

# INSTR2015 SYMPOSIUM PROGRAM

1<sup>st</sup> Aug. (Sat)

<u>17:00-</u> Welcome cocktail at <a href="#">Hotel Nikko Nara 4F Hagoromo Room</a>
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2<sup>nd</sup> Aug. (Sun)

	Room 1	Room 2	Room 3
<u>9:20-9:35</u>	Opening ceremony		
<u>9:35-10:35</u>	Keynote Speech <i>Kotaro Kato</i>		
<u>10:35-10:55</u> Coffee Break			
<u>10:55-12:35</u> Session I	Resilience <i>Takeshi Nagae</i>	Travel behaviour under uncertainty <i>Yasuo Asakura</i>	Network performance 1 <i>Alan Nicholson</i>
<u>12:35-14:05</u> Lunch (Bento BOX) & Poster session (@ 2F Reception Hall)			
<u>14:05-15:45</u> Session II	Disaster 1 <i>Hiroshi Wakabayashi</i>	Route and departure time choice <i>Daisuke Fukuda</i>	Network performance 2 <i>Takashi Oguchi</i>
<u>15:45-16:05</u> Coffee Break			
<u>16:05-17:45</u> Session III	Disaster 2 <i>Michael Taylor</i>	Valuation of reliability <i>Shoichiro Nakayama</i>	Traffic network Management <i>Toshio Yoshii</i>
<u>18:30-</u> Banquet at <a href="#">Nara National Museum B1</a>			

3<sup>rd</sup> Aug. (Mon)

	Room 1	Room 2	Room 3
<u>9:00-10:00</u>	Keynote Speech <i>Michael G. H. Bell</i>		
<u>10:00-10:20</u> Coffee Break			
<u>10:20-12:00</u> Session IV	Network reliability modelling 1 <i>Seungjae Lee</i>	Management of public transportation <i>Hong K Lo</i>	Assignment <i>Hai Yang</i>
<u>12:00-14:00</u> Conference Lunch at <a href="#">Yume-Kaze Plaza</a>			
<u>14:00-15:15</u> Session V	Network reliability modelling 2 <i>David Levinson</i>	Reliability of public transportation <i>William H K Lam</i>	Network design <i>Agachai Sumalee</i>
<u>15:15-15:45</u>	Closing Ceremony		

# Programs:

## Room 1: (Noh Theatre Hall)

9:20-9:35, 2<sup>nd</sup> Aug.

Opening ceremony

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9:35-10:35, 2<sup>nd</sup> Aug.

Keynote Speech

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TBA

*Kotaro Kato*

10:55-12:35, 2<sup>nd</sup> Aug.

Session I: Resilience

Chairperson: Takashi Nagae (Tohoku University)

Resilience index in vulnerable transport infrastructures

*Seungjae Lee, Jooyoung Kim and Shinhae Lee*

A methodology for road traffic resilience analysis and review of related concepts

*Simeon Calvert and Maaïke Snelder*

A GIS method for measuring road system resilience to extreme events

*Amirhassan Kermanshah and Sybil Derrible*

The resilience value of public transport development plans

*Oded Cats*

14:05-15:45, 2<sup>nd</sup> Aug.

Session II: Disaster 1

Chairperson: Hiroshi Wakabayashi (Meijo University)

Cascading failure in a road network depending on external systems

*Kashin Sugishita, Takahiko Kusakabe and Yasuo Asakura*

Evaluation of tsunami evacuation planning considering vehicle usage and starting time of evacuation

*Bunpei Nagao, Hiroshi Shimamoto, Toshiyuki Nakamura, Nobuhiro Uno,*

*Jan-Dirk Schmöcker and Hiroki Yamazaki*

Location-routing problem for disaster relief operations

*Sattrawut Ponboon, Eiichi Taniguchi and Ali Gul Qureshi*

Supply chain design for the emergency supply of blood in disasters

*Behnam Fahimnia, Ali Ghavamifar, Armin Jabbarzadeh and Michael Bell*

16:05-17:45, 2<sup>nd</sup> Aug.

Session III: Disaster 2

Chairperson: Michael Taylor (University of South Australia)

Evaluating disaster network resilience with an agent-based evacuation model

*Joel S.E. Teo, Jan-Dirk Schmöcker, Florin Leon, Yeun-Touh Li, Hiroki Yamazaki, Ali Gul Qureshi,  
Gabriela Atanasiu and Eiichi Taniguchi*

Monitoring traffic congestion using probe data at Great East Japan Earthquake in 2011 and design of efficient evacuation schemes

*Masao Kuwahara, Yusuke Hara and Takeshi Ohata*

Anti-seismic reinforcement strategy for an urban road network: a cross-entropy approach

*Nobuo Takei and Takeshi Nagae*

Transportation network protection based on path directness and travel demand weighted connectivity reliability

*James C Chu and Shih-Chi Chen*

9:00-10:00, 3<sup>rd</sup> Aug.

Keynote Speech

Managing uncertainty in supply chains

*Michael G. H. Bell*

10:20-12:00, 3<sup>rd</sup> Aug.

Session IV: Network reliability modelling 1

Chairperson: Seungjae Lee (University of Seoul)

Tightness of the system-wide travel time reliability assessment under partial information

*Xiangfeng Ji, Xuegang Ban, Jian Zhang and Bin Ran*

Simulation-based pricing optimization for improving network-wide travel time reliability

*Xiqun Michael Chen, Lei Zhang, Xiang He and Chenfeng Xiong*

Robust cordon toll pricing scheme with endogenous residential distribution under uncertainty in travel demand

*Yajuan Chen, Zhichun Li and William H.K. Lam*

Simulation-Based Optimal Travel Information Provision Strategies: An Agent-Based Approach under Uncertainty

*Chenfeng Xiong, Xiqun Chen, Zheng Zhu and Lei Zhang*

14:00-15:15, 3<sup>rd</sup> Aug.

Session V: Network reliability modelling 2

Chairperson: David Levinson (University of Minnesota)

A data-driven assessment of travel time reliability on the origin destination level

*Christian de Boer, Maaïke Snelder, Rob van Nes and Bart van Arem*

Improving the efficiency and reliability of demand estimation from traffic counts using information on network observability

*Francesco Viti, Guido Cantelmo, Marco Rinaldi and Francesco Corman*

Modelling Issues in Incorporating Link Travel Time Correlations in the Analysis of Corridor Trip Time Reliability

*Alan Nicholson and David Watling*

15:15-15:45, 3<sup>rd</sup> Aug.

Closing ceremony

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## Room 2: (Reception Hall 1)

10:55-12:35, 2<sup>nd</sup> Aug.

Session I: Travel behavior under uncertainty Chairperson: Yasuo Asakura (Tokyo Institute of Technology)

Subjective perception towards uncertainty on weather conditions and its impact on out-of-home leisure activity participation *Chengxi Liu, Yusak O. Susilo and Nursitihazlin Ahmad Termida*

Modeling and simulation of risk-taking driving behavior at signalized intersections based on a Fuzzy Cellular Automata (FCA) model *Chen Chai, Yiik Diew Wong, Meng Joo Er and Evan Tat Meng Gwee*

Memory, expectation formation and scheduling choices *Stefanie Peer, Paul Koster and Thijs Dekker*

Commuting for meetings *Mogens Fosgerau, Leonid Engelson and Joel Franklin*

14:05-15:45, 2<sup>nd</sup> Aug.

Session II: Route and departure time choice Chairperson: Daisuke Fukuda (Tokyo Institute of Technology)

A time-dependent alpha-reliable mean-excess path finding model in stochastic networks

*Kriangsak Vanitchakornpong, Zhong Zhou, Chen Anthony, Nakorn Indra-Payoong and Sarawut Jansuwan*

Impact study of various information about accident risk on driver's route choice behavior

*Satoshi Hyodo, Shinya Kurauchi and Toshio Yoshii*

A link-based mean-excess traffic equilibrium model under uncertainty

*Xiangdong Xu, Chen Anthony, Lin Cheng and Chao Yang*

Incorporating observed travel time reliability into a commuters' departure time choice model

*Liang Tang, Sepehr Ghader, Carlos Carrion, Sabyasachee Mishra, Chenfeng Xiong and Lei Zhang*

16:05-17:45, 2<sup>nd</sup> Aug.

Session III: Valuation of reliability Chairperson: Shoichiro Nakayama (Kanazawa University)

Methodology to quantify in economic terms the vulnerability of an interurban road network and prioritize investments for climate change adaptation *David Paez, Julian Gomez, Juan Pablo Bocarejo and Mauricio Sanchez*

A study on benefit estimation considering both value of travel time and of travel time reliability in road networks *Teppei Kato and Kenetsu Uchida*

Application of an integrated approach for valuing travel time reliability benefit in an urban expressway

*Ryo Nakata, Mitsuya Nagasawa, Masakazu Nakanishi and Daisuke Fukuda*

Evaluation method of travel speed reliability using Wi-Fi packet receiver

*Tomoyuki Adachi, Junji Nishida and Takumi Nishimura*

10:20-12:00, 3<sup>rd</sup> Aug.

Session IV: Management of public transportation

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Chairperson: Hong K Lo (Hong Kong University of Science and Technology)

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A study of holding strategies for bus service reliability and their impact to surrounding traffic

*Shuai Li and Andy Chow*

An experimental analysis of reliability, resilience and robustness in closed loop railway traffic control

*Francesco Corman and Egidio Quaglietta*

Bus Bunching Along a Corridor Served by Two Lines

*Jan-Dirk Schmöcker, Wenzhe Sun, Ronghui Liu and Achille Fonzone*

Robust dynamic transit network design under demand uncertainty

*Kun An and Hong Lo*

14:00-15:15, 3<sup>rd</sup> Aug.

Session V: Reliability of public transportation

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Chairperson: William H K Lam (Hong Kong Polytechnic University)

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Exposing the role of exposure in public transport network vulnerability analysis

*Oded Cats, Niels van Oort and Menno Yap*

Beyond a complete failure: the impact of partial capacity reductions on public transport network vulnerability

*Erik Jenelius and Oded Cats*

The estimation of minimum connection time between runway and apron to enhance airline schedule reliability and airfield operation performance at Songshang International Airport

*Suiling Li*

## Room 3: (Conference Room 1)

10:55-12:35, 2<sup>nd</sup> Aug.

Session I: Network performance 1

Chairperson: Alan Nicholson (University of Canterbury)

Availability and reliability of a signalised lane

*Krzysztof Ostrowski and Marian Tracz*

Effect of speed limits in degradable transport networks

*Chen-Yang Yan, Rui Jiang, Zi-You Gao and Hu Shao*

On time-aggregate intervals for reliable freeway capacity analysis

*Huizhao Tu, Lijun Sun and Hao Li*

Modelling demand and supply side variability for a road link using Bluetooth and loop detector data

*Fiona Crawford, David Watling, Richard Connors*

14:05-15:45, 2<sup>nd</sup> Aug.

Session II: Network performance 2

Chairperson: Takashi Oguchi (The University of Tokyo)

Accessibility and the ring of unreliability

*Mengying Cui and David Levinson*

Quantifying the robustness of metro networks

*Xiangrong Wang, Yakup Koc, Rob Kooij, Sybil Derrible and Nasir Ahmad*

Moment-ratio diagram and travel time reliability: empirical study on urban and periurban links

*Raphael Delhome, Romain Billot and Nour-Eddin El Faouzi*

Assessing corridor-level travel time reliability on urban freeways

*Jing Dong*

16:05-17:45, 2<sup>nd</sup> Aug.

Session III: Traffic network management

Chairperson: Toshio Yoshii (Ehime University)

Analysis of gridlock traffic flow on a single grid network

*Daisuke Oshima and Takashi Oguchi*

Evaluation of a hard shoulder running scheme applied on a Japanese motorway

*Jian Xing, Shoichi Hirai, Hiroyuki Konda and Hideo Yonekawa*

Controlling lane traffic flow for managing uncertainty in traffic breakdown

*Yasuhiro Shiomi*

Network-wide on-line travel time estimation with inconsistent data from multiple sensor systems under network uncertainty

*Hu Shao, William H K Lam, Agachai Sumalee and Anthony Chen*

10:20-12:00, 3<sup>rd</sup> Aug.

Session IV: Assignment Chairperson: Hai Yang (Hong Kong University of Science and Technology)

Stochastic properties and estimation problem of large transportation networks

*Shoichiro Nakayama, David Watling and Richard Connors*

Validation of proportionality assumptions in traffic assignment accounting for day-to-day variability

*Emily Moylan, Vinayak Dixit and Lauren Gardner*

A primal-dual perspective of elastic-demand stochastic traffic assignment problems

*Yanjie Wan and Chi Xie*

Reliability-based stochastic transit assignment: approach-based formulation, solution method, and paradox

*W.Y. Szeto and Y. Jiang*

14:00-15:15, 3<sup>rd</sup> Aug.

Session V: Network design Chairperson: Agachai Sumalee (King Mongkut's University of Technology)

Capacitated public bike station location design with demand uncertainty

*Chin Sum Shui and Wy Szeto*

Substitute Bus Service Network Design after a Metro Failure

*Shuyang Zhang, Hong Lo and Kun An*

Robustness of multi-level public transport networks: a methodology to evaluate and quantify robustness from a passenger perspective

*Menno Yap, Niels van Oort, Rob van Nes and Bart van Arem*