

# 20th ITS WORLD CONGRESS TOKYO 2013

# **Preliminary Program**



Co-hosted by













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# **Welcome Letters**



I first must express my deepest gratitude for the heartfelt messages and support received from so many individuals, ITS organizations and governments around the world, which really encouraged people in the areas devastated by the Great East Japan Earthquake of March 11, 2011 and became a big driving force toward restoration.

The theme of the 20th World Congress on Intelligent Transport Systems is "Open ITS to the Next." Next-generation ITS will address a variety of traffic-related issues, including the environment, energy, safety and traffic congestion. In addition it will contribute to enhancing quality of life while answering society's need for accurate and prompt responses to disasters and other unexpected events. In the next-generation ITS era, automobiles and other means of mobility will be embedded as a component of the social network. I believe that when combining the function of transfer that is basic mobility itself with the function of connectivity through next-generation ITS, a practical, networked society will emerge which doesn't remain a simple virtual network but can stimulate real-life action. The open platform, a common foundation created for this purpose, will make it possible for anybody to provide information, access necessary information and enjoy its benefits from any location. The Congress Organizing Committee will propose a robust and resilient society at the Congress for future generations, to be achieved by focusing efforts on the creation of new industries as well as prosperous and healthy communities, through mutual cooperation among ITS organizations, the corporate sector and academia worldwide. The Greater Tokyo area, with a population of 36 million, is the world's liveliest mega-city. We will present social systems and community activities for this mega-city that utilize state-of-the-art ITS and next-generation mobility, through which we hope to contribute to Asian and global economic evolution.

I look forward to seeing you at the 20th ITS World Congress Tokyo 2013.



I am very pleased that Tokyo will play host to the 20th ITS World Congress 2013.

Tokyo possesses a rich 400-year history as the center of Japan. While carrying on the legacies of its unique culture and traditions, the metropolis has developed not only as the nation's economic and political center, but as its cultural center as well. In recent years, the city's pop culture

of "anime" has also gained global popularity.

The field of science and technology is also a source of Tokyo's growth and development. Leading-edge science and technologies, including ITS technology, efficiently and effectively support the metropolis' dynamic urban activities. Tokyo already controls its high volume of vehicular traffic and its precise rail network through a variety of systems that apply ITS technology, and continues to work toward realization of even smoother and more comfortable transport.

Should Tokyo be selected this coming September as the host city for the 2020 Olympic and Paralympic Games, I am confident that we will make the best use of these technologically advanced transport systems, and deliver the best possible Games.

I am certain that you will be captivated by Tokyo's vibrant mix of traditional culture and cutting-edge technology, along with its dynamism as a global economic hub. The modern Tokyo Skytree, the world's tallest freestanding broadcast tower at 634 meters, stands ready to welcome you as Tokyo's latest tourist attraction. Tokyo, in addition to being one of the safest cities in the world, is a city that takes great pride in its warm hospitality as well.

Please allow me to once again take this opportunity to express my heartfelt gratitude to everyone around the world who offered warm words of encouragement and support to us in the wake of the Great East Japan Earthquake of March 2011. Following the earthquake, Japan has been making steady progress on its road to recovery. Visitors will now be able to see a Tokyo that has overcome the tragedy of the earthquake, and is evolving into a city that is even more disaster-resistant through the application of technologies including ITS.

We look forward to welcoming you to our city in October for the ITS World Congress Tokyo 2013.

Naoki INOSE.

Hiroyuki Watanabe Chairman, ITS Japan Naoki Inose Governor of Tokyo



The scope of ITS has been enlarging from reducing traffic accidents and casualties on the road, to integrating mobility, energy and information communication technology so that we can maximize the benefits for future generations. Member countries are everincreasing and needs are becoming so diversified. ITS World Congress Tokyo 2013 is the best chance for industry players to reveal new technologies and products to the fastest growing Asia Pacific markets. For policy makers, this is an excellent chance to present and hear different social needs and opinions for resolving the issues we face. Ranging from theoretical research to field trials and experiments, academia and researchers have very important roles to stimulate and encourage people during the World Congress. As the chairman of ITS BOD 2013, I am honored to welcome many presentations and papers from around the world, especially from the Asia Pacific region.



Atsushi Yano

Chairman, 20th ITS World Congress Board of Directors Managing Director, Sumitomo Electric Industries, Ltd.



On behalf of the International Program Committee (IPC), I am profoundly honored to invite all of you to participate in the 20th anniversary ITS World Congress Tokyo 2013. After the passage of two decades from the start of the congress, the 20th ITS World Congress marks a time of further evolution to open ITS to new domains. We found, for example, that ITS can contribute to constructing a resilient and energy-conscious society after our experience of the Great East Japan Earthquake in 2011. Open platforms, open connectivity, open opportunities, open collaboration and so forth will be discussed in the plenary, executive and special interest sessions. The scientific, technical and interactive sessions are also open to all participants. The IPC has devoted our sincere efforts to provide you with a memorable and valuable experience at this 20th ITS World Congress. Please come and join the congress in Tokyo and enjoy this exciting mega-city.



Takashi Oguchi

Chairman, 20th ITS World Congress International Program Committee
Professor, The University of Tokyo



On behalf of the ITS Asia Pacific Board of Directors, I would like to invite you to the 20th ITS World Congress Tokyo 2013.

Asia Pacific is the fastest growing region as the

industrial center of the world. As the world is becoming a unified economy, the Asia-Pacific region is playing increasingly important roles. However, we are facing grave challenges in transportation, especially in megacities. Building faster, safer and more reliable transportation networks across boundaries is essential for both economic growth and improvement in quality of life.

At the 20th ITS World Congress in Tokyo, you will find the right experts on a variety of issues for viable solutions. Especially from the Asia-Pacific region, as the host of the World Congress, leaders in policies, technologies and institutional issues are waiting for you to share challenges and opportunities with you.

The entire ITS community in the Asia-Pacific region is looking forward to seeing you in Tokyo.



On behalf of ITS America, I am pleased to invite you to attend the 20th ITS World Congress in Tokyo, Japan. The theme of the Congress "Open ITS to the Next" will address environment,

energy, safety, and traffic congestion related issues that continue to be of increasing significance globally.

The ITS World Congress provides an exciting opportunity for the global ITS Community to learn, discuss, challenge and advance ITS at the political, technical and strategic levels. Submitting a paper for the Congress is a great way to generate ideas and to ensure that every voice is heard.

Tokyo will be another milestone towards a world where ITS becomes a reality in improving the well-being of society. I am delighted to have the chance to meet you at the ITS World Congress in Tokyo!



On behalf of ERTICO - ITS Europe and its partners, I would like to invite you to attend the 20th ITS World Congress in Tokyo in 2013.

With the theme "Open ITS to the Next," the Congress will

explore the next generation of ITS, showcasing solutions resulting from the cooperation between ITS organisations, industry and academia.

Today's challenge is to deploy ITS solutions effectively in a coordinated and harmonised manner. To do so we need optimal interaction between people and technologies, bringing synergy between modes of transport to offer mobility in a way that is environmentally friendly, safe and efficient.

Tokyo is not only a high technological capital and a great location for the Congress, but it is also recognised for its warm hospitality. Europe is most excited about the prospect of this excellent ITS World Congress.

I look forward to meeting you in the multicultural and international city of Tokyo, and to participating together in the wide range of dynamic events planned for the Congress.

hm

Hajime Amano Secretary General, ITS Asia-Pacific

Scott Belcher
President and CEO, ITS America

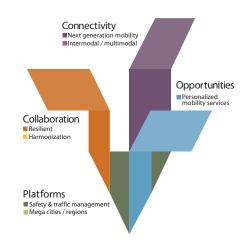
Hermann Meyer CEO, ERTICO - ITS Europe

# Congress Concept - Open ITS to the Next -

ITS is expanding into the next stage of mobility and society.

Starting with safety and traffic management as basic concerns, ITS is reaching out to three new domains: energy management, personalized mobility services navigated by big data, and resilient transport systems. The first two stem from the emergence of electrified vehicles and continuously advancing ICT technologies, and the third concept of resilient transport has become very important since the Great East Japan Earthquake in 2011. At the same time, mobility in mega cities/regions is a major issue to be addressed in emerging economies, especially in Asia.

**Open** has been adopted as the key word for expanding the potential of ITS: open **platforms** for basic concerns, and open **connectivity**, **opportunities** and **collaboration** for the three new domains.



# **Congress Topics**

## ■ 1. Safety and traffic management

Every country is seriously concerned about traffic congestion and casualties, since they have great impact on the economy and energy resources. New innovative technologies along with law enforcement initiatives can achieve safer and smoother traffic. Various technical approaches and enforcements will be discussed.

## ■ 2. Next generation mobility and sustainability

Regardless of mode of transport, society requires lower-emission mobility. More electrified vehicles including EV, HEV, pHEV and FCV are being launched, requiring closer information exchange between vehicles and infrastructure. Efficient energy management systems ranging from the home to community level will be discussed in relation to electrified vehicles as one component of such systems. New innovative personalized vehicles, including mobility for aging societies, will also be discussed as next-generation solutions.

## 3. Efficient transport systems in mega cities/regions

Many mega cities/regions are suffering from substantial transport stresses, many of which are caused by lack of transport capacity due to rapid urbanization and motorization. Possible measures to ease such strains will be discussed based on past experiences and best practices in various cities/regions.

## 4. Intermodal and multimodal systems for people and goods

Optimal mode combination is the key to transporting people and goods. Public transport combined with various personal modes of transport will be discussed in the context of human mobility. Another solution is harmonization of bus rapid transit (BRT) and light rail transit (LRT) with private vehicles, including safety issues. Discussion of goods distribution will focus on efficient and secure handling of goods and cutting-edge EDI technologies.

## ■ 5. Personalized mobility services

ICT brings various new services/businesses into reality by deploying big data via information networks. Information is collected from and delivered to mobile devices. Some services are already in the market and this is an area with high potential for entry by business newcomers. Various possibilities and examples will be discussed.

## ■ 6. Resilient transport systems for emergency situations

Transport systems must be robust enough to support daily life in disasters such as hurricanes, tsunamis and earthquakes, including preventive approaches. Readiness training involving the general public and collaboration between relevant agencies is also important. Information on experiences and lessons learned will be shared to discuss various resilient transport systems in terms of concept, design, structure and evaluation.

## 7. Institutional issues and international harmonization

Various institutional approaches and cross-organizational cooperation will be necessary to ensure a livable society with enhanced mobility on a global scale in the future. This topic will cover a wide range of issues including regulation and enforcement, funding and costs/benefits, security and privacy, standardization and architecture as well as professional education and training.

# **Congress Format**

# 1. Opening and Closing Ceremonies

The Opening Ceremony, to be held at Tokyo International Forum, will be attended by business leaders and high level government officials from around the globe, and will take an in-depth look into the future. It will also feature special entertainment in the form of Japanese cultural performances.

The Closing Ceremony, to be held at Tokyo Big Sight, will provide a summary of the congress and future perspectives. There will be several awards, and the "Passing the Globe" ceremony.

## 2. Sessions

The following sessions are to be held at Tokyo Big Sight:

## **Plenary Sessions**

Top level transport officials and leading industry representatives from many countries will present insightful speeches on ITS policies, initiatives and international development trends.

### **Executive Sessions**

High-level industry executives, public officials and academics from around the world will share their expert global and strategic views on ITS achievements, issues and challenges.

## **Special Interest Sessions**

Organized at the request of organizations or individuals involved in developing and deploying ITS, these sessions are designed as open for a and workshop for experts from government, industry and academia to hold discussions and debates on specific topics.

## **Host Selected Sessions**

Through the same process as the Special Interest Sessions, these sessions are especially designed as open for for the experts to cast a spotlight on the important ITS projects and activities happening mainly in the Asia Pacific region.

## **Technical / Scientific Sessions**

These sessions will be composed of presentations by international experts on various ITS-related topics encompassing all technical, economic, organizational and societal aspects of ITS.

## **Interactive Sessions**

These sessions will provide a space for interactive discussion via two-stage presentations including short oral presentations followed by poster presentations.

## 3. Exhibition

The Exhibition, to be held at Tokyo Big Sight, will create an international meeting point for industries and agencies involved in ITS. This will be a wonderful opportunity to promote your organization's technologies to the world.

## 4. Showcase Demonstrations

Showcase Demonstrations will take place in the outdoor exhibition areas of Tokyo Big Sight and on public roads. Participants will experience firsthand cutting-edge ITS technologies and solutions.

# 5. Technical Visits / Post Congress Tours

Various field trips and tours will be conducted to get a closer look at the deployment of the latest ITS technologies.

## 6. Guest Tours

Attractive guest tours in and around Tokyo are planned specifically for delegates and accompanying persons.

## 7. Social Events

Delegates can experience the Japanese cultural atmosphere at the Welcome Reception and the Gala Dinner, which will be unforgettable networking opportunities.

# 8. Host Organized Atrium Events

ITS America, ERTICO and ITS Asia-Pacific jointly organize the brand new events in Exhibition Hall Atrium.

# **Special Features**

# Host Organized Events: ITS America, ERTICO and ITS Asia Pacific

## 20th Anniversary Exhibition

- · ITS World Congresses
- Upon entering the exhibition hall, visitors will see the history of 20 ITS World Congresses prepared by the host organizations. A series of large banners and panels showing salient points of the World Congresses will be set up in the exhibition hall.
- · Explanatory Exhibition on the Progress of ITS Development and Deployment
- Visitors will be given an overview of ITS development in the past, present and future, prepared by the three regional organizations under common topics to be identified soon. A large panel showing a chronological table will be set up in the exhibition hall.

## **Public Sessions by High Profile Leaders**

Key issues of future ITS applications will be discussed in these sessions, which are open to the general public and media to promote awareness and acceptance of new technologies and implementation frameworks.

- · Topic 1: Automated and connected vehicle technologies
- Speakers: Research and development leaders of auto manufacturers in Europe, the USA and Japan
- $\boldsymbol{\cdot}$  Topic 2: ITS big data, business opportunities and public services
- Speakers: ICT industry and public sector leaders

## **Demonstrations Associated with Topic 1 of Public sessions**

Automated driving and advanced driving assistance systems

Auto manufacturers from Europe, the USA and Japan will participate with actual vehicles. Test rides for visitors will be organized.

## Panel Discussions Organized by Tokyo Metropolitan Government

• On the public days, on-stage events will be held to provide citizens with chances to learn about the roles and possibilities of ITS. In these events, ITS professionals, government officials and an entertainer representing citizens will discuss visions for future ITS and transportation.

## **Other Events**

- $\cdot$  Symposium in collaboration with CEATEC JAPAN 2013\*1 and the 43rd Tokyo Motor Show 2013\*2
- · Live broadcast of Showcase Demonstrations in remote locations
- 1) CEATEC JAPAN 2013: Combined Exhibition of Advanced Technologies, www.ceatec.com/en/
- 2) The 43rd Tokyo Motor Show 2013: www.tokyo-motorshow.com/en/

# **Public Days**

## Thursday, October 17 and Friday, October 18

The exhibition, atrium events and Showcase Demonstrations will open to the public on Thursday, October 17 and Friday, October 18. This will be an opportunity for many people to experience at first hand cutting-edge ITS technologies displayed from around the world.

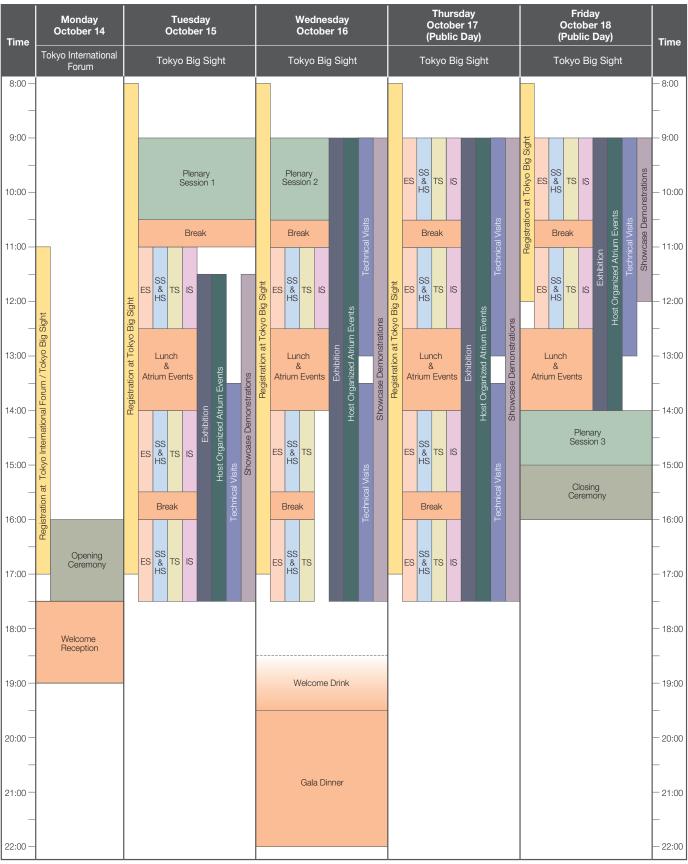
Detailed information will be posted on the official website: http://www.itsworldcongress.jp/



ITS will open up a whole new future

# **Congress Schedule at a Glance**

(As of July 2013. Subject to change)



ES: Executive Session SS: Special Interest Session HS: Host Selected Session TS: Technical/Scientific Session IS: Interactive Session

# **Congress Session at a Glance**

	Int'l Conference Room	C605	C606	C607	C608	C609	C610	C701/702	C703	W400
	ay, October 15, 2013 PL01									
00- 30	Open ITS to the Next : Aims and Issues in Moving Towards the Next Stage									
30- 00	Break			I—			_			
00- 30	ES01 Autonomous Vehicles The Path to Implementation	SIS01 Efficient and Effective Winter Road Management by using ITS	The Combined Charging System - an Innovative Charging System for Electric Vehicles	SIS03 Using Big Data to Go from Me to We	SIS04  Analysing the Outcomes of Field Operational Tests		SIS05  Next Step of Electronic Toll Collection System	HS01 Education for Next Generation ITS in Asia	SIS06 Spatio-Temporal Databases for Next- Generation ITS Applications	IS01 Green ITS and Sustainability
30- 30	Lunch				I					
00- 30	ES02 Connected Vehicles - Preparing for Deployment	HS02 Pedestrian Detection in Various Manners(III)	HS03 For the Practical Use of Fully Automated Platoon System (on Energy ITS Project)	SIS07 Wireless Recharging for Electric Vehicles	SIS08 Tomorrow's Traffic Management - the Services Required and the Tools Needed		HS04  New Services Enabled by Distributing the Road Related Information	SIS09 ITS and Ensuring Everyday Mobility in Extreme Weather	SIS10 ITS Information for Transportation Support by Opening Public and Private	IS02 Driving Safety
30-	Break		Znorgy mo mojecty		and the redictions	1	Tiolatoa illiomation		Data	
00- 30	ES03  Deployment of Cooperative Safety and Energy Efficient Services	SIS11 Driven by Cities: Cooperative Mobility Services in Urban Environments	SIS12 Goverance and ITS Optimal Decision Making	SIS13 Freight Goods Movement – As Critical as People!	SIS14 Towards Collaborative Mobility: a Joint Stakeholder Approach	,	HS05  Next ITS for Sustainable Communities in Rural Cities	SIS15 Standardization of Connected Vehicles	HS06 Electric Mobility and Smart Society	IS03 Traffic Modeling a Disaster
dn	esday, October 16, 2013	3								
00- 30	Improving Quality of Mobility in Mega-Cities/ Regions									
30- 00	Break	SIS16	SIS17					HS08		
00- 30	ES04 International Cooperation - Acceleration for ITS Development and Deployment	Automotive Radar on the Move - Towards International Frequency Harmonisation	ITS Innovations in the Licensing	HS07 Realization and Expectations of Next Generation VICS	SIS18 Global Perspectives: Cooperative Energy Efficient Applications	SIS19 Advancing eCall to Deployment - Global Perspectives	SIS20 Updates of Connected Vehicle in China	Toward Practical Implementation of Vehicle-Infrastructure Cooperation Systems for Safety		IS04 Advanced and Autonomous Vehi
30- 30	Lunch	I —	-		_	_	_			
00- 30	ES05 Cooperative Strategies for Urban Traffic Management	SIS22 Cooperative Mobility	HS09 Future Mobilities beyond 202X	SIS23 Radiocommunication Technologies for Advanced ITS	SIS24 TPEG Services on a Global Scale	HS10 Automated Driving - Next Generation Vehicle-Highway System	HS11 Intelligent Guidance for Congestion Mitigation	VMT Pricing - Looking Beyond Fuel Taxes to Solve the Transportation Funding Crisis	SIS26 Can ITS Save the People from Huge Disaster?	
30-	Break	Workshop SS1								
00- 30	ES06 ITS Policy and Vision	SS2 SS3	SIS27 The Need for V2V Market Penetration Numbers	SIS28 Emergency Medical Supporting System with the Use of eCall	SIS29 Sustainable Intelligent Freight Transport Systems	HS12 Precise Positioning for ITS Application Using Multi-GNSS	HS13 New ITS R&D Framework Programs in Korea	SIS30 The Internet Paradigm and ITS	HS14 Toward Dependable ITS in an Enormous Disaster	
urs	day, October 17, 2013			and AACN	,,,,,					
:00- :30	ES07 Emerging Business Opportunies for GNSS Technology	SIS31 Satellite Based Applications for Land Transport and Sustainable Mobility	SIS32 Innovative Fleet Management in Commercial Vehicles	HS15 Driving Behavior of Elderly Drivers and Their Safety Countermeasures (Part 2)	SIS33 Creation of the Next-generation Car Society by Data Centric ITS		SIS34 IBEC - Comparing ITS Evaluation Methodologies Internationally: Challenges and Common Denominators	SIS35 Accelerating Service Deployment - a Strategic View from the Traffic and Transport Industry	SIS36 Autonomous Vehicles - Technical Challenges	IS05 Sensing and Dat
30- 00	Break						Denominators	,		
							Denominators	,		
	ES08 Progressing Safety for All Users through ITS	SIS37 Roadmap to Automation	SIS38 Connected Mobility - Achievements, Ambitions and the Actions Needed to Accelerate Deployment	SIS39 Parking Management Policies and Technologies	SIS40 Clouds, Crowds and Traffic: the Internet of the Automobile		SIS41 IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and the Traveller Case	SIS42 Harmonization for Open ITS Communications Standards	SIS43 Lessons Learned During Natural Disasters: Using and Protecting Public Transport ITS	IS06 Next Generatio Mobility
30- 30	Progressing Safety for All	Roadmap to	Connected Mobility - Achievements, Ambitions and the Actions Needed	Parking Management Policies and	Clouds, Crowds and Traffic: the Internet of		SIS41 IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and	SIS42 Harmonization for Open ITS Communications	Lessons Learned During Natural Disasters: Using and Protecting Public	Next Generatio
80- 80- 90-	Progressing Safety for All Users through ITS	Roadmap to	Connected Mobility - Achievements, Ambitions and the Actions Needed to Accelerate	Parking Management Policies and	Clouds, Crowds and Traffic: the Internet of	HS17 Grass-roots ITS Promoted through Public, Private and Academia Patrochin	SIS41 IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and	SIS42 Harmonization for Open ITS Communications Standards  SIS48 Certification – Benefits of Common Guidelines for International	Lessons Learned During Natural Disasters: Using and Protecting Public Transport ITS	Next Generatic Mobility  IS07 Advanced Traff
30-	Progressing Safety for All Users through ITS  Lunch  ES09 International Spectrum	Roadmap to Automation  HS16  Deliverables from ITS Asia-Pacific	Connected Mobility - Achievements, Ambitions and the Actions Needed to Accelerate Deployment  SIS44 ITS for Global Mega	Parking Management Policies and Technologies  SIS45  Sustainable Urban Mobility Solution to Address Challenges	Clouds, Crowds and Traffic: the Internet of the Automobile  SIS46  Revisioning Taxis: Modular Urban	Grass-roots ITS Promoted through Public, Private	SIS41 IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and the Traveller Case  SIS47 IBEC - Evaluation of Cooperative and	SIS42 Harmonization for Open ITS Communications Standards  SIS48 Certification – Benefits of Common Guidelines for	Lessons Learned During Natural Disasters: Using and Protecting Public Transport ITS  SIS49 Resillent ITS to Support Emergencies	Next Generatio Mobility
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30- 30- 30- 30- 30- 30-	Progressing Safety for All Users through ITS  Lunch  ES09 International Spectrum Allocation Policies  Break  ES10 ITS Enabling Next	HS16 Deliverables from ITS Asia-Pacific Collaboration  HS18 Cooperative ITS for Now and the Next	Connected Mobility - Achievements, Ambitions and the Actions Needed to Accelerate Deployment  SIS44 ITS for Global Mega Events  SUCCESSFUI Integrated Transport Management in	Parking Management Policies and Technologies  SIS45 Sustainable Urban Mobility Solution to Address Challenges in Mega Cities  SIS51 E-ticketing for Public	Clouds, Crowds and Traffic: the Internet of the Automobile  SIS46 Revisioning Taxis: Modular Urban Transit Systems  SIS52 EU-Japan-US Trilateral Cooperation for Future R&D of for Future R&D of for Future R&D of the State of th	Grass-roots ITS Promoted through Public, Private and Academia	SIS41 IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and the Traveller Case  SIS47 IBEC - Evaluation of Cooperative and Automated Driving  SIS53 IBEC - Why (not)	SIS42 Harmonization for Open ITS Communications Standards  SIS48 Certification – Benefits of Common Guidelines for International Harmonization  HS19 Data Integration Issues and Standardization - Creating Connected	Lessons Learned During Natural Disasters: Using and Protecting Public Transport ITS  SIS49 Resilient ITS to Support Emergencies and Major Events  SIS54 Predictive Map- based Applications Reaching Market and	IS07 Advanced Traff Management  IS08 Institutional Issu and Informatio
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# **Opening and Closing Ceremonies**

# **Opening Ceremony**

## Monday, October 14, 2013, 16:00-17:30

Tokyo International Forum, Hall A

In the well-established tradition of the ITS World Congresses, this year's event will bring all the delegates together at the Tokyo International Forum to celebrate the opening of the Congress with many prominent figures from all over the world.

In addition to the exciting moments of the cultural experiences, the highlight includes the "Hall of Fame" and two other awards newly implemented from this congress.

After the Opening Ceremony, the participants are escorted to the welcome reception for networking and catching up the friendship.

## **Invited Speakers:**

Dr. Hiroyuki Watanabe, Chairman, Japan Organizing Committee, Japan

Representative from the Government of Japan, Japan

Representative from Tokyo Metropolitan Government, Japan

Mr. Hajime Amano, Secretary General, ITS Asia Pacific/ITS Japan, Japan

Mr. David St. Amant, President & Chief Operating Officer, Econolite Group Inc. / Board Chair, ITS America, USA

Dr. Hermann Meyer, CEO, ERTICO - ITS Europe

# **Closing Ceremony**

## Friday, October 18, 2013, 15:00-16:00

International Conference Room

The Closing Ceremony will attract attendees by taking a look back over the unforgettable 5 days, focusing the most important events and congratulating the winners of Best Papers Awards, and looking on the future World Congresses events with "Passing the Globe" ceremony.

Summary of ITS World Congress Tokyo 2013

Highlights Video

Paper Awards

Future ITS World Congress Presentations (Detroit / Bordeaux / Melbourne)

Passing the Globe Ceremony



# **Plenary Sessions**

# Plenary Session 1: Open ITS to the Next: Aims and Issues in Moving Towards the Next Stage

Tuesday, October 15, 2013, 9:00-10:30

International Conference Room

Open ITS to the Next is the theme for the 2013 congress, encapsulating the aim of making mobility and society better than ever in many ways. With new technology, ITS can expand into new domains to realize better mobility. The concept of expansion is symbolized by the folded paper (Origami) shown in the illustration, with three wings expanding from a base called "platforms". Political leaders and policymakers from the Asia-Pacific region, the Americas, and Europe will outline their visions from their own perspectives on these four aspects and cover not only safety and traffic management but also improving the total quality of mobility.

## **Speakers**

Mr. Malcolm Dougherty, Director, California Department of Transportation, USA Dr. Matthias Ruete, Director General, DG MOVE, European Commission Speaker from Japan Speaker from Asia-Pacific

# Plenary Session 2: Improving Quality of Mobility in Mega-Cities/Regions

Wednesday, October 16, 2013, 9:00-10:30

International Conference Room

Cities and regions where population is high and business is active tend to have common issues. Capacity for mobility in such cities and regions is almost saturated in terms of both space and time. Therefore, collecting mobility information and managing it to maintain efficient transport systems becomes the key. Efficient mobility should be provided not only from the perspective of transport facilities but also that of smart communities, including energy management. Furthermore, the concept of resilience should be incorporated into the system to mitigate damage from disasters. City authorities and related organizations will share their concerns and measurement experiences, and discuss these to identify clues for solutions.

## **Speakers**

Mr. Xiaojing Wang, Chief Engineer, Research Institute of Highway, Ministry of Transport/Director, China National ITS, China Mr. Suat Hayri Aka, Deputy Under-Secretary, Ministry of Transport, Maritime Affairs and Communications, Turkey Speaker from Tokyo Metropolitan Government, Japan Speaker from USA

# Plenary Session 3: Beyond ITS: from Conventional Approaches to Four Aspects of "Open"

Friday, October 18, 2013, 14:00-15:00

International Conference Room

Transport problems cannot be solved solely by transport facilities. They may require different technologies from different industries. Since society can collect various data through sensors embedded anywhere, optimal decisions for mobility can be made through integration of information, energy, and money by securing personal information. Navigating and analyzing data has the potential to add value and unimagined benefits. Moreover, evolution of device technology can lead to full realization of new services and applications. In this concluding session of the congress, speakers will forecast or envision the next stage of mobility and society from their perspectives.

## **Speakers**

Prof. Masao Sakauchi, Vice Chairman, ITS Japan, Japan

Dr. Peter Sweatman, Director, University of Michigan Transportation Research Institute (UMTRI), USA

Mr. Bruno Simon, Senior Director, Europe, the Middle-East, Africa and Russia & Asia-Pacific Traffic, Nokia, Germany

# **Executive Sessions**

# **ES01 - Autonomous Vehicles - the Path to Implementation**

Tuesday, October 15, 2013, 11:00-12:30

International Conference Room

Research into Advanced Vehicle Control and Safety Systems has built the foundation for automating some or all of the driving tasks. Convergence of sensor-based autonomy and connected vehicle technologies will enhance both of the systems and adoption. This session will address the architectures and deployment strategies for autonomous vehicles and the key opportunities associated with deployment. Environmental impact and the legal framework will also be addressed. It will also examine possible deployment paths including new business models, productivity improvements and new models for vehicle ownership.

### Moderator

Mr. Gerald Conover, Managing Director, PRC Associates, USA

## **Speakers**

Mr. Keiji Aoki, Research Director, ITS Center, Japan Automobile Research Institute (JARI), Japan

Mr. Ron Medford, Director, Safety for Self-driving Cars, Google, USA

Mr. Christoph Hagedorn, President & CEO, Continental Japan, Japan

Dr. Fawzi Nashashibi, Head of IMARA Team, INRIA, France

# **ES02 - Connected Vehicles - Preparing for Deployment**

Tuesday, October 15, 2013, 14:00-15:30

International Conference Room

Connected and Cooperative Vehicle Programs are moving quickly toward implementation. Private firms are readying hardware and V2V systems while infrastructure operators are working to define opportunities for field infrastructure. One key element is how to help public-sector decision makers understand the benefits of infrastructure investments. This session will bring together leaders from around the world to discuss their plans for and impediments to implementation of cooperative systems and services.

## Moderator

Mr. Ananth Prasad, Secretary, Florida Department of Transportation, USA

## **Speakers**

Mr. Yong-wook Lee, Director, Ministry of Land, Infrastructure and Transport (MOLIT), Korea

Dr. Josef Fiala, Managing Director, ASFINAG Service GmbH, Austria

Mr. Klaus Kompass, Vice-President, Vehicle Safety, BMW, Germany

Speaker from USA

# ES03 - Deployment of Cooperative Safety and Energy Efficient Services

## Tuesday, October 15, 2013, 16:00-17:30

International Conference Room

Linking vehicles and infrastructure is expected to bring significant safety improvements particularly through avoiding accidents at intersections, rear-end collisions, and accidents caused by adverse weather as well as significant energy savings. In Japan a cooperative ITS system is already in use, while the US and Europe are running extensive field tests. Connectivity will open new markets for the automotive industry and bring to drivers and other road users new digital age smart mobility services. This Session will review the needs of the global marketplace, the extensive collaboration taking place between these regions, the automotive industry and standardisation organisations.

### Moderator

Mr. Patrick Oliva, Corporate Vice-President, Prospective and Sustainable Development, Michelin, France

## **Speakers**

Speaker from Toyota Motor Corporation, Japan

Mr. James Sayer, Research Scientist, University of Michigan Transportation Research Institute (UMTRI), USA

Mr. Jean-Philippe Mechin, Project Manager at Satellite and Telecommunication Application Task Force, Ministry of Ecology, Sustainable Development and Energy, CETE SO Bordeaux, France

Mr. Marcus Burke, Manager Policy, National Transport Commission, Australia

# ES04 - International Cooperation - Acceleration for ITS Development and Deployment

## Wednesday, October 16, 2013, 11:00-12:30

International Conference Room

Various ITS cooperative systems, V2V and V2I have been developed and deployed in the world to achieve safety, mobility and sustainability. EU, US and AP have been promoting the collaboration for harmonisation of ITS cooperative systems. In this session, current status and achievement of this international cooperation will be introduced, and actions needed to accelerate further development and deployment worldwide will be discussed.

## Moderator

Prof. Hironao Kawashima, Emeritus Professor, Keio University, Japan

## **Speakers**

Mr. Yasuhiro Okumura, Director, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

Mr. Ken Leonard, Director, ITS Joint Program Office, RITA, USDOT, USA

Mr. Juhani Jääskeläinen, Adviser for ICT for Transport & Energy, DG CONNECT, European Commission

Mr. Dick Schnacke, Vice President, TransCore, USA

# **ES05 - Cooperative Strategies for Urban Traffic Management**

## Wednesday, October 16, 2013, 14:00-15:30

International Conference Room

The world-wide spread of the Information Society has brought higher data volumes per person, more mobile devices and users, expanding public and private IT networks and growing demands for personalised services. This has had a direct impact on traffic management in urban areas and the information services supporting mobility of persons and goods. Mobile persons expect complete and correct pre-trip information on traffic updated en route with the consequences of personal travel choices.

This session will address the necessity for cooperation between political leaders and the transport industry to achieve smarter traffic management and thus more optimised usage of infrastructure for the benefits of all users.

### **Moderator**

Prof. Takashi Oguchi, Professor, The University of Tokyo, Japan

## **Speakers**

Mr. Morio Fukuda, Director for ITS, National Police Agency, Japan

Mr. Abbas Mohaddes, President and CEO, Iteris, Inc., USA

Mr. Pekka Sauri, Deputy Mayor for Public Works and Environmental Affairs, City of Helsinki, Finland

Mr. Lars Reger, Vice-President Strategy, New Business Development, R&D, BU Automotive, NXP Semiconductors, Germany

## **ES06 - ITS Policy and Vision**

## Wednesday, October 16, 2013, 16:00-17:30

International Conference Room

Deploying ITS relies on clear identification of the transport-related policy goals to be supported which in many cases requires sustained political commitment. This is particularly evident with "smart city" concepts where bringing together e.g. energy and transport is especially complex and brings new challenges - for example increased deployment of electric vehicles requires government, researchers and industry to work together on the fusion of energy management and transport systems. Similarly applications of big and open data raise sensitive issues in terms of security, privacy, and data ownership.

In this Session, leading experts review the policy issues and visions to promote ITS deployment for a sustainably mobile society.

## Moderator

Dr. Hermann Meyer, CEO, ERTICO-ITS Europe

## **Speakers**

Mr. Daisuke Kitabayashi, Counsellor of Information Technology Policy Office, Cabinet Secretariat, Japan

Mr. Kirk Steudle, Director, Michigan Department of Transportation, USA

Mr. Olivier Onidi, Director, DG MOVE, European Commission

Dr. Elly Sinaga, Secretary of R&D, Ministry of Transport, Indonesia

# **ES07 - Emerging Business Opportunities for GNSS Technology**

## Thursday, October 17, 2013, 09:00-10:30

International Conference Room

This topic explores emerging business opportunities for GNSS technology and in particular its role in implementing road user charging. Funding for transport infrastructure is an issue facing societies around the globe. Opportunities such as vehicle tonne mileage and other business models need to be considered to ensure the quality of our transport assets going forward. This session will present emerging trends around the world and discuss implications for ITS. Industry leaders will share their vision for the future, present innovative business models and outline new opportunities.

### Moderator

Mr. Satoshi Kogure, Associate Senior Engineer, Japan Aerospace Exploration Agency (JAXA), Japan

## **Speakers**

Mr. Chris Koniditsiotis, CEO, Transport Certification Australia, Australia

Mr. T. Russell Shields, Chairman, Ygomi LLC, USA

Mr. Carlo Des Dorides, Executive Director, GSA

Mr. Bruno Corthier, Head of the Telematic Department, Sanef, France

# **ES08 - Progressing Safety for All Users through ITS**

## Thursday, October 17, 2013, 11:00-12:30

International Conference Room

The challenge of improving road safety is as important now as it was when the UN launched its 2011 Decade of Action for Road Safety. In the past major benefits have flowed from active and passive vehicle safety and developments in road design; deployment of connected and automated vehicles will continue this trend. However casualties have fallen considerably for vehicle occupants, but reduction has been smaller for pedestrians, cyclists, and other vulnerable road users despite the potential of ITS to give unprecedented safety. We must be smarter about how we improve safety.

This Session will focus on the safety contribution of ITS for all users and discuss how to ensure that road safety is a primary objective of utilising new transport technology.

## Moderator

Moderator from Europe

## **Speakers**

Mr. Hidenobu Kubota, Director, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

Mr. Jon Morrison, President and General Manager, Meritor WABCO, USA

Mr. Jan Hellaker, Vice President Transport Solutions & Services, Volvo Group Trucks Technology, Sweden

Mr. Tom Dingus, Director, Virginia Tech Transportation Institute, USA

# **ES09 - International Spectrum Allocation Policies**

Thursday, October 17, 2013, 14:00-15:30

International Conference Room

All regions of the world have been carefully protecting and allocating spectrum as needs arise given the proliferation of devices requiring it. In addition, it is widely agreed that harmonized ITS standards and spectrum use would very much help the deployment of cooperative systems and services. The dilemma facing policy-makers is how to reach a balance between market interests and public safety. This Executive Session will bring together leading experts from the policy side to discuss accomplishments and best practices in spectrum allocation and harmonization.

### Moderator

Mr. Greg Winfree, Deputy Administrator, Research and Innovative Technology Administration (RITA), USDOT, USA

## **Speakers**

Mr. Tomoyuki Tanuma, Director, Ministry of Internal Affairs and Communications, Japan

Mr. Robert Kelly, Partner, Squire Sanders, USA

Mr. Xaiojing Wang, Chief Engineer, Research Institute of Highway, Ministry of Transport/Director, China National ITS, China Speaker from Europe

# **ES10 - ITS Enabling Next Generation Mobility**

Thursday, October 17, 2013, 16:00-17:30

International Conference Room

The rapid emergence of new mobility demands demonstrates the scope for ITS as a key enabler of services such as demand-responsive public transport or vehicle sharing. By connecting users, vehicles, and infrastructure ITS helps to adapt vehicle characteristics to new mobility behaviours and to ensure better integration of a range of vehicles within an overall multimodal mobility solution. Transport's environmental challenges will be a key driver for this initiative as we strive for reduced pollution whilst increasing mobility.

This Session will address strategic collaborations for next generation vehicles, passenger and goods mobility and the developments and research likely to be required to achieve 2020 mobility goals.

## Moderator

Moderator from Europe

## **Speakers**

Prof. Takashi Oguchi, Professor, The University of Tokyo, Japan

Mr. Steve Heminger, Executive Director, Metropolitan Transportation Commission of the San Francisco Bay Area, USA Dr. Glenn Geers, Technology Director, Infrastructure Transport and Logistics (ITL), National ICT Australia (NICTA), Australia Speaker from Europe

# ES11 - The New Normal: the Integration of ITS with Other Technology Sectors

Friday, October 18, 2013, 09:00-10:30

International Conference Room

A host of ITS R&D projects have been undertaken in Europe, Japan and the Americas. Public outreach has been lacking, given the acceptance of new consumer electronics and automotive ITS systems by the general public. Transportation users rely on a variety of information from a variety of sources to plan trips and to travel safely, efficiently and effectively -- and they receive these ITS services via consumer electronics and automotive systems. Consumers understand the benefits of these systems and services, but don't identify them with ITS. This session will explore the value from making ITS a conscious part of consumer electronics and automotive telematics and infotainment, and how best to get that story across to consumers worldwide.

### Moderator

Mr. Gerry Mooney, General Manager of Global Smarter Cities, IBM, USA

## **Speakers**

Mr. Kenichiro Yoshida, Director, Ministry of Economy, Trade and Industries, Japan

Mr. Kevin Link, Verizon, USA

Dr. Johanna Tzanidaki, Director, The TomTom International Traffic Foundation

Speaker from Europe

# ES12 - Benefits and Returns on Investment for Real World ITS Applications

Friday, October 18, 2013, 11:00-12:30

International Conference Room

When developing an effective investment program for Intelligent Transport Systems, it is essential to have a clear understanding of the effects that can be expected in return. With the ability of today's ITS to provide a greatly expanded range and quality of online real-time travel information, are we now better placed to use this information to identify the best investment programs that will maximise our return on investment? This session will focus on understanding the manner in which this information can be used to define results based ITS investment programs, through assessment of the increased economic value and carrying capacity of existing networks and improving the value and quality of travel while reducing costs and environmental impacts.

## Moderator

Mr. John Y. J. Sun, President, ITS-Taiwan, Chinese Taipei

## **Speakers**

Mr. Bruce Johnson, General Manager, Ministry of Transport, New Zealand

Mr. Randy Iwasaki, Executive Director, Contra Costa Transportation Authority (CCTA), USA

Mr. Cees De Wijs, Group President, International Transportation and Government, Xerox Services, The Netherlands

Mr. Pete Hardigan, Director of Sustainability, Environment & Safety Engineering, Ford Asia Pacific, USA

# **Special Interest Sessions**

# SIS01 - Efficient and Effective Winter Road Management by using ITS

## Tuesday, October 15, 2013, 11:00-12:30

C605

This session will be held based upon the research cooperation between Sweden and Japan, which has been continuing since 1999. Both countries have cold and icy areas, therefore efficient and effective road management systems are required especially by using ITS technologies. The latest ITS technologies for winter road management systems in Sweden and Japan will be introduced. In addition, a guest speaker from Canada will contribute to the discussion about the usage of ITS technologies in that part of the world.

## **Organizers**

Jan Bergstrand, Head of Section, Swedish Transport Administration, Sweden Fumihiko Kanazawa, Head, ITS division, National Institute for Land and Infrastructure Management, MLIT, Japan

## **Moderator**

Bengt Hallström, Analyst, Swedish Transport Administration, Sweden

## **Speakers**

Tateki Ishida, Team Leader, Civil Engineering Research Institute for Cold Region, Japan Michihiro Takko, Head of Section, East Nippon Expressway Company Limited, Japan Liping Fu, Director of iTSS Lab, University of Waterloo, Canada Jan Ölander, Senior Advisor, Swedish Transport Administration, Sweden Dan Eriksson, Analyst Maintenance, Swedish Transport Administration, Sweden

# SIS02 - The Combined Charging System - an Innovative Charging System for Electric Vehicles

## Tuesday, October 15, 2013, 11:00-12:30

C606

The automotive manufacturers Audi, BMW, Daimler, Porsche and Volkswagen, together with Chrysler, Ford and General Motors have mainly driven the development of the Combined Charging System - an open, universal charging system for electric vehicles for global deployment. The Combined Charging System is a new, innovative system which integrates one-phase AC-charging, fast three-phase AC-charging, DC-charging at home and ultra-fast DC-charging at public stations into one vehicle inlet. The technology describes a single standard with identical electrical systems, charge controllers, packaging dimensions and safety mechanisms. The system maximizes the capability of integrating electric vehicles into future smart grids through common broadband communication methods. This will allow customers to charge at all existing charging stations regardless of the power source. This universal charging system enhances today's regional solutions towards one global integrated system and will thus accelerate the market introduction of electric vehicles. In summary, the Combined Charging System technology enables a common approach to charging Electric Vehicles globally.

## Organizer

Cornel Pampu, Head of Coordination Office Combined Charging Interface, Carmeq, Germany

## Moderator

Katharina Reinwage, Coordination Office Combined Charging Interface, Carmeq, Germany

## **Speakers**

Pete Hardigan, Director, Sustainability, Environment and Safety Engineering for Asia Pacific, Ford Motor Company, China George P. Hansen, Director, Communications, General Motors Japan, Japan

Toshiaki Hara, Manager, Electric & Electronics Development, VOLKSWAGEN Group Technical Representative Tokyo, Japan Patrick Freytag, Manager, Driver Assistance System, Alternative Driver Trains, Mercedes Benz Research & Development, Japan Marc Hofmann, Manager, Technology Office Japan, BMW Japan Corp., Japan

# SIS03 - Using Big Data to go from Me to We

## Tuesday, October 15, 2013, 11:00-12:30

C607

Data is increasingly affecting how we make transport decisions on a localized and individual basis. Data generated from real-time transit arrival information, peer-to-peer transport options and on-demand services is not only useful for observing how people behave, but also as a means for measuring the changes in behavior due to using specific mobility applications. Big Data has the potential to gain a deeper understanding of how people interact and make transport decisions within an urban environment. Transportation policy makers and providers can benefit from greater access to data to build personalized services, or evaluate the effectiveness of investments or behavior-oriented policies. This session will explore the potential of Big Data to affect policy in the transport industry.

## **Organizer**

Carol Schweiger, Vice President, TranSystems Corporation, USA

## Moderator

Charlie Catlett, Director, Urban Center for Computation and Data University of Chicago, USA

## **Speakers**

John Tolva, CTO, City of Chicago, USA Neal Lathia, Research Associate, Networks and Operating Systems Group, Cambridge University, United Kingdom Speaker from Asia-Pacific TBD

# SIS04 - Analysing the Outcomes of Field Operational Tests

## Tuesday, October 15, 2013, 11:00-12:30

C608

In Field Operational Tests (FOT) large sets of data are gathered on the interaction between drivers and ITS. These data need to be analysed to answer research questions and finally to determine the impact of large-scale implementation of ITS on areas such as safety, mobility, and environment. In the European support action FOT-Net, in interaction with international partners, recommendations on data and impact analysis are being formulated to support FOTs. We will transfer and discuss knowledge on methods and tools used to analyse FOT outcomes and to determine their impact, and the sharing and re-use of data resulting from FOTs.

## **Organizer & Moderator**

Yvonne Barnard, Project Manager, ERTICO - ITS Europe

## **Speakers**

Adrian Zlocki, Senior Manager, Driver Assistance, Forschungsgesellschaft Kraftfahrwesen GmbH, Germany Eline Jonkers, Research Scientist, Transport & Mobility, TNO, The Netherlands Helena Gellerman, Manager, FOT/NDS, SAFER Vehicle and Traffic Safety Competence Center, Sweden Dave Leblanc, Head, Engineering Systems Group, University of Michigan Transportation Research Institute, USA

# SIS05 - Next Step of Electronic Toll Collection System

## Tuesday, October 15, 2013, 11:00-12:30

C610

While US and Japan have built the network of electronic toll collection, EU and China are still on the way to establish the EETS and China's network of ETC. Japan's ITS Spot has shown his way of extending the ETC systems based on the DSRC technology to the traffic information services. How about the analysis of cost-benefit for the ITS Spot? What's the impact of LTE technology to the further development of the electronic toll collection systems? In this session, international experience related to ETC and its next step will be shared and discussed.

## Organizer

Weiyun Jiao, Department Manager, China National ITS Center, China

### Moderator

Xiaojing Wang, Director, China National ITS Center, China

## **Speakers**

Ken Philmus, Senior Vice President, Transportation and Local Government, Xerox, USA Xianghui Song, Chief Engineer, China National ITS Center, China Shoichi Suzuki, Senior Researcher, National Institute for Land and Infrastructure Management, MLIT, Japan

# SIS06 - Spatio-Temporal Databases for Next-Generation ITS Applications

## Tuesday, October 15, 2013, 11:00-12:30

C703

Along with evolution of ITS applications, high functionality of digital road map is supposed to require more accurate road features, more variety of road alignment parameters and more capability to manage spatio-temporal information such as dynamically moving objects, incidental affairs and also meteorological phenomena. Thus the importance of digital road map, as spatio-temporal geographic information, is more and more keenly recognized for advanced various ITS systems. This session covers state-of-the-art spatio-temporal databases used in the next-generation ITS applications. Additionally the direction of the role of spatio-temporal databases and the creation, penetration, and maintenance strategy for spatio-temporal databases will be discussed.

## **Organizer**

Akira Yaguchi, Executive Director, Japan Digital Road Map Association (DRM), Japan

## Moderator

Jun Shibata, Senior Researcher, Japan Digital Road Map Association (DRM), Japan

## **Speakers**

Speaker from ITS Policy and Program Office, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Speaker from L&C Location Content, Nokia

Speaker from ISO/TC204/WG18 Drafting Team, Europe

Speaker from UTMS Society of Japan, Japan

Speaker from Japan Digital Road Map Association (DRM), Japan

# SIS07 - Wireless Recharging for Electric Vehicles

## Tuesday, October 15, 2013, 14:00-15:30

C607

With worldwide focus on the environment and energy, technology is advancing rapidly to make vehicle electrification less expensive and more convenient. Wireless induction power transmission is one area that is demonstrating some of the greatest advances. Cities in Europe are seeking such solutions to eliminate unsightly overhead catenary systems for trams, college campuses are experimenting with electric buses using wireless induction at bus stops, and automakers are exploring ways to quickly and conveniently recharge personal vehicles using this technology. This session will explore the advances being made on dynamic and static wireless recharging systems, and how these systems might affect the market for electric and automated vehicles in the future.

## **Organizer**

Jim Barbaresso, Vice President - Intelligent Transportation Systems, HNTB, USA

## Moderator

TBD

## **Speaker**

Chris Borroni-Bird, Vice President, Strategic Development, Qualcomm, USA
David Schatz, Vice President of Sales & Business Development, WiTricity, USA
Judy Brunson, Head of Operations, Mercedes Benz Research & Development - Drive and Powertrain Division, USA
Roland Kibler, Chief Technologist, NextEnergy, USA

# SIS08 - Tomorrow's Traffic Management - the Services Required and the Tools Needed

## Tuesday, October 15, 2013, 14:00-15:30

C608

Integrating V2V and V2I into road transportation systems will dramatically increase the data volumes handled by traffic management centers. On the other hand the services to be delivered to vehicles have to be much more precise in content, time and point of destination and cannot be delivered individually. New processes – most of them highly automated – need to be devised and installed in centers to satisfy future information requests. This Session will look at the services required from future traffic management centers to deliver to vehicles, the processes and procedures for quality and accuracy, and the tools required to generate and distribute these services.

## **Organizer & Moderator**

Reinhard Pfliegl, CEO, A3PS, Austria

## **Speakers**

Ke Zhang, Vice Director, TOCC, Beijing Municipal Commission of Transport, China Hajime Sakakibara, Senior Assistant General Manager, Sumitomo Electric Industries., Ltd., Japan Bernd Datler, CEO, Asfinag Tolling System and Traffic Information Services, Austria

Matt Barth, UC Riverside, USA

Scott Sedlik, Vice President, Product, Planning & Marketing, INRIX, USA

Antoine de Kort, Strategic Adviser, Information Systems, Ministry of Infrastructure and the Environment, The Netherlands

# SIS09 - ITS and Ensuring Everyday Mobility in Extreme Weather

Tuesday, October 15, 2013, 14:00-15:30

C701/702

Increasingly frequent extreme weather as a result of climate change requires improved responses from road and other modes' management. This session covers the views of inter-governmental organizations, authorities and industry on sharing today's solutions and even more so those of the future. The focus is on winter weather, where ITS can contribute to pro-active maintenance tools, before and on-trip road user information, as well as optimized operations, in order to ensure everyday mobility. The session covers all aspects of ITS deployment in ensuring mobility in harsh winter conditions, such as strategic approaches, innovative ITS services and ITS-enabled maintenance.

## **Organizer & Moderator**

Pekka Leviäkangas, Research Professor, University of Oulu, Finland

## **Speakers**

Pirkko Saarikivi, Senior Advisor, Foreca Ltd., Finland
Paul Bridge, Roads & Rail Offering Manager, Vaisala Inc., USA
Yrjö Pilli-Sihvola, President, Standing International Road Weather Commission (SIRWEC), Finland
Naoto Takahashi, Deputy Team Leader, Civil Engineering Research Institute for Cold Region, Japan
Philippe Crist, Administrator, OECD/ITF, France

# SIS10 - ITS Information for Transportation Support by Opening Public and Private Data

Tuesday, October 15, 2013, 14:00-15:30

C703

We learned a lot from the Great East Japan Earthquake in 2011. For example, there is one fact that some system currently used every day operated effectively at the time of a disaster, while a system dedicated for disaster prevention did not function. Furthermore, we also learned the importance of appropriate information provided from public and private sectors in accordance with the time progress of disaster, purposes or objects. In order to realize these, construction of fundamental platform and structure of local government data are indispensable. And it is required to carry out cooperation with to build the local resident service in which each local government suited each area by becoming subjects, wide-range cooperation among local governments, the authority concerned, and public organization. In this session, we discuss about management, utilization including SNS, etc. at the time of disaster of each country, information dissemination subjects, etc.

## **Organizer**

Makoto Otsuki, Senior Vice President, ITS Japan, Japan

## **Moderator**

Haruo Hayashi, Professor, Disaster Prevention Research Institute, Kyoto University, Japan

## **Speakers**

Ryuzo Mizuta, Supervisor, Tokyo Metropolitan Government, Japan Manabu Sakamoto, Manager, Yamato Transport Co., Ltd, Japan Toshiaki Nakano, WG chief examiner, ITS Japan, Japan Passakon Prathombutr, Director, National Electronics and Computer Technology Center (NECTEC), Thailand Speaker from Japan Meteorological Agency, Japan

# SIS11 - Driven by Cities: Cooperative Mobility Services in Urban Environments

## Tuesday, October 15, 2013, 16:00-17:30

C605

This Session aims to demonstrate how the development of cooperative systems may have positive impacts on local mobility (in terms of safety, efficiency, environment). It will present real results from deployment initiatives (Compass4D, Safety Pilot, ITS Spot) and share positive practices among local stakeholders (Municipality authorities, Emergency services, fleet providers). The session will focus on concrete examples of cities aiming at stimulating a wide deployment of ITS solutions while ensuring interoperability and scalability of the services. Our goal is also to establish a base for future political discussions, decisions and worldwide cooperation for deployment of C-ITS with special focus on cities.

## **Organizer & Moderator**

Pierpaolo Tona, Project Manager, ERTICO-ITS Europe

## **Speakers**

Peter Sweatman, Director, University of Michigan Transportation Research Institute (UMTRI), USA

Koichi Sakai, Senior researcher, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Jean-Philippe Mechin, Project Manager at Satellite and Telecommunication Application Task Force, Ministry of Ecology, Sustainable Development and Energy, CETE SO Bordeaux, France

Siebe Turksma, Product Research Manager, Peek Traffic, The Netherlands

Hossein Zakizadeh, Director Connected Vehicle & Infrastructure, Volvo Group, Sweden

# SIS12 - Governance and ITS - Optimal Decision Making

## Tuesday, October 15, 2013, 16:00-17:30

C606

There are many players engaged in determining an ITS strategic direction. This session will examine how to best bring participants from the private sector, multiple jurisdictional entities, policy makers, system users, and others together in a collaborative way. An effective governance structure assures that sound recommendations can be made to policy makers, private sector investments can occur with reasonable certainty, and system users find common approaches within various jurisdictions.

## **Organizer & Moderator**

C. Douglass Couto, Consultant, USA

## **Speakers**

Kirk Steudle, Director, Michigan Department of Transportation, USA

Jonathon Bartsch, CEO/Principal, CDR Associates, USA

Takaaki Sugiura, Staff Researcher, Mitsubishi Research Institute, Inc., Japan

Sven Tofting, Head of the ITS North Sector, North Denmark Region, Denmark

Dean Herenda, Acting Director General, Infrastructure Directorate, Ministry of Infrastructure and Special Planning, Slovenia

# SIS13 - Freight Goods Movement - As Critical as People!

Tuesday, October 15, 2013, 16:00-17:30

C607

The effective, safe and efficient movement of goods is critical for our economies. Multi-modal interests – ports, airports, rail and asphalt – need to talk ITS, together.

Adaptive decision-making for all modes needs to enter the market firmly, and respecting other new technology developments. An example is the US DOT's proposed research to integrate existing data sources to support freight's unique operational characteristics, and integrate connected vehicle data. This can be applied globally to air, sea and other transport modes.

This session brings together global users and policy makers to exchange ideas and seek common ground in a sustainable manner by better integrating goods movement into regional and national ITS strategies.

## Organizer

Carl Kuhnke, Executive Director, ITS Canada, Canada

### Moderator

Susan Spencer, Director, Intelligent Transport Systems, Transport Canada, Canada

## **Speakers**

Philip Kilby, Specialist in Intelligent Fleet Logistics, National ICT Research Center, Australia
Richard Easley, CEO, E-Squared Engineering Inc, USA
Terry Bergan, CEO, IRD Inc, Canada
Suhono Harso Supangkat, Chairman, Institute for Innovation and Entrepreneurship Development, Bandung Institute of Technology,
Indonesia

# SIS14 - Towards Collaborative Mobility: a Joint Stakeholder Approach

Tuesday, October 15, 2013, 16:00-17:30

C608

Recently there has been much interest in cooperative driving technologies as a way to increase road safety and energy efficiency by providing travellers with sufficient information so that they can respond to dynamic traffic situations. The relevant stakeholders have high expectations from cooperative V2X systems. This Session aims to present an innovative approach towards the next generation of cooperative systems and investigate the creation of an integrated mobility system, where travellers, drivers, vehicles and the infrastructure construct a seamless and sustainable collaborative network. In the framework of this session the European IP TEAM approach to the above issues will be also presented.

## **Organizer & Moderator**

Angelos Amditis, Researcher Director, Institute of Communication and Computer Systems, Greece

## **Speakers**

Richard Harris, Solution Director, International Transportation and Government, Xerox Services, United Kingdom Ilja Radusch, Head of Department, Automotive Services and Communication Technologies, Fraunhofer FOKUS, Germany Angelos Amditis, Researcher Director, Institute of Communication and Computer Systems, Greece Francesco Alesiani, Senior Researcher, NEC Laboratories, Software & Services, Research Division, NEC Europe Ltd, United Kingdom Marco Annoni, ETSI TC, ITS vice-chairman and Innovation Area Manager "ITS & Logistics", Telecom Italia S.p.A., Italy Andreone Luisa, Project Manager, European Network, Centro Ricerche Fiat, Italy

## SIS15 - Standardization of Connected Vehicles

Tuesday, October 15, 2013, 16:00-17:30

C701/702

Standards are critical to the world-wide deployment of cooperative ITS; a standardized platform and message sets form the foundation for such applications as cooperative intersection collision avoidance, probe data management/collection, vehicle-to-vehicle safety applications, eco driving applications, and priority/preemption at signalized intersections. As the auto manufacturers, road operators, and governmental agencies develop and validate these applications through field operational tests and demonstration projects, it becomes important to pool the lessons learned to harmonize the vehicle to infrastructure and vehicle to vehicle communications standards to enable interoperability and future applications. This session will review the state of the ITS standards for this specific domain and the results of the US/EU/AP harmonization efforts including ISO, CEN, ETSI, SAE, IEEE, and more recently, the ITU.

## Organizer

Bob Rausch, Vice President, TransCore, USA

### Moderator

TBD

## **Speakers**

TBD

# SIS16 - Automotive Radar on the Move -Towards International Frequency Harmonisation

Wednesday, October 16, 2013, 11:00-12:30

C605

This session will review the current status of activities in the field of automotive radar systems focusing on aspects related to both technology roadmap (requirements for future automotive radar-based safety and comfort functions) and frequency regulation (focusing on the worldwide frequency allocation for vehicular radars above 76GHz), and analysing the pros and cons of the individual frequency ranges. A further update will be given on the activities of the recently founded International Automotive Radio Regulations Experts Group (IARREG) and its involvement in the acceleration of the 79 GHz rulemaking process in the key-countries of the world.

## **Organizer**

Davide Brizzolara, Project Support Manager, ERTICO-ITS Europe

## **Moderator**

Satoshi (Sam) Oyama, Senior Advisor, Association of Radio Industries and Businesses (ARIB), Japan

## **Speakers**

Frank Gruson, Manager, Radar System Architecture & Frequency Management, Continental Automotive Corporation, Germany Germaine Sylvain, Spectrum and Homologation Engineer, TRW, France

Christian Rousseau, Transport Policy Director, RENAULT SAS, France

Shingyoji Masahito, Chief Engineer, Honda Motor Co., Ltd., Japan

Hartmut Dunger, European (CEPT) coordinator for WRC15 Agenda Item 1.18, Robert Bosch GmbH, Germany

# SIS17 - ITS Innovations in the Licensing and Operational Management of Heavy Vehicle Fleets

Wednesday, October 16, 2013, 11:00-12:30

C606

Innovative ITS offers new opportunities and efficiencies for flexible on-line licensing and improved management of heavy vehicle movements on transport networks. Many of these innovations stem from improved vehicle-infrastructure communications and the ability to continuously monitor the operation and performance of individual heavy vehicles in terms of their location, route, interaction with other traffic, and loads imposed on pavements. This session examines the world wide progress made both in the licensing and real-time management of heavy vehicles, and in the greatly improved and efficient management of freight across national highway networks.

## **Organizer**

Deryk Whyte, Director, ITS New Zealand, New Zealand

### **Moderator**

TBD

## **Speakers**

Peter McCombs, Chairman, Traffic Design Group Ltd, New Zealand

TRE

TBD

TBD

# SIS18 - Global Perspectives: Cooperative Energy Efficient Applications

Wednesday, October 16, 2013, 11:00-12:30

C608

Around the globe many programs acknowledge the potential of cooperative technology to cut fuel consumption and emissions. This session offers an overview of current activities and recent results from the European Union, United States and Japan. Presentations will focus on recent lessons learned from pilots and validation, evaluation and application impact, as well as successful application design and deployment aspects. Regional programs have converged through collaboration efforts such as an International Joint Report on assessment methodology and a working group on sustainability applications as part of the EU-US ITS cooperation. This session aims to update the state of play and set the research agenda.

## **Organizer**

Jaap Vreeswijk, Senior Researcher, Imtech Traffic & Infra, The Netherlands

## Moderator

Martijn de Kievit, Business Developer, TNO, The Netherlands

## **Speakers**

Hesham Rakha, Professor of Civil and Environmental Engineering and Director, Center for Sustainable Mobility Virginia Tech, USA Takashi Oguchi, Professor, Institute of Industrial Science, The University of Tokyo, Japan

Jaap Vreeswijk, Senior Researcher, Imtech Traffic & Infra, The Netherlands

Luisa Andreone, Project Manager, Center Ricerche Fiat, Italy

Matthew Barth, Professor of Engineering, University of California - Riverside, USA

Speaker from Japan

# SIS19 - Advancing eCall to Deployment - Global Perspectives

## Wednesday, October 16, 2013, 11:00-12:30

C609

eCall deployments are poised to take effect across the Americas, Pacific Rim, Europe and Russia and have the potential to influence casualties. This session will discuss the deployment of eCall from the perspective of the four geographic areas.

What is different across the continents?

Will mandated deployment in Russia and Europe alter the view points from continents where eCall is deployed?

What can be learnt from each sector regarding

Policy and Strategy

Services and Functions

Governance

Cooperation and Organizational structure.

With understanding could a common approach to eCall benefit the wider society?

## **Organizer & Moderator**

Andy Rooke, Senior Project Manager, ERTICO-ITS Europe

## **Speakers**

Francois Fischer, Project Manager, ERTICO ITS - Europe

Catherine Bishop, Global Emergency Outreach Manager, General Motors America, USA

Minoru Nakamura, Director of Business and Engineering, Testbed Business Department, Yokosuka Research Park Inc., Japan

Peter Zhou, General Manager, AutoNavi, China

Marcel Visser, Global Vice President, Automotive, Gemalto, Germany

Yoshi Shiraishi, Executive Chief Engineer of Product Planning, Fujitsu Ten, Japan

Yaroslav Domaratsky, Project Director, GLONASS, Russia

# SIS20 - Updates of Connected Vehicle in China

## Wednesday, October 16, 2013, 11:00-12:30

C610

The deployment of the technology of connected vehicle is extending worldwide nowadays. This concept is also a popular topic both in the academics and the industries in China. In this session, China's experts both from the academics and the industries will share the updates of connected vehicle with the peers from other countries and try to find a reasonable way to accelerate the deployment of connected vehicle in China.

## Organizer

Weiyun Jiao, Department Manager, China National ITS Center, China

## Moderator

Jianqiang Wang, Assistant Professor, Tsinghua University, China

## **Speakers**

Daiya Yao, Professor, Department of Automation, Tsinghua University, China

Xiaobing Chen, Department Manager, King Long R&D, China

Yin Chen, Senior Engineer, Changan Auto Global R&D Center, China

# SIS21 - Can we Take Traveler Information to the Next Level to Improve Mobility?

Wednesday, October 16, 2013, 11:00-12:30

C703

Technology deployment has been critical in improving mobility from the view of state, regional and local transportation agencies, travelers and Federal governments. This session will explore answers to the following critical questions: (1) Do we know enough about customer values and quality requirements to develop high-value services that will result in an improvement in mobility? (2) How would network performance change if more private travelers made more economical trip choices? (3) What is the threshold level of inconvenience or cost that motivates travelers to change their travel patterns and modes? (4) What if network managers could predict the impact of real-time information on travelers' trip choices, and use that information to improve network conditions?

## **Organizer & Moderator**

Carol Schweiger, Vice President, TranSystems Corporation, USA

## **Speakers**

Martin Böhm, Head, Mobility Systems & ITS Deployment, AustriaTech GmbH, Austria

Jane Lappin, Program Manager and Social Scientist, Volpe National Transportation Systems Center, RITA, USDOT, USA

Chris Gibbard, Data & Knowledge Manager, Transport Direct Department for Transport, United Kingdom

Keiichiro Hayakawa, Senior Supervisor, Multimedia Development Division, Toyota Motor Engineering & Manufacturing (China) Co., Ltd.,

Beijing Branch, Japan



# SIS22 - Cooperative Mobility Workshop

## Wednesday, October 16, 2013, 14:00-17:30

C605

Cooperative-ITS in the field of road vehicle have been a subject for strategies, research and development since many years. Proposed applications have been listed as results of research project, from collaboration project and others studies. Demonstrations and field operational test have been performed to validate the technical functionality. Standardisation has been going on in different bodies. Some areas, countries and road authorities/operators have been more successful than others in implementing the infrastructure needed for short range communication. Among other road operators the questions remains around impact assessment and cost/benefit issues that is connected to the deployment of short range communication.

This workshop will focus the deployment process showing good examples from all regions from which we can learn and get inspiration.

## **Organizers**

Masao Fukushima, General Manager (ITS), Global Government Affairs Department - Environmental and Safety Technologies, Nissan Motor Co., Ltd., Japan

Bengt Hallström, Analyst and Senior Advisor, Swedish Transport Administration, Sweden

## Sub-Session 01: V2V/V2I F0Ts

## **Moderators**

Brian Cronin, Chief, U.S. Department of Transportation, USA Roger Pagny, Ministry of Transport, France

## **Speakers**

Pierpaolo Tona, ERTICO - ITS Europe

Tim Johnson, National Highway Traffic Safety Administration (NHTSA), USDOT, USA

Kenichi Kitahama, Project Manager, Toyota Motor Corporation, Japan

Hossein Zakiradeh, Volvo Group, Sweden

Hideaki Nanba, Project Director, Engineering R&D Center, DP-V2X Department, Denso Corporation, Japan

## **Sub-Session 02: New Mobility Trial**

## Moderator

Tsun-Chieh Chiang, Division Director, Industrial Technology Research Institute (ITRI), Chinese Taipei

## **Speakers**

Cheng-Foo Cheng, Senior General Manager, HAITEC, Chinese Taipei Michael Li, Deputy Division Director, Industrial Technology Research Institute (ITRI), Chinese Taipei B.D. (Bart) Netten, Senior Scientific Researcher, TNO, The Netherlands Young-Jun Moon, Director, The Korea Transport Institute (KOTI), Korea

## **Sub-Session 03: Traffic Management Using Cooperative ITS**

## Moderator

Bengt Hallström, Analyst and Senior Advisor, Swedish Transport Administration, Sweden

## **Speakers**

TBD

TBD

TBD

# SIS23 - Radiocommunication Technologies for Advanced ITS

## Wednesday, October 16, 2013, 14:00-15:30

C607

In this session, the speakers invited from Europe, the United States, Japan, and the automaker will report current status of their ITS radiocommunication policies, standards and technologies.

In Japan, 700 MHz band ITS will be in operation soon. In Europe and North America, 5.9 GHz WAVE standards are almost completed and several large scale FOTs have been conducted such as DriveC2X and Connected Vehicles Safety Pilot toward deployment.

We will figure out and dissect current issues regarding our international harmonization of ITS radiocommunication standards and related projects, and then discuss solutions to each.

## Organizer

Takahiro Ueno, Deputy Director, Ministry of Internal Affairs and Communications, Japan

### Moderator

Satoshi (Sam) Oyama, Senior Researcher, ITS Group, Association of Radio Industries and Businesses (ARIB), Japan

## **Speakers**

Sadayuki Tsugawa, Professor, Meijo University, Japan Takahiro Ueno, Deputy Director, Ministry of Internal Affairs and Communications, Japan Soeren Hess, Chairman, ETSI TC ITS, Denmark John Kenney, Senior Research Manager, Toyota Info Technology Center, USA

## SIS24 - TPEG Services on a Global Scale

## Wednesday, October 16, 2013, 14:00-15:30

C608

The Traveller Information Services Association (TISA) is concerned with the development and standardization of TPEG as a successor to RDS-TMC. TPEG is a versatile, content-rich protocol suite for the distribution of traffic and traveller information services. This special session will introduce TPEG services that are currently operated worldwide, as well as ongoing development work. For participants that consider the development or rollout of TPEG services, the session will provide an excellent overview of TPEG applications already standardized as well as detailed information of how to engage in work currently under development within TISA.

## **Organizer**

Stephanie Chaufton, TISA Coordinator, TISA

## Moderator

Matthias Unbehaun, Executive Director, TISA

## **Speakers**

Leila Lei, Project Director, AutoNavi Software Co., Ltd, China Jim O'Neill, CEO, North America, GEWI, USA Adam Game, CEO, Intelematics, Australia Saurav Bhattacharyya, CEO, Quantum Inventions, Singapore Joseph d'Angelo, Senior Vice-President, iBiquity, USA

# SIS25 - VMT Pricing - Looking Beyond Fuel Taxes to Solve the Transportation Funding Crisis

## Wednesday, October 16, 2013, 14:00-15:30

C701/702

It will take trillions of dollars over the next decade to manage our transportation infrastructure across the board – not only our roads, but also our ports, airports, rail and public transit systems. US highways alone require the nation spend nearly \$5 trillion to keep pace with preservation and congestion needs over the next decade. The problem is that the bulk of our revenue for transportation comes from state and federal fuel taxes. With increased gas prices, greater vehicle fuel economy and the push toward vehicle electrification, the fuel tax is quickly becoming obsolete as a viable funding mechanism for transportation. Reduced fuel tax receipts have pushed the Highway Trust Fund to the brink of bankruptcy. Does it make sense that increased transportation funding is dependent on using more oil? Other solutions, based on actual miles driven and more consistent with environmental and energy policies, are being tested and evaluated. This session describes these solutions along with the technical and policy barriers that stand in the way of implementation.

## **Organizer & Moderator**

Jim Barbaresso, Vice President - Intelligent Transportation Systems, HNTB, USA

## **Speakers**

Ray Starr, Assistant State Traffic Engineer, Minnesota Department of Transportation, USA Paul Hanley, Director of Transportation Policy, University of Iowa, USA Josef Czako, Senior Vice-President, International Business Development, Kapsch, Austria

# SIS26 - Can ITS Save the People from Huge Disaster?

## Wednesday, October 16, 2013, 14:00-15:30

C703

In March, 2011, the unprecedented earthquake attacked east Japan. Japan often suffers from natural disaster. Once major disaster occurs, we cannot count on conventional traffic information collection measures because of the destruction of sensors, telephones lines, local control centers, etc. In order to reduce the risk in large-scale disasters as well as frequent occurring ones which cause flooding on roads for example, we will discuss how traffic information should be collected and provided to people when it occurs and how the issues including both technical and non-technical e.g. institutional can be solved.

## **Organizer**

Kazumitsu Hayashi, Deputy General Manager, Vehicle Information and Communication System Center (VICS), Japan

## Moderator

Hitoshi leda, Professor, The University of Tokyo, Japan

## **Speakers**

Amirul Hossain, Head, Flood Forecasting and Warning Center, Bangladesh John Tipaldo, New York City Department of Transportation, USA Kiichiro Hatoyama, The University of Tokyo, Japan

Sorawit Narupiti, Chulalongkorn University, Thailand

Kazumitsu Hayashi, Deputy General Manager, Vehicle Information and Communication System Center (VICS), Japan Speaker from Asia

## SIS27 - The Need for V2V Market Penetration Numbers

## Wednesday, October 16, 2013, 16:00-17:30

C606

Once December 2013 arrives, a new set of numbers will be collected and distributed in the US. The set of numbers will represent how many new OEM Connected Vehicles are actually on the road, how many after-market V2V devices are installed, where these Connected Vehicles (CVs) are geographically located, what the concentration of CVs are, and how crash rates actually compare to previous trends. Insurance companies will undoubtedly expand their Usage Based Insurance offerings to include deeper discounts for CVs based on these numbers. This session explores two issues. 1) What other practical actions may be driven by these new numbers? For example, will some local communities decide they want the safety benefits of CVs enough to require subsidized after-market devices in all vehicles registered in their community? and 2) Who will be collecting and providing access to these new numbers?

## **Organizer & Moderator**

Robert Porter, Systems Support, Texas Department of Transportation, USA

## **Speakers**

Dominic Paulraj, COO and VP Engineering, Arada Systems, USA
Peter Lee, Director, Asia Pacific P&C Practice, Towers Watson, Singapore
Robin Goodyer, Director of Product Management, Sales & Marketing, ChromeData, USA
Robert Porter, Systems Support Specialist, ITS, Texas Department of Transportation, USA

# SIS28 - Emergency Medical Supporting System with the Use of eCall and AACN

## Wednesday, October 16, 2013, 16:00-17:30

C607

Private eCall or Automatic Collision Notification (ACN) services including Advanced ACN (AACN) are operational in some countries. The telemetry information sent from the vehicle in case of an accident through ACN systems will help decrease the time from collision to medical treatment and improve mortality and morbidity for the injured patient.

In this session, representatives from the automotive and medical authority domains in Asia, Europe and US will discuss on current and upcoming emergency medical supporting systems with the use of eCall and AACN.

## **Organizer & Moderator**

Hirotoshi Ishikawa, Director, Emergency Medical Network of Helicopter and Hospital, Japan

## **Speakers**

Kang Hyun Lee, Professor/Director, Emergency Center, Wonju College of Medicine, Yonsei University, Korea Pangma Atchariya, Professor/Director, Emergency Medical Institute of Thailand, Thailand Klaus Kompass, Vice President, Vehicle Safety, BMW Group, Germany Kunihiro Mashiko, Professor/Director, Emergency Medical Network of Helicopter and Hospital, Japan Yoshihiro Ida, Executive Managing Director, Japan Mayday Service Co., Ltd, Japan Speaker from USA

# SIS29 - Sustainable Intelligent Freight Transport Systems

### Wednesday, October 16, 2013, 16:00-17:30

C608

The session will address the vision of freight transport, and highlight the technological and organizational trends. E-freight, green corridors, ICT challenges, e-commerce and urban logistics will be intensively discussed. Furthermore, it will present standardized and paperless solutions and e-business models for an efficient green supply chain and seamless information system. In addition, the session will discuss how the EC intends to address intelligent freight transport in the EU Framework Program for Research and Innovation (Horizon2020).

#### **Organizer & Moderator**

Meng Lu, Program Manager International, Dutch Institute for Advanced Logistics, The Netherlands

#### **Speakers**

Naotaka Ishizawa, Manager/Co-chair, NYK Line/GS1 Group, Japan Mats Rosenquist, Manager Technology Strategy & Innovation, Asia, Volvo Group, Sweden Richard Easley, President, E-Squared Engineering, USA Wolfgang Höfs, Head of Sector "ICT for low carbon mobility", European Commission Eric Louette, ITS Officer, MEDDE/DoT, France

## SIS30 - The Internet Paradigm and ITS

## Wednesday, October 16, 2013, 16:00-17:30

C701/702

ITS is being transformed by the Internet Paradigm. To date, the transportation sector has largely employed a "federal systems" paradigm in which a system's devices and connections constitute a single technical ensemble, often operated by a single entity. In the Internet Paradigm, ubiquitous connectivity is provided by internet service providers, and devices can be provided by anyone. As any device in the world can connect to any other, radically new systems arise. Institutional boundaries soften as publicly-operated devices connect with privately-operated devices. This session will examine impacts and requirements of the Internet Paradigm including transit, traffic management, connected vehicles and standards.

#### **Organizer & Moderator**

Kari Watkins, Assistant Professor, Civil and Environmental Engineering, Georgia Institute of Technology, USA

#### **Speakers**

Hans Klein, Associate Professor, Georgia Institute of Technology, USA Speaker from Europe Speaker from Asia-Pacific Speaker from Americas

# SIS31 - Satellite Based Applications for Land Transport and Sustainable Mobility

### Thursday, October 17, 2013, 09:00-10:30

C605

This session presents the principal transport and sustainable mobility uses of satellites, which will be further highlighted during the 2015 Bordeaux World Congress which adopts the theme "More Space for greener mobility". It will illustrate applications in telecommunications: satellite communications for vehicle or infrastructure, and Smartphones, as well as the use of Earth Observation satellites for mapping networks and processing DME and DMT.

The European and French Satellite-based Applications Plan will also be presented: e call, eco-tax toll system using GNSS, real-time information to encourage users to choose greener mobility, automatic driving assistance, traffic information and management, and the tracking & tracing of hazardous goods.

We will also bring out the links in this field with, and between, the World Congresses of Tokyo and Detroit, and the European Congresses of Dublin and Helsinki.

#### **Organizer & Moderator**

André Reix, General Secretary, TOPOS AQUITAINE, France

#### Speakers

Augusto Gonzales, EU Space Policy, European Commission Christian Siebert, EU GNSS Application, European Commission André Perpey, President, TOPOS AQUITAINE, France Fabien Couly, Head Manager, CETE SUD-OUEST, France Jean Philippe Mechin, Manager, CETE SUD-OUEST, France

## SIS32 - Innovative Fleet Management in Commercial Vehicles

## Thursday, October 17, 2013, 09:00-10:30

C606

Well management for transport vehicles not only enhanced the control of fleet, but also help decreasing running costs, reducing pollution caused and energy consumed, lowering ecological footprint, and improving passenger satisfaction. The session will bring together industry researchers and operators from around the world to share and discuss innovative use of fleet management.

#### **Organizers**

Telematics Promotion Office, Ministry of Economic Affairs, Chinese Taipei SK Jason Chang, Professor, National Taiwan University, Chinese Taipei

#### **Moderator**

TBD

#### **Speakers**

Tien-Yin Chou, Director, Geographic Information Systems Research Center, Feng Chia University, Chinese Taipei

Ya-Wen Chen, Director, Sustainable Transport Planning Division, Advanced Public Transportation Research Center, National Taiwan University, Chinese Taipei

Alex Jeng, President, Funtoro Inc., Chinese Taipei

TBD

# SIS33 - Creation of the Next-generation Car Society by Data Centric ITS ~ Realization of the New Car Society by the Vehicle Cloud Advancing Worldwide ~

## Thursday, October 17, 2013, 09:00-10:30

C608

Examination of the next-generation ITS has begun from various directions by rapid evolution of IT technology. The fusion of cars and an IT society is necessary.

As for an in-vehicle IT system, a new Vehicle Cloud structure will appear, aiming at open-platform. Now, "Data Centric Next-generation ITS", with which all the information about cars is integrated and utilized for various purposes, has been developed all over the world. In this session, we would like to discuss this direction.

#### **Organizer**

Naoki Tokitsu, President, Internet ITS Consortium, Japan

#### **Moderator**

Makoto Maekawa, Executive Expert, NEC Corporation, Japan

#### **Speakers**

Kazuya Takeda, Professor, Nagoya University, Japan
Paul Kompfner, Head of Sector, Smart Mobility, ERTICO - ITS Europe
Eric-Mark Huitema, Global Director, Smarter Transportation, IBM, The Netherlands
Speaker from ITS Japan, Japan
Speaker from USA

# SIS34 - IBEC - Comparing ITS Evaluation Methodologies Internationally: Challenges and Common Denominators

## Thursday, October 17, 2013, 09:00-10:30

C610

There are methodological and philosophical differences in the way that different regions and countries carry out benefit and cost analysis. This makes actual comparisons of ITS evaluation results difficult. Differences are not well appreciated nor are they being sufficiently addressed.

This session looks into methodological questions arising from international comparison of ITS evaluation practices as a result of database analysis of hundreds of studies. It will also examine prospects for defining common methodological approaches arising from both regional and national experiences and supporting databases and projects. It will address a number of examples and opens the floor to discuss ways to make different approaches more comparable.

#### **Organizers**

Alan Stevens, Transport Research Laboratory, United Kingdom Luca Studer, Politecnico de Milano-Laboratory for Mobility and Transport, Italy

#### Moderator

Stig Franzen, Chalmers University of Technology, Sweden

#### **Speakers**

Amy Guo, Researcher in Intelligent Mobility, Newcastle University, United Kingdom

Kerry Malone, TNO, The Netherlands

Martin Böhm, Head of Unit Mobility Systems and ITS deployment, AustriaTech, Austria

Nobuhiro Uno, Professor, Graduate School of Management & Department of Urban Management, Kyoto University, Japan

Jianping Wu, Professor, School of Civil Engineering, Tsinghua University, China

Wei Liu, Researcher, National ICT Australia (NICTA), Australia

Speaker from USA

# SIS35 - Accelerating Service Deployment - a Strategic View from the Traffic and Transport Industry

Thursday, October 17, 2013, 09:00-10:30

C701/702

This session considers how best to accelerate ITS deployment.

It includes high-level representatives from Government and key industry members of the ERTICO Traffic and Transport Industry sector platform. In particular this session will address how to overcome barriers to deployment, the importance and the role of political leadership and how industry can best cooperate with the authorities to ensure sustained operational acceleration.

The ERTICO Sector Platforms have been established to initiate new activities, develop priorities, technical positions, roadmaps and project ideas. The Traffic and Transport Industry sector platform comprises fifteen leading organizations that influence the development and deployment of ITS enabled services. The views of these industry experts and Government representatives will provide a stimulating, informative view of the current situation and challenge us all to make a difference in the near future.

#### **Organizer**

Richard Harris, Solution Director, International Transportation and Government, Xerox Services, United Kingdom

#### Moderator

Rasmus Lindholm, Director of Partnership Services and Communication, ERTICO-ITS Europe

#### Speakers

Cees de Wijs, Group President, International Transportation and Government, Xerox Services, The Netherlands Josef Czako, Director, International Business Development, Kapsch TrafficCom AG, Austria Hauke Jurgensen, CEO, Intelligent Traffic Systems, Siemens, Germany Dean Herenda, Secretary, Ministry of Transport, Slovenia John Chipperfield, CTO, Traffic Management Division, SWARCO, Austria Speaker from Cabinet Secretariat, Japan

## SIS36 - Autonomous Vehicles - Technical Challenges

### Thursday, October 17, 2013, 09:00-10:30

C703

A lot of discussion has occurred over the last several years about the possibility of autonomous vehicles being driven on public roads, while a number of institutional issues exist prior to deployment there are number of technology issues that must be addressed before widespread deployment of autonomous vehicles will occur. This session will focus on what technical problems need to be addressed before the current generation of vehicles will be ready for deployment.

#### **Organizer & Moderator**

Steven Dellenback, Director, R&D Southwest Research Institute, USA

#### **Speakers**

Richard Bishop, Principal, Bishop Consulting, USA

Ryan Lamm, Manager, Southwest Research Institute, USA

Suzanne Murtha, ITS Business Development Executive, TUV Rheinland Mobility Inc., USA

Maartin Oonk, Senior Market Manager, TNO, The Netherlands

Tim Johnson, Director, Human Vehicle Performance, National Highway Traffic Safety Administration (NHTSA), USDOT, USA

# **SIS37 - Roadmap to Automation**

### Thursday, October 17, 2013, 11:00-12:30

C605

Vehicles of the future will sense and communicate and so create an ecosystem of advanced connectivity that will revolutionize transportation. Vehicles will no longer travel in isolation, but connect with other vehicles, the roadway, pedestrians, businesses, and other digital networks. This connectivity will transform the driving experience by opening the door to multiple degrees of automated transportation, from assisted to robotic and to monumental improvements in safety, mobility, environmental and productivity. The question is not so much will this happen, but when? This session will address milestones and roadmaps to automated vehicle systems with topics including milestone forecasts for achieving partial and full automation, the actions that can be taken by governments to bolster consumer acceptance of autonomous vehicles onto roadways, component failure scenarios, critical sensors and other components, core research areas and required breakthroughs for automated vehicles, road environments, automated vehicle functions or behaviors that require improvement, and actions to ensure a future market for civilian automated vehicles.

#### **Organizer**

Steve Underwood, Director, Connected Vehicle Proving Center (CVPC) University of Michigan-Dearborn, USA

#### Moderator

TBD

#### **Speakers**

Steve Underwood, Director, Connected Vehicle Proving Center (CVPC), University of Michigan-Dearborn, USA Mitsuhisa Shida, Project Manager, Toyota Motor Corporation, Japan

# SIS38 - Connected Mobility - Achievements, Ambitions and the Actions Needed to Accelerate Deployment

### Thursday, October 17, 2013, 11:00-12:30

C606

This session will give insight from the different stakeholders on today's achievements and tomorrow's ambitions in the field of connected mobility. It will also highlight how players from the different sectors are now cooperating around development and, more importantly, the deployment of value-added services to end users.

OEMs, Telecom Operators and Traffic Administrators will discuss the development and ecosystems for connected vehicles, part of the overall M2M (machine to machine) market, which is expected to grow substantially during the next coming years as worldwide megatrends in governmental policies, societies, economies and technology generate accelerating demand for new services.

#### Organizer

Bengt Hallström, Analyst, Swedish Transport Administration, Sweden

#### Moderator

Theo Quick, Global Business & Portfolio, CGI, United Kingdom

#### **Speakers**

Gabriel Westrell, Business Development Director, CGI, Sweden

Bengt Hallström, Analyst, Swedish Transport Administration, Sweden

Olle Isaksson, Director, Ericsson, Sweden

Ulrich Fastenrath, Head of Traffic and Routing, BMW, Germany

Daniel Zackrisson, Technology Area Director - Intelligent Transport Systems, Volvo Trucks, Sweden

# SIS39 - Parking Management Policies and Technologies

### Thursday, October 17, 2013, 11:00-12:30

C607

This session will discuss the various approaches to parking operations and enforcement including the institutional, economical and technology aspects. Panel members will discuss various business models and local policy issues as well as technologies that facilitate Parking management, enforcement and performance measures.

#### **Organizer & Moderator**

Hamed Benouar, Vice President, Sensys Networks Inc., USA

#### **Speakers**

Rick Warner, President/CEO, Parking Carma, USA
Robert De Beukelaer, Solution Delivery Manager, EMEA at ACS, Xerox Company, The Netherlands
Richard Easley, CEO, E-Squared Engineering, USA
Speaker from Asia-Pacific

# SIS40 - Clouds, Crowds and Traffic: the Internet of the Automobile

## Thursday, October 17, 2013, 11:00-12:30

C608

The "Internet of the Automobile" is an extension of the popular Internet of Things concept to illustrate how disruptive technologies are connecting the driver, the car, devices, apps, and data all through inter-connected networks.

Using real-world examples of "Clouds, Crowds, and Traffic," this session will explore the benefits of Big Data in delivering intelligent driving services such as traffic, parking, fuel, electric vehicle services and road weather to help automakers improve the driving experience for consumers and to reduce the individual, economic and environmental toll of traffic congestion across Europe and the globe.

Attendees will gain insight into the future of connected navigation based upon revolutionary approaches of vehicle OEMs and infotainment providers in integrating smartphone connectivity, apps, and cloud services into the car. The session will explore how quality real-time and predictive speed data, event and incident data can be enhanced with GPS probe data from consumer and commercial vehicles along with mobile crowdsourcing to deliver better navigation experiences. Additionally, the session will outline how emerging artificial intelligence techniques such as predictive analytics, pattern recognition and machine learning are the catalyst for a new generation of connected navigation apps and services.

#### **Organizer**

Scott Sedlik, Vice President, Product Planning & Market Development, INRIX, USA

#### **Moderator**

TBD

#### **Speakers**

Scott Sedlik, Vice President, Product Planning & Market Development, INRIX, USA
Toshiro Muramatsu, Deputy General Manager, Vehicle Information Technology Division, Nissan Motor Co., Ltd., Japan Kenichi Murata, Project General Manager, Electronics Development Division, Toyota Motor Corporation, Japan Andrew Hart, Head of Advanced Research, SBD, United Kingdom

# SIS41 - IBEC - ITS: Making the Cost-Benefit Analysis for the Policy, Operator and the Traveller Case

Thursday, October 17, 2013, 11:00-12:30

C610

This session looks into the question whether clarifying the cost-benefit relation for multimodal Traveller Information Services could actually speed up their implementation. If the ratio was to be established for the policy case, the operator case and the traveler case, would it contribute to larger investment and deployment? The session will feature multimodal TIS evaluation studies that have aimed to cover these different "business" cases and their outcomes.

#### Organizer

Reinhard Pfliegl, A3PS, Austria

#### Moderator

TBD

#### **Speakers**

TBD

# SIS42 - Harmonization for Open ITS Communication Standards

Thursday, October 17, 2013, 11:00-12:30

C701/702

The real world of ITS is progressing everyday. High-end personal devices such as smartphone and high speed mobile communications such as LTE have appeared and Information Communications Technology such as M2M and Big data have evolved, while Electric Vehicle has changed the structure and position of vehicles themselves. These new technologies depend on the open ICT. Utilizing these ICT for ITS improves convenience and safety, while we cannot miss the standardization of communications technology. In this session, we will share the information of standardization activities in leading SDOs or countries, and discuss how to collaborate each other.

#### **Organizers**

Yoichi Maeda, CEO & S.V.P., The Telecommunication Technology Committee (TTC), Japan Yasubumi Chimura, Chairman of SmartCar WP, The Telecommunication Technology Committee (TTC), Japan

#### Moderator

TBD

#### **Speakers**

TBI

# SIS43 - Lessons Learned During Natural Disasters: Using and Protecting Public Transport ITS

Thursday, October 17, 2013, 11:00-12:30

C703

Lessons learned or best practices using and protecting public transport ITS when dealing with emergency situations or natural disasters has become extremely important over the past several years. This session will explore the simple lessons learned - what worked, what did not work, how the damage is assessed, and how to determine when and how to restart service. Some of the practical lessons learned that may be covered in this session include: How was ITS utilized during and after the disaster? How was communication facilitated by ITS during and after the event? What was the least expensive, easiest and most effective "fix"? What one thing will an agency do differently in the future? Finally, this session will cover those issues that are common across the three ITS regions.

#### **Organizer & Moderator**

Carol Schweiger, Vice President, TranSystems Corporation, USA

#### **Speakers**

Doug Jamison, ITS Program Manager, LYNX, USA

Masaki Ogata, Vice Chairman, East Japan Railway Company, Japan

Andrew Bata, Senior Director, Strategic Business Planning, Technology Partnering, Strategic Improvements and Best Practices, New York City Transit, USA

Yeatland Wong, Senior Manager, City of Calgary, Canada

## SIS44 - ITS for Global Mega Events

## Thursday, October 17, 2013, 14:00-15:30

C606

This session will present how ITS takes the global mega events (e.g. World Cup Soccer, Olympic Games, etc.) which generate additional travel demands and have significant impacts on transport systems in the host cities and regions. Managing transport systems before and during a global mega event obviously is a big challenge in ITS area. Speakers from around the world who are operators of public transport, provider of ITS services with traveller information or transport planner for mega events will introduce their experiences with transport services for the Olympic Games 2012 in London, 2014 in Sochi, 2016 Rio de Janeiro, 2018 PyeongChang, and World Cup Soccer 2010 in South Africa.

#### **Organizer & Moderator**

Young-Jun Moon, Director, The Korea Transport Institute (KOTI), Korea

#### **Speakers**

Speaker from United Kingdom Speaker from Russia Speaker from Brazil Speaker from Korea

Speaker from South Africa

# SIS45 - Sustainable Urban Mobility Solution to Address Challenges in Mega Cities

### Thursday, October 17, 2013, 14:00-15:30

C607

This session aims at sharing good practices on ITS-enabled sustainable urban mobility solutions in mega cities/regions worldwide who face ever increasing demands on their transport. In the past, many cities/regions mistakenly built urban highways to facilitate car traffic leading to congestion and poor air quality, but also in long term economical and social issues such as social exclusion. Many mega cities/regions now promote sustainable urban mobility.

This session will invite speakers working on innovative and sustainable mobility solutions in different cities to describe their experiences and lessons learnt. Such solutions include effective traffic and mobility management, advanced public transport management, integrated traveller information, applications of clean vehicles for passengers and urban logistic. The speakers will review the technologies, policies and required infrastructures to enable solutions to be deployed.

#### **Organizer**

Yanying Li, Senior Project Manager, ERTICO-ITS Europe

#### Moderator

Natascia Lai, Project Officer, DG RTD, European Commission

#### **Speakers**

Roberto Palacin, Senior Research Associate, Newcastle University, United Kingdom Mats Rosenquist, Senior Vice President, Vovlo Group, China Ralf Willenbrock, Business Development Manager, T-system, Germany/China Gilles Vesco, Deputy Mayor of Lyon & Vice-President of the Greater Lyon, City of Lyon, France Vincent Blervaque, Director of Development and Deployment, ERTICO – ITS Europe Alessandro Dos Santos, Researcher, IPT, Brazil

## SIS46 - Revisioning Taxis: Modular Urban Transit Systems

## Thursday, October 17, 2013, 14:00-15:30

C608

The New Taxis: Modular Urban Transportation Systems will explore the growing relevance and sophistication of for-hire vehicle systems. Big data, automated driving technologies, increasing urban population densities, ubiquitous mobile computing, and increased awareness of the importance of sustainability and resilience — all contribute to for-hire vehicle systems' significantly enhanced transportation efficiencies. In contrast with their predecessors, these systems increase the carrying capacity of individual vehicles, mitigate and navigate adverse traffic conditions, link disconnected fixed transportation nodes, and diversify their carrying payloads — to decrease the economic, temporal, and environmental costs associated with for-hire vehicle transportation and mobility more generally. In aggregate, New Taxis are important extensions of fixed transportation networks where they exist, and can obviate the need for capital-intensive fixed infrastructure projects in growing cities. Furthermore, New Taxis affect our conception of urban space and relationships, and collapse the distance between our experience of digital and physical spaces. The New Taxis investigates the implications for retrofitted taxi-services, by analyzing hard and experiential data associated with one augmented taxi project conducted in collaboration by three organizations in Montreal, Canada: Jour de la Terre, Weeels, Inc., and Taxi Diamond. The speakers and moderator of the New Taxis session are all experts in the fields of Transportation, Business, and Sustainability. Most notably, David Mahfouda, the founder of Weeels, Lucius Riccio, the former Department of Transportation Commissioner and Pierre Lussier, the CEO of Jour de la Terre (Earth Day) will be leading this groundbreaking special interest session.

#### **Organizer & Moderator**

Pierre Lussier, CEO, Jour de la Terre Québec, Canada

#### Speakers

Lucius Riccio, Professor, Columbia University/New York City Department of Transportation, USA Robin Chase, Entrepreneur, Buzzcar, France David Mes, Venture Capital, Cipio Partners, France Denis Larame, Manager, Taxi Diamond, Canada David Mahfouda, Entrepreneur, Weeels, USA

# SIS47 - IBEC - Evaluation of Cooperative and Automated Driving

### Thursday, October 17, 2013, 14:00-15:30

C610

The expected deployment of highly or fully automated road transport and connected vehicle systems increasingly raise questions about how these new ITS-based systems can and will be evaluated in terms of benefits and costs. These systems promise to: (i) improve traffic safety; (ii) reducte congestion in urban areas and on motorways; (iii) reduce vehicle emissions and fuel consumption; and (iv) provide productivity improvements. To what extent, if any, are these benefits actually likely to be realized? How will drivers actually behave and react? What happens when there is a crash - are occasional tragedies something to consider in benefits and costs calculations? What new metrics and performance measures are needed? The session will focus on the challenge of evaluating these potential benefits and costs, and feature illustrative evaluation studies on cooperative and automated transport.

#### **Organizer**

Alan Stevens, Transport Research Laboratory, United Kingdom

#### Moderator

Meng Lu, Program Manager, International Dutch Institute for Advanced Logistics, The Netherlands

#### **Speakers**

Ryan Lamm, Assistant Director R&D - Intelligent Vehicle Systems, Southwest Research Institute, USA Steven Shladover, Program Manager, Mobility, PATH Program, University of California, Berkeley, USA Kaneo Hiramatsu, Guest Researcher, National Traffic Safety and Environment Laboratory, Japan Hironao Kawashima, Emeritus Professor, Keio University, Japan

Angelos Amditis, Research Director, I-Sense Group Institute of Communication and Computer Systems (ICCS), Greece Maarten Oonk, Senior Market Manager, TNO, The Netherlands

# SIS48 - Certification — Benefits of Common Guidelines for International Harmonization

### Thursday, October 17, 2013, 14:00-15:30

C701/702

Users of future transport systems will strongly rely on safety applications provided by ITS services, whose compliancy, will be critical to ensure the expected quality of service.

Furthermore, interoperability between the different components of the ITS systems, is required for seamless end to end services.

International standards are key for designing interoperable systems, however, appropriate ITS certification schemes are necessary to

Harmonization certification schemes aims to ensure that consistent tests are carried out across different countries. Applied methodologies for testing and certification will be explained and with examples from ITS technologies based on international case studies.

#### **Organizer**

check devices.

Francois Fischer, Senior Project Manager, ERTICO-ITS Europe

#### **Moderator**

Susan Harris, CEO, ITS Australia, Australia

#### **Speakers**

Matthias Unbehaun, Executive Director, TISA Chris Koniditsiotis, CEO, Transport Certification Australia, Australia Carl Kuhnke, Executive Director, ITS Canada, Canada Sebastian Müller, Project Manager, ETSI, France Francois Fischer, Senior Project Manager, ERTICO - ITS Europe

# SIS49 - Resilient ITS to Support Emergencies and Major Events

Thursday, October 17, 2013, 14:00-15:30

C703

This session will highlight international perspectives on the importance and/or use of robust and resilient Intelligent Transportation Systems during significant weather events and other emergency situations. Major weather events and other emergencies in the United States, Asia, and Europe have stressed our ITS, communications, power and transportation infrastructure. This session will compare and contrast the experiences in North America, Europe, and Asia to plan for and fund more robust and resilient systems in the aftermath of catastrophic events, as well as how they are exercised by authorities and utilized by the public in emergency situations.

#### Organizer

Jim Barbaresso, Vice President - Intelligent Transportation Systems, HNTB Corporation, USA

#### Moderator

Steve Cyra, Associate Vice President, HNTB Corporation, USA

#### **Speakers**

Jeff Kaufman, Transportation Safety Coordinator, Houston-Galveston Area, USA TBD
TBD

# SIS50 - Successful Integrated Transport Management in Dynamic Mega Regions and Cities

Thursday, October 17, 2013, 16:00-17:30

C606

The Australasian region demonstrates unique examples of encompassing, integrated transport management solutions at the mega region and mega city scale. These examples encompass broad jurisdictions, multiple travel modes and diverse transport problems within successful, dynamic societies. For example, the state of New South Wales, with the capital of Sydney, demonstrates: extensive vehicle detection coverage, vehicle-infrastructure (V-I) communications, tracked real-time prioritized public transport, sophisticated congestion and network management policies using an integrated traffic control system that spans the road network, state-wide. Experts from New Zealand and Australia will provide the audience with high caliber, mega region examples. The session is particularly relevant to managers of mega regions whom are seeking to gain the benefits of integrating their traffic management system capabilities and policies at the mega scale.

#### **Organizer & Moderator**

Steven Shaw, Manager, Traffic Systems Application, Roads and Maritime Services, New South Wales, Australia

#### **Speakers**

Ken Lee-Jones, Technical Services Manager, Auckland Transport, New Zealand

Andrew Mehaffey, Executive Manager, Transport Strategy & Systems, Roads and Maritime Services, New South Wales, Australia Dean Zabrieszach, Director, Road Operations, VicRoads, Victoria, Australia

Philip Blake, Manager, Traffic Operations, Department of Transport, Energy and Infrastructure, South Australia, Australia

Dennis Walsh, Executive Director, Department of Transport and Main Roads, Queensland, Australia

Adrian Gibbons, Traffic Signals Operations Manager, Brisbane City Council, Australia

# SIS51 - E-ticketing for Public Transport

## Thursday, October 17, 2013, 16:00-17:30

C607

E-ticketing systems provide convenient means of payment for public transport, and meanwhile collecting lots of information that enables public transport to be easily utilised, to be efficiently managed and controlled. By means of e-ticketing, even multi-modal, multi-operator trips can be easier to implement, and the revenues can be easier to re-distribute across the different modes and operators after clearing. This session will focus on the intelligent integration of various e-ticketing applications among different public transport systems.

#### Organizer

Telematics Promotion Office, Ministry of Economic Affairs (MOEA), ITS Taiwan, Chinese Taipei

#### Moderator

TBD from ITS Taiwan

#### **Speakers**

Simon Chiang, President, MiTAC Information Technology Corporation, Chinese Taipei Chia-Sheng Chang, Chairman, EasyCard Corporation, Chinese Taipei Richard Harris, Solution Director, International Transportation and Government, Xerox Services, United Kingdom Speaker from Korea

# SIS52 - EU-Japan-US Trilateral Cooperation for Future R&D of Probe Data

### Thursday, October 17, 2013, 16:00-17:30

C608

EC DG-Connect, US DOT and MLIT Japan cooperatively promote research and development of probe data used to collect information enabling smoother, safer and more comfortable roads transport.

In this session, a summary and progress of the collaborative research by EU, Japan and US will be introduced, and target probe service and future plan of research and development will be introduced as well. And information about a trend of research and development of latest probe data in each country will be presented. At the same time, speakers will discuss significance of international cooperation about research and development of probe data and expected solution.

#### **Organizer**

Keiji Hattori, Chief, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

#### Moderator

TBD

#### **Speakers**

TBD

# SIS53 - IBEC - Why (not) Evaluate ITS?

## Thursday, October 17, 2013, 16:00-17:30

C610

Several barriers may prevent ITS evaluation studies from being performed on the scale necessary to account for and justify past and future ITS investments. A number of reasons have been given to why ITS projects are not being evaluated. At least the following reasons have been cited:

- no expertise
- not useful
- not yet
- no reward
- no priority
- too risky
- no need as performance and acceptance is enough
- not relevant
- too expensive
- not prepared
- no tradition
- no quidelines

This session will elaborate on these reasons, assess their importance and will provide a platform to discuss potential ways of addressing them.

#### **Organizer & Moderator**

Richard Harris, Solution Director, International Transportation and Government, Xerox Services, United Kingdom

#### **Speakers**

Risto Kulmala, Finnish Transport Agency, Finland Oliver Carsten, University of Leeds, United Kingdom Susan Spencer, Director, Intelligent Transportation Systems, Transport Canada, Canada Caroline Visser, Deputy Director General, International Road Federation, Switzerland Yukio Oguri, Professor, Chiba University of Commerce, Japan

# SIS54 - Predictive Map-based Applications Reaching Market and Perspectives

## Thursday, October 17, 2013, 16:00-17:30

C703

New generation driver assistance systems use more and more predictive data based on vehicle position and map data. This session will report on new developments by the automotive industry on the implementation of the ADAS Interface Specifications, and plans for further market introduction of ADASIS compliant applications.

This enabling technology linking map, position and ADAS was developed by the ADASIS Forum, created in 2002, in the form of ADAS Interface Specifications released in April 2010, which are used in today's new Driver Assistance systems. This session will present the possible future development of this de facto industry standard.

#### **Organizer & Moderator**

Jean-Charles Pandazis, Head of Sector EcoMobility, ERTICO-ITS Europe

#### **Speakers**

Alexander Bracht, ADASIS Forum Chairman, Daimler, Germany

Frans Van-Dingenen, Senior Product Marketing Manager, ADAS Nokia Location & Commerce, The Netherlands Masahiko Ikawa, Head Researcher, Advanced Technology R&D Center, Mitsubishi Electric Corporation, Japan Speaker from Denso Corporation, Japan

Si Jun Kim, Project Manager, Hyundai Motor Company, Korea

# SIS55 - Unlocking the Market for Cooperative Services: the Concepts of a Universal Platform

Friday, October 18, 2013, 09:00-10:30

C605

The European Commission has called for the development and deployment of a Europe-wide service platform but are all conditions in place regarding coverage and accessibility? Service providers find it hard to extend their product range and customer base while cooperative applications are not yet available as an online service. A number of key innovations are required to help transcend national borders and overcome the limitations of proprietary technologies: eg an open business environment providing automated mechanisms for service orchestration, a unified mobile payment framework etc. This session will explore with similar initiatives in Asia Pacific and America the needs and requirements of business and end users.

#### **Organizer**

Julie Castermans, Project Support Manager, ERTICO-ITS Europe

#### **Moderator**

Juhani Jääskeläinen, Adviser for ICT for Transport and Energy, DG CONNECT, European Commission

#### **Speakers**

Koichi Sakai, Senior Researcher, ITS Division, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan Martin Hauschild, Head of Traffic Technology, BMW, Germany Paul Kompfner, Head of Smart Mobility Sector, ERTICO - ITS Europe Peter-Paul Schakmann, Project Manager, TNO, The Netherlands

Dirk Beckmann, Project Manager, DLR German Aerospace Center, Germany

Marco Annoni, ETSI TC ITS Vice Chairman, Telecom Italia, Italy

# SIS56 - Urgent Actions for Promotion of Video Drive Recorder to Reduce Traffic Accidents

Friday, October 18, 2013, 09:00-10:30

C606

In last three World Congresses, this SIS has appealed internationally how effectively Drive Recorder ("DR") technologies could contribute to the reduction of traffic accidents along with well-considered software application. In this SIS, the prominent experts from Asia, North America and Europe are invited to discuss together further practical means to facilitate DR promotion through GIAP (Government-Industry-Academia-People) collaboration. Each speaker will pick up the top three issues for this subject, then move to open discussion among speakers, also involving audience.

Major issues to be solved for further promotion of DR are likely as follows;

- 1) Quick analysis and feedback of collected data at operational level,
- 2) Establishment of sound traffic safety education program utilizing data analyzed,
- 3) Unique approach to organized professional drivers and un-organized private drivers as well.

#### **Organizer**

Koji Ukena, CEO, UK-Consultant, Japan

#### Moderator

Sadao Horino, Professor, Kanagawa University, Japan

#### **Speakers**

Peter Zhou, Vice President, Auto Navi, China Johan Engstrom, Senior Specialist, Volvo, Sweden Shoichi Washino, Professor, Tottori University of Environmental Studies, Japan Eric Cohen, Director, Drive Cam, USA

# SIS57 - Challenges in Increasing Safety and Quality Accountability under IS026262

## Friday, October 18, 2013, 09:00-10:30

C607

Automobiles are critical systems that are operated by general consumers, and so high levels of safety and quality must be maintained. To manufacturers, supporting international frameworks such as ISO26262 is very important.

This session will survey the particular circumstances of Japanese manufacturers, who face challenges in quality accountability, although the actual quality of their products is generally high. In addition, we will investigate the issues that must be dealt with to insure functional safety standards are met and quality control is strengthened. This will be discussed from the viewpoint of technology development processes as well as independent verification and validation.

#### **Organizer**

Hitoshi Kume, Executive Advisor, Veriserve Corporation/Professor Emeritus, The University of Tokyo, Japan

#### **Moderator**

Akira Fukuda, Director, System LSI Research Center, Kyushu University, Japan

#### **Speakers**

Sven Seifert, Functional Safety Expert, TUV SUD Japan Automotive Group, Germany

Speaker from Automotive Manufacturer, Japan

Masa Katahira, Senior Engineer, Safety and Mission Assurance Department, Japan Aerospace Exploration Agency (JAXA), Japan Shuichiro Yamamoto, Professor, Nagoya University, Japan

## SIS58 - Web Technologies Change Car Life?

## Friday, October 18, 2013, 09:00-10:30

C608

The open platform realized by web technology is about to become a core component of next-generation telematics, and is now making ITS smarter through combination with big data. W3C (World Wide Web Consortium) in cooperation with the automotive industry has launched a standardization activity to support the adoption of web technologies in automotive contexts.

We would like to discuss the following for web applications in automotive field: changes in ITS and car life, realization of safe and ecological driving, and human-machine interfaces to make driving comfortable. Based on them, we would like to discuss what web and automotive aspects should be standardized.

#### **Organizer & Moderator**

Masao Isshiki, Professor, Keio University/W3C, Japan

#### **Speakers**

Toshiro Muramatsu, Deputy General Manager, Vehicle Information Technology Division, Nissan Motor Co., Ltd., Japan

TBD

TBD

TBD

# SIS59 - Women in ITS - Leveraging the Experience of Other Regions and other Industries

## Friday, October 18, 2013, 09:00-10:30

C609

This Women in ITS Special Interest Session continues an ITS World Congress tradition. This session will re-enforce the role of women in the industry through inviting selected high profile female leaders to present. Female leaders will be invited to share their insights and experiences of different strategies aimed at both attracting and retaining women in the ITS industry and other industries. Opportunities to celebrate achievements and raise the profile of women in the industry from entry level roles through to executive positions will also be explored. This session will explore the experience in different regions around the globe not only of the ITS industry but also of other industries that are working to encourage the involvement of women.

#### **Organizer & Moderator**

Susan Harris, CEO, ITS Australia, Australia

#### **Speakers**

Gertraud Oberzaucher, AustriaTech, Austria Fang Chen, National ICT Australia (NICTA), Australia Karen Hay, Manager, Road Safety, Auckland Transport, New Zealand TRD

# SIS60 - IBEC - Drastic Measures for the Middle East and South Africa to Reach Zero Crash Fatalities

### Friday, October 18, 2013, 09:00-10:30

C610

Compared to the traditionally industrialized countries with low crash statistics, and low industrialized countries with high crash statistics, what in the socio-economic-political make-up and culture of countries that do not lack resources and do have technology access prevents us from improving crash statistics?

This session will present the current situation in several world regions in traffic congestion and crash fatalities with the technological measures taken to improve each. It will also include success stories on to what lessons could be learned to reach zero fatalities.

#### **Organizer**

Zeina Nazer, Secretary General, ITS Arab, United Kingdom

#### **Moderator**

TBD

#### **Speakers**

Speaker from Qatar Speaker from UAE Speaker from Saudi Arabia Paul Vorster, CEO, ITS South Africa, South Africa Osama Filali Naji, Director of Policy, ITS Arab, United Kingdom Thomas Kern, Executive Vice President, ITS America, USA

# SIS61 - Emerging Information and Telecommunication Technologies for Improving ITS Operations

Friday, October 18, 2013, 09:00-10:30

C701/702

Creative uses of information and telecommunication technologies in both the private and public sectors provide opportunities for using these same approaches for better operations of ITS Systems. This session will look at technologies for better decision making, more efficient operations, better customer communications, and the new security challenges created. Special attention will be given to adopting cloud solutions, use of geospatial decision tools, virtualization, mobility, social networks and security.

#### **Organizer & Moderator**

C. Douglass Couto, Consultant, USA

#### **Speakers**

C. Douglass Couto, Consultant, USA

Terry Bills, Transportation Industry Manager, Esri, USA

Pankaj Lunia, Intelligent Transportation Solution Leader - ASEAN, IBM, Singapore

Adam Feng, Technical Manager, Industrial Technology Research Institute (ITRI), Chinese Taipei

## SIS62 - What are the Effects of Open Data on Public Transport?

Friday, October 18, 2013, 09:00-10:30

C703

Over the past several years, open data has revolutionized the availability of public transport information. The benefits to public transport authorities due to open data have been mentioned previously, but measurable and specific effects on ridership and acceptance of public transport have not been cited. Only a few studies have examined transit agencies adopting transparency strategies for their operations data to improve customer service. This session will explore the specific effects of open data on various aspects of public transport services (e.g., ridership, types of services provided, data management. Also, the session will identify and report on studies that examine whether the availability of open data is driving improved performance by transit agencies and increased customer satisfaction.

#### **Organizer & Moderator**

Carol Schweiger, Vice President, TranSystems Corporation, USA

#### **Speakers**

Joshua Robin, Director of Innovation, Massachusetts Bay Transportation Authority, USA Speaker from Transport for London, United Kingdom

Kari Watkins, Assistant Professor, Civil and Environmental Engineering, Georgia Institute of Technology, USA

Speaker from Asia-Pacific

# SIS63 - Building the Future - Advanced Integrated Safety Applications

## Friday, October 18, 2013, 11:00-12:30

C605

This session addresses safety and traffic management. It will review issues related to active safety systems and digital map-supported ADAS to enhance safety and eco solutions; and the development of ADAS by mixing real-world sensor data, digital map data and simulation programs. In this framework the audience will also have the opportunity to learn more about the results and evaluation aspects emerged from the work performed inside the European Integrated Project Interactive.

#### **Organizer & Moderator**

Angelos Amditis, Researcher Director, Institute of Communication and Computer Systems, Greece

#### **Speakers**

Aria Etemad, Senior Research Coordinator, Ford Research & Advanced Engineering Europe, Germany Lali Gohsh, Chief Engineer, Delphi Delco Electronics Europe GmbH, Germany Martin Brockmann, Project Manager, Allround Team GmbH, Germany Frans van Dingenen, Product Marketing ADAS, Nokia Location & Commerce, The Netherlands Ulrich Lages, CEO, IBEO Automotive Systems, Germany Adrian Zlocki, Senior Manager, Driver Assistance, RWTH Aachen University, Germany

## **SIS64 - Improving the Public Transport Services**

### Friday, October 18, 2013, 11:00-12:30

C606

Due to the increasing population and vehicles, the traffic jam and Eco problems in mega cities/regions are becoming serious. Convenient, efficient public transport service will contribute more to solve the jam and Eco problems in mega cities/regions, also to support the economic development. It will be discussed in this session how to improve the public transport services through useful ITS technologies.

#### Organizer

Weiyun Jiao, Department Manager, China National ITS Center, China

#### Moderator

Tongyan Qi, Vice Chief Engineer, Research Institute of Highway, Ministry of Transport, China

#### **Speakers**

Dongmei Liu, Senior Engineer, China National ITS Center, China Koorosh Olyai, Assistant Vice President, Dallas Area Rapid Transit, USA Bo Liu, Senior Researcher, Hitachi China R&D, China Cees de Wijs, Group President, International Transportation and Government, Xerox Services, The Netherlands Graham Hanson, Head of Traffic Signs Policy, Department for Transport, United Kingdom

# SIS65 - 2014 World Congress Detroit and Beyond

## Friday, October 18, 2013, 11:00-12:30

C607

The 21st ITS World Congress will be held in Detroit with the theme of "Reinventing Transportation in our Connected World". The session will introduce attendees to the Congress including program highlights, technology showcase, technical tours, exhibition, and ceremonies. Attendees will also hear the plans for the 2015 World Congress in Bordeaux, France and the 2016 Congress in Melbourne, Australia.

#### **Organizer & Moderator**

Jim Barbaresso, Vice President - Intelligent Transportation Systems, HNTB Corporation, USA

#### **Speakers**

André Reix, Secretary, TOPOS Aquitaine, France

Dean Zabrieszach, Vice President ITS Australia, 2016 World Congress Project Director, VicRoads, Australia Jim Barbaresso, Vice President - Intelligent Transportation Systems, HNTB Corporation, USA Peter Sweatman, Director, University of Michigan Transportation Research Institute (UMTRI), USA

## **SIS66 - Cyber Security**

## Friday, October 18, 2013, 11:00-12:30

C608

With the growing emphasis on cyber security, system vulnerability and denial of service, this session will share some recent experiences and discuss the risk to a modern transportation system that is using V2X technologies. Participants will also discuss the severity of the risk, how the risks could be mitigated and how agencies/companies may protect themselves against these threats.

#### **Organizer & Moderator**

Steven Dellenback, Director, R&D Southwest Research Institute, USA

#### **Speakers**

Tim Leinmuller, Denso Automotive, Germany
Ronnie Killough, Director, Southwest Research Institute, USA
Jane Lappin, Program Manager, Volpe National Transportation Systems Center, RITA, USDOT, USA
Manabu Nakano, Information-Technology Promotion Agency (IPA), Japan

# SIS67 - Giving Access to Transport Related Data - Will Different Data-Policies Hinder the Deployment of Seamless and Harmonised End-user Services?

### Friday, October 18, 2013, 11:00-12:30

C701/702

An increasing number of ITS applications rely on the availability of accurate transport related data which are generated by or owned by authorities eg digital map data or real time information on the current traffic situation for all transport modes. Standards and regulations have been written to try to harmonise access to transport related data and information but national policies on data provision vary very much between different countries.

This session will look at national approaches to providing accurate public data to commercial companies for end-user service provision as a way of enabling accurate and high quality Traveller Information Services.

#### **Organizer & Moderator**

Martin Böhm, Secretary, ITS Austria, Austria

#### **Speakers**

Maarten Koningsveld, Project Manager, CONNEKT - ITS Netherlands, The Netherlands Bernhard Engleder, Head of Steering Committee, ITS Vienna Region, Austria Kari Hiltunen, Development Manager, Finnish Transport Agency, Finland Stephen T'Siobbel, Senior Project Manager, TomTom, Belgium Tom Kern, Executive Vice President, Intelligent Transportation Society of America, USA

## SIS68 - International Standard Issues for Green ITS (G-ITS)

## Friday, October 18, 2013, 11:00-12:30

C703

This session will present the international standards and/or harmonization issues for development and deployment of Green ITS (G-ITS) utilizing sustainable transport modes, infrastructure, transport facilities, and users. In developing G-ITS technologies for the future worldwide, emphasis should be placed on the requirements which include CO<sub>2</sub> emissions-free green transport systems ensuring efficient multi-modal connectivity. A concept to build an green transport system which is called G-ITS has been under discussion in Korea utilising ITS technology for operation and management of the system and also in ISO/TC204 discussing what issues to be harmonized in order to being international standards.

#### **Organizer**

Young-Jun Moon, Director, The Korea Transport Institute (KOTI), Korea

#### Moderator

Tyler Messa, TC204 Secretariat, ITS America, USA

#### **Speakers**

Young-Jun Moon, Director, The Korea Transport Institute (KOTI), Korea Hans-Joachim Schade, CEO, TSE Consult, Germany Dean Zabrieszach, Director, VicRoads, Australia William Johnson, HOD, ITS Canada, Canada Speaker from Japan

# **Host Selected Sessions**

## **HS01 - Education for Next Generation ITS in Asia**

### Tuesday, October 15, 2013, 11:00-12:30

C701/702

In Asia, where economic is significantly developing, traffic jam, accidents and pollution by traffic become a major issue not only in metropolitan area but also in suburban city area. Therefore, the spread of effective and immediate ITS policy is needed, and wide ranging human resource development is also needed for the spread. In this session, experts will discuss how to develop human resource who engages in research, policy planning and implementation of ITS according to status of city and traffic especially in Asia.

#### Organizer

Keiji Hattori, Chief, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

#### Moderator

Akimasa Fujiwara, Professor, Dean of IDEC, Hiroshima University, Japan

#### **Speakers**

Shigeru Morichi, Director of Policy Research Center, Senior Professor, The National Graduate Institute for Policy Studies (GRIPS), Japan

Hajime Amano, President, ITS Japan, Japan

Yukihiro Tsukada, Director, Research Center for Advanced Information Technology, National Institute for Land and Infrastructure Management, MLIT, Japan

Tadashi Yoshida, President, Smart Infrastructure Research and Institute, Japan

Speaker from Korea

# **HS02 - Pedestrian Detection in Various Manners (III)**

## Tuesday, October 15, 2013, 14:00-15:30

C605

Pedestrian protection is one of the key issues for safety as accidents involving pedestrians are still high in each region. Approach to detect pedestrians varies in several categories. Detecting by image processing, active sensing such as RADAR, and V2P communication with position information are the candidates. It can be done by on board unit or road side unit. Among these options, suitable measurement to detect pedestrian might differ according to situations. This session also refers related projects such as ASV covering the aspect of V2P and V2V based detection.

Since 2011 is the first year for this SIS, this will be the 3rd year covering from the different technical aspects and effects including the ADAS policy.

#### **Organizer & Moderator**

Nobuyuki Ozaki, Senior Fellow, Toshiba Corporation, Japan

#### **Speakers**

Keisuke Kinumoto, Special Assistant to the Director, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

TBD

# **HS03 - For the Practical Use of Fully Automated Platoon System** (on Energy ITS Project)

## Tuesday, October 15, 2013, 14:00-15:30

C606

Energy saving as well as CO<sub>2</sub> emission reduction is important and challenging subjects for the road transport sector to achieve sustainable mobility.

Japanese government, METI established "Development of Energy-saving ITS Technologies" project, in which an automated platoon coupled electrically by more 3 heavy trucks as 5 years program from FY 2008 to FY 2012. It is required for automated platoon to develop new technologies for keeping closely the gap distance between trucks and compensating the controllability for the failure of control devices or several driving conditions.

The project has reached its final term milestone, presenting and showcasing important findings.

Towards the practical use, finding of driver's evaluation tests as well as technical issues will be discussed with the project members and overseas guests.

#### **Organizer**

Hiroshi Yamaka, Deputy Director, Electric Vehicle, Advanced Technology and ITS Promotion Office, Ministry of Economy, Trade and Industry, Japan

#### **Moderator**

Yoshihiro Suda, Professor, Institute of Industrial Science, The University of Tokyo, Japan

#### **Speakers**

Nobuo Iwai, Senior Researcher, New Energy and Industrial Technology Development Organization (NEDO), Japan Keiji Aoki, Research Director, ITS Research Division, Japan Automobile Research Institute (JARI), Japan Manabu Omae, Professor Graduate School of Media and Governance, Keio University, Japan Toru Okimura, Manager, Economic Research Division, Nittsu Research Institute and Consulting, Inc, Japan Sadayuki Tsugawa, Professor, Department of Information Engineering, Meijo University, Japan

# HS04 - New Services Enabled by Distributing the Road Related Information

### Tuesday, October 15, 2013, 14:00-15:30

C610

The digital map with permanent IDs to each road enhances the quality of information distribution. This enables all map users to exchange the road related information even if they use the different maps and tools.

New approaches beyond the current services began with the utilization of the Road Section Identification Data set (RSIDs) in Japan. In this session, we would like to share the uses of the road related information, application examples, the expectations of new services and to discuss broadly towards the spread of future ITS services with road related information and vehicle information.

#### **Organizer**

Makoto Otsuki, Senior Vice President, ITS Japan, Japan

#### **Moderator**

Satoru Nakajo, Senior Researcher, Mobility Strategy Research Group, Mitsubishi Research Institute, Inc., Japan

#### **Speakers**

Nobuhiro Arima, Assistant Manager, System Technology Group, Maintenance and Traffic Management Department, Hanshin Expressway Company Limited, Japan

Benjamin Dodd, Leader, ITS Business Dept.1, IT-ITS Division, Zenrin DataCom Co., Ltd, Japan

Trond Hovland, Director, ITS Norway, Norway

Soohong Park, Professor, Dept. of GeoInformatic Engineering, Inha University, Korea

## **HS05 - Next ITS for Sustainable Communities in Rural Cities**

### Tuesday, October 15, 2013, 16:00-17:30

C610

In developed countries, aging population and hollowing-out of regional industries are accelerated in local cities. For this reason, the local public authorities are putting more priority to concentrate the city functions and revitalize the regional economy once dispersed in a suburb. Especially in Japan, the local authorities are making efforts to provide the mobility to vulnerable road users, including elderly people. As these solutions, LRT or BRT offer the fundamental reform in local public traffic, and some new framework are taken by various stakeholders, such as entrepreneurs, residents, local public authorities. This session will discuss about ITS and ICT technologies which support the traffic & urban planning to ensure the mobility of aged-people. It will also covers the ITS which contributes to revitalization of regional economy, and sustainable communities.

#### **Organizer**

Makoto Otsuki, Senior Vice President, ITS Japan, Japan

#### Moderator

Fumihiko Nakamura, Professor, Yokohama National University, Japan

#### **Speakers**

Dai Nakagawa, Director/Professor, Urban Policy Unit for Low-Carbon Society, Kyoto University, Japan Masayuki Kanda, Vice Mayor, Toyama City, Japan Hironobu Kitaoka, Project Manager, R&D Management Division, Toyota Motor Corporation, Japan Speaker from Asia-Pacific Speaker from Asia-Pacific

## **HS06 - Electric Mobility and Smart Society**

## Tuesday, October 15, 2013, 16:00-17:30

C703

Many verification projects regarding electricity demand control including EV or PHV are now going around the world. In this session, we expect to have a presentation and exchange opinions about solution how to realize sustainable smart society. Representatives from Japan and other regions will introduce advanced projects as Toyota City Low Carbon Verification Project, Nagasaki EV&ITS Project, and other relating projects in the world.

#### **Organizers**

Hodo Nakamura, Governor of Nagasaki Prefecture, Japan Takahiro Suzuki, Associate Professor, The University of Tokyo, Japan Ushio Komoda, Project Manager, Toyota Motor Corporation, Japan

#### Moderator

Hironao Kawashima, Emeritus Professor, Keio University, Japan

#### **Speakers**

Satoshi Inoue, Director, Ministry of Economy, Trade and Industry, Japan
Tatsuya Morii, Assistant Manager, R&D Management Division, Toyota Motor Corporation, Japan
Isamu Kurosaki, Director, Green New Deal Office, Industry and Labor Department, Nagasaki Prefectural Government, Japan
David Dallinger, Scientist, Fraunhofer Institute for Systems and Innovation Research ISI, Germany
Speaker from Korea

# **HS07 - Realization and Expectations of Next Generation VICS**

Wednesday, October 16, 2013, 11:00-12:30

C607

The VICS (Vehicle Information and Communication System) service has traditionally been based on traffic data such as congestion, travel time and other traffic attributes that are now collected by the public sectors. Next-generation VICS will adopt new approaches such as collecting probe vehicle data by taxi fleets. Utilizing the probe data, Next-generation VICS can complement the current traffic information on road segments where no infrastructure detectors are installed, and enhance the current VICS service and improve its quality. Next-generation VICS also aims to provide useful information for aging society. In this session, we will discuss the benefits, issues and expectation of Next-generation VICS.

#### **Organizer**

Toshihiko Oda, General Manager, Vehicle Information and Communication System Center (VICS), Japan

#### **Moderator**

Nobuhiro Uno, Associate Professor, Kyoto University, Japan

#### **Speakers**

Fumitaka Kurauchi, Professor, Gifu University, Japan
Ching-Yao Chan, Program Leader, University of California at Berkeley, USA
Thomas Riedel, President, Adaptive Traffic Control AG, Switzerland
Mark Hsiao, Vice President, International Integrated Systems, Chinese Taipei
Toshihiko Oda, General Manager, Vehicle Information and Communication System Center (VICS), Japan

# HS08 - Toward Practical Implementation of Vehicle-Infrastructure Cooperation Systems for Safety

Wednesday, October 16, 2013, 11:00-12:30

C701/702

It is the most important problem through many countries to prevent road traffic users from having traffic accident, especially critical accident, which are negative products in motorized societies. Many of traffic accidents are occurred by human error. We are considering that if driver could recognize some dangerous situations approaching to him in advance and the recognition could prevent him from occurring human error, the process will be able to restrain many of traffic accident previously. ITS technology can realize the process.

This session aims to introduce the DSSS demonstrated at this congress showcase and to discuss some technological and political subjects of V-I Cooperative systems for safety, taking into account subjects of the EU and the USA.

#### **Organizers**

Kenichi Ito, Deputy Director, National Police Agency, Japan Takashi Kimura, Leader of International Cooperation Subcommittee, UTMS Society, Japan

#### **Moderator**

Takashi Oguchi, Professor, The University of Tokyo, Japan

#### **Speakers**

Masaaki Oizumi, Deputy Director, National Police Agency, Japan Noriyuki Tsukada, Engineer, Nissan Motor Co., Ltd., Japan Shigeru Inoue, Chief Engineer, Honda R&D Co., Ltd., Automobile R&D Center, Japan Speaker from Europe Speaker from USA

## **HS09 - Future Mobilities beyond 202X**

## Wednesday, October 16, 2013, 14:00-15:30

C606

Speakers will be discussing the future mobilities beyond 202X.

In conjunction with ITS, the new mobilities with different energy sources will provide additional values for people in many different scenarios.

This session expect speakers from all over the world brings future visions of transportation in various circumstances and share the new value for many different transportation users.

Expected outcomes from this session are to share the bright future with new mobilities and figure the task to be resolved.

#### **Organizer & Moderator**

Takahiko Uchimura, Vice President, ITS Japan, Japan

#### **Speakers**

Yoshitsugu Hayashi, Director and Professor, Graduate School of Environmental Studies, Nagoya University, Japan James Sayer, Project Director Safety Pilot Model Deployment, University of Michigan Transportation Research Institute (UMTRI), USA Dirk Beckman, German Aerospace Center, Institute of Transportation Systems, Germany Hiroshi Yamada, Manager, ITS Japan, Japan

# **HS10 - Automated Driving - Next Generation Vehicle-Highway System**

## Wednesday, October 16, 2013, 14:00-15:30

C609

Automated driving system is an ultimate method to decrease the probability of accidents caused by human recognition, process and operation error and to enable smooth, comfortable road transport. In this session, current status of development of the system in EU, US and Japan including EU-US-Japan trilateral activities by experts from EU, US and Japan will be introduced, and challenges about future R&D and implementation and how to internationally cooperate for solution will be discussed.

#### Organizer

Keiji Hattori, Chief, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

#### Moderator

TBD

#### **Speakers**

TBD

# **HS11 - Intelligent Guidance for Congestion Mitigation**

## Wednesday, October 16, 2013, 14:00-15:30

C610

The invited speakers from road and railway operations individually lecture on histories till they reached the current guidance systems for traffic flow management. The following discussion is expected to provide the attendee with views and clues on how to design analogue/digital message signs for highways, parking areas and railway stations to be both more effective and sustainable, so to say intelligent.

#### **Organizer**

Takayuki Hirasawa, Research Associate, The University of Tokyo, Japan

#### **Moderator**

TBD

#### **Speakers**

Dirk Herrmann, IVLZ Stuttgart, Germany
Paul Unwin, Highways Agency, United Kingdom
Hiroshi Warita, Metropolitan Expressway Company Limited, Japan
Speaker from NEXCO (Nippon Expressway Company), Japan
Speaker from JR (Japan Railway), Japan

# **HS12 - Precise Positioning for ITS Application Using Multi-GNSS**

## Wednesday, October 16, 2013, 16:00-17:30

C609

GPS and GLONASS have been supplying Position, Navigation and Timing (PNT) information to several applications. In the near future new GNSS and RNSS (Regional Navigation Satellite System) will start providing PNT information in the same way. This will improve the availability, precision, and reliability of the applications and may create new applications as well.

Recently, toward the upcoming this multi-GNSS era, international cooperation for the effective usage of multi-GNSS is under discussion.

In this session we will focus on the usage of multi-GNSS for ITS applications such as pedestrian-vehicle communication, autonomous vehicle, precise positioning in indoor parking lot and so on.

#### Organizer

Masaya Mine, Director, Satellite Positioning Research and Application Center (SPAC), Japan

#### Moderator

TBD

#### **Speakers**

TBD

# **HS13 - New ITS R&D Framework Programs in Korea**

## Wednesday, October 16, 2013, 16:00-17:30

C610

This session will introduce the new ITS R&D framework program in Korea, which has been launched by Korean government for next 5 years. Five sub programs are demonstrated which include Safe Mobility, Smart Mobility, Eco Mobility, Welfare Mobility, and Logi Mobility.

#### **Organizer**

Young-Jun Moon, Director, The Korea Transport Institute (KOTI), Korea

#### Moderator

Dae-Yeon Cho, Director General, Korea Institute for Construction and Transportation Technology Planning and Evaluation (KICTEP), Korea

#### **Speakers**

Jaejoon Lee, Research Associate, The Korea Transport Institute (KOTI), Korea Jongbae Wang, Director, Korea Railroad Research Institute, Korea Jun-Seok Park, Professor, Kookmin University, Korea Wonjae Jang, Research Fellow, The Korea Transport Institute (KOTI), Korea Hong-Seung Roh, Director, The Korea Transport Institute (KOTI), Korea

# **HS14 - Toward Dependable ITS in an Enormous Disaster**

## Wednesday, October 16, 2013, 16:00-17:30

C703

A great earthquake is imminent underneath the Tokyo metropolitan area and in Tokai-Kinki-Shikoku region of middle Japan. These areas are densely inhabited and the damage will be catastrophic. Therefore, it is sorely needed to mitigate/prevent heavy damage by all means. We have experienced a massive earthquake in March 11, 2011 and salutary lessons learned from this unprecedented earthquake should be effectively utilized. In this session, ITS and information/communication technologies that are conducive to reducing damage and saving lives are discussed. Experts from other countries are invited to share the experience and knowledge.

#### **Organizer & Moderator**

Harutoshi Yamada, Project Professor, The University of Tokyo, Japan

#### **Speakers**

Hiroshi Makino, Senior Director for Planning and Coordination, Central Nippon Expressway Company Limited, Japan Tomohiro Ikeda, Leader, Infrastructure Business Group, Mitsubishi Research Institute, Japan Speaker from Europe
Speaker from Americas
Speaker from Asia-Pacific

# **HS15 - Driving Behavior of Elderly Drivers and Their Safety Countermeasures (Part 2)**

Thursday, October 17, 2013, 09:00-10:30

C607

Traffic accidents caused by elderly drivers are increasing in number year by year according to the aging process of Japanese society. In Japan, 4,612 persons died in traffic accidents in 2011 and 2,262 of them were more than 65 years old. Traffic accidents by the elderly have remained one of the most important problems to solve in Japan. In this session, we will not only discuss traffic accidents and driving behavior of elderly drivers but also propose the safety countermeasures with ITS. This session is Part 2 because Part1 was already held at Vienna in 2012. (Mar1)

#### **Organizer**

Yasuhiko Kumagai, Professor, Kochi University of Technology, Japan

#### Moderator

Kaechang Park, Visiting Professor, Kochi University of Technology, Japan

#### **Speakers**

Fumitaka Kurauchi, Professor, Gifu University, Japan Koji Oguri, Professor, Aichi Prefectural University, Japan Kimihiko Nakano, Associate Professor, The University of Tokyo, Japan Yasuhiko Kumagai, Professor, Kochi University of Technology, Japan Hideo Inoue, Deputy General Manager, Future Project Division, Toyota Motor Corporation, Japan

## **HS16 - Deliverables from ITS Asia-Pacific Collaboration**

### Thursday, October 17, 2013, 14:00-15:30

C605

In urban traffic in Asia-Pacific region, ITS has been already introduced as a vital tool to solve the traffic problems, however it's not always successful in various aspects.

One of the important points of introducing ITS is to formulate national policy on ITS, such as a national ITS Master Plan. At this time, a guideline for ITS Master Plan has been developed with collaboration between ITS Asia-Pacific based on discussions through "ITS World Congresses", "Asia-Pacific ITS Forums" and the "Regional Workshops on ITS" collaborated with Asian Development Bank Institute.

On the other hand, discussions from academic viewpoints also have been going on based on the activities of the Asian Civil Engineering Coordinating Council (ACECC).

In this session, speakers from ITS Asia-Pacific and ACECC review the ITS Guideline and discuss collaborative issues of ITS in Asia-Pacific region.

#### Organizer

Nobukazu Kanesaki, Secretariat, ITS Asia-Pacific, Japan

#### **Moderator**

S. K. Jason Chang, Professor, National Taiwan University / Vice President, ITS Taiwan, Chinese Taipei

#### **Speakers**

Shunsuke Kamijo, Associate Professor, The University of Tokyo, Japan Hidehiko Akatsuka, Senior Vice President, ITS Japan, Japan Speakers from ITS Asia-Pacific

# **HS17 - Grass-roots ITS Promoted through Public, Private and Academia Partnership**

Thursday, October 17, 2013, 14:00-15:30

C609

Japan is regarded as one of the leaders of ITS development and deployment in the world. The number of VICS (Vehicle Information & Communication Systems) units or ETC (Electric Toll Collection) units shows that ITS is widely used throughout Japan. But, in the local area, it is hardly to say that ITS is recognized in general and had the ITS benefits. Therefore, there is the phenomenon called ITS Divide. For improving those situations, this session discusses about the characteristics of local areas, problems of regional ITS and the deployment procedure of regional ITS which we call Grass-Roots ITS.

#### **Organizer & Moderator**

Yasuhiko Kumagai, Professor, Kochi University of Technology, Japan

#### **Speakers**

Yasuhiko Kumagai, Professor, Kochi Prefecture Government, Japan Naoto Ono, Chief Engineer, Kochi Prefecture Government, Japan Speaker from, Traffic Planning Group, Kashiwa City, Japan Naoki Sakakibara, Staff, Shizuoka Prefecture, Japan Tran Vu Tuan Phan, Lecturer, University of Transport & Communication, Viet Nam

# **HS18 - Cooperative ITS for Now and the Next Round 2**

Thursday, October 17, 2013, 16:00-17:30

C605

This session is organized as round 2 session after Vienna 2012, SIS 83. As same as the session in 2012, speakers will be discussing the experiences of Cooperative ITS systems from real world and field operational testing. How these ITS systems contribute society from traffic safety or the other point of view. The other discussion point is performance study like Real performances of Cooperative ITS systems vs. expected performance. Progress in each region after World Congress in Vienna will be other discussion point. As the summary of the session, the attendees will discuss the subjects to be resolved for further Cooperative ITS system Deployment. A speaker from Japan will discuss about a story behind the "ITS GREEN SAFETY SHOWCASE", the cutting edge National Cooperative ITS Project Showcase on the Metropolitan Tokyo public road.

#### **Organizer & Moderator**

Takahiko Uchimura, Vice President, ITS Japan, Japan

#### **Speakers**

Markus Bauer, Total Vehicle Architecture and Integration, Integrated Safety, BMW Group, Germany
Mike Shulman, Techincal Leader, Ford Global Driver Assistance and Active Safety, USA
Toshio Yokoyama, Senior Chief Engineer, Future Transportation Systems Research Lab, Honda R&D Co., Ltd., Japan
Keiichi Mori, Chairman, Infrastructure Cooperative System Committee, ITS Japan / General Manager, IT & ITS Planning Division,
Toyota Motor Corporation, Japan

# **HS19 - Data Integration Issues and Standardization** - Creating Connected World Around Vehicles

Thursday, October 17, 2013, 16:00-17:30

C701/702

ITS systems need more advanced analytics combined with real-time information from many information sources such as camera and social messages, to provide safer and more useful ITS capabilities to ITS users. This requires the information visualisation and orchestration on the digitized maps. To realize this vision, we need the common framework of information unification by open data with common data semantics. This SIS will present the state-of-the-art technologies and discuss the future collaboration in this area.

#### **Organizer**

Tomoyuki Ezaki, Business Development Executive, Mobility & Transportation, Smarter Cities, IBM, Japan

#### Moderator

TBD

#### **Speakers**

Speaker from Europe Speaker from USA Speaker from Japan Speaker from China Speaker from Other area



# **Technical/Scientific Sessions**

■Scientific Paper

# TS001 - ADAS Systems

### Tuesday, October 15, 2013, 11:00-12:30

W401

An Applicable Evaluation of Human Machine Interface for Cooperative Adaptive Cruise Control of Trucks using a Truck Driving Simulator System

Rencheng Zheng, The University of Tokyo, Japan

- 3303 Development of HTML5 Application for Automotive Shizuka Tamura, Fujitsu Ten Limited, Japan
- 2920 User Evaluation of Cooperative C-ITSs: a Study of Ten Use Cases on a Dynamic Simulator Cecile Barbier, Renault, France
- 3035 The Traffic Safety Self-Learning System on the Internet and Its Effectiveness Koji Ukena, UK-Consultant, Japan
- 3257 Evaluation of Effective Notification for Various Target Vehicle Types on V2V Collision Avoidance Support Yuriko Ino, Honda R&D Co., Ltd., Japan

# **TS002 - Smart Phones and Speech Recognition**

Tuesday, October 15, 2013, 11:00-12:30

W402

3041 ITS Drive Assist System using Smartphone

Tomokazu Shimoda, Mitsubishi Motors Corporation, Japan

- **3910** A Proposal of a Detection Method for Simultaneous Smartphone Operation Yukihiro Okamoto, Meijo University, Japan
- 3154 Development of an Automatic Detection and Alarm System of Traffic Control for Drivers using Real-Time Analysis of Pictures on Cellular Phone Handsets Masatoshi Yokota, East Nippon Expressway Company Limited, Japan
- 2139 Speech Input Pre-Processing for Car Driver Robust Automatic Speech Recognition Sacha Vrazic. Free Impulse, France

## TS003 - Advanced Traffic Data Collection (1)

## Tuesday, October 15, 2013, 11:00-12:30

W403

- 2014 Deployment of Co-Operative Mobility Services of the Future Pekka Eloranta, Mobisoft Oy, Finland
- 3143 Monitoring Entire-City Traffic using Low-Resolution Web Cameras
  Tsuyoshi Ide, IBM Research Tokyo, Japan
- 1037 Determination of Vehicular Travel Patterns in an Urban Location using Bluetooth Technology Sule Yucel, ISSD, Turkey
- A Quantitative Study of Traffic Characteristics base on MTC Data from Tianjin Highway Network Pengpeng Jiang, Research Institute of Highway, Ministry of Transport, China
- **3359** Experiment based Accuracy Evaluation of Traffic Flow Detectors Data Yaqiao Zhai, Beijing Transportation Research Center, China
- 1024 Data Collection and Congestion Mapping using Existing PTZ Cameras Daniel J. Benhammou, Acyclica Inc., USA

## **TS004 - Sensors (1)**

Tuesday, October 15, 2013, 11:00-12:30

W404

- 3082 Experimental Study of Infrastructure Radar Modulation for Vehicle and Pedestrian Detection Takayuki Inaba, The University of Electro-Communications, Japan
- 3009 79GHz High Resolution and Wide Scanning Radar System Hidekuni Yomo, Panasonic Corporation, Japan
- **79GHz Ultra-Wide-Band Radar for Automotive Application** Katsuyuki Ohguchi, Fujitsu Ten Limited, Japan
- 3008 Sensor Fusion Method based on Millimeter-Wave Radar Profile and Stereo Camera Disparity Histogram Makoto Yasugi, Panasonic Corporation, Japan
- 3132 Millimeter Wave Radar using Stepped Multiple Frequency Complementary Phase Code Modulation in the Automotive Radar

Masato Watanabe, The University of Electro-Communications, Japan

3126 Lane Mark Detection using On-Vehicle Lidar for Platooning Naohito Takasuka, Denso Corporation, Japan

# TS005 - Traffic Control (1)

Tuesday, October 15, 2013, 11:00-12:30

W405

- 4150 Connected Vehicle based Dynamic All-Red Extension for Adaptive Signalized Intersections Xiqun (Michael) Chen, University of Maryland at College Park, USA
- **4074** Offset Optimization to Maximize Green-Time Overlap considering a Platoon for Network Signal Control Hiromasa Niimi, The University of Tokyo, Japan
- **4081** Self-Learning Algorithm and Signal State Prognosis at Traffic Lights for V2I-Applications Thomas Otto, GEVAS software Austria, Austria
- **4180** Estimating Queue Size from Single Loop Detector Data
  Johannes J. Bezuidenhout, University of Auckland, New Zealand
- **4183** Fully Distributed and Coordinated Traffic Control Strategy using Mesh Control George F. List, Consultant, USA

## TS006 - Traveler Information (1)

Tuesday, October 15, 2013, 11:00-12:30

W406

- 3069 Application of Advanced Traveler Information Service -Development and Prospect of Taipei City ATIS Web Huang Chun-Chia, Taipei City Government, Chinese Taipei
- 2030 ITS Innovation Stockholm Kista- Stimulating Innovative ITS Solutions in Sweden's First PCP Jens Lofgren, Sweco, Sweden
- 1010 Electronic Signage for Public Transport: Is It History? Carol L. Schweiger, TranSystems Corporation, USA
- 2023 Energy-Based Pedestrian Navigation
  Ari Virtanen, Technical Research Centre of Finland, Finland
- 2084 BayernInfo Traveller Information Services as a Means for Fostering New Mobility Concepts
  Ulrich Haspel, Bavarian Road Administration, Germany

■Scientific Paper

W407

# **TS007 - Traffic Modeling (1)**

Tuesday, October 15, 2013, 11:00-12:30

3298	The Traffic Simulator for EV and Electrical Bus in Consideration of Road Grade Information
	Hiroyuki Kozawa, Mitsubishi Heavy Industries, Ltd., Japan
1054	A Systematic Genetic Algorithm based Framework to Optimize Intelligent Transportation Sys

- 1054 A Systematic Genetic Algorithm based Framework to Optimize Intelligent Transportation System (ITS) Strategies Guangyu Zou, Xerox, USA
- 3062 Development of a Validation Scheme for CO₂ Emission Estimation Methodology using a Simulation Model Daisuke Oshima, The University of Tokyo, Japan
- 3103 Simulation for Operating Additional Buses based on Demand in Toyota City Low-Carbon Society Verification
  Project
  Masahiro Kuwahara, Toyota Info Technology Center Co., Ltd., Japan

# TS008 - ETC Technology (1)

Tues	day, October 15, 2013, 11:00-12:30	W408
1035	ROI Makes ANPR an Easy Sell Paul Everett, IHS, USA	
3106	Implementation of EMV Payment in Vehicle for Cashless Payment Hisaya Sano, National Institute for Land and Infrastructure Management, MLIT, Japan	
3260	Vehicle Detection and Dimension Measurement with Laser Scan Sensor Masayuki Ota, Mitsubishi Heavy Industries, Ltd., Japan	
3333	Improvement of the Electromagnetic WAVE Environment at ETC Toll Gates Yoshiaki Tsuda, Mitsubishi Electric Corporation, Japan	
1014	Port Mann Bridge All Electronic Tolling : Return of Experience of the Launchi	ng of the Operation

3051 A Study of Active DSRC OBU for Multi Payment Media Saku leuji, Mitsubishi Heavy Industries, Ltd., Japan

Pascal Lemonnier, EGIS Projects, France

# **TS009 - Public Transport Operations**

Tues	day, October 15, 2013, 11:00-12:30	W409	
3209	Proposal for Novel Bus Location System using Wireless Sensor Network Motonari Hata, Meijo University, Japan		
3245	An Empirical Analysis of the Relation between Access to Bus Operation Information and Bus Use Hiroyuki Oneyama, Tokyo Metropolitan University, Japan		
3264	Multi-Directional Dispatch Platform: Cloud Taxi Ya-Wen Chen, National Taiwan University, Chinese Taipei		
4164	Approximation and Short-Term Prediction of Bus Dwell Time Using AVL Data Prakash Ranjitkar, University of Auckland, New Zealand		
3374	Information Hub for Bus Performance Improvement Tonny Yeap, Land Public Transport Commission (SPAD), Malaysia		

# TS010 - Supply Chain

Tuesday, October 15, 2013, 11:00-12:30

W410

- 3214 Trip Chaining and Logistics in a Commodity based Freight Model Houston Area Freight Model Vamsee K. Modugula, Citilabs, India
- 2085 Ecosystems for Intelligent Cargo and Its Impact on Resilient Supply Chains and Emission Reduction Martin Dobler, Vorarlberg University of Applied Sciences, Austria
- 2916 Lean and Reliable Digital Supply Chains T-Scale Platform Case Study Marcin Hajdul, Institute of Logistics and Warehousing, Poland
- 2152 Use of Automated Control System of Multimodal Logistics based on GLONASS/GPS Alexandr Boreyko, Navigation-information Systems, Russia
- 2921 Innovation through Improvement of Supply Chain Security
  Johan Scholliers, VTT Technical Research Centre of Finland, Finland

## **TS011 - Reducing Energy Consumption through ITS**

Tuesday, October 15, 2013, 11:00-12:30

W411

- 3328 Vehicle's Energy Efficiency Determination: Case Study Bangkok Traffic
  Raksit Thitipatanapong, National Electronics and Computer Technology Center (NECTEC), Thailand
- 3373 Optimization of Train Running Profile on the Basis of Pruning Algorithm Yukinori Tonosaki, Toshiba Corporation, Japan
- 2129 European and United States Scenarios for Energy Efficient Traffic Signal Operations Jaap Vreeswijk, Imtech Traffic & Infra, The Netherlands
- A Research on the Ecomobility Planning and Application of ITS for Energy Saving and Carbon Emission Reduction

Foun-Shea F. Chang, Institute of Transportation, MOTC, Chinese Taipei

**4165** Energy-Efficient Train Movement under Steep-Gradient Track Fangming Zhou, Research Institute of Highway, MOT, China

## **TS012 - Driver Safety Support**

Tuesday, October 15, 2013, 14:00-15:30

W401

- 3179 Development of the Driver Assistance System for the High Speed Tunnel Lighting Cleaning Truck Futoshi Okubo, Central Nippon Expressway Company Limited, Japan
- 3227 Information Service for Safe Driving by Using Road Section Identification Data Set (RSIDs) by Public-Private Initiative

Takashi Kodama, Hanshin Expressway Company Limited, Japan

- 3125 Development and Verification Test of Driving Safety Support Systems utilizing ITS Radio System Yuichi Taniguchi, Sumitomo Electric Industries, Ltd., Japan
- **2125** Advanced Design of Motorcycle Approaching Indication Takeshi Chiba, Honda R&D Co., Ltd., Japan
- 3050 Development of Communication based Intersection Support and Safety System (ISS) Manbok Park, MANDO Corporation, Korea

■ Scientific Paper

W403

## **TS013 - Logistics**

Tuesday, October 15, 2013, 14:00-15:30

W402

W4

# **TS014 - Advanced Traffic Data Collection (2)**

Mats Jonsson, Logistics, Sweden

Tuesday, October 15, 2013, 14:00-15:30

3177	Estimating Vehicle Trajectories on a Motorway by Data Fusion of Probe and Detector Data
	Takeshi Ohata, Tohoku University, Japan

3942 Reconstruction of the Missing Data of Location-Specific Detectors using Spatial-Temporal Relatively Weight Method

Ling Sun, Research Institute of Highway, Ministry of Transport, China

3012 Research on Future Provision of Road Traffic Information with Coordinated Broadcast and Communications Media

Fujinori Ozawa, Vehicle Information and Communication System Center (VICS), Japan

3172 Data Fusion Analysis for Traffic Management in Disaster and Normal Situations
Takeshi Ohata, Tohoku University, Japan

3391 Development of Ramp Metering Methodology based on Individual Vehicle Data Kyu-Ok Kim, The Korea Transport Institute (KOTI), Korea

2149 The BLIDS-Protocol, a SALT-Based Encryption Method for the Collection of BT and WLAN based Traffic Data to Comply Even with the Highest Data Privacy Requirements
Erich Jaekel, cccom GmbH, Austria

# **TS015 - Sensors (2)**

Tuesday, October	15, 2013, 14:00-15:30	W404

- **4036** Cognitive Vision for Driving Environment Categorization using Network-Type Fusion Toshio Ito, Daihatsu Motor Co., Ltd., Japan
- 3080 Improving the Pedestrian Actuated Signal Control System by detecting the Presence of Slow-Walking Pedestrians

Takanori Yamada, The Nippon Signal Co., Ltd, Japan

- 3275 Development of Image-Processing Vehicle Detector for DSSS (Driving Safety Support System)
  Yoshiteru Koreeda, Sumitomo Electric System Solutions Co., Ltd., Japan
- **4141** Detecting and Stabilizing Shaky Segments in Long Omnidirectional Videos of Streets Mostafa Kamali, The University of Tokyo, Japan
- 3283 Individual Vehicle Level Evaluation of Loop, Video Image, and Microwave Detector Jinhwan Jang, Korea Institute of Construction Technology (KICT), Korea

3241

# TS016 - Traffic Control (2)

Tuesday, October 15, 2013, 14:00-15:30
 Traffic Signal Control Optimization using Genetic Algorithm and Signaling Model Modification
 IGP Suta Wijaya, Mataram University, Indonesia
 Effects and Future Plans for MPD Traffic Control System/Traffic Data Collection and Analysis Function
 Satoshi Hashimoto, Sumitomo Electric System Solutions Co., Ltd., Japan
 Traffic Signal Performance Evaluation: an Example of Greedy Randomized Tabu Search Algorithm
 Li-Wen Chen, Chung Hua University, Chinese Taipei
 Improving SCATS Performance in Oversaturation Conditions in order to Deal with Queue Spillback using Queue
 Detector in Tehran City
 Nazli Dehghani, Tehran Traffic Control Company, Iran
 Development of Traffic Signal Control based on Statistical Travel Time

# TS017 - Traveler Information (2)

Yuzo Hirotsu, Panasonic System Solutions Infrastructure Co., Ltd., Japan

Tuesday, October 15, 2013, 14:00-15:30 W406
 Easyway Deployment Guideline for Co-Modal Traveler Information
 Ulrich Haspel, Bavarian Road Administration, Germany
 Deepening the Use of Social Media in ITS: Idaho's Cars-Vox "Citizen Reporting" Project
 Peter Davies, Castle Rock Associates, USA
 Multimodal Traveller Information - from a Local Approach to Interoperable Cross-Border Services
 Martin Böhm, AustriaTech GmbH, Austria

"Smart Routing" Provides a Better User Experience to the Driver with Floating Car Data Shinichi Amaya, Clarion Co., Ltd., Japan

3191 Profiling Bangkok Travel Time using a Data Warehousing Approach
Pimwadee C. Awad, National Electronics and Computer Technology Center (NECTEC), Thailand

3332 The Taxi Strike Augment Bus Information Using
Daehee Han, Sungkyunkwan University, Korea

## TS018 - Traffic Modeling (2)

Tuesday, October 15, 2013, 14:00-15:30 W407

3377 SimMobility: Integrated Activity based Modeling
Kakali Basak, Singapore-MIT Alliance for Research and Technology, Singapore

3248 Verification of Vehicle Acceleration Behaviors using Microscopic Traffic Simulation Model Hiroyuki Oneyama, Tokyo Metropolitan University, Japan

2127 Comparison Study of Software Tools for Online Traffic Simulation Supporting Real-Time Traffic Management of Heterogeneous Road Networks

Andreas Pell, University of Applied Sciences Upper Austria, Austria

**2020** Validation of a Multi-Objective, Predictive Urban Traffic Model Isabel R. Wilmink, TNO, The Netherlands

1904 Calculating Optimized Coordinated Trajectories for Intelligent Vehicles in Highways Ricardo Reghelin, UTFPR/IFC, Brazil

# TS019 - ETC Technology (2)

Tuesday, O	ctober 15, 2013, 14:00-15:30	W408
	cal Approach for Remote Operational Lanes Hamamoto, Highway Toll Systems Co., Ltd., Japan	
•	n Evaluation Test in Singapore for GNSS/CN Based Road Pricing Systemic Matsunaga, Mitsubishi Heavy Industries, Ltd., Japan	em
,	Electronic Tolling Solution for France: Schindler, Siemens Electronic Tolling, Austria	
	tication of Maintenance Work by utilizing Multi-Function Measuremen u Omokawa, Nexco-East Engineering Company Limited, Japan	t Vehicle
	pment of the Services and Strategies for Smart Tolling System based ng Park, ITS Korea, Korea	on Any Media
	Electronic Toll Collection In Poland - Experience and Outlook Konzett, Kapsch TrafficCom AB, Austria	

# **TS020 - Aspects of Electromobility (1)**

Tues	day, October 15, 2013, 14:00-15:30	W409
3042	Prediction Method of Cruising Range using Probe Data for Electric Vehicle Masayoshi Ito, Mitsubishi Motors Corporation, Japan	
2096	New Electric Bus System with Wireless Underground Power Supply and Auto Ernst Pucher, Vienna University of Technology, Austria	omatic Guidance
2107	Vehicle-to-Infrastructure Communications for Electric Race Car Alvaro Arrue, Applus IDIADA Automotive Technology S.A., Spain	
3372	Development of an EV Simulator for Estimating Electric Energy Consumption using Running Resistances Varying by Location Ena Ishii, Toshiba Corporation, Japan	
3189	Analysis of Electric Vehicle Traffic considering Recharging Behavior Haruhisa Akatsuka, The University of Tokyo, Japan	

# **TS021 - Transport Policy Issues (1)**

		*	
Tues	day, October 15, 2013, 14:00-15:30		W410
2155	ITS Strategy of Turkey Emine Altintas, Turkish Ministry of Transport, Maritime and G	Communication, Turke	/
2005	Comprehensive Overview of Recent Its Achievements in Roberto Bauducco, Swedish Transport Administration, Swe		
3110	Singapore Intelligent Transport Systems Master Plan 2.6 Kian Keong Chin, Land Transport Authority, Singapore	)	
2126	Finland's Second Generation Strategy for ITS - Intellige Marko K. Forsblom, Ministry of Transport and Communication	•	Wisdom for Travellers
2002	ITS All About Implementation Anders-Martin Fon, Norwegian Ministry of Transport and Co	ommunications, Norwa	у
2158	ITS Policy and Business Outcomes Richard G Harris, Xerox, United Kingdom		

# **TS022 - Congestion Detection and Speed Criteria**

Tuesday, October 15, 2013, 14:00-15:30

W411

- 4177 Traffic Density Estimation of Signalised Arterials with Stop Line Detector and Probe Data Takahiro Tsubota, Queensland University of Technology, Australia
- 3353 Detection of Congestion Change using Decision Tree Sangwoo Shim, Ajou University, Korea
- 3168 Providing a Route Passing through Traffic Signals Effectively a Study of the Stopping Pattern Extraction Model at Corridor Intersections with Traffic Signals
  Jianwu Zeng, Aisin AW Co., Ltd., Japan
- 3949 Study on the Speed Criteria of Expressway Traffic Conditions for FTMS using Break Points of Three-Regime Traffic Flow Models

  Eum Han, Ajou University, Korea
- 4115 Recurrent Congestion Recovery Detection Algorithm in Freeway Kittipong Hiriotappa, National Electronics and Computer Technology Center (NECTEC), Thailand

### TS023 - Driving Safety

Tuesday, October 15, 2013, 16:00-17:30

W401

- 3300 Controlling Bicycle Speed by Visual Perception, Road Marking "Optical Dot System" for Bicycles Ayumi Han, The University of Tokyo, Japan
- **2123 Evaluating Pictograms : Use of the Tachistoscopic Test** Romain Chaumontet, MEDDE, France
- 2028 Trafisafe Supporting Learning in Novice Drivers Mikko Tarkiainen, VTT, Finland
- 2901 Automated Detection and Classification Process for Critical Incidents and Driving Events by Means of Vehicle Data
  Mohamed Benmimoun, RWTH Aachen University, Germany

# TS024 - Driver Detection System (1)

Tuesday, October 15, 2013, 16:00-17:30

- Detection of Driver's Low Vigilance using Vehicle Steering Information and Facial Inattention Features
  Jia-Xiu Liu, Automotive Research & Testing Center, Chinese Taipei
- 3911 Verification on the Effect in Relieving Fatigue of The Driver by Fragrance that Stimulates the Serotonin Secretion Yuya Ogawa, Meijo University, Japan
- 3290 Psychophysiological and Behavioral Effects of Drowsy Driver Alert Systems: Comparative Study of Eye Closure and Heart Rate based Alarms
  Shin Osuga, Aisin Seiki Co., Ltd., Japan
- 3268 Driver Condition Monitoring Device using a Smartphone with an Ear-Clip Sensor Yasuhiko Nakano, Fujitsu Laboratories Ltd., Japan
- 3224 Estimation of Driver's Drowsiness Level considering a Characteristic Sleepiness Transition of Drowsy Driving Akihiro Imai, Aichi Prefectural University, Japan
- 3182 Providing the Driver with the Most Appropriate View according to the Change in the State of the Vehicle for Bus Mitsuaki Yamaguchi, Yazaki Energy System Corporation, Japan

# **TS025 - Traffic Detection Technologies**

Tuesday, October 15, 2013, 16:00-17:30 W403 How the "Railreader Maintenance Support" Ensures a High Level of Safety and Availability in Railway Networks Martin Novak, Prosoft Sued Consulting GmbH, Austria 3392 Cellular and 802.11P together for Better ITS Linyi Tian, Department of Standardization, Huawei, China 3185 The Automated Analysis of the Video and Sensor Measurements at the Occurrence of Traffic Near-Accidents Logged by Video Event Data Recorders on Automobiles Kentaro Kondo, Fujitsu Limited, Japan Acoustic Traffic Detection, a Reliable Standalone Tool and a Crucial Complement in a Multi Sensor System 1032 Marcos A. Meneses, Founder, Argentina 3015 Vehicle Detection using Milliwave Radar Transmitting Orthogonally Takafumi Tokuhiro, Panasonic Corporation, Japan Vehicle Detection in Dense Traffic using Electronically Scanning Millimeter-Wave Radar

# **TS026 - Sensors (3)**

Kazuhiko Shite, Fujitsu Limited, Japan

Tues	day, October 15, 2013, 16:00-17:30	W404
4067	Classify 3D Point Cloud using Relationship Descriptor Yiming Liu, The University of Tokyo, Japan	
3370	Automatic Detection and Recognition of Thai License Plate Yasuo Ogiuchi, Sumitomo Electric Industries, Ltd., Japan	
3313	The Method Recognizing the Trailgating-Cars at a Crossroad based on a KLT Tracking using the Image Frames Played Backward Inwon Lee, KyungPook National University, Korea	
3336	Study on Personnel Access System based on RFID and Face Recognition Te Zhao Jiahai, National Center of ITS, China	chnology
3094	MEMS Flow Vector Sensor for Measuring Velocity and Direction of Wind Yoshimitsu Kanaoka, Yazaki Corporation, Japan	

## TS027 - Traffic Control (3)

Tuesday, October 15, 2013, 16:00-17:30		W405
3160	Utilizing Probe Information for the Signal Controls Katsuhisa Kawasugi, Metropolitan Police Department, Japan	
3945	The Mixed Flow Signal-Control Model with Optimization at Single Road Inters Motorcycles with Case Study of Cloud Device Application Shing Tenqchen, CHTTL, Chinese Taipei	section for Both Cars and
3233	V2V, I2V/V2I and I2I Communication Service with 700MHz-Band for ITS Kengo Kishimoto, Sumitomo Electric Industries, Ltd., Japan	
3950	Case Study of Queue Growth Equity Method for Urban Traffic Signal Optimization Byun, Korea Advanced Institute of Science and Technology, Korea	ation
1046	Real Progress, Great Measures! Real-Time, Real-World Traffic Management F of Traffic Signal Operational Objectives Douglas Gettman, Kimley-Horn, USA	Performance Measures for Validation

### **TS028 - Personalized Information**

Tuesday, October 15, 2013, 16:00-17:30

W406

- 2001 Universal Design in Public Transport Information Services- Assisting Visually Impaired Orjan Tveit, Norwegian Public Roads Administration, Norway
- 3289 A Study on the Pedestrian Route Guide System for Inducing Carbon Emission Reduction Kyunghoon Kang, ZAOLSOFT, Korea
- **3948** A Scheme to Build a System for Smart Mobility-Based Future Transport Services Dahee Hong, The Korea Transport Institute (KOTI), Korea
- 3087 Verification Test on the Effect of Individual Information Provision Services on Existing On-Board Units Junpei Sawa, National Institute for Land and Infrastructure Management, MLIT, Japan

### TS029 - Traffic Predictions through Modeling and Simulations

Tuesday, October 15, 2013, 16:00-17:30

W407

- 3371 DynaMIT 2.0: Advances in Real Time Traffic Simulators
  Stephen Robinson, Singapore-MIT Alliance for Research and Technology, Singapore
- 3060 Development of the Nowcast Traffic Simulation System for Road Traffic in Urban Areas Hisatomo Hanabusa, i-Transport Lab. Co., Ltd., Japan
- 3352 Using Traffic Information in Operations Analysis for Response of Emergency Services Mohit Sindhwani, Quantum Inventions Pte Ltd, Singapore
- **4127** Parallelized Traffic Prediction with a Nonlinear Model Yubin Wang, Trinie Automation, The Netherlands

### TS030 - Interoperability for ETC

Tuesday, October 15, 2013, 16:00-17:30

- 1052 Convergence: Will ITS and Tolling Converge?

  Joseph Averkamp, TUV Rheinland, USA
- 2118 Interoperability -Is It a Benefit to Road Users?
  Timothy S. Gammons, Ove Arup & Partners Ltd, United Kingdom
- 3215 A Study on a Measurement Method for Wave Absorbers using a Metal-Plate Lens Antenna Yasuyuki Matsuda, Nippon Expressway Research Institute Company Limited, Japan
- 2086 Interoperability and Multi-Application Support in Dedicated Short Range Communication Systems Carl Olov Carlsson, Kapsch TrafficCom AB, Sweden
- 3287 Cost-Effective ETC System using ID Tag
  Masato Kato, Mitsubishi Heavy Industries, Ltd., Japan
- 1007 Clearing House as a Business Model for Tolling Interoperability
  Pascal Lemonnier, EGIS Projects, France

# TS031 - Aspects of Electromobility (2)

W409

- 2917 Real-Time In-Car Emission Measurement of a Hybrid Vehicle for Improved Eco-Driving in Urban Areas Ernst Pucher, Vienna University of Technology, Austria
- 4031 An Energy Management System using Trip Information and Fuzzy Logic for a Plug-In Hybrid Electric Vehicle Nicolas Denis, Sherbrooke University, Canada
- 3921 Development of the Algorithm for On-Demand Transportation with Electric Vehicles Kei Ishiguro, The University of Tokyo, Japan
- 4032 Power Split Strategy for a Plug-In Hybrid Electric Vehicle using Driving Pattern Recognition and Genetic Algorithm

Nicolas Denis, Sherbrooke University, Canada

### TS032 - Transport Policy Issues (2)

Tuesday, October 15, 2013, 16:00-17:30

W410

- 2130 A New Sustainable Paradigm for Taxing Vehicle Use
  Duncan G. Matheson, PA Consulting Group, United Kingdom
- 3943 Chinese Public Transport Operation Mode Research based on the Limited Liability Government in the New Situation: Case Study of Foshan, China

Wenjing Wang, Research Institute of Highway, Ministry of Transport, China

2903 The Contribution of Intelligent Transportation Systems to Sustainable Development of Austria as a Business Location in 2020 - a Delphi Study

Friedrich P. Starkl, FHOOE Logistikum Steyr, Austria

- 2017 The Issue: Traffic, Health, Environment; Intelligent Solutions Sustaining Urban Economies
  Jacques Bouffier, CETE SO (French Ministry of Transportation), France
- 1039 Ethical and Legal Issues facing Government Agency Collection, Management, and Use of ITS Data Richard Wallace, Center for Automotive Research, USA

### TS033 - Traffic Management Strategy

Tuesday, October 15, 2013, 16:00-17:30

W411

2033 Compliant Roads

Paul Marsh, Mouchel, United Kingdom

- 2098 In-Vehicle Systems -A Challenge Or Panacea for Network Operators?
  lan W. Patey, Mouchel, United Kingdom
- 3043 Nationwide Deployment of a Lane Usage Regulation Service as a Congestion Countermeasure at Expressway Sag Sections

Kazufumi Suzuki, National Institute for Land and Infrastructure Management, MLIT, Japan

- 3383 A Study on the Priority Determination using the AHP method in ATMS Beomil Kim, The Korea Transport Institute (KOTI), Korea
- 3345 Development of National Road Network Operation Monitoring Information Reporting System Hong-Hai Li, Research Institute of Highway, Ministry of Transport, China

### **TS034 - Collision Avoidance**

### Wednesday, October 16, 2013, 11:00-12:30 W401 Smooth Stop Brake Control for Passenger Car for Full-Speed Range Adaptive Cruise Control 3358 Yosuke Hashimoto, ADVICS Co., Ltd., Japan 3936 Characterization of Vehicle Congestion Detection Device by Diffraction Properties of Millimeter-Wave Byung Hwa Kim, Korea Institute of Construction Technology (KICT), Korea 2069 Key Findings from the Development of a V2X Data Visualization Solution Boris Atanassow, Denso Corporation, Germany Towards the Development of a Laserscanner-Based Collision Avoidance System for Trams 2046 Roman Katz, Ibeo Automotive Systems GmbH, Germany 2024 Impact Assessment Methodology in Interactive Felix Fahrenkrog, RWTH Aachen University, Germany

### TS035 - Driver Detection System (2)

Wednesday, October 16, 2013, 11:00-12:30

Wedi	nesday, October 16, 2013, 11:00-12:30	W402
2044	"UR:BAN MV" - A German Project Focusing on Human Factors to Increase Tr Dietrich Manstetten, Robert Bosch GmbH, Germany	raffic Safety in Urban Areas
3170	A Study of the Personal Adaptive Driver Support System using a Big Data An Kyohei Morita, Fujitsu Ten Limited, Japan	alysis
3274	Towards Safety Driving Assistance: a Method for Robust and Accurate Eye Corner Detection for Gaze Information Monitoring Shanshan Yu, Fujitsu Laboratories Ltd, Japan	
3140	Human-Vehicle Intelligent Communication with Advanced Steering Wheel and Smartphone Yoichi Hasegawa, Aichi Prefectural University, Japan	
3218	Evaluation of Driver's Acceptance of a Road Work Site Information System for Junya Kobayashi, Toyota Motor Corporation, Japan	or Highways

# **TS036 - Improving Efficiency in Traffic Management (1)**

3915	Determining the Urban City-Traffic Situation using ITS Spots- Initiatives at Kashiwa City, Chiba Prefecture - Masahiro Koibuchi, Mitsubishi Research Institute, Inc., Japan
3201	Data Utilization in Fleet Management Systems Satomi Yoshioka, Denso Corporation, Japan
3932	City Notifications as a Data Source for Traffic Management Biplav Srivastava, IBM Research - India, India
3228	Study on Application of Uplink Data Collected via Infrared Beacons to Traffic Management Koichiro Iwaoka, Panasonic System Solutions Infrastructure Co., Ltd., Japan

### **TS037 - Vehicle Positioning (1)**

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Wednesday, October 16, 2013, 11:00-12:30

W404

- 3031 Detection of Emergency Telephone Indicators using Infrared Cameras for Vehicle Positioning in Tunnel Environment
  - Zhipeng Wang, The University of Tokyo, Japan
- 3174 Vehicle Navigation System using UHF RF-ID with Two Antennas
  Takeshi Kawamura, Kitami Institute of Technology, Japan
- 3935 An Analysis on the Mutual Recognition between RSE for Road Traffic Information and OBU for Vehicles in Uninterrupted Flow Segment
  - Byung Hwa Kim, Korea Institute of Construction Technology (KICT), Korea
- 3119 Accuracy Improvement by Phase Only Correlation for Distance Estimation Scheme for Visible Light Communications using a LED Array and a High-Speed Camera
  Akihiro Ohmura, Nagoya University, Japan
- 3141 Application of the Camera-Equipped Drive Recorder to the Recognition of Road Surface Markings
  Hiroyuki Oishi, Yazaki Energy System Corporation, Japan
- 3115 Results of a Fundamental Experiment Evaluating Heavy Vehicles' Driving Route Monitoring Technologies
  Takahiro Tsukiji, National Institute for Land and Infrastructure Management, MLIT, Japan

### TS038 - Traffic Control (4)

Wednesday, October 16, 2013, 11:00-12:30

W405

- 3325 Development of the Next Generation Smart Traffic Signal Devices
  Quanfang Fan, Zhejiang SUPCON Information Technique Co., Ltd., China
- 3046 Effects and Future Plans for Sophisticated MPD Traffic Control Kazuyuki Takahashi, Sumitomo Electric System Solutions Co., Ltd., Japan
- 2143 Always Green at Traffic Lights for Emergency Vehicles
  Jukka Talvi, City of Oulu, Finland
- 3054 Experimental Report of the Pedestrian Control using Vehicle Arrival Prediction Information Takeyoshi Tayamachi, The Nippon Signal Co., Ltd., Japan
- 3924 Analysis of BRT Priority Signal Control System Implementation in Major Intersections of Khon Kaen City Shota Toma, Nihon University, Japan

# TS039 - Communications (1)

Wednesday, October 16, 2013, 11:00-12:30

- 2016 Investigation of ITS Coexistence on The Physical Layer Liesbeth Gomme, NXP Semiconductors, Belgium
- 3291 Development of GPS-Equipped Audio Type ITS Spot-Compatible on Board Unit Hayato Fujii, Panasonic Corporation, Japan
- **4098** High Throughput Routing based on SNR Prediction for Variable Mobility Nodes Tsubasa Suzuki, The University of Electro-Communications, Japan
- 2078 The Constraints of 4G/LTE Deployment in Underground Metros Cedric Levy-Bencheton, Egis Rail, France
- 3342 Development of High-Speed V2I and V2V Communication Technology for Ubiquitous Vehicular Network Yuan Zhan, SUPCON, China
- 3091 Time Synchronization of Plural Roadside Units in 700 MHz Band Intelligent Transport Systems Fumiya Saitou, Sumitomo Electric Industries, Ltd., Japan

# **TS040 - Parking Systems and Management**

Wednesday, October 16, 2013, 11:00-12:30

W407

- 3288 Proposal of a Parking ITS Service to Associate Multiple Parking Facilities in Kashiwa City Central Area Masahide Sasaki, Kashiwa City, Japan
- 2032 Fix for the Missing Link in Parking Guidance Two-Way Pedestrian Guidance in Car Parks Ali Lattunen, Finnpark Ltd, Finland
- 2154 Dynamic Parking Pricing and Future Developments Robert De Beukelaer, Xerox Services, The Netherlands
- 2133 Low Cost Stereovision based Truck Parking Occupancy Detection Wouter Favoreel, Traficon International N.V., Belgium

### TS041 - Mileage Base / Congestion Pricing

Wednesday, October 16, 2013, 11:00-12:30

W408

- Marketing Development for a Free Flow Operation: from User to Customer Management Pascal Lemonnier, EGIS Projects, France
- 3217 Improvement of the Free Flow System by Arrangement of Antenna
  Akira Watanabe, Nippon Expressway Research Institute Company Limited, Japan
- 3295 Introduction of Discount System by Collating Data of Roads having Different Toll Collection System in Metropolitan Area
  Hiroki Sako, West Nippon Expressway Company Limited, Japan
- 3946 Modernising a Commercial Vehicle Weight Mileage Tax Regime Nina Elter, EROAD, New Zealand
- 1053 Assessing the Utility of In-Vehicle Safety Signage and Its Impact on Driving Behavior Christopher Armstrong, SAIC, USA

### TS042 - Aspects of Electromobility (3)

Wednesday, October 16, 2013, 11:00-12:30

W409

- 3299 Smart Mobility Project, ZEM2ALL Shinya Yano, Mitsubishi Heavy Industries, Ltd., Japan
- 2105 Understanding Electric Vehicles Usage and the Role of ITS: the North East England Electric Vehicle and Infrastructure Trials

Yvonne Huebner, Newcastle University, United Kingdom

- 3039 An Application Platform for Electric Vehicle Route Planning
  Shigeki Nishimura, Sumitomo Electric System Solutions Co., Ltd., Japan
- 3175 Development Of EV's Power Consumption Estimation Engine on Distributed Processing Platform Junji Yano, Sumitomo Electric Industries, Ltd., Japan
- 2092 Urban Electric Mobility Impacts on Road Pollutant Emissions: the Role of ITS and Traffic Management Solutions Simone La Spada, University of Roma Tre, Italy

# **TS043 - Professional Development, Education and Training**

### Wednesday, October 16, 2013, 11:00-12:30

W410

- 3089 Development of the Safe Driving Training System with Driver Identification Kazuaki Goshi, Kyushu Sangyo University, Japan
- 3063 Improvement of Maintenance Skill and Technology by utilizing Technical Training Center (TTC) Yasushi Nasaka, Nexco-East Engineering Company Limited, Japan
- 2113 Innovation and Talent Management: a Strategic Challenge for ITS Professional Education and Training
  Petra Wagner-Luptacik, AIT Austrian Institute of Technology, Austria
- 2912 Automatic Construction of ITS Ontologies with Structure and Syntactic Analysis Specific to ITS Documents
  Naohiro Nakamura, Keio University, Japan
- 2151 Talents for ITS Coordinated Policy Measures to Avoid the Brain Drain in the ITS Industry Best Practices and Lessons Learned from the ITS World Congress 2012 in Vienna Sarah Krautsack, Austrian Federal Ministry for Transport, Innovation and Technology, Austria

### **TS044 - Location-Based Systems**

### Wednesday, October 16, 2013, 11:00-12:30

W411

- 1051 ITS: Can't We Just Do This with My Wireless Phone?
  Joseph Averkamp, TUV Rheinland, USA
- **3369** Future Urban Mobility Survey: a Next Generation Travel Diary Technology
  Francisco C. Pereira, Singapore-MIT Alliance for Research and Technology, Singapore
- **4140** On-Vehicle Videos Localization using Geometric and Spatio-Temporal Information Kazuma Fukumoto, Kagoshima University, Japan
- 3344 Lords, Design and Implementation of Location-Based Digital Signage System Yasuhito Tsukahara, Keio University, Japan
- 3271 Infrastructure of Application for Using Location Information
  Naoki Harashina, Fujitsu Limited, Japan

### TS045 - Obstacle Detection Systems (1)

### Wednesday, October 16, 2013, 14:00-15:30

- From Assisted Parking to Automated Driving
  Bernd Giesecke, Niles Co., Ltd., Japan
- 2037 The Integrated Object Recognition Approach of the Novel MiniFaros Laserscanner Nikolaos Floudas, Institute of Communication and Computer Systems, Greece
- 3010 Digital Road Map Generation using Conventional In-Vehicle Sensors for ADAS Application Junichi Meguro, Toyota Central R&D Labs., Inc., Japan
- 2093 Real-Time Bicycle Recognition for Intelligent Rear Collision Warning Systems Reza Shirvany, IMRA EUROPE SAS, France

### TS046 - ADAS Related to Lane Detection

### Wednesday, October 16, 2013, 14:00-15:30

W402

- 3076 Merging Assistance at an Expressway Ramp with Vehicle-to-Vehicle Communications Kuniaki Sakakibara, Meijo University, Japan
- 3056 A Study of Lane Keeping Assistance by Steering Control based on Muscular Activity Hideki Takahashi, Mazda Motor Corporation, Japan
- 3908 Enhancement of Lane Departure Warning System in Short Term Autonomous Warning using Inertial Sensors Assistance
  Chan Wei Hsu, Automotive Research & Testing Center, Chinese Taipei
- 3305 Benefit Estimation of a Lane Departure Warning System based on Reconstructed Accident Scenes Shin Tanaka, Toyota Motor Corporation, Japan
- 3312 Cooperative System Applied on Merging Assistance in China Dongzhu Wang, National ITS Center, China

### TS047 - Improving Efficiency in Traffic Management (2)

Wednesday, October 16, 2013, 14:00-15:30

W403

3265 An Analysis of Parking Duration for Short-Term Prediction of Congestion at Rest Area using Individual Detection Data

Nobuhiro Uno, Kyoto University, Japan

- 3193 An Ontology Design for Traffic Incident Q&A System
  Napong Wanichayapong, National Electronics and Computer Technology Center (NECTEC), Thailand
- 3018 Multi-Hop Communication and Multi-Protocol Gateway for Disaster Network Assumed Vehicles as Local Network Nodes

Takashi Ohyama, Oki Electric Industry Co., Ltd., Japan

- 3956 The Real-Time Traffic Status Identification of Signalized Intersections based on Floating Car Data Aoxiang Wu, Tongji University, China
- 3335 Identifying Overweight Vehicles Crossing the Auckland Harbour Bridge using WIM, ANPR and Statistical Analysis lan J. Leach, Auckland Motorway Alliance, New Zealand
- 1047 Border Wait Time Implementation Experiences Roy Sumner, FreeAhead Inc., USA

# TS048 - Vehicle Positioning (2)

### Wednesday, October 16, 2013, 14:00-15:30

- 3197 Combination RTLS Of GPS/RTK And RF-Beacon in Unavailability Area for Safety Lane Detect Sang Chan Moon, Kyung Hee University, Korea
- Preliminary Result from the Experiment to Integrate Car-Sensor Data and New Positioning Technique using Augmentation Signals from QZSS Satellite for Where-in-Lane Positioning Yoshimi Ohshima, NEC Corporation, Japan
- 3121 Robust Dead-Reckoning In Urban Area With Tightly Coupled Integration Of GPS-Doppler And Ins Kojiro Takeyama, Toyota Central R&D Labs., Inc., Japan
- **4018** A Study on Accuracy of Calculated Mileage based on GNSS Technology Shoichi Suzuki, National Institute for Land and Infrastructure Management, MLIT, Japan
- 3183 A Novel Approach for 1 M Position Accuracy under Multipath Environments Masaaki Endo, Furuno Electric Co., Ltd., Japan
- **4114** Design of a Mobile GNSS Reference System for Road Vehicle Localisation Marco Wegener, University of Braunschweig, Germany

# TS049 - Traffic Control (5)

# Wednesday, October 16, 2013, 14:00-15:30 3326 A GPS-Based Dynamic Bus Signal Priority Scheme using Rolling Optimization Strategy Yingying Chen, Zhejiang SUPCON information Co., Ltd., China 3058 How to Maintain the MPD Traffic Control System Shotaro Ohira, Sumitomo Electric System Solutions Co., Ltd., Japan 3925 Evaluating Signal Control Strategies based on Hardware-in-the-Loop Simulation Xiaohua Zhao, Beijing University of Technology, China 1050 Three Implementations of Emergency and Transit Vehicle Priority within a Connected Mobility Framework Tim Hall, Global Traffic Technologies, USA 3152 Effect of Introducing Traffic Demand-Predicting Signal Control Toshiyuki Shimazu, Metropolitan Police Department, Japan

### TS050 - Communications (2)

Wedr	nesday, October 16, 2013, 14:00-15:30	W406
3276	Analysis of VANET under Co-Operative Driving Environments Yoon Taeho, UST, Korea	
4059	<b>Gigabit Optical Transmission using Step-Index Hard Polymer Cladding Fiber</b> Takamitsu Aiba, Ibaraki University, Japan	Cord for Vehicles
3937	Development of GPS/DSRC In-Vehicle Unit for Driving Safety Support Ryutaro Hashi, Panasonic Mobile Communications R&D Lab. Co., Ltd., Japan	
3938	Dual-Band Circularly Polarized Patch Antenna with Parasitic Elements for Au Hiroyuki Uno, Panasonic Mobile Communications R&D Lab. Co., Ltd., Japan	tomotive Applications
3067	Reducing False Positives in Wake-on-Demand In-Vehicle Communication Tsuyoshi Takahashi, Iwate Prefectural University, Japan	

### **TS051 - Vehicle Detection**

Wed	nesday, October 16, 2013, 14:00-15:30	W407
3085	Proposal for Intersection Passage Support Systems based on Vehicle-Infrast Existing Traffic Information Infrastructure Noriyuki Tsukada, Nissan Motor Co., Ltd., Japan	ructure Cooperation and Using the
1048	The Value of Video Vehicle Detection and Fully Adaptive Traffic Management William Sowell, Iteris, Inc., USA	
3095	Traffic Control Support by the Video Analysis Technology with Pan-Tilt-Zoom Yoshihiro Ogi, Japan Telecommunication Engineering Service Company Limited, Ja	
2021	Do Water Underpass Tunnels Pose Specific Challenges in the ITS Safety Con Rudolf Benedik, Kapsch TrafficCom AG, Austria	text?
3176	A Study of Optimal Allocation of Detectors for Traffic Signal Control System Satoshi Niikura, Kanagawa Prefectural Police Headquarters, Japan	

# **TS052 - Impact of Traveler Information Media** on Road User Safety and Mobility

Wednesday, October 16, 2013, 14:00-15:30

W408

Methods to Differentiate between Traffic Information based on Real Time Samples to Traffic Information based Mainly on Historical Patterns

Ofer Avni, Cellint Traffic Solutions, Israel

- Analysis of Congestion Reduction Effect of Information Provided VICS using Traffic Simulation 3267 Shinji Nakagawa, Institute of Systems Science Research, Japan
- Travel Time and Graphical Based Traffic Advisory Information for Singapore's Roads 3133 Mun Onn Cheong, Land Transport Authority, Singapore
- Analysis of Road User's Perceptions to Radio Traffic Information in Lahore, Pakistan 4054 Muhammad A. Javid, Yokohama National University, Japan
- 1902 Impact of Dynamic Message Signs on Occurrence of Road Accidents Ali Haghani, University of Maryland, College Park, USA

# **TS053 - EV Car Sharing and Behaviors**

Wednesday, October 16, 2013, 14:00-15:30

W409

- Development of a Simulator for One-Way EV Sharing Service Keiko Shimazaki, Toyota Info Technology Center Co., Ltd., Japan
  - iShare -Car Sharing Concept Vehicle
- 2106 Alvaro Arrue, Applus IDIADA Automotive Technology S.A., Spain
- 3381 Analysis of User Preference for Activating Use of Electric Vehicle Minhui Lim, The Korea Transport Institute (KOTI), Korea
- 4107 Analysis of Purchase Preferences for Electric Vehicles and Its Determinant Factors Yoriko Tsuchiya, Tokyo Metropolitan University, Japan

# TS054 - ITS Business Models and Funding Strategies

Wednesday, October 16, 2013, 14:00-15:30

- 2094 **Business Model Evolution for ITS Services** 
  - Juho Kostiainen, VTT Technical Research Centre of Finland, Finland
- 2076 How Open Data Will Bring Traffic Information -the Next Level in The Netherlands Hans Nobbe, Rijkswaterstaat, The Netherlands
- 1029 Transforming ITS Business Strategy Into an Information Security Strategy Michael J. Bertram, SANDAG Intelligent Transportation Systems, USA
- 3030 Partnering with Industry for ITS Procurement - Embarking on the First Pure ITS Alliance Andrew Somers, Main Roads Western Australia, Australia
- 2072 Efficient ITS Organisation Structures as Framework for Collaborative ITS Key Projects in Austria Bernhard Engleder, ITS Vienna Region / Verkehrsverbund Ost-Region VOR GmbH, Austria
- 2157 **Funding ITS Deployment** Richard G Harris, Xerox, United Kingdom

### TS055 - Multi-Modal

# Wednesday, October 16, 2013, 14:00-15:30 ChoiceRail - Multi-Modal, Real Time Journey Planning Paul Everson, Trapeze Group (UK), United Kingdom A Traffic Demand Forecasting Model for Internal Junction of a Multi-Platform Bus Terminal with RFID Monitoring Systems Chien-Hung Wei, National Cheng Kung University, Chinese Taipei Field Test of the Multi-Transportation Sharing Service Management System in Japan Jaeyoul Kim, The University of Tokyo, Japan The Effects of Changes in Passenger Habit with the Real-Time Transit Information Service Jin-Yuan Wang, National Chiao Tung University, Chinese Taipei Information and Fare Integration for All Transit via Mobile Phone Jungsil Lim, The Korea Transport Institute (KOTI), Korea

# TS056 - Obstacle Detection Systems (2)

Wed	nesday, October 16, 2013, 16:00-17:30	W401	
3181	Autonomous Driving System: a Cooperative Driving Approach to Increase Driving Safety Jungsook Kim, Electronics and Telecommunications Research Institute, Korea		
2038	Object Perception Algorithms for Multiple Homogeneous Sensors with All-Around Vehicle Coverage Nikolaos Floudas, Institute of Communication and Computer Systems, Greece		
2039	Improved Road Geometry Estimation by Fusing Multiple Sources of Information: the Interactive Approach Manolis Tsogas, Institute of Communication and Computer Systems, Greece		
3200	3D Laser Sensor Vehicle and Pedestrians Detection Device Kiyohide Sekimoto, IHI Corporation, Japan		

### **TS057 - Automated Vehicle**

Wednesday, October 16, 2013, 16	:00-17:30	W402
	Safety Evaluation of System Failures in Formation and Separation Processes of Automatic Platooning of Trucks Rencheng Zheng, The University of Tokyo, Japan	
3033 Development of Radio and Optical Vel Takafumi Tezuka, Oki Electric Industry Co	nicle-to-Vehicle Communication for the b., Ltd., Japan	Automated Truck Platooning
3129 Design of Lateral Control Algorithms f Takamasa Miyake, Meijo University, Japa		
3349 Development of Back-Up Brake Syste Masahiko Aki, The University of Tokyo, o	9	
2906 Driver Support Systems and Road Saf Truls Vaa, Institute of Transport Economi		

# TS058 - Improving Efficiency in Traffic Management (3)

Wednesday, October 16, 2013, 16:00-17:30

W403

- 3086 Analysis of Traffic Congestion Catastrophe on Freeway with Long Tunnel Tien-Pen Hsu, National Taiwan University, Chinese Taipei
- 3901 Cell Transmission Model Applied to Level of Service Control of Freeway Traffic via Ramp Metering Hung-Jen Huang, Sinotech Engineering Consultants, Inc., Chinese Taipei
- 3128 Automatic Recognition of the Number of Passengers to Revise a Bus Route to the Needs of Passengers
  Junji Tanaka, Yazaki Energy System Corporation, Japan
- 3330 The Analyze of Characteristics and Emergence Mechanism of Speed Difference Liang Hao, Research Institute of Highway, Ministry of Transport, China
- 3204 Understanding Traffic Patterns through 4D Visualization of Dense Vehicle Trajectory
  Suporn Pongnumkul, National Electronics and Computer Technology Center (NECTEC), Thailand

### TS059 - Vehicle Positioning (3)

Wednesday, October 16, 2013, 16:00-17:30

W404

- 3958 Enhanced Unified Hybrid Architecture for Indoor and Outdoor Localization for Disaster Recovery Hooi Ling Khoo, Universiti Tunku Abdul Rahman, Malaysia
- **4037** Urban Road Extraction on the DSM Data based-on ART, Hough Transform and B-Spline Darlis Herumurti, Kumamoto University, Japan
- **4172** GPS Positioning with Multipath Detection and Rectification using 3D Maps Shunsuke Miura, The University of Tokyo, Japan
- 3919 Global Coordinate Adjustment of 3D Survey Models in World Geodetic System under Unstable GPS Condition Ashwani Kumar, The University of Tokyo, Japan
- Evaluation and Analysis of Correlation in Reflected Signals and its Application in Cooperative Relative
   Positioning

   Rei Furukawa, Advanced Telecommunications Research Institute International, Japan

### TS060 - Traffic Control (6)

Wednesday, October 16, 2013, 16:00-17:30

- 3122 Traffic Signal Control using Probe Data
  Yasushi Nagashima, UTMS Society of Japan, Japan
- 2925 Evaluation of the Two Adaptive Traffic Signal System Utopia/Spot and ImFlow, and Comparison with Existing Signal Control in Stockholm, Sweden

  Johan Wahlstedt, KTH, Royal Institute of Technology, Sweden
- 2012 Use Of Model Based Signal Control Systems And Other Signal Control Systems In Germany Thomas Wietholt, TUV Rheinland InterTraffic GmbH, Germany
- 3916 Advanced Intersection Manager for Intelligent Traffic Control without Traffic Lights
  Chenghsuan Cho, Institute for Information Industry, Chinese Taipei

# TS061 - Communications (3)

### Wednesday, October 16, 2013, 16:00-17:30 W406 **Enhanced Spot Communication System using Wave** Takeshi Nagata, Mitsubishi Heavy Industries, Ltd., Japan 2022 Standardization and Upgrade of HA Communications Infrastructure by Extending IP Capability to the Edge of the Network Gabriel E. Ozique, Fluor Corporation, United Kingdom Approaching Vehicle Cyber Security by Applying the Functional Safety Concept Hirofumi Onishi, Alpine Electronics Research of America, Inc., USA Fading Characteristic Modeling of V2V Communication at 700MHz Band and the System Margin Design 3156 Masahiro Suneya, Mazda Motor Corporation, Japan Software Development of OSEK/VDX Direct Network Management 3005 Rong-Terng Juang, Automotive Research & Testing Center, Chinese Taipei

# **TS062 - Innovative Application of Data Communication**

V	/ednesday, October 16, 2013, 16:00-17:30	W407	
41	4103 Communication and Localization in Urban Traffic Environments using IEEE 802.15.4-Based WSN Robert Baumbach, Technical University Dresden, Germany		
31	195 GPS/RTK Accuracy Localization Applied Wave Commun Sang Chan Moon, Kyung Hee University, Korea	unication for Intelligent Vehicle	
10	V2X Cooperative Systems - What Is It All About? Steve Sprouffske, Kapsch TrafficCom Inc., USA		
31	Pattern Analysis of Road Traffic Information for Utilizati Shunji Goto, Vehicle Information and Communication Syste		
21	BLIDS Network, a State of the Art Traffic Analysis Solut Sensors in Combination with a Computation Engine, us Erich Jaekel, cccom GmbH, Austria	•	affic

# TS063 - Understanding the Data - Evaluating the System

Wed	nesday, October 16, 2013, 16:00-17:30	W408
3321	Evaluation of Bus Service Performance based on Transit Smart Card Data in Jin Ki Eom, Korea Railroad Research Institute, Korea	Seoul
2036	ITS Evaluation and Implementation: the Dutch Touch Kerry M. Malone, TNO, The Netherlands	
3297	A Statistical Analysis of the ITS Role in Road Networking Ability Kyeong-Pyo Kang, The Korea Transport Institute (KOTI), Korea	
2153	Application of Satellite Technologies based on GLONASS/GPS for Creating IT Vladimir Vozhzhov, Navigation-information Systems, Russia	rs Systems in Big Cities
3384	Integrated Transport Solution -Approach and Concept- Nobuyuki Ozaki, Toshiba Corporation, Japan	

# **TS064 - EV Charging and Technology Applications**

Wednesday, October 16, 2013, 16:00-17:30

W409

- A Study on Effective Operation Methods of On-Line Electric Bus based on SOC Consumption Patterns Analysis
  -focused on the Exclusive Median Bus Lanes in Goyang CityJieun Park, The Korea Transport Institute (KOTI), Korea
- 3368 Integrating Traffic and Power Simulators using MetaMAS for Evaluating Highway EMS Hisashi Hayashi, Toshiba Corporation, Japan
- 3016 Wireless Power Charging Techniques and ITS Technology for the Practical Operation of the LED Sign Board EV Takeyori Maeda, Central Nippon Expressway Company Limited, Japan
- 1043 Plug-In Electric Vehicle Roadmap and Impact on Interoperability Standards Vishant Shah, Last Mile TT, USA

### TS065 - Institutional Issues and International Harmonization (1)

Wednesday, October 16, 2013, 16:00-17:30

W410

- 1058 Will Tasteful Promotion of ITS Benefits Increase ITS Deployment?
  Peter Von Heidenstam, Swedish Transport Administration, Sweden
- 3258 Spread of ETC in Japan and Its Ripple Effects
  Harumi Kikuchi, Organization for Road System Enhancement (ORSE), Japan
- 1033 US-Mexico Bi-National Cooperation to Enhance Safety, Security and Enforcement in Mexico using Automated Number Plate Recognition (ANPR) System Venu Sarakki, Sarakki Associates Inc., USA
- 3327 An Inspiring Survey on Market Potential of Connected Vehicle Infrastructure System and Urban Traffic Conditions in China

Yingying Chen, Zhejiang SUPCON information Co., Ltd., China

3135 Strategy Research towards Realization of the Sustainable Traffic Society, by Cooperation of ITS and the Governmental Road Traffic Policies

Kohei Koide, The University of Tokyo, Japan

### TS066 - ITS for Emission Reduction

Wednesday, October 16, 2013, 16:00-17:30

- 2013 Study on CO₂ Benefit through Cooperative Systems
  Philipp Gilka, DLR German Aerospace Center, Germany
- 2057 Methodology and Framework Architecture for the Evaluation of Effects of ICT Measures on CO<sub>2</sub> Emissions Eline Jonkers, TNO, The Netherlands
- 3277 Social Feedback System for Promoting General Citizens to Change their Travel Behavior using the CO<sub>2</sub> Information System

  Katsushi Ikeuchi, The University of Tokyo, Japan
- 3198 Improving the CO<sub>2</sub> Reduction Effect of the Green Wave Advisory System by Expanding the Reach of the Service Yui Ogura, Toyota Motor Corporation, Japan
- Noise Propagation Control Measures and Prediction of their Effects on Road Traffic Noise Shinichi Sakamoto, The University of Tokyo, Japan
- 3011 Development of Green Wave Driving Support Systems
  Kenichi Ito, National Police Agency, Japan

# TS067 - V2X Application (1)

Thur	sday, October 17, 2013, 09:00-10:30	W401
2008	Validation Results of Driver Behavior Prediction in a Cooperative Network Philipp Themann, RWTH Aachen University, Germany	
3049	Automatic Vehicle Guidance Control by Infrastructure using Information Obta Manabu Omae, Keio University, Japan	ined by Sensors on Infrastructure
3079	Driver Receptivity Evaluation of Vehicle-to-Vehicle Communication Driving St. Toshikazu Ashiki, Mitsubishi Motors Corporation, Japan	upport System
2043	V2X Communications Applied to Safety at Level Crossings Louahdi Khoudour, CETE South West, France	
3247	Evaluation of HMI Proposal for V2X Communication System Kevin A.C. Walters, Mitsubishi Motors Corporation, Japan	

### **TS068 - Human Machine Interface**

Makoto Mochizuki, Panasonic Corporation, Japan

Thur	sday, October 17, 2013, 09:00-10:30	W402	
4024	24 Development of Multimodal Stimulus Detection Task for Assessing Mental Workload Associated with Operating In-Vehicle Information Systems Takahiro Ishikawa, Denso Corporation, Japan		
4171	The Effect of Secondary Task Timing and Difficulty on Driving-Related Performance and Modality Selection Sachi Mizobuchi, Vocalage Inc., Canada		
4084	Criterion-Shift in a Complex Visual Environment as Function of Location of Information in the Visual Field and as Function of Age  Marino Menozzi, ETH Zurich, Switzerland		
4143	An Analysis of Collision Avoidance Effectiveness by Using the Information Dis	splayed in Driver's Peripheral Vision	

# **TS069 - Improving Efficiency in Traffic Management (4)**

Thur	sday, October 17, 2013, 09:00-10:30	W403
3102	Real-Time OD Matrix Prediction in Shanghai Urban Expressway Network Lin Yu, Shanghai SEARI Intelligent System Co., Ltd., China	
3029	Enhancement in the Function of Metropolitan Expressway Traffic Control Sys Satoshi Endo, Metropolitan Expressway Company Limited, Japan	tem
4154	Study on the Estimation of Dynamic Origin-Destination for Variable Network Junwei Li, Research Institute of Highway, MOT, China	pased on Multi-Source Information
4085	Smarter Mobility Integrated System: a Real Time Processing Framework for Sand Query Tatsuhiro Chiba, IBM Research - Tokyo, Japan	Sensor Data Aggregation, Analysis
3356	The Chinese Highway Traffic Dedicated Broadcast Lei Cai, Research Institute of Highway, MOT, China	
3028	Information Gathering System utilizing a Smartphone Daisuke Watanabe, National Institute for Land and Infrastructure Management, ML	IT, Japan

### TS070 - Road Management (1)

Thursday, October 17, 2013, 09:00-10:30 W404 MOBI-ROMA Developing Mobile Observation Methods for Road Maintenance Assessments Pirkko Saarikivi, Foreca Consulting Ltd, Finland 3360 CCTV Monitoring Technology of Nighttime Low-Light Situations at the ITS Center in Korea Dongwon Choi, Korea Institute of Construction Technology (KICT), Korea 3208 Development of the New Road Clean-Up Vehicle with ITS Technology Eiji Mori, Central Nippon Expressway Company Limited, Japan

Masahito Naito, Chubu Regional Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

### TS071 - V2X Communication Technologies (1)

The Advancement of Road Patrolling utilizing ICT in the Chubu Region

### Thursday, October 17, 2013, 09:00-10:30

W405

Fault Tolerant C-ITS for Road Safety Gerard Segarra, RENAULT SAS, France 3940 Impact of Vehicular Obstructions In Vehicle-To-Vehicle Communication Scenarios Luoyi Huang, Tongji University, China 2090 Secure Messaging in V2X Communication Cornelis (Kees) M. Moerman, NXP Semiconductors, The Netherlands 2058 Fault Model for Cooperative Semi-Automated Vehicles Josef Nilsson, SP Technical Research Institute of Sweden, Sweden Security Evaluation of Mobile Device Integration With V2X Communication

Tim Leinmueller, DENSO AUTOMOTIVE Deutschland GmbH, Germany

# TS072 - FOT (1)

3173

2066

### Thursday, October 17, 2013, 09:00-10:30

- 3232 Trends in Performance Evaluation of ITS Equipment in Korea Yoon Mi Shin, ITS Korea, Korea
- 3186 VPET: a Real-Time Performance Evaluation Tool of V2X Communication for Field Experiment Jhihoon Joo, Kyungpook National University, Korea
- 3266 Evaluation of Operating Magnetic-Field Sensors in Dynamic Parking Lot Vacancy Information System for **Expressway Rest Areas** Hideki Takahashi, Central Nippon Expressway Company Limited, Japan
- Automated Tool Chain for Evaluation of Real World Tests Developed and Applied in eCoMove and interactIVe Philipp Themann, RWTH Aachen University, Germany
- 3184 New Tool Suite for Facilitating WAVE/DSRC Field Trials Chih-Che Lin, Industrial Technology Research Institute (ITRI), Chinese Taipei

# **TS073 - Applications of Probe Data (1)**

Thur	sday, October 17, 2013, 09:00-10:30	W407
3017	A Probe Data-Based Approach of Enhancing Traffic Flow Observation for Traffoshihiko Oda, Vehicle Information and Communication System Center (VICS), Jap	0 11
3285	A Camera-Based Probe Car System for Traffic Condition Estimation Kentaro Yokoi, Toshiba Corporation, Japan	
3020	Development of a Probe Information Utilization System to Facilitate Road Ma Yoshihiro Tanaka, National Institute for Land and Infrastructure Management, MLIT,	0
3226	Field Experiment of Offline Traffic Signal Control using Probe Data Collected Koichiro Iwaoka, Panasonic System Solutions Infrastructure Co., Ltd., Japan	via Infrared Beacons
3090	Applicability of Probe Data for Identifying Individual Vehicles in the Public and Yoshihiro Tanaka, National Institute for Land and Infrastructure Management, MLIT,	

### **TS074 - Travel Time Estimation**

Thur	sday, October 17, 2013, 09:00-10:30	W40
3923	Application of Truncated Distribution to Travel Time on Signalized Road Section Peng Cao, Nagoya University, Japan	ion
3913	Applying Data Clustering and Decision Tree in Travel Time Estimation for Pub Chih-Wei Sung, Chung Yuan Christian University, Chinese Taipei	lic Bus
3922	Estimation of Travel Time based on Forecasted Precipitation Tae-Uk Kim, Pukyong National University, Korea	
3066	Prediction of Travel Time Considering Turning Behavior at Intersections Yasuo Ookubo, Vehicle Information and Communication System Center (VICS), Jap	oan
3354	Travel Time and Speed Estimation from Location and Spot Speed Information Tanachart Kohprasurt, National Electronics and Computer Technology Center (NEC	

### **TS075 - Innovative Personalized Vehicle**

Thur	sday, October 17, 2013, 09:00-10:30	W409
4017	A Case Study on Evaluation of Three-Wheeled Personal Mobility Vehicles using Ryosuke Ando, Toyota Transportation Research Institute, Japan	ng i-REAL
3236	Development of Safety Assist System for Ultra-Small EV Harutoshi Ogai, Waseda University, Japan	
2104	Spanish Initiative to Develop a PRT System in the San Sebastian Technology Jesus Murgoitio, Tecnalia Research & Innovation, Spain	Park
2048	fahrE; Concepts for Multimodal Micro Mobility using Local Renewable Energ Sven Bauer, Chemnitz University of Technology, Germany	у

# TS076 - Institutional Issues and International Harmonization (2)

Thursday, October 17, 2013, 09:00-10:30

W410

- **2042** Converge ITS Communication Architecture for Future Mobility
  Jonas Vogt, Hochschule fuer Technik und Wirtschaft des Saarlandes, Germany
- **4120** Deploying ITS Sub Architectures over IMS (4G NGN)
  Claudio Luiz Marte, University of São Paulo, Brazil
- 3934 A Proposal of Network Architecture for Narrowband V2X Communication Kenya Sato, Doshisha University, Japan
- 2910 Autonomic Intelligent Transport Systems Architecture
  Florin Nemtanu, Politehnica University of Bucharest, Romania
- 2135 Standardization of Performances of GNSS-Based Positioning Terminals for ITS Applications at CEN/CENELEC/TC5

Francois Peyret, IFSTTAR, France

### **TS077 - ITS Technologies for Heavier Vehicles**

Thursday, October 17, 2013, 09:00-10:30

W411

- 3109 Calculation Algorithm of Steering Control Target for Autonomous Heavy Vehicle under Mixed Traffic Tetsuya Kaneko, Osaka Sangyo University, Japan
- **4100** Practical Lateral Control for Autonomous Platooning System of Heavy-Duty Trucks Toshiyuki Sugimachi, Kobe University, Japan
- 3278 An Estimating Method of CO<sub>2</sub> Emissions from Logistic Vehicles using ITS Spot and GPS OBUs Kazunori Inoue, Panasonic Corporation, Japan
- 3113 Applicability for Monitoring Weight of Heavy Vehicles with Onboard Mass Unit Hideyuki Wakishima, CTI Engineering Co., Ltd., Japan
- **4076** Fuzzy Inference-Based Self-Tuning of Steering Control Gains for Heavy-Duty Trucks Takuma Ario, Kobe University, Japan
- 1025 Retrofit Safety Devices for Cooperative Commercial Vehicles Steven W. Dellenback, Southwest Research Institute, USA

### TS078 - V2X Application (2)

Thursday, October 17, 2013, 11:00-12:30

- Analyses of Route Choice and Route Switching Behavior using ETC Data from Tokyo Metropolitan Expressway
  Tawin Tiratanapakhom, The University of Tokyo, Japan
- Employment of Dynamic Parking Lot Vacancy Information System in a Circuit Style Rest Area Tadahisa Muramatsu, Central Nippon Expressway Company Limited, Japan
- **3262 Verification of Effects of Traffic Safety Installations using NIRS**Kouji Yamamoto, Central Nippon Expressway Company Limited, Japan
- Evaluation of the Reduction Effect on Traffic Accidents by the Left Side Crossing Pedestrian Recognition
  Enhancement System
  Hirohito Ide, Toyota Motor Corporation, Japan
- **3216** Development of a Smartphone-Based Driving Support System for Pedestrian at Intersection Shinji Yasuhara, Nissan Motor Co., Ltd., Japan

W403

# **TS079 - Driver Behavior Using Simulator**

Thur	sday, October 17, 2013, 11:00-12:30	W402
3311	Accident Analysis on Intersection Right Turning by Using Driving Simulator Takashi Yonekawa, Toyota Motor Corporation, Japan	
3238	Preliminary Evaluation of Road-Traffic Safety Countermeasures utilizing National Simulator System Rencheng Zheng, The University of Tokyo, Japan	onal Digital Map in a Driving
2909	Effect of Discomfort Glare on Speed Discrimination in a Simulated Driving Sc Ying-Yin Huang, ETH Zurich, Switzerland	enario
3047	Simultaneous Measurement of a Driver's Behavior, Gaze and Driving Perform Inattention Driving Fumiaki Obayashi, Aichi University of Technology, Japan	ance, and Its Application to
3296	Evaluation of Safety of Car Navigation Systems using a Driving Simulator Hiromitsu Ishiko, The University of Tokyo, Japan	

# **TS080 - Improving Efficiency in Traffic Management (5)**

Thurs	sday, October 17, 2013, 11:00-12:30
2040	Tomorrow's Transport Infrastructure: from Static to Elastic Mobility Panagiotis Lytrivis, Institute of Communication and Computer Systems, Greece
1015	Work Zone Travel Time Collaboration in Minnesota Rashmi S. Brewer, Minnesota Department of Transportation, USA
3941	Economically Justified ITS Traffic Control Systems Peter Kirby, Member Institution of Engineering and Technology, New Zealand
4073	Concepts of Traffic Management System and Participation Policy for Intelligent Vehicles Ricardo Reghelin, UTFPR/IFC, Brazil
2089	SYNCRO: Innovative Road Data Gathering and Treatment System for Interurban Road Jean-Christophe Maisonobe, Conseil General de l'Isere, France

# TS081 - Road Management (2)

Thurso	lay, October 17, 2013, 11:00-12:30	W404
	rial Use of ICT to Construct the Gamagori Bypass on National Highway 23  Takahiro Kawano, Chubu Regional Bureau, Ministry of Land, Infrastructure, Transpo	ort and Tourism (MLIT), Japan
	Measuring the Roughness of Pavement Surface using a Smartphone Devices Marko Sevrovic, Faculty of Transport and Traffic Sciences, Croatia	i
	Remote Sensing of Road Surface Conditions and ITS Applications Torgeir Vaa, Norwegian Public Roads Administration, Norway	
	Geospatial Information Search System Development and Operations Gumihiro Shingu, Nexco Engineering Niigata Company Limited, Japan	

### TS082 - V2X Communication Technologies (2)

Thursday, October 17, 2013, 11:00-12:30

W405

- 3032 Development of Pedestrian Portable Terminal for ITS Hideyuki Fujii, Panasonic Corporation, Japan
- 3070 Cooperation Algorithm of V2V Communication and Autonomous Sensor for Automatic Acceleration and Deceleration Control

Tsubasa Okuya, Denso Corporation, Japan

- 3021 An Examination of Vehicle-to-Pedestrian Communication Access Method Yuichi Kanai, Panasonic Corporation, Japan
- 3074 Connected Vehicle Technology Project in I.R.Iran Hamid Karimi, ACECR-Sharif Branch, Iran
- 3142 Vehicles Group Identification Technology in Host Vehicle Path Via Fusion of V2V Communication and Autonomous Sensor Information
  Motonori Ando, Denso Corporation, Japan

### TS083 - FOT (2)

Thursday, October 17, 2013, 11:00-12:30

W406

- 3346 Field Operation Test of Sensing System and ECU Function for Automatic Driving of Trailer-Type Truck Masahiko Aki, The University of Tokyo, Japan
- 3120 Using Traffic Information Systems to Alleviate Congestion on Expressways Hiroyuki Ishibashi, East Nippon Expressway Company Limited, Japan
- 2065 Cooperative Services: User Acceptance Assessment in the Austrian FOT Testfield Telematik Doris Bankosegger, High Tech Marketing, Austria
- 3954 Road Marking 'Optical Dot System' for Controlling the Speed -Development and Four Years Empirical Analysis-Ayumi Han, The University of Tokyo, Japan
- 3222 Evaluation of Effectiveness of a Vehicle-Infrastructure Cooperative System under Real-World Conditions Shunsuke Nakamura, Toyota Motor Corporation, Japan
- 1019 Adaptive Traffic Signal Control Pilot Project for the City of Surrey, Canada Joseph K. Lam, Delcan International Corporation, Canada

### **TS084 - Applications of Probe Data (2)**

Thursday, October 17, 2013, 11:00-12:30

- 3014 Knowledge Discovery from Taxi Probe Information at Tokyo by Using Hadoop MapReduce Naoto Mukai, Sugiyama Jogakuen University, Japan
- 3220 Traffic Volume Estimation using Probe-Car Data Mariko Okude, Hitachi, Ltd., Japan
- 2070 Secure Traffic Networks a Method for Model Based Security Tests in the Field of ITS Franziska Wolf, Institut für Automation und Kommunikation-ifak, Germany
- **2915** Fusion and Enrichment of Traffic Message Channel (TMC) Messages with Floating Car Data (FCD) Anke Sauerlaender-Biebl, German Aerospace Center (DLR), Germany
- 3904 Research on Location Planning of ITS Spots for Using Probe Data in Travel Speed Survey Fumihiko Kanazawa, National Institute for Land and Infrastructure Management, MLIT, Japan

### **TS085 - Incident and Emergency Management**

2908 DOGIES - Dangerous Goods Incident Early Warning System Miroslav Haltuf, H-Comp Consulting, Czech

Thursday, October 17, 2013, 11:00-12:30

1003 Automotive Emergency Call and Ng (Next Generation) - 911
Hirofumi Onishi, Alpine Electronics Research of America, Inc., USA

3196 Development and Evaluation of New Automatic Incident Detector to Make Safer Highway Whoi-Bin Chung, ITS Korea, Korea

2116 112 eCall on Motorcycles
Aki J. Lumiaho, Ramboll, Finland

3083 Field Study for Velocity Control Effect by utilizing Visible Appearing Measures against Traffic Accidents
Takeshi Matsushita, West Nippon Expressway Company Limited, Japan

### TS086 - Eco-Mobility(1)

Thursday, October 17, 2013, 11:00-12:30

W409

W408

- 3146 The Development of Kashiwa Cyber Physical Database to Integrate Time-Space Traffic Data Saori Yorozu, Chodai Co., Ltd., Japan
- 3137 Improvement of Fuel Economy Driving Support System Software Junji Tanaka, Yazaki Energy System Corporation, Japan
- 3104 Threshold-Speed-Based Eco-Cruise Control Model
  Ji Eun Choi, Pukyong National University, Korea
- 3159 Demonstration of Regional-Traffic-Information Feedback System for Promoting Environmentally Conscious and Efficient Traffic-Related Behavior

  Akira Mitsuyasu, Pacific Consultants Co., Ltd., Japan
- 2907 Prototype Implementation and Positioning Performance Results of the Gain Enhanced Active Green Driving Assistant
  Robin Streiter, Chemnitz University of Technology, Germany

Development of Eco-Driving Support Function that Visualizes the Points to Be Improved Hiroyuki Mizuno, Aisin AW Co., Ltd., Japan

### TS087 - Social Benefits and Planning (1)

Thursday, October 17, 2013, 11:00-12:30

W410

- 3334 Car Ownership Sensitive Analysis
  Qian Yi, Research Institute of Highway, Ministry of Transport, China
- 1044 Unlocking the Business Value of Connected Vehicles Andreas Mai, Cisco, USA
- 2919 Societal Benefits by In-Car Centric Traffic Management
  Ben Rutten, Eindhoven University of Technology, The Netherlands
- 3388 New R&D Programs for ITS Technology in Korea
  Chang-Ho Lee, The Korea Transport Institute (KOTI), Korea
- 2902 Achieving Environmental Sustainability of the European Transport System through Deployment of ITS: Policy Implications

Christina L. Nikolova, University of National and World Economy, Bulgaria

### TS088 - Moving People Quicker, Safer, Smoother

Thursday, October 17, 2013, 11:00-12:30

W411

- 3319 3 Items of SMRT to Improve Maintenance and Reliability
  Hyunsu Lee, Seoul Metropolitan Rapid Transit Corporation, Korea
- 3053 Development History of Tainan City Dynamic Bus Information System Hsieh C. Chen, AsiaTEK Inc., Chinese Taipei
- 3234 Applying GIS to Assess the Influence of Public Transportation Operating Plans on the Accessibility Jauming Su, Chung Hua University, Chinese Taipei
- 3905 Discrete-Event Simulation Framework for Modeling Bus-Rapid Transit Fergyanto E. Gunawan, Binus University, Indonesia

### TS089 - V2X Application (3)

Thursday, October 17, 2013, 14:00-15:30

W401

3096 Development of the Device to Prevent Wrong-Way Driving

Yuichi Mizushima, Nexco Engineering Niigata Company Limited, Japan

- 1008 An Approach for Integrating DSRC Technologies with PTC for Road Rail Intersection Safety Harsh Verma, R Systems International, USA
- 2018 V2X in Industrial Site Safety Applications

Ari Virtanen, Technical Research Centre of Finland, Finland

- 1028 Assigning Safety Message Priority based on Vehicle Dynamics Gaurav Bansal, Toyota Info Technology Center, U.S.A., Inc., USA
- 3237 Introduce Test Site of Smart Highway Project Seokjune Lee, ITS Korea, Korea

### TS090 - Driver Assistance Systems (1)

Thursday, October 17, 2013, 14:00-15:30

- 4185 Multiple Object Detection using Image Recognition LSI for Automobiles Ryuzo Okada, Toshiba Corporation, Japan
- 4035 Study on Driver Assistance System with Smartphones
- Sumi Kaio, Meijo University, Japan

  4008 Detecting Driving Events using Smartphone
- 4008 Detecting Driving Events using Smartphone Chalermpol Saiprasert, National Electronics and Computer Technology Center (NECTEC), Thailand
- **Study of Vehicle All-in-One System with Single Camera**Yi-Feng Su, Automotive Research & Testing Center, Chinese Taipei
- 4029 A Framework of Autonomous Electric Vehicle with Advanced Motion Control based on the Integration of GPS Receiver and On-Board Dynamic Sensors

  Binh Minh Nguyen, The University of Tokyo, Japan

# TS091 - Improving Efficiency in Traffic Management (6)

### Thursday, October 17, 2013, 14:00-15:30

W403

- 1012 GIS Routing and Analysis of Oversize and Overweight Truck Permit Sanghong Yoo, Rahall Transportation Institute, USA
- **2128** Drivers' Perception of Route Alternatives
  Jaap Vreeswijk, Imtech Traffic & Infra, The Netherlands
- 3178 Identifying the Optimal Road Closure with Simulation Takayuki Osogami, IBM Research Tokyo, Japan
- 3130 Expressway Operations Management using a GPS Vehicle Location Management System Masanori Tomita, Nexco Engineering Niigata Company Limited, Japan
- 1049 LBJ Expressway: the Continual Convergence of ITS and TCS Technologies Douglas Chastain, Kapsch, USA

### TS092 - Road Management (3)

Thursday, October 17, 2013, 14:00-15:30

W404

- **4039** Interactive Local Road Weather Services through VANET-Capable Road Weather Station Timo Sukuvaara, Finnish Meteorological Institute, Finland
- 1045 Smart Work Zone Analytics Rob Hranac, Iteris, Inc., USA
- 3073 Discrimination between Summer and Winter Tires based on Tire/Road Noises Tetsuya Tanizaki, Nagoya Electric Works Co. Ltd, Japan

### TS093 - V2X Communication Technologies (3)

### Thursday, October 17, 2013, 14:00-15:30

- Wireless Technology Assessment with Radio Channel Emulator Fanny Mlinarsky, octoScope, Inc., USA
- 3272 Handover Performance Evaluation in Wave Testbed
  Yooseung Song, Electronics and Telecommunications Research Institute, Korea
- 3376 Car to Car Communication System
  Yuta Shimizu, NEC Corporation, Japan
- 3252 The Evaluation of WAVE Communication under High Speed Environment for V2X Services Jinki Lee, ITS Korea, Korea
- 3138 Propagation Characteristics Of 700MHz Band V2X Wireless Communication Yasumune Yukizaki, Denso Corporation, Japan

### TS094 - FOT (3)

### Thursday, October 17, 2013, 14:00-15:30

W406

- 2041 Score@F: System Coopératif Routier Expérimental Français (French Field Operationaltest For Cooperative Systems)
  - Louahdi Khoudour, CETE South West, France
- 3097 Actuated Signal Controllers for Right-Turn by Using V2I Cooperation System Shigeki Umehara, Sumitomo Electric Industries, Ltd., Japan
- 2049 Co-Operative Systems V2X Communications FOT by Testfield Telematik based on 5.9Ghz in Real Traffic Environment (Highways and Urban, Different TMCs, and Traffic Modes) Experiences, Results and Lessons Learnt Juergen D. Rudolf, Kapsch TrafficCom AG, Austria
- 2138 A Selection Process for Next Generation Cooperative Driver Assistance Systems
  Oliver Sawade, Fraunhofer FOKUS, Germany
- 3023 Conducting the FOT to Evaluate the Driving Practice for Smooth Traffic to Mitigate Traffic Congestion at Sag Sections on Expressways

  Fumihiko Kanazawa, National Institute for Land and Infrastructure Management, MLIT, Japan

### TS095 - Freight Management (1)

Thursday, October 17, 2013, 14:00-15:30

W407

- 3148 Establishment of an In-Vehicle Platform that Allows a Variety of Services by Using Cloud Computing
  Tatsuo Yamamoto, Yazaki Energy System Corporation, Japan
- 3134 Application of The Payload Measuring System Technology to a Truck Rollover Warning System Tetsuji Takamori, Yazaki Energy System Corporation, Japan
- **4078** Gofer -Demonstration of a Cooperative System Solveig Meland, SINTEF, Norway
- 3909 Vehicle Routing Problem in Stochastic Time-Dependent Networks with Time Window Constraint Shichao Sun, Tongji University, China
- 2117 Sustainable Freight Transport Systems through Strengthening Cluster Initiatives
  Meng Lu, Dutch Institute for Advanced Logistics, The Netherlands

### TS096 - Traffic Management in Metropolitan Area

### Thursday, October 17, 2013, 14:00-15:30

- 1009 Improving Mobility and Safety in New York City by Using ITS and Old Fashion Traffic Engineering Ernest Athanailos, City of New York, USA
- 3337 Single System for Active Traffic Management across New Zealand
  Martin Leak, Resolve Group Ltd, New Zealand
- 2904 Effective Use of Intelligent Transport Systems in Big Cities
  Rifkat N. Minnikhanov, Head of Traffic Police, Russia
- 2150 Collaborative Road Traffic Management in Gothenburg
  Josef Hamrin, Prospero Technology Management AB, Sweden
- 2009 Possibilities of System Integration in the Development of Operations in the Road Traffic Management Centers in Finland
  - Sami M. Luoma, Finnish Transport Agency, Finland
- 3112 The Advanced Road Lighting Technology (with Controlling the Lights depending on the Weather and Traffic Volume)
  - Kenji Ueda, Central Nippon Expressway Company Limited, Japan

# TS097 - Eco-Mobility(2)

# Thursday, October 17, 2013, 14:00-15:30 2134 Real-Time Eco-Driving Prototype Francesco Alesiani, NEC Europe Ltd., Germany

- 3117 Recommended Speed Notification System for 2011/2012 Green Wave Field Operation Test Hisashi Sugawara, Mitsubishi Electric Corporation, Japan
- 3007 On A Prediction Method About Preceding Vehicle's Deceleration Behavior At Intersection Sayaka Ono, Toyota Motor Corporation, Japan
- 2156 Minimal Fuel Routing
  Kees Wevers, BrightAngel ITS, The Netherlands
- 2081 Macro Emission Module for Assessing ITS With Macroscopic Traffic Models Gerdien A. Klunder, TNO, The Netherlands

# TS098 - Social Benefits and Planning (2)

Thursday, October 17, 2013, 14:00-15:30

W410

W409

- 3180 Product Certification Conception and Implementation in the Life Cycle of Intelligent Transport Systems Yuan-Jui Chang, TUV Rheinland Greater China, Chinese Taipei
- 2077 Merging the Best of Two Worlds ITS Toolkits: International Cooperation
  Martin Böhm, AustriaTech GmbH, Austria
- 3907 Impact Assessment of Heavy Precipitation on Network Reliability Ta-Yin Hu, National Cheng Kung University, Chinese Taipei
- 3902 A General Approach to Exploit Available Traffic Data for a Smarter City Biplav Srivastava, IBM Research India, India

# TS099 - "Smoothing" Traffic Economically and Safely

Thursday, October 17, 2013, 14:00-15:30

- 3147 Integrated Traffic Management across NSW Mega Region and Sydney Mega City Steven M. Shaw, Roads and Maritme Services, NSW, Australia
- 3098 Method for Informing Economical Speed of Vehicle in City Driving
  Myunghee Son, Electronics and Telecommunications Research Institute, Korea
- 2121 Detection of Unnecessary Intersecting of Traffic Flows using Historical Vehicle Itineraries Ivan Dadic, Faculty of Transport and Traffic Sciences, Croatia
- Expansion of Fast Into Tokyo Metropolitan Area
  Yuuko Katou, Metropolitan Police Department, Japan
- 3036 Adaptive Traffic Control Implications of the SCATS and the Environment Study Christian C. Chong-White, Roads and Traffic Authority, Australia

# TS100 - Driver Behavior (1)

Thursday, October 17, 2013, 16:00-17:30

W401

- **4188** Modeling Driving Behavior and Traffic Flow at Sags
  Bernat Goni Ros, Delft University of Technology, The Netherlands
- 4105 Effects of Individualized Dynamic Travel Information on Drivers' Adaptation Behavior to the Occurrence of Traffic Accidents

Ying Jiang, Hiroshima University, Japan

4091 Modeling En-Route Driver Diversion Behavior with Advanced Traveler Information System: a Descriptive Bayesian Approach

Chenfeng Xiong, University of Maryland, USA

- **4001** Field Investigation of Driver Response to In-Vehicle Safety Warning Information Cheol Oh, Hanyang University, Korea
- **4019** Brake Operation Algorithm of Driver Model in Simulation
  Kazumoto Morita, National Traffic Safety and Environment Laboratory, Japan

### TS101 - Driver Assistance Systems (2)

Thursday, October 17, 2013, 16:00-17:30

W402

4022 Development of a Car-Following Tendency Prediction Method and Its Application to a Forward Collision Warning System

Hirofumi Aoki, Nagoya University, Japan

- **4002** Effect of ACC and FCW on Driver Behaviour, Safety, and Fuel Consumption Mohamed Benmimoun, RWTH Aachen University, Germany
- **4093** Design of Seat Mounted ECG Sensor for Detecting Absent-Mindedness in Vehicle Kenichi Yanai, Denso Corporation, Japan
- **4010** A Flexible System for Studying Driver Visual Attentiveness while Using Semi-Autonomous Driving Systems Tao Yang, Nexteer Automotive, USA

# **TS102 - Incident Detection and Safety Systems**

Thursday, October 17, 2013, 16:00-17:30

- **4134** Improving Moving Jam Detection Performance with V2I Communication Bart B.D. Netten, TNO, The Netherlands
- **4063** Utilizing Machine-to-Machine Communication for Speeding Alerts and Enforcement Augmentation Ching-Yao Chan, University of California, Berkeley, USA
- **Deriving a Surrogate Safety Measure for Freeway Incidents based on Predicted End-of-Queue Properties**Chih-Sheng Chou, Rahall Transportation Institute at Marshall University, USA
- **4123** Enabling Automated Pedestrian Data Collection using Computer Vision Mohamed Zaki, University of British Columbia, Canada
- 4151 Characteristics and Countermeasures against Wrong-Way Driving on Motorways in Japan
  Jian Xing, Nippon Expressway Research Institute Company Limited, Japan

# **TS103 - Driving in Snow and Adverse Weather Conditions**

Thursday, October 17, 2013, 16:00-17:30

W404

- 2075 Taking Better Advantage of Road Weather Information Different Models for Combining Content and Services
  Eetu Pilli-Sihvola, VTT Technical Research Centre of Finland, Finland
- 3280 Driving Support Service Providing Information Related to Traveling on Snow-Covered Roads in Winter Hiroyuki Hasegawa, East Nippon Expressway Company Limited, Japan
- 3212 Detection of Road Surface Conditions in Winter using CCTV Camera Images
  Kazuya Takeuchi, University of Toyama, Japan
- 1040 Developments in Weather Responsive Traffic Management Strategies
  Ray Murphy, Federal Highway Administration (FHWA), USDOT, USA
- 2007 Weather Applications and Services in Field Operational Tests Experiences from the First Practical ITS Solutions in FOTsis

Pertti Nurmi, Finnish Meteorological Institute, Finland

### **TS104 - Public Transport**

Thursday, October 17, 2013, 16:00-17:30

W405

- 2146 National Public Transport e-Ticketing in Turkey
  Ihsan Cihan, The Ministry Transport, Maritime Affairs and Communication, Turkey
- 3127 Real World Experiments to Add Values for Light Rail Transit in Toyama City by Smart ICT Masakazu Hori, INTEC Inc., Japan
- 3387 The Concept of Energy Management in Railway Systems and Development of the EE Train Traffic Control Miyako Miyoshi, Toshiba Corporation, Japan
- **4065** Automated Courier Transport System using Public Transport: Use of ITS-Aided Robots
  Tomoyuki Yamamoto, National Institute of Information and Communications Technology (NICT), Japan
- 3093 Development of Intelligent Transport Systems for Public Transport in Yogyakarta, Indonesia Ahmad Munawar, Gadjah Mada University, Indonesia

### **TS105 - Traffic Management under Emerging Condition (1)**

Thursday, October 17, 2013, 16:00-17:30

- 4179 Calculating Coordinated Trajectories of Intelligent Vehicles in Highways Considering Priority Ricardo Reghelin, UTFPR/IFC, Brazil
- 3309 A Study on the Analysis of an Evacuation Path for Sheltering and Detouring Vehicles according to the Signal Operation Rule in Case of Accidents on an Urban Network
  Hyungmok Yoo, Myongji University, Korea
- 1031 Hybrid Wireless NOMOHi Networks, IEEE 802.11 and Ultra Wideband IEEE 802.15.3 Working Together to Support Emergency Inter-Vehicle Communications
  Juan Martinez, Acantelys Research Group, Venezuela
- 3040 Efforts to Apply Disaster Prevention ITS in Snowy Cold Regions Akifumi Kasai, Aomori ITS Club, Japan
- 3065 Optimization of the Monitoring by Analysis of Road Traffic Information
  Takuya Tsugawa, Vehicle Information and Communication System Center (VICS), Japan

# TS106 - Freight Management (2)

Thursday, October 17, 2013, 16:00-17:30

W407

- Using Fleet GPS Data to Monitor the Movement of Commercial Vehicles in New Zealand
  Alan P. Kerr, Beca, New Zealand
- 2073 An Intelligent Transport System for Intermodal Freight Transport
  Max Haberstroh, RWTH Aachen University, Germany
- 1042 Freight-Focused Technology Applications for the Ports Region of Long Beach and Los Angeles Christopher Hedden, Gateway Cities, USA
- 3114 Applicability for Green ITS of Heavy Vehicles by Using Automatic Route Selection System Hideyuki Wakishima, CTI Engineering Co., Ltd., Japan

### TS107 - Parking Information

Thursday, October 17, 2013, 16:00-17:30

W408

- 2031 Real-Time Event-Based Information Collection from Street Parking
  Ali Lattunen, Finnpark Ltd, Finland
- 2110 The Truck Stops Here
  Casper Wulff, Ramboll, Denmark
- 3171 Progress of VICS Parking Information Service at the Time of Fireworks Display and Other Special Events Kazumitsu Hayashi, Vehicle Information and Communication System Center (VICS), Japan
- 2132 Video-Based Parking Occupancy Detection
  Kristof Maddelein, Traficon International N.V., Belgium

### **TS108 - EV Charging and Innovation**

Thursday, October 17, 2013, 16:00-17:30

- 3307 A Charging Station Recommendation System for Electric Vehicles using Big Data Analysis Makoto Kano, Toshiba Solutions Corporation, Japan
- 3045 Development of New AC/DC Converter for PHEV/EV
  Takeshi Ariyoshi, Sumitomo Electric Industries, Ltd., Japan
- 2063 A Proof-of-Concept for Token-Based Authentication for Secure EV Charging Robert K. Schmidt, Denso Automotive Dtld. GmbH, Germany
- 4021 Impedance Inverter Based Analysis of Wireless Power Transfer via Magnetic Resonant Coupling for Charging Moving Electric Vehicles
  Kim Ean Koh, The University of Tokyo, Japan
- 2103 Analysis of the Use of Quick Chargers for Electric Vehicles in the North East of England Yvonne Huebner, Newcastle University, United Kingdom

# TS109 - Social Benefits and Planning (3)

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### Thursday, October 17, 2013, 16:00-17:30

W410

- 3281 Accurate Monitoring of Sudden Cardiac Arrest with Doppler Radar under ISM Band Electromagnetic Interferences for Automotive Drivers
  Hisashi Inaba, Aisin Seiki Co., Ltd., Japan
- 3348 Construction of Vehicle Communication System Applied the Information Security
  Norio Tsuruta, Fujitsu Ten Limited, Japan
- 3350 Transit Users' Choice on Heavy Snowfall
  Seokjoo Lee, The Korea Transport Institute (KOTI), Korea
- 3957 Agent Based Simulation for Pedestrian Movement during Panic Situation Masria Mustafa, Universiti Teknologi MARA, Malaysia
- 1038 Expert Opinion Forecast of Connected Vehicle Technology Valerie S. Brugeman, Center for Automotive Research, USA

### TS110 - Elderly Mobility

Thursday, October 17, 2013, 16:00-17:30

W411

- 3190 An Analysis of Elderly Drivers' Behavior around Accident-Prone Toll Barrier on Expressway Hiroaki Sakamoto, Osaka University, Japan
- **2114** Stay Active, Stay Safe: the Mobility of Older Drivers Weihong Guo, Newcastle University, United Kingdom
- 3078 Factors Affecting Self Check-In Services Adoption for Elderly Air Passengers
  Yu-Chun Chang, National Taiwan Ocean University, Chinese Taipei
- 3270 Study of Call Attention System for Elderly Driver Yasuhiko Nakano, Aichi Prefectural University, Japan

### TS111 - Driver Behavior (2)

### Friday, October 18, 2013, 09:00-10:30

- 3219 Capturing Drivers' Aggressiveness from Inter-Vehicular Dynamics Data Jeong-Il Son, Daegu Gyeongbuk Institute of Science and Technology, Korea
- 3013 Self Assessed Driver Behaviour Evaluation Tool Thunyasit Pholprasit, National Electronics and Computer Technology Center (NECTEC), Thailand
- 3038 Analyzing Slowing-Down and Stopping Behavior to Check the Surroundings when Entering an Intersection Ayu Karasudani, Fujitsu Laboratories Ltd., Japan
- 3292 Route Choice Behavior Affected by Incidents and Travel Time Information at an Expressway Junction Tadahisa Muramatsu, Central Nippon Expressway Company Limited, Japan
- 3136 Establishment of a New Safe Driving Indicator through the Recognition of Traffic Lights
  Junji Tanaka, Yazaki Energy System Corporation, Japan
- 3161 Estimation of a Driver's Stress based on Steering Admittance Measurement Hiroki Nakamura, The University of Tokyo, Japan

# **TS112 - Driver Vigilance**

Frida	y, October 18, 2013, 09:00-10:30	W402
3284	Effect of Visual Biofeedback for Awaking Drivers Sayuri Takahashi, Aichi Prefectural University, Japan	
3304	Study for Subsidiary-Task Procedure to Assess Driver Distraction Hiroshi Uno, Japan Automobile Research Institute (JARI), Japan	
3256	Study on the Effect of Information Provision of VICS on Elderly Drivers' Beharmation Content on Driving Assistance and Disaster Event by Using Driving Katsunari Hibino, Keio University, Japan	, ,
3206	Estimating Time when a Driver Reach Critical Drowsiness Level using Heart F Yuto Hayata, Aichi Prefectural University, Japan	Rate Variability and Eyelid Closure

# TS113 - Improving Traffic Efficiency to Reduce CO<sub>2</sub> Emissions (1)

Frida	y, October 18, 2013, 09:00-10:30	W403
1905	Optimized Fuel Consumption Trajectories for Intelligent Vehicles in Highways Ricardo Reghelin, UTFPR/IFC, Brazil	
3314	An Ecological Driving Pattern Calculation Method for Eco-Driving Diagnosis Yuko Ohta, Mitsubishi Electric Corporation, Japan	
3390	Fuel Economy due to Traffic Congestion Detector using Smartphone Takamasa Koshizen, Honda R&D Co., Ltd., Japan	
3382	Research on Guidance and Warning Information for Emission Control Zone bandwork  Jinwoo An, The Korea Transport Institute (KOTI), Korea	ased on Vehicle to Nomadic Device
3150	A Study of Gas Pedal Release Support System by Using Vehicle-to-Vehicle Co	ommunication

# **TS114 - Connected Vehicles and Speed Advisory**

Takao Shimamori, Honda R&D Co., Ltd., Japan

Frida	y, October 18, 2013, 09:00-10:30	W404	
3366	Perspective for the Deployment of Intelligent Speed Adaptation from Japanese Experience Yukio Oguri, Chiba University of Commerce, Japan		
1901	State-of-the-Art of Variable Speed Limit Systems Mohamed Abdel-Aty, University of Central Florida, USA		
3072	Using Self-Illuminating Pacemakers to Alleviate Congestion Ken-Ichi Shibata, East Nippon Expressway Company Limited, Japan		
3379	Development of Ramp Metering Methodology for Speed Management in Merging-Area under V2I Communication Network  Kyeong Su Yoo, The Korea Transport Institute (KOTI), Korea		

# **TS115 - Traffic Information System based on Big Data**

Friday, October 18, 2013, 09:00-10:30

3101 The Development of ITS Cloud Services in Taiwan
Tsung-Hsun Chang, Chunghwa Telecom, Chinese Taipei

3001 Mega Cities and ITS Traffic Issues
Mohd Osnizam Othman, City Hall of Kuala Lumpur, Malaysia

2112 Open Data as Enabler for ITS Factory
Aki J. Lumiaho, Ramboll, Finland

3246 Distributed Intelligence to Transform "Uncertain Big Data" Into "Valuable Data"
Nobuhiro Asai, IBM, Japan

3004 Integrated Traffic and Travel Information for the End User through Open-Architecture, Public-Domain, Cloud-Computing Information Platform

# TS116 - Traffic Management under Emerging Condition (2)

Friday, October 18, 2013, 09:00-10:30 W406

3308 Development of Shortest Path Searching Algorithm in Case of Disaster Serye Yum, Myoungji University, Korea

Edmond C. Chang, EDCPC, Inc. (USA, China), USA

Approach to Disaster using Telematics
Takuro Masuda, Honda Motor Co., Ltd., Japan

3254 Smartphone Based Road Bump Detection Method, and Measurement Result of Road Damage From the Great East Japan Earthquake
Koichi Yagi, BumpRecorder Developers, Japan

2136 Geofencing MD Project: Management and Control of Dangerous Goods Transports in Urban Areas Fabrice Reclus, CETE LYON, France

3315 Development of Proactive Seamless Transportation Services
Wen-Jing Huang, CECI Engineering Consultants, Inc., Chinese Taipei

2060 Adaptive Routing Strategies for Ambulance Vehicles
Franziska Wolf, Institut für Automation und Kommunikation-ifak, Germany

# **TS117 - Simulation Enabled Adaptive Traffic Control**

Friday, October 18, 2013, 09:00-10:30 W407

An Improved Calibration Method for VISSIM Simulation Model Of Signalized Intersection Meng Wang, Beijing University of Technology, China

**4083** Accelerating Large-Scale Distributed Traffic Simulation with Adaptive Synchronization Method Toyotaro Suzumura, IBM Research, Japan

1041 Evaluating InSync Performance in Microsimulation Aleksandar Stevanovic, Florida Atlantic University, USA

**4190** Model-Based Design of Coordinated Traffic Controllers Roopak Sinha, University of Auckland, New Zealand

### **TS118 - Vulnerable Road Users**

### Friday, October 18, 2013, 09:00-10:30

W408

- 2131 Real-Time Bicycle Detection at Signalized Intersections using Thermal Imaging Technology
  Kristof Maddelein, Traficon International N.V., Belgium
- 3952 Performance Assessment Study of Road User Sensing Method by RSSI Combinations at Real Intersections Shoma Hisaka, The University of Tokyo, Japan
- 3251 ITS for Safer Environment of Vulnerable Road Users and Public Transport Yi-Syuan Huang, National Taiwan University, Chinese Taipei
- 3203 Study on the Development of Passage Safety Systems in the School Zones based on Context Awareness
  Deokhwan Lee, Korea Research Institute for Human Settlements, Korea
- 3024 A Study on Communication System for Prevention of Bicycle/Pedestrian Accidents Yasunobu Sugiura, Denso Corporation, Japan

### **TS119 - EV Charging and Management**

### Friday, October 18, 2013, 09:00-10:30

W409

- 1036 Demonstrative Experiment on Optimum Charging and Power Demand Control System based on Smart Grid Standard Technologies
  - Akihisa Yokoyama, Toyota Info Technology Center, U.S.A., Inc., USA
- 3385 Efficient Reservation of Chargers for Electric Vehicles
  Kazuyuki Miyakita, Niigata University, Japan
  - Optimal Design of EV Charging System and EV Charging Scheduling
  - Takahiro Shimoo, Toshiba Corporation, Japan
- 3261 Highway EMS for Efficient Management of EVs and Energy Paul Topon, Toshiba Corporation, Japan

### **TS120 - Tourism and Entertainment**

### Friday, October 18, 2013, 09:00-10:30

- 3240 Development of Navigation System for Sightseeing Wandering -Transit from Tram to Walking in Downtown Nagasaki-
  - Hitoshi Morita, Nagasaki University, Japan
- 3207 A Love of Travel-Demonstration Project of Sun-Moon Lake Importing ITS/Telematics Yong-Chun Lee, THI Consultants Inc., Chinese Taipei
- 3917 Study on Inclination to Use Personal Transporters for Sightseeing Tours Hiroaki Nishiuchi, Nihon University, Japan
- 3068 Easy-Traffic Information Smart Phone App Fun Travel in Taipei
  Ho Chen-Yu, Taipei City Government, Chinese Taipei

W411

# **TS121 - Congestion Management in Mega Regions**

### Friday, October 18, 2013, 09:00-10:30 Effectiveness of Speed Recovery and Lane Utilization Information at an Expressway Bottleneck Tadahisa Muramatsu, Central Nippon Expressway Company Limited, Japan 3926 Ant-Pheromones Based Traffic Congestion Avoidance Strategy Priti R. Ranadive, CREST, KPIT Cummins Infosystems Ltd., India 3231 Development of the 'Expressway Intelligent Transport Systems (ITS) Master Plan 2020' in Korea Ryunho Yang, ITS Korea, Korea Non-Recurrent Congestion caused by Freeway Accidents: Which Factors Are Critical? 4186

Transport Countermeasure Strategies for the PyeongChang Winter Olympic Games

# TS122 - Driver Behavior (3)

3375

Frida	y, October 18, 2013, 11:00-12:30	W401	
3202	Effect of Stimulus of Light-Emitting Devices Focusing on the Characteristics of the Drivers Wakana F. Okada, Nagoya Electric Works Co. Ltd, Japan		
3229	Analysis of the Lane-Change Behavior at a Lane-Closure Event by Driving Simulation Experiment Sungjoon Hong, The University of Tokyo, Japan		
3322	Development of Driver's Route Diversion Model based on the Theory of Planned Behavior Seung-Neo Son, ITS Korea, Korea		
2095	Signalization Safety and Driver Behavior Study with Flashing Green and Amber Time at Signalized Intersections in Istanbul Rahime Gunay, ISBAK Inc., Turkey		
3367	Analysis of Speed Pattern on Motion for Low-Floor Single Deck Bus		

# **TS123 - ADAS based on Vision System**

Hooi Ling Khoo, Universiti Tunku Abdul Rahman, Malaysia

Younshik Chung, The Korea Transport Institute (KOTI), Korea

Sung-Eun Kim, The Korea Transport Institute (KOTI), Korea

Frida	ıy, October 18, 2013, 11:00-12:30	W402	
3324	ADAS High-Precision Road Database using MMS Sukjo Yoon, PASCO Corporation, Japan		
3259	Development of Auto-Calibration for In-Vehicle Multi-Camera Monitor System: High-Precise Position Detector of Target Marker Yasuhiro Aoki, Fujitsu Laboratories Ltd., Japan		
3959	Monocular-Camera Based Obstacle Detection with Reconstruction Error Mod Akihito Seki, Toshiba Corporation, Japan	del	
3052	Optimization of Look-ahead-Distance for a Vision-Based Vehicle Asami Matsushima, Meijo University, Japan		

# TS124 - Improving Traffic Efficiency to Reduce CO<sub>2</sub> Emissions (2)

Friday, October 18, 2013, 11:00-12:30

W403

- 2055 Estimation of Vehicle Emissions of Improved Traffic Management Performance using Microsimulation
  Olaf Czogalla, Institut f. Automation und Kommunikation-ifak, Germany
- 3205 Application Methodology of a CO<sub>2</sub> Emission Model Combined with a Mesoscopic Traffic Simulation Model Shuichi Kanari, Japan Automobile Research Institute (JARI), Japan
- 3055 Estimation of Reduction in Environmental Impact by ITS Measures with Vehicle Information Kazufumi Suzuki, National Institute for Land and Infrastructure Management, MLIT, Japan
- **2124** An App to Contribute on CO<sub>2</sub> Emission Reduction Yubin Wang, Trinie Automation, The Netherlands
- 3077 Road Infrastructure Planning for CO₂ Reduction using Mathematical Optimization Yuichiro Miyamoto, Sophia University, Japan

### **TS125 - Data Management to Improve System Performance**

Friday, October 18, 2013, 11:00-12:30

W404

- 3318 Characteristics of the Portable Reference Equipment Developed for ITS System Performance Evaluation in Korea
  - Sang Hyup Lee, Korea Institute of Construction Technology (KICT), Korea
- 3930 Define High Priority 4 Application related to C-ITS in Smart Highway Haewoong Lee, ITS Korea, Korea
- 2006 Data Management in Field Operational Tests Sami Koskinen, VTT, Finland
- 3918 Development and Field-Testing of an Image Sensor System with Existing Cameras Takeshi Matsunuma, Oriental Consultants Co., Ltd., Japan
- 3166 The Deployment of ITS Spot Service in the Chubu Region

  Takahiro Kawano, Chubu Regional Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

### **TS126 - Coping with Congestion**

Friday, October 18, 2013, 11:00-12:30

- 3293 Toward a Resilient Prediction System for Non-Uniform Traffic Data
  Osamu Masutani, Denso IT Laboratory, Inc., Japan
- 3187 Travel Time Estimation Method based on Traffic Data Collected by Vehicle Detectors Saburi Shota, Nihon University, Japan
- 3100 Scenarios Demonstrating Congestion Management Policies using SCATS
  Christian C. Chong-White, Roads and Traffic Authority, Australia
- 1023 Data Collection: Affordable Real-Time Traffic Adaptive Control Daniel J. Benhammou, Acyclica Inc., USA
- 3163 Quantifying Route Quality through Viability Indices using Actual Travel Time Data Jeong-II Son, Daegu Gyeongbuk Institute of Science and Technology, Korea

■ Scientific Paper

## **TS127 - Traffic Management under Emerging Condition (3)**

### Friday, October 18, 2013, 11:00-12:30

W406

- 3165 Information Collecting Measures during the Earthquake Disaster using Smartphone and Other Tools Katsunori Yamazaki, Metropolitan Police Department, Japan
- 3123 ITS at the Time of Disaster

Masafumi Kobayashi, Sumitomo Electric Industries, Ltd., Japan

- 3071 Monitoring of Congestion on Expressways and Provision of Information using Probe Data: an Initiative Regarding the Rehabilitation Work following the Great East Japan Earthquake
  Yasunori Kamata, East Nippon Expressway Company Limited, Japan
- 3250 The Efforts for Transmitting Disaster Related Information by Micromedia Satomi Sudo, Global Survey Corporation, Japan
- 3026 Traffic Control System Providing for Large-Scale Disaster
  Akira Kawaguchi, Metropolitan Police Department, Japan
- 3953 A Study on Improvement of Transportation Disaster Prevention Related Legal System for Minimizing Disaster Damage
  Sung Uk Jun, Myongji University, Korea

### **TS128 - Traffic Demand Management**

Friday, October 18, 2013, 11:00-12:30

W407

- 2059 Investigating Intermittent Bus Lanes using Simulation Data
  Vladimir Zyryanov, Rostov State Civil Engineering University, Russia
- 3022 Simulation of a Park-and-Ride System and Train Scheduling using Mathematical Optimization Ryuhei Miyashiro, Tokyo University of Agriculture and Technology, Japan
- **4162** Designing a Demand Sensitive Timetable for MRT Services Lijun Sun, Singapore-ETH Centre, Singapore
- 3331 Lessons Learnt from the Auckland Travel Demand Management Project Stephen D. Hewett, Beca, New Zealand

### TS129 - Map Database

### Friday, October 18, 2013, 11:00-12:30

W408

- Possibility for the Use of the Authority Map for ITS Services in Japan Satoru Nakajo, Mitsubishi Research Institute, Inc., Japan
- 3099 More Efficient Incremental Map Updating System for Navigation Systems Takayuki Watanabe, Denso Corporation, Japan
- 3037 A Broadcast-Based Notification Scheme of Updated Digital Road Map Data for Car Navigation Systems Tatsuhiko Nakano, Kyushu University, Japan
- 3144 A Quarter of Century of National Road Map Database in Japan and Challenging for Contribution to Advanced ITS

Akira Yaguchi, Japan Digital Road Map Association (DRM), Japan

- 3294 Development of Feed Information 3D-Mapping Data for DSSS used by GNSS Technologies Yuichi Hagito, Mitsubishi Electric Corporation, Japan
- 2924 DynaMap: A Dynamic Map for Road Side ITS Stations Bart B.D. Netten, TNO, The Netherlands

## TS130 - EV Charging and Smart Grid

### Friday, October 18, 2013, 11:00-12:30

W409

- 3933 Agent-Based Simulation of Local Electricity Sharing System: Can We Charge All EVs in a City only with the PVs? Yoshiki Yamagata, National Institute for Environmental Studies (NIES), Japan
- 3378 Development of the Station Energy Management System Yumi Hanashima, Toshiba Corporation, Japan
- 3027 Development of EV/PHEV Charging System with Communication Technologies Kenichi Hatanaka, Sumitomo Electric Industries, Ltd., Japan
- 2053 An Integrated Communications and Control Framework for Electric Vehicle Charging Angelos I. Amditis, Institute of Communication and Computer Systems, Greece
- 3044 Development of V2G/V2H Communication ECU for EV/PHV Charging Systems Shuhei Takimoto, AutoNetworks Technologies, Ltd., Japan

### TS131 - Information and ITS

#### Friday, October 18, 2013, 11:00-12:30

W410

- 3302 Novel Driver Authentication System using Electrocardiogram Naoki Nobata, Tokai Rika Co., Ltd., Japan
- 3343 Development for Application Interfaces and Test Method Standard of Electronic Toll Collection using Mobile Telecommunication and WAVE
  Sang-Heon Kim, ITS Korea, Korea
- 2102 Mobile Error Reporting (MER)
  Richard Fresk, Västtrafik AB, Sweden
- 2052 Smart Mobility through Multi-Level Innovation
  Niklas E. Johansson, Viktoria Swedish ICT, Sweden

# **IS01 - Green ITS and Sustainability**

Tues	day, October 15, 2013, 11:00-12:30	W400		
4136	36 Fuel-Optimal Vehicle Throttle Control: Model Logic and Preliminary Testing Hesham A. Rakha, Virginia Tech, USA			
3253	Development of Information Provision System based on Actual Vehicle Movements for Reducing CO₂ Emission Yukimasa Matsumoto, Meijo University, Japan			
1030	1030 A Calibration Algorithm for Vehicle Emission Estimation using Driving Simulator Fengxiang Qiao, Texas Southern University, USA			
4124	The Development of a Green Control Unit for Eco-Driving of Electric Vehicles Kang Li, National Taiwan University, Chinese Taipei			
3145	Estimation of Yaw Moment of Inertia of the Vehicle for Automatic Platooning Seungyong Lee, The University of Tokyo, Japan			
1006	1006 Fixed Anti-Icing Spray Technology (Fast) in the 21st Century Paul Bridge, Vaisala Inc, USA			
3169	3169 Extraction of Blocked Road Regions by Analysis of High-Resolution Satellite Images Keishi Yamaguchi, Shizuoka University, Japan			
3955	Modeling and Analysis on Personal Allocation of Highway Maintenance Yanmei Guo, Research Institute of Highway, Ministry of Transport, China			
1005	Ensuring and Quantifying ITS Return on Investment through the Developmen Performance Measures Paul Bridge, Vaisala Inc, USA	t of Winter Maintenance		

# **IS02 - Driving Safety**

Tuoc	day, October 15, 2013, 14:00-15:30	W400		
1065	uay, october 13, 2013, 14.00-13.30	W400		
3939	Toward the Development of a Driving Support System for Repressing Overtrust and Overreliance Yusuke Tanaka, Denso Corporation, Japan			
3192	2 Evaluation of HMI for Motorcycle Mutsumi Katayama, Honda R&D Co., Ltd., Japan			
1903	1903 An Evaluation of the Visual Demands of Portable Telematics in Young Adult Drivers Yu Zhang, Denso International America, Inc., USA			
4170	Double Articulation Analysis and Prediction of Driving Behavior Kentarou Hitomi, Toyota Info Technology Center Co., Ltd., Japan			
3048	Measurement of Sleepiness Depth based on Accelerator Operation Tomokatsu Okuya, Denso IT Laboratory, Inc., Japan			
3088	Variable Speed Limit Control Strategy for Accident Management on Taiwan Freeway Ying Lee, National Kaohsiung Marine University, Chinese Taipei			
2061	MAVE - an Intelligent System for Automating the Exchange, Generation and Michael Kieslinger, Fluidtime Data Services GmbH, Austria	Management of Traffic Messages		
2119	A Road Safety Decision Support System for Municipalities Davide Shingo Usami, University of Rome La Sapienza, Italy			

W400

3273

3397

## **IS03 - Traffic Modeling and Disaster**

Tuesday, October 15, 2013, 16:00-17:30 W400 4069 Burr Regression And SCATS DS for Travel Time Variability Modelling Susilawati Susilawati, Padang State Polytechnic, Indonesia 1011 Using Cloud Computing to Increase Efficiency in Transportation Modeling Nate Chanchareon, Citilabs, USA 4055 Developing Real-Time Queue Estimation Model with Dynamic Capacity based on Shock Wave Analysis Jing Cao, University of Alberta, Canada Virtual Stop Line Strategy to Reduce Fuel Consumption of Vehicles at Ramp Meters 2109 Zeremariam T. Woldeab, TNO, The Netherlands 3947 A Modified Social Force Model under Different Psychological Conditions for Room Evacuation Zhang Hailin, Research Institute of Highway, Ministry of Transport, China 4028 A Hierarchical Traffic Management Framework with Multiple Survivability Classes for Vehicular Networks Chih-Wei (Mark) Hsu, Industrial Technology Research Institute (ITRI), Chinese Taipei Dynamic Simulation for Effective Evacuation Planning 3107 Kazuki Suzuki, Urban Development Engineering and Consulting, Inc., Japan Strategic Plan for Disaster Information Services based on VICS Mitsuhiko Koga, Vehicle Information and Communication System Center (VICS), Japan

Analysis of Operation Effect based on Variable Speed Limits in Tunnel using Micro Traffic Simulator

### **IS04 - Advanced and Autonomous Vehicle**

Mark Nichols, Trimble Navigation Ltd, New Zealand

Toshihiro Yasuda, Toyota Motor Corporation, Japan

Hyo Kyoung Eo, Korea Institute of Construction Technology (KICT), Korea

Wednesday, October 16, 2013, 11:00-12:30				
3221	3221 Imaging Radar for Detecting Spatial Distribution of Reflection from an Automobile Hirosuke Suzuki, KEYCOM Corporation, Japan			
3210	Multiple Moving Target Simulation System for Developing Radar-Based Safety Systems Hirosuke Suzuki, KEYCOM Corporation, Japan			
3927	Modeling the Impact of Inter-Vehicle Communications on Chain Collision Avoidance Mohammad Javad Fazel Ashrafi, Urmia University, Iran			
3357	FOT of Innovative ASV in Hiroshima - V2V by Communication between Tramcars and Cars Takayuki Hirasawa, The University of Tokyo, Japan			
3199	Path Planning based on Support Vector Machine for Autonomous Vehicle Yusuke Ueda, Nippon Soken, Inc., Japan			
3061	Cloud Supported Autonomous Driving Ryoma Niihara, Denso IT Laboratory, Inc., Japan			
1027	A Short Range Vehicle to Infrastructure System at Work Zones and Intersections Fengxiang Qiao, Texas Southern University, USA			
1013	Recent Advances in High Accuracy GNSS for Automotive Applications			

A Feasibility Study of the New Method of Vehicle Troubleshooting Utilizing the Remote Technology

Thur	sday, October 17, 2013, 09:00-10:30	W400
4149	An Efficient License Plate Recognition Algorithm under Complex Illumination Bo Zou, Neusoft Corporation, China	
4062	A Robust Traffic Light Detection Algorithm based on Computer Vision Bo Zou, Neusoft Corporation, China	
2918	Compensation Algorithms for The Piezoelectric WIM Sensors Anna Cerovska, BETAMONT, Slovakia	
2923	What Is Required to Guarantee Data Quality for Regional Traffic Management Jos L.M. Vrancken, Delft University of Technology, The Netherlands	1?
4168	Travel Route of Subway Passenger Measurements from Cellular Phone Local Lai Jianhui, Beijing University of Technology, China	ion Data
3164	Extraction of Vehicle Queues using a Satellite Image Extraction of Vehicle Queues usi	eues using a Satellite Image
3365	Object Searching on Maps Optimization Wasan Pattaraatikom, National Electronics and Computer Technology Center (NEC	CTEC), Thailand
3279	Vehicle Detection for Road Surveillance Systems Yoshihiko Suzuki, Toshiba Corporation Power Systems Company, Japan	
4042	Real-Time Vehicle Tracking using TLD in Red Light Camera Bo Zou, Neusoft Corporation, China	

# **IS06 - Next Generation Mobility**

Thur	sday, October 17, 2013, 11:00-12:30	W400		
2051	eCo-FEV: Efficient Cooperative Infrastructure for Fully Electric Vehicles Lan Lin, Hitachi Europe SAS, France			
2914	The Electric Vehicles Ecosystem -Literature Review and Identification of Relevant Challenges  Zulkarnain Zulkarnain, VTT Technical Research Centre of Finland, Finland			
2010	The ITS-Platform for Electromobility in Norway  Tom E. Noerbech, Norwegian Public Roads Administration, Norway			
3249	249 State of Charge Estimation of Electric Vehicles based on Vehicle Specific Power Yuanyuan Song, Beijing Jiaotong University, China			
3116	An EV Car Sharing Pilot Project in Taiwan's Sun Moon Lake National Scenic Area Chi-Chung Tao, Tamkang University, Chinese Taipei			
1026	The Future of Transit is Here: Rides on Demand Can Be Better Than (and Almost as Fast as) Driving Yourself Stephan A. Parker, Transportation Research Board of The National Academies, USA			
4009	Privacy-Preserving Key Management Scheme for V2G Networks Huei-Ru Tseng, Industrial Technology Research Institute (ITRI), Chinese Taipei			
4095	A Model and Simulation of EV Use in Environments with V2H and Battery Replacement Infrastructure Marat Zhanikeev, Tokyo University of Science, Japan			
3162	A Long Term Experiment of the ECOLOG Database Capable to Estimate V2X Effect Replacing with EVs Takashi Tomii, Yokohama National University, Japan			
4007				

# **IS07 - Advanced Traffic Management**

Thurs	sday, October 17, 2013, 14:00-15:30	W400		
3914	An Adaptive Traffic Light Control Application in WAVE/DSRC Tien-Yuan Hsieh, Industrial Technology Research Institute (ITRI), Chinese Taipei			
3363	A Simulation Study for ACC Design and Alleviation Effects for Traffic Congestions Osamu Nishihara, Kyoto University, Japan			
3139	Impact of Speed Limit on Traffic Flow Characteristic in Long Tunnel on Freeway Tien-Pen Hsu, National Taiwan University, Chinese Taipei			
4161	Assessing Ramp Metering and Variable Speed Limits Strategies for Auckland Motorway Prakash Ranjitkar, University of Auckland, New Zealand			
3002	Effective, Automated Traffic Signal Control and Retiming Needed to Relief China Urban Congestion Edmond C. Chang, EDCPC, Inc. (USA, China), USA			
3105	Introduction of Profile-Based Traffic Signal Control in Okayama Prefecture Taketo Mizuno, Okayama Prefectural Police Headquarters, Japan			
4175	Estimation of Delay at Signalized Intersections with an Increasing Discharge Rate Mohsin S. Chaudhry, University of Auckland, New Zealand			
2922	QHM: The Quantitative Hierarchical Model, a Scalable Framework for Road Traffic Network Management Jos L.M. Vrancken, Delft University of Technology, The Netherlands			
2087	<u> </u>			

### **IS08 - Institutional Issues and Information Services**

Thur	sday, October 17, 2013, 16:00-17:30	W400	
1016	Automated Test Platform to Evaluate Conformance of Intelligent Transportation Adriano G. Leal, IPT - Institute for Technological Research, Brazil	on Systems to Brazilian Regulations	
1020	Minnesota Safety, Mobility and User Fee Study: Summary And Findings Zachary T. Burton, Mixon Hill Incorporated, USA		
3084	Visualizing Evolutionary Trails of Knowledge Mapping of Taiwan's Intelligent Thi-Chi-Chung Tao, Tamkang University, Chinese Taipei	Transportation Systems	
3255	Quasi-Realtime Street Context Services by Stream Data Processing of Social Shigeru Shimada, Advanced Institute of Industrial Technology, Japan	Media	
3243	Real-Time Intelligent Transport Information System in a Local Village with EV And PV: a Proposal Kanae Matsui, National Institute for Environmental Studies (NIES), Japan		
4112	Public Perception on Increased Use of Technology in Automobiles: Survey Findings Hesham A. Rakha, Virginia Tech, USA		
2144	EU Wide Multimodal ITS Services and Regional High Quality Data -Is This a C Possible for the Benefit of the Traveler? : Experiences Made in the Co-Cities Alexander Froetscher, AustriaTech, Austria		
3339	Proposal and Trial of Feasible On-Site ICT for Promotion of Stop-By Round T Makoto Ogasawara, Yonden Consultants Inc., Japan	rips in Sightseeing Areas	
3347	Implementation of Traffic Cloud using Taxi Fleet as Vehicle Probe Will Y. Lin, Feng Chia University, Chinese Taipei		
3025	Multi-Type Multi-Modal Simulator for Transit Service Quality Evaluation Satoko Itaya, NEC Corporation, Japan		

# **IS09 - Cooperative System and Telematics**

Frida	y, October 18, 2013, 09:00-10:30	W400				
3931	3931 Stronger VANET Privacy, Security, and Robustness through Multichannel Communications Erik A. Hill, Utsunomiya University, Japan					
2079	Traffic Data Routing through Cooperative Systems and DATEX II Developed in the French FOT Score@F Van-Bao Ta, French Ministry of Transport - CETE IDF, France					
1018	Enabling the Connected Commercial Vehicle Michael Brown, SwRI, USA					
1017	1017 Interoperability Assurance: Processes, Procedures, and Tools for Performing Structured Qualification and Certification Testing of Connected Vehicle Devices Michael Brown, SwRI, USA					
4108	8 Dynamic Travel Time Prediction using Pattern Recognition Hesham A. Rakha, Virginia Tech, USA					
2122	A Smart Mobility Operational Framework for ATIS/ATMS Services Exploiting ICT Measurements Jaume Barcelo, Universitat Politècnica de Catalunya, UPC-Barcelona Tech, Spain					
2088	On-Board Real Time Driver Information using Bidirectional Data Exchange between Smartphones and Traffic Data Provider Felix Rudolph, University of Kassel, Germany					
3282						
4038	<b>Utilization of Spatio-Temporal Image for LED Array Acquisition in Road to Vel</b> Syunsuke Usui, Nagoya University, Japan	hicle Visible Light Communication				

# **IS10 - Urban and Regional Transport Management**

Frida	ıy, October 18, 2013, 11:00-12:30	W400			
4116	4116 Estimating Value of Time and Its Inter/Intra-Personal Variations with Longitudinal GPS Data for Congestion Pricing Applications  Cory M. Krause, University of Maryland, USA				
2137	2137 Smart Park and Ride -Conceptualising and Demonstrating Intelligent P&R Service in Stockholm Haval Davoody, Swedish Transport Administration, Sweden				
3323	3323 Research of Integrated Power Supply System on Highway Emergency Command Vehicle Sun Jiaming, Ministry of Communications, China				
2025	2025 Smart City Wide Parking Management for the Benefit of Urban Residents Meta A. Rotenberg, HTS, Israel				
3944	3944 Traffic Characteristics Analysis on Freeway during Holiday in Tianjin using ETC Data Nale Zhao, Research Institute of Highway, Ministry of Transport, China				
1021	1021 Dallas Integrated Corridor Management Koorosh Olyai, Dallas Area Rapid Transit, USA				
3244	Development of the Parking Information System for the Wide Area and Parkin CCTVs  Hyoung Won Park, ITS Korea, Korea	ng Guidance System based on			
4005	Robust Path-Based Control for Emergency Vehicle Preemption Wei Yin, Tongji University, China				

# **Ancillary Events**

# FOT-Net Sixth International Workshop on Impact and Deployment of FOT Results and Data



FOT-Net has been established by the European Commission to network Field Operational Tests (FOTs) organisers in one strategic networking platform in order to address common issues related to the practical organisation, set up and follow-up of FOTs results.

There is a need for the different regions (Europe, Asia-Pacific and North America) to cooperate on common FOTs issues, such as data handling and sharing, methods and deployment. FOT-Net has established an international network of FOT organisers, aiming to tackle common working issues and foster cross-region cooperation.

General objectives of this workshop include reinforcing the global FOT network in order to exchange knowledge, best practices and foster cooperation for FOT activities and supporting the coherent development and implementation of FOTs at European and International level.

In this edition of the FOT-Net workshop four round tables will target issues related to:

- Data and Impact analysis
- Strategies for deployment and satisfying stakeholders' needs
- Sharing of driver data from FOTs and Naturalistic Driving Studies
- International cooperation on system data sharing for cooperative systems

**Date and time:** Monday, 14 October (before the ITS Congress opening ceremony). Round tables will be from 09:00 to 12:00. The plenary session starts at 13:00 and concludes at 15:30. Lunch will be provided between 13:00 and 14:00.

Place: Tokyo International Forum, G04 - 10.

Fee: Free of charge

For more information please contact:

Yvonne Barnard Project Manager ERTICO - ITS Europe Tel: +32-(0)2-400-07-12 E-mail: info@fot-net.eu

### 79 GHz Workshop



The 79 GHz Workshop will present an overview of the achievements of the 79 GHz Project over the past year at global level and the creation and activities of **GARREG (Global Automotive Radio Regulations Expert Group)** to establish a worldwide acting technical committee and interest group on automotive frequency allocation issues.

During the workshop the status of the regulation and the activities of the project in the different region of the world will be illustrated. The basic intention and objective of the 79 GHz Project is to establish and speed up the world wide harmonized frequency allocation for automotive radar systems in the frequency range 77 GHz to 81 GHz (79 GHz).

In 2004 the 79 GHz frequency range has been recognized by the European Commission and the CEPT as the most promising frequency allocation for automotive radar devices from a technical and regulatory perspective and designated in an EC (Commission Decision 2004/545/EC) and ECC decision (ECC/DEC/(04)03) on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short range.

#### About 79 GHz

Project Partners: Robert Bosch GmbH, ERTICO - ITS Europe, ADC Automotive distance control systems (Continental) GmbH, Renault s.a.s.

Associated Partners: Autoliv, BMW, CRF (Centro Ricerche Fiat), Daimler, Delphi, Infineon, Peugeot Citroën, ST Microelectronics, UMS, Valeo, Volkswagen AG.

**Date and Time:** Thursday, 17 October, 09:00-13:00 **Place:** Tokyo Fashion Town Building, Room 907A

For more information please contact:

Juergen Hildebrandt, 79 GHz project coordinator

Robert Bosch GmbH

E-mail: Juergen.Hildebrandt@de.bosch.com

Tel: +49-711-811-47527

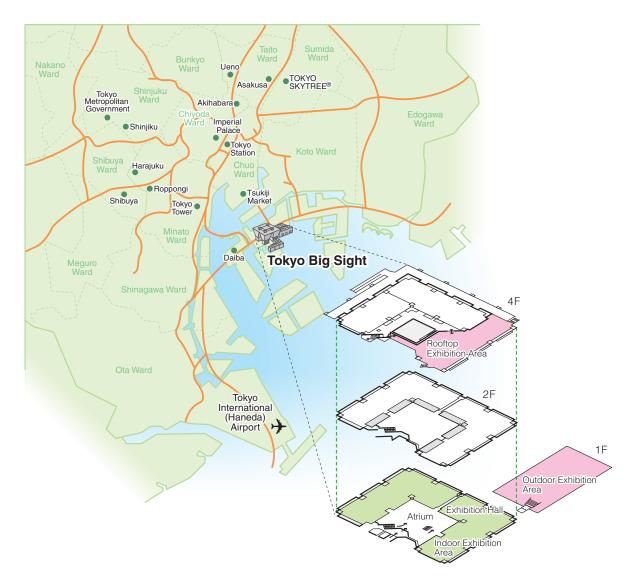
Official Website: http://www.79ghz.eu/

### **Showcase Demonstrations**

Along with sessions and exhibitions, showcase demonstrations are one of the important components of the ITS World Congress. While sessions and exhibitions are limited to the indoor sections of the event venue, showcase demonstrations are positioned as "the exhibition" which expands its stage outdoors and to the streets. A number of services and systems which are still in the experimental stage, or close to practical application will be presented at the ITS World Congress Tokyo 2013 as specific cases of the 7 topics based on the 4 congress concepts. Come and experience the "Open ITS to the Next", direction of next generation ITS, by observing and participating in showcase demonstrations.

#### **Opening Dates and Times**

Tuesday, October 15: 11:30-17:30 Wednesday, October 16: 09:00-17:30 Thursday, October 17: 09:00-17:30 Friday, October 18: 09:00-12:00



### **Future Plans**

Registration will open in September 2013.

Registrants in the delegate, speaker/moderator or student categories are entitled to attend the demonstrations.

### Safety and traffic management

These showcase demonstrations introduce specific solutions featuring further advanced and more convenient sensing technologies, prediction technologies and information presentation methods.

### **GS Next Generation DSSS (I2V)**

Next-generation Driving Safety Support Systems (DSSS) consists of the technologies including devices for I2V communication via infrared beacons and radio waves, and roadside sensing equipment to detect vehicles and pedestrians. In this demonstration, participants will experience DSSS on ordinary roads around the venue with image display and audio guidance designed for next-generation DSSS.

The demonstration will include the systems which are based on the information from infra sensors such as Right Turn Collision Prevention System and Left Turn Collision with Motorcycles Prevention System. It will also include Signal Information Drive Systems (SIDS) for ensuring safe and smooth flow at intersections and reducing  $CO_2$  emissions by providing signal information.

**GS: ITS GREEN SAFETY SHOWCASE** 

Demonstrators: National Police Agency, Tokyo Metropolitan Police Department, UTMS Society of Japan, Member companies of UTMS Society of Japan



### GS Cooperative Advanced Safety Vehicles (V2V, V2P)

Study Group for Promotion of Advanced Safety Vehicle (ASV), a joint initiative involving industry, academia and government, has developed communication-based advanced safe driving assistance systems. The demonstration will show how driving assistance systems with vehicle-to-vehicle and vehicle-to-pedestrian communication work in different traffic conditions.

The demonstration will provide drivers with information on potential hazards such as the approach of vehicles and pedestrians

in order to prevent accidents caused by driver oversight due to low visibility or inattention

In order to support drivers, vehicles equipped with the systems can recognize the traffic conditions around them and support drivers even when visibility is low.

GS: ITS GREEN SAFETY SHOWCASE

Demonstrators: Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Study Group for Promotion of ASV (ASV5 Task Force for the Demonstration), ASV Member Companies, etc (16 companies)



### GS Smartway with ACC/CACC (I2V, V2V)

Participants will experience the demonstration of congestion mitigation in sag sections of expressway in a vehicle equipped with Adaptive Cruise Control (ACC) / Cooperative-ACC (CACC). The relevant information about ACC/CACC settings will be

provided via ITS Spot. Receiving the information on the car navigation screen, the participants will experience ACC to adjust and maintain the distance between cars, and CACC to synchronize the movement of vehicles in a platoon using vehicle-to-vehicle communication.

GS: ITS GREEN SAFETY SHOWCASE

Demonstrators: Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism,
National Institute for Land and Infrastructure Management, Ministry of
Land, Infrastructure, Transport and Tourism, Research Consortium for
Smart Traffic Flow Control System (5 Japanese Automakers), Highway
Industry Development Organization



### **GS ITS Spot Services (I2V)**

ITS Spot services, the world's first vehicle-infrastructure cooperative system, started nationwide in 2011. In this showcase, participants will experience dynamic route guidance, safe driving support and other functions, such as guidance and warnings according to traveling speed, road alignment, events occurring on an expressway in the Tokyo metropolitan area with daily traffic volumes of more than 1 million vehicles. In addition, the technology currently being trialed for cashless payment by credit card in parking lots will be demonstrated.

GS: ITS GREEN SAFETY SHOWCASE

Demonstrators: Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism,
National Institute for Land and Infrastructure Management, Ministry
of Land, Infrastructure, Transport and Tourism, Highway Industry
Development Organization, Metropolitan Expressway Company Limited,
ITS Spot project team



### GS Mobile and ITS Spot cooperative services (I2V)

Experience next-generation ITS services offered by linking ITS Spot and smartphones. Participants will make a round trip by bus from Odaiba to Umihotaru. During the trip, ITS Spot information (e.g. wide-area traffic jams, dangerous areas) and local information provided by a cellular network (e.g. traffic signs, landmarks) will be displayed on participants' smartphones, and they will experience a safer, more comfortable highway drive suitable to place and time. Moreover, new services such as emergency evacuation information in the undersea Aqua Tunnel and a stamp collection rally at ITS Spot will be demonstrated. Complementary use of ITS Spot and mobile networks

- Traffic information from ITS Spot displayed on smartphones in English, Chinese and Japanese
- Local information provided continuously via a mobile network
- Collect a series of stamps at ITS Spot
- In addition to smartphone sensors, information acquired from ITS Spot is used to accurately identify position in the tunnel.

GS: ITS GREEN SAFETY SHOWCASE

Demonstrators: National Institute for Land and Infrastructure Management, Ministry of Land,
Infrastructure, Transport and Tourism, Highway Industry Development Organization,
East Nippon Expressway Company Limited, Central Nippon Expressway Company
Limited, Metropolitan Expressway Company Limited, Members of the Next Generation
Cooperative ITS Joint Research (2 companies)



### VICS, Evolution for the Next

Japan's Vehicle Information and Communication System (VICS) contributes to greater safety and smooth traffic flow. Goals for the next generation of this system include expanding the area where information is provided using data acquired by probe technologies and further improving services for users. One example of those services is to provide dynamic hazard maps in case of natural disasters. Participants in the demonstration can view new services for the next-generation VICS from a bus actually running in Tokyo. The bus will pass by various Tokyo landmarks. Experience with a tablet computer how information is provided when heavy rain falls or when a festival is going on nearby as well as new traffic information services that utilize probe technologies.

**Demonstrator: Vehicle Information and Communication System Center** 



### Supporting Safety in Zone 30 (20 mph zone)

The AISIN GROUP will demonstrate its safety support technologies utilizing near-vehicle monitoring, car navigation and brake control systems. In recent years Zone 30 have been established in the residential districts in Japan to ensure traffic safety. The demonstration will present how drivers are supported in Zone 30 with the technology of pedestrian priority. The presence of pedestrians and obstacles will be detected and alerts of the potential danger will be issued to drivers when the vehicle is moving and parking. Warning technology for unsafe vehicle operation and automated parking in a tricky parking space will also be presented.

Demonstrator: AISIN GROUP (AISIN SEIKI Co., Ltd.)



### **Honda Cooperative Mobility Demonstration**

Honda expects that ITS will make a substantial contribution to realizing "the Joy and Freedom of Mobility" and "a Sustainable Society where People Can Enjoy Life". The showcase will demonstrate how Honda is going to achieve free, safe and reassuring transportation systems using communication among cars, motorcycles, electric carts and pedestrians, and assist driving with ITS technology.

Participants will be able to experience an advanced and exciting ride into the transportation environment of the future through wireless communication and driving assistance technology.

Demonstrator: Honda Motor Co., Ltd.



### Intelligent Driver Support System Technology on Expressway

Participants will experience a new-concept driving assist system using full-range speed Cooperative Adaptive Cruise Control (C-ACC) and Lane Keeping Assist (LKA) system for reducing traffic jams, accidents, and driver workload. Participants will experience a C-ACC system that firmly controls inter-vehicle distance and an LKA system that keeps vehicles in the center of their lanes without weaving. Participants can also monitor these systems on in-car displays.

**Demonstrator: TOYOTA MOTOR CORPORATION** 



### **Intersection Signal Control Employing Vision Sensors**

This live broadcast demonstration shows a new traffic signal control system using innovative vision sensors. In the demonstration, two vision sensors are installed diagonally at an intersection to measure the entire directional vehicle flow and

pedestrians crossing the four crosswalks. The control algorithm is designed to optimize the balance of green time between vehicle traffic and pedestrian traffic as well as the split of vehicle directional flow.

Our vision sensor can integrate multiple loop detectors with highly flexible installation, and these advantages promise low-cost installation. The vision sensor measures vehicle and pedestrian flows simultaneously to maximize both benefits of pedestrian safety and vehicle flow efficiency.

Demonstrators: The University of Tokyo and Tokyo Metropolitan Police
Department

### **Next generation mobility and sustainability**

This showcase demonstration introduces the fusion of next generation transportation ways which can reduce the effects on the environment, and smart communities which effectively conduct energy management.

### **Autonomous Driving System Project**

The Research Committee on Car Robotics, Society of Automotive Engineers of Japan (JSAE) integrates automobiles and robotics in initiatives expected to lead to new developments. As part of these efforts, organizations involved in the project will showcase

cutting-edge autonomous driving systems and driver assistance systems through demonstrations, test drives, and displays.

Demonstrations and test drives will feature self-controlled, automatically driven vehicles equipped with autonomous driving systems. The vehicles will run autonomously on a special course at the venue, recognizing and avoiding obstacles, as well as preceding and oncoming vehicles, cooperative driving to proceed safely to their destination.

Demonstrators: Organizations participating in Research Committee on Car Robotics,
Society of Automotive Engineers of Japan (Kanazawa University, ZMP
INC., The team of Tokyo University of Science & National Institute
of Advanced Industrial Science and Technology, and other related
research organizations)



### **Smart Charging Demonstration**

This demonstration presents a smart charging system for electric and plug-in hybrid vehicles (EV/PHVs) to reduce energy consumption and help to create a sustainable low-carbon society. Using DENSO's energy management system (EMS), charging control system and parking management system, a vehicle can travel back and forth on its own between a parking spot and a charging station for an optimum, trouble-free charging.

This is an example of how future car technologies may change our lives. With a smart phone application, a future car might use remote-controlled parking and charging system technologies to travel on its own to pick up a driver at a requested time.

**Demonstrator: DENSO CORPORATION** 



### **Energy-ITS Automated Truck Platooning System**

Energy ITS Project has developed an Automated Truck Platooning system to save energy and reduce CO<sub>2</sub> emissions from automobiles. This live broadcast demonstration will show the advantages of these technologies and the image of a future transport system.

Participants will see the automated truck platooning at a speed of 80 km/h with inter-vehicle distance of 4 meters, achieved through integration of safe and reliable advanced technologies.

**Demonstrator: Ministry of Economy, Trade and Industry** 



### **Smart City Solutions Guided Tour**

Participants will be guided around the "Panasonic Center Tokyo" showroom within walking distance of Tokyo Big Sight. Panasonic Center Tokyo is a Corporate Global Communications Hub for Panasonic. With Panasonic's aim to become a "Green Innovation Company" and the vision of bringing about innovation in lifestyles and business with eco ideas for the earth, the Center serves as a vehicle for communications, receiving opinions and requests directly from customers while presenting actual products and services. The tour will introduce variety of Panasonic products and services for making cities and houses smarter including EV charging system, intelligent security and disaster reduction systems for town, and energy management systems for home, office and store. Panasonic Center Tokyo will continue to evolve together with its customers.

**Demonstrator: Panasonic Corporation** 



### Personalized mobility services

This showcase demonstration introduces services for efficient mobility suited to each individual based on the premise of an environment where all social infrastructure is networked.

### **WYSIWYAS - Indoor Seamless Positioning and Navigation**

A pedestrian navigation system will be available in several areas of the ITS World Congress and Exhibition venue. Participants will be able to use this system on smartphones with an intuitive interface called WYSIWYAS, a basic navigation display design concept standing for "What You See Is What You Are Suggested". The navigation application displays position and navigation information received from positioning infrastructure consisting of several positioning systems and databases. This infrastructure manages positioning systems including Wireless LAN, M-CubITS, and spot information.

**Demonstrator: WYSIWYAS Navigation Consortium** 



# Nagasaki Electric Tramway's "DOKONE" LRV Operation and User Navigation Service

The Nagasaki LRT Navigation Promotion Council provides a navigation service called "DOKONE". The purpose of this service is to provide walking support for disabled persons and a sightseeing guide for travelers. "DOKONE" means "Where is here?" in the Nagasaki dialect. This demonstration will broadcast images live from Nagasaki, transmitted from a streetcar in the peace memorial city. Participants in Tokyo can experience all the services of the Nagasaki Electric Tramway, such as operation of barrier-free vehicles, use of the navigation system, and the Wi-Fi connection method.





### **Resilient transport systems for emergency situations**

This showcase demonstration introduces policies for rapid recovery of traffic and transportation societies from emergency situations utilizing learnings from the unprecedented disasters that occurred in recent years.

# Demonstration of providing road traffic information and other related information at earthquakes

Tokyo Metropolitan Government (TMG) has been discussing the scheme for providing road traffic information using ITS technology as the lesson traffic congestion occurred at the time of the Great East Japan Earthquake. Participants will experience receiving an emergency warning e-mail informing you of traffic regulation information. Also, they will check these information on the electrical map so that they will experience the system for getting such information at the time of earthquakes.

This showcase demonstration shows participants how drivers easily receive necessary information through smart phones even at the confusion period immediately after a disaster occurs.

**Demonstrator: Tokyo Metropolitan Government** 



Photo courtesy of Tokyo Fire Department

### Vehicular Communications over White Space during Disasters

The demonstration will show that vehicles can act as information hubs conveying the information from the area where the telecommunications network is disrupted, to the area where the telecommunications infrastructure is available. The demonstration combines different means of communication including Wi-Fi and white space, as well as the movement of the vehicles themselves.

Demonstrators: TOYOTA Info Technology Center Co., Ltd.,
National Institute of Information and Communications Technology



### **Advanced Emergency Medical Support Intelligent Transport System**

Saving lives and reducing injuries from accident or disaster is an international issue. Advanced Automatic Collision Notification System (AACN), Global Emergency Medical supporting Intelligence Transport System (GEMITS), Disaster Relief Aircraft Management System Network (D-NET) and Doctor-Heli Support System (FOSTER-GA) are the subsystems in the development stage or already exist in Japan. This demonstration will organically integrate these cooperative sub-systems to showcase an image of the advanced ITS emergency care support technologies of the future.

Demonstrator: Research committee on AACN emergency care support service (Secretariat: Emergency Medical Network of Helicopter and Hospital)





The color code corresponds to the congress topics. A square indicates the focus topic of the visit, while triangles show other relevant topics

■ 1. Safety and traffic management

2. Next generation mobility and sustainability 3. Efficient transport systems in mega cities/regions 4. Intermodal and multimodal systems for people and goods

■ 5. Personalized mobility services 6. Resilient transport systems for emergency situations 7. Institutional issues and international harmonization

## **Technical Visits**

Technical visits will be conducted to get a closer look at the deployment of the latest ITS technologies. These half-day visits departing from Tokyo Big Sight in either the morning or afternoon during the congress period will enable participants to observe institutions and physically sense the convenience of ITS systems. The program of nine visits to road, railway and port control centers will provide firsthand experience of cutting-edge transportation innovations.

### **Time Schedule**

	Visiala Nama		October 15 (TUE)		October 16 (WED)		October 17 (THU)		October 18 (FRI)	
	Visit's Name	Visit area	AM	РМ	AM	РМ	AM	РМ	AM	PM
TV1	Tokyo Traffic Control Center and Disaster Prevention Center	Tokyo					09:00- 13:00	13:30- 17:30		
TV2	Yurikamome Control Center and Public Transport Ride	Tokyo		13:30- 16:45						
TV3	Waterfront Tunnels Control Center and Oi Container Terminal	Tokyo			09:10- 12:10	13:40- 16:40				
TV4	Advanced Traffic Control Centers and VICS	Tokyo, Chiba		13:30- 17:30		13:30- 17:30				
TV5	Kanagawa Traffic Control Center and V2I Cooperative Systems	Yokohama						13:30- 17:30		
TV6	Yokohama Smart Mobility	Yokohama			09:10- 13:10	13:30- 17:30	09:10- 13:10	13:30- 17:30	09:10- 13:10	
TV7	Kashiwa ITS Smart City	Kashiwa		13:20- 17:20		13:20- 17:20				
TV8	Honda Smart Home System & Solar Hydrogen Station	Saitama			09:00- 12:50	13:20- 17:10	09:00- 12:50	13:20- 17:10		
TV9	Expressway Control Center and Facilities for O&M	Yokohama		13:20- 17:20	09:00- 13:00		09:00- 13:00	13:20- 17:20	09:00- 13:00	

The time indicated above is departure/return time to Toko Big Sight

### **TV1: Tokyo Traffic Control Center and Disaster Prevention Center**

This tour visits two important control centers in Tokyo. One is Tokyo Traffic Control Center, managing more than 7,000 traffic signal controllers to ensure smoother traffic. The center also has the capability to handle unusual situations such as big events and disasters. The other is the Tokyo Disaster Prevention Center, where the Disaster Countermeasure Headquarters is established by the governor in the event of emergency situations like major earthquakes. As the operational hub, it works in close collaboration with the Japan Self-Defense Forces, Metropolitan Police Department, Metropolitan Fire Department, etc.

**Demonstrator: Tokyo Metropolitan Government, Tokyo Metropolitan Police Department** 

Color Code:

Date and time: Thursday, October 17, 09:00-13:00 Thursday, October 17, 13:30-17:30

Price: JPY 3,000 per person Meals Provided: No meal included

Course: Tokyo Big Sight - Tokyo Traffic Control Center and Disaster Prevention Center -

Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

Transportation: Bus

Minimum participants required: 2 Maximum participants: 30

· When you do online registration, additional questionnaires are required due to regulation of this visit

For security reasons, you are required to present your photo ID on the day of the technical visit departure.
In some cases, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date

• The technical visit organizer reserves the right to refuse participation due to their regulations.



### TV2: Yurikamome Control Center and Public Transport Ride

This tour offers participants who have experienced Tokyo's smooth and convenient public transportation a chance to see how it works safely and punctually by using three lines with one IC card, including a new transit system called Yurikamome. This unmanned transit system is 14.7 km in length and takes 100,000 + passengers every day. Since its launch in 1995, no major accident has occurred. The tour will also include a visit to the Yurikamome Control Center.

**Demonstrator: Tokyo Metropolitan Government,** 

Yurikamome Inc.

Color Code:

Date and time: Tuesday, October 15 13:30-16:45

Price: JPY 3.000 per person Meals Provided: No meal included

Course: Tokyo Big Sight - Yurikamome Control Center and Public Transport Ride -

Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

Transportation: Bus

Minimum participants required: 10

**Maximum participants: 15** 



- · When you do online registration, additional questionnaires are required due to regulation of this visit.
- For security reasons, you are required to present your photo ID on the day of the technical visit departure.
  In some cases, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date.
- The technical visit organizer reserves the right to refuse participation due to their regulations.

### TV3: Waterfront Tunnels Control Center and Oi Container Terminal

The Waterfront Tunnels Control Center monitors and controls 4 tunnels and 2 bridges to ensure safe and efficient transport around the area. Oi Container Terminal has an innovative sea freight hangar which can efficiently load and unload containers from a 3D-cell hangar. The tour shows how the system, the first of its kind, improved the efficiency of yard usage and environmentally-friendly operations. The tour also takes visitors to Tokyo Gate Bridge, a new bridge of unique design.

**Demonstrator: Tokyo Metropolitan Government,** 

**Tokyo Port Terminal Corporation** 

Color Code:

Date and time: Wednesday, October 16, 09:10-12:10

Wednesday, October 16, 13:40-16:40

Price: JPY 3,000 per person Meals Provided: No meal included

Course: Tokyo Big Sight - Waterfront Tunnels Control Center and Oi Container

Terminal - Tokyo Big Sightt

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

Minimum participants required: 10 Maximum participants: 20

- When you do online registration, additional questionnaires are required due to regulation of this visit.
- For security reasons, you are required to present your photo ID on the day of the technical visit departure.
  In some cases, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date.
- The technical visit organizer reserves the right to refuse participation due to their regulations.

The color code corresponds to the congress topics. A square indicates the focus topic of the visit, while triangles show other relevant topics.

1. Safety and traffic management

■ 2. Next generation mobility and sustainability 3. Efficient transport systems in mega cities/regions

4. Intermodal and multimodal systems for people and goods

■ 5. Personalized mobility services

 Resilient transport systems for emergency situations 7. Institutional issues and international harmonization

### TV4: Advanced Traffic Control Centers and VICS

This tour explores Japan's leading traffic-related systems (traffic management, signal control, traffic information utilizing probe data, etc.) and traffic information delivery services called VICS (Vehicle Information and Communication Systems). Travelling between the traffic control centers in the Metropolitan area, the largest in Japan, and Chiba area, the latest in Japan, visitors will be introduced to present systems and those currently under development by VICS for the future.

**Demonstrator: Vehicle Information and Communication System Center,** 

**National Police Agency,** 

Tokyo Metropolitan Police Department, **Chiba Prefectural Police Headquarters** 

Color Code:

Date and time: Tuesday, October 15, 13:30-17:30

Wednesday, October 16, 13:30-17:30

**Price:** JPY 3.000 per person Meals Provided: No meal included

Course: Tokyo Big Sight - Advanced Traffic Control Centers and VICS -

Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

Minimum participants required: 10 **Maximum participants: 35** 



For security reasons, you are required to present your photo ID on the day of the technical visit departure.
In some cases, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date.

• The technical visit organizer reserves the right to refuse participation due to their regulations



### TV5: Kanagawa Traffic Control Center and V2I Cooperative Systems

This tour visits the Kanagawa Traffic Control Center for demonstrations of the latest traffic signal control and V2I Cooperative Systems. The tour includes a bus ride to experience the prediction-based traffic signal system in real time. Demonstrations will cover Pedestrian Information and Communication Systems (PICS) and V2I Cooperative Systems, including Driving Safety Support Systems (DSSS) and a world-first traffic control system with V2I cooperative technologies.

**Demonstrator: UTMS Society of Japan,** 

**National Police Agency,** 

**Kanagawa Prefectural Police Department** 

Color Code:

Date and time: Thursday, October 17, 13:30-17:30

Price: JPY 3,000 per person Meals Provided: No meal included

Course: Tokyo Big Sight - Kanagawa Traffic Control Center and V2I Cooperative

Systems - Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

Minimum participants required: 10 Maximum participants: 40



- Because this visit to an expensive institution of the security is included, when you do online registration, additional questionnaires are required due to regulation of this visit.
   For security reasons, you are required to present your photo ID on the day of the technical visit departure.
- If input contents have deficiency, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date.
- The technical visit organizer reserves the right to refuse participation due to their regulations.

### **TV6: Yokohama Smart Mobility**

The City of Yokohama introduces the "next-generation mobility vision for Yokohama", which aims to create a low carbon community, working with mobility enterprises. The City of Yokohama has promoted advanced environmental measures in the Minato Mirai 21 district such as YMPZ (Yokohama Mobility Project Zero) and YSCP (Yokohama Smart City Project). Visitors will explore some aspects of the vision by experiencing a low-carbon micro mobility vehicle and energy management & ICT systems.

Demonstrator: City of Yokohama,

**NISSAN MOTOR CO.,LTD.** 

Color Code:

Date and time: Wednesday, October 16, 09:10-13:10

Wednesday, October 16, 13:30-17:30 Thursday, October 17, 09:10-13:10 Thursday, October 17, 13:30-17:30 Friday, October 18, 09:10-13:10

**Price:** JPY 3,000 per person **Meals Provided:** No meal included

Course: Tokyo Big Sight - Yokohama Smart Mobility - Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

Minimum participants required: 10 Maximum participants: 20



### TV7: Kashiwa ITS Smart City

This tour invites visitors to Kashiwa City to learn how the city is advancing urban development and mobility under the "Kashiwa ITS Smart City" concept. Visiting two sites, the Kashiwa campus of the University of Tokyo and the Urban Design Center Kashiwanoha (UDCK), the participants will experience various innovative ITS technologies such as capacitor EV, on-demand transport, PMV, and Augmented Reality (AR).

**Demonstrator: Kashiwa ITS Promotion Council** 

Color Code:

Date and time: Tuesday, October 15, 13:20-17:20

Wednesday, October 16, 13:20-17:20

**Price:** JPY 3,000 per person **Meals Provided:** No meal included

Course: Tokyo Big Sight - Kashiwa ITS Smart City - Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

**Minimum participants required:** 10 **Maximum participants:** 40



The color code corresponds to the congress topics. A square indicates the focus topic of the visit, while triangles show other relevant topics.



2. Next generation mobility and sustainability
3. Efficient transport systems in mega cities/regions
4. Intermodal and multimodal systems for people and goods

5. Personalized mobility services
6. Resilient transport systems for emergency situations
7. Institutional issues and international harmonization

### TV8: Honda Smart Home System & Solar Hydrogen Station

This visit provides insights into Honda's advanced environmental and energy technologies, which include the Honda Smart Home System and Solar Hydrogen Station linked to electric and fuel cell vehicles. These facilities are installed in Saitama, a part of greater Tokyo area. Honda is striving to achieve new energy technologies to reduce CO<sub>2</sub> emissions from household and personal mobility by 50% by 2015.

Demonstrator: Honda Motor Co., Ltd.

Color Code:

Date and time: Wednesday, October 16, 09:00-12:50

Wednesday, October 16, 13:20-17:10 Thursday, October 17, 09:00-12:50 Thursday, October 17, 13:20-17:10

**Price:** JPY 3,000 per person **Meals Provided:** No meal included

Course: Tokyo Big Sight - Honda Smart Home System & Solar Hydrogen Station -

Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

Transportation: Bus

Minimum participants required: 10 Maximum participants: 26



### TV9: Expressway Control Center and Facilities for O&M

This tour visits the advanced Kawasaki Traffic Control Center of NEXCO-Central, an expressway operator in Japan, and observes the state-of-the-art information processing system, which analyzes information collected from CCTV cameras, vehicle detectors and other equipment and displays the analyzed data on large monitors in real time. In addition, visitors experience the demonstration of maintenance vehicles utilizing ITS technologies such as wireless EV charging.

**Demonstrator: Central Nippon Expressway Company Limited** 

Color Code:

Date and time: Tuesday, October 15, 13:20-17:20

Wednesday, October 16, 09:00-13:00 Thursday, October 17, 09:00-13:00 Thursday, October 17, 13:20-17:20 Friday, October 18, 09:00-13:00

**Price:** JPY 3,000 per person **Meals Provided:** No meal included

 $\textbf{\textit{Course:}} \ \, \textbf{Tokyo} \ \, \textbf{Big Sight - Expressway Control Center and Facilities for O\&M-}$ 

Tokyo Big Sight

Tour conductor: English-speaking tour conductor is included

**Transportation:** Bus

**Minimum participants required:** 10 **Maximum participants:** 40



# **Post Congress Tours**

Post congress tours of one or two days after the congress will give visitors a closer look at the deployment of the latest ITS technologies outside Tokyo.

### PT1: Aichi/Toyota ITS & Samurai Tour

The tour includes test drives with the wireless Driving Safety Support System (DSSS) as well as field trips to Toyota Ecoful Town, a model town harmonizing ITS technologies with a low-carbon-emission society, and the Road Information Control Center, which collects and provides information on central Japan's roads. The program also includes visits to the Toyota Kaikan Museum, a test ride in the maglev "Linimo", and Samurai culture at the Tokugawa Art Museum and Nagoya Castle.

**Demonstrator: Executive Committee for Aichi Post Congress Tour** 

Color Code:

Date: Saturday, October 19-Sunday, October 20

Price: JPY 33,000 per person

\*Tour fare includes: The cost of a round-trip ticket between Tokyo and Nagoya on the Shinkansen, one overnight stay in Toyota City, lunch on the first day, breakfast and lunch on the second day, the cost of a ride on the Linimo, as well as entry to the Tokugawa Art Museum and Nagoya Castle. Dinner on the first evening is not included.

Course: 1st day Tokyo Station (approx. 09:00) - Nagoya Station (approx. 10:40) - Lunch-Toyota Kaikan Museum - Test drive of the Driving Safety Support System (DSSS) - Toyota Ecoful Town-Overnight stay at Hotel Toyota Castle

2nd day Smart Community Toyota Higashiyama - "Linimo" test ride - Road Information Control Center-Lunch - Tokugawa Art Museum-Nagoya Castle - Nagoya Station (approx. 16:30) - Tokyo Station (approx. 18:10)

Guide: English-speaking guide service is included Meals: Breakfast 1, Lunch 2, Dinner Not included

Minimum participants required: 5
Maximum participants: 20



# PT1A: Aichi/Toyota ITS & Samurai Tour (Assemble and Disband at Nagoya Station)

Date: Saturday, October 19-Sunday, October 20

Price: JPY 12,800 per person

\*Tour fare includes: The cost of one overnight stay in Toyota City, lunch on the first day, breakfast and lunch on the second day, the cost of a ride on the Linimo, as well as entry to the Tokugawa Art Museum and Nagoya Castle. Dinner on the first evening is not included.

Course: 1st day Nagoya Station (approx. 10:40) - Lunch- Toyota Kaikan Museum - Test drive of the Driving Safety Support System (DSSS) - Toyota Ecoful Town-Overnight stay at Hotel Toyota Castle

2nd day Smart Community Toyota Higashiyama - "Linimo" test ride - Road Information Control Center-Lunch - Tokugawa Art Museum-Nagoya Castle - Nagoya Station (approx. 16:30)

**Guide:** English-speaking guide service is included **Meals:** Breakfast 1, Lunch 2, Dinner Not included

Minimum participants required: 5
Maximum participants: 20

\*Places to visit are subject to change with or without notice

The color code corresponds to the congress topics. A square indicates the focus topic of the visit, while triangles show other relevant topics.



- 2. Next generation mobility and sustainability
  3. Efficient transport systems in mega cities/regions
  4. Intermodal and multimodal systems for people and goods
- 5. Personalized mobility services
  6. Resilient transport systems for emergency situations
  7. Institutional issues and international harmonization

### PT2: Nagasaki EV & ITS – Go to Goto "Eco-Islands"

"Nagasaki EV & ITS Project" is the most advanced smart island project with an integration of the most diffused EVs(Electric Vehicles) and ITS in a regional area of "Goto islands". Visitors will experience "driving tours of the future", at integrated charging & information spots with quick chargers, ITS spots, and distributed micro grid system which consits of renewable energies and energy strage, in a practical compact model. Visitors will also enjoy the beautiful nature, delicious local dishes and historical sites of the area, which is a candidate for the World Heritage. World Heritage status.

**Demonstrator: Nagasaki Prefectural Government** 

Color Code:

Date: Saturday, October 19-Sunday, October 20

Price: JPY 86,800 per person

\*Tour fare includes: The cost of a round-trip ticket between Tokyo and Fukue airport or Fukue Island on aircraft or/and ferry, one overnight stay in Fukue City, lunch and dinner on the first day, breakfast and lunch on the second day, the cost of Goto Tourist and History Museum, Dozaki Church Museum.

Course: 1st day Haneda airport (approx. 08:30-09:30) - via Nagasaki or Fukuoka airport - Fukue airport or Fukue Island on aircraft or/and ferry, Lunch box on the way - Fukue Cultural Center - Goto Tourist and History Museum - The ruins of Fukue Castle - Street of the Samurai Quarter - Dinner - Hotel (approx. 20:30)

2nd day Hotel (approx. 09:00) - Dozaki Church Museum - Kentoshi Museum

- Takahama Beach/ Gyoran Kannon Goddess - Osezaki Lighthouse

- Lunch - Fukue airport or Fukue Island on aircraft or/and ferry - via Nagasaki or Fukuoka airport - Haneda airport (approx. 19:30-22:40)

Guide: English-speaking guide service is included

Meals: Breakfast 1, Lunch 2, Dinner 1
Minimum participants required: 7
Maximum participants: 30

\* Places to visit are subject to change with or without notice.

\*Tour Highlights; At Fukue Cultural Center, visitors join the lectures on "Nagasaki EV&ITS Project" and "Field Test Projects on Smart Grid Model", and at Kentoshi Museum, visitors join the programs of "EV riding experience", "ITS spot & Nagasaki Futuristic Navi experience", "EV quick charging experience", and "Smart Grid Model facilities technical visit", presented by Nagasaki Prefectural Government.



### PT3: The Shin-Tomei Expressway Tour – A Next-Generation Expressway

Visitors experience the state-of-the-art ITS technologies and enjoy sightseeing while traveling along the Shin Tomei Expressway. The tour includes a visit to the Kawasaki Traffic Control Center, which is the same destination as the technical visit "Expressway Traffic Control Center and O&M Facilities". The tour also features the demonstration of maintenance vehicles with ITS technologies at the foot of Mt. Fuji, as well as a visit to the Surugawan-Numazu Service Area, an ocean-view rest area designed in the image of a Mediterranean port city.

**Demonstrator: Central Nippon Expressway Company Limited** 

Color Code:

**Date:** Saturday, October 19 **Price:** JPY 5,000 per person

\*Tour fare includes: A round-trip bus fare between Tokyo Big Sight and Fuji and a lunch, Breakfast and dinner are not included.

Course: Tokyo Big Sight (09:00)

- Kawasaki Traffic Control Center

- Kawasaki Communication Plaza - Lunch (Fuji Communication Plaza)

- Fuji Maintenance/Customer Service Center - Remote toll system

- Maintenance vehicle demonstration - Surugawan Numazu Service Area

- Tokyo Big Sight (arrival approx. 17:30)

Guide: English-speaking guide service is included

Meals: Lunch 1

Minimum participants required: 10 Maximum participants: 40



### PT4: On-demand Transport Systems in Kamaishi City

Tour participants will visit the control room for the local on-demand bus system in Kamaishi City, which supports convenient transport for residents. The city is under reconstruction after serious damage in the Great East Japan Earthquake. This system is expected to meet changing public mobility needs as reconstruction progresses. The tour includes a visit to the Hiraizumi World Heritage site.

Demonstrator: TOYOTA MOTOR CORPORATION, KAMAISHI CITY

Color Code:

Date: Saturday, October 19-Sunday, October 20

Price: JPY 30,190 per person

\*Tour fare includes: The cost of a one way-trip ticket between Tokyo and Sendai on the Shinkansen, one overnight stay in Tohno City,

lunch on the first day, breakfast and lunch on the second day, the cost of entry to the Chuson-ji Temple and Motsuji Temple, Pure Land Garden. Dinner on the first evening is not

included.

Course: 1st day Shimbashi Station (07:50)

- Tokyo Station (approx. 08:28) - Sendai Station (approx. 10:09)

- Lunch- on the way - Kamaishi City Hall

- Operations Center Tour-Disaster Area Inspection

- Demand Bus - Dialogue with temporary residents

- Overnight stay at Aeria Tohno

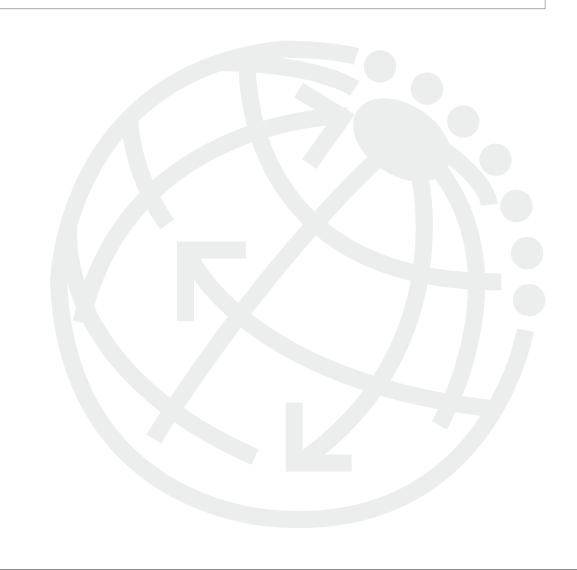
2nd day Chuson-ji Temple - Lunch - Motsuji Temple - Pure land Garden

Sendai Station (arrival approx. 16:10)

**Guide:** English-speaking guide service is included **Meals:** Breakfast 1, Lunch 2, Dinner Not included

Minimum participants required: 10 Maximum participants: 20





The color code corresponds to the congress topics. A square indicates the focus topic of the visit, while triangles show other relevant topics.

1 2 3 4 5 6 7

1 Safety and traffic management

2. Next generation mobility and sustainability
3. Efficient transport systems in mega cities/regions
4. Intermodal and multimodal systems for people and goods

5. Personalized mobility services
6. Resilient transport systems for emergency situations
7. Institutional issues and international harmonization

# PT5: Innovative ASV Demonstration in Hiroshima - LRV and Automobile Cooperation

Hiroshima is the biggest tramway-networked city in Japan, with 150 thousand passengers per day. Participants will experience series of innovative LRV-to-Automobile (L2A) and autonomous Advanced Safety Vehicle (ASV) services to enhance traffic safety, by boarding both Hiroden tramway and Mazda car on the arterial and community roads. The tour includes visits of the Mazda Museum and two World Heritages, the Atomic Bomb Dome (Peace Memorial Park) and the Itsukushima Shrine (Miyajima).

**Demonstrator: Hiroshima ITS Public Road Test Consortium** 

Color Code:

Date: Saturday, October 19-Sunday, October 20

Price: JPY 55,000 per person

\*Tour fare includes: The costs of a round-trip ticket between Tokyo and Hiroshima on the Shinkansen, one overnight stay in Hiroshima City, transportation during the tour, lunch on the first day, breakfast and lunch on the second day, the tour costs at the Itsukushima Shrine (Miyajima). Dinner on the first evening is not included.

Course: 1st day Tokyo Station (approx. 09:00) - Hiroshima Station (approx. 13:40), Lunch box on the way - Miyajima (approx. 14:40) -

Overnight stay at Hotel Comfort Hiroshima (approx. 18:00)
2nd day Hotel - LRV-to-Automobile (L2A) and autonomous Advanced
Safety Vehicle (ASV) service experiences - Mazda Museum Atomic Bomb Dome (Peace Memorial Park) - Hiroshima Station

(approx. 18:00) - Tokyo Station (approx. 22:13)

**Guide:** English-speaking guide service is included **Meals:** Breakfast 1, Lunch 2, Dinner Not included

Minimum participants required: 6
Maximum participants: 14

\*Places to visit are subject to change with or without notice.

\*In the L2A and ASV services experiences, signing of a consent form required.



# PT5A: Innovative ASV Demonstration in Hiroshima – LRV and Automobile Cooperation (1 day Tour)

**Date:** Monday, October 21 **Price:** JPY 5,000 per person

\*Tour fare includes: The costs of transportation during the tour and lunch

Course: Hiroshima Station (08:50) - LRV-to-Automobile (L2A) and autonomous Advanced Safety Vehicle (ASV) services - Mazda Museum

- Atomic Bomb Dome (Peace Memorial Park) - Hiroshima Station (approx. 18:30)

Guide: English-speaking guide service is included

Meals: Lunch 1

Minimum participants required: 6
Maximum participants: 24

\*Places to visit are subject to change with or without notice.

\*In the L2A and ASV services experiences, signing of a consent form required.

### PT6: Energy-ITS Automated Truck Platooning System

Energy ITS Project has developed an Automated Truck Platooning systems to save energy and reduce  $CO_2$  emissions from automobiles. Joining this tour, participants will visit a test course in Tsukuba city near Tokyo and will ride on the passenger seat of each trucks at the demonstration of the automated truck platooning with 10 m gap distance. Also, visitors will observe the demonstration of automated truck platooning with 4 m gap distance by riding a tour bus.

**Demonstrator: Ministry of Economy, Trade and Industry** 

Color Code:

Date: Saturday, October 19
Price: JPY 3,000 per person

\*Tour fare includes: A round-trip bus fare between Tokyo Big Sight and a test course in Tsukuba city, and a lunch.

Course: Tokyo Big Sight (12:00) - Lunch - on the way - test course in Tsukuba city - Automated Track Platooning Demonstration - Tokyo Big Sight (Arrival

approx. 18:15) **Guide:** English-speaking guide service is included

Meals: Lunch 1 Minimum participants required: 5 Maximum participants: 21



### **Guest Tours**

Half-day and full-day guest tours conducted during and after the congress will offer the chance to experience the attractions of popular sights in Tokyo and surrounding areas.

### **G1: Imperial Palace and Ginza Shopping**

**Date and time:** Monday, October 14, 14:00-18:00 Tuesday, October 15, 14:00-18:00 Friday, October 18, 08:30-12:30

**Price:** JPY 5,000 per person

Course: Tokyo Big Sight - Imperial Palace Plaza - Ginza - Tokyo Big Sight

Guide: English-speaking guide service is included

Meals: Not included

Minimum participants required: 30 Maximum participants: 40

\*Places to visit are subject to change with or without notice.



#### \*Tour Highlights;

The Imperial Palace Plaza comprises the moats and spacious plaza between the east side of the Imperial Palace and the Marunouchi office buildings. On either side of the road through the middle of the plaza stretches lawn with pine groves. Ginza is the most celebrated shopping and amusement district in the Champs-Elysees of Tokyo. The street has always been fashionable and in the vanguard of change.

### **G2: Yakatabune Dinner Cruise**

Date and time: Tuesday, October 15, 18:00 21:00

Thursday, October 17, 18:00 21:00

Price: JPY 12,000 per person

Course: Tokyo Big Sight - Yakatabune Cruise - Tokyo Big Sight

Guide: English-speaking guide service is included

Meals: Dinner

Minimum participants required: 30 Maximum participants: 40

\*Places to visit are subject to change with or without notice.



#### \*Tour Highlights;

"Yakatabune" are Japanese style boats. This tour will cruise around the Tokyo Bay Area while enjoying a nice dinner and the fabulous night view of Tokyo.

### **G3:** Sake Brewery and Museum Tour

**Date and time:** Tuesday, October 15, 09:00-17:30 Thursday, October 17, 09:00-17:30

Price: JPY 11,000 per person

Course: Tokyo Big Sight - Museum - Sake Brewery - Tokyo Big Sight

\*Museum: Kanzasi Museum or Dogyoku Museum

Guide: English-speaking guide service is included

Meals: Lunch

Minimum participants required: 30

Maximum participants: 40

\*Places to visit are subject to change with or without notice.



#### \*Tour Highlights;

Take this chance to experience sake making and to discover the beautiful landscape of Japan

### G4: Mt. Fuji & Hakone 1-Day Tour

This guided one-day tour takes you to majestic Mt. Fuji and Hakone. It includes a stop at the Fuji Visitor Center, a trip up to Mt. Fuji's 5th station, a cruise on Lake Ashi, and more.

Date and time: Tuesday, October 15, 08:30-20:30

Thursday, October 17, 08:30-20:30

Course: Hamamatsucho Bus Terminal - Fuji 5th Station - Hakone Lake Ashi cruise

- Mt. Komagatake Ropeway - Tokyo station **Guide:** English-speaking guide service is included

Meals: Lunch

Price: JPY 17,000 per person Minimum participants required: 30 Maximum participants: 40

#### \*Tour Highlights;

#### Lake Ashi

Excursion boats give cruises around beautiful Lake Ashi, a crater lake with a circumference of nearly 18 kilometers. Lake Ashi is also well known for the inverted reflection of Mt. Fuji on a calm, clear day.

#### Owakudani Valley

The Owakudani Ropeway joins Togendai, on the northern shore of Lake Ashi, and Mt. Soun. The highest point is 130 meters above the ground between Mt. Soun and Owakudani.

#### The Komagatake Ropeway

The Ropeway takes the visitor to the top of Mt. Komagatake, which affords a view of Mt. Fuji, Lake Ashi, Mt. Futago and the mountains of the distant Izu Peninsula.

Cable cars travel the 720-meter-long ropeway in five minutes.



### **G5: Nikko World Heritage 1-Day Tour**

This 1-day guided tour from Tokyo takes you to some of Nikko's most popular sightseeing spots like World Heritage-registered Toshogu Shrine and beautiful Kirifuri Falls.

Date and time: Tuesday, October 15, 08:30-20:00

Course: Hamamatsucho Bus Terminal - Nikko Toshogu Shrine - Tamozawa

Imperial Villa - Kirifuri Falls - Tokyo, Ginza **Guide:** English-speaking guide service is included

Meals: Lunch

**Price:** JPY 14,000 per person **Minimum participants required:** 1



#### \*Tour Highlights;

#### Nikko Toshogu Shrine

Tour UNESCO World Heritage Site famous for its lavish decorations, ornate details, and five structures categorized as National Treasures of Japan, and an additional three categorized as Important Cultural Properties. This shrine houses the remains of Edo period's founder, Tokugawa leyasu.

#### Tamozawa Imperial Villa

View refined architecture that spans the three different periods of Edo, Meiji, and Taisho. Former Emperors and royal family have used this villa as their residence, which is now the only remaining Imperial residence of the Meiji era.

#### Kirifuri Falls

Climb an observatory deck located directly in front of one of Nikko's three famous waterfalls, from which the entire 75 m (264 ft) can be viewed at a glance.

### G6: Kamakura, Yokohama & Tokyo Bay 1-Day Bus Tour

Cruise along the beloved ancient cities of Kamakura and Yokohama to visit the famous Great Buddha towering, Hasedera Temple, historically significant Tsurugaoka Hachimangu Shrine, one of Japan's largest Yokohama Chinatown, Sankeien Japanese Garden, and the symbolic Yokohama Bay Bridge and Tokyo Bay.

Date and time: Tuesday, October 15, 08:30-18:40

Course: Hamamatsucho Bus Terminal - Tsurugaoka Hachimangu Shrine - The Great Image of

Buddha - Hase Kannon Temple - Tokyo, Shinjuku

Guide: English-speaking guide service is included

Meals: Lunch

**Price:** JPY 12,000 per person **Minimum participants required:** 1



#### \*Tour Highlights;

#### Tsurugaoka Hachimangu Shrine

One of the most famous Shinto Shrines in Kamakura.

#### The Great Image of Buddha

The world famous approximately 750-years-old, 38-foot-tall, 120-ton bronze statue in Kotoku-in temple.

#### Hase Kannon Temple

The temple is celebrated for its eleven-headed gift statue of Kannon.

### **G7: Kyoto 1-Day by Hikari Bullet Train**

This travel package to Kyoto includes bullet train tickets and accommodations in the ancient capital! Travel to Kyoto by Japan's famous bullet train.

Date and time: Saturday, October 19, 05:30-23:20

Course: Tokyo Station - Heian Jingu Shrine - Sanjusangendo Temple -

Kiyomizudera Temple - Tokyo station

Guide: English-speaking guide service is included, while sightseeing in Kyoto.

Meals: Lunch

**Price:** JPY 26,900 per person **Minimum participants required:** 1



#### \*Tour Highlights;

#### Heian Jingu Shrine

Prowl the gorgeous inner gardens of the shrine built to celebrate the 1100 year anniversary of the founding of the city of Kyoto.

#### Sanjusangendo Temple

Browse the world's longest wooden structure, housing 1,001 life size statues of Buddhist deities Kannon dating back to the 13th century.

#### Kiyomizudera Temple

View the city of Kyoto from this hilltop temple and catch the drops of the Otowa waterfall flowing from beneath the main hall, known to grant wishes to those who drink it.



# **Complimentary Programs**

# Tokyo Metropolitan Government's Complimentary Programs for ITS TOKYO 2013 overseas guests

Tokyo Metropolitan Government will offer the following programs for the overseas guests of the 20th ITS World Congress Tokyo 2013.

#### **Tokyo City Tours**

The free bus tours with English speaking guide take you to the most popular sightseeing areas in Tokyo. Each tour is approximately 3-3.5 hours long.

Date Early Morning		Morning	Afternoon		
Wednesday, October 16	TOUR-1 Tsukiji Fish Market (20)	TOUR-2 Edo-Tokyo Museum (40) TOUR-3 TOKYO SKYTREE® (40)	TOUR-4 Hama-rikyu Gardens (40)		
Thursday, October 17		TOUR-2 Edo-Tokyo Museum (40) TOUR-3 TOKYO SKYTREE® (40)	TOUR-2 Edo-Tokyo Museum (40) TOUR-4 Hama-rikyu Gardens (40)		
Friday, October 18	TOUR-1 Tsukiji Fish Market (20)	TOUR-2 Edo-Tokyo Museum (40)			

<sup>\*</sup>The itinerary is subject to change.

#### **TOUR-1 Tsukiji Fish Market**

The fish market is located in Tokyo Metropolitan Central Wholesale Markets, which also handles fresh vegetables and fruits. This early-bird tour will visit the biggest wholesale fish and seafood market in the world, and take in the famous daily tuna auction. The exciting actual trading scene of big frozen tuna is a favorite among people from abroad.

#### **TOUR-2 Edo-Tokyo Museum**

After crossing a replica of Nihonbashi Bridge, you enter the museum that showcases Tokyo during the Edo era, starting in the 17th century and lasting 265 years. Here you discover how the village of Edo was built, encounter the townsfolk in their daily routine, and learn about the industries and cultural activities of the time. Exhibits include famous scenes from Kabuki performances and the process of making Ukiyoe woodblock prints.

#### **TOUR-3 TOKYO SKYTREE®**

TOKYO SKYTREE® is the world's tallest broadcasting tower at 634 m that opened in May 2012, and is representative of architectural features unique to Japan. You'll venture up to the glass-enclosed 360° observation deck at 350 m above ground, where Tokyo's other landmarks come into view from Rainbow Bridge across Tokyo Bay to the nation's iconic Mt. Fuji on fine-weather days.

#### **TOUR-4 Hama-rikyu Gardens**

This tour takes you to the majestic Hama-rikyu Gardens along the Tokyo Waterfront in Shiodome, where you'll walk around a beautifully preserved garden that the family of the ruling Tokugawa Shogun owned and used to hunt with falcons in the 17th to mid-19th centuries.







TOKYO SKYTREE®

<sup>\*</sup>The number indicated in ( ) is the capacity of each tour.

#### **Cultural Programs**

The free cultural programs conducted in English give you an opportunity to feel Japanese traditions. Each program is 2 hours long.

Date	Morning	Afternoon		
Wednesday, October 16  CP-1 Flower Arrangement (30)		CP-1 Flower Arrangement (30)		
Thursday, October 17	CP-2 Trying on Kimono (30)	CP-2 Trying on Kimono (30)		

<sup>\*</sup>The itinerary is subject to change.

#### **CP-1 Flower Arrangement**

You will be given a chance to try your hand at the art of Kado, the "way of flowers," which originated from the early Buddhist floral offerings of the 6th century. The Japanese art of flower arrangement is a creative expression that observes certain rules of construction, while expressing the three elements of heaven, earth, and mankind in a balanced composition comprised of natural flowers.

#### **CP-2 Trying on Kimono**

You will have the rare opportunity to have professionals help you put on a kimono. The kimono is an internationally recognized symbol of Japan. Even for Tokyoites, there are special occasions where locals look forward to wearing traditional kimono, such as graduations and weddings. The kimono is comprised of T-shaped, straight-lined robes with attached collars and long wide sleeves, wrapped around the body and secured by an Obi sash tied at the back.





Flower Arrangement

Trying on Kimono

#### ◆ Capacity & Booking

Please sign up for the tours and cultural programs at "TOKYO CITY TOUR" desk at the Congress Venues. Each tour & program has limited capacity. Booking will be accepted on a first-come-first-served basis.

#### ♦ Who can join?

Overseas guests with the following registration category; Delegate, Speaker/Moderator, Student and Accompanying Person.

#### **Tokyo Hospitality Team**

#### **Airport Welcome Desk**

Please stop by the Airport Welcome Desk in Arrival Lobby of Tokyo International (Haneda) Airport, Narita International Airport Terminal 1 and 2, which open on Sunday, October 13 and Monday, October 14 for the 20th ITS World Congress Tokyo 2013 to get assistance for your transportation.

#### **Hospitality Desk**

The hospitality team at the Congress Venues provides you general city information of Tokyo.

<sup>\*</sup>The number indicated in ( ) is the capacity of each program.

## **Social Events**

The 20th ITS World Congress Tokyo 2013 will feature exciting networking opportunities at Tokyo's unique places with the entertainment with "MATSURI (Festival)" concept.

### **Welcome Reception**

Date and time: Monday, October 14, 2013, 17:30-19:00

Venue: Tokyo International Forum B5/B7

Fee: Free of charge

Tokyo International Forum is one of the leading convention centers in Japan. The Glass Building, a symbol of the center, has various public art works from both domestic and international artists, and is called "A Boat of Diversity" due to its large boat-like appearance. This unique and artistic place will delight guests of the event.



### **Gala Dinner**

**Date and time:** Wednesday, October 16, 2013, 19:30 - 22:00 (Welcome drink 18:30-19:30)

Venue: Hotel Chinzanso Tokyo

(Formerly Chinzanso & Four Seasons Hotel Tokyo at Chinzanso)

Fee: JPY 10,000

The evening at Chinzanso will start with the welcome drink in the Japanese Garden at 18:30 and be followed by the dinner at 19:30. Come along with your colleagues to make new contacts and catch up the friends in the traditional Japanese atmosphere. The seats are limited.

\*The shuttle bus will be served from Tokyo Big Sight to Chinzanso.

~Bringing Japanese Hospitality to the world~ The Japanese Garden Restaurant, Chinzanso, is situated in a historical and scenic part of Tokyo. The area, also known as "Camellia Mountain", was the estate of Prince Aritomo Yamagata, a noted politician and states-man during the Meiji Era (1868-1912). His manor, named "Mansion on Camellia Mountain", was the site of important government meetings and conferences in which the Meiji Emperor attended. The Chinzanso Garden, covering an area of 60,000 square meters, is rich with historic remains and artifacts, which shouldn't be missed when visiting Chinzanso. We welcome you to experience the "REAL" Japanese hospitality and everlasting experience.





# **Registration Information**

### **Registration Period**

#### 12:00 (Noon/JST\*) Monday, April 1, 2013 - Friday, October 18, 2013

Early registration fee is available until 12:00 (Noon/JST\*) Wednesday, July 31, 2013.

Pre-registration is available until 12:00 (Noon/JST\*) Monday, September 30, 2013.

After September 30, you can register on-site during the congress.

### **Registration Fees**

Catego	Fees			
Standard Fees				
Delegate*1	Four Day (Early registration fee)	JPY 105,000		
	Four Day	JPY 145,000		
	One Day	JPY 80,000		
Speaker/Moderator*2	Four Day	JPY 100,000		
	One Day	JPY 50,000		
0. 1. 1*2	Four Day	JPY 30,000		
Student*3	One Day	JPY 10,000		
Developing Countries Privilege	*4			
D 1 1 *1	Four Day	JPY 105,000		
Delegate*1	One Day	JPY 70,000		
Speaker/Moderator*2	Four Day	JPY 90,000		
	One Day	JPY 45,000		
Student*3	Four Day	JPY 25,000		
	One Day	JPY 8,000		
● Exhibition Visitor* <sup>5</sup>	One Day (Online pre-registrants)	Free of charge		
	One Day (On-site registrants)	JPY 2,000		
● Accompanying Person*6	Four Day	Free of charge		
● Press* <sup>7</sup>	Four Day Free of charge			
● Gala Dinner*8	Wednesday, October 16	JPY 10,000		

#### 1) Delegate

Registration in this category includes admission to congress sessions and the exhibition for the day(s) selected, Opening Ceremony, Closing Ceremony, Welcome Reception, lunch for the day(s) attended and a congress bag (including a copy of the Congress proceedings DVD).

#### 2) Speaker/Moderator

Registration in this category includes admission to congress sessions and the exhibition for the day(s) selected, Opening Ceremony, Closing Ceremony, Welcome Reception, lunch for the day(s) attended and a congress bag (including a copy of the Congress proceedings DVD).

Your paper and/or session number will be requested at the time of pre-registration. You will also be asked to present a valid ID, as well as your paper and/or session number at the registration desk on-site.

#### 3) Student

Registration in this category includes admission to congress sessions and the exhibition for the day(s) selected, Opening Ceremony, Closing Ceremony, Welcome Reception, lunch for the day(s) attended and a congress bag (including a copy of the Congress proceedings DVD).

A copy of your valid student identification card must be submitted at the time of pre-registration. You will also be asked to present your student identification card at the registration desk on-site.

#### 4) Developing Countries Privilege

To qualify for this category, you must reside in one of the countries listed on the developing countries list on the website.

<sup>\*</sup>Japan Standard Time (GMT+9)

#### 5) Exhibition Visitor

Registration in this category includes admission to the exhibition for one day.

Online pre-registrants for this category will be eligible to attend the exhibition free of charge. On-site registrants for this category will be charged JPY 2,000 per day.

The Congress proceedings DVD will be available for purchase on-site.

#### 6) Accompanying Person

To qualify for this category, you must be attending with your spouse or partner and not be involved in the ITS industry.

Registration in this category includes admission to the exhibition, Opening Ceremony, Closing Ceremony, Welcome Reception and lunch. One accompanying person per delegate, speaker/moderator or student category registrant is entitled to register.

#### 7) Press

Accredited press registrants will be admitted to cover congress sessions, the exhibition, Opening Ceremony, Closing Ceremony and Welcome Reception.

To cover technical visits, post congress tours or showcase demonstrations, you must register for the ones you wish to cover on-site.

A copy of your press identification card must be submitted at the time of pre-registration. You will also be asked to present your press identification card and business card at the registration desk on-site.

#### 8) Gala Dinner

Registrants in the delegate, speaker/moderator, student or accompanying person categories are entitled to attend the gala dinner by paying the additional fee.

Please note that seats are limited, so please register early. The registration for the gala dinner will be closed once all seats have been reserved.

#### **Payment**

Payment by credit card or bank transfer is acceptable.

The following credit cards are acceptable: VISA, MasterCard, Diners Club, American Express, and JCB. For bank transfer, please note that all the remittance charges incurred in both your country and in Japan should be borne by registrants.

In order to take advantage of the early registration fee, payment must be completed by Wednesday, July 31, 2013.

#### Confirmation

Credit card payment: Upon completion of your payment, you will receive an automatic email to access your personal page to obtain the confirmation sheet.

Bank transfer payment: Once the registration desk confirms the receipt of your payment, you will receive an email to access your personal page to obtain the confirmation sheet.

Please bring your confirmation sheet upon your arrival at the registration desk on-site.

#### Receipt

Receipts will be issued at the registration desk on-site on a request basis.

#### **Change / Cancellation**

Registrations are non-transferable. You will not be able to transfer the right of your registration to any other person. In case of change or cancellation, the amount of refund will depend on the date and time of change or cancellation.

Congress	Before 12:00 (Noon/JST) Saturday, September 14	10% of your total registration fee will be charged
Registration	On and after 12:00 (Noon/JST) Saturday, September 14	No refund
Gala Dinner	Before 12:00 (Noon/JST) Saturday, September 14	JPY 5,000 will be charged
	On and after 12:00 (Noon/JST) Saturday, September 14	No refund

#### Contact us

JTB Global Marketing & Travel Inc.

TEL: +81-(0)3-5796-5445 FAX: +81-(0)3-5495-0685

E-mail: itswctokyo\_reg@gmt.jtb.jp

Office hours: 10:00 - 17:30, Monday to Friday, excluding national holidays

#### **Visa Application Documents**

In addition to a valid passport, some foreign nationals are required to obtain a visa, issued by the Japanese Embassy or Consulate in your country, to enter Japan.

For details of the procedures, please visit the website of the Ministry of Foreign Affairs of Japan or contact the Japanese Embassy or Consulate in your country, since required steps to obtain visas vary from country to country.

Ministry of Foreign Affairs of Japan: http://www.mofa.go.jp/j\_info/visit/visa/index.html

Due to the official nature of visa documents issued by the congress organizer, pre-registration including full payment is required to request a set of documents to support your visa application. After completing your registration and full payment, please download and fill in the visa document application form on the website and send it to the e-mail address indicated in the application form. Please note that your application will be reviewed by the organizer and in some cases issuance of documents may be declined. It sometimes takes more than a month to obtain a visa from the Japanese Embassy or Consulate in your country, so we suggest you to request the Registration Desk for the supporting documents well in advance, by the end of July. Please also note that the documents issued by the organizer do not assure the applicants of obtaining the visa but will be judged by the Japanese Embassy or Consulate where you have applied for your visa. The Japanese Embassy or Consulate may also have their own separate requirements for other documents.

#### **Showcase Demonstrations**

Registrants in the delegate, speaker/moderator or student categories are entitled to attend the showcase demonstration(s). Registration for the demonstrations will open in September 2013.

#### Tours

#### **Technical Visits**

Registrants in the delegate, speaker/moderator or student categories are entitled to attend the visit(s) by paying the fee(s) for the selected visit(s). For those who have registered for One Day, please note in advance that you will be able to attend the visit(s) conducted on the day you have chosen to attend the congress only. Please also note that places are limited. The registration for the visit(s) is on a first-come, first-served basis, and will be closed once we reach the limit. Operation of the visit(s) may be cancelled in case there is not a sufficient number of participants.

#### **Post Congress Tours**

Registrants in the delegate, speaker/moderator, student or accompanying person categories are entitled to attend the tour(s) by paying the fee(s) for the selected tour(s). Please note that places are limited. The registration for the tour(s) is on a first-come, first-served basis, and will be closed once we reach the limit. Operation of tour(s) may be cancelled in case there is not a sufficient number of participants.

#### **Guest Tours**

Registrants will be entitled to attend the tour(s) by paying the fee(s) for the selected tour(s). Please note that places are limited. The registration for the tour(s) is on a first-come, first-served basis, and will be closed once we reach the limit. Operation of tour(s) may be cancelled in case there is not a sufficient number of participants.

#### **Tour Condition**

- 1. Tours may be cancelled in case there is not a sufficient number of participants.
- 2. Places to visit are subject to change with or without notice.
- 3. Please refer to the details on the following URL.

URL: <a href="http://www.jtbgmt.com/tourconditionagtorgcd/index.html">http://www.jtbgmt.com/tourconditionagtorgcd/index.html</a>

Two Additional conditions apply to Technical Visits only:

- 4. If you select TV1 TV5, additional questionnaires are required due to regulation of those visits.
  - · For security reasons, you are required to present your photo ID on the day of the technical visit departure.
  - In some cases, we may contact you by email in advance. You will lose your right to participate unless we receive your reply by the specified date.
  - The technical visit organizer reserves the right to refuse participation due to their regulations.
- 5. These should be at least 30 minutes interval between two technical visits on the same day.

#### **Tour Application and Payment**

Participants wishing to reserve tours should apply online no later than Saturday, September 14, 2013. Application should be accompanied by a remittance covering total tour fare due JTBGMT. No reservation will be confirmed in the absence of this payment. Personal checks are not accepted. All payment must be in Japanese yen. If the remittance covers more than one person, please inform us the name of each participant.

The following credit cards are acceptable: VISA, MasterCard, Diners Club, American Express, and JCB. For bank transfer, please note that all the remittance charges incurred in both your country and in Japan should be borne by applicants.

Bank Transfer Details:

A bank transfer to JTB Global Marketing & Travel Inc. (Message: its2013)

Account at The Bank of Tokyo-Mitsubishi UFJ, Ltd.

Shin-Marunouchi Branch (swift code: BOTKJPJT)

1-4-1, Marunouchi, Chiyoda-ku, Tokyo 100-8114 Japan (Account number: 3131677)

#### **Tour Confirmation**

Your reservation would be completed upon receipt of your online tour reservation information and verifying your payment.

The Confirmation button will be displayed when you complete your reservation. Please print your confirmation sheet by clicking the Confirmation button and bring it with you on the departure date.

#### **Tour Cancellation**

In case of cancellation, the amount of refund will depend on the date and time of change or cancellation. The following cancellation fees will be deducted before any refund is made.

<ul><li>9 - 8 days before the departure day of one day tours,</li><li>20 - 8 days before the departure day of tours for Post Congress Tours including hotel accommodations</li></ul>	20% of tour fare
7 - 2 days before	30% of tour fare
1 day before	40% of tour fare
Prior to starting time on the departure day	50% of tour fare
After departure or failure to show without notice	100% of tour fare

#### Contact us

#### JTB Global Marketing & Travel Inc.

TEL: +81-(0)3-5796-5445 FAX: +81-(0)3-5495-0685

E-mail: itswctokyo\_reg@gmt.jtb.jp

Office hours: 10:00 - 17:30, Monday to Friday, excluding national holidays

Commissioner of Japan Tourism Agency Registered Travel Agency No. 1723 Shigeaki Ito, Certified Travel Service Manager

#### **Accommodation**

In order to make a reservation for accommodations at the official hotels, you are firstly requested to complete your registration. Please refer to the next pages for further details.

### **Onsite Registration**

Pre-registrants are requested to present your confirmation sheet upon your arrival at the registration desk. On-site registration is also available at the congress venue.

To avoid queuing at the registration, delegates are encouraged to register in advance. Pre-registration is available until 12:00 (Noon/JST) Monday, September 30, 2013.

#### **Opening Dates and Times**

Date	Time	Location
Monday, October 14	11:00-17:00	Tokyo International Forum & Tokyo Big Sight
Tuesday, October 15	08:00-17:00	Tokyo Big Sight
Wednesday, October 16	08:00-17:00	Tokyo Big Sight
Thursday, October 17	08:00-17:00	Tokyo Big Sight
Friday, October 18	08:00-12:00	Tokyo Big Sight

# **Accommodation Information**

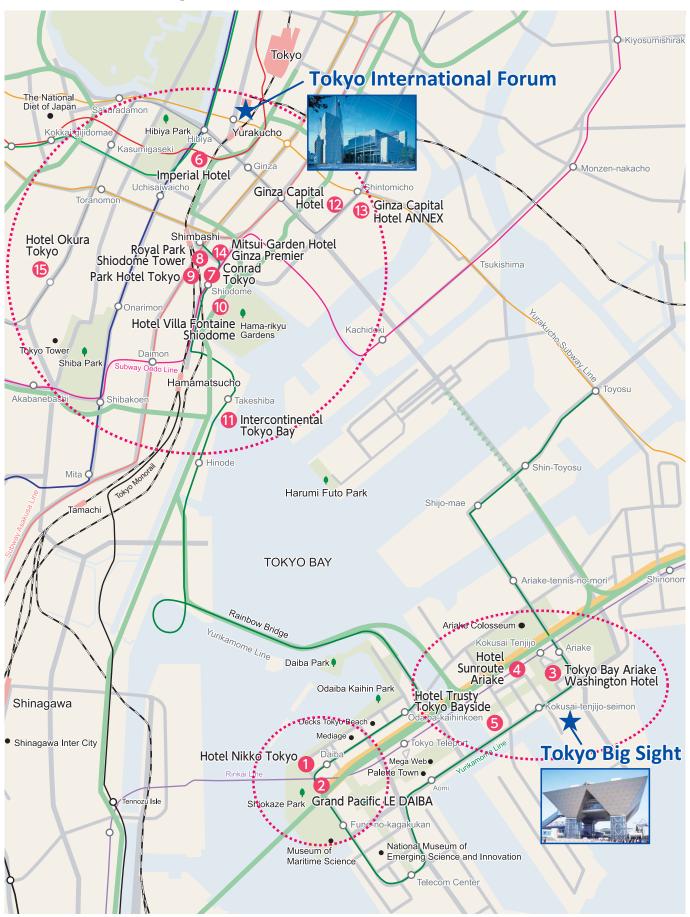
# **Official Hotel List**

	Hotel Name (Check-in & out time)	Room rates (JPY)				1) Address			Shuttle Bus	
		Without breakfast With bre		*						
No.		Single	Twin	Single	Twin	3) Access to the nearest station 4) Access to Tokyo Big Sight 5) Access to Tokyo International Forum	Deposit	Internet Access / Price	for Tokyo Inter- national Forum	for Tokyo Big Sight
					Toky	o Big Sight Area				
	Hotel Nikko Tokyo (15:00 / 12:00)	Park View			1) 1-9-1 Daiba, Minato-ku					
1		*JPY23,300	JPY27,500	*JPY25,400	JPY29,600	2) +81-3-5500-5500 3) Adjust to Daiba Sta	One	LAN cable / JPY1,050	<b>/111111</b>	шш
		Ocean View				4) 8 min. by Yurikamome Line 5) 27min. by Yurikamome Line &	Night	(during the stay)		0-0-
		*JPY27,500	JPY31,700	*JPY29,600	JPY33,800	JR Yamanote Line				
2	Grand Pacific LE DAIBA (15:00 / 12:00)	*JPY20,200	JPY21,200	*JPY22,800	JPY26,500	1) 2-6-1 Daiba, Minato-ku 2) +81-3-5500-6711 3) Adjust to Daiba Sta 4) 8 min. by Yurikamome Line 5) 27min. by Yurikamome Line & JR Yamanote Line	One Night	LAN cable or wireless router [rental] / Free		
3	Tokyo Bay Ariake Washington Hotel (14:00 / 10:00)	JPY8,800	JPY15,600	JPY10,000	JPY18,100	1) 3-7-11 Ariake Koto-ku 2) +81-3-5564-0111 3) 3-min-walk from Ariake Sta. or Rinkai line Kokusai Tenjijo Sta. 4) 5-min-walk 5) 25min. by Yurikamome Line & Subway Yurakucho Line	One Night	WiFi / Free		
4	Hotel Sunroute Ariake (15:00 / 11:00)	JPY9,000	JPY15,800	JPY10,300	JPY18,500	1) 3-6-6 Ariake,Koutou-ku 2) +81-3-5530-3610 3) 3-min-walk from Yurikamome Kokusai Tenjijo Seimon Sta. 4) 7-min-walk 5) 25min. by Yurikamome Line & Subway Yurakucho Line	One Night	LAN cable / Free		
5	Hotel Trusty Tokyo Bayside (15:00 / 11:00)	JPY10,000	JPY17,000	JPY11,500	JPY20,000	1) 3-1-15 Ariake, koto-ku 2) +81-3-6700-0001 3) 5-min-walk to Yurikamome Kokusai Tenjijo Seimon Sta. 4) 10-min-walk 5) 25min. by Yurikamome Line & Subway Yurakucho Line	One Night	LAN cable / Free		
					Tokyo Into	ernational Forum Area				
6	Imperial Hotel (14:00/11:00)	*JPY34,300	JPY37,400	*JPY37,300	JPY43,400	1) 1-1, Uchisaiwai-cho 1-chome, Chiyoda-ku 2) +81-3-3504-1111 3) 5-min-walk from JR Yurakucho Sta. 4) 25min. by Subway Yurakucho Line & Yurikamome Line 5) 7-min- walk	One Night	WiFi / Free		
7	Conrad Tokyo (15:00 / 12:00)	*JPY32,600	JPY32,800	*JPY34,900	JPY37,400	1) 1-9-1, Higashi-Shinbashi, Minato-ku 2) +81-3-6388-8000 3) 1-min-walk from Shiodome Sta. 4) 21min. by Yurikamome Line 5) 10min. by Yamanote Line from Shimbshi Sta.	One Night	WiFi / Free		

	Hotel Name (Check-in & out time)	Room rates (JPY)						o		
No.		Without breakfast With bro		1) Address 2) TEL				Shuttl	e Bus	
		Single	Twin	Single	Twin	3) Access to the nearest station 4) Access to Tokyo Big Sight 5) Access to Tokyo International Forum	Deposit	Internet Access / Price	for Tokyo Inter- national Forum	for Tokyo Big Sight
8	Royal Park Shiodome Tower (14:00 / 12:00)	JPY20,200		JPY21,200		1) 1-6-3 Higashi-shinbashi, Minato-ku 2) +81-3-6253-1111 3) 3-min-walk from Shinbashi Sta. 4) 23min. by Yurikamome Line 5) 3min. by JR Yamanote Line	One Night	Wireless Lan or Lan Cable / Free		
9	Park Hotel Tokyo (14:00 / 12:00)	JPY16,400	JPY18,500	JPY18,500	JPY22,700	1) 1-7-1 Higashi-shinbashi, Minato-ku 2) +81-3-6252-1111 3) 7-min-walk from Shimbashi Sta. 4) 21min. by Yurikamome Line 5) 3min. by JR Yamanote Line	One Night	WiFi / Free		
10	Hotel Villa Fontaine Shiodome (15:00 / 11:00)			JPY14,000	JPY20,000	1) 1-9-2, Higashi Shimbashi, Minato-ku 2) +81-3-3569-2220 3) 1-min-walk from Shiodome Sta. 4) 21min. by Yurikamome Line 5) 10min. by Yamanote Line from Shimbshi Sta.	One Night	LAN cable / Free		
11	Intercontinental Tokyo Bay (12:00 / 11:00)	*JPY23,900	JPY25,900	*JPY24,900	JPY28,000	1) 1-16-2, kaigan, Minato-ku 2) +81-3-5404-2222 3) 1-min-walk from Takeshiba Sta. or 8-min-walk from Hamamatsucho Sta. 4) 20min. by Yurikamome Line 5) 5min. by Yamanote Line from Hamamatsucho Sta.	One Night	LAN cable or WiFi / JPY1,575 (24hours) JPY525 (30min.)	<u>'m</u>	
12	Ginza Capital Hotel (15:00 / 10:00)	JPY8,400	JPY12,600	JPY9,450	JPY14,600	1) 2-1-4 Tsukiji, Chuo-ku 2) +81-3-3543-8211 3) 1-min-walk from Shintomicho Sta. 4) 25min. Subway Yurakucho Line & Yurikamome Line 5) 5min. by Subway Yurakucho Line	Whole Night	LAN cable[rental] / Free		
13	Ginza Capital Hotel ANNEX (15:00 / 10:00)	JPY8,400	JPY12,600	JPY9,450	JPY14,600	1) 3-1-5 Tsukiji, Chuo-ku 2) +81-3-3543-8211 3) 1-min-walk from Shintomicho Sta. 4) 25min. Subway Yurakucho Line & Yurikamome Line 5) 5min. by Subway Yurakucho Line	Whole Night	LAN cable[rental] / Free		
14	Mitsui Garden Hotel Ginza Premier	JPY18,100 (except Oct. 13)	JPY22,300 (except Oct. 13)	JPY20,200 (except Oct. 13)		1) 8-13-1 Ginza, Chuo-ku 2) +81-3-3543-1131 3) 4-min-walk Shimbashi Sta.	Whole Night	WiFi / Free		
	(15:00 / 12:00)	JPY22,300 (Oct. 13 only)	JPY31,900 (Oct. 13 only)	JPY24,400 (0ct. 13 only)	JPY36,100 (Oct. 13 only)	<ul><li>4) 23min. by Yurikamome Line</li><li>5) 3min. by JR Yurikamome Line</li></ul>	rugiit			
15	Hotel Okura Tokyo (14:00 / 12:00)	*JPY18,000	JPY20,000	*JPY20,000	JPY22,000	1) 2-10-4 Toranomon, Minato-ku 2) +81-3-3582-0111 3) 5-min-walk from Toranomon Sta. or Kamiyacho Sta. 4) 37min. by Subway Ginza Line & Yurikamome Line 5) 10min. by Subway Ginza Line & JR Yamanote Line	One Night	WiFi / Free	<u> </u>	<u>'m</u>

- Room rates include service charge, a 5% consumption tax and hotel tax where applicable.
  \*indicates single occupancy of a twin or double room.
  Shuttle bus service will be provided as mentioned above. Please note that it is subject to change.

# **Official Hotel Map**



#### Online Booking accommodation deadline

12:00(Noon/JST) Monday, September 30, 2013

#### **Payment**

Application should be accompanied by a remittance covering the hotel deposit due JTBGMT. (The hotel deposit will be credited to your bill. All hotel expenses deducting the deposit should be paid directly to the hotel.)

No reservation will be confirmed in the absence of this payment. All payment must be in Japanese yen.

If the remitter's name is different from the participant's name or the remittance covers more than one person, please clarify the name of each participant.

After making a remittance, please send us a copy of the bank receipt to avoid possible confusion.

Payment should be in the form of:

#### One of the following credit cards

1. VISA 2. MasterCard 3. Diners Club 4. American Express 5. JCB

#### A bank transfer to JTB Global Marketing & Travel Inc. (Message:ITS2013)

Account at The Bank of Tokyo-Mitsubishi UFJ, Ltd. Shin-Marunouchi Branch (swift code: BOTKJPJT) 1-4-1 Marunouchi, Chiyoda-ku, Tokyo 100-0005 Japan (Account number: 3131677)

#### Confirmation

Your reservation would be completed upon receipt of your online tour reservation information and verifying your payment. The Confirmation button will be displayed when you complete your reservation. Please print your confirmation sheet by clicking the Confirmation button and bring it with you on the departure date.

#### Cancellation

In the event of cancellation, the following cancellation fees will be deducted before any refund is made.

Up to 10 days before the first night of stay	None
9 to 2 days before	20% of daily room charge
1 day before	80% of daily room charge
On the day of arrival or no notice given	100% of daily room charge

<sup>\*</sup>Please revise and/or cancel your reservation by log-in to your Personal Page.

#### Contact us

#### JTB Global Marketing & Travel Inc.

TEL: +81-(0)3-5796-5445 FAX: +81-(0)3-5495-0685

E-mail: itswctokyo\_reg@gmt.jtb.jp

Office hours: 10:00 - 17:30, Monday to Friday, excluding national holidays

Commissioner of Japan Tourism Agency Registered Travel Agency No. 1723

Shigeaki Ito, Certified Travel Service Manager

# **Exhibition Information**

Exhibits including ITS Technologies, products, systems and services will provide opportunities for interdisciplinary networking among national and regional organizations, industry associations, the corporate sector and researchers. The Exhibition is open to not only Congress participants, but also interested parties from companies and industry groups in a wide range of fields. The seven congress topics will enable visitors to experience products and solutions extending beyond conventional fields to embrace a wide range of businesses and industries including new domains.

## **Opening Dates and Times** Tuesday, October 15: 11:30-17:30 Wednesday, October 16: 09:00-17:30 Thursday, October 17: 09:00-17:30 Friday, October 18: 09:00-14:00 Rooftop Exhibition Area 2F 1F Outdoor Exhibiţiøń West Halls Exhibition Hall. Indoor Exhibition **Exhibition Venue**

#### **Exhibitor Fields**

- -Automotive technologies
- -Energy (fuel cells, etc.)
- -Content and service providers
- -Digital broadcasting
- -Digital signage
- -E-commerce
- -Intelligent home appliances
- -Mobile communications
- -Modeling and simulation systems
- -Traveller information systems
- -Vehicle navigation and information systems
- -Traffic information networks
- -Commercial vehicle operation
- -Road construction
- -Electronic toll collection systems
- -Global positioning systems
- -Parking management systems
- -Signaling and control systems
- -Environmental and welfare technologies

- -Traffic and congestion management
- -Safety systems
- -Disaster prevention
- -Emergency and medical systems
- -Infrastructure-linked systems
- -Public transport
- -Smart communities
- -Efficient transport systems for goods and people
- -Innovative materials
- -And many other diverse fields

#### **Exhibits (tentative)**

#### Advanced driving support systems

- -Technologies leading to autonomous driving
- -Driving support cockpit
- -Prevention of collisions between trains and automobiles

#### **Next-generation telematics**

- -Cloud-based telematics
- -Telematics utilizing probe data

#### Next-generation urban transport systems

- -Road traffic management
- -Smart public transport infrastructure

#### **Energy management systems**

- -Electric vehicle battery systems
- -Electric motorcycle charging systems
- -Systems integrating electric vehicles and mobile devices

#### Disaster information and response systems

A range of other products and solutions related to logistics, medical care, telecommunications and environmental infrastructure

		(as of July 3, 2013
Exhibitor Name	Country /	Booth No.
	Area	
Alpine Electronics, Inc.	Japan	015-1
AISAN TECHNOLOGY CO., LTD.	Japan	034
AISIN SEIKI Co., Ltd. / AISIN AW CO., LTD. / ADVICS CO., LTD.	Japan	076
Applus IDIADA ARH INC.	Spain Hungary	103/104 045-2
A-TEC Co.Ltd	Japan	109
Austria Pavilion	Austria	092/093/094
Autotalks Ltd.	Israel	060
China National ITS Center	China	043-2
CHODAI CO., LTD.	Japan	112
Continental Automotive Corporation	Japan	016-6
CTI Engineering Co., Ltd.	Japan	016-8
DAIHATSU MOTOR CO., LTD.	Japan	016-1
DENSO CORPORATION	Japan	097
East Nippon Expressway Company Limited (NEXCO EAST)	Japan	065/066
EIDEN Co.,Ltd.	Japan	053
Electronics and Telecommunication Research Institute (ETRI)	Korea	016-7
Environmental Systems Research Institute Inc.	USA	054
Ericsson European Pavilion	Sweden EU	074-2 096
FLIR INTELLIGENT TRANSPORTATION SYSTEMS	Belgium	096
FormoLight Technologies, Inc.	Chinese Taipei	023
FORUM8 Co., Ltd.	Japan	020-1
Fuji Heavy Industries Ltd.	Japan	033
FUJITSU LIMITED	Japan	073
FURUNO ELECTRIC CO., LTD.	Japan	024
GNSS Technologies Inc.	Japan	016-11
Hitachi, Ltd.	Japan	070
Honda elesys Co., Ltd.	Japan	032
Honda Motor Co., Ltd.	Japan	017
Huawei	China	043-1
HYTEC INTER Co., Ltd.	Japan	027
Ibeo Automotive Systems GmbH	Germany	045-1
IBM Japan	Japan	042-1
IHI Corporation iMobile Corporation	Japan Japan	061 107
ITS Taiwan	Chinese Taipei	044
INTERCOMP	USA	087
Internet ITS Consortium - IIC Corporation	Japan	074-3
ITS America / ITS Canada	USA/Canada	099
ITS Asia-Pacific	Japan	040-1
ITS Australia	Australia	095
ITS Korea	Korea	037
JAI Ltd., Japan	Japan	016-10
JAPAN CAPACITOR INDUSTRIAL CO., LTD. (JCC)	Japan	063
JAPAN MAYDAY SERVICE CO., LTD (HELPNET)	Japan	080/081
Japan Road Traffic Information Center (JARTIC)	Japan	051
Kapsch TrafficCom AG	Austria	067
KDDI CORPORATION  Kitakyushu Foundation for the Advancement of Industry, Science and Technology Car	Japan	078
Electronics Center (FAIS)	Japan	059
KOGA SOFTWARE Inc.	Japan	026
LUFFT MESS- UND REGELTECHNIK GmbH	Germany	016-2
MARBEN PRODUCTS	France	029
Mazda Motor Corporation  Measurement Devices Ltd.	Japan United Kingdom	049 090
MITSUBISHI ELECTRIC CORPORATION	Japan	090
MITSUBISHI HEAVY INDUSTRIES, LTD.	Japan	019-2
MITSUBISHI MOTORS CORPORATION	Japan	019-2
Murata Manufacturing Co., Ltd.	Japan	046-1
NAGOYA ELECTRIC WORKS CO., LTD.	Japan	025
National Police Agency	Japan	083
NEC Corporation	Japan	039
NEXCOM JAPAN CO., LTD.	Japan	035/036
NIPPON KOEI CO., LTD.	Japan	046-2
NIPPON TELEGRAPH AND TELEPHONE CORPORATION (NTT) / NTT GROUP	Japan	072

	Country	
Exhibitor Name	/	Booth No.
NISSAN MOTOR CO., LTD.	Area Japan	038
Noptel Oy	Finland	016-9
NXP Semiconductors	The Netherlands	042-3
Oki Electric Industry Co., Ltd.	Japan	071
OMRON Social Solutions Co., Ltd.	Japan	064
Oriental Consultants Co., LTD.	Japan	055
PACIFIC CONSULTANTS CO., LTD.	Japan	020-2
Panasonic Corporation  PASCO CORPORATION	Japan	100
PIONEER CORPORATION	Japan	062 068/069
PTV GROUP	Japan Germany	042-2
Q-Free ASA	Norway	091
Reserved	Japan	040-2
Sanei Co., Ltd.	Japan	106
Satellite Positioning Research and Application Center (SPAC)	Japan	056
SBD Japan	Japan	050
Sick K. K.	Japan	031
Smart Microwave Sensors	Germany	030
Sumitomo Electric Industries, Ltd.	Japan	098
Suntec Software (Shanghai) Co., Ltd.	China	015-2
SUZUKI MOTOR CORPORATION	Japan	047
TATTILE SRL	Italy	016-4/016-5
Tokai Clarion, Ltd.	Japan	110/111
TomTom  TOSHURA CORROBATION	Japan	057
TOSHIBA CORPORATION TOYOTA MOTOR CORPORATION	Japan Japan	018 075
TOYOTA MOTOR CORPORATION  TOYOTA TSUSHO CORPORATION	Japan	022
TRAFFICSENS SYSTEM (M) SDN. BHD.	Malaysia	088
TSS-TRANSPORT SIMULATION SYSTEMS	Spain	028
Ubiquitous Corporation	Japan	046-1
UKIP Media & Events Ltd	United Kingdom	016-3
Urban Development Engineering & Consulting Inc. (UDEC)	Japan	028
UTMS Society of Japan	Japan	082
Vaisala	Finland	089
Vector Japan Co., Ltd.	Japan	079
Vehicle Information and Communication System Center (VICS)	Japan	077
VENDEKA INFORMATION TECHNOLOGIES	Turkey	058
VERISERVE CORPORATION	Japan	074-1 105
Virtual Mechanics Corporation  VITRONIC DrIng. Stein Bildverarbeitungssysteme GmbH	Japan Germany	052
VZGLYAD LTD	Russia	016-12/016-13
West Nippon Expressway Facilities Co., Ltd.	Japan	101/102
YAMAHA MOTOR CO.,LTD.	Japan	085/086
YAZAKI Corporation	Japan	048
Yokosuka Telecom Research Park, Inc. (YRP)	Japan	108
YONEI & CO.,LTD.	Japan	074-4
ZENRIN CO., LTD.	Japan	021
Aichi Prefectural University	Japan	
Center for Spatial Information Science, The University of Tokyo	Japan	
Kumamoto University	Japan	Academia
Nagoya University	Japan	Area
Tokyo University of Agriculture and Technology	Japan	
Nagasaki University  AICHI ITS COUNCIL	Japan Japan	
ITS Japan	Japan	
KASHIWA ITS	Japan	
Ministry of Economy, Trade and Industry	Japan	
Ministry of Internal Affairs and Communications	Japan	
Nagasaki Prefectural Government	Japan	
National Institute for Land and Infrastructure Management	Japan	Atrium
National Police Agency	Japan	]
New Energy and Industrial Technology Development Organization (NEDO)	Japan	
Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism	Japan	
Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism	Japan	
Shizuoka ITS Council	Japan	
TOKYO METROPOLITAN GOVERNMENT	Japan	

# **Exhibition Floor Plan**

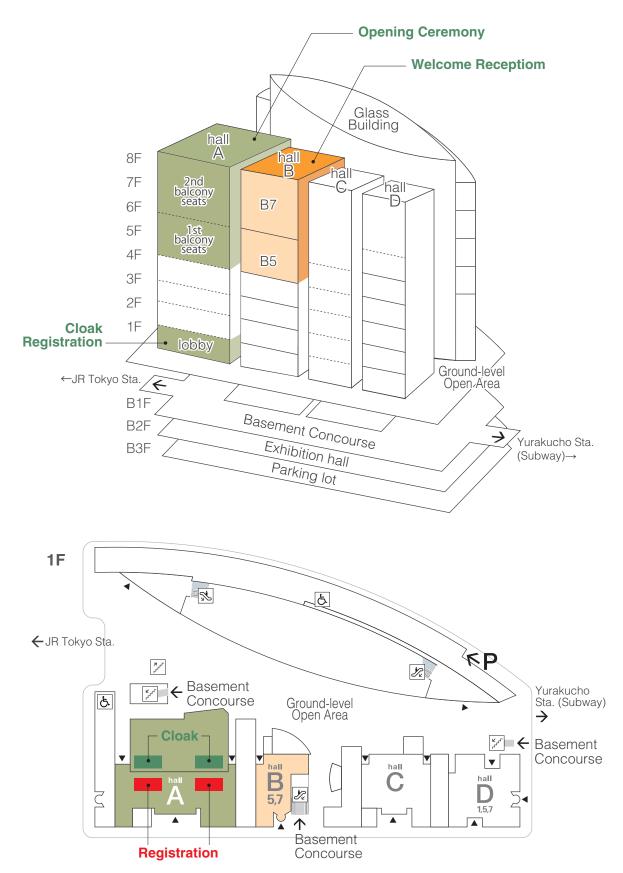


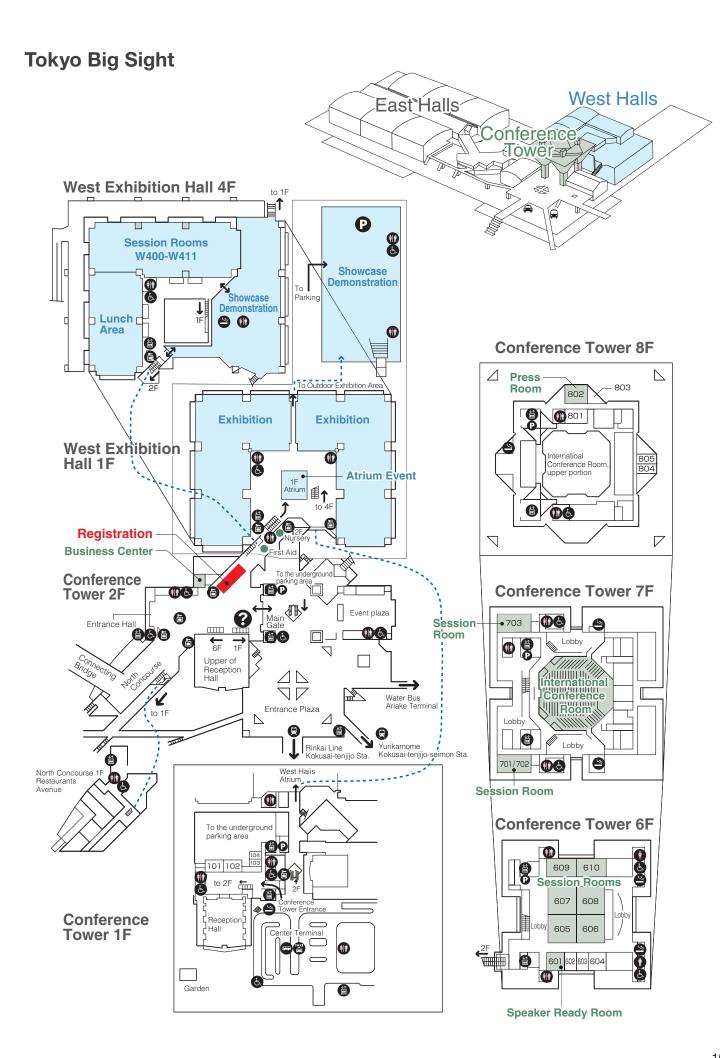


(As of July 2013)

# **Venue Map**

# **Tokyo International Forum**





# **Congress Navigator**

Two applications for smartphones and tablets will be especially prepared for ITS World Congress Tokyo 2013 participants. The applications are intended to help participants to experience the best of the Congress.

# My Schedule

"My Schedule" contains various functions enabling users to search for information on sessions, Technical Visits, Showcase Demonstrations, etc., add favorite programs to their calendars, view a venue map and more. Using these functions, participants will be able to create and store personalized schedules. Additionally, the "What's New" function will provide timely access to the latest useful information, such as the congestion situation at Showcase Demonstrations.

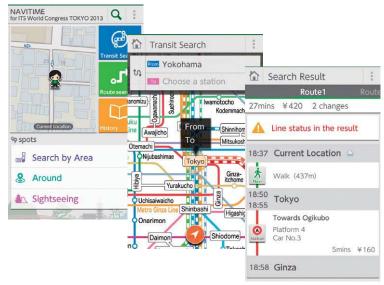




## **NAVITIME for ITS WORLD CONGRESS TOKYO 2013**

NAVITIME JAPAN CO. LTD., the leading mobile navigation company in Japan, will help ITS WORLD CONGRESS TOKYO 2013 participants to find their way around. The "NAVITIME for ITS World Congress Tokyo 2013" application is available for Android and iPhone smartphones, and provides navigation and directions necessary to get around Japan, with extensive coverage of Tokyo, one of the world's most complex metropolises. The NAVITIME for ITS application provides point-to-point multi-modal route search (including routes for walking, trains, and buses connecting from Narita and Haneda Airports, GPS voice-guided pedestrian navigation, train transit information, and maps). The application is provided in English, and will be available between mid-September and the end of October.

The application contains English-language data on more than four million points of interest, with basic information such as maps, addresses, and phone numbers. Furthermore, photographs and detailed descriptions are also available for major sightseeing spots.



NAVITIME for ITS requires a network connection, but some features can be used offline as well. Users can bookmark up to 50 routes or spots, which can be checked later without a network connection.

#### **Features**

- Route navigation
- Over four million points of interest in Japan
- Train route map (for Tokyo area)
- Basic information on major sightseeing spots
- GPS voice navigation
- Bookmarks for up to 50 routes and spots

#### **Basic information**

Name of application: NAVITIME for ITS WORLD CONGRESS TOKYO 2013

Download: Google Play(Android), App Store(iOS)

Price: Free of charge Language: English Coverage: Japan

\*The service will be available between mid-September and the end of October

About NAVITIME JAPAN CO. LTD., http://corporate.navitime.co.jp/en/index.html

# **General Information**

#### **Access Information**

#### From Airport to Central Tokyo

#### From Narita International Airport



Approx. 60 minutes to Tokyo Station by JR Narita Express (N'EX) limited express train

2 minutes to Yurakucho Station and 4 minutes to Shimbashi Station from Tokyo Station by JR Yamanote Line



Approx. 40 minutes to Nippori Station by KEISEI Skyliner

13 minutes to Yurakucho Station and 15 minutes to Shimbashi Station from Nippori Station by JR Yamanote Line Approx. 100 minutes to Tokyo Station by Limousine Bus

2 minutes to Yurakucho Station and 4 minutes to Shimbashi Station from Tokyo Station by JR Yamanote Line

Narita International Airport official website: http://www.narita-airport.jp/en/index.html

#### From Tokyo International (Haneda) Airport

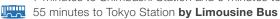


Approx. 20 minutes to Hamamatsucho Station by Tokyo Monorail Haneda Express



15 minutes to Shinagawa Station by Keikyu Airport Express 7 minutes to Shimbashi Station and 9 minutes to Yurakucho Station from Shinagawa Station by JR Yamanote Line

2 minutes to Shimbashi Station and 4 minutes to Yurakucho Station from Hamamatsucho Station by JR Yamanote Line



2 minutes to Yurakucho Station and 4 minutes to Shimbashi Station from Tokyo Station by JR Yamanote Line

Tokyo International (Haneda) Airport official website:

International Flight Terminal: http://www.haneda-airport.jp/inter/en/

Domestic Flight Terminal (Big Bird): http://www.tokyo-airport-bldg.co.jp/en/

\*Airport Limousine buses are also available from Narita International Airport and Tokyo International (Haneda) Airport with convenient, direct service to various points and hotels in the Central Tokyo area.

For more information please visit Airport Limousine's official website: http://www.limousinebus.co.jp/en/

#### **Access to Tokyo Big Sight**



#### By Yurikamome Line

Approx. 22 minutes from Yurikamome Line Shimbashi Station to Kokusai-Tenjijo-Seimon Station (3-minute walk from the train station)



Approx. 13 minutes from Rinkai Line Osaki Station to Kokusai-Tenjijo Station (7-minute walk from the train station)



#### By Airport Shuttle Bus (Airport Limousine Bus, Keikyu Bus)

Approx. 60 minutes from Narita International Airport to Tokyo Bay Ariake Washington Hotel (3-minutes walk from the hotel) Approx. 25 minutes from Tokyo International (Haneda) Airport to Tokyo Big Sight

Tokyo Big Sight official website: http://www.bigsight.jp/english/index.html

#### **Access to Tokyo International Forum**



#### JR Line

1-minute walk from Yurakucho Station

5-minute walk from Tokyo Station (connected by B1 underground concourse with Keiyo Line Tokyo Station)



#### Subway

Yurakucho Line: Connected to Yurakucho Station by B1 underground concourse

Hibiya Line: 5-minute walk from Ginza Station, 5-minute walk from Hibiya Station

5-minute walk from Nijubashimae Station, 7-minute walk from Hibiya Station Chiyoda Line:

Marunouchi Line: 5-minute walk from Ginza Station

Ginza Line: 7-minute walk from Ginza Station, 7-minute walk from Kyobashi Staiton

Mita Line: 5-minute walk from Hibiya Station

Tokyo International Forum official website: http://www.t-i-forum.co.jp/e/

#### **Useful Links (Transportaion in Tokyo)**

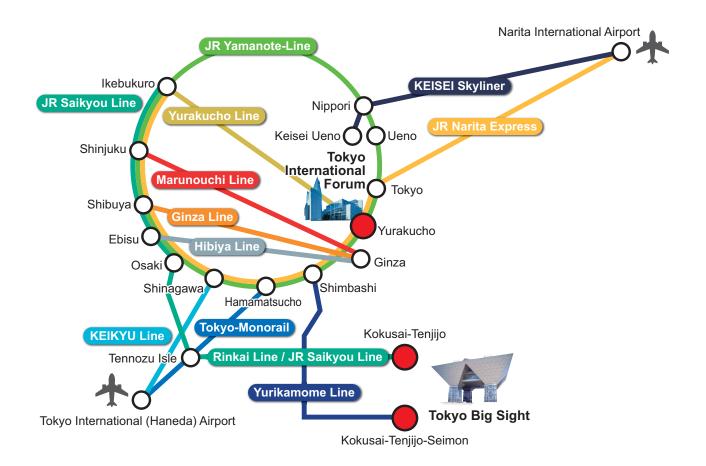
JR-EAST: http://www.jreast.co.jp/e/index.html

Tokyo Metro: http://www.tokyometro.jp/en/index.html

Tokyo Metropolitan Bureau of Transportation: http://www.kotsu.metro.tokyo.jp/eng/

**Yurikamome:** http://www.yurikamome.co.jp/en/

**Tokyo Monorail:** http://www.tokyo-monorail.co.jp/english/ **Keikyu:** http://www.haneda-tokyo-access.com/en/



# **Congress Information**

#### Language

The official language of the Congress is English.

#### Insurance

The Japan Organizing Committee of ITS World Congress Tokyo 2013 can accept no responsibility for accidents or damage to the private property of participants. Please make your own arrangements for health insurance and any other necessary insurance.

#### **Internet Access**

There will be internet access service available at certain areas at the Congress venue.

### **Travel Information**

#### **Time**

Japan Standard Time is 9 hours ahead of Greenwich Mean Time.

#### **Currency and Credit Cards**

Currency in Japan is the Yen (JPY). Most foreign currencies and travelers' checks can be exchanged at banks and hotels where you stay. However, we highly recommend purchasing travelers' checks or cash in Yen or U.S. dollars before leaving your home countries. A passport may be required for currency exchange services. Major credit cards (American Express, Diners Club, Visa and MasterCard) are widely accepted at hotels, department stores, shops and restaurants.

#### Tax

Consumption tax is 5% of the price of commodities and services you are buying. It is already included in the indicated price.

#### **Tipping**

Tipping is not customary in Japan. However, major hotels or restaurants may add a 10% to 15% service charge to your bill.

#### **Climate and Clothing**

Autumn weather in Tokyo is cool and dry. The average temperatures in October are low  $59^{\circ}F$  ( $15^{\circ}C$ ) and high  $72^{\circ}F$  ( $22^{\circ}C$ ). The weather is usually nice with sunshine. Typical dress for this time of year: light jackets, light sweaters and other similar kinds of clothing.

#### **Electricity**

Japan's electricity voltage is 100V A.C. with a frequency of 50Hz in the Tokyo area. Please note that plugs in Japan are a 2 flat-prong type ("A Type"), so a plug adapter for personal appliances may be necessary if you require a 3-prong or round plug.

#### Shopping

General hours are from 10:00 to between 19:00 and 20:00 Most department stores are open 7 days a week. Also, most convenience stores are available 24 hours a day.

#### **Smoking**

In Japan, you can only smoke in designated areas inside most public facilities. Public transportation such as trains, buses, and taxis are generally non-smoking. Most hotels have separate smoking rooms and non-smoking rooms.

#### Water

Water throughout the country is potable and safe for drinking. Bottled water is available at hotels, restaurants, supermarkets, and etc.



# **Committees**

# The Japan Organizing **Committee of ITS WORLD CONGRESS TOKYO 2013**

Watanabe, Hiroyuki (Chair)

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Kitamura, Tadashi

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Matsui, Fusaki

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Shibata, Masahisa

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Takahashi, Takehide

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Tokitsu, Naoki

Toyomasu, Shunichi

Uetakaya, Koichi

Yaguchi, Akira

Yamamoto, Yoshiharu

Yano, Atsushi

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Shim, Dubo

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Grassegger, Evelinde

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Harris, Richard

Xerox Services, United Kingdom Jääskeläinen, Juhani

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Kulmala, Risto

Finnish Transport Agency, Finland

Meyer, Hermann ERTICO - ITS Europe

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Siemens AG, Germany

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Ozaki, Nobuyuki

Toshiba Corporation, Japan (Vice Chair)

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Australia

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Hikmet, Mohammed

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Moon, Young-Jun

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VicRoads, Australia

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Caldwell, Stan

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Couto, C. Douglass

Consultant, USA

Dellenback, Steven W.

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E-Squared Engineering, USA

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Keller, John

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ITS Canada, Canada

Kumar, Manjunathan

Nevada DOT, USA

Lappin, Jane

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Lister, Mac

ITS Joint Program Office, Research and Innovative Technology Administration, USDOT, USA

McQueen, Bob

The O Cash Company, USA

Rausch, Robert

Row, Shelley

Shelley Row & Associates, LLC, USA

Sanders, Louis F. American Public Transportation Association, USA

Schweiger, Carol L. TranSystems Corporation, USA

Seymour, Ed

Texas Transportation Institute, Texas A&M University, USA Shaheen, Susan A.

University of California, Berkeley, USA

Spencer, Susan

Transport Canada, Canada

Sweatman, Peter F.

University of Michigan Transportation Research Institute, USA

Wright, James

American Association of State Highway and Transportation Officials, USA

Zhang, Wei-Bin

University of California, Berkeley, PATH, USA

#### Europe

Blervaque, Vincent ERTICO - ITS Europe

Blythe, Phil

Newcastle University, United Kingdom

Coldefy, Jean

Grand Lyon, France

Diani, Fiammetta

European GNSS Agency - GSA

Dreher, Stéphane

Foersterling, Frank
Continental Automotive GmbH, Germany

Frötscher, Alexander AustriaTech, Austria

Gorteman, Didier

ERTICO - ITS Europe

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Harris, Richard Xerox Services, United Kingdom

Henchoz, Jean-Michel
DENSO INTERNATIONAL EUROPE, Belgium

Hietanen, Sampo ITS-Finland, Finland

Jääskeläinen, Juhani DG CONNECT, European Commission

Karlsson, Christer

ITS Sweden, Sweden

Kirn, Friedemann

Koester, Frank DLR - German Aerospace Center, Germany

Kryuchkov, Vladimir

Kulmala, Risto Finnish Transport Agency - FTA, Finland

Lu, Meng International Dutch Institute for Advanced

Logistics (Dinalog), The Netherlands

Martin, Jennie ITS United Kingdom, United Kingdom

Mechin, Jean-Philippe Ministry of Ecology, Sustainable Development and Energy, CETE SO Bordeaux, France

Mercier-Handisyde, Patrick

DG RTD. European Commission

Pagny, Roger
Ministry of Ecology, Sustainable Development, Transports and Housing, France

Perpey, André
TOPOS Aquitaine, France
Petti, Stéphane
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Potters, Paul
Cachelot, The Netherlands
Quick, Theo
CGI, The Netherlands

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Seddi, Malika ASFA, France

Sena, Michael

Michael Sena Consulting AB, Sweden Soubies, Delphine ERTICO - ITS Europe

Valente, Pamela ERTICO - ITS Europe

Vorster, Paul S South Africa, South Africa

Wevers, Kees
BrightAngel ITS, The Netherlands
Williams, Mihaela
DG MOVE, European Commission

# **TOYOTA**

# The Future of Mobility

By comprehensive activities to connect among people, vehicles and communities,

Toyota will lead the way to expand the possibility of ITS

to bring Sense of Freedom to all of you.

http://www.toyota-global.com/innovation/intelligent\_transport\_systems/



Toyota aims to support the realization of a new power grid, developed from the vehicle user's perspective, controlling power supply utilizing IT.













# Vehicle

# Vehicle-infrastructure Cooperative Systems

After participating in some proving tests held by the relevant governmental agencies and automotive industries, Toyota has commercialized some functions for a Japanese environment since October 2009.

ITS Proving Ground

Vehicle to-vehicle communications system

THE

# People

# Urban Transport System

It is a network system, being tested already in Toyota City, which will make transportation more people- and community friendlycombining private car and public transportation efficiently.



Come feel our solutions to tomorrow's user-friendly mobility.











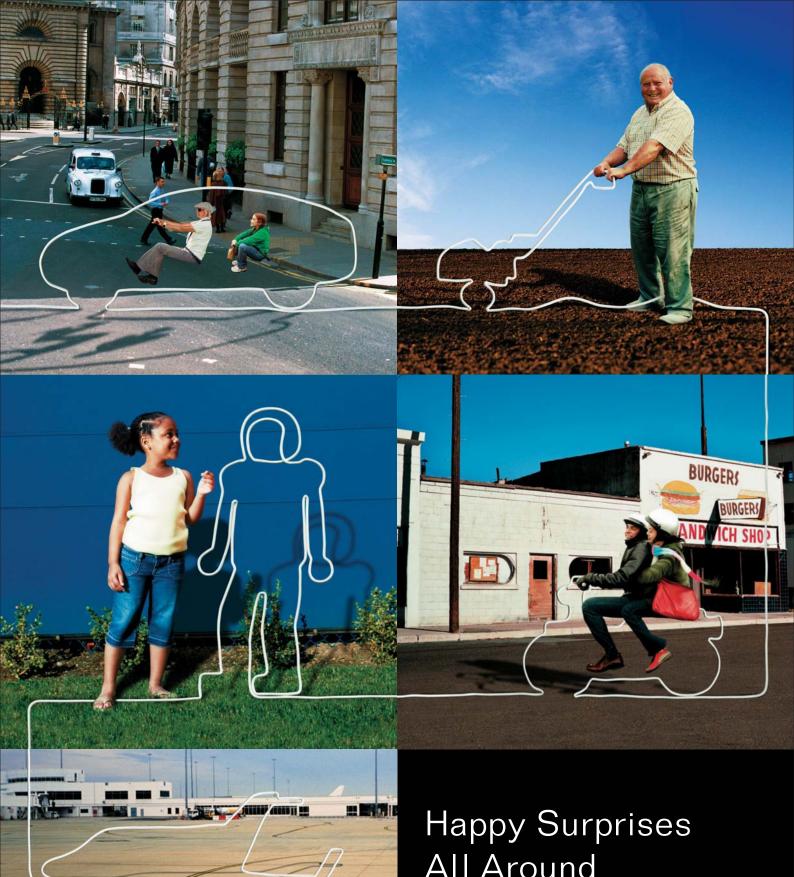
## Expand your view to 360°

DENSO has plans for a wide variety of safety systems, including a warning system that will quickly detect a child or hindrances in the blind spot and feed proper information to the driver, and a safety assurance system that, when another car cuts in suddenly or an emergency situation develops, will automatically take over operation of the steering wheel and brake from the driver to avoid danger. Using our long years of experience in producing vehicle sensors and in advanced data analysis, our goal is to create systems that ensure a higher level of confidence and safety.









# All Around

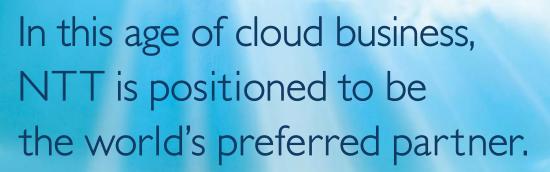
Motorcycles, automobiles, power products, ASIMO, HondaJet. Honda has a vibrant tradition of creating mobility products that feature advanced safety technology and environmental responsibility. It's all driven by a spirit of challenge. Whenever they say it can't be done, we grow more determined to make it happen. And to offer everyone another happy surprise.

world.honda.com









Why? Because NTT is a global telecom leader, offering one-stop, comprehensive cloud solutions through its vast network. It serves more than I50 regions with advanced R&D and maintains top-class, secure data centers.

Today, NTT's global cloud services are rapidly transforming lifestyles and business models around the world. And very soon manufacturing, retail, education and health care will all experience positive change.

# Next Value Partner





# WHAT IF\_YOUR PHONE COULD CHARGE YOUR CAR FOR A CHANGE?

**REMOTE CHARGE** 



**SMARTPHONE CONTROL APP** 



# **Panasonic**

# Reaching people in all the moments of our lives



your TV tracking your preferences to deliver the shows you want



your home generating, storing, and managing renewable energy efficiently



your car we show you the way, and help you go farther...with less environmental impact



sketching your ideas on the spot with that new device



your journey making calls and sending email in the sky







# Solutions for a better world

For nearly one hundred years, Panasonic has offered the world a wide range of quality products. Leveraging electronics technology since our foundation, we've been listening to what customers in different cultures truly want. Now we're evolving into a provider of innovative solutions that touch people's lives with new value. More than ever, as we join hands with leading business partners worldwide, we're delivering on the promise of eco efficiency. Providing comfort and convenience in the home and throughout the community, at work and at play. Engineering a better world for individuals and families, for companies and societies. For people like you.

# For Our Society For Our Future

Sumitomo Electric supports safe and comfortable living, offering environment-friendly products and technologies in its five business segments: Automotive; Information & Communications; Electronics; Environment & Energy; and Industrial Materials.

We will continue our endeavor to improve our technological competence to respond to changes in society, to satisfy customers of any age, and to create a bright future with you.



# **Ingenious Dynamics**

Each company of the Sumitomo Electric Group combines its unsurpassed creativity with knowledge and experience to generate dynamics that allow the Group to contribute to society.



# TOSHIBA

**Leading Innovation** >>>















# Highway Systems

- Toll collection
- Traffic ControlPower & Facili
- Management

# Systems

**Public** 

- LRT/BRT & Operation Management
- Inter-city rapid trains

# Energy Management HEMS/FEMS

Core **Technology** 

Solutions

Sensing Technology Semiconductor Devices Rechargeable Batteries (SCiB™)

Social conditions of modern society demand entirely new and comprehensive transport policies including transport-related energy management technologies. This is because our society is facing new trends such as an aging population with declining birthrate, environmental issues and an economic slowdown.

#### Smart Mobility with thoughtful consideration to our environment

With its wide range of technology from energy to ICT, Toshiba will achieve "Smart Mobility" exceeding the former ITS technology that we intensively developed up to now.

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