

## **CURRICULUM VITAE**

**Ata M. Khan, Ph.D., P.Eng., F.CSCE, F.ITE**

### **DEGREES:**

Ph.D., Civil Engineering, University of Waterloo, Canada, 1970  
M. Eng., Civil Engineering, American University of Beirut, 1965  
B. Eng., Civil Engineering, American University of Beirut, 1963

### **CONTACT INFORMATION:**

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### **RESEARCH**

Policy and planning challenges of increasing automation in driving, trustCAV, shared mobility and automated vehicles, transition to electrification, eco-drive, risk in infrastructure investment, resilience of traffic network, resilience of transportation supply chain.

Application: urban and intercity transportation. Multimodal transportation. Traffic management and control. Road safety. Sustainable development. Urban planning. Current/recent (past 10 years) sponsors: Natural Sciences and Engineering Research Council of Canada (NSERC), Transport Canada, Industry Canada, City of Ottawa, Ministry of Transportation of Ontario (MTO), AUTO21 Network of Centres of Excellence (NCE), Nuclear waste management organization (NWMO).

### **PRESENT ROLE AT CARLETON UNIVERSITY:**

Professor Emeritus, Department of Civil and Environmental Engineering, Carleton University (Since July 1, 2020)

### **PRESENT ROLE AT YORK UNIVERSITY:**

Adjunct Professor, Member to the Graduate Program in Civil Engineering, Department of Civil Engineering, York University (2022-2025)

### **EMPLOYMENT HISTORY:**

1981—2020	Professor, Department of Civil and Environmental Engineering, Carleton University
1998—2000	Associate Dean, Faculty of Engineering and Design, Carleton University
1974—1981	Associate Professor, Department of Civil Engineering, Carleton University
1969—1974	Assistant Professor, Department of Civil Engineering, Carleton University

- 1967—1969 Graduate Student, Department of Civil Engineering, University of Waterloo
- 1965—1967 Transportation Planner & Engineer, DeLeuw, Cather & Co., Chicago
- 1965—1965 Instructor, School of Engineering and Architecture, American University of Beirut
- 1964—1964 Design, Investigations & Construction Department, Trans Arabian Pipeline Co., Saudi Arabia

### **HONOURS:**

- 2020 Lifetime Achievement Award, Institute of Transportation Engineers (ITE) (March 2020)
- 2012 Session's Best Paper Award, 16<sup>th</sup> World Multiconference on Systemics, Cybernetics and Informatics, awarded by the International Institute of Informatics and Systemics (July 2012)
- 2007&2009 Life Member, Institute of Transportation Engineers (ITE) (awarded in 2009 at the lifetime achievement ceremony organized by the CITE National Capital Section)
- 2006 Fellow, Institute of Transportation Engineers (ITE)
- 2006 Life Member, American Society of Civil Engineers (ASCE)
- 2003 Ron Rice Award for Best Conference Paper, awarded by the Canadian Transportation Research Forum 2003 (with graduate student S. Taylor)
- 1996 Fellow, Canadian Society for Civil Engineering (CSCE)
- 1986 Faculty of Engineering (Academic/Research) Award, Carleton University

### **POLICY, PLANNING AND R&D INVESTIGATIONS:**

- **Transport-Canada- City of Ottawa:** Eco-Drive II project.
- **City of Ottawa:** Eco-Drive I project (joint project with Ministry of Transportation of Ontario and Transport Canada).
- **Industry Canada:** International supply chain vulnerabilities, impacts of supply chain disruptions on competitiveness.
- **Nuclear Waste Management Organization (NWM):** Transportation time and distance study: methodologies and data to support detailed risk analysis of transporting nuclear waste by truck.
- **AUTO21 NCE (Federal Government Network of Centres of Excellence):** A five year project on Canadian Automobile Research Simulation (CARS) (in association with the University of Calgary, University of Guelph, and University of Montreal).
- **RAND Corporation (USA):** Review of technical material on “Autonomous Vehicle Technology: A Guide for Policy Makers”.
- **United Nations:** Expert on Mission, Cairo (GIS, City Sustainability and Environment).
- **Transport Canada:** Commodity-specific supply chain vulnerabilities and competitiveness of Canadian ports. Supply chain nature-induced vulnerabilities. Resilience of transportation supply chain; environmental efficiency of marine transportation; competitiveness and R&D in transportation (air, surface and marine modes); energy and environmental factors in intercity passenger & freight transportation; truck, rail and intermodal freight R & D program development; remote monitoring & management of traffic at airports; intermodal freight transportation

(assessment of supply factors); deregulation policies and technological innovations; highway transportation strategic R & D program; the future role of the automobile; intercity passenger transportation energy efficiency; freight transportation energy efficiency.

- **Transport Canada University Programs:** Airport impacts of regulatory reforms; planning, programming and financing of highway infrastructure; demand models; Canadian impacts of U.S. transportation policies; policy perspectives on small shipment transportation; modal shifts and energy conservation.
- **Canadian Transport Commission:** Transportation & communications; railway capacity; small shipment transportation (courier); railway relocation.
- **Natural Resources Canada (NRCan):** Tools for transportation energy use and CO<sub>2</sub> planning; energy and CO<sub>2</sub> planning workshops (with DELCAN)
- **Transportation Climate Change Table (Government of Canada):** Greenhouse gas emission reduction strategies in urban areas of Toronto, Montreal and Vancouver, in major freight corridors; forecasts of greenhouse emissions in Canadian freight transportation system (with DELCAN and KPMG).
- **Environment Canada:** OECD Environmentally Sustainable Transportation Study (a team project with IBI and Frances Frisken).
- **Natural Resources Canada (NRCan):** Traffic Congestion Impact on CO<sub>2</sub> Emissions Inventory in Canada (a team project with DELCAN Corporation)
- **National Transportation Act Review Commission:** Review of "Environmental Instruments and Transportation".
- **Canadian International Development Agency (CIDA):** Transportation management & environment in Asia; low (life cycle) cost transportation.
- **Science Council of Canada:** Air transportation issues; intermodal transportation; passenger rail (VIA Rail Canada) study; railway electrification; intercity passenger transportation energy studies; impacts of changing statutory rates for grain transportation.
- **Ministry of State for Urban Affairs:** Urban transportation & land use -- federal government role.
- **The Ontario Task Force on Provincial Rail Policy:** Passenger rail; grain transportation.
- **Ministry of Highways and Transportation, British Columbia:** Climbing & passing lanes.
- **N.D. Lea and Associates:** National planning for airports (Transport Canada project).
- **ADI Limited (in Association with IBI Group, Abt Associates):** Capital investment socio-economic analysis (Ministry of Transportation, Ontario project).
- **Regional Municipality of Ottawa-Carleton:** Impacts of telecommuting and related intelligent transportation system aspects on residential location choice.
- **Transportation, Energy, Environment Consulting Services:** Urban freight (Transport Canada project); urban travel choice models (Regional Municipality of Ottawa-Carleton project).
- **CUSAM Consultants:** Fuel consumption models for urban passenger transportation (Transport Canada project).
- **Ministry of Transportation, Ontario:** Driving assistance systems for road safety; roadmap from loops to probe data; connected cognitive vehicle and intelligent transportation systems; policy implications of automation in driving; integrating freeway and arterial transportation management including traffic-responsive ramp metering;

managing traffic through highway work zones; construction zone queue end warning system; estimating delay at border crossings; human and social factors in highway lighting; highway shoulder issues; long term environmental research needs; design crossfall and drainage issues; cost-effectiveness of climbing & passing lanes; warrants for truck climbing lanes; telecommunications & transportation; telework (background material for a symposium).

- **Transport Canada, Ministry of Transportation of Ontario, Quebec Ministry of Transport: ATLANTIC project** (intelligent transportation systems).
- **Canadian Delegation on Sustainable Development (Member):** China and Pakistan.
- **Int'l Association of Traffic & Safety Sciences (Japan):** Transitway technology.
- **NSERC Sponsored Research (All modes of passenger and freight transportation):** Resilience of adaptive capacity in traffic networks; Demand management, level of service; congestion management; system management; efficiency studies; system development and evaluation; planning and design techniques; decision-theoretic framework for policy and investment decisions.
- **Lecturer, Transportation Planning Course, Kingston, Jamaica:** sponsored by the Canadian International Development Agency (CIDA).
- **Member and Participant:** International Logistics Congress, Beijing and Toronto.
- **Participant:** International Heavy Haul Railway Conference, Beijing (role of heavy haul technologies in intermodal service requirements)

**SCHOLARLY AND PROFESSIONAL ACTIVITIES (Since 1997, various terms):**

- 1978-2020-Present: Director, Transportation Research Centre (established in 1978) 1978-2020; Contact person since 2020.
- 2023-24 Institute for Research on Public Policy (IRPP) project on The New Mobility Era: Leveraging Digital Technologies for More Equitable, Efficient and Effective Public Transportation (with Professor Ren Thomas, DalTech). Refereed report (IRPP Insight No. 52) and media event (9 April 2024).
- 2023-24 Invited to participate in the Automotive Panel of the Ontario Research Fund – Research Excellence Program, Ontario Ministry of Colleges and Universities.
- 2020 Invited to participate in the Ontario Ministry of Economic Development, Job Creation & Trade ERA Round 15 Adjudication Review Process.
- 2019 Rogers Radio Interview (also aired on TV) on the Ottawa LRT opening day.
- 2019 Proposal Review for Alberta Innovates & CUTRIC.
- 2018 Peer Review of Graduate Program, Ryerson University.
- 2017 Senate (Canada) Standing Committee on Transport and Communications  
EVIDENCE: Study on the regulatory and technical issues related to deployment of connected and automated vehicles.
- 2016 Participation as a subject matter expert in the Government Excellence Award Program, United Arab Emirates.
- 2013 Consultant to Rand Corporation (USA)
- 2012&2013 CBC(Radio) and CTV(National News Channel): transportation infrastructure topics

- 2011 Advisor, Course Development Project “ITS for Advanced Traveller Information Services”, Globis Consulting Inc., Funded by ITS Canada.
- 2011 Advisor, ITS Canada Training Curriculum Development Project, ONE-ITS Research Society, Funded by ITS Canada.
- 2011 “Can I keep up with my car?”, Feature article, Boomer magazine, Ottawa Citizen, Fall 2011.
- 2010 PEO Infrastructure Forum
- 2010-2018 PEO Examiner for Transportation Economics, ITS, Public Transportation
- 2010 Television debate on electronic road pricing
- 2010 Advisor, G4 Apps (on “Technologies to automate the measurement of real-time border wait times at U.S.-Canada border crossings” for border crossing authorities/governments of the USA and Canada)
- 2009-2020 Associate Editor, The Canadian Journal of Civil Engineering
- 2006-2008 Chair, Sustainable Development Committee, Canadian Society for Civil Engineering (1990-94 Chair of CSCE Transportation Division)
- 2006, 2009 Associate Editor, IEEE ITSC
- 2000-2020 Paper reviews for Journal of Ergonomics, Transportation Engineering Journal of the ASCE, Environment and Planning UK, Transportation Research, Journal of Urban Technology, Transportation Research Board (USA), Canadian Journal of Civil Engineering.
- 2000-2020 Research proposal review (NSERC, SSHRC, CFI, and other national and foreign organizations)
- 2000-2020 Reviewer of Canada Research Chair (CRC) Nominations
- 2003-2004 Independent Observer, University of Toronto Project “Field Evaluation of Systems and Exploration of Probe Data Sources”, funded by Enterprise, Ministry of Transportation of Ontario, and Transport Canada.
- 2004-2006 ITS Canada Representative on project “Remote Access PDA in Support of the York Region Centralized Traffic Control System”, Transport Canada and ITS Canada contract with York Region and Delcan Corporation.
- 2003-2004 Team Leader for Theme 1.1 (Thematic-based Traffic and Travel Information Services) of the ATLANTIC Project (A University-Based R&D Project).
- 2003-2008 Co-Leader, Canadian Automobile Research Simulation (CARS) Network, a part of AUTO21 Network of Centres of Excellence (NCE) (participating universities were Carleton, Calgary, Guelph, and Montreal).
- 2005-2006 Advisor to PSR Group Inc. on “ITS Database-New and Emerging Products and Services”, funded by Transport Canada.
- 2000-2017 Television interviews (Canada, China), radio interviews (Canada), newspaper interview (U.S.A. and Canada)
- 2000-2006 Member of Environment Council, Transportation Association of Canada.
- 2006-2008 Member of Transportation Research Board’s Committee on Transportation in the Developing Countries.

1997-2004 Financial Custodian, The Common Fund of the implementing agreement for Hybrid and Electric Vehicle, International Energy Agency (IEA) (1997-2004) (Financial Custodian was an Adjunct Member of the Executive Committee). Overhead funds directed to the Transportation Research Centre, Dept. of Civil and Environmental Engineering, Carleton University.

**GRADUATE SUPERVISION:**

Completed: 94 M.A.Sc./M.Eng./M.A.;16 Ph.D.  
In Progress: 3 M.A.Sc.

**PH.D. THESIS EXTERNAL EXAMINER:**

University of Alberta 1, UNB 1, U of Toronto 3, U of Waterloo 3 (2 in Civil Eng, 1 in Mechatronics), U of Manitoba 1, U of Calgary 3, UBC 1, Queen's 1

**GRADUATE COURSES:**

Urban transportation; intercity transportation; traffic engineering; transportation supply; railway planning and engineering; transportation economics and policy; transportation policy seminar course (for the School of Public Administration); engineering management; directed studies courses (mainly on intelligent transportation, public transportation, infrastructure planning and management).

**UNDERGRADUATE COURSES:**

Transportation engineering and planning; engineering economics; urban planning; capstone design project; professional practice.

**EXTERNAL RESEARCH FUNDING (Principal Investigator):**

2015 - 2020	NSERC
2018 - 2020	Transport Canada - City of Ottawa
2016 - 2019	City of Ottawa (with financial contribution from Transport Canada & Ministry of Transportation, Ontario)
2015 - 2016	Ministry of Transportation, Ontario
2015 - 2016	Industry Canada
2014 - 2015	Nuclear Waste Management Organization
2013 - 2016	Transport Canada
2011 - 2013	Ministry of Transportation of Ontario (MTO)
2011 - 2015	NSERC
2003 - 2010	NSERC
2003 - 2008	AUTO21 Network of Centres of Excellence (NCE)
2003 - 2006	Ministry of Transportation of Ontario (MTO)
1969 - 2003	NSERC/NRC, MTO, Transport Canada

## **PUBLICATIONS:**

### **Life-time summary (count):**

- Edited book (Co-editor, author of 4 chapters, co-author of 2 chapters) 1
- Books authored (co-authored) 1
- Chapters in books 22
- Papers in refereed journals 92
- Papers in refereed conference proceedings 88
- Technical reports (peer reviewed) 24
- Abstracts and/or papers read (not peer-reviewed) 4
- Others (workshops presented) 3
- International conference presentations 2

## **Publications 2009-2023**

### **Refereed journal publications (published) (2009 to present) (Sponsors are shown in bracket)**

- Junshen, Feng, Khan, Ata. M. 2023. Accelerating urban road transportation electrification: planning, technology, economic and implementation factors in converting gas stations into fast charging stations. *Energy Systems Journal*, <https://doi.org/10.1007/s12667-023-00638-4> Springer Nature 2024 (Carleton University).
- Khan, Ata M., Kent, Greg, Choudhry, Omar. 2021. Eco-Drive Technology, Human Factors, and Environmental and Economic Benefits. *Transportation Research Record, Transportation Research Board, National Academy of Sciences*. *sagepub.com/journals-permissions*. DOI: 10.1177/03611981211014204. *journals.sagepub.com/home/trr* (Transport Canada, Government of Ontario, City of Ottawa)
- Yerushalmi, Ariel., Folk, Lauren., Carton, Hannah, Gales, John, Khan, Ata., Weckman, Elizabeth (2021). Fire evacuation modelling of a Canadian wildland urban interface community. *Canadian Journal of Civil Engineering* • 11 January 2021. <https://doi.org/10.1139/cjce-2020-0096> (NSERC)
- Hyuk-Jae Roh , Furqan A. Bhat, Prasanta K. Sahu, Satish Sharma, Babak Mehran, Ata M. Khan, Orlando Rodriguez. 2019. Appraisal of Temporal Transferability of Cold Region Winter Weather Traffic Models for Major Highway Segments in Alberta Canada. *Geosciences* 2019, 9, 137; doi:10.3390/geosciences930137. MPDI. (NSERC).
- Khan, A.M., 2015. Modelling Telecommuting Decisions in Diverse Socio-Economic Environments. Published by the Journal of the Institute of Transportation Engineers (NSERC).
- Roh, Hyuk-Jae., Sahu, Prasanta K., Khan, Ata M., Sharma, Satish. (2014). “Relative efficiency appraisal of discrete choice modeling algorithms using small-scale maximum likelihood estimator through empirically tailored

computing environment”, J. Mod. Transport. DOI 10.1007/s40534-014-0063-x (NSERC).

- Khan, A.M., Bacchus, A. and Erwin, S., “Surrogate Safety Measures as Aid to Driver Assistant Design of the Cognitive Vehicle” *IET Intelligent Transportation Systems*. ITS-SI-2013-0022, published 2013 (MTO, NSERC).
- Roh, H-J. and Khan, A.M., 2013, “Enhancing Algorithmic Base for Discrete Choice Modelling”, *KSC Journal of Civil Engineering*, *KSCE-D-12-00318*, Published 2013 (NSERC).
- Khan, Ata M., 2013, “Cognitive Connected Vehicle Information System Design Requirements for Safety: Role of Bayesian Artificial Intelligence”, *Journal on Systemics, Cybernetics, and Informatics (JSCI)*, Published 2013 (MTO, NSERC).
- Khan, A.M., 2013, “Bayesian-Monte Carlo Model for Collision Avoidance System design of Cognitive Connected Vehicle”, *International Journal of ITS Research*, Volume 11, pp.23-33 (MTO, NSERC).
- Khan, A.M., 2012, “Intelligent Infrastructure-based System for Enhancing Safety and Mobility in Highway Zones”, *Modern Traffic and Transportation Engineering Research (MTTER)*, V.1, No.2 (pp.37-45) (MTO, NSERC).
- Qin, X. and Khan, A.M. 2012, “Control strategies of traffic signal timing transition for emergency vehicle preemption”, *Transportation Research Part C: Emerging Technologies*, Elsevier, ID: TRC-D-10-0079 (accepted on April 6, 2012). (NSERC).
- Khan, A.M., Bacchus, A. and Erwin, S., 2012. “Policy challenges of increasing automation in driving”, *IATSS Research Journal*, *IATSS Research* 35 (2012) 79-89, ELSEVIER. (MTO, NSERC).
- Mucsi, K., Khan, A.M. and Ahmadi, M., 2011. “An adaptive neuro fuzzy inference system for estimating the number of vehicles for queue management at signalized intersections”, *Transportation Research Part C: Emerging Technologies*, Elsevier, ID: TRC-D-10-00080 (NSERC).
- Brijmohan, A. and Khan, A.M., 2011. “Development of methodology for quantifying the effectiveness of priority crossing programs at land border crossings”, *Canadian Journal of Civil Engineering*, ID: 10-169 (NSERC/MTO).
- Khan, Ata M., 2011. “Risk factors in toll road life cycle analysis”. *Transportmetrica*, Taylor and Francis, ID: TTRA-2010-0048 (NSERC).
- Vu, Nam H. and Khan, Ata M., 2010, “Bus running time prediction using a statistical pattern recognition technique”. *Transportation Planning and Technology*, Vol. 33, No.7, Routledge, Taylor and Francis Group, pp. 625-642 (NSERC).
- Khan, Ata M., 2010. “Prediction and display of delay at road border crossing”. *The Open Transportation Journal*, Bentham Open, 4, 9-22 (NSERC/AUTO21/MTO).
- Brijmohan, Andy and Khan, Ata M., 2010. “Adaptive road border crossing system management: the role of priority programs”, *Journal of Advanced Transportation*, Wiley-Blackwell, ID: ATR-10-0065/10-0134 (NSERC/MTO).



- Khan, Ata M., 2010. “Bayesian predictive travel time methodology for advanced traveller information system”, *Journal of Advanced Transportation*, Wiley-Blackwell, ID: ATR-10-0064.R3 (Accepted on August 7, 2010), early view on line 4 OCT 2010|DOI:10.1002/atr.147 (NSERC).
- Khan, Ata M. and Langlois, Rob, 2010. “Factoring cycling in transportation infrastructure: design considerations based on risk exposure”, *ITE Journal*, Institute of Transportation Engineers (Accepted on March 3, 2010; Vol.80, tentatively No.11) (MTO/NSERC).
- Khan, A.M., and Kline, D., 2010. “Addressing older driver visibility needs in roadway lighting design”, *ITE Journal/ITE Learned Journal of Transportation*, Institute of Transportation Engineers (2011) (NSERC).
- Khan, Ata M., 2009. “Risk Analysis of intelligent transportation system investments”. *IET Intelligent Transport Systems*, V.3, No.3, p.245-268, September 2009 (Special Issue based selected peer-reviewed papers from the 10<sup>th</sup> International Conference on Applications of Advanced Technologies in Transportation; extended and re-reviewed) (NSERC/MTO).

#### **Refereed Published Book Chapters (2014-2022)**

- Shaheen, Susan A., Khan, Ata, M. (2022). Introduction. Chapter 1 (pages 1-11) of *Shared Mobility and Automated Vehicles: Responding to socio-technical changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Khan, Ata, M. (2022). Design of systems with nonautomated electric vehicles. Chapter 8 (pages 145-163) of *Shared Mobility and Automated Vehicles: Responding to socio-technical changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Khan, Ata, M. (2022). Matching demand and supply under uncertainty. Chapter 12 (pages 227-247) of *Shared Mobility and Automated Vehicles: Responding to socio-technical changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Khan, Ata, M. (2022). Economic factors. Chapter 16 (pages 341-360) of *Shared Mobility and Automated Vehicles: Responding to socio-technical changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Khan, Ata, M. and Shaheen, Susan A. (2022). Future directions: maximizing the social and environmental benefits of shared and automated mobility services. Chapter 18 (pages 391-409) of *Shared Mobility and Automated Vehicles: Responding to socio-technical changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Khan, Ata, M. (2022). Literature for further readings (pages 429-470) of *Shared Mobility and Automated Vehicles: Responding to socio-technical*

- changes and pandemics* (Edited by Ata M. Khan and Susan A. Shaheen), Published by the Institution of Engineering and Technology (IET), UK.
- Gatien, S., Khan, A.M., Gales, J. (2021). Technology and Human Factor Considerations in Adapting Airport Landside Facilities and Operations to Autonomous and Connected Vehicles. Paper ID#:403. Published in AHFE 2021 Springer books.
  - Gatien S., Gales J., Khan A., Yerushalmi A. (2020) The Importance of Human Factors When Designing Airport Terminals Integrating Automated Modes of Transit. In: Stanton N. (eds) Advances in Human Aspects of Transportation. AHFE 2020. Advances in Intelligent Systems and Computing, vol 1212. Springer, Cham. [https://doi.org/10.1007/978-3-030-50943-9\\_76](https://doi.org/10.1007/978-3-030-50943-9_76)
  - Khan, Ata (2019). Bayesian Artificial Intelligence-Based Driver for Fully Automated Vehicle with Cognitive Capabilities. Book: Advances in Human Factors of Transportation. Chapter No.6. (N. Stanton – Editor). AHFE 2019, AISC 964 (Chapter DOI: 10.1007/978-3-030-205503-4\_6. Springer Nature Switzerland AG. Copyright Year: 2020. (NSERC)
  - Khan, Ata (2018). Role of Artificial Intelligence in Car-Following and Lane Change Models for Autonomous Driving. Advances in Human Aspects of Transportation (N. Stanton – Editor). AHFE 2018. AISC 786, pp. 307-317, 2019. Springer International Publishing AG. Copyright year 2019. (NSERC)
  - Khan, Ata (2017). Autonomous Vehicles: Reliability of their Perception of the World around Them and the Role of Human Driver. Advances in Intelligent Systems and Computing (AISC) 597 AHFE 2017. Chapter 55. DOI 10.1007/978-3-319-60441-1\_55(597): 1-11. Published by Springer. (MTO, NSERC)
  - Khan, Ata (2017). Cognitive Vehicle Design Guided by Human Factors and Supported by Bayesian Artificial Intelligence. Advances in Intelligent Systems and Computing (AISC) 597 AHFE 2017. Chapter 36 DOI: 10.1007/978-3-319-6044-1\_36(597): 1-11. Published by Springer. (MTO, NSERC)
  - Khan, A.M. (2016), “Modelling Human Factors for Advanced Driving System Design”, published by Springer as a part of a book of proceedings, International Conference on Applied Human Factors and Ergonomics and Affiliated Conferences, Orlando, Florida, July 2016. (MTO, NSERC)
  - Khan, A.M. (2014). "Design of Real-Time Transition from Driving Assistance to Automation Function: Bayesian Artificial Intelligence Approach.", Advanced Microsystems for Automotive Applications 2014, Smart Systems for Safe, Clean and Automated Vehicles, VDI|VDE|IT, Springer., 39-48, Springer International Publishing Switzerland. Editors: Jan Fischer-Wolfarth and Gereon Meyer. (MTO, NSERC)

### **Refereed National, International, and World Conferences 2010-20 Papers**

- Khan Ata, Kent Greg, Choudhry Omar (2020). Eco-Drive: Technology and Human Factors. ITS World Congress, October 2020 (Accepted, but not presented due to COVID19).

- Elsafdi, Omar, Khan, Ata (2019). Developing Methodological Framework to Enhance Dynamic Resilience of Transportation Network. CITE 2019 Annual Conference, Ottawa, June 2-5, 2019. (NSERC)
- Alfasi, Baraa, Khan, Ata (2019). Enhancing Sustainability in Highway Infrastructure: Life Cycle Cost Risk Analysis Models. CITE 2019 Annual Conference, Ottawa, June 2-5, 2019. (NSERC)
- Elsafdi, Omar, Khan, Ata (2019). Factors for Enhancing Inherent Resilience in Traffic Network. CSCE 2019 Annual Conference, Laval (Greater Montreal), June 12-15, 2019. (NSERC)
- Alfasi, Baraa, Khan, Ata (2019). Enhancing Sustainability in Highway Infrastructure: Risk Analysis Models. CSCE 2019 Annual Conference, Laval (Greater Montreal), June 12-15, 2019. (NSERC)
- Perks, A., Lovegrove, G., Tam, E., Khan, A., Mulligan, C., Rennie, C., Dimitrova, R. 2018. Here and Now. CSCE Annual Conference, Fredericton, June 13-16, 2018. (NSERC)
- Hossain, A, and Khan, A.M., 2017. Modelling demand and supply interaction in multiple stations shared vehicle systems. ITS World Congress 2017, Montreal, October 29-November 2, 2017. (MTO, NSERC)
- Perks, A., Lovegrove, G., Tam, E., Khan, A., Mulligan, C., 2017. Rising Above Routine Practice. ASCE International Conference on Sustainable Infrastructure, New York City, October 26-28, 2017. (NSERC)
- Khan, A.M., Whelen, M., Snobar, N., ElSafdi, O., Jones, B., Arnold, P. 2016. Enhancing Resilience of Traffic Networks with Connected Vehicles. 11<sup>th</sup> International Transportation Speciality Conference, CSCE Annual Conference, London Ontario. (NSERC)
- Khan, A.M., Whelen, M., ElSafdi, O., Snobar, N., Jones, B., Arnold, P. 2016. Automation for Enhancing Resilience in Transportation Systems. 11<sup>th</sup> International Transportation Speciality Conference, CSCE Annual Conference, London Ontario. (NSERC)
- Perks, A., Lovegrove, G., Khan, A., Tam, E., Brown, 2016. Decision Making Under Uncertainty. CSCE Annual Conference, London, ON, June 2016. (NSERC)
- Perks, A., Mulligan, C., Tam, E., Lovegrove, G., Khan, A., 2016. A Profession in Transition – A Call to Action for Civil Engineering. CSCE Annual Conference, London, ON, June 2016. (NSERC)
- Whelen, M., Khan, A.M., Tardif, L-P., Ramsey, D. 2016. Resilience measures for reducing the impact of nature-induced disruptions in transportation supply chains. Canadian Transportation Research Forum 51<sup>st</sup> Annual Conference, Toronto, May 2016. (Transport Canada, NSERC)
- Allen, R., Whelen, M. and Khan, A.M. 2016. Building resilience to counter the impact of international supply chain vulnerabilities. Canadian Transportation Research Forum 51st Annual Conference, Toronto, May 2016. (Industry Canada, NSERC)
- Whelen, Matthew, Khan, Ata M., Ramsey, D., 2015. Reducing Disruption-Induced Impacts on Transportation Supply Chain Fluidity. Canadian Transportation Research Forum 50<sup>th</sup> Annual Conference, Montreal, May 24-26, 2015. (Transport Canada, NSERC)

- Hossain, A. and Khan, A.M., 2014. Multiple Station Shared Vehicle Systems Design and Operations Modeling Framework. Intelligent Transportation Systems (ITS) World Congress 2014, Detroit Michigan. (NSERC)
- Vu, Nam H. and Khan, A.M., 2013. A Comprehensive Analysis for Bus Dwell Time Prediction. World Conference on Transport Research, Rio de Janeiro. (NSERC)
- Khan, A.M., 2013. Bayesian Approach to Integration of Technology and methodology for Traveller Information System. World Conference on Transport Research, Rio de Janeiro. (NSERC)
- Khan, A.M., Bacchus, A. and Erwin, S., “Surrogate Safety Measures as Aid to Cognitive Vehicle Design: Example of Longitudinal and Side Swipe Collisions”, ITS World Congress 2012, Vienna (Accepted for presentation and publication in conference proceedings). (NSERC)
- Khan, Ata M. 2011. “Design of Adaptive Longitudinal Control for Cognitive Connected Vehicle”, ITS World Congress, Orlando, Florida (Session: Collision Avoidance System 1”, Tuesday, October 18, 2011, 10:30 AM-12:00 PM) (NSERC/MTO/AUTO21).
- Khan, Ata M. and Zargari, S.A., 2010. “Sustainability of major urban travel corridors in a multi-nucleated urban region: role of bus rapid transit, highway tolls and parking charges”. Selected Proceedings of the 12<sup>th</sup> World Conference on Transport Research, Lisbon, Portugal, July 11-15, ID: 1547 (NSERC).
- Khan, Ata M., 2010. “Telecommuting as a strategy for reducing energy consumption and greenhouse gas emissions in multi-nucleated urban regions”, Selected Proceedings of the 12<sup>th</sup> World Conference on Transport Research, Lisbon, Portugal, July 11-15, ID: 1545 (NSERC).

### **International Conference Presentation 2023-2024**

- Khan, Ata M., 2024. “Accelerating Urban Road Transportation Electrification: Planning and Implementation Strategies for Connected Automated Shuttle Services”. GEM-2024, Los Angeles, USA., March 8, 2024.
- Khan, Ata M., and Feng, Junshen, 2023. “Accelerating Road Transportation Electrification: Planning and Implementation Strategies”. GEM-23 Boston, USA. March 9, 2023.

### **Refereed Technical Report 2023**

- Khan, A., & Thomas, R. (2023). *The New Mobility Era: Leveraging Digital Technologies for More Equitable, Efficient and Effective Public Transportation*. IRPP Insight No. 52. Montreal: Institute for Research on Public Policy.