

14th International Conference

# Road Safety on Four Continents

Bangkok, Thailand, 14-16 November 2007



Ministry of Transport  
Thailand

**vti**



GLOBAL  
ROAD SAFETY  
PARTNERSHIP



## Welcome

### Message.

The 14<sup>th</sup> International Conference of Road Safety on Four Continents, 14–16 November 2007, Bangkok, Thailand

On behalf of the Ministry of Transport of the Royal Thai Government, I would like to thank the Swedish National Road and Transport Research Institute (VTI), Sweden, and other supporters, i.e., GRSP, FERSI, TRB, and ECTRI for selecting Bangkok as a venue for the 14<sup>th</sup> International Conference of Road Safety on Four Continents. It is a great pleasure for us to extend a hearty welcome to all distinguished participants from the four continents and other countries.

It is indeed a great honor for Thailand to co-host this multi-continental conference which is held for the first time in Asia. This will be a global stage to address common challenging issues of road safety similarly experienced by countries across the world. In Thailand, road accidents are currently a huge problem causing a high fatality rate of some 13,000 road deaths per year, higher than many countries in this continent. Thus, Thailand has put road safety on its national agenda, mapped out policies and action plans, and staged several activities at both national and international level to combat the problem.

I truly believe that there is nothing more worthwhile and beneficial to human being than the cooperation among themselves in eradicating such manmade catastrophe. We hope to see this kind of cooperation provided on a broad scale, not just among governmental agencies, private sector, or academics. We do wish to see road racers and drunk drivers pay greater attention to the safety of their own lives and of the people around them as well. Many good plans and activities on road safety would become useless if we fail to instill the awareness among these troublemakers.

I personally hope to see that all members of the global society take road safety problem as our duty and individual responsibility to save all human lives from road accidents.



Admiral Thira Hao-Charoen  
Minister of Transport, Thailand

Together with the Ministry of Transport, Thailand, VTI has the pleasure of welcoming you to the 14<sup>th</sup> International Conference “Road Safety on Four Continents” in Bangkok, Thailand, on 14-16 November 2007. The conference is organized by VTI, with active support of GRSP, FERSI, TRB and ECTRI. The host organisation in Thailand includes the Transport Safety Planning Bureau in the Office of Transport and Traffic Policy and Planning (OTP).

The “Road Safety on Four Continents” is two conferences in one. One part is the ‘researcher to researcher’ type which will attract the research community. The other one has the emphasis towards the application of research and involves developing countries or countries in transition. The main objective of the conference is to explore emerging research and development in the area of road safety.

The conference is expected to attract the international research community, national safety experts, decision makers, practitioners and other delegates with an interest in road safety development. We expect more than 200 delegates, from all continents, to the three day conference in Bangkok and we wish all participants welcome and hope that you will have a fruitful exchange of know-how in the warm atmosphere of Bangkok.



Kent Gustafson,  
Chairman of the organising committee, VTI, Sweden

14 November



Registration 08.30-09.30

### Opening Ceremony

09.30-10.30

**Welcome address**

Admiral Thira Hao-Charoen, Minister of Transport, Thailand

**Welcome address**

HE Mr Lennart Linnér, Ambassador of Sweden, Thailand

**Welcome address**

Mr Kent Gustafson, Deputy Director General, VTI, Sweden

**Key note speech**

Mr Sansern Wongcha-Um, Deputy Minister of Transport, Thailand

**Key note speech**

Mr Barry Cable, United Nations ESCAP, Thailand

Coffee 10.30-11.00

### Opening Session 11.00-12.30

**Chairman:** Dr Maitree Srinarawat, Director General, Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, Thailand

**Plenary speech on road safety in Thailand**

Chamroon Tangpaisalkit, Director, OTP Ministry of Transport, Thailand

**The pro-active approaches to make our roads safer**

Hans-Joachim Vollpracht, Chair of PIARC TC 3.1 (Road Safety)

**Safer roads – an achievable goal for all countries**

Gerard Waldron, Managing Director, ARRB Group Ltd, Australia

**Road safety in countries with less developed infrastructures**

G. A. Giannopoulos, Head Hellenic Institute of Transport, Past president – ECTRI, Greece

**How can we set and achieve ambitious road safety targets?**

Eric Howard, OECD/ITF Working Group on Ambitious Target Achievement

Lunch 12.30-13.30

**Session 1**

**13.30-15.00, Ballroom A  
Road Safety Plans and  
Strategies I**

**Chairman:**  
Mr Peter Elsenaar, GRSP, Switzerland

**Road traffic injury risk in Norway,  
road safety strategies and public  
health perspectives**

Stig H. Jørgensen, Norwegian  
University of Science and  
Technology, Norway

**Initiating road safety policy  
through participation: A successful  
experience with a Chilean  
methodology**

Alfredo Del Valle, Innovative  
Development Institute, Chile

**A conceptual content analysis of  
politicians' and safety experts'  
judgements of transport safety in  
public decision making**

Torbjörn Rundmo, Norwegian  
University of Science and  
Technology, Norway

**A method for improving road safety  
transfer from highly motorised  
countries to less motorised  
countries**

Mark King, CARRS-Q, Australia

**Freedom to auto enjoyment contra  
freedom from traffic accidents**

Per A. Loken, Safe Traffic. Info,  
Norway

**Session 2**

**13.30-15.00, Park  
Modelling I**

**Chairman:**  
Dr Bhagwant Persaud, Ryerson  
University, Canada

**Study on relationships between  
crash and speed for expressway**  
Changcheng Li, Research Institute  
of Highway, China

**Relationship between presence  
of passengers and freeway crash  
characteristics**

Mohamed Abdel-Aty, University of  
Central Florida, USA

**Concept of Pro-Active traffic safety  
engineering management**  
Slobodan Lazic, Petroleum  
Development, Oman

**Zero inflated models based on  
real time traffic characteristics for  
predicting crash probabilities**

Nicholas J. Garber, University of  
Virginia, USA

**Studying the effect of weather  
conditions on daily crash counts**

Tom Brijs, Hasselt University,  
Belgium

**Session 3**

**13.30-15.00, Ballroom B  
Commercial and Fleet  
Safety**

**Chairman:**  
Ms Lori Mooren, ARRB Group Ltd,  
Australia

**Introduction on heavy vehicle safety**  
Lori Mooren, ARRB, Australia

**Striving forward with analysis,  
research, and technology at the  
United States Federal Motor Carrier  
Safety Administration**

Michael Griffith, Federal Motor  
Carrier Safety Administration, USA

**Education and training of heavy  
vehicle drivers**

Maria Jobenius, Scania, Sweden

**ITS solution to increase traffic safety  
behaviour for truck drivers: speed,  
seat belt and alcohol follow-up**

Magnus Hjälm Dahl, VTI, Sweden

**Bus driver and passenger  
experiences and perceptions: Bus  
safety situation in Thailand**

Pichai Taneerananon, Prince of  
Songkla University, Thailand



Coffee 15.00-15.30

Session 4	Session 5	Session 6
<p><b>15.30-17.00, Ballroom A</b>  <b>Road Safety Plans and Strategies II</b></p> <p><b>Chairman:</b>            Dr Rune Elvik, Institute of Transport Economics, Norway</p> <p><b>On the methods of road safety interventions in developing countries: Knowledge transfer from a policy perspective</b>            Matthew Ericson, Monash University Accident Research Centre, Australia</p> <p><b>Evaluating measures in order to achieve safety targets</b>            Harri Peltola, VTT, Finland</p> <p><b>Pattern and socio-economic implications of road crashes in south western Nigeria</b>            Ipingbemi Olusiyi, Department of Urban and Regional Planning, Nigeria</p> <p><b>Road safety in Bangladesh and some recent advances</b>            Mazharul Hoque, Bangladesh University, Bangladesh</p> <p><b>The importance of consultation and cooperation from the perspective of a local Cambodian NGO</b>            Kim Pagna, Coalition for Road Safety (CRY), Cambodia</p>	<p><b>15.30-17.00, Park</b>  <b>Modelling II</b></p> <p><b>Chairman:</b>            Dr Mohamed Abdel-Aty, University of Central Florida, USA</p> <p><b>Refining Haddon's matrix: Evidence-based policy for preventing global road traffic injuries</b>            Robert Alexander Hawes, University of Ottawa, Canada</p> <p><b>International road safety comparisons using accident prediction models</b>            Bhagwant Persaud, Ryerson University, Canada</p> <p><b>Selecting and prioritizing safety projects through the use of net present value analysis</b>            Mark Plass/Felix Delgado, Florida Dept. of Transportation, USA</p> <p><b>Designing a model to identify and prioritize accident Black-Spots</b>            Ali Pirdavani, Tehran Traffic &amp; Transportation Organization, Iran and Mahmood Saffarzade, Tarbiat Mondarres University, Iran</p> <p><b>Framework for real-time crash risk estimation: Implications of random and matched sampling schemes</b>            Mohammed Abdel-Aty, University of Central Florida, USA</p> 	<p><b>15.30-17.00, Ballroom B</b>  <b>Vehicle Innovation</b></p> <p><b>Chairman:</b>            Director Michael Griffith, Federal Motor Carrier Safety Administration, U.S. Dept. of Transportation, USA</p> <p><b>The effectiveness of electronic stability control in reducing real-world crashes: A literature review</b>            Susan Ferguson, Ferguson International LLC, USA</p> <p><b>Methods for evaluation of electronic stability control (ESC) – a literature review</b>            Astrid Linder, VTI, Sweden</p> <p><b>Vision-based static pre crash warning</b>            David Mahalel, Transportation Research Institute, Israel</p> <p><b>Selection of control speeds in dynamic intelligent speed adaptation system: A preliminary analysis</b>            Kanok Boriboonsomsin, University of California, USA</p> <p><b>Personalized system for in-vehicle transmission of vms information design, implementation and testing within the context of the in-safety project</b>            Evangelos Bekiaris, Hellenic Institute of Transport, Greece</p> <p><b>Vehicle to vehicle communication – how to prepare drivers for dangerous situations</b>            Albert Kircher, VTI, Sweden            Anna Anund, VTI, Sweden</p>
<p><b>Welcome Reception</b></p>		

**Plenary Session 09.00-10.30, Ballroom A/B**

**Chairman:** Director Gerard Waldron, ARRB Group Ltd, Australia

**Cascading the World Report, the ASEAN experience**  
Robert Klein, Regional Programme Director, Asia, GRSP

**Road traffic safety management system standard /ISO-RTS-MSS?**  
Hans Skalin, Swedish Road Administration, Sweden

**The road safety work of the United Nations Commission for Europe: International legal instruments and campaigns**  
Marie-Noëlle Poirier, UN Economic Commission for Europe, Switzerland

**Developments in highway /traffic safety in the US**  
Michael S. Griffith, Director, Federal Motor Carrier Safety Administration U.S. Dept. of Transportation, USA

**Road transport safety**  
Martijn Arends, Royal Dutch Shell

Coffee 10.30-11.00

**Session 7**

**11.00-12.30, Ballroom A  
Safety Management**

**Chairman:**  
Mr Terje Assum, Institute of Transport Economics, Norway

**Improving road safety in developing countries using netrisk: A road network risk management approach**  
Peter Damen, ARRB Group Ltd, Australia

**Road safety management by objectives: a critical analysis of the Norwegian approach**  
Rune Elvik, Institute of Transport Economics, Norway

**Road safety management and planning in Spain**  
Anna Ferrer and Carmen Girón, Spanish Traffic General Directorate, Spain

**Field road safety reviews in the province of Gujarat**  
Oleg Tonkonojenkov, Synecyics Transportation Consultants, Canada

**Implementing the European road safety observatory in the "SafetyNet" project**  
Pete Thomas, Vehicle Safety Research Centre, UK

**Session 8**

**11.00-12.30, Ballroom B  
Motorcycles and Bicycles**

**Chairman:**  
Dr Tuenjai Fukuda, Nihon University, Japan

**Reasons for poor/non-use of crash helmets by commercial motorcyclists in Oyo State, Nigeria**  
Adesola Sangowawa, Department of Community Medicine, Nigeria

**Motorcycle crash characteristics in Thailand**  
Sattrawut Ponboon, Thailand Accident Research Center, Thailand

**Challenging efforts in promoting young motorcyclist safety in Indonesia**  
Dewanti Marsoya, Gadjah Mada University, Indonesia

**An impact study of seat belt and helmet use in Thailand**  
Nuttapong Boontob, Thailand Accident Research Center, Thailand

**Analysis of bicycle crossing times at intersections for providing safer right of bicycle users**  
Jin Kak Lee, Myong Ji University, Korea

**The value of an exclusive motorcycle lane in mix traffic: Malaysian experience**  
M. Subramaniam, OVARoad Safety, Malaysia

**Session 9**

**11.00-12.30, Park  
Urban Safety**

**Chairman:**  
Dr Tappan Datta, Wayne State University, USA

**New guidelines on collision prevention and reduction and UK-MoRSE**  
Mike Mounfield, Institution of Highways and Transportation, UK

**A low-tech approach to road safety engineering in urban areas**  
Clive Sawers, Traffic Engineering Consultants, UK

**Speed characteristics and safety on low speed urban midblock sections based on GPS-equipped vehicle data**  
Saroch Boonsiripant, Georgia Institute of Technology, USA

**Road accidents in Dhaka, Bangladesh: How to provide safer roads?**  
M. Shafiq-Ur Rahman, Jahangirnagar University, Bangladesh

**Comparative analysis about speed reduction on the different types of the traffic calming measures in Slovenia**  
Marko Rencelj, University of Maribor, Slovenia

Lunch 12.30-13.30

**Session 10**

**13.30-15.00, Park  
Education and Training**

**Chairman:**  
Dr Evangelos Bekiaris, Hellenic Institute of Transport, Greece

**Why traffic as a system is an important conceptual contribution to road safety teaching?**

Maria Isoba, Luchemos por la Vida, Argentina

**A new concept on the integration of driving simulators in driver training – The train-all approach**

Maria Panou, Hellenic Institute of Transport, Greece

**Preparation of specialists from different community sectors related to road traffic injuries prevention. Cuba 2004-2006**

Mariela Hernandez-Sánchez, INHEM, Cuba

**Education and training of highway safety professionals in the United States**

Martin Lipinski, University of Memphis, USA

**A novel program to enhance safety for young drivers in Israel**

Tsippy Lotan, OR YAROK, Israel

**Session 11**

**13.30-15.00, Ballroom B  
Crash Recording Systems and Safety Auditing I**

**Chairman:**  
Dr Josef Mikulik, CDV Transport Research Centre, Czech Republic

**Introduction of highway safety enhancement project in flat area in China**

Bin Huang, Research Institute of Highway, China

**Run off the road accidents on motorways in Finland**

Katja Suhonen, Helsinki University of Technology, Finland

**A systemic view on Swedish traffic road accident data acquisition system**

Imad Abugesaisa, Linköping University, Sweden

**Comparison of highway accidents based on vehicle types in Thailand**

Chakkrit Kanokkantapong, Prince of Songkla University, Thailand

**An in-depth analysis of road crashes in Thailand**

Mouyid Bin Islam, Asian Institute of Technology, Thailand

**Regional black-spot treatment program – A polish experience**

Krzysztof Jamrozik, National Road Safety Council, Poland

**Session 12**

**13.30-15.00, Ballroom A  
Rural Safety**

**Chairman:**  
Mr Robert Klein, GRSP, Switzerland

**The challenge of dysfunctional roads – upgrading the safety of inter-urban roads**

John Mumford, iRAP and Reputation Risk Consultants Ltd, UK

**Implementation of the flashing yellow arrow permissive left-turn indication in signalized intersections**

David Noyce, University of Wisconsin-Madison, USA

**Broadening the transport safety agenda: A rural perspective  
A synthesis of pilot case studies from Sri Lanka, India, Madagascar, Cameroon and Peru**

Guy Kemtsop, IFRTD, Cameroon

**Fatality risks of intersection crashes in Bangladesh**

Upal Barua, Department of Civil Engineering, Canada

**Use of intelligent road studs to reduce vehicle-pedestrian conflicts at signalised junctions**

Ho Seng Tim, Land Transport Authority, Singapore



Coffee 15.00-15.30

**Session 13**

**15.30-17.00, Ballroom A  
Performance and Adverse  
Effects on Driving**

Chairman:  
Dr Astrid Linder, VTI, Sweden

**Safety performance indicators  
– a tool for better road safety  
management: The case of alcohol  
and drugs**

Terje Assum, Institute of Transport  
Economics, Norway

**Situational and driver-related factors  
associated with falling asleep at the  
wheel**

Fridulv Sagberg, Institute of  
Transport Economics, Norway

**Random roadside drug testing:  
A study into the prevalence of drug  
driving in a sample of Queensland  
motorists**

Jeremy Davey, CARRS-Q, Australia

**Detection and prediction of driver's  
micro sleep events**

Martin Golz, University of Applied  
Sciences, Schmalkalden, Germany

**Evaluation of a drowsy driving  
system – a test track study**

Anna Anund, VTI, Sweden

**Session 14**

**15.30-17.00, Ballroom B  
Crash Recording Systems  
and Safety Auditing II**

Chairman:  
Dr Tappan Datta, Wayne State  
University, USA

**Transparency, independence and in-  
depth with regard to safety oriented  
road accident investigation**

Heikki Jähi, Institute for Transport  
and Safety Research, France

**Comparison analysis of traffic  
accident data management systems  
in Korea and other countries**

San Jin Han, Korea Transport  
Institute, Korea

**Using GIS technology to enhance  
road safety in Singapore**

Hau Lay Peng, Land Transport  
Authority, Singapore

**Thailand road safety and introducing  
public participatory approach for  
black spot identification**

Tuenjai Fukuda, Nihon University,  
Japan

**Road safety auditing also on  
existing roads – an efficient tool for  
preventing accidents?**

Jesper Mertner, COWI Consulting  
Engineers, Denmark

**Session 15**

**15.30-17.00, Park  
Road Safety Economics**

Chairman:  
Dr. Piet Venter, GRSP, South Africa

**Benevolence and the value of road  
safety**

Henrik Andersson, VTI, Sweden

**The burden of fatalities resulting  
from road accidents:**

**An epidemiological study of Iran**  
Esmaeel Ayati, Ferdowsi University  
of Mashhad, Iran

**Quantification of accident potential  
on rural roads: A case study in  
Rajasthan (India)**

Ashoke Sarkar, IFRTD, India

**Evaluating rural road safety  
conditions using road safety index:  
An application for rural roads in  
Thailand**

Wit Ratanachot, Department of  
Rural Roads, Ministry of Transport,  
Thailand

**The road safety cent**

Gunter Zietlow, GTZ – German  
Technical Cooperation, Germany



Conference Dinner



**Session 16**

**9.00-10.30, Ballroom A  
Enforcement Techniques  
and Speed Management**

**Chairman:**  
Ms Lori Mooren, ARRB Group Ltd,  
Australia

**Penalty points systems: Efficient  
technique of enforcement and  
prevention**

Josef Mikulik, CDV Transport  
Research Centre, Czech Republic

**Spot speed study along a speed  
zone on motorway M2 in Mauritius**  
Harvindradas Sungker, CODEPA,  
Mauritius

**Factors leading to violation of traffic  
light rules among motorists in  
Malaysia**

S. Kulanthayan, University Putra  
Malaysia, Malaysia

**Safety effects of variable speed  
limits at rural intersections**

Mohsen Towliat and Helena  
Svensson, Swedish Road  
Administration Consulting Services,  
Sweden

**Session 17**

**9.00-10.30, Park  
Health Issues and Raising  
Awareness**

**Chairman:**  
Dr Stig Jörgensen, Norwegian University  
of Science and Technology, Norway

**Involvement and impact of road  
traffic injuries among productive age  
groups (18–59 years) in Bangladesh:  
Issue for priority setting**

Salim Mahmud Chowdhury, CIPRB,  
Bangladesh

**Developing an integer programming  
sketch to optimize the expenses on  
promoting the road safety and social  
traffic culture**

Hamid Reze Behnood, Ferdowsi  
University of Mashhad, Iran

**Social and information campaigns to  
improve road safety**

Barbara Król, Polish National Road  
Safety Council, Poland

**The identification of “At-risk” groups  
for transport-related fatalities  
across four South African cities**

Laher Hawabibi, UNISA, South  
Africa

**Study of pattern of fatal accidents for  
safe designing of vehicles**

Amandeep Singh, Department of  
Forensic Medicine, India

**Session 18**

**9.00-10.30, Ballroom B  
Human Behaviour and  
Pedestrians**

**Chairman:**  
Dr Martin Golz, University of Applied  
Sciences, Schmalkalden, Germany

**A study examining the relationship  
between attitudes and aberrant  
driving behaviours within an  
Australian fleet setting**

J. Davey Freeman, CARRS-Q,  
Australia

**Road safety in the Czech Republic is  
related to human factors research**  
Karel Schmeidler, CDV Transport  
Research Centre, Czech Republic

**Pedestrian safety requires planning  
priority**

Esther Malini, Larsen & Toubro,  
India

**Walkability of school surrounding  
environment and its impact on  
pedestrian behaviour**

Lina Shbeeb, Balqa’a Applied  
University, Jordan

**Road accidents and pedestrians:  
The importance of traffic calming  
measures in tackling the (in)visible  
public health disaster in Kampala  
city**

Paul Isola Mukwaya, Makerere  
University, Uganda



Coffee 10.30-11.00

## 16 November

### Closing Session 11.00-12.00

#### Summary of Global Road Safety

Peter Elsenaar, GRSP, Switzerland

#### Closing Address

Aram Kornsonbat, Deputy Director General, Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, Thailand

#### Closing Address

Kent Gustafson, Chairman of RS4C organizing committee, VTI

Lunch 12.00-13.00

### Technical Visit 13.00-17.00

#### Honda Safety Riding Center

The motorcycle training centre has a large off-road area for rider training and is equipped with motorbikes, lecture rooms and state-of-the-art motorcycle simulators.



## Poster Session, Park C

**Towards comprehensive and sustainable road safety strategies, action plan and policy framework for Nigeria**

S.I. Oni, University of Lagos, Nigeria

**Risky driving in fog: Psychological explanations**

Viola Cavallo, INRETS, France

**Road traffic accidents and Cambodian University students: A case study in Phnom Penh municipality**

Kim Pagna, Coalition for Road Safety (CRY), Cambodia

**Vulnerable road user – pedestrian in the Czech Republic**

Karel Schmeidler, CDV Transport Research Centre, Czech Republic

**Why do they avoid footbridges? Explaining jaywalkers through the haddon matrix**

Ignacio Nazif Munoz, Government of Chile, Chile

**Mobility, attitudes, risk and behaviour of young drivers**

Cécile Coquelet, INRETS, France

**Are Okada operators licensed to ride in Nigeria? A preliminary finding**

G.T. Arosanyin, University of Ilorin, Nigeria

**Study of project to use a hard shoulder as a traffic lane.**

Jocelyne Doré, INRETS, France

**Time of day and sleep deprivation effects on motorcyclists riding performances: A pilot study**

Clément Bougard, INRETS, France

**Development of urban safety management in Indonesia**

Mrs Lanalyawati, Institute of Road Engineering, Indonesia

**Fifteen-year experience with roundabouts and measures of assuring traffic safe roundabouts in Slovenia**

Tomaz Tollazzi, University of Maribor, Slovenia

**Short term traffic volume prediction on NH-1 using time series analysis**

Inderjeet Kaushik, Banaras Hindu University, India

**Design of decision support system on urban road traffic safety management**

Tianjun Yang, Ministry of Communications, China

**The potential development of self reliance and social network constructional community beside highway for traffic accident prevention**

Chulaporn Sota, Khon Kaen University, Thailand





### Conference Patronage



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