

RESUME

- ✧ Senior transportation engineer, supervisor and researcher
- ✧ Over 20 years' experience in the fields of transportation safety, emerging transportation technologies, ITS solutions, Smart City initiatives, operation & maintenance, planning and facility design
- ✧ 45 journal and peer-reviewed conference papers
- ✧ Proficient at data analytics & programming by Python/R/SAS/ BI/IHSDM, simulation and capacity analysis by SYNCHRO/HCS+, performance monitoring by KPIs, planning by TransCAD, design by AutoCAD, and optimization by MATLAB
- ✧ Excellent oral and writing skills in English and Mandarin

EMPLOYMENT HISTORY

Senior Road Safety Engineer Apr 2017-current (part-time since Sept 2017)
Fireseeds North Infrastructure Corporation (FNI), Winnipeg, Manitoba

Adjunct Researcher Apr 2017-current (working remotely from Toronto)
Research Institute of Highway Ministry of Transport, China (RIOH)

Chief Research Scientist Jan 2015-Apr 2017
Research Institute of Highway Ministry of Transport, China (RIOH)

Acting Senior Traffic Safety Engineer Sept 2013- Jan 2015
Office of Traffic Safety, City of Edmonton

Traffic Safety Predictive Analyst Jul 2012- Sept 2013
Office of Traffic Safety, City of Edmonton

Research & Teaching Assistant Sept 2008-Jul 2012
Ryerson University, Toronto, Ontario

Associate Professor Jan 2004-Sept 2008
Traffic Research Center, Beijing University of Technology, China

Assistant Professor Jun 1996- Dec 2003
Traffic Research Center, Beijing University of Technology, China

EDUCATION

Ph.D. Civil Engineering June 2013
Ryerson University

Ph.D. Transportation Planning and Management June 2001

M.S. Transportation Engineering

June 1996

Beijing University of Technology

B.S. Transportation Engineering

June 1993

Beijing University of Technology

PROFESSIONAL ORGANIZATIONS

- ✧ Member of Institute of Transportation Engineers
- ✧ Member of Canadian Association of Road Safety Professionals

SKILLS AND EXPERIENCE

Video Conflict Analysis, In-Service Road Safety Review & Road Safety Audit (2000-current)

- ✧ Collision data analysis
- ✧ Video conflict analysis (VCA)
- ✧ In-Service Road Safety Review (ISRSR)
- ✧ Road Safety Audit (RSA)
- ✧ Detailed Engineering Review and Diagnostics
- ✧ Developments on countermeasures

Traffic Operation, Traffic Risk Assessment & Smart Freeway (2014-current)

- ✧ R& D on real-time risk assessment on traffic flows
- ✧ R&D on traffic operational control strategy
- ✧ R& D on smart freeway management and control programs, including tolling system

Engineering Analytics, Measure Developments & B/A Assessments (2012-current)

- ✧ Data analytics, measure developments and assessments on concept plans, designs, rehabilitations and traffic and speed controls
- ✧ Space-temporal risk prioritization and site selection for improvements
- ✧ Before-after evaluation for countermeasures, e.g., design changes, automated devices

Highway Safety Research

- ✧ Four MTO/TC transportation research projects (2008-2013)
- ✧ EU-Asia network in competence enhancement on traffic safety on roads funded by European Commission (2005-2008)
- ✧ Highway Safety Improvement Project funded by World Bank (2001-2004)
- ✧ R&D of Highway Safety Database (funded by DOC, China) (2005-2008)

Statistical Modeling

- ✧ Time Series (SARIMA) models (2012-current)
- ✧ Data mining & machine learning (2012-current)
- ✧ Integrating prior knowledge into before-after evaluation (2008-2012)
- ✧ Modeling, calibrating of Safety Performance Functions (2008-2012)

- ✧ Crash prediction model (funded by DOC, China) (2003-2006)

Macro & Software Developing

- ✧ Applicative Spreadsheet Tools, by VBA at Excel (2008-2012)
- ✧ Reconstruction of crash process, by language of Java (2002)
- ✧ Highway Safety Design Platform, by language of Visual Basic (1997-2001)
- ✧ Traffic signal simulation, by language of C (1993)

Planning, Survey and Feasibility Study

- ✧ Over 15 traffic impact analysis projects (2001-2008)
- ✧ Highway network modeling and traffic demand analysis (2002-2008)
- ✧ Benefit-cost analysis (three freeway and two arterial projects) (2003-2005)
- ✧ OD Survey and Estimation of OD Matrix (four freeway projects) (2005-2008)
- ✧ Transit passenger flow Prediction (One light rail project) (1996)
- ✧ Demand analysis and layout design of long-distance transit terminals (1995-1997)

**** References Available Upon Request ****