Research Board*, January 2011.
 36. Pro-active Roadway Safety and the New Direction in Safety Research, King Saud University, Riyadh, April 3, 2011.
 37. Pro-Active Traffic Safety: Changing the way we think about Safety, 2nd International Road Federation Middle East Regional Congress, Nov. 29- Dec. 1, 2010, Abu Dhabi.
 38. A Roadway Safety Analysis of a Fog Related Crashes and Development of a Visibility Warning System, 2nd International Road Federation Middle East Regional Congress, Nov. 29- Dec. 1, 2010, Abu Dhabi.
 39. Portable Visibility Warning System for the Safety of Highways, 17th ITS World Congress, October 25-29, Pusan, Korea.
 40. Enhancing Safety through Advanced Proactive Traffic Management, 17th ITS World Congress, October 25-29, Pusan, Korea.
 41. Traffic Management – the Next Generation, Active Traffic Management Summit, Denver, June 16, 2010.
 42. A Study on Visibility Obstruction Related Crashes Due to Fog and Smoke, 12th World Conference on Transport Research (WCTR), June 11-15, Lisbon, Portugal.
 43. Analysis of the Safety Characteristics of Unsignalized Intersections, 12th World Conference on Transport Research (WCTR), June 11-15, Lisbon, Portugal.

44. Enhancing Safety Through Advanced Pro-active Traffic Management, 19th International Conference on Management of Technology, Cairo, March 2010
45. Managing Transportation Technology, Panel Session, 19th International Conference on Management of Technology, Cairo, March 2010
46. Suggestions for Safety Studies for FDOT District 5, presentations at FDOT attended by district 5 secretary, DeLand, FL, January 2010.
47. County-level Crash Risk Analysis in Florida: Bayesian Spatial Modeling, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
48. Viability of Proactive Traffic Management on Freeways, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
49. Fog and Smoke Related Crashes in Florida: Identifying Crash Characteristics, Spatial Distribution and Injury Severity, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
50. Using Genetic Programming to Investigate the Design Parameters Contributing to Crash occurrence on Urban Arterials, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
51. Web-Based Application for Providing Crash Profiles at Intersections, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
52. Multiple Applications of the Multivariate Adaptive Regression Splines Technique In Predicting Rear-end Crashes At Unsignalized Intersections, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
53. Occupational Driver Safety of Public Transportation: Risk Perception, Attitude, and Driving Behavior, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
54. Analysis of Urban Arterial Safety in Developing Countries: Case of China, 89th Annual Meeting of the *Transportation Research Board*, January 2010.
55. Advances and Innovations in Traffic Safety Research, Plenary session, Chinese-German Symposium on Urban Road Traffic Safety, Shanghai, October 2009
56. Using Traffic Micro-simulation to Test Route Diversion as a Real-Time Crash Prevention Strategy on Freeways, *International Conference on Road Safety and Simulation RSS 2009*, October 2009, Paris, France.
57. Advanced Traffic Management, Colorado Department of Transportation, September 10, 2009.
58. Application of Variable Speed Limits and Ramp Metering To Improve Safety and Efficiency of Freeways, Plenary session, 2nd International Symposium on Freeway and Tollway Operations, Honolulu, June 2009.
59. Advances in Traffic Safety, Keynote Speech, International Conference on Intelligent Transportation Systems, Cairo, March 2009.
60. Large Scale Injury Severity Analysis For Arterial Roads: Modeling Scheme And Contributing Factors, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
61. Incorporating Traffic Operation Measures in Safety Analysis at Signalized Intersections, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
62. Evaluating Resurfacing Projects On Multilane Arterials And Identifying Best Practices, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
63. Patterns In Severe Crashes On Segments of Multi-lane Arterials With Partially Limited Access, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
64. Corridor Level Signalized Intersection Safety Analysis Using Bayesian Spatial Models, 88th

- Annual Meeting of the *Transportation Research Board*, January 2009.
65. Severity Analysis Of Crashes On Multilane Arterials Using Conditional Inference Forests, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
 66. Real-Time Estimation of Lane-Change and Car-Following-Related Traffic Flow Parameters and Their Effects on Crash Occurrence by Lane, 88th Annual Meeting of the *Transportation Research Board*, January 2009.
 67. The Viability of Real-time Prediction and Prevention of Traffic Accidents, the Fourth International Gulf Conference on Roads, Doha, Qatar, November 2008.
 68. Safety Research at UCF, Seminar, IIT Delhi, December 2008.
 69. Real-Time Risk Estimation on Freeways and the Viability of Proactive Traffic Management, Transpo2008, Orlando, Florida, September 2008.
 70. Intelligent Transportation Systems and their potential in Egypt, Egyptian Engineering Day, Cairo, July 2008.
 71. Viability of Real Time Prediction and Prevention of Traffic Crashes: How can we prevent traffic crashes in real-time, ITS Georgia, Savannah, October 2008.
 72. Proactive Freeway Management: The Viability of Real-Time Prediction and Prevention of Traffic Crashes, Freeway and Tollway Operations Conference, Fort Lauderdale, June 2008.
 73. Evaluating Route Diversion as a Strategy for Reduction of Real-Time Crash Risk on Freeways Using Microscopic Simulation, 10th International Conference on Applications of Advanced Technologies in Transportation (AATT), Athens, May 2008.
 74. Exploration of Crash Prone Traffic Conditions on Freeways in the Netherlands using Random Forests, 10th International Conference on Applications of Advanced Technologies in Transportation (AATT), Athens, May 2008.
 75. Assessing Rear-End Crash Risk at Signalized Intersections Based on the Driving Behavior, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
 76. Using Variable Sped Limits and Variable Message Signs for Real-Time Crash Risk Reductions on Freeways, 87th Annual Meeting of the *Transportation Research Board*, January 2008.
 77. A Proactive Approach to Freeway Traffic Management, Civil & Env. Engineering Dept., Corporate Affiliates Board, Fall 2007 lecture series.
 78. Overview of Recent Research in Traffic Safety and Travel Demand Modeling at UCF, Transportation Research Seminar, CATSS, November 2007.
 79. Framework for Real-Time Crash Estimation: Implications of Random and Matched Sampling Schemes, 14th International Conference Road Safety on Four Continents, Bangkok, Thailand, November 2007.
 80. Relationship Between Presence of Passengers and Freeway Crash Characteristics, 14th International Conference Road Safety on Four Continents, Bangkok, Thailand, November 2007.
 81. Exploring the Crash Severity Along an Urban Freeway Based on Temporal, Spatial, and Real-Time Traffic Conditions, 11th World Conference on Transport Research, Berkeley, California, June 2007.
 82. Temporal and Spatial Safety Analyses of Signalized Intersections, 11th World Conference on Transport Research, Berkeley, California, June 2007.
 83. Can we Predict Traffic Crashes in Real-Time? An Overview of Recent Research at The University of Central Florida, Seminar Institut National de Recherche sur les Transports et leur Securite (INRETS), Paris June 19, 2007.
 84. Disaggregate Analysis of Safety Data: A New Approach for Proactive Traffic Management, Keynote Speech, the 7th International Conference of Chinese Transportation Professionals,

- Shanghai, May 21, 2007.
85. Exploring Driving Simulator as a Traffic Safety Test Tool at Signalized Intersections, Tongji University Driving Simulator Lab Construction Technical Workshop, Shanghai, May 25, 2007.
 86. Integration of Freeway Safety and Advanced Traffic Management, Invited Speaker at the Institute of Transportation Engineers, Central Florida Chapter, April 30, 2007.
 87. Investigation of Signalized Intersection Right-Angle Crash Occurrence at Intersection, Roadway, and Approach Levels, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 88. Analysis of Output from Crash prediction Models and Their Amalgamation in A Proactive Traffic Management Framework, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 89. Impact of Presence of Passengers on Freeway Crash Potential, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 90. Market Basket Analysis: A Novel Way to Find Patterns In Crash Data From Large Jurisdictions, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 91. Coordinated use of Variable Speed Limits and Ramp Metering for Improving Traffic Safety on Congested Freeways, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 92. Using Traffic and Safety Measures for Driving Simulator Validation, 86th Annual Meeting of the *Transportation Research Board*, January 2007.
 93. Properties of Freeway Rear-end Crash Clusters, 11th International Conference of the Hong Kong Society of Transportation Studies, HK, December 2006.
 94. Real Time Simulation Applications for Traffic Safety, Transpo2006, Palm Harbor, Florida, November 2006.
 95. The Potential of ITS Applications to Reduce Crash Potential on Urban Freeways using Micro-Simulation, Proceedings of the International Symposium of Transport Simulation 2006 (ISTS06), Lausanne, Sep 2006.
 96. Evaluation of ITS alternatives targeting crash mitigation on Freeways using Micro-simulation, Applications of Advanced Technologies in Transportation, AATT 2006, ASCE, Chicago, August 2006.
 97. Application of data mining techniques for real-time crash risk assessment on freeways, Applications of Advanced Technologies in Transportation, AATT 2006, ASCE, Chicago, August 2006.
 98. Potential Real-Time Indicators of Sideswipe Crashes on Freeways, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 99. Assessing Crash Occurrence on Urban Freeways by Applying a System of Interrelated Equations, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 100. Applying Variable Speed Limits and the Potential for Crash Migration, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 101. Crash Estimation at Signalized Intersections: Significant Factors and Temporal Effect, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 102. Crash Estimation at Signalized Intersections along Corridors: Analyzing Spatial Effect and Identifying Significant Factors, 85th Annual Meeting of the *Transportation Research Board*, January 2006.
 103. A Comprehensive Analysis of the Relationship between Real-time Traffic Surveillance data and Rear-end Crashes on Freeways, 85th Annual Meeting of the *Transportation Research*

Board, January 2006.

104. A Conceptual Approach for Using the UCF Driving Simulator as a Test Bed for High Risk Locations, DSC 2005 North America - Orlando - November 2005
105. Modeling Longitudinal Crash Frequencies at Signalized Intersections Using Generalized Estimating Equations with Negative Binomial Link Function, *13th International Conference, Road Safety on Four Continents*, Warsaw, October 2005.
106. Proactive Real-Time Safety Implementation Strategy on Freeways, *13th International Conference, Road Safety on Four Continents*, Warsaw, October 2005.
107. Identification of Rear-end Crash Patterns on Instrumented Freeways: A Data Mining Approach, 8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005), Vienna, September 2005.
108. Traffic Surveillance from a Safety Perspective: An ITS Data Application, 8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005), Vienna, September 2005.
109. Simulation Experiments to Investigate Drivers Adherence with Traffic Information, 8th International IEEE Conference on Intelligent Transportation Systems (ITSC2005), Vienna, September 2005.
110. Traffic Safety Evaluation of Orange County School Children, Orange County School Board, August 16, 2005.
111. Improving safety and security by developing a traffic accident prevention system, First International Conference on Safety and Security Engineering, Rome, Italy, June 2005.
112. Intelligent Transportation Systems: The Road into the 21st Century, The International Telecommunication and Information Technology Conference, Cairo ICT, February 2005.
113. Analysis of the Types of Crashes at Signalized Intersections using Complete Crash Data and Tree-Based Regression, 84th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2005.
114. Spatio-Temporal Variation of Risk Preceding Crash Occurrence on Freeways, 84th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2005.
115. Split Models for Predicting Multi-Vehicle Crashes during High-Speed and Low-Speed Operating Conditions on Freeways, 84th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2005.
116. Predicting Traffic Crashes Using Real-Time Traffic Speed Patterns, 10th World Conference on Transport Research, Istanbul, Turkey, July 2004.
117. Modeling Drivers' Diversion from Normal Route, Link Choice and Compliance Under ATIS Using Generalized Estimating Equations, 10th World Conference on Transport Research, Istanbul, Turkey, July 2004.
118. Exploring the Safety Risks of Cellular Phone Use While Driving, 10th World Conference on Transport Research, Istanbul, Turkey, July 2004.
119. Classification of Real-Time Traffic Speed Patterns to Predict Crashes on Freeways, 83rd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2004.
120. Predicting Freeway Crashes Based on Loop Detector Data Using Matched Case-Control Logistic Regression, 83rd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2004.
121. Modeling Long- and Short-Term Travel Time under ATIS Using Mixed Linear Models for Correlated Data, 83rd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2004.

122. Modeling Repeated Multinomial Route Choices Under ATIS Using Generalized Estimating Equations with Polytomous Logit Function, 83rd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2004.
123. Linking Roadway Geometrics and Real-Time Traffic Characteristics to Model Daytime Freeway Crashes Using Generalized Extreme Equations for Correlated Data, 83rd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2004.
124. Traffic Safety Research, Delft University of Technology, The Netherlands, October 2003.
125. Modeling Multiple Route Choice Paradigms Under Different Types and Levels of ATIS Using Correlated Data, Delft University of Technology, The Netherlands, October 2003.
126. Origin-Destination Travel Survey for the Central Florida Expressway System, Eindhoven University, The Netherlands, October 2003.
127. Traffic Safety Research, Eindhoven University, The Netherlands, October 2003.
128. Traffic Accident Simulation and Animation, Summer Computer Simulation Conference (SCSC'03), Montreal, July 2003.
129. Exploring the Viability of Non-Traditional Injury Severity Modeling Methods, Proceedings of the Canadian Multidisciplinary Road Safety Conference, Banff, Alberta, June 2003.
130. A Preliminary Investigation into the Impact of the Increase in Minivans, Light-duty Trucks, and SUVs on Future Traffic Fatality Trends, Proceedings of the Canadian Multidisciplinary Road Safety Conference, Banff, Alberta, June 2003.
131. Traffic Safety Research, 2003 CECS Distinguished Research Lecturers, UCF, June 2003.
132. Spatial Analysis of Expressway Ramps, 8th International Conference on Computers in Urban Planning and Urban Management (CUPUM'03), Sendai, Japan, May 2003.
133. Computer Simulation and Animation Tool for Realistic Route Choice Data Collection, 8th International Conference on Computers in Urban Planning and Urban Management (CUPUM'03), Sendai, Japan, May 2003.
134. Configuration Analysis of Two-Vehicle Rear-End Crashes, 82nd Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2003
135. Design and Development of a Computer Simulation Tool to Collect Data that Support Hybrid Travel Models Under ATIS, the 4th Transportation Speciality Conference, Canadian Society of Civil Engineers, Montreal, Quebec, June 2002.
136. Calibration of Florida Nested-Logit Mode-Choice Model, the 4th Transportation Speciality Conference, Canadian Society of Civil Engineers, Montreal, Quebec, June 2002.
137. Traffic Safety Analysis for Toll Plazas of Toll Facilities using Artificial Neural Networks and Logit Models, 81st Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2002.
138. Investigating the Travel and User Characteristics of Toll Roads Based on a Travel Survey of the Central Florida Expressway System, 81st Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2002.
139. Driver Distraction Metrics, Vehicle User Characteristics Committee, Transportation Research Board, Washington D.C., January, 2002.
140. Development of Artificial Neural Networks Models to Predict Driver Injury Severity in Traffic Accidents at Signalized Intersections, 80th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2001.
141. Design and Implementation of an Origin-Destination Travel Survey for the Central Florida Expressway System, 80th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 2001.

142. Modeling Severe Traffic Crashes at Intersections, 9th World Conference on Transport Research, Seoul, Korea, July 2001.
143. Applying Fuzzy ARTMAP Neural Networks to Predict Driver's Injury Severity in Traffic Accidents, 9th World Conference on Transport Research, Seoul, Korea, July 2001.
144. The Design and Administration of an Origin/Destination Survey for The Central Florida Expressway System, 9th World Conference on Transport Research, Seoul, Korea, July 2001.
145. Using Induced Exposure to Investigate the Effect of Driver Factors in Traffic Safety, the 3rd Transportation Speciality Conference, Canadian Society of Civil Engineers, London, Ontario, June 2000.
146. Log-Linear Analysis of the Relationship Between Alcohol Involvement and Driver Characteristics in traffic Crashes, the 3rd Transportation Speciality Conference, Canadian Society of Civil Engineers, London, Ontario, June 2000.
147. Origin/Destination Survey for the Central Florida Expressway System, Florida Transportation Modeling Applications Conference, Clearwater, May 2000.
148. The Design and Administration of an Origin/Destination Survey for the Central Florida Expressway System, Al-Azhar Engineering Sixth International Conference, Cairo, Egypt September 2000.
149. Applying MLP Neural Networks to Predict Driver's Injury Severity in Traffic Accidents, Al-Azhar Engineering Sixth International Conference, Cairo, Egypt September 2000.
150. Central Florida Expressway System Origin/Destination Survey, OOCEA Board Meeting, February 2000.
151. Using GIS to Locate High Risk Driver Population, International Conference "Traffic Safety on Two Continents", Malmo, Sweden, September 1999.
152. Developing Crash Predictive Models for a Principal Arterial, International Conference "Traffic Safety on Two Continents", Malmo, Sweden, September 1999.
153. Exploring the Relationship between Drivers' Demographic Characteristics and Traffic Accident Involvement, Seminar, Institute of Transportation Studies, University of California, November 1998.
154. Exploring the Relationship between Drivers Age and Crash Involvement, the 2nd Transportation Specialty Conference, Canadian Society of Civil Engineers, Halifax, Nova Scotia, June 1998.
155. Safety Aspects at a Toll Plaza Equipped with Automatic Vehicle Identification Technology, the 2nd Transportation Speciality Conference, Canadian Society of Civil Engineers, Halifax, Nova Scotia, June 1998.
156. Survey of the Elderly: An Assessment of their Travel Characteristics, 77th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 1998.
157. Modeling Incident-Related Routing Decisions Including the Effect of Traffic Information Using a Nested Logit Structure, 77th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 1998.
158. Using Travel Surveys and Experiments to Explore the potential Impact of Transit Information Systems on Mode Choice, 30th International Symposium on Automotive Technology & Automation (ISATA), Florence, Italy 16th-19th June 1997.
159. Investigating the Factors Influencing the Motor Vehicles Fire Accidents, 30th ISATA, Florence, Italy, June 1997.
160. Using New Technologies to Meet the Transportation Demand of the Special Needs Travelers, 30th ISATA, Florence, Italy, 1997.

161. Investigating the Factors Influencing Route Choice in Transportation Networks, Seminar, Institute of Transportation Studies, University of California, March 1997.
162. A Methodology for Route Selection and Guidance Using GIS and Computer Network Models, 76th Annual Meeting of the Transportation Research Board (TRB), Washington D.C., January, 1997.
163. Investigating the Effect of Advanced Traveler Information on Commuters' Tendency to Use Transit, 75th Annual Meeting of TRB, Washington D.C., January 9, 1996.
164. Impact of ATIS on Route Choice, Transportation Congress, American Society of Civil Engineers (ASCE), San Diego, October 1995.
165. A New Approach to Route Choice Data Collection: Multi-phase, CATI Panel Surveys Using A GIS Database, 5th National Transportation Planning Methods Application Conference, Seattle, April 1995.
166. Understanding the Effect of ATIS on Commuters' Route Choice Decisions, 5th Annual Meeting of ITS America, Washington D.C., March 1995.
167. Investigating the Factors Influencing Route Choice: New Approaches in Data Collection and Modeling, Winter Seminar Series Institute of Transportation Studies, University of California, February 1995.
168. Investigating the Effect of Travel Time Variability on Route Choice Using Repeated-measurement Stated Preference Data, 74th Annual Meeting of TRB, Washington D.C., January 1995.
169. Route Choice Models Using GIS-based Alternative Routes and Hypothetical Travel Time Information Input, 74th Annual Meeting of TRB, Washington D.C., January 1995.
170. Models of Commuters' Information Use and Route Choice: Initial Results Based on a Southern California Commuter Route Choice Survey, 73rd Annual Meeting of the Transportation Research Board, Washington D.C., January 1994.
171. Impact of Advanced Traveler Information Systems on Drivers' Route Choice Decisions, meeting of the Northern California Chapter of ITE, Davis, California, February 1993.

In addition to several presentations to Florida Department of Transportation (FDOT), MetroPlan Orlando, Greater Orlando Aviation Authority, FL Turnpike Enterprise, Colorado Department of Transportation, Orlando-Orange County Expressway Authority, California Department of Transportation (CalTrans) and Partners for Advanced Transit and Highways (PATH) related to several research projects, 1991-2013. Also multiple presentations (not listed above) at the Transportation Research Board's Annual meetings.