International Symposium on Safety of Vulnerable Road Users

25-26 March 2019
Changsha, China

Programme

中南大學
CENTRAL SOUTH UNIVERSITY

International Symposium on Safety of Vulnerable Road Users

25-26 March 2019
Empark Grand Hotel
Changsha, China

Programme

ICoRSI
Independent Council for Road Safety International

Acknowledgement
Independent Council for Road Safety International (ICoRSI) is supported by Tata Education and Development Trust, Mawana Sugars, Tata Sons and individual donors.

The International Symposium on Safety of Vulnerable Road Users in Changsha, China, was supported by the University of Chicago, Beijing Center.

Declaration
Some of the presentations at the symposium will be recorded and used for public information.

The papers presented at the *International Symposium on Safety of Vulnerable Road Users* represent the views of the authors and may be published separately after discussion at the symposium. All papers will be available at www.icorsi.org after the symposium.

© Independent Council for Road Safety International, 2019.

International Committee

Co-Chairs
Barry Sheerman (UK)
Guoqing Hu (China)

Members
Brian O'Neil (USA)
Christer Hyden (Sweden)
Dinesh Mohan (India)
Geetam Tiwari (India)
Helai Huang (China), Central South University
Ian Roberts (UK)
Jing Wu (China), Chinese CDC
Kavi Bhalla (USA)
Maria Isabel Gutierrez Martinez (Colombia)
Mark Stevenson (Australia)
Mathew Varghese (India)

Organising Committee

Co-Chairs
Shengyong Wang
Dinesh Mohan
Liping Li
Yan Gao

Members
Guoqing Hu (China), Central South University
Helai Huang (China), Central South University
Hui Chen (China), Huazhong University of Science and Technology
Huiping Zhu (China), Capital Medical University
Kavi Bhalla (US), University of Chicago
Kezhi Jin (China), Fudan University
Liping Li (China), Shantou University
Jihong Zhou (China), Army Medical University
Shengyong Wang (China), Jinan University
Xiaobin Hu (China), Lanzhou University
Xujun Zhang (China), Southeast University
Xuesong Wang (China), Tongji University
Yan Gao (China), Traffic Management Research Institute of the Ministry of Public Security
Yong Peng (China), Central South University

ICoRSI

Independent Council for
Road Safety International

Welcome

I am delighted that our Independent Council for Road Safety International (ICoRSI) meeting in China marks the third year since a small group of us saw the urgent need for better communication and action globally in the field of road casualty research.

The small band who met in Budapest and then grew in Paris, now meet in Changsha, China. Sadly, the turmoil in UK politics and the crucial Brexit votes mean I cannot be with you this time, and I apologise profusely for this.

We launched ICORSI because we are convinced that the struggle to tackle the great epidemic of our times, road deaths and serious injuries, can only be tackled by good laws based on high quality research, which are then fairly and firmly enforced.

We were deeply concerned that in recent years some centres of research had declined or disappeared and that we needed more national and regional research hubs in the transport safety sector. In addition, we worried that existing researchers were unaware of their colleagues working in other parts of the world and we were determined to identify all researchers and link them in a supportive manner. The politicians amongst us particularly understood that excellent research requires proper funding from diverse sources of finance.

In two years we have made much progress and identified many new researchers, many from diverse interesting backgrounds and cultures. We are now working with many organisations to highlight not only our existence and the valuable role that research play. It is clear to all of us working for a dramatic reduction in road deaths that we need the best possible data. The data collectors, national and regional governments, the police and health sectors must be empowered to know where accidents occur to plan sensible accident reduction policies. Good data, excellent research and proper public health education are of fundamental importance to our work. My job as a mere politician is to try to harness this good science and link it with a passion that will lead to good legislation and regulation to deliver the casualty reduction we so desperately need.

ICoRSI has enormous potential but our driving objective is to tackle the 1.4 million killed on the roads each year and reduce the ten times that number who are seriously injured. I know, that working together we can continue to go from strength to strength. As a starter for priority activity now we can focus on six priorities, use of seatbelts, cars satisfying latest crashworthiness standards, helmet use by two-wheeler riders, daytime headlamp use by motorcyclists, speed control and control of driving under the influence of alcohol. Have a brilliant seminar and great discussion in Changsha.

Barry Sheerman MP
Chairperson ICoRSI

PROGRAMME

08:30 Registration

INAUGURAL SESSION | **VIP Conference Room#** | **Monday 25 March**
Moderator: Professor Guoqing Hu

09:00	**Welcome**	*Professor Guoqing Hu*
09:05	**Introduction to Symposium by Director ICoRSI**	*Professor Dinesh Mohan*
09:15	**Address by Vice Director of Hunan Health Commission**	*Professor Luxi Yi*
09:25	**Address by Vice President of CSU**	*Professor Kechao Zhou*
09:40	**Address by Chairperson ICORSI**	Mr. Barry Sheerman
09:45	Group photograph	

10:00 Tea/Coffee Break

SCIENTIFIC SESSION 1 | **VIP Conference Room** | **Monday 25 March**
Chair: Professor Liping Li

10:30	**Trend in Transport Injury Incidence and Mortality for Old Adults Aged 65+ in BRICS, 2008-2017** *Jing Wu*	1*
10:55	**Analysis on the Long-Term Trend of Road Traffic Injury and Its Leading Factors in China** *Shengyong Wang*	2
11:10	**Managing Change in Driving Behaviour for Creating Safe Community by Students** Sittha Jaensirisak, Paramet Luathep Thaned Satiennam, Tuenjai Fukuda	3
11:25	**The Diffusion Mechanism of Road Safety, from Traffic Education / Traffic Enforcement / Discussion on Traffic Engineering** *Tai-Shen Yin, Titan Cheng Yin*	4
11:40	**Multiple Influences on Children's Street-Crossing Behavior In a VR Environment** *Huarong Wang, Zhan Gaob, Ting Shen, Fei Li, Jie Xu, David C Schwebel*	5
11:55	**Driver Education – How Effective?** *Brian O'Neill*	6

12:20 Lunch

Third Floor Empark Grand Hotel

* *Represents paper number in Proceedings*

SCIENTIFIC SESSION 2 **VIP Conference Room** **Monday 25 March**

Chair: Professor Jing Wu

13:15	**The Short-Term Intervention Effect on Kindergarten Children Using CRS** *Liping Li*	7
13:40	**Improvement of Traffic Safety at School Zones: Engineering and Operational Countermeasures** *Md Hasibur Rahman, Mohamed Abdel-Aty, Jaeyoung Lee and Md. Sharikur Rahman*	8
13:55	**Mobile Application for Mapping Hazardous Locations in Thailand: Case of ATRANS Safety Map** *Paramet Luathep, Sittha Jaensirisak and Tuenjai Fukuda*	9
14:10	**Determinants of Congestion Caused By a Traffic Accident in Urban Road Networks** *Zhenjie Zheng, Zhengli Wang and Hai Jiang*	10
14:25	**Investigating Varying Effect of Road-Level Factors on Crash Frequency Across Regions: A Bayesian Hierarchical Random Parameter Modeling Approach** *Chunyang Han, Helai Huang, Jaeyoung Lee and Jie Wang*	11
14:40	**Driver Physiology and Behavior Differences During Perpendicular Parking: A Real Vehicle Experiment** *Weihua Zhang, Qian Chen, Zhongxiang Feng, Jinbiao Gu and Kun Wang*	12
14:55	**Progress in Pedestrian Safety Research** *Geetam Tiwari*	13

15:20 Tea/Coffee Break

SCIENTIFIC SESSION 3 **VIP Conference Room** **Monday 25 March**

Chair: Professor Mark Stevenson

15:50	**China Powered-Two-Wheeler（PTW）Accident Investigation and Analysis** *Yong Chen*	14
16:15	**Second Thoughts on Safety-in-Numbers Phenomenon: Counterevidence from an Area with Low Pedestrian Activities** *Jaeyoung Lee, Mohamed Abdel-Aty, Pengpeng Xu and Yaobang Gong*	15
16:30	**Risk Perception and Responsibility Attribution Concerning Pedestrian-Vehicle Crashes Among Children, Adolescents and Young Adults In China** *Yue Wu, Sophie Yu, Sylvie Mrug, Huarong Wang, Scarlett Ridley, Guoqing Hu and David C. Schwebel*	16
16:45	**Empirical Analysis of Expressway Long Tunnels Using a Seven-Zone Analytic Approach** *Amjad Pervez, Jie Wang and Helai Huang*	17
17:00	**Analysis on Curative Expenditure on Child Injury in Northwest China: Based on SHA 2011** *Zhuoma Dawa, Miao Miao, Qian Ding, Lili Ma, Meitao Zhao, Lei Qi, Yuan Chen and Xiaobin Hu*	18
17:15	**Urban Structures and Traffic Safety – A Systemic Interdisciplinary Approach** *Hermann Knoflacher*	19
17:40	Close	
18:00	**Conference dinner**	

SCIENTIFIC SESSION 4 **VIP Conference Room** **Tuesday 26 March**
Chair: Professor K. N. Jha

08:30	**China's Progress in Reducing Road Traffic Mortality: An Analysis of National Surveillance Data from 2006 to 2016** *Lijun Wang, Peishan Ning, Peng Yin, Peixia Cheng, David C. Schwebel, Jiangmei Liu, Yue Wu, Yunning Liu, Jinlei Qi, Xinying Zeng, Maigeng Zhou, Guoqing Hu*	20
08:55	**The Effect of Zonal Factors in Estimating Crash Risks by Transportation Modes: Motor Vehicle, Bicycle and Pedestrian** *Jie Wang and Helai Huang*	21
09:10	**Application of Accident Data in the Development of Autonomous Vehicles** *Fan Li, Shiwei Tian and Yicheng Jiang*	22
09:25	**Analysis of the Injury Risk for Elderly Drivers' Accident Based on Improved Decision Tree Algorithm** *Weijie Wang, Qilu Fang and Yingshuai Li*	23
09:40	**Simulation and Analysis of kinematic Parameters of Vehicle Offset and Rear End Accident** *Wenhui Zhang, Yulong Pei, Yongmin Su, Shurui Sun, Qiuying Yu, Hehe Song and Hangxian Shen*	24
09:55	**Improve Traffic Death Statistics in China** *Helai Huang, Fangrong Chang, David C. Schwebel, Peishan Ning, Peixia Cheng and Guoqing Hu*	25
10:10	**Road Safety in Urban Areas: Understanding the Complex City** *Mark Stevenson*	26

10:35 Tea/Coffee Break

SCIENTIFIC SESSION 5 **VIP Conference Room** **Tuesday 26 March**
Chair: Professor Yong Peng

11:00	**Building Road Safety Institutions in Low- and Middle-Income Countries: The Case of Argentina** *Kavi Bhalla*	27
11:15	**Exploring Factors Affecting Motorcycle Crash Severity in Ghana Using Multinomial Logit Regression Model** *Lukuman Wahab, and Haobin Jiang*	28
11:30	**Impact of pillion passengers of motorcycle crashes** *Qianyi Zhang and Helai Huang*	29
11:45	**Characteristic Analysis of the Motorized Two-Wheeler Collisions In County Areas Based on Real World Accident Data in China** *Xinghua Wang, Yong Peng and Lin Hu*	30
12:00	**The Patterns of Riding Behaviors of Non-motor Vehicle in a District in Shanghai** *Bingbing Zhu, Yujie Wang, Ya Wang, Yi Li, Chaoqi Wu and Kezhi Jin*	31
12:15	**Motorised Two-Wheeler Mobility and Safety: Past, Present and Future** *María Isabel Gutiérrez M.*	32

12:40 Lunch

SCIENTIFIC SESSION 6 | **VIP Conference Room** | **Tuesday 26 March**

Chair: Professor Kezhi Jin

14:00	**Trauma Care: A Continuum of Care** *Mathew Varghese*	33
14:25	**Whose City? Securing the Rights of Pedestrians in Urban India** *Girish Agrawal*	34
14:40	**Unsafe Riding Behaviours of Shared-Bicycle Riders In Urban China: A Retrospective Survey** *Xiaolin Wu, Wangxin Xiao, Conghui Deng, David C. Schwebel and Guoqing Hu*	35
14:55	**Road Traffic Accident Patterns in two District of Shanghai From 2010 to 2012** *Ya Wang, Xiuqin Chen, Jiali Ying, Shen Yang, Tao Lin and Kezhi Jin*	36
15:10	**Investigation of Drivers' Preference and Choice for the Content and Format of Variable Message Signs** *Wenjing Zhao, Mohammed Quddus, Helai Huang, Zaining Li and Zhuanglin Ma*	37
15:25	**Driving Anger Among Professional and Non-Professional Drivers In China** *Gaoqiang Fei, Xujun Zhang, Xinyu Li, Liuwei Gao, Yixi Zhou*	38
15:40	**Effective Police Enforcement: What Works** *Dinesh Mohan*	39

16:05 Tea/Coffee Break

VALEDICTORY SESSION | **VIP Conference Room** | **Tuesday 26 March**

Moderator: Professor Geetam Tiwari

16:30	**Address by Vice Direct of International Office, CSU**	*Helai Huang*
16:45	**Way forward and future directions**	*Geetam Tiwari*
17:05	**Vote of Thanks**	Guoqing Hu

17:15 Close

Independent Council for Road Safety International (ICoRSI)

Vision

The implementation of effective strategies for the prevention of road traffic deaths and injuries is a global health priority and consistent with the goal of environmental sustainability. With the ultimate goal of eliminating all deaths and disabilities related to mobility, ICoRSI envisions a comprehensive and rigorous scientific evaluation of all mobility related policies and encourages promotion of evidence-based safety interventions.

Keeping this vision in mind we believe that road safety and sustainable mobility policies should be based on sound analyses of road safety data and scientifically robust evaluations of road safety interventions. ICoRSI recognises that the field of safety is an area that involves expertise from several sectors including those from the engineering, planning, architecture, epidemiology, economics, statistics, medicine, environmental sciences and the social sciences. The Council therefore draws from the experience, knowledge and the expertise of experts from many of these areas, so that recommendations from the Council are broad based and are socially, economically and scientifically acceptable.

ICoRSI maintains its independence by not accepting funding that could in any way compromise the integrity of the organization or the individual members.

Mission

Existing scientific knowledge on road safety can save thousands of lives globally. However, lack of awareness of this knowledge and experience among politicians, policy makers, NGOs, development and donor agencies can lead to adoption of practices that are not only ineffective but in some instances could lead to an increase in deaths and injuries. ICoRSI hopes to provide decision makers and practitioners with scientifically based information and advice to help save lives and prevent disabilities. There is an urgent need to ensure that the road safety activities of local, national, and international institutions prioritize the most important issues that threaten the safety and wellbeing of society.

Decision makers need to be provided with independent and unbiased advice on what is known from decades of safety research, as well as guidance on the expected effects of emerging technologies that could potentially be game changers. Wherever and whenever required ICORSI hopes to generate scientific evidence for safety in transportation through independent research and reviews conducted by members or their associates or partners.

The Independent Council for Road Safety International is a not-for profit organization that provides independent authoritative advice on global road safety policies by road safety scientists that have no financial conflicts of interest. In summary ICoRSI aims to:

- Provide rapid, independent and evidence-based information on road safety policy and practice to policy makers and the public.
- Strengthen the capacity of safety professionals and policy makers to understand existing evidence and undertake new research.
- Facilitate capacity building for safety professionals and policy makers in the field of transportation safety.

https://www.icorsi.org

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

Symposium Supported by

THE UNIVERSITY OF CHICAGO | Center in Beijing

TATA TRUSTS

www.icorsi.org