

18th International Conference
**Road Safety
on Five Continents**

Jeju, Korea, May 16-18, 2018

Programme



vti

Swedish National Road
and Transport Research Institute



국토교통부
Ministry of Land,
Infrastructure and Transport

TS 한국교통안전공단
Korea Transportation Safety Authority



#rs5c
www.vti.se/RS5C

Organisers



Photo: Hejdlösa Bilder AB

The Swedish National Road and Transport Research Institute (VTI), is an independent and internationally prominent research institute in the transport sector.

Our principal task is to conduct research and development related to infrastructure, traffic and transport. We are dedicated to the continuous development of knowledge pertaining to the transport sector, and in this way contribute actively to the attainment of the goals of Swedish transport policy.

Our operations cover all modes of transport, and the subjects of pavement technology, infrastructure maintenance, vehicle technology, traffic safety, traffic analysis, users of the transport system, the environment, the planning and decision making processes, transport economics and transport systems. Knowledge that the institute develops provides a basis for decisions made by stakeholders in the transport sector. In many cases our findings lead to direct applications in both national and international transport policies.

VTI conducts commissioned research in an interdisciplinary organisation. Employees also conduct investigations, provide counseling and perform various services in measurement and testing. The institute has a wide range of advanced research equipment and world-class driving simulators. There are also laboratories for road material testing and crash safety testing.

In Sweden VTI cooperates with universities engaged in related research and education. We also participate continuously in international research projects, networks and alliances.



www.vti.se, vti@vti.se, +46 13 20 40 00

Organisers

www.kotsa.or.kr

We promise to open up a bright future without traffic accidents.

Safety

- Vehicle inspection
- Railroad safety
- Aviation safety

Creativity

- Vehicle safety research
- Transportation safety investigation research
- Advanced traffic information system

Trust

- Commercial vehicle management
- Transportation safety management in transportation companies
- Safe driving training
- Supporting families of traffic accident victims and community service activities



KOTSA Driving Center

We dream about safe transportation and happiness of fifty million people of Korea.

From safe road free of traffic accidents to railroads accompanied by restful leisure, Reliable skyway, and scientific and systematic transportation safety management, KOTSA has continued to work in these areas to bring safety and happiness to the community.

As a human-centered global transportation safety organization, KOTSA places transportation, safety, and people at the center of consideration. With the efficient, smooth transportation at the core, KOTSA considers safety as the top priority and treats people foremost among transportation and safety, so that everyone can use roads, railroads, and flight without worries.

KOTSA dreams the future of bright and happy life free of traffic accidents, in which transportation, safety, and people are at the center.



K-city : Connected and Automated Vehicle test-bed



Korea Automobile Testing & Research Institute



Safe driving training center

Conference Programme Overview

Conference Programme Overview

| Start | Wednesday May 16 th | Thursday May 17 th | | | | Friday May 18 th | | | | | |
|----------|---|---|---|---|--|---|--|---------------------------------------|--|--|---|
| 9:00 am | 9:30 Opening Session | | | | Keynote | | Session II | | 5A Finding the way of transport in safety and disaster management | 5B Vulnerable road users – safety of cyclists | 5C Public transport and urban safety |
| 10:30 am | Coffee break | | | | Coffee break | | | | Coffee break | | |
| 11:00 am | Keynote Session I | | | | 3A Transportation Safety Management using Transportation Big data | 3B Traffic Safety Issues in Building Livable Communities. part 1 | 3C Risk factors in traffic, part 1 – impaired driving | 3D iRAP and 3-star or Better Roads | 6A Monitoring road safety attitudes & performance – the ESRA approach | 6B Vulnerable road users – safety of children and pedestrians | 6C Traffic safety analysis, part 3 |
| 12:30 pm | Lunch break | | | | Lunch break | | | | Lunch break | | |
| 2:00 pm | 1A Vision Zero and Safe System | 1B Economics and Road Safety | 1C Traffic Safety Analysis, part 1 | 1D Communication between motor vehicles and VRUs not least when considering vehicle automation | 4A Traffic safety analysis, part 2 | 4B Traffic Safety Issues in Building Livable Communities, part 2 | 4C Risk factors in traffic, part 2 | 4D Suicide in Road Traffic | 7A Safety, friction and monitoring infrastructure | 7B Vulnerable road users – safety of motorcyclists | 7C Traffic safety analysis, part 4 |
| 3:30 pm | Coffee break | | | | Coffee break | | | | Closing Session | | |
| 4:00 pm | 2A Traffic Safety Policy and Strategy to reduce fatalities | 2B Infrastructure and traffic safety | 2C Traffic Safety and road user capabilities | 2D Automation and ITS | Poster Session | | | | | | |
| 5:30 pm | | | | | | | | | | | |
| 6:30 pm | | | | | Conference Dinner | | | | | | |

“Road safety concerns each and every one of us. Europe has a very good track record in road safety which has been achieved through exchange of best practices and learning from each other. The same should be done globally in order to tackle the growing epidemic of road fatalities and serious injuries. I very much encourage cooperation and knowledge exchange at the international level which will be essential in order to deliver concrete results and make citizens across the globe safer as road users. Europe is certainly ready to play its role in this process.”

– Ms. Violeta Bulc,
European Commissioner for Transport



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Welcome to RS5C 2018

Opening hours for registration:

| | |
|-----------|----------------|
| Tuesday | 2:00 - 5:00 pm |
| Wednesday | 8:00 - 9:30 am |
| Thursday | 8:00 - 9:00 am |
| Friday | 8:00 - 9:00 am |

Please wear your name badge visible during the entire conference.

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#rs5c

Wednesday May 16th



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Opening Session

9:30 am - 10:30 am, Ramada Ballroom 1

Chair: Dr Anna Vadeby, VTI, Sweden

Opening performance:
Media 'Dae Buk' Performance

Dr. Anna Vadeby, Chair RS5C, VTI, Sweden

Mr. Byung Yoon Kwon, Director at Korea Transportation Safety Authority, Korea

Dr. Tomas Svensson, Director General, VTI, Sweden

Mr. Kyungwook Kim, Deputy Minister for Transport and Logistics at Ministry of Land, Infrastructure and Transport, Korea

Mr. Mattias Landgren, State Secretary for Infrastructure at the Ministry for Enterprise and Innovation, Sweden

Mr. Sung-tae Jun, Vice Governor at Jeju Special Self-Governing Province, Korea

Coffee Break 10:30 - 11:00 am

Keynote Session I

11:00 am - 12:30 pm, Ramada Ballroom 1

Chair: Dr. Anna Vadeby, VTI, Sweden

Challenges and opportunities in collective action for road safety – an ITF perspective
Dr. Young Tae Kim, Secretary-General, ITF

Innovating national road safety system in Korea

Dr. Jaehak Oh, President, The Korea Transport Institute, Korea

Lunch 12:30 - 2:00 pm
in the hotel restaurant

Session 1A

2:00 pm - 3:30 pm, Ramada Ballroom 1

Vision Zero and Safe System

Organised by: KOTI/VTI

Chair: Sangjin Han, KOTI, Korea,
Anna Vadeby, VTI, Sweden

Renewed Commitment to Vision Zero
Kenneth Svensson, Swedish Transport
Administration, Sweden

Vision Zero and traffic safety impact
Anna Vadeby, VTI, Sweden

Safe system version 3.0 in the Netherlands
Rob Eenink, SWOV, the Netherlands

Safe system in Australia
Jennifer Oxley, Monash University, Australia

**Development of road safety performance
indicators and its application to Korea**
Sangjin Han, KOTI, Korea

Session 1B

2:00 pm - 3:30 pm, Ramada Ballroom 2

Economics and Road Safety

Chair: Åsa Forsman, VTI, Sweden

**Private and Public Willingness to Pay for
Safety: A validity test with an empirical test
based on preferences for road safety**
Henrik Andersson, University of Toulouse
Capitole, France

**The costs of road injuries in France: some
preliminary outcomes:**
Laurent Carnis, Ifsttar, France

**Economic feasibility analysis of high friction
surface treatments in Pennsylvania**
Seri Park, Villanova University, USA

**Analysis of the impact of socio-economic
development on road safety based on the
example of Baltic Sea Region countries**
Aleksandra Romanowska, Gdansk University
of Technology, Poland

**Does corruption affect road safety in
developed countries?**
Byung-Jung Park, Myongji University, Korea

Session 1C

2:00 pm - 3:30 pm, Ramada Ballroom 3

Traffic Safety Analysis, part 1

Chair: Astrid Linder, VTI, Sweden

**European road safety policy by 2020: A
forecast on topics and activities**
Armin Kaltenecker, KFV Austrian Road
Safety Board, Austria

**Occupant safety assessment in European
regulatory tests: review of occupant models,
gaps and suggestion for bridging any gaps**
Astrid Linder, VTI and Chalmers University
of Technology, Sweden

**Empirical tunnel traffic safety analysis
in Sweden**
Per Strömrgren, Movea AB, Sweden

**Motorway incident response prioritization
in Thailand.**
Jiralak Suttitum, Kasetsart University,
Thailand

**Synthesis of state highway worker safety
practice and programs in the United States**
Zachary Wesley Barlow, Oregon State
University, USA

Session 1D

2:00 pm - 3:30 pm, Ramada Ballroom 4

**Communication between
motor vehicles and VRUs not
least when considering vehicle
automation**

Organised by: ICTCT
Chair: Ralf Risser, FACTUM OG, Austria

**Traffic channelization method in T-intersections
with multiple traffic modes in Beijing**
Chenjiechao Hujiangbi, Beijing University of
Technology, China

**Traffic channelization method at cross inter-
section for urban road under multi traffic mode
in Beijing**
Chenli Hujiangbi, Beijing University of
Technology, China

**Pedestrian-driver communication and decision
strategies at marked crossings**
Ralf Risser, FACTUM OG, Austria

**ITS and the effects on vulnerable road users:
The case of pedestrians**
Truls Vaa, Institute for Transport Economy, Norway

**Concerns related to the interaction between
autonomous vehicles and other transport users**
Vit Gabrhel, Petr Zamecnik, Centre for
Transport Research, Czech Republic

**Autonomous driving and possible outcome for
bicyclists – Technology which helps to identify hazards**
Christine Chaloupka, FACTUM OG, Austria

**The courteous automated vehicle. Slowing
down as Informal Communication Signal to
Pedestrians**
Matthias Beggiato, Chemnitz University of
Technology, Germany

Coffee Break 3:30 - 4:00 pm

Coffee Break 3:30 - 4:00 pm

Session 2A

4:00 pm - 5:30 pm, Ramada Ballroom 1

Traffic Safety Policy and Strategy to reduce fatalities

Organised by: MOLIT

Chair: Cheol Oh, Hanyang University, Korea

Introduction of the Korean road safety plan
Jungsoo Park, MOLIT, Korea

Management by objectives – a systematic approach for traffic safety in Sweden
Anna Vadeby, VTI, Sweden

Virginia's Highway Safety Improvement Program
In-kyu Lim, Virginia DOT, USA

Global and regional mandates and updates on road safety situations in Asia and the Pacific
Thanattaporn Rasamit, UNESCAP

Japan's traffic safety master plan and ITARDA's role
Toru Kiuchi, Institute for Traffic Accident Research and Data Analysis, Japan

Session 2B

4:00 pm - 5:30 pm, Ramada Ballroom 2

Infrastructure and traffic safety

Chair: Leif Sjögren, VTI, Sweden

Exploring roundabout safety in the context of time series: case study with state of Pennsylvania
Seri Park, Villanova University, USA

Analysis of merging freeways with decreasing number of lanes: A driving simulator study
Ali Pirdavani, IMOB, Hasselt University, Belgium

Before-after analysis and crash modification factor development for high friction surface treatments in Pennsylvania
Seri Park, Villanova University, USA

A Field Experiment on the Accuracy of Visual Assessment of Winter Road Conditions
Roberto Tokunaga, Civil Engineering Research Institute for Cold Region, Japan

Proposed pavement markings to reduce right-turning vehicular crashes
Essam Dabbour, Abu Dhabi University, United Arab Emirates

Session 2C

4:00 pm - 5:30 pm Ramada Ballroom 3

Traffic Safety and road user capabilities

Chair: Jennifer Oxley, Monash University, Australia

Road user behavioural adaptation to infrastructure safety treatments – evidence, implications and mitigation
Bhagwant Persaud, Ryerson University, Canada

Empathy, conformity and cultural factors related to aberrant driving behaviour in a sample of Turkish urban drivers
Trond Nordfjærn, St.Olavs University Hospital, Norway

Traffic safety of tourist drivers in an unfamiliar driving environment
Audur Thora Arnadottir, Icelandic Road and Coastal Administration (IRCA), Iceland

The importance of reaction time abilities for drivers with visual deficits
Jan Andersson, VTI, Sweden

Older adult's use of hearing and vision aids for driving
Birgitta Thorslund, VTI, Sweden

Session 2D

4:00 pm - 5:30 pm Ramada Ballroom 4

Automation and ITS

Chair: Henrik Andersson, University of Toulouse Capitole, France

Avoidable collision controls under a connected and autonomous vehicles environment
Sangung Park, University of Seoul, Korea

Public commitment and implementation scenarios for self driving and connected vehicles
Magnus Hjalmdahl, Sweco, Sweden

Fast dash: program overview and key findings from initial technology evaluations
Richard Joseph Hanowski, Virginia Tech Transportation Institute, USA

Detecting and tracking vehicles, pedestrians, and bicyclists at intersections with a stationary Lidar
Andrew P Tarko, Purdue University, USA

A resource scheduling decision support model for mobile photo enforcement
Amy M Kim, University of Alberta, Canada

End of Day One

End of Day One

Session 3A

11:00 am - 12:30 pm, Ramada Ballroom 1

Transportation Safety Management using Transportation Big data

Organised by: KOTSA

Chair: Youlim Jang, KOTSA, Korea

Study on the development of safety grade model for roads in Korea using digital tachograph and traffic accident data
Ilsoo Yun, Ajou University, Korea

Develop safety surrogate measure for evaluating motor carrier companies and drivers

Kitae Jang, Korea Advanced Institute of Science and Technology, Korea

Analysis on taxi operation using digital tachograph and meter data in Korea

Seungmo Kang, School of Civil, Environmental & Architectural Engineering, Korea University, Korea

Prediction for danger zone of Gyeongbu expressway using digital tachograph data

Youlim Jang, Korea Transportation Safety Authority, Korea

Panelist:

Jungcheol Bae (KOTSA, Korea),
Juyoung Kim (KOTI, Korea),
Byungkyu Park (University of Virginia, USA),
Joyoung Lee (University Heights Newark, USA)

Lunch 12:30 - 2:00 pm
in the hotel restaurant

Session 3B

11:00 am - 12:30 pm, Ramada Ballroom 2

Traffic Safety Issues in Building Livable Communities, part 1

Organised by: Western Michigan University

Chair: Jun-Seok Oh, Western Michigan University, USA

Identification of factors associated with pedestrian hot crash spots – spatial and statistical analysis approach
Deo Chimba, Tennessee State University, USA

An automated evaluation method for bicycling environments

Cheol Oh, Hanyang University, Korea

Using crowd sourcing to locate and characterize conflicts for vulnerable modes

Stephen Mattingly, University of Texas at Arlington, USA

Evaluation of bicycle safety environment and risk factors

Jun-Seok Oh, Western Michigan University, USA

Lunch 12:30 - 2:00 pm
in the hotel restaurant

Session 3C

11:00 am - 12:30 pm, Ramada Ballroom 3

Risk factors in traffic part 1 - impaired driving

Chair: Henriette Wallen Warner, VTI, Sweden

Zolpidem use and risk of fatal motor vehicle collisions

Joongyub Lee, Seoul National University Hospital, Korea

Drink drivers' views of a voluntary alcohol interlock program for drink driving offenders in Sweden

Åsa Forsman, VTI, Sweden

Understanding the belief system of young people around alcohol consumption and road safety. The case of Argentina

Maria Eugenia Keller, National Road Safety Agency of Argentina, Argentina

Speeding drivers and drink drivers. Common characteristics and distinctive characteristics
Dan Campsall, Road Safety Analysis Limited, United Kingdom

The journey to legalize cannabis in Canada
Danielle Y.R. Comeau, Alcohol Countermeasure Systems Corp., Canada

New joint project between authorities will increase the sobriety in traffic

Eva Lundberg, Swedish Transport Administration, Sweden

Session 3D

11:00 am - 12:30 pm, Ramada Ballroom 4

iRAP and 3-star or Better Roads

Organised by: iRAP

Chair: Rob McInerney, CEO, iRAP

Global Targets and Action for 3-star or better roads

Rob McInerney, CEO, iRAP

Road safety infrastructure policy priorities for national governments

Young Tae Kim, Secretary-General, ITF

Saving Lives on the world's motorways:

Philippe Fenain, Director of Operations and Quality, Abertis

United Nations' Asian highway design standards for road safety

Sung-min Michael Cho, Korea Expressway Corporation, Korea

Panel discussion:

The Role of PPP's Delivering Safety Outcomes

Session 4A

2:00 pm - 3:30 pm, Ramada Ballroom 1

Traffic safety analysis, part 2

Chair: Laurent Carnis, Ifsttar, France

Exploring microscopic crash mechanisms of freeway-to-freeway interchange ramps
Mohamed Abdel-Aty, University of Central Florida, USA

Analysis of safety impact of freeway designs using data mining techniques
Juneyoung Park, University of Central Florida, USA

Crash effects of hard shoulder runnings in freeways
Jaisung Choi, The University of Seoul, Korea

Identification of collision formation trends based on traffic characteristics for freeway networks
Claire Edwina Silverstein, George Washington University, USA

Evaluation of factors affect freeway accident occurrence using regression models focused on the Gyeongbu expressway from W.Ulsan IC to Yeongcheon IC
Da-Woon Jeong, Seoul National University, Korea

Session 4B

2:00 pm - 3:30 pm, Ramada Ballroom 2

Traffic Safety Issues in Building Livable Communities, part 2

Organised by: Western Michigan University

Chair: Deo Chimba, Tennessee State University, USA

Safety of older drivers - What is unique about older adults?
Jun-Seok Oh, Western Michigan University, USA

Effectiveness using random effects generalized models with nonlinearizing link functions
Juneyoung Park, University of Central Florida, USA

Integrated multivariate approach for pedestrian and bicycle trips and crashes in the framework of transportation safety planning
Jaeyoung Lee, University of Central Florida, USA

Assessing crash risks considering vehicle interactions with trucks using point detector data
Kate (Kyung) Hyun, University of Texas at Arlington, USA

Connected vehicle data for crash hotspots
Byungkyu Brian Park, University of Virginia, USA

Session 4C

2:00 pm - 3:30 pm, Ramada Ballroom 3

Risk factors in traffic, part 2

Chair: Jan Andersson, VTI, Sweden

Exploring the effects of driving environment on driver perception time (PT) using SHRP2 naturalistic driving study data
Kun-Feng Wu, National Chiao Tung University, Taiwan

The impact of perceptual countermeasures on driving behaviour in rural-urban transition: a driving simulator study
Ali Pirdavani, IMOB, Hasselt University, Belgium

Effects of ADHD on driver attention and speed evaluated in a driving simulator
Birgitta Torslund, VTI, Sweden

Distraction potential of unmanned aircraft systems (UAS) near roadways
Zachary Wesley Barlow, Oregon State University, USA

Analysis of factors influencing traffic accidents: a case study of Tiruchirappalli city
Hemanthini Allirani, National Institute of Technology, Tiruchirappalli, India

Session 4D

2:00 pm - 3:30 pm, Ramada Ballroom 4

Suicide in Road Traffic

Organised by: Swedish Transport Administration

Chair: Kenneth Svensson, Swedish Transport Administration, Sweden

The overall suicide problem in Korea
Jong-Woo Paik, Kyung Hee University college of medicine, Korea

Suicide in traffic in Korea including classification method
Mr. Seokmin Lee, Statistics Korea, Korea

Suicide and accident classification method used in Sweden
Kenneth Svensson, Swedish Transport Administration, Sweden

Analysis of suicides in road traffic in Sweden 2010-2016
Kenneth Svensson, Swedish Transport Administration, Sweden

Coffee Break 3:30-4:00 pm

Coffee Break 3:30-4:00 pm

Poster Session

4:00 pm - 5:30 pm
Ramada Ballroom 2/Lobby

Chair: Anna Vadeby, VTI, Sweden

1. Exploring factors contributing to road traffic crashes in Hintalo Wejerat district, Ethiopia. A qualitative study
Nigus Asefa, University of Groningen, the Netherlands
2. Drivers distraction at curves under distraction task in static driving simulator
Ana Paula C. Larocca, University of Sao Paulo, Brazil
3. Application of nationwide weather data for traffic safety analysis in the United States: a spatial analysis and crash prediction modeling
Jaeyoung Lee, University of Central Florida, USA
4. Impact of reduced conflict intersection on large truck exposure and conflicts
Shauna Hallmark, Iowa State University, USA
5. Quantitative evaluation of the relationship between the road surface conditions measured by continuous testing vehicles and the rate of winter traffic accidents
Akira Saida, Civil Engineering Research Institute for Cold Region, Japan
6. Daylight, twilight, and night variation in road environment-related freeway traffic crashes in Korea
Sungmin Hong, Korea Transportation Safety Authority, Korea

7. Rheological evaluation of asphalt modified with automobile waste engine oil
Touqeer Shoukat, Korea Institute of Civil Engineering and Building Technology (KICT), Korea
8. A study on the effects of aggressive driving on traffic safety based on driving behavior analysis
Sungmin Hong, Korea Transportation Safety Authority, Korea
9. A study on plastic deformation resistance test between glass fiber reinforced asphalt and modified SMA mixture
Kisoo Park, Korea Institute of Civil Engineering and Building Technology, Korea
10. Automatic speed control in Sweden – Key performance indicators
Eva Lundberg, Swedish Transport Administration, Sweden
12. Accomplishments and lessons learned of the first four years of the implementation of the Puerto Rico strategic highway safety plan
Benjamin Colucci, University of Puerto Rico at Mayagüez, Puerto Rico
13. A study on vehicle fuel consumption in various driving condition and driving mode
Ju Young Kim, Korea Transportation Safety Authority, Korea
14. Road safety policy issue exploration methodology on limited subjects using LDA topic model
Chang-Seok Oh, The Board of Audit and Inspection, Korea

End of Day Two

Poster Session

15. Evaluation of the effectiveness of vertical devices as a speed transition zone countermeasures in small, rural communities
Shauna Hallmark, Iowa State University, USA
16. A pilot study aiming to increase speed compliance of taxi drivers in Sweden
Åsa Forsman, VTI, Sweden
17. Methodological proposal for generating a Pedestrian Crosswalk Safety Index (PCSI)
Jorge Alberto Montejano Escamilla, Centro de Investigacion en Geografia y Geomática Ing. Jorge L Tamayo A.C. (CentroGeo), Mexico
18. Part-time shoulder use effects on safety: a vissim-based case study in southeast Pennsylvania
Seri Park, Villanova University, USA
19. Usefulness and acceptance of assessments of drivers with disabilities in simulation test rigs
Birgitta Thorslund, VTI, Sweden
20. A bivariate ordered probit modeling for Korean young drivers' risky behavior and perception
Jaeyoung Lee, University of Central Florida, USA

Beverages and finger snacks will be served during the Poster Session.

End of Day Two

Conference Dinner

6:30 pm, Ramada Ballroom
Buffet Dinner with Entertainment.

Welcome to enjoy an evening of entertainment, tasty food and the possibility to socialize with other conference participants.

Nun bit, meaning 'white eyes, pure heart', is a creative group of Korean Gayageum players. Gayageum is a traditional Korean instrument.



Photo Credit: Mostphotos.





Session 5A

9:00 am - 10:30 am, Ramada Ballroom 1

Finding the way of transport in safety and disaster management

Organised by: KOTI
Chair: Jeong Bok YU, Korea Transport Institute, Korea

Preemptive reallocation of fire services in emergency response for small municipalities
Peter Park, York University, Canada

Natural disaster and emergency information management research in Australia
Jinwoo (Brian) Lee, Queensland University of Technology, Australia

Evacuation policies and strategies for infrastructure construction and supporting method development against huge disasters
Kiichiro Hatoyama, Nagaoka University of Technology, Japan

Lessons learned on the passage of category 5 Hurricane Maria over the island of Puerto Rico: road safety infrastructure perspective
Colucci Benjamin, University of Puerto Rico, Puerto Rico

Disaster prevention and mitigation: designing national emergency road
Jun Lee, The Korea Transport Institute, Korea

Panel
Ministry of Land, Infrastructure and Transport,
The Ministry of Public Safety and Security,
Seoul National University,
University of Seoul,
Ulsan National Institute of Science and Technology,
Chungang University,
National Graduate Institute for policy studies,
Queens land University of Technology,
York University,
The Korea Transport Institute,
Korea Road Traffic Authority,
Korea Transportation Safety Authority

Coffee Break 10:30 - 11:00 am

Session 5B

9:00 am - 10:30 am, Ramada Ballroom 3

Vulnerable road users - safety of cyclists

Chair: Astrid Linder, VTI, Sweden

How close is close? An experimental study of cycling safety related to cycling on rural roads.
Christopher Patten, VTI, Sweden

An evaluation of re-designed rural roads
Henriette Wallén Warner, VTI, Sweden

Bicyclist injuries leading to emergency room visits
Gudmundur F Ulfarsson, University of Iceland, Iceland

Prevention of turning accidents between vehicles and cyclists at urban intersections
Janina Sachs, Technische Universitaet Berlin, Germany

Pedestrian injuries due to collisions with cyclist Melbourne, Australia
Jennifer Oxley, Monash University, Australia

Coffee Break 10:30 - 11:00 am

Session 5C

9:00 am - 10:30 am, Ramada Ballroom 4

Public transport and urban safety

Chair: Tomas Svensson, VTI, Sweden

Safety impacts of implementing median bus lane system in Seoul Metropolitan area: vehicle-to-vehicle and vehicle-to-pedestrian crashes
Yongju Yi, Ajou University, Korea

Safety assessment of road facilities through visualization of dangerous driving behavior in Seoul city bus
Christian Kapuku, Seoul National University, Korea

Reducing traffic crash risk through driver rescheduling a case study on intercity bus drivers
Shuo-Yen Wang, National Chiao Tung University, Taiwan

Judgement of urban transport security, risk perception, and travel mode use
Torbjorn Rundmo, NTNU, Norway

Determining the optimal access design of managed lanes considering dynamic pricing
Jaeyoung Lee, University of Central Florida, USA

Session 6A

11:00 am - 12:30 pm, Ramada Ballroom 1

Monitoring road safety attitudes & performance – the ESRA approach

Organised by: Vias Institute

Chair: Uta Meesman, Vias Institute, Belgium

The ESRA survey: cross national initiative to monitor road users' attitudes and performance

Uta Meesman, Vias Institute, Belgium

Comparison of self-declared mobile use while driving in Canada, the United States, and Europe

Ward Vanlaar, Traffic Injury Research Foundation (TIRF), Canada

Characteristics of road users' safety behavior and attitude in Korea: findings from ESRA survey

Sangjin Han, The Korea Transport Institute, Korea

Subjective versus objective safety: combining ESRA with care accident data

Gerald Furian, Austrian Road Safety Board, Austria

Potential for growth - new countries joining

Uta Meesman, Vias Institute, Belgium

Session 6B

11:00 am - 12:30 pm, Ramada Ballroom 3

Vulnerable road users - safety of children and pedestrians

Chair: Birgitta Torslund, VTI, Sweden

Korea's 96% reduction in child traffic fatalities

Jaehoon Sul, Korea Transport Institute, Korea

An investigation of awareness, perception and usage of child car seats in developing countries: A case study of Pakistan

Amna Chaudhry, University of Engineering and Technology, Lahore

Children way of travelling to school in towns outside the capital area in Iceland. Does the highway affect?

Erna Bara Hreinsdottir, ICRA Icelandic road and costal administration, Iceland

An ecological study of road safety for children undertaking active travel in Melbourne, Australia

Jennifer Oxley, Monash University, Australia

Pedestrian crash analysis: a case study in Louisiana

Xiaoduan Sun, University of Louisiana, USA

Lunch 12:30 - 2:00 pm
in the hotel restaurant

Session 6C

11:00 am - 12:30 pm, Ramada Ballroom 4

Traffic safety analysis, part 3

Chair: Henrik Andersson, University of Toulouse Capitole, France

Implementation of Ramp Metering to Improve Safety of Congested Expressway Weaving Segments

Mohamed Abdel-Aty, University of Central Florida, USA

Factors affecting the severity of out-of-control single-vehicle crashes in Singapore

Mo Zhou, National University of Singapore, Singapore

Application of the Lomax distribution to estimate the conditional probability of crash

Andrew P Tarko, Purdue University, USA

The in-depth accident study to evaluate the advanced automatic collision notification system in Japan

Toru Kiuchi, Institute for Traffic Accident Research and Data Analysis, Japan

Revisiting the modified areal unit problem in macro-level crash modeling

Jaeyoung Lee, University of Central Florida, USA

Lunch 12:30 - 2:00 pm
in the hotel restaurant



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Session 7A

2:00 pm - 3:30 pm, Ramada Ballroom 1

Safety, friction and monitoring infrastructure

Organised by: KICT/VTI

Chair: Leif Sjögren, VTI, Sweden,
Yongseok Kim, KICT, Korea

A study on design criteria for slope walking facilities to reduce the aged's falling
Chang-gyun Roh, Korea Institute of Civil Engineering and Building Technology, Korea

A deep learning approach for pavement evaluation using 2D and 3D imaging systems
Hae-Bum Yun, University of Central Florida, USA

A simple method for automatic incident detection using vehicle detector data
Jinhwan Jang, Korea Institute of Civil Engineering and Building Technology, Korea

Friction requirements on roads, paths and cycleways in summer road condition in Sweden
Leif Sjögren, VTI, Sweden

Friction in road design safety
Yongseok Kim, Korea Institute of Civil Engineering and Building Technology, Korea

Session 7B

2:00 pm - 3:30 pm, Ramada Ballroom 3

Vulnerable road users - safety of motorcyclists

Chair: Christopher Patten, VTI, Sweden

Recent trends in fatal motorcycle crashes in the U.S.
Chanyoung Lee, Center for Urban Transportation Research, USA

Injured motorcyclists in Sweden – an analysis of where on the road network motorcyclists are injured.
Åsa Forsman, VTI, Sweden

Impacts of helmet law changes on motorcyclists' fatalities in the United States
Jaeyoung Lee, University of Central Florida, USA

Evaluation of accident avoidance supporting system at intersections for motorcyclists using ADAS
JooHyeong Lee, Kagawa University, Japan

Police-like high visibility vests for motorcyclists: How does this affect interactions between road users?
Henriette Wallén Warner, VTI, Sweden

Session 7C

2:00 pm - 3:30 pm, Ramada Ballroom 4

Traffic safety analysis, part 4

Chair: Magnus Hjälm Dahl, Sweco, Sweden

Road safety study for roadway functional and preliminary designs rehabilitation of Belize's northern highway between miles 9.5 -24.5
Andres Enrique, Morrison Hershfield, Canada

Influence of traffic flow separation devices on road safety in Brazil's multilane highways
Gabriel Andrade Lanzaro, University of Brasilia - UnB, Brazil

Evaluating the impact of kinematic wave on rear-end collision using spatiotemporal wave reconstruction
Eui-Jin Kim, Seoul National University, Korea

Comparative evaluation on left turn safety measures at signalized intersections in New York city
H.Joon Park, New York City Dept. of Transportation, USA

Closing Session

3:30 - 4.00 pm, Ramada Ballroom 1

Dr. Anna Vadeby, Chair of RS5C, VTI, Sweden

Dr. Dong Su Kang, KOTSA, Korea

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- Dr. Yongseok Kim, KICT, Korea
- Dr. You-Lim Jang, KOTSA, Korea
- Dr. Åsa Forsman, VTI, Sweden

Additional reviewers

- Dr. Christer Ahlström, VTI, Sweden
- Prof. Jan Andersson, VTI, Sweden
- Dr. Jessica Berg, VTI, Sweden
- Ms. Jenny Eriksson, VTI, Sweden
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