

## Hany Hassan, Ph.D.

### CURRENT POSITION

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#### *Assistant Professor in Transportation Engineering*

Department of Civil and Environmental Engineering

3240E Patrick F. Taylor Hall

Louisiana State University

Baton Rouge, LA 70803

Phone: (225) 578-6588

Email: hassan1@lsu.edu

Website: <http://scholar.google.ae/citations?user=NTpYt3oAAAAJ&hl=en>

### PROFESSIONAL PROFILE

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- Self-motivated and highly skilled researcher in Transportation Engineering
- Over 10 years of experience in Academia (teaching and research) through working as graduate research assistant, post-doctoral/ senior researcher and assistant professor in Transportation Engineering
- Over 7 years of industrial experience through working as Highway design & Transportation Engineer as well as projects manager in several transportation firms
- Member in TRB committee on User Information Systems, AND20 since 2011  
<https://sites.google.com/site/trband20/membership>
- Paper review coordinator of the TRB committee on Intelligent Transportation Systems (TRB ITS committee, AHB15), since January 2019  
<https://www.mytrb.org/OnlineDirectory/Committee/Details/2074>
- Traffic safety instructor with International road federation (IRF)
- Experienced in teaching undergraduate and graduate courses in Civil/Transportation Engineering
- Experienced in developing externally funded research program, and effectively manage research projects and students/researchers
- Experienced in writing technical proposals/papers and published them in international journals
- Experienced in applying the five phases of project management (initiation, planning, execution, monitoring and closing)
- Experienced in using driving simulator, statistical and transportation software
- Active reviewer for several Transportation Engineering Journals (such as AAP, TRB, Transportation research part F, Transportation safety and Security, Canadian Journal of Civil Engineering)

### EDUCATION

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#### **University of Central Florida**

Doctor of Philosophy in Civil Engineering (Transportation)

Dissertation: *Improving Traffic Safety and Driver Behavior in Reduced Visibility Conditions*

Orlando, USA

August 2011

#### **Ain Shams University**

Master of Science in Civil Engineering (Transportation)

Dissertation: *Environmentally Oriented Road Design*

Cairo, Egypt

September 2005

#### **Ain Shams University**

Bachelor of Science in Civil Engineering (Grade: Distinction with honor)

Graduation Project: *Highway and Airport Engineering Project* (Grade: Distinction)

Cairo, Egypt

June 2000

## RESEARCH INTERESTS

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Transportation Safety, Smart/Intelligent Transportation Systems, Emerging Technologies in Transportation Engineering (connected and autonomous vehicles, smart cities), Highway Geometric Design, Human factors and drivers' behaviors, Traffic Operation and Simulation, and Statistical Applications in Transportation Engineering.

## GOOGLE SCHOLAR

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According to my google scholar, my work has been cited more than 470 times to date by researchers from all over the world. More details can be found at my google scholar profile, which is located at [<http://scholar.google.ae/citations?user=NTpYt3oAAAAJ&hl=en>].

## PROFESSIONAL MEMBERSHIPS

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|---|-----------------------|
| (1) Member in TRB Committee on User Information Systems, AND20  | Apr. 2011 – Present   |
| (2) Member and paper review coordinator in TRB Committee on Intelligent Transportation Systems, AHB15 | Jan. 2019 – Present   |
| (3) American Society of Highway Engineers (ASHE), vice president                                      | Aug. 2008 – Aug. 2011 |
| (4) The Institute of Transportation Engineers (ITE), UCF  | Aug. 2009 - Aug. 2011 |
| (5) Graduate Student Association (GSA), UCF   | Aug. 2010 - Aug. 2011 |

## ACADEMIC HONORS AND AWARDS

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- Nominee, the Civil department level award for outstanding Ph.D. dissertation, Faculty of Engineering, University of Central Florida, USA, October 28, 2011
- Recipient, Arab American Community Center Endowed Scholarship, Orlando, March 2011
- Recipient, the Intelligent Transportation Society of Florida scholarship (the Anne S. Brewer Scholarship), one of three recipients on the state level, December 2009
- Recipient, the American society of Highway Engineers (ASHE) scholarship, April 2009
- Nominee, the college level award for outstanding M.Sc. dissertation, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 2005

## SUMMARY OF ACADEMIC EXPERIENCE

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Aug. 2019 – Present	Assistant Professor in Transportation Engineering, Department of Civil and Environmental Engineering, Louisiana State University, Baton Rouge, LA, USA
Apr. 2018 – July 2019	Senior Researcher in Transportation Engineering, McMaster Institute for Transportation and Logistics (MITL), McMaster University, Hamilton, ON, Canada.
Oct. 2011 – Sep. 2013	Research Assistant Professor in Transportation Engineering, Civil Engineering Department, King Saud University, Riyadh, Saudi Arabia.
Aug. 2008 – Aug. 2011	Graduate Research Assistant / Ph.D. Candidate, Department of Civil, Environmental and Construction Engineering, University of Central Florida, Orlando, FL, USA.
Mar. 2002 – Jul. 2008	Assistant lecturer in Highway Engineering, Department of Civil Engineering, Ain Shams University, Cairo, Egypt.

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## SUMMARY OF INDUSTRIAL EXPERIENCE

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- Oct. 2013- March 2018      Senior Transportation Engineer / Projects manager,  
Department of traffic engineering and road safety, Abu Dhabi  
Police / TATWEER for Traffic Assets & Systems Operation and  
Management L.L.C, Abu Dhabi, UAE
- Dec. 2006 – Jul. 2008      Highway Design Engineer, Transportation Engineering  
Department, Dar Al-Handasah (Shair and partners) Company,  
Cairo, Egypt

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## WORK EXPERIENCE IN ACADEMIA

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- 1. Senior Researcher in Transportation Engineering**      **April 2018 – July 2019**  
McMaster Institute for Transportation and Logistics (MITL),      Hamilton, ON, Canada  
McMaster University  
<http://mitl.mcmaster.ca/team/dr-hany-hassan>

My duties included:

- Preparing technical and financial proposals related to several aspects of transportation engineering to attract funded research projects.
- Conducting multidisciplinary research with faculty members from other faculties at McMaster University (i.e., Faculty of Engineering, faculty of science and faculty of health sciences).
- Working on several research projects related to: electrical mobility, Safety and mobility of older adults, Motor Cycle crash causation study, and autonomous vehicles technology.
- Supervising several undergraduate and graduate students at MITL.

- 2. Research Assistant Professor in Transportation Engineering**      **Oct. 2011 – Sep. 2013**  
Civil Engineering Department, Faculty of Engineering,      Riyadh, Saudi Arabia  
King Saud University,

I worked on several research projects that address traffic safety issues. These include:

- Evaluating the effectiveness of Speed limit enforcement in improving safety using cameras installed on Riyadh's roadways network.
- Investigating the factors affecting traffic safety in Saudi Arabia using crash reports, geometric, weather and traffic flow data in order to suggest countermeasures to improve traffic safety in Saudi Arabia.

In addition, I was the instructor of the following undergraduate course.

CE 436: Traffic Engineering

This course covers the introduction to fundamentals of traffic engineering, including data collection, analysis, and design. Traffic engineering studies, traffic control devices, capacity and level of service analysis of freeways and urban streets. Design of isolated intersection and coordinated traffic signal control systems.

- 3. Graduate Research Assistant / Ph.D. Candidate**      **August 2008 – August 2011**  
Department of Civil, Environmental and Construction Engineering,      Orlando, FL, USA  
University of Central Florida,

- Worked on multiple research projects that address ITS and traffic safety issues
- Worked on research related to developing a real-time weather warning system on Florida Highways
- Developed and tested the visibility warning system (with my colleagues) in June 2010

- Designed two surveys exploring drivers' decisions under reduced visibility and young drivers' safety considerations
- Examined visibility related crashes on freeways and expressways based on real-time traffic flow data
- Investigated the effect of Changeable Message Signs and Variable Speed Limit Signs on drivers' behavior and preferences under reduced visibility conditions
- Examined the attitudes, perceptions and behaviors of young drivers to design appropriate treatments to enhance the safety of this group of the population

#### **4. Assistant Lecturer in Highway Engineering**

**Mar. 2002 – July 2008**

Civil Engineering Department, Faculty of Engineering  
Ain Shams University

Cairo, Egypt

- Designed and conducted a survey-based study that addressed drivers' satisfaction and response to vehicular noise and emissions in urban areas
- Designed and conducted a field experiment that examined environmental impact (such as: vehicle's emissions, air pollution, noise, etc.) on road cross-section elements in some selected urban roads in greater Cairo as a representative example of heavily urbanized regions
- Proposed environmentally-oriented design criteria of road elements to ensure better quality of life based on the field measurements and the questionnaire results
- Participated in teaching three undergraduate courses at the Faculty of Engineering, Ain Shams University

##### (1) Geometric Design of Highways and Airports:

This course covers all aspects of the Highway and Airport 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. In addition, it covers the geometric design of Airports' elements.

##### (2) Structural Design of Highway Pavement

This course covers all aspects of the structural design of Highway pavement. Topics covered include various types of pavement, different methods for designing flexible and rigid pavements.

##### (3) Surveying

This course covers introduction to Surveying Engineering, measurements and errors, distance measurements, leveling, angles, bearings, azimuths and traversing.

## **WORK EXPERIENCE IN INDUSTRY**

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### **1. Senior Transportation Engineer / Projects Manager**

**Oct. 2013 – March 2018**

Department of traffic engineering and road safety,

Abu Dhabi Police / TATWEER for Traffic Assets & Systems Operation and Management L.L.C,

Abu Dhabi, UAE

My responsibilities included:

1. Evaluate the effectiveness of new projects implemented by Abu Dhabi Police related to traffic engineering and road safety,
2. Prepare TOR and tender documents for new projects related to transportation engineering,
3. Review and evaluate proposals submitted to the department.
4. Conduct research and prepare papers related to road safety, human behavior, traffic operation and ITS.
5. Conduct traffic impact studies.
6. Conduct traffic crashes analysis: periodic safety reports including descriptive analysis and identification of black spots,
7. Teach statistical softwares (such as SPSS) and its applications in the field of Transportation Engineering.

8. Teaching a course titled “principles of statistics and traffic safety” to traffic engineers at Abu Dhabi Police Traffic Department
9. Supervise a total of 10 transportation engineers and acting as the projects manager in developing the following projects:
  - Developing an intelligent GIS-based traffic safety management system for Abu Dhabi
  - Developing of OPTIMA simulation model for Abu Dhabi Emirate
  - Developing a national transportation tracking system for UAE
  - Provision of Design Services for Infrastructure Facilities in Dalma Industrial Area, UAE.
  - Provision of Design Services for Infrastructure Facilities in Al Mirfa Industrial Area, UAE.
  - Provision of Design Services for Upgrade of Roundabouts (Al Jabal, Al Diwan, Library & Al Ain Hospital) and Construction of Al Sarooj Road at Al Ain City, UAE.
  - Design Consultancy Services for Upgrading of Tawam (IP251) and Zakher (IP149) Roundabouts at Al Ain City, UAE.
  - Design Consultancy Services for the Upgrading of Inner Road Parallel to E45 – Madinat Zayed, Abu Dhabi, UAE.

## **2. Highway Design Engineer**

*December 2006 - July 2008*

Transportation Engineering Department,  
Dar Al-Handasah (Shair and partners) Company

Cairo, Egypt

During this period, I participated in a multitude of projects and studies including Highway geometric Design, planning of new roads, interchanges and intersections design, cross sections and bill of quantities, quality control and quality assurance of the following projects:

- Pre-Construction Services for Autoroute Est-Ouest, Lot East, Algeria
- Madinaty Development infrastructure Design – Districts 2, 4 & 5, new Cairo, Egypt
- Estrada Golf - Viana Expressway, Luanda, Angola
- New Highway Roads in Riyadh, Saudi Arabia
- Touqi to Riyadh Qassim Expressway Link, Saudi Arabia

## **FUNDED RESEARCH PROJECTS**

1. **Maintaining the mobility of older Canadians: Examining older adults’ preferences and needs for using different transportation modes** (Total Budget: \$45,000). Funded by McMaster Institute for Research on Aging (MIRA), Canada (Sep. 2018 – Aug. 2019), my role is main researcher/project manager.

This is interdisciplinary research project that include researchers from three faculties: Engineering, science and health sciences. This research aims to address a major gap in evidence with respect to aging and mobility by examining older adults’ perceptions, preferences, and needs when it comes to driving and accessing other modes of transport. Underlying this objective is to further understand factors that can influence older adults’ decisions to stop driving and their respective shift to use other transportation modes.

My current duties include:

- Preparation of detailed work plan and project schedule.
- Coordinate between all members of the research team.
- Designing of a questionnaire survey for older Canadians.
- Survey administration, data preparation and analysis.
- Supervise one undergraduate student and one master student who are currently assisting in this project
- Documentation and Preparation of progress reports and technical papers.

2. **Examining traffic safety challenges of older Pedestrians in Canada** (Total Budget: \$45,000). Funded by Provost Research Excellence, Canada (Oct. 2018 – Oct. 2019), my role is main researcher/project manager.

This research aims to investigate the safety challenges of older pedestrians in Hamilton, concretely the factors that influence pedestrian-related crashes. To this aim, the research will identify the hot spot locations of crashes involving older pedestrians and investigates their characteristics. In parallel, the research will examine the needs and preferences of older adults while crossing various types of road crossings.

My current duties include:

- Preparation of detailed work plan and project schedule.
- Data preparation and analysis.
- Coordinate between all members of the research team.
- Documentation and Preparation of progress reports and technical papers.

**3. Developing an artificial immune system to control roadway traffic signals and regulate traffic flow in case of emergencies** (Total budget = \$534,000). Funded by King Abdulaziz City for Science and Technology (KACST), Riyadh. From Dec. 2014 to Dec. 2017. My role was: co-I.

This is interdisciplinary research project that include researchers from three different departments: Civil Engineering, industrial engineering and mechanical Engineering.

My duties included:

- Participated in preparing the detailed work plan and project schedule.
- Provided the traffic engineering expertise needed for the successful delivery of the project outcomes.
- Review and approve the progress reports and technical papers.

**4. Young drivers' safety study** (Total budget = \$100,000). Funded by Florida Department of Transportation, District 5. From Aug. 2010 to Aug. 2011. My role was: main researcher.

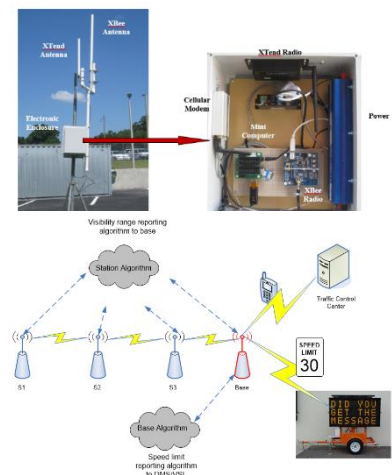
My duties included:

- Preparation of detailed work plan and project schedule.
- Designing of a questionnaire survey for young drivers in Central Florida.
- Survey administration, data preparation and analysis.
- Developing several multivariate models to examine young drivers' behavior and factors associated with their safety.
- Documentation and Preparation of progress reports and technical papers.

**5. Developing an early detection system for reduced visibility from fog/smoke and means to effectively and timely warn drivers** (Total budget=\$400,000). Funded by Florida Department of Transportation. From Aug. 2008 to Aug. 2010. My role was: main researcher.

My duties included:

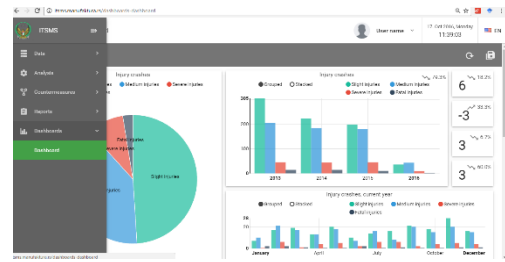
- Preparation of detailed work plan and project schedule.
- Development of state of the art system that involves visibility sensors, wireless communications, GPS, Mini Computers, Controllers, solar power, Dynamic Message Signs, Variable Speed Limits, etc.
- Software design and development of real-time operating algorithm.
- Testing and calibrating the system in the field.
- Demonstrated and delivered the system to Florida Department of Transportation.
- Documentation and Preparation of progress reports and technical papers.



**6. Developing an intelligent GIS Traffic Safety Management System (ITSMS) for Abu Dhabi, UAE** (Total budget= \$380,000). Funded by Department of traffic engineering and road safety, Abu Dhabi police, UAE. From March 2016 to March 2018. My role was: Project manager.

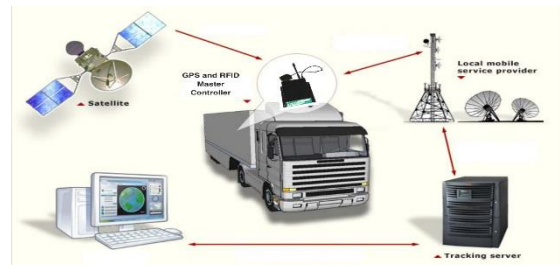
This project aimed to develop an innovated system for traffic safety management on roadway networks using GIS and artificial intelligence. The system can be used to continuously analysis traffic collisions data, traffic volumes data and land uses to identify traffic safety problems on roadway networks (i.e., black spots identification). Accordingly, the system can suggest several effective countermeasures that can be implemented to improve traffic safety. The system is capable also to evaluate these countermeasures and learn from the results before suggesting future countermeasures.

In addition, the system can generate advanced traffic safety analysis and prepare monthly traffic safety reports. In this project, I have acted as the main project manager.



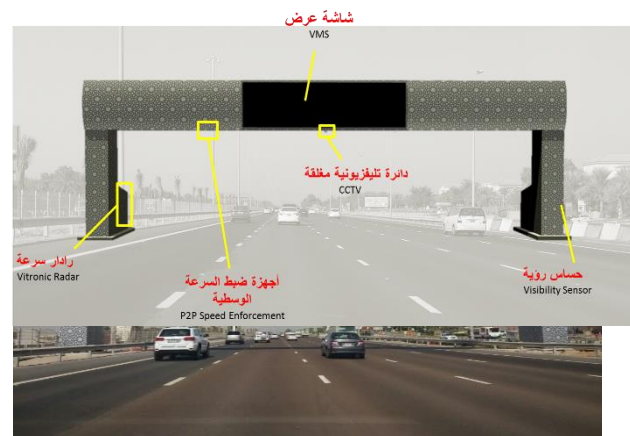
**7. Developing a national transportation tracking system for Hazardous materials' trucks in UAE** (Total budget= \$270,000). Funded by Ministry of Interior, UAE. From Oct. 2015 to Dec. 2017. My role was: Project manager.

This project aimed to provide the required consultancy services to develop a national transportation tracking system in UAE for tracing and tracking the movement of Hazardous and cash vehicles across UAE. The project scope included: (1) determine Gaps in laws, regulations and tracking technology in UAE; (2) Provide the detailed design of the system; (3) Prepare specifications and tender documents. In this project, I have acted as the main project manager.



**8. Design and Project Management Services for the Installation and Operation of 45 Smart Towers in Abu Dhabi Emirate (May 2015 – March 2018)**

The project involves design, and manage installation and O&M of 45 Smart Gantries in Abu Dhabi Emirate. Each gantry includes a 9 x 2 m variable message sign (VMS), closed circuit television (CCTV), visibility sensors, average speed enforcement systems, laser scanner, fixed speed camera, and a generator. The installed cameras can detect the traffic incidents such as traffic congestions and road crashes in real time and directly communicating with a smart traffic center for required police actions. The visibility sensors are also sending weather information in real time where any reductions in the visibility because of fog or sand storms. Speed enforcement systems in the gantries can be configured remotely to change the enforcement speed limits for more efficient speed management during abnormal driving conditions. An operating system is also developed for Abu Dhabi Police to fully control the message content to disseminate information to drivers as required. The project also included the consultancy services and supporting GIS-based studies for the best selection of the gantries' locations.

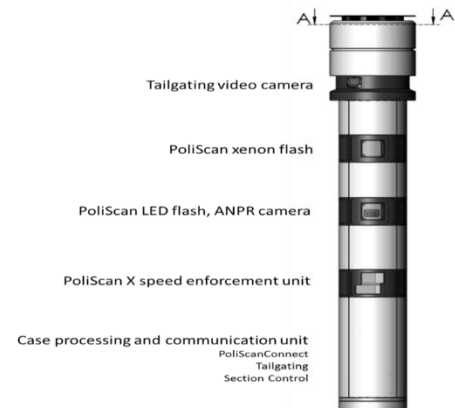


My main role in this project was acting as a subject matter expert to provide the technical expertise in selecting the locations of gantries, safety countermeasures needed to improve safety at these locations, content of warning messages that will be shown in the VMSs.

### 9. Design, Installation and Operation of 435 Fixed Speed Cameras in Abu Dhabi Emirate (May 2015 to March 2018)

The scope of this project is to install, operate and maintain a total of 435 speed radars (spot speeds, P2P and tailgating radars) in Abu Dhabi Emirate to enhance the traffic safety. My duty is to provide the technical expertise in determining the locations of all types of these radars based on traffic safety analysis. Also, my role is to determine the threshold values that shall be used to detect the tailgating violations (not leaving enough space from the car in front).

Also, to conduct before and after evaluation studies.



### 10. Design and Project Management Services for Implementation and Operation of a Smart Traffic Management Centre in Abu Dhabi Emirate (Total budget=\$4,000,000). Funded by Department of traffic engineering and road safety, Abu Dhabi police, UAE. From June 2013 to June 2017. My role was: traffic engineering advisor.

The main scope of this project is to establish a Smart Traffic Center (STC) for the Traffic and Patrols Directorate of Abu Dhabi Police GHQ to increase road-safety and significantly help them in improving their daily services.



The center includes the state of the art subsystems that are integrated to:

- Ensure smooth traffic operation
- Provide the highest levels of traffic safety
- Reduce response times to emergencies
- Support achieving the strategic objectives

My main role in this project is acting as a traffic engineering advisor to provide the technical expertise in developing several subsystems in the center such as Smart awareness, aggressive violators, patrol cars allocations, and intelligent GIS based traffic safety management system.

## REFEREED JOURNAL PUBLICATIONS

1. **Hassan, H.**, Ferguson, M., Razavi, S. and Vrkljan, B. (2019). Factors that influence Older Canadians' Preferences for using Autonomous Vehicle Technology: A Structural Equation Analysis. *Transportation Research Record*, Vol. 2673(1), pp. 469–480.
2. **Hassan, H.**, Shawky, M., Kishta, M., Garib, A. & Al-Harthei, H. (2017). Investigation of drivers' behavior towards speeds using crash data and self-reported questionnaire. *Accident Analysis and Prevention*, 98, pp. 348–358.
3. Shaaban, K. & **Hassan, H.** (2017). Underage Driving and Seat Belts Use of High School Teenagers in Qatar. *Journal of Transportation Safety and Security*, Volume 8, pp. 115-129.
4. Shawky, M., **Hassan, H.**, Garib, A. & Al-Harthei, H. (2016). Examining the Factors Affecting the Severity of Run-off-Road Crashes in Abu Dhabi. *Canadian Journal of Civil Engineering*, 43, pp. 132–138.



5. **Hassan, H.** (2016). Investigation of the self-reported aberrant driving behavior of young male Saudi drivers: A survey-based study. *Journal of Transportation Safety and Security*, VOL. 8, NO. 2, 113–128.
6. Sahnoun, I., Sarhan, M., **Hassan, H.**, Garib, A. & Al-Harthei, H. (2016). Impact of Red-Light Enforcement Cameras on Safety Performance at Signalized Intersections in Abu Dhabi. *Transportation Research Record*, 2584, pp. 16–23.
7. **Hassan, H.**, Albusaedi, N., Garib, A. & Al-Harthei, H. (2015). Exploring the nature and severity of heavy trucks crashes in Abu Dhabi, *Transportation Research Record*, 2517, pp. 1–9.
8. Shaaban, K. & **Hassan, H.** (2014). Modeling Significant Factors affecting Commuters' Perspectives and Propensity to Use the New Proposed Metro Service in Doha. *The Canadian Journal of Civil Engineering*, 41, pp. 1054–1064.
9. **Hassan, H.** & Al-Faleh, H. (2013). Exploring the risk factors associated with the size and severity of roadway crashes in Riyadh. *Journal of Safety Research*, 47, pp. 67–74.
10. **Hassan, H.** & Abdel-Aty, M. (2013). Predicting Reduced Visibility Related Crashes on Freeways Using Real-Time Traffic Flow Data. *Journal of Safety Research*, 45, pp. 29-36.
11. **Hassan, H.** & Abdel-Aty, M. (2013). Exploring the Safety Implications of Young Drivers' Behavior, Attitudes and Perceptions. *Accident Analysis & Prevention*, 50, pp. 361-370.
12. **Hassan, H.**, Abdel-Aty, M., Choi, K. & AlGadhi, S. (2012). Driver Behavior and Preferences for Changeable Message Signs and Variable Speed Limits in Reduced Visibility Conditions. *Journal of Intelligent Transportation Systems*, 16(3), pp. 1–15.
13. Abdel-Aty, M., **Hassan, H.**, Ahmed, M. & Al-Ghamdi, A.S. (2012). Real-time prediction of visibility related crashes. *Transportation Research Part C*, 24, pp. 288–298.
14. **Hassan, H.** & Abdel-Aty, M. (2011). Analysis of drivers' behavior under reduced visibility conditions using a structural equation modeling approach. *Transportation Research Part F*, 14(6), pp. 614–625.
15. Pande, A., Das, A., Abdel-Aty, M. & **Hassan, H.** (2011). Real-time crash risk estimation: are all Freeways created equal? *Transportation Research Record*, 2237 (2), pp. 60–66.

#### REFEREED CONFERENCE PUBLICATIONS

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1. **Hassan, H.**, Farooqui, N., Ferguson, M. and Razavi, S. (2018). Examining Contributing Factors to Motorcycle Crashes using Matched Case-Control Logistic Regression. *Transportation Research Record*, in press (lately accepted for presentation in October 2018).
2. **Hassan, H.**, Sarhan, M., Garib, A., Al Harthei, H. (2017). Drivers' Time Headway Characteristics and Factors Affecting Tailgating Crashes. *Transportation Research Board*, 96<sup>th</sup> Annual Meeting Compendium of Papers, TRB 17-03478.
3. Shaaban, K., **Hassan, H.** (2016). Problems of Underage Driving and Seat Belt Use among High School Teenagers in Qatar. *Transportation Research Board*, 95<sup>th</sup> Annual Meeting Compendium of Papers, TRB 16-3613.
4. **Hassan, H.**, Shawky, M., Garib, A., Al-Harthei, H. (2015). Examining the differences between contributing factors affecting the severity of Single and Multi-Vehicle Crashes. *Transportation Research Board*, 94<sup>th</sup> Annual Meeting Compendium of Papers, TRB 15-3625.
5. Shawky, M., **Hassan, H.**, Garib, A., Al-Harthei, H. (2014). Examining Factors Affecting the Severity of Run-off-Road Crashes: Abu Dhabi Case Study. Presented at the 1<sup>st</sup> IRF Asia Regional Congress in Bali, Indonesia.
6. **Hassan, H.** (2014). Examining the factors associated with the involvement of the Saudi' young drivers in at-fault crashes: A Survey-Based Study. *Transportation Research Board*, 93<sup>th</sup> Annual Meeting Compendium of Papers, TRB 14-0789.
7. Shaaban, K., **Hassan, H.** (2014). Exploring the Factors Affecting Commuters' Perspectives and Tendency to use a Proposed Public Transit Service. *Transportation Research Board*, 93<sup>th</sup> Annual Meeting Compendium of Papers, TRB 14-0595.
8. **Hassan, H.**, Al-Faleh, H., & Al-Rashidi, A. (2013). Comprehensive Analysis of the Severity and Nature of Traffic Crashes Occurring on Rural Roads in KSA. 17<sup>th</sup> IRF World Meeting & Exhibition, Riyadh, Nov. 2013.

9. **Hassan H.**, Dimitriou, L. (2013). Examining Severe Traffic Crashes in Riyadh using Different Data Mining Techniques. WCTR Rio, Brazil.
10. Dimitriou, L., **Hassan H.** (2013). Spatial Prediction of Car Crashes Severity Based on Dynamically Updated MIMO Autoregressive Neural Models. WCTR Rio, Brazil.
11. **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, Transportation Research Board, 92<sup>th</sup> Annual Meeting Compendium of Papers, paper no.13-2333
12. Dimitriou, L. and **Hassan H.** (2013). Dynamic Autoregressive Neural Networks for Spatially Distributed Time Series Prediction of Car Crashes in Urban Networks, Transportation Research Board, 92<sup>th</sup> Annual Meeting Compendium of Papers, paper no.13-4272
13. 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? Transportation Research Board, 91<sup>th</sup> Annual Meeting Compendium of Papers, paper no.12-0113
14. **Hassan H.**, Abdel-Aty M. and Oloufa, A. (2011). The effect of warning messages and variable speeds in different visibility conditions. Transportation Research Board, 90<sup>th</sup> Annual Meeting Compendium of Papers, paper no. 11-0354
15. **Hassan H.** and Abdel-Aty M. (2011). Exploring visibility related crashes on freeways based on real-time traffic flow data. Transportation Research Board, 90<sup>th</sup> Annual Meeting Compendium of Papers, paper no. 11-0920
16. **Hassan H.** and Abdel-Aty M. (2011). How CMS and VSL affect Drivers' Speeds under Low Visibility Conditions? The Australasian College of Road Safety National Conference, Melbourne
17. **Hassan H.** and Abdel-Aty M. (2011). Design and Administration of a survey to Investigate Drivers' responses to Reduced Visibility Conditions, 9<sup>th</sup> International Conference on Transport Survey Methods, Chile
18. **Hassan H.**, Abdel-Aty M. and Oloufa, A. (2011). Use and content of CMS and VSL under low visibility conditions, 18<sup>th</sup> ITS world congress, Orlando, USA
19. Abdel-Aty M., Oloufa A., **Hassan H.**, Ahmed M. and Siddiqui M. (2010). Portable Visibility Warning System for the Safety of Highways, 17<sup>th</sup> ITS world congress, Busan, Korea

## PRESENTATIONS

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1. Impact of Red-Light Enforcement Cameras on Safety Performance at Signalized Intersections in Abu Dhabi, 95<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2016.
2. Problems of Underage Driving and Seat Belt Use among High School Teenagers in Qatar, 95<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2016.
3. Exploring the nature and severity of heavy trucks crashes in Abu Dhabi, 94<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2015.
4. Exploring the Factors Affecting Commuters' Perspectives and Tendency to Use a Proposed Public Transit Service, 94<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2015.
5. Examining the factors associated with the involvement of the Saudi' young drivers in at-fault crashes, 93<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2014.
6. Analysis of Risk Factors Affecting the Size and Severity of Traffic Crashes in Riyadh, 92<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2013
7. Dynamic Autoregressive Neural Networks for Spatially Distributed Time Series Prediction of Car Crashes in Urban Networks, 92<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2013
8. Examining Severe traffic crashes in Riyadh using different data mining techniques, World Conference on Transport Research (WCTR), Rio de Janeiro, Brazil, July 2013 (accepted August 2012)
9. Spatial Prediction of Car Crashes Severity Based on Dynamically Updated MIMO Autoregressive Neural Models, World Conference on Transport Research (WCTR), Rio de Janeiro, Brazil, July 2013 (accepted August 2012)
10. Real-time analysis of visibility related crashes: can loop detector and AVI data predict them equally? 91<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington DC, January 2012

11. Improving traffic safety system of school transportation of Saudi Arabia, 1st international conference of school transportation, Riyadh, October 2012
12. Developing Saudi Highway safety manual, traffic safety workshop, King Saud University, Saudi Arabia, May 2012.
13. The Effect of Warning Messages And Variable Speeds In Different Visibility Conditions, 90th Annual Meeting of the Transportation Research Board, Washington DC, January 2011.
14. Exploring Visibility Related Crashes on Freeways based On Real-time Traffic Flow Data, 90th Annual Meeting of the Transportation Research Board, Washington DC, January 2011.
15. How CMS and VSL affect Drivers' Speeds under Low Visibility Conditions? The Australasian College of Road Safety National Conference, Melbourne, September 2011.
16. Design and Administration of a survey to Investigate Drivers' responses to Reduced Visibility Conditions, 9th International Conference on Transport Survey Methods, November 2011.
17. Portable Visibility Warning System for the Safety of Highways, 17th ITS world congress, Busan, Korea, October, 2010.
18. Portable Visibility Warning System for the Safety and Efficiency of Highways, 18<sup>th</sup> International Conference on Management of Technology, Orlando, April 2009.

### **INVITED LECTURES**

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1. Road Network Safety Management, International Road Federation, Dubai, UAE, Sep. 2016.
2. Traffic safety at working zones. Abu Dhabi Municipality, UAE, Oct. 2016.
3. Vehicles and roads safety and the role of the relevant authorities in reducing traffic accidents, presented at the Saudi Standards, Metrology and Quality Organization, Riyadh, March 2013.
4. Recent research efforts towards improving traffic safety in KSA, presented at the 3rd Annual Road Planning, Design and Construction, Middle East, Doha, Qatar, February 2013.
5. Role of Traffic safety center at King Saud University in improving traffic safety in KSA, presented in the international forum of the Arab organization of traffic safety, Tunisia, December 2012.
6. Improving Traffic Safety System of Public Transportation in KSA, presented in the first international conference of school Transportation, Riyadh, October 2012.
7. Improving Traffic Safety and Driver Behavior under Reduced Visibility Conditions, King Saud University, Riyadh, November 2011.

### **TRAINING**

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- Project Management Professional (PMP), Cambridge Education.
- Data manipulation and analysis using SPSS, IPM.
- PTV VisSim,

### **COURSES STUDIED AFTER Ph.D.**

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To further improve my teaching and research skills, I have studied the following courses after obtaining my Ph.D. Each course was given in three full days

1. Effective Teaching
2. The use of modern technology in teaching.
3. Modern trends in teaching.
4. Effective Presentation
5. Examinations systems and performance evaluation
6. Quality standards in the teaching process
7. Managing Research Teams
8. International Publication.
9. Competitive research projects
10. Leadership
11. Change Management
12. Legal and financial aspects in university environment