



9TH ANNUAL (EDMONTON)  
INTERNATIONAL CONFERENCE ON

# URBAN TRAFFIC SAFETY

4TH INTERNATIONAL CONFERENCE ON

# TRANSPORTATION INFORMATION AND SAFETY

AUGUST 8-10, 2017 BANFF, ALBERTA, CANADA



Edmonton



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## OBJECTIVES

*Showcase innovative road design, public education and enforcement efforts*

*Share research and best practice on applying global Safe System principles to local applications as we move towards Vision Zero*

*Collaborate with international academic institutions in transportation safety*

*Network with traffic-safety researchers, practitioners and industry professionals from around the world, develop skills, and forge connections.*

# WELCOME MESSAGES



## *Welcome from Gord Cebryk*

Welcome to the 9th Annual (Edmonton) International Conference on Urban Traffic Safety held in conjunction with the 4th International Conference on Transportation Information and Safety. This prestigious and innovative event is a collaboration among the City of Edmonton, Canada, the University of Alberta, Canada, and Wuhan University of Technology, China.

This year, we bring together top-notch researchers, industry professionals, and practitioners in the transportation safety field to showcase best innovation, technology, engineering improvements, enforcement efforts, and education and engagement to address current and emerging transportation safety issues.

We are truly excited to celebrate this unique collaboration of uniting the two international conferences on Canada's 150th birthday. With a global perspective in mind, we are also showcasing the City of Edmonton's continuing efforts to eliminate serious and fatal injuries on our roads.

Confucius said "having friends coming from distant quarters—isn't this delightful?" We welcome our friends at one of Canada's most iconic national parks. We hope you will enjoy your experience here and cherish the memories for many years to come.

### **Gord Cebryk**

Branch Manager of Parks and Roads Services,  
City Operations, City of Edmonton





## Welcome from Dr. Xinping Yan

On behalf of the conference Organizing Committee, I am pleased to welcome all of you to the 4th International Conference on Transportation Information and Safety (ICTIS2017). Thank you for attending the three-day conference to exchange your research ideas and progress.

Efficiency, safety, reliability and environment friendly is the key to the operation of transportation systems. The efficiency, safety, reliability and intelligence of transport systems are among the most important topics in transportation areas, especially in road and maritime transportation. The theme of ICTIS 2017 is "Transportation Information and Safety in Intelligent and Connected Environments", which includes a broad range of topics related to the theories, technologies and applications of transportation information and safety technology.

I offer my sincere thanks to the conference sponsors, China Communications and Transportation Association (CCTA), The American Society of Civil Engineers (ASCE) and Canadian Society for Civil Engineering (CSCE) for their support. I also appreciate Ministry of Education (MOE) for their support. Many people made a significant contribution to the conference organization of ICTIS2017. I highly appreciate Academic Committee Members for their technical review work. I am delighted in the participating of the keynote speakers, invited speakers, and all of the authors. I would like to thank the following members of the Organizing Committee: Dr. ZHANG, Hui; Dr. ZHANG, Jinfen; Dr. JIANG, Zhonglian from Wuhan University of Technology (WUT) for their hard and tireless work.

The conference is an excellent platform to exchange new ideas and technical discoveries. The conference has received about 283 full papers from researchers in more than 10 countries and regions. After a careful review of the abstracts and full papers, 205 papers have been selected for publishing in the ICTIS2017 Proceedings, which will be published by IEEE. There will be 22 technical sessions over the conference. We hope the technical discussion and idea exchange will benefit your future research.

### **Dr. Xinping Yan**

Chair, Organizing Committee of ICTIS2017

Director of National Engineering Research Center for Water Transport Safety  
Professor and Vice President, Wuhan University of Technology





# ICUTS CONFERENCE AT A GLANCE

Monday, August 7: Registration 3:00 – 7:00 pm, Reception 5:00 – 7:00 pm

## Tuesday, August 8

## Wednesday, August 9

## Thursday, August 10

7:00	Registration*   Breakfast	Breakfast	Breakfast
8:30	Opening Ceremony	Opening Remarks	Opening Remarks
	<b>KEYNOTE</b>	9:00 <b>KEYNOTE</b>	9:00 <b>KEYNOTE</b>
9:30	Safety and Reliability of Autonomous Maritime Transportation: Human Still in the Loop KC 101/103/105	Incorporating Safety into Pavement Engineering and Management. How Can A Risk-Based Approach be Effectively Used in Design and Operation of Large Marine Transportation Systems Under Uncertainties? KC 101/103/105	Can One Get Crash Modification Functions from Regressions? The Development of Transportation Safety and Safety Technologies in China KC 101/103/105
10:00	Break	Break	Break
	<b>BREAKOUT SESSIONS</b>	<b>BREAKOUT SESSIONS</b>	<b>BREAKOUT SESSIONS</b>
10:30	Why Talking to Your Car Can Drive You to Distraction Legalization of Marijuana: Lessons Learned from the United States KC 205 KC 101/103/105	Achieving Vision Zero: How Can Remote Sensing Data Help Road Agencies Save Lives? Roadside Drug Testing in Australia – History, Processes, and Lessons Learned Mornington Peninsula Shire – Striving to be a 'Towards Zero' Municipality Drug Impairment in Traffic: A Problem in Perspective KC 205 KC 101/103/105	Cycling Road Safety Audit 2016 Edmonton and Area Traffic Safety Culture Survey Pedestrian Safety – The City of Edmonton Initiatives Fire Safety and Drugs KC 205 KC 101/103/105
11:00	Residential Traffic Enforcement Unit Weed and Driving: Is Marijuana Legalization Killing More Drivers? KC 101/103/105		
11:30	Lunch	Lunch	Lunch
	<b>BREAKOUT SESSIONS</b>	<b>BREAKOUT SESSIONS</b>	<b>WORKSHOP (100 - 3:00pm)</b>
1:00	Vision Zero Canada Vision Zero Seattle: Bicycle and Pedestrian Safety Analysis KC 101/103/105 KC 101/103/105	Traffic Safety Enforcement High Risk Licence Plates KC 101/103/105 KC 101/103/105	Preparation for Legalization of Marijuana Vision Zero Engineering with a Focus on Vulnerable Road Users KC 205 KC 101/103/105
2:00	Break	Break	Break
	<b>PANEL DISCUSSION</b>	<b>PANEL DISCUSSION</b>	<b>KEYNOTE</b>
2:15	Implementing Successful Programs to Deter Drugged Driving: Barriers and Solutions KC 101/103/105	Vision Zero and the Safe System Approach KC 101/103/105	The Safe System Approach in The Netherlands: Adoption, Implementation, and Updates of The Vision KC 101/103/105
3:00	Break	Break	Break
3:15	Break	Break	Break
	<b>KEYNOTE</b>	<b>KEYNOTE</b>	<b>KEYNOTE</b>
3:30	Leadership for Zero Road Deaths and Serious Injuries: What Can You Do? KC 101/103/105	The Role of The Road User In A Safe System: Challenges and Opportunities for the Future KC 101/103/105	
4:15	Free time	Free time	Free time
4:30	Free time	Free time	Free time
		<b>Closing Remarks</b>	<b>Closing Remarks</b>
		<b>Conference Ends</b>	<b>Conference Ends</b>



# ICTIS CONFERENCE AT A GLANCE

Tuesday, August 8

Wednesday, August 9

Thursday, August 10

	Registration   Breakfast	Breakfast	Breakfast
7:00	<b>Registration</b>   Breakfast	Breakfast	Breakfast
8:30	<b>Opening Ceremony</b> <b>KEYNOTE</b> Safety and Reliability of Autonomous Maritime Transportation: Human Skill in the Loop KC 101/103/105	<b>Opening Remarks</b> 9:00 <b>KEYNOTE</b> Incorporating Safety into Pavement Engineering and Management. How Can A Risk-Based Approach be Effectively Used in Design and Operation of Large Marine Transportation Systems Under Uncertainties? KC 101/103/105	<b>Opening Remarks</b> 9:00 <b>KEYNOTE</b> Can One Get Crash Modification Functions from Regressions? KC 101/103/105
9:30			
10:00	Break	Break	Break
10:30	<b>BREAKOUT SESSIONS</b> <b>Transportation System Research</b> MB 252 <b>Ships and Technologies</b> <b>INVITED SPEECH:</b> Progress in Unmanned Ships and Intelligent Navigation Techniques KC 203 Lunch	<b>BREAKOUT SESSIONS</b> <b>Transportation System Research</b> <b>INVITED SPEECH:</b> Hybrid Lane-Based Short-Term Urban Traffic Speed Forecasting: A Genetic Approach MB 252 <b>Transportation System Research</b> <b>INVITED SPEECH:</b> Dynamic Flashing Yellow Arrow (FYA) – A Study on Variable Left Turn Mode Operational Impact KC 203 Lunch	<b>BREAKOUT SESSIONS</b> <b>Traffic and Safety Analyses</b> <b>INVITED SPEECH:</b> How can Connected Vehicle help improve urban traffic signal control? MB 252 <b>Modelling Research</b> KC 203
11:30	Lunch	Lunch	Lunch
1:00	<b>BREAKOUT SESSIONS</b> <b>Traffic and Safety Analyses</b> <b>INVITED SPEECH:</b> Calibrating Traffic Microsimulation Models for Safety Analyses MB 252 <b>Ships and Safety Analyses</b> <b>INVITED SPEECH:</b> Dynamic Process Simulation of Ship Navigation Risk at Arctic Northeast Route via Markov Chain Monte Carlo Algorithm and Cloud model KC 205 Break	<b>BREAKOUT SESSIONS</b> <b>Modelling Research</b> <b>INVITED SPEECH:</b> Bayesian Approach to Estimating Parameters in Monte-Carlo Microsimulation Models of Parcel-Level Land Development Activity. MB 252 <b>Connected Vehicles</b> KC 203 <b>Modelling Research</b> KC 205 Break	<b>BREAKOUT SESSIONS</b> <b>WORKSHOP: Connecting Emerging Transportation Professionals on Hot Transportation Topics</b> (student led) MB 252 <b>Traffic and Safety Analyses</b> <b>Marine Safety</b> <b>INVITED SPEECH:</b> Road Safety Analysis in the Era of Big Data and Machine Learning KC 203
2:00	Break	Break	Break
2:15	<b>BREAKOUT SESSIONS</b> <b>Traffic and Safety Analyses</b> <b>INVITED SPEECH:</b> Public Transport Induced Demand Estimation with Application of Fuzzy Inference System KC 203 <b>Traffic and Safety Analyses</b> <b>INVITED SPEECH:</b> Traffic safety studies for highway sections through small urban communities in Canadian Prairies MB 251 <b>Impact of Environment and Safety</b> MB 252 <b>Marine Safety</b> KC 205 <b>Transportation System Research</b> KC 203	<b>BREAKOUT SESSIONS</b> <b>Traffic and Safety Analyses</b> MB 252 <b>Ships and Technologies</b> KC 203 <b>Traffic and Safety Analyses</b> KC 205 <b>Transportation System Research</b> <b>INVITED SPEECH:</b> Accurate Vision-based Localization of Intelligent Vehicles Using Multi-Scale Matching from Visual Map MB 251	<b>Transportation System Research</b> KC 203

FOR END OF DAY KEYNOTES, SEE ICUTS CONFERENCE AT A GLANCE

# SCHEDULE

*Monday, August 7, 2017*

3:00 – 7:00 pm	Registration	KC Main Floor
<b>5:00 – 7:00 pm</b>	<b>Welcome Reception</b>	<b>KC 101/103</b>
Welcoming Remarks	Mr. Gerry Shimko, Co-Chair, Organizing Committee of ICUTS2017, Executive Director, City of Edmonton, Traffic Safety, Canada Xinping Yan, PhD, Chair, Organizing Committee of ICTIS2017, Director of National Engineering Research Center for Water Transport Safety, Professor and Vice President, Wuhan University of Technology, China	



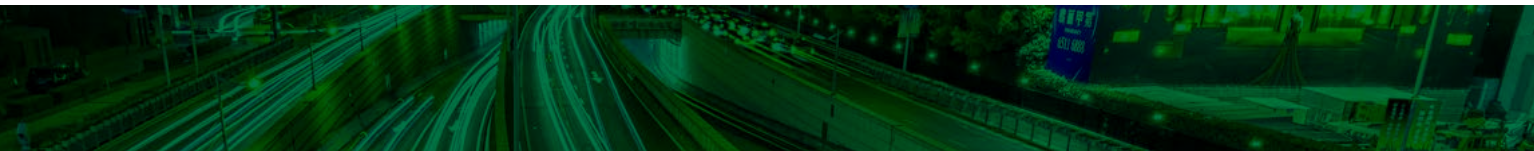


## Tuesday, August 8, 2017

7:00 – 8:30 am	Breakfast	
<b>8:30 – 9:30 am</b>	<b>Opening Ceremony and Welcoming Remarks</b>	<b>KC 101/103/105</b>
Aboriginal Welcome		
Welcoming Remarks	John Lilley, MD FRCP (C), Edmonton Police Commission, Canada Gord Cebryk, Branch Manager, Parks and Roads Services City Operations, City of Edmonton, Canada Chinese Embassy and CCTA Representatives	
<b>9:30 – 10:00 am</b>	<b>KEYNOTE SPEAKER</b>	<b>KC 101/103/105</b>
<b>Safety and Reliability of Autonomous Maritime Transportation: Human Still in the Loop</b> Ali Mosleh, PhD, University of California in Los Angeles (UCLA), USA		
10:00 – 10:30 am	Break	
<b>BREAKOUT SESSIONS</b>		
<b>A1: 10:30 – 11:00 am</b> KC 205	<b>Why Talking to Your Car Can Drive You to Distraction</b> David Strayer, PhD, Department of Psychology, University of Utah, USA	
<b>A2: 11:00 – 11:30 am</b> KC 205	<b>Residential Traffic Enforcement Unit</b> Sergeant Daran Wood, Calgary Police Service, Calgary, Canada	
<b>A6: 10:30 – 11:00 am</b> KC 101/103/105	<b>Legalization of Marijuana: Lessons Learned from the United States</b> Jim Fell, Principal Research Scientist, National Opinion Research Center, University of Chicago, USA	
<b>A7: 11:00 – 11:30 am</b> KC 101/103/105	<b>Weed and Driving: Is Marijuana Legalization Killing More Drivers?</b> Chief John R. Batiste, Washington State Patrol, USA	
11:30 am – 1:00 pm	Lunch	
<b>BREAKOUT SESSIONS</b>		
<b>B1: 1:00 – 1:30 pm</b> KC 101/103/105	<b>Vision Zero Canada</b> Pamela Fuselli, Vice President, Knowledge Transfer and Stakeholder Relations, Parachute, Canada	
<b>B2: 1:30 – 2:00 pm</b> KC 101/103/105	<b>Vision Zero Seattle: Bicycle and Pedestrian Safety Analysis</b> Monica DeWald, Seattle Department of Transportation, USA	
2:00 – 2:15 pm	Break	
<b>2:15 – 3:15 pm</b>	<b>PANEL DISCUSSION</b>	<b>KC 101/103/105</b>
<b>B24: Implementing Successful Programs to Deter Drugged Driving: Barriers and Solutions</b>	<b>Facilitator:</b> Flavio Pechansky, MD, PhD, Professor and Director of the Center for Drug and Alcohol Research, Federal University of Rio Grande do Sul, Porto Alegre, Brazil <b>Panelists:</b> Chief John R. Batiste, Jim Fell, Kathryn Stewart, and Barry Watson	
3:15 – 3:30 pm	Break	
<b>3:30 – 4:30 pm</b>	<b>KEYNOTE SPEAKER</b>	<b>KC 101/103/105</b>
<b>Leadership for Zero Road Deaths and Serious Injuries: What Can You Do?</b> Iain Cameron, Trustee- Towards Zero Foundation (UK), Chair- OECD/ITF Working Group on Zero Road Deaths and Serious Injuries, Australia		







Tuesday August 8th, 2017

**BREAKOUT SESSIONS**

<b>A3–A5:</b> 10:30 – 11:30 am MB 252	<b>Transportation System Research</b> Hui ZHANG, Ando RYOSUKE, Yanning ZHANG, and Qi XU
<b>A8–A10:</b> 10:30 am – 12:00 pm KC 203	<b>Ships and Technologies</b> Lei XIE, Kun YANG, Nannan SHAO, and Jing WU <b>INVITED SPEECH: Progress in Unmanned Ships and Intelligent Navigation Techniques</b> Jingxian LIU, Professor, Wuhan University of Technology, China
12:00 – 1:00 pm	Lunch
<b>B3–B5:</b> 1:00 – 2:00 pm MB 252	<b>Traffic and Safety Analyses</b> Yao WU, Nikolay KAMENOV, and Shaobo LIU <b>INVITED SPEECH: Calibrating Traffic Microsimulation Models for Safety Analyses</b> Laurence RILETT, Professor, University of Nebraska, Lincoln, USA
<b>B6–B8:</b> 1:00 – 2:00 pm KC 205	<b>Ships and Safety Analyses</b> Fang LI, Yupeng YUAN, and Changhai HUANG <b>INVITED SPEECH: Dynamic Process Simulation of Ship Navigation Risk at Arctic Northeast Route via Markov Chain Monte Carlo Algorithm and Cloud model</b> Shenping HU, Professor, Shanghai Maritime University, China
<b>B9–B11:</b> 1:00 – 2:00 pm KC 203	<b>Traffic and Safety Analyses</b> Cunbao ZHANG, Nina KRAPUKHINA, and Qi LIU <b>INVITED SPEECH: Public Transport Induced Demand Estimation with Application of Fuzzy Inference System</b> Andrzej SZARATA, Professor, Cracow University of Technology, Poland
2:00 – 2:15 pm	Break
<b>B12–B14:</b> 2:15 – 3:15 pm MB 251	<b>Traffic and Safety Analyses</b> Lei LIU, Yupeng YUAN, and Chen CHEN <b>INVITED SPEECH: Traffic safety studies for highway sections through small urban communities in Canadian Prairies</b> LIU Guoxin (Andrew), Adjunct Professor of Engineering, University of Regina, Canada
<b>B15–B17:</b> 2:15 – 3:15 pm MB 252	<b>Impact of Environment and Safety</b> Zongfan LUO, Zhixin FENG, Yuri YEVDOKIMOV, and Peng CHANG
<b>B18–B20:</b> 2:15 – 3:15 pm KC 205	<b>Marine Safety</b> Jinhui HUANG, Xu YOU, Jinfen ZHANG, and Kun YANG
<b>B21–B23:</b> 2:15 – 3:15 pm KC 203	<b>Transportation System Research</b> Nengchao LYU, Wenting ZHANG, Juan BAO, and Jiangchen LI



## Wednesday, August 9, 2017

7:00 – 8:30 am	Breakfast	
<b>8:30 – 9:00 am</b>	<b>Welcoming Remarks</b>	<b>KC 101/103/105</b>
	Welcoming Remarks from CSCE, ASCE, and IEEE Representatives	
Student Award Ceremony	Karim El-Basyouny, PhD, PEng, Associate Professor and City of Edmonton Research Chair in Urban Traffic Safety, Department of Civil & Environmental Engineering, University of Alberta, Canada Shea Wang, PhD, Traffic Safety Analyst, City of Edmonton, Traffic Safety, Canada	
<b>9:00 – 10:00 am</b>	<b>KEYNOTE SPEAKERS</b>	<b>KC 101/103/105</b>
	<b>Incorporating Safety into Pavement Engineering and Management</b> Susan L. Tighe, PhD, University of Waterloo, Canada	
	<b>How Can A Risk-Based Approach be Effectively Used in Design and Operation of Large Marine Transportation Systems Under Uncertainties?</b> Jin Wang, PhD, Liverpool John Moores University, UK	
10:00 – 10:30 am	Break	
	<b>BREAKOUT SESSIONS</b>	
<b>C7: 10:30 – 11:00 am</b> KC 205	<b>Achieving Vision Zero: How Can Remote Sensing Data Help Road Agencies Save Lives?</b> Karim El-Basyouny, PhD, PEng, Associate Professor and City of Edmonton Research Chair in Urban Traffic Safety, Department of Civil & Environmental Engineering, University of Alberta, Canada	
<b>C8: 11:00 – 11:30 am</b> KC 205	<b>Mornington Peninsula Shire – Striving To Be A 'Towards Zero' Municipality</b> Bruce Corben, PhD, MENGSC (TRANS), BSC, Corben Consulting, Australia	
<b>C9: 10:30 – 11:00 am</b> KC 101/103/105	<b>Roadside Drug Testing in Australia – History, Processes, and Lessons Learned</b> Doug Fryer, APM, Assistant Commissioner, Road Policing Command, Victoria Police, Australia	
<b>C10: 11:00 – 11:30 am</b> KC 101/103/105	<b>Drug Impairment in Traffic: A Problem in Perspective</b> Kathryn Stewart, President of the International Council on Alcohol, Drugs and Traffic Safety and Director for the Dissemination and Diffusion of Science-Based Prevention, Prevention Research Center, Oakland, California, USA	
11:30 am – 1:00 pm	Lunch	
<b>D10: 1:00 – 1:30 pm</b> KC 101/103/105	<b>Traffic Safety Enforcement</b> Chief Neil Dubord, PhD, Delta Police Service, Canada	
<b>D11: 1:30 – 2:00 pm</b> KC 101/103/105	<b>High Risk Licence Plates</b> Inspector Jonathan Coughlan, Traffic Services Branch, Edmonton Police Service, Canada	
2:00 – 2:15 pm	Break	
<b>2:15 – 3:15 pm</b>	<b>PANEL DISCUSSION</b>	<b>KC 101/103/105</b>
<b>D24: Vision Zero and the Safe System Approach</b>	<b>Facilitator:</b> Ken Karunaratne, M.Eng., PEng, PTOE, Technical Specialist-Road Safety Engineering, City of Edmonton, Traffic Safety, Canada <b>Panelists:</b> Iain Cameron, Bruce Corben, and Monica DeWald	
3:15 – 3:30 pm	Break	
<b>3:30 – 4:30 pm</b>	<b>KEYNOTE SPEAKER</b>	<b>KC 101/103/105</b>
	<b>The Role of The Road User In A Safe System: Challenges and Opportunities for the Future</b> Barry Watson, PhD, Global Road Safety Consultant and Adjunct Professor at the Queensland University of Technology, Australia	





## Wednesday August 9th, 2017

### BREAKOUT SESSIONS

<b>C1-C3:</b> 10:30 am – 12:00 pm MB 252	<b>Transportation System Research</b> Shiyu DONG, Kun LI, and Houjie YAO <b>INVITED SPEECH: Hybrid Lane-Based Short-Term Urban Traffic Speed Forecasting: A Genetic Approach</b> Ming ZHONG, Professor, Intelligent Transportation System Center, Wuhan University of Technology, China
<b>C4-C6:</b> 10:30 am – 12:00 pm KC 203	<b>Transportation System Research</b> Xianglong WANG, Lian GU, Haoran WU, and Chao WEN <b>INVITED SPEECH: Dynamic Flashing Yellow Arrow (FYA) – A Study on Variable Left Turn Mode Operational Impact</b> Essam RADWAN, Professor, University of Central Florida, USA
12:00 – 1:00 pm	Lunch
<b>D1-D3:</b> 1:00 – 2:00 pm MB 252	<b>Modelling Research</b> Deshan CHEN, Chen CHEN, and Zhiyong LV <b>INVITED SPEECH: Bayesian Approach to Estimating Parameters in Monte-Carlo Microsimulation Models of Parcel-Level Land Development Activity.</b> John Douglas HUNT, Professor of Civil Engineering, University of Calgary; International Chair Professor, Wuhan University of Technology; Hill GT Modelling Analyst, HBA Spectro Incorporated
<b>D4-D6:</b> 1:00 – 2:00 pm KC 203	<b>Connected Vehicles</b> Jiacheng LI, Wei XIONG, and Suliman GARGOUM
<b>D7-D9:</b> 1:00 – 2:00 pm KC 205	<b>Modelling Research</b> Bing HAN, Zhonglian JIANG, Tao GUAN, and Xin SONG
2:00 – 2:15 pm	Break
<b>D12-D14:</b> 2:15 – 3:15 pm MB 252	<b>Traffic and Safety Analyses</b> Feng CHEN, Zichu ZHOU, Tang LI, and Haniyeh GHOMI
<b>D15-D17:</b> 2:15 – 3:15 pm KC 203	<b>Ships and Technologies</b> Jie LI, Kun LI, Feng ZHOU, and Kai WANG
<b>D18-D20:</b> 2:15 – 3:15 pm KC 205	<b>Traffic and Safety Analyses</b> Quan YUAN, Zhu MENG, Jingcheng WU, and Zahra BAHRAMIAN
<b>D21-D23:</b> 2:15 – 3:15 pm MB 251	<b>Transportation System Research</b> Zhaozheng HU, Ying ZHOU, Yupeng YUAN, and Tran ANH <b>INVITED SPEECH: Accurate Vision-based Localization of Intelligent Vehicles Using Multi-Scale Matching from Visual Map</b> Zhaozheng HU, Professor, Intelligent Transportation System Center, Wuhan University of Technology, China



## Thursday, August 10<sup>th</sup>, 2017

7:00 – 8:30 am	Breakfast	
<b>8:30 – 9:00 am</b>	<b>Welcoming Remarks</b>	<b>KC 101/103/105</b>
	Welcome from ICADTS: Kathryn Stewart, President of the International Council on Alcohol, Drugs and Traffic Safety and Director for the Dissemination and Diffusion of Science-Based Prevention, Prevention Research Center, Oakland, California, USA	
	ATS Awards Ceremony	
<b>9:00 – 10:00 am</b>	<b>KEYNOTE SPEAKERS</b>	<b>KC 101/103/105</b>
	<b>Can One Get Crash Modification Functions from Regressions?</b> Ezra Hauer, PhD, University of Toronto (Emeritus), Canada	
	<b>The Development of Transportation Safety and Safety Technologies in China</b> Xinping Yan, PhD, Wuhan University of Technology, China	
10:00 – 10:30 am	Break	
	<b>BREAKOUT SESSIONS</b>	
<b>E7: 10:30 – 11:00 am</b> KC 205	<b>Cycling Road Safety Audit</b> Paul DeLeur, PhD, P.Eng, de Leur Consulting Ltd., Vancouver, Canada	
<b>E8: 11:00 – 11:30 am</b> KC 205	<b>Pedestrian Safety - The City of Edmonton Initiatives</b> Tazul Islam, PhD, P.Eng, Traffic Safety Analyst, City of Edmonton, Traffic Safety, Canada	
<b>E9: 10:30 – 11:00 am</b> KC 101/103/105	<b>2016 Edmonton and Area Traffic Safety Culture Survey</b> Laura Thue, PhD, Senior Research Coordinator, City of Edmonton, Traffic Safety, Canada	
<b>E10: 11:00 – 11:30 am</b> KC 101/103/105	<b>Fire Safety and Drugs</b> Chief Len Garis, Adjunct Professor, University of the Fraser Valley's Centre for Public Safety and Criminal Justice Research, Fire Chief, City of Surrey, Canada	
11:30 – 1:00 pm	Lunch	
<b>1:00 – 3:00 pm</b>	<b>WORKSHOP</b>	<b>KC 205</b>
	<b>Preparation for Legalization of Marijuana</b> Gerry Annetts, Executive Director of Legal and Regulatory Services, Edmonton Police Service, Canada Inspector Jonathan Coughlan, Traffic Services Branch, Edmonton Police Service, Canada	
<b>1:00 – 3:00 pm</b>	<b>WORKSHOP</b>	<b>KC 101/103/105</b>
	<b>Vision Zero Engineering with a Focus on Vulnerable Road Users</b> Bruce Corben, PhD, MENGSC (TRANS), BSC, Corben Consulting, Australia	
3:00 – 3:15 pm	Break	
<b>3:15 – 4:15 pm</b>	<b>KEYNOTE SPEAKER</b>	<b>KC 101/103/105</b>
	<b>The Safe System Approach in The Netherlands: Adoption, Implementation, and Updates of The Vision</b> Letty Aarts, PhD, SWOV Institute of Road Safety Research, the Netherlands	
<b>4:15 – 4:30 pm</b>	<b>Closing Remarks</b>	<b>KC 101/103/105</b>
	ICUTS and ICTIS Representatives	





## Thursday August 10<sup>th</sup>, 2017

### BREAKOUT SESSIONS

**E1-E3:** 10:30 – 11:30 am  
MB 252

#### Traffic and Safety Analyses

Alireza MOHAMMADI, Yuanchang DENG, and Jieling JIN

#### **INVITED SPEECH:** How can Connected Vehicle help improve urban traffic signal control?

Tony QIU, Professor, Intelligent Transportation System Center, Wuhan University of Technology, China, University of Alberta, Canada

**E4-E6:** 10:30 – 11:30 am  
KC 203

#### Modelling Research

Qionsgai BAI, Yunxia CHEN, Daiyong ZHANG, and Youxi HU

12:00 – 1:00 pm

Lunch

**1:00 – 3:00 pm**

### WORKSHOP

**MB 251**

Connecting Transportation Professionals on Hot Transportation Topics  
(student led)

### BREAKOUT SESSIONS

**F1:** 1:00 – 2:00 pm  
MB 252

#### Traffic and Safety Analyses

Xu WANG, Shuyuan LIU, and Jun LI

**F5-F7:** 1:00 – 2:00 pm  
KC 203

#### Marine Safety

Yang WANG, Likang ZONG, and Jie XUE

#### **INVITED SPEECH:** Road Safety Analysis in the Era of Big Data and Machine Learning

Liping FU, Professor, University of Waterloo, Canada

2:00 – 2:15 pm

Break

**F2-F4:** 2:15 – 3:15 pm  
KC 203

#### Transportation System Research

Guantao AI, Liqun PENG, Nini WANG, and Guanbing DENG



# KEYNOTE SPEAKERS

*Tuesday August 8, 2017*

9:30 – 10:00 am  
KC 101/103/105



## **ALI MOSLEH**

*Safety and Reliability Autonomous of Maritime Transportation:  
Human Still in the Loop*

Ali Mosleh is Distinguished University Professor and holder of Evelyn Knight Chair in Engineering at the University of California in Los Angeles where he is also the director of the UCLA Garrick Institute for the Risk Sciences. Previously he was the Nicole J. Kim Eminent Professor of Engineering and Director of the Center for Risk and Reliability at the University of Maryland. He was elected to the US National Academy of Engineering in 2010, and is a Fellow of the Society for Risk Analysis, and the American Nuclear Society, recipient of several scientific achievement awards, and consultant and technical advisor to numerous national and international organizations, including appointment by President George W. Bush to the U.S. Nuclear Waste Technical Review Board.

He conducts research on methods for probabilistic risk analysis and reliability of complex systems and has made many contributions in diverse fields of theory and application. He holds several patents, and has edited, authored or co-authored over 500 publications including books, guidebooks, and technical papers. In 2013 he received the ANS Thompson Award for his contributions to probabilistic risk and safety assessment. Mosleh has led many major studies on risk and safety of complex systems such as space missions, nuclear power plants, commercial aviation, communication networks, and healthcare systems.



## Tuesday August 8, 2017

3:30 – 4:30 pm  
KC 101/103/105

### IAIN CAMERON

Iain Cameron has public sector policy, strategy and leadership experience in education, public health, drug strategy, transport, roads and road safety.

Iain was Executive Director of the Western Australian State Office of Road Safety from 2000 to 2015. Iain's team lead the development of Towards Zero, the WA Government's ambitious strategy to reduce serious crashes by at least 40% by 2020, the first in Australia to articulate a vision zero through a safe system. The rate of road deaths fell from 11.3 per 100,000 population in 2000 to 6.2 in 2015.

Iain made significant contributions to the Australian Road Safety Strategy (2011–2020) and the bi-annual national action plans. Iain is a Trustee of the Towards Zero Foundation (a UK registered charity) and an Independent Director on the Board of the Australasian New Car Assessment Program (ANCAP). Iain chaired the OECD/ITF Safe System Working Group, the Austroads National Road Safety Task Force and he was a member of the WA Road Safety Council and the Curtin Monash University Accident Research Centre Board. He is a graduate of the Australian Institute of Company Directors.

In 2014 Iain was awarded as a Fellow of the Australasian College of Road Safety by the Governor General of Australia for his significant contributions to road safety locally, nationally and internationally.

In December 2016, the ITF Report Zero Road Deaths and Serious Injuries: Leading a Paradigm Shift in Road Safety chaired by Iain won the 2017 Special Award of the prestigious Prince Michael of Kent International Road Safety Awards. Canada made a significant contribution to this leading work through Gerry Shimko on the writing and editorial team.



# KEYNOTE SPEAKERS

*Wednesday August 9, 2017*

9:00 – 10:00 am  
KC 101/103/105



## **SUSAN L. TIGHE**

*Incorporating Safety into Pavement Engineering and Management.*

Dr. Susan L. Tighe is a founding member and Director of the Centre for Pavement and Transportation Technology (CPATT) at the University of Waterloo, President Elect of the Canadian Society for Civil Engineering, and a Norman W. McLeod Professor of Sustainable Pavement Engineering. Prior to assuming the Director role in September 2010, she served as the CPATT Associate Director of Research and Technology from 2005 to 2010.

Dr. Tighe worked for the Ministry of Transportation of Ontario prior to pursuing a career in academia. She is a past Canada Research Chair in Pavement and Infrastructure Management. She is a member of the inaugural class of the New College of Scholars of the Royal Society of Canada, and was named one of Canada's Top 40 Under 40 for her leadership and vision with respect to the Canadian Transportation Community. She received the Transportation Association of Canada Academic Merit Award, the prestigious Research & Development Medal given to her by the Ontario Society of Professional Engineers (OSPE) and Professional Engineers Ontario (PEO), as well as the Inaugural Bleeds Black Award from the Ontario Hot Mix Producers, and Inaugural Region of Waterloo Top 40 Under 40.

She has successfully completed over 45 graduate students since starting at the University of Waterloo in 2000; many of whom are now in academic, public and private sector leadership positions. She currently supervises over 20 PhD and MASc graduate students. She is an author of over 400 technical publications in pavements and infrastructure, including being the principal investigator on the 2013 Transportation Association of Canada Pavement Asset Design and Management Guide, and is involved in a number of national and international research projects. She has been involved with projects in Africa, Chile, India, China, Australia, New Zealand and throughout North America.

During sabbaticals she has spent time in Australia working for a contractor, and has also received academic Fellowships including the Erskine Fellowship at the University of Canterbury in New Zealand, the U.K. Royal Academy of Engineering University of Nottingham in England and the Queensland Pavement Center located at University of the Sunshine Coast Australia.





## Wednesday August 9, 2017

9:00 – 10:00 am  
KC 101/103/105

### JIN WANG

#### *How can a Risk-Based Approach be Effectively Used in Design and Operation of Large Marine Transportation Systems Under Uncertainties?*

Professor Jin Wang is Associate Dean (Research and Scholarship) of Faculty of Engineering and Technology at Liverpool John Moores University (LJMU), UK. He is also Director of Liverpool Logistics, Offshore and Marine (LOOM) Research Institute at LJMU. Following just less than 5 years' research as a Research Associate at Newcastle University, UK, he joined LJMU as a lecturer in 1995, and was promoted as Reader in Marine Engineering and Professor of Marine Technology in 1999 and 2002 respectively. He has been involved in safety and reliability research of large engineering systems with significant financial support from the UK research councils, EU, etc.

Jin Wang has successfully completed supervision of more than 50 doctoral/postdoctoral researchers. His research areas are in risk-based design and operation of large maritime engineering systems such as ships and offshore installations. Prof. Wang's publications include 2 research monographs and more than 120 SCI cited journal papers (h-index 28, more than 2,200 citations in Web of Science). He has won several research awards including two Denny Medals from the Institute of Marine Engineering, Science and Technology (IMarEST). He has led seven UK research council funded projects as PI and two EU funded projects (REFERENCE and RESET) as the coordinator. He has been a member of IMO's formal safety assessment experts group since 2008 and the chairman of the marine transportation safety committee of European Safety and Reliability Society since 2010. Prof. Wang was a sub-panel member (sub-panel 12: Aeronautical, Mechanical, Chemical and Manufacturing Engineering) in the Research Excellence Framework 2014 for assessing the quality of research in the UK's higher education institutions.



# KEYNOTE SPEAKERS

*Wednesday August 9, 2017*

3:30 – 4:30 pm  
KC 101/103/105



## **BARRY WATSON**

Dr. Barry Watson is a global road safety expert based in Australia and an Adjunct Professor at the Queensland University of Technology (QUT). Between 2015 and early 2017, he was the Chief Executive Officer of the Global Road Safety Partnership (GRSP), which is hosted by the Federation of the Red Cross and Red Crescent Societies in Geneva, Switzerland. As the CEO of GRSP, Barry was responsible for the overall strategic direction of the organisation as well as the management of its activities in over 35 countries worldwide.

Prior to this, Barry worked in the road safety field for over 30 years in government, academic and civil society organisations. Between 2008 and 2015, he was the Director of the Centre for Accident Research & Road Safety (CARRS-Q), based at the QUT in Brisbane, Australia. Barry has conducted research and policy development into a wide range of road user safety issues including drink driving, speeding, driver licensing, driver education, and traffic law enforcement, and developed and delivered road safety training programs in a wide range of countries. Barry is a member of the Executive Board of the International Council on Alcohol, Drugs & Traffic Safety (ICADTS) and a Fellow of the Australasian College of Road Safety (ACRS).



Thursday August 10, 2017

9:00 – 10:00 am  
KC 101/103/105

## **EZRA HAUER**

*Can one get Crash Modification Functions from Regressions?*

Professor (emeritus) Ezra Hauer, Department of Civil Engineering,  
University of Toronto.

Education: Ba.Sc., Technion, Israel; Ma.Sc. Technion, Israel; Ph.D.,  
U.C. Berkeley.

Active in road safety research and consulting since 1970. Author of more than 200 scientific papers. Recipient of R. Crum Award, U.S. National Academies of Sciences and Engineering (1999) and ITE Transportation Safety Award (1993). Director, Transportation Safety Council, Institute of Transportation Engineers (1993–1995); Member 407 Safety Review (1997), Coordinator of "Safety Research Group Ontario" (1981–1993). Vice President, Canadian Association of Road Safety Professionals (1987–88); President, Canadian Association of Road Safety Professionals (1985–86); Member, Advisory Board, International Association of Traffic Safety Sciences, Japan, (1986); Member, International Committee of Symposia on Traffic and Transportation Theory (1983), Convener (1996–2000); Associate Editor of "Accident Analysis & Prevention" (1982–1995); Chairman, Committee on Methodology for Evaluating Highway Improvements, Transportation Research Board (1982–1997), Chairman (1993–1995); Member, Committee to Study Geometric Design Standards, U.S. National Research Council (1984–1987). Member, Committee for the study of the regulation of weights, lengths and widths of commercial motor vehicles (2000–2002). Member of Committee on research priorities and coordination in highway infrastructure and operations safety.



# KEYNOTE SPEAKERS

*Thursday August 10, 2017*

9:00 – 10:00 am  
KC 101/103/105



## **XINPING YAN**

*The Development of Transportation Safety and Safety Technologies in China.*

Professor Xinping Yan received the BSc and Master degree in Marine Mechanical Engineering from Wuhan University of Water Transportation Engineering, China in 1982 and 1987 respectively, and PhD in Mechanical Engineering from Xi'an Jiaotong University, China in 1997.

His research interests include condition monitoring and wear diagnosis, risk assessment and reliability, renewable energy for marine power, intelligent transport system and safety science, etc.

He is the member of ISO/TC108/SC5 Committee, Vice Chairman of China Association of Plant Engineering, and Chairman of Organizing Committee of The 1st, The 2nd and The 3rd International Conference on Transportation Information and Safety (2011, 2013 and 2015), Wuhan, China, and the editorial member of Journal of Maritime Environment (U.K.). The Extinguished Visiting Fellowship granted by the Royal Academy of Engineering (2014).

He has published 10 monographs and textbooks, over 500 refereed journal and conference publications (98 SCI-cited journal papers since 2005), 15 keynote speeches in international and national conferences, Second Prize for Technological Invention Award of China (2012) and Second Prize for Science and Technology Progress Award of China (2016).

He is the former Vice President of Wuhan University of Technology (2000–2015), and the Chair Professor of marine engineering, Reliability and Safety in Wuhan University of Technology, and Director of National Engineering Research Center for Water Transport Safety (WTS Center), China.



*Thursday August 10, 2017*

3:15 – 4:15 pm  
KC 101/103/105

### **LETTY AARTS**

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Dr. Letty Aarts studied psychology in Amsterdam and obtained her doctorate with a thesis on situation awareness in ship navigation. Letty has been working for SWOV Institute of Road Safety Research, the Netherlands since 2003. She has done research on a variety of topics related to the interaction of road users, their behaviour and the design of the traffic system, such as speed and risk, and self-explaining road design.

Furthermore, she managed several local, national and international research projects on road safety statistics including serious road injuries and road safety performance indicators, forecasting and road safety policy issues. Letty is author and co-editor of the updated version of the Sustainable Safety road safety vision of the Netherlands (2005) and is currently leading the next update of the vision which will become available later this year.



*Other speakers' bios are available on [urbantrafficsafetyconference.com](http://urbantrafficsafetyconference.com).*

# BANFF CENTRE MAP

## Map Legend

- |                   |                                      |
|-------------------|--------------------------------------|
| Parking           | Public Road                          |
| Wheelchair Access | Service Road (service vehicles only) |
| Information       | Stairs                               |
| Dining Facilities | Path                                 |

100 metres

## Food & Beverage Services

### SALLY BORDEN BUILDING:

#### Vistas Dining Room

7:00–9:30 am,  
11:30 am – 1:30 pm,  
5:30 – 7:30 pm

#### Three Ravens Restaurant

5:00 – 9:00 pm

#### Three Ravens Wine Bar

4:00 – 12:00 pm

#### Le Café

10:00 am – 10:00 pm

### KINNEAR CENTRE FOR CREATIVITY & INNOVATION:

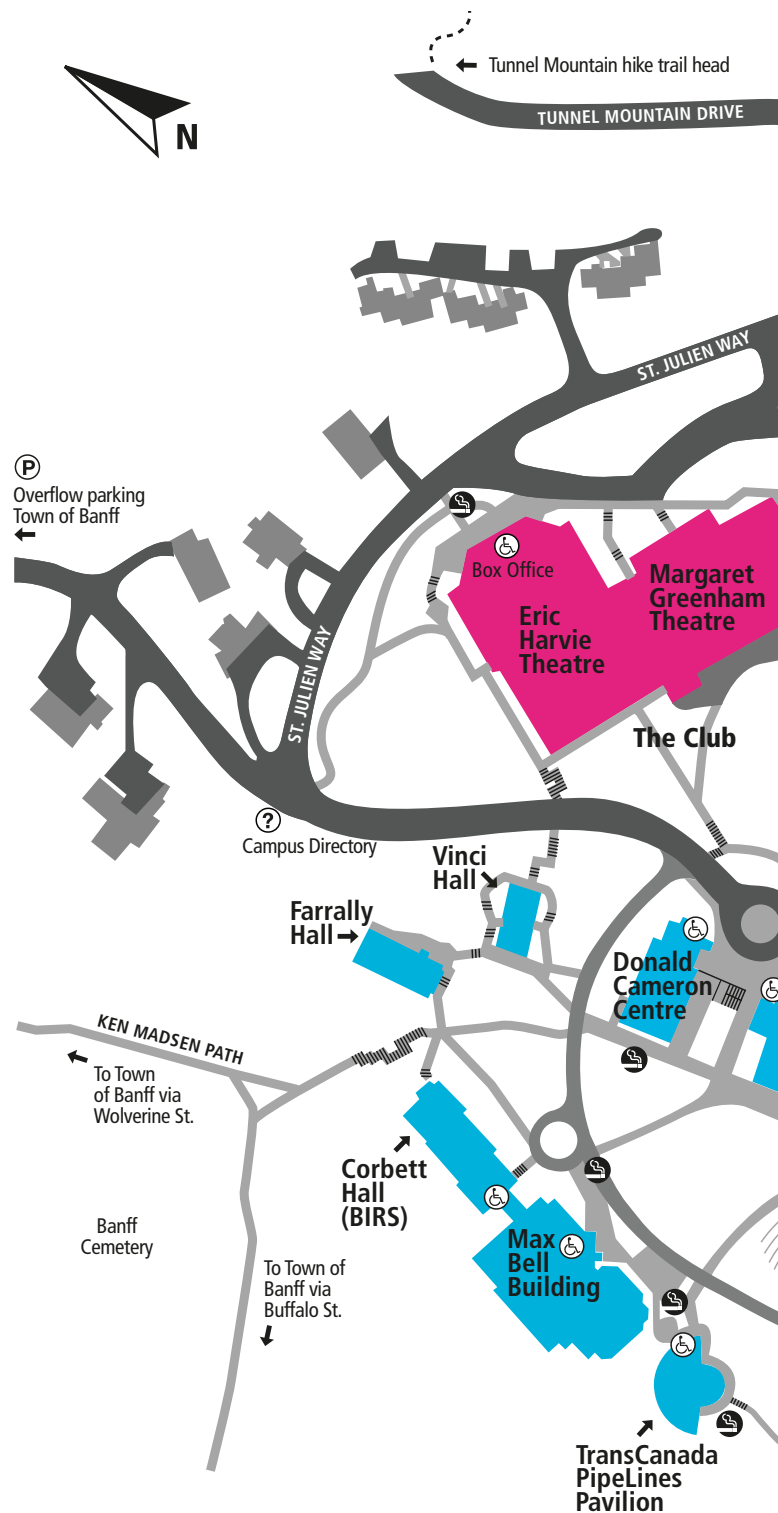
#### Maclab Bistro

7:00 am – 2:00 am

#### Room Service:

5:00 – 11:00 pm

*\*hours may vary during holiday periods*





# CRISP

CAPITAL REGION INTERSECTION SAFETY PARTNERSHIP

