

2nd IRF Asia Regional Congress & Exhibition

Connecting Asia with Better Roads

asrc.IRFnews.org

**Kuala Lumpur, Malaysia
October 16–20, 2016**



Organized in collaboration with



Ministry of Works,
Malaysia



Public Works Department,
Malaysia



Malaysian Highway
Authority

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FROM THE CHAIRMAN



On behalf of the IRF's global volunteer leadership and members, it gives me great pleasure to invite you to the 2nd IRF Asia Regional Congress & Exhibition. With this Congress, our goal is to help policy-makers, planners and infrastructure operators from across Asia build a resilient and sustainable road and transport infrastructure that can drive economic growth and prosperity in the region.

As with past IRF congresses, the IRF, in cooperation with the Road Engineering Association of Malaysia (REAM), will bring together the world's top practitioners, thought leaders and academics with the sole purpose of discussing road infrastructure solutions that are safe, sustainable and lead to economic growth.

We have chosen Malaysia as the host of the 2nd edition of this Congress due to its advanced road network, progressive road policies and its position as one of the primary growth engines of the ASEAN region.

On this note, I invite all stakeholders from across the region to attend this landmark road and transport sector event.

Abdullah A. Al-Mogbel

Chairman

International Road Federation

FROM THE ORGANIZING COMMITTEE ADVISOR



Roads are a nation's arteries facilitating the flow of the required synergy for economic transformation in developing countries, and as such, the development, operation and maintenance of an efficient road infrastructure is pivotal for sustained economic growth, particularly in the Asian continent where almost all the countries are in various stages of development.

The human and physical geography is as varied as the 55 countries that form the Asian continent considering, among others, its diverse topography and vagaries of different climates ranging from mild to the extremes, dense and massive settlements as well as huge areas that are barely inhabited, multiple ethnic groups with differing cultures and traditions, environment and governance. These are the challenges that require in depth consideration towards realising an efficient and safe road infrastructure development in Asia.

On that note, I take great pleasure in inviting all professionals, experts and stakeholders to this timely platform for the sharing of intellectual capital in the area of road infrastructure and take the opportunity to interact and network with worldwide delegates for mutual benefit.

Malaysia is known as a land of eternal summer and even more renowned for its hospitality. Do come and savour this unique Malaysian experience, truly an Asia in miniature.

Datuk Ir. Haji Adanan Bin Mohamed Hussein

Director General, Public Works Department, Malaysia

First Delegate, World Road Association

President, Road Engineering Association of Malaysia / Malaysian National Committee

INTRODUCTION

Jointly organized by the International Road Federation (IRF) and the Road Engineering Association of Malaysia (REAM), the 2nd IRF Asia Regional Congress & Exhibition (October 16-20, 2016 – Kuala Lumpur, Malaysia) will once again be the premier event for the road sector and transportation professionals in the region. The Congress will provide a forum for showcasing best practices, new technologies, cutting edge research, and practical applications that can maximize returns from road investments. Carrying the theme “Connecting Asia with Better Roads,” the Congress will be the largest gathering in Asia of its kind.

SCIENTIFIC & TECHNICAL THEMES

- Adaptation of Road Pavements to Climate Change
- Road Financing / PPPs
- Project Delivery
- Asset Management
- Innovations in Pavements & Materials
- Road Safety
- Intelligent Transportation Systems

WHY PARTICIPATE?

- Network with top industry stakeholders and top organizations in the region
- Engage with over 1,000 local & international delegates
- Benefit from an exceptional technical and scientific program featuring some 125 speakers
- Meet the top Technical & Scientific Experts in the region
- View the latest technologies and products and services at the exhibition



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<http://www.pwtc.com.my/>

CONNECTING ASIA WITH BETTER ROADS

Building on the 1st IRF Asia Regional Congress theme of “Building the Trans-Asia Highway”, the 2nd IRF Asia Congress will continue to discuss and advocate for building and maintaining a highway network that is efficient, safe, resilient, and sustainable. The prospects for growth in Asia and particularly in South Asia and ASEAN are tremendous, but the region’s true potential will not be unleashed unless there is well planned and efficient highway network that is part of a well-integrated road transport system. This can

only be done through use of best practices, excellent policies, innovations in engineering and technology, and work force development. It is for this reason that IRF is bringing the region’s and the world’s top policy makers, road builders & operators, manufacturers, and researchers together in Kuala Lumpur so that we can share experiences, witness innovations, and share knowledge that can make a well connected Asia a reality in the near future.

CONGRESS FORMAT

PLENARY SESSIONS

Plenary sessions will set the stage for, and are at the core of, activities for the 2nd IRF Asia Regional Congress & Exhibition.

APPLIED KNOWLEDGE SESSIONS*

The Applied Knowledge Sessions are designed as a forum for successful companies to share their business strategy insights and success stories with a local and regional audience.

EXECUTIVE SESSIONS

Executive sessions take the form of round tables addressing key aspects of road and infrastructure development across the Asia region and the underlying challenges.

PARTNER SESSIONS

These “by invitation” sessions focus on specific intervention areas developed by road stakeholder organizations.

INVESTORS SESSIONS*

The main focus of the sessions are to present major projects in the host country, from the point of view of showcasing engineering achievements and identifying new business opportunities.

CERTIFIED WORKSHOPS

As a leading provider of road sector knowledge, the IRF offers all registered delegates access to a program of certified training workshops before and during the event.

SAFER ROADS BY DESIGN™ SESSIONS

Developed and coordinated by the IRF, these sessions will introduce engineering concepts, best practices and state-of-the-art technologies tailored to the needs of highway agencies and road operators that can be used to prevent road crashes, and reduce the severity of accidents.

TECHNICAL & SCIENTIFIC SESSIONS

The technical & scientific portion of the program is developed through the peer evaluation of abstracts and papers by a committee of recognized surface transportation experts and researchers. The best papers will be published in IRF’s technical quarterly journal, the IRF Examiner.

A VIBRANT HUB FOR INFRASTRUCTURE INVESTMENT

Malaysia's persistent drive to upgrade its infrastructure has resulted in one of the most well-developed infrastructure among the newly industrializing ASEAN countries. Peninsular Malaysia's network of well-maintained highways is a boon to its industrial and commercial sector. These highways link major growth centers to seaports and airports throughout the peninsula and provide an efficient means of transportation for goods.

To complement these highways, a Kuala Lumpur-Bangkok-Kuala Lumpur containerized service known as the ASEAN Rail Express (ARX) has been initiated with the aim of expanding it to become the Trans-Asia Rail Link that will include Singapore, Vietnam, Cambodia, Laos and Myanmar before ending up in Kunming, China. The development of Kuala Lumpur Sentral, a futuristic self-contained city, is enabled through a modern transportation hub offered on par with leading cities. Among other planned investments, the Malaysian government recently announced the construction of a 1,663-kilometer highway between the states of Sabah and Sarawak on Borneo island worth US\$ 6.5 billion.

The investment needs in Malaysia and neighboring ASEAN economies remain significant. ASEAN Member States are now physically interconnected by 23 designated national highway networks with a total length of

38,400 kilometers. In 2015, UNCTAD estimated that some \$110 billion a year will be needed for infrastructure investment across major asset classes.

Given the current spending by ASEAN governments, the infrastructure investment gap will be equally huge but resources need to be found if the gap is to be filled and future demand is to be met. Filling this gap is possible and the private sector is increasingly encouraged to play a greater role to help bridge the gap. A 'connected ASEAN' has important implications. It will increase further the competitiveness of the region, enhance production efficiency, reduce transaction costs and attract Foreign Direct Investment, the report concludes.



Major infrastructure projects, such as the Iskandar Coastal Highway, demonstrate Malaysia's commitment to an agenda of sustained growth

DEVELOP YOUR BUSINESS NETWORK

The 2nd IRF Asia Regional Congress will be the most business-friendly to date with the introduction of a dedicated business & networking hub available to exhibitors and delegates:

INVESTORS SESSIONS*

Major projects and associated business opportunities in the host country and neighboring region will be presented by government officials and investment agencies.

- Infrastructure programs in Malaysia
- Doing Business in ASEAN
- ITS Projects in ASEAN

APPLIED KNOWLEDGE SESSIONS*

An opportunity to share your business strategy insights and success stories with a local and regional audience.

- Bitumen & Asphalt Applications
- Road Safety Applications
- Inspection & Survey Applications
- Smart Bridges & Tunnels
- ITS Applications



AWARDS PROGRAM

The IRF Awards Programs are set up to gather information on the exemplary people and projects that place this industry at the forefront of social and economic development. By recognizing such individuals and groundbreaking projects, the IRF seeks to publicize the great positive impact that the road building industry has on the global quality of life. The IRF encourages all companies and organizations in the road development sector to get involved in our Awards Program. By promoting the innovative ideas and successes of our industry, we can provide a road map for others to follow.

GLOBAL ROAD ACHIEVEMENT AWARDS

The IRF Global Road Achievement Awards (GRAA) program is a competition to honor and recognize road-industry projects that demonstrate excellence and innovation in road development worldwide. The program, which is designed to elicit information on successful projects and programs from leading industry organizations, will draw attention to these leading projects and organizations, providing a road map for others to follow in continuously improving and advancing road development worldwide.

AWARD CATEGORIES

- Safety
- Research
- Design
- Excellence in Project Finance and Economics
- Technology, Equipment & Manufacturing
- Environmental Mitigation
- Construction Methodology
- Asset Preservation & Maintenance Management
- Traffic Management and ITS
- Program Management
- Quality Management
- Urban Planning & Mobility

PROFESSIONAL OF THE YEAR AWARD

Presented during the Opening Ceremonies

October 17

GLOBAL ROAD ACHIEVEMENT AWARDS

Presented during the Gala Dinner

October 18

AGRI...
Award



PROFESSIONAL OF THE YEAR

The International Road Federation Professional of the Year Award is one of the most prestigious individual honors in the global road industry. The Award, which was established in 1951 and is open to both IRF members and non-members, recognizes eminent public, private and educational sector professionals who have demonstrated passion, leadership and commitment to the sector.



LEGEND	ES Executive Session	PS Partner Session	SRD Safer Roads by Design™	TS Technical Sessions	IS Investors Sessions	AK Applied Knowledge	WS Workshop
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16 OCTOBER, SUNDAY

08:50 – 14:30 **WILLIAM F. TROXLER MEMORIAL GOLF TOURNAMENT**

17 OCTOBER, MONDAY

EXHIBITION OPEN: 10:30-18:30

08:30 **KEYNOTE SPEECHES & OPENING CEREMONIES**
Connecting Asia with Better Roads: Building Regional Prosperity



10:30 **EXHIBITION OPENING**
Refreshments served

11:00	ES1 Road Financing & PPPs: Experiences from Emerging Nations	PS1 ARRB Group	SRD1 Work Zone Safety	TS	WS1 Benefits of Galileo for ITS Applications
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12:30 **LUNCH**

14:00		SRD2 Managing Road Traffic Injury Risk	TS
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15:30 **REFRESHMENTS & NETWORKING BREAK**

16:00	ES2 Overloading and ITS Control	PS2 MIROS	SRD3 Roadside Safety	TS	IS1 Investors Roundtable (Part 1): Infrastructure Programs in Malaysia
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20:00 **IRF FELLOWS REUNION**

18 OCTOBER, TUESDAY

EXHIBITION OPEN: 09:00-18:30

09:00	ES3 Building Climate Resilience in Road Infrastructure: A Cross-Sectoral Roundtable	PS3 Korea Road Association	SRD4 Vulnerable Road User Safety	TS	IS2 Investors Roundtable (Part 2): Doing Business in ASEAN
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10:30 **REFRESHMENTS & NETWORKING BREAK**

18 OCTOBER, TUESDAY (CONT'D)**EXHIBITION OPEN: 09:00-18:30**

11:00	ES4 Preserving & Enhancing Road Assets	PS4 China Highway & Transportation Society	SRD5 Speed & Driver Behavior Management	TS	AK1 ITS Applications for Big Data
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12:30 LUNCH

14:00	ES5 Congestion Management for Asian Highways		SRD6 iRAP	TS	AK2 Innovations in Rubberized Asphalt (Sponsored by Consulpav)	WS2 Performance-Based Contracts
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15:30 REFRESHMENTS & NETWORKING BREAK

16:00 – 17:30	ES6 Delivering Successful Road Tolling Programs			TS	AK3 Innovative Road Safety Products	
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20:30 GALA DINNER & GRAA AWARDS CEREMONY**19 OCTOBER, WEDNESDAY****EXHIBITION OPEN: 09:00-15:30**

09:00	ES7 Global Road Achievement Award Showcase		SRD7 Smart ITS Application for Road Safety	TS	AK4 Innovations in Pavement Materials (Part1)	WS3 Building and Maintaining Climate Resilient Low-Volume Roads
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10:30 REFRESHMENTS & NETWORKING BREAK

11:00	ES8 Skills Development in the Transportation Sector	PS5 Institute of Road Engineering (Indonesia)		TS	AK5 Innovations in Pavement Materials (Part2)	
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12:30 LUNCH

14:00				TS		
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15:30 REFRESHMENTS & NETWORKING BREAK**16:00 CONGRESS OUTPUTS & CLOSING****17:00 EXHIBITION TEAR DOWN****20 OCTOBER, THURSDAY****08:30 – 12:30 TECHNICAL SITE VISITS**



SIR GORDON WU
Chairman
 Hopewell Holdings
IRF Man of the Year
 (1994)



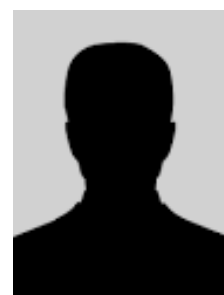
KANG HEE-UP
Director, Road Policy
Division
 Ministry of Land,
 Infrastructure and
 Transport, Korea



**YB DATO' SRI HAJI
 FADILLAH BIN HAJI
 YUSOF**
Honourable Minister of
Works, Malaysia



C. PATRICK SANKEY
President & CEO
 International Road
 Federation



YOHANNES ABEBE
Practice Lead
 Millennium Challenge



MARK ARGAR
BD Manager Asia
Pacific
 Bechtel



MEHRAN AVINI
Senior PPP Advisor



YVES CAPELLE
Head, Space Services
& Application Business
Unit
 Telespazio France



Y. C. CHANG
Managing Director
 Far Eastern Electronic
 Toll Co., Ltd. (FETC)



LUKE CHENG
Regional Director
 Citilabs



PEI-WEN CHOU
Vice President and CFO
 Far Eastern Electronic
 Toll Collection Co., Ltd.
 (FETC)



PATRICK CLANCEY
Director of Business
Development
 Safetyverse Sdn. Bhd.



MIKE DREZNES
Executive VP
 International Road
 Federation



MAGID ELABYAD
Vice President,
International Programs
& Member Services
 IRF



BEN GERICKE
Program Team Leader,
Transport and ICT
 The World Bank



CHIN CHI HAW
Group General
Manager
 Opus International (M)
 Berhad



ROBERT HARDY
Technical Director
 Australian Gov.-funded
 Indonesia Infrastructure
 Initiative



DAN HICKEY
Manager, Int'l
Government Relations
 3M



SUNNY HO
Portfolio Manager, ITS
and Public Security
 3M



RUSSELL HOOD
Managing Director
 Traffic Tech Pte. Ltd.



KAMIL KALOUSH
Director
 National Center of
 Excellence on SMART
 Innovations



GORDON KELLER
Geotechnical Engineer
 USDA, Forest Service
 (retired)



ROWAN KYLE
*OPUS International
 Consultants*
 (New Zealand)



OLGA LANDOLFI
Secretary General
 TTS Italia



JAMIE LEATHER
*Principal Transport
 Specialist*
 ADB



**SREEJITH
 NARAYANAN**
Deputy Vice President
 ITNL



**DR. ESSAM
 RADWAN**
Executive Director
 Center for Advanced
 Transportation Systems
 Simulation



AJAY RANKA
CEO
 Zydex Industries



**MARC RIBO
 PEDRAGOSA**
 Abertis



ARMANDO PEZZONI
Manager
 Louis Berger



**AHMAD FARHAN BIN
 MOHD. SADULLAH**
*Dean, Faculty of
 Engineering and Professor,
 Transport Studies*
 Universiti Sains Malaysia



CHRIS SANDERS
Senior Vice President
 Lindsay Transportation
 Solutions



WILLIAM H SOWELL
*Vice President,
 Business Development*
 Eberle Design, Inc.



SUI TAN
Program Manager
 Metropolitan
 Transportation
 Commission



**FRANK VAN
 STEENBERGEN**
 MetaMeta



OLIVER WHALLEY
Project Engineer
 The World Bank



RICHARD WU
*Chief Technology
 Officer*
 Far Eastern Electronic
 Toll Collection Co., Ltd.
 (FETC)



INSOO YEO
 Korean Ministry of
 Land, Infrastructure
 and Transport



HK YONG
 Institute of Strategic &
 International Studies
 (Malaysia)



MARTINS ZAUMANIS
Civil Engineer
 Latvian State Roads,
 Riga Technical
 University

Connecting Asia with Better Roads: Building Regional Prosperity



October 17, 8:30 – 10:30

KEYNOTE SPEAKERS



Sir Gordon Wu Ying Sheung

Chairman Hopewell Holdings Ltd and IRF Professional of the Year (1994)



Kang Hee-up

Director, Road Policy Division, Ministry of Land, Infrastructure and Transport, Korea
Achieving Common Performance Standards for Safer Roads

OPENING CEREMONIES SPEAKERS



YB Dato' Sri Haji Fadillah bin Haji Yusof

Honourable Minister of Works, Malaysia



C. Patrick Sankey

President & CEO, International Road Federation

AWARD PRESENTATION

2016 IRF Professional of the Year

IS1

Investors Roundtable (Part 1): Infrastructure Programs in Malaysia

October 17, 16:00 – 17:30

SUMMARY

The main purpose of this session will be to give an overview of major infrastructure investment programs in Malaysia. The panelists will discuss how national and international investors can be involved in these major projects.

IS2

Investors Roundtable (Part 2): Doing Business in ASEAN

October 18, 9:00 – 10:30

SUMMARY

The main purpose of this session will be to give an overview of opportunities created by the new ASEAN market. Experts from several ASEAN nations will give insights on how this market will transform the investment climate in the region.



Join us **LIVE** on Facebook during select sessions

/IRFhq

ES1

Road Financing & PPPs: Experiences from Emerging Nations

October 17, 11:00 – 12:30

SUMMARY

Public Private Partnerships are being increasingly utilized as an alternative to traditional public financing methods for road and surface transport. This panel will feature presentations and a discussion about successful Road PPP projects from around the world, followed by a discussion on best practices.

MODERATOR



Mehran Avini, Senior PPP Advisor

SPEAKERS



HK Yong, Institute of Strategic & International Studies (Malaysia)
PPP Experience in Malaysia



Sreejith Narayanan, Associate Vice President, IL&FS Transportation Networks Limited
Infrastructure Development in India: Issues & Challenges



Pei-Wen Chou, Vice President and CFO, Far Eastern Electronic Toll Collection Co., Ltd. (FETC)
FETC Experience in Taiwan



Robert Hardy, Technical Director Transport, at the Australian Government-Funded Indonesia Infrastructure Initiative (Indii)
Indonesia New Annuity PPP Program

ES2

Overloading and Road Management

October 17, 16:00 – 18:00

ORGANIZER



Japan International Cooperation Agency (JICA)

SUMMARY

Damages on the road system, such as pavement and bridges including the JICA project roads, brought about by overloading have been reported in some of ASEAN countries. In addition to these, deterioration of roads has been accelerated by the introduction of modern large freight trucks which is contributing the development of industrial supply chain systems and economic development of the region. The panel will discuss those issues attended by officials and experts from Asian countries to exchange information and good practice.



Use hashtag #ASRC2 during the event

@IRFhq

ES3

Building Climate Resilience in Road Infrastructure: A Cross-Sectoral Roundtable

October 18, 9:00 – 10:30

SUMMARY

Using real world case studies taken from different fields of engineering, this roundtable seeks to identify promising applications as well as knowledge gaps that can be addressed through information and capacity strengthening programs that can help make Asia's road infrastructure more Resilient to climatic change and extreme weather events.

MODERATOR



Gordon Keller, retired US Forest Service

SPEAKERS



Oliver Whalley, Project Engineer, The World Bank
Setting the Stage: Transport & Climate Resilience



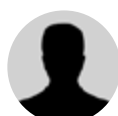
Jamie Leather, Asian Development Bank
Mainstreaming Climate Resilience into Road Projects



Kamil Kaloush, Director, National Center of Excellence on SMART Innovations
Pavement Mitigation Strategies in Urban Areas



Frank van Steenbergen, MetaMeta
Making Roads Work for Water



Dr. Jasper Cook, Team Leader, Research in Community Access Partnership (ReCAP)

ES4

Preserving & Enhancing Road Assets

October 18, 11:00 – 12:30

SUMMARY

Some countries excel at long term infrastructure asset management, while others have fallen behind. Emerging Asian economies have an excellent opportunity to begin planning for long term maintenance during the investment stage of their infrastructure. This panel will address the region's commonly shared challenges, and discuss opportunities to build a framework for knowledge sharing and regional collaboration, highlighting best practices for infrastructure asset management.

SPEAKERS



TBD, Ministry of Public Works, Malaysia



Sui Tan, Program Manager, Metropolitan Transportation Commission
Asset Management from a Municipal Perspective



Rowan Kyle, Principal Asset Manager, OPUS International Consultants
Asset Management Challenging in Emerging Countries



Ben Gericke, The World Bank
The World Bank Experience in Emerging Nations

ES5

Congestion Management for Asian Highways

October 18, 14:00 – 15:30

SUMMARY

The rapid development and growth of Asian economies has led to increasingly congested roads all across the region. This session will explore practical and cost effective solutions that can help alleviate congestion and improve the travel experience of the Asian road users.

MODERATOR



Bill Sowell, Eberle Design, Inc.

SPEAKERS



Chris Sanders, Senior Vice President, Lindsay Transportation Solutions
An Introduction to Congestion Mitigation Strategies



Dr. Olga Landolfi, Secretary General, TTS Italia
Intelligent Demand Management as a Key Tool for Congestion Mitigation - Italian Experiences



Richard Wu, Chief Technology Officer, Far Eastern Electronic Toll Collection Co., Ltd. (FETC)
Electronic Tolling Solutions for Congestion Mitigation



TBD, 3M



TBD, REAM

ES6

Delivering Successful Road Tolling Programs

October 18, 16:00 – 17:30

SUMMARY

The electronic toll collection (ETC) market is characterized by a diversity of solutions and systems which are frequently based on legacy developments addressing different technical and regulatory criteria. Moreover, Capital Expenditure and Operational Expenditure remain a significant hurdle for many road agencies. For decision-makers considering the deployment of ETC systems, the diversity of solutions and financial models means that comparing relative whole-life costs and strengths is a daunting task. Using business cases from around the world, this session will review existing approaches with a focus on successful methodologies and risk mitigation tools that maximize opportunities to deliver a successful tolling project.

SPEAKERS



Essam Radwan, University of Central Florida
Congestion Pricing Strategies on Limited Access Highways



YC Chang, Far Eastern Electronic Toll Collection Co., Ltd. (FETC)
Advances in Free-Flow Tolling Systems



Sunny Ho, Portfolio Manager, ITS and Public Security, 3M
Best Practices Sharing and Challenges for Implementing RFID-Based ETC



Marc Ribo Pedragosa, Abertis
A Manifesto for Road User Charging

ES7

Global Road Achievement Award Showcase

October 19, 9:00 – 10:30

SUMMARY

This session will feature presentations from current and previous winners of the prestigious IRF Global Road Achievement Awards. The presentations will focus on the key success factors of the progress, as well as gives a status update on their progress.

MODERATOR



Magid Elabyad, Vice President, International Programs & Member Services, International Road Federation

SPEAKERS



Chris Sanders, Senior Vice President, Lindsay Transportation Solutions
Golden Gate Bridge Median Barrier



Sreejith Narayanan, Associate Vice President, IL&FS Transportation Networks Limited
RIDCOR PPP Highway Project



Armando Pezzoni, Manager, Louis Berger
Timisoara Lugoj Motorway, Romania



Martins Zaumanis, Project Manager, Latvian State Roads
100% Recycled Asphalt

ES8

Skills Development in the Transportation Sector

October 19, 11:00 – 12:30

SUMMARY

Building a capacity is an issue many emerging nations struggle with. This panel will discuss how to build local capacity, while also balancing the need for meeting the immediate demands of the public for better, safer, and more efficient transportation systems, which often will need the assistance of international expertise and labor.

SPEAKERS



TBD, Indonesia Infrastructure Initiative



Mark Argar, BD Manager Asia Pacific, Bechtel
Upskilling the Workforce in Transitioning Economies



Insoo Yeo, Korean Ministry of Land, Infrastructure and Transport
Presenting the International Road Center



Yohannes Abebe, Practice Lead, Millenium Challenge Corporation



Dr. Jasper Cook, Team Leader, Research in Community Access Partnership (ReCAP)

PS1

Data Collection: Better, Faster, Stronger The ARRB Group



October 17, 11:00 – 12:30

SUMMARY

ARRB Group will discuss the latest development in road condition survey equipment and technology, and how it has helped improve data collection practices across the world. This session will share experience from both Australia and Malaysia, with insights direct from ARRB customers. The participant will receive information on the entire process, covering planning, data collection, project management and data processing.

PS2

Partner Session 2 MIROS



October 17, 16:00 – 17:30

SUMMARY

This session is aimed at highlighting the current initiatives carried out by MIROS as the ASEAN Road Safety Centre. Besides non-road related initiatives, the session will focus on the activities of International Road Assessment Programme (iRAP) in Malaysia as well as the development of ISO 39001: Road Traffic Safety Standards for Malaysia. Participants can expect to listen from some of the industry players in Malaysia sharing their experience after having implemented the ISO 39001 regulations in their operations.

PS3

Partner Session 3 Korea Road Association



October 18, 09:00 – 10:30

SUMMARY

This session will highlight Korea's current initiatives to promote overseas business and enhance international cooperation in the road sector. It will also provide a brief introduction of the Korea Road Association International Road Center and the duties they perform. Furthermore, several state-of-the-art technologies and products developed by road sector companies in Korea will be showcased.

PS4

One Belt, One Road China Highway and Transportation Society



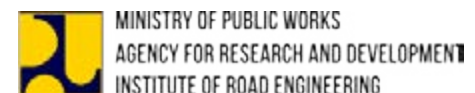
October 18, 11:00 – 12:30

SUMMARY

Connecting more than 60 countries (and representing more than 50% of global GDP), China's "The Belt & Road Initiative" has the potential to have a far reaching impact on trade and economic development worldwide. This session will outline the "One Belt, One Road" agenda and discuss how private sector institutions, governments, and financing institutions can work together to achieve the "One Belt, One Road" vision, as well as how the road sectors can achieve this through science and technology cooperation. Furthermore, the panel will include a discussion on the biggest challenges and opportunities ahead.

PS5

Partner Session 5 Institute of Road Engineering (Indonesia)



October 19, 11:00 – 12:30

SUMMARY

Coming soon

SRD1

Diagnosing Road Hazards

October 17, 11:00 – 12:30

SUMMARY

Work zones are hazardous both for motorists who drive through the complex array of signs, barrels, and lane changes and for workers who build, repair, and maintain streets, bridges, and highways. Panellists and participants will exchange international best practices on how to design a safe work zone using a combination of good practices and new technologies.

MODERATOR



Patrick Clancey, Director of Business Development, Safetyverse Sdn. Bhd.

SPEAKERS



Chris Sanders, Lindsay Transportation Solutions

Using the “Zipper” to Make Japanese Work Zones Safer for All Road Users



Oliver Pulling, Field Applications Engineer, Highway Care

Developments in Safety Barriers in Work Zones



Russell Hood, Managing Director, Traffic Tech Pte. Ltd.

Proper Terminal Connections for Work Zone Barriers



Felipe Almanza, Traffix

Safer Work Zones Using Truck Mounted Attenuators (TMAs)

SRD2

Managing Road Traffic Injury Risk

October 17, 14:00 – 15:30

SUMMARY

Governments across the world are challenged to manage road safety in a context where different government agencies share responsibility and stakeholder engagement is key. Initiatives such as the recent adoption of ISO 39001 now allow more active participation by a wider range of public and private sector actors.

This session will provide an overview of the role of proactive road safety management, with a focus on country programs that have proved their cost-effectiveness and can provide inspiration for Asian safety stakeholders.

MODERATOR



Mike Dreznes, Executive Vice President, International Road Federation

SPEAKERS



Peter Hartzell, Swedish Standards Institute

ISO 39001 Benefits & Applications



Erling Rask, Managing Director, Consia Consultants

Accident Information Systems & Black Spot Programs



Representative, MIROS

Building Skills for Road Safety Audits in Malaysia & ASEAN Countries



Tulasi Sitaula

Enhancing Road Safety in Nepal: A Systematic Approach



Paolo Franchetti, CEO and Partner, Studio Franchetti

Experiences to Improve Road Safety in Brazil

SRD3

Roadside Safety

October 17, 16:00 – 17:30

SUMMARY

Roadside safety is a critical element of road safety. This session is designed to encourage practitioner-led exchanges on items used to create forgiving roads, as recommended in the Safe System Approach. Topics discussed will include longitudinal barriers, crash cushions, terminals and transitions, as well as the importance of site specific data to determine the appropriate product for a particular application

SPEAKERS



Russell Hood, Managing Director, Traffic Tech Pte. Ltd.
Standards; Pick One, Any One



Daren Hotchkin, CEO, Saferoads Pty. Ltd.
Forgiving Poles



Mauro Corsanici, AMS
A Multipurpose Crash Cushion Designed to Save Lives



Felipe Almanza, Technical Engineering Director, TrafFix
Cost Effective Crash Cushion Technology



Steve Johnson, Lindsay Transportation Solutions
Proper Use, Installation and Maintenance of Roadside Safety Features

SRD4

Vulnerable Road User Safety

October 18, 9:00 – 10:30

SUMMARY

Vulnerable road users are over-represented in serious and fatal traffic injuries throughout the ASEAN region. The session will discuss the reasons pedestrians, bicyclists, motorcyclists, public transportation vehicles and non-motorized vehicles are involved in these impacts, and what corrective actions can be taken to reduce their frequency.

SPEAKERS



Essam Radwan, University of Central Florida (USA)
Pedestrian Safety in an Urban Setting



Benjamin Schaefer, Evonik
Traffic Separation Using Colored Pavement Markings to Protect Vulnerable Road Users



Dr. Kulanthayan KC Mani, Universiti Putra Malaysia
Motorcycle Safety: Issues vs Solutions



Mohamed Shawky, Ph.D
Pedestrian Safety and Road Crossing Behavior: A Case Study of Abu Dhabi

SRD5

Speed & Driver Behavior Management

October 18, 11:00 – 12:30

SUMMARY

Speed has been identified as a key risk factor in road traffic injuries, influencing both the risk of a road crash as well as the severity of the injuries that result from crashes. This session will take a comprehensive look at cost-effective programs to enforce and manage driver speed.

SPEAKERS



Philip Wijers, SensysGatso
A Model for Public Private Partnerships (PPP) for Automated Enforcement Technologies



Ahmad Farhan Mohd Sadullah, USM
Localising Management for Road Safety Outcomes: the Penang Experience



Ashutosh Atray, Director, Ace Driving & Road Safety Education
Effective, Low Cost Web Based Road Safety Training for the Masses



Dr. Wafa M. Dabbas, Ministry of Planning (retired) (Jordan)
Mobile Phones While Driving: Road Safety and Performance Issues

SRD6

iRAP's Star Rating Road Designs

October 18, 14:00 – 15:30

SUMMARY

This session will take an in-depth look at how to use the iRAP tools to make sure your roads achieve at least 3-stars for all road users.

SRD7

Smart ITS Applications for Road Safety

October 19, 9:00 – 10:30

SUMMARY

This session will discuss new ITS technologies that are now available and that can help us achieve better, smarter and most importantly safer roads around the world. Presenters from several international countries, will present case studies on the use of new ITS technologies that have had a significant impact on road safety when deployed.

SPEAKERS



Philip Wijers, SensysGatso
Maximizing the Subjective Chance of Apprehension



Brodie von Berg, Sales & Marketing Director, MiX Telematics
Pragmatic Road Hazard Assessment with the Aid of New Technology



Essam Radwan, University of Central Florida
Short Term Work Zone Safety and Efficiency



Chris Sanders, Lindsay Transportation Solutions
Using ITS to Mitigate Congestion

AK1

ITS Applications for Big Data

October 18, 11:00 – 12:30

SUMMARY

Big Data and IoT have the potential to dramatically improve the safety, efficiency and carbon footprint of transportation systems around the world. This session will give an opportunity for ITS companies to showcase new and innovative applications and uses for Big Data.

PANELISTS



Luke Cheng, Citilabs Regional Director – Asia
Transportation Planning in the Era of Cloud Computing and Big Data



Bill Sowell, Eberle Design
The Application of Big (Traffic) Data to Transportation Operations and Planning in the Asia Pacific Region



Dr. Olga Landolfi, Secretary General, TTS Italia
ITS and Big Data for Smarter Cities: Applications in Italian Cities

AK2

Innovations in Rubberized Asphalt (Sponsored by Consulpav)

October 18, 14:00 – 15:30

SUMMARY

This session will give an opportunity for material producers and equipment manufacturers to showcase their latest projects & research.

PANELISTS



Kamil Kaloush, Director, National Center of Excellence on SMART Innovations
Performance Tests and Environmental Issues



Jorge Sousa, Chairman, Consulpav
Rubberized Pavements in an Instant



George Way, President, Consulpav
Recycled Tire Rubber Roadways to the Future

AK3

Innovative Road Safety Products

October 18, 16:00 – 17:30

SUMMARY

This session will give an opportunity for Road Safety Equipment and Application providers to showcase new products and applications that can dramatically enhance road safety in Asia.

AK4

Innovations in Pavement Materials (Part 1)

October 19, 09:00 – 10:30

SUMMARY

This session will give an opportunity for material producers and equipment manufacturers to showcase their latest projects & research.

PANELISTS



Stephan Hotz, FAYAT Mixing Plants
FAYAT Road Building Division on Asphalt Mixing Plants (FMP)



Mai Kobayashi, Toshiaki Hirato, Masato Murayama, TOA Road Corporation
Application of Appropriate Repair Materials for Asphalt Pavement in Japan



Vivek Kane, Executive Vice President,
Zydex Industries
Organo-Silane 'Warm Compaction' Technology for Green Roads



Richard Koch, President, East Asia,
Quasco LLC
Resonant Rubblization as a Method to Rehabilitate Concrete Pavement

AK5

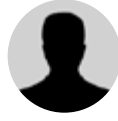
Innovations in Pavement Materials (Part 2)

October 19, 11:00 – 12:30

SUMMARY

This session will give an opportunity for material producers and equipment manufacturers to showcase their latest projects & research.

PANELIST



Stephan Hotz, FAYAT Mixing Plants
Green Mixing Plant Technologies



Dave Huddleston, International Business Development Manager, Forta Corporation
High Tensile Strength Fiber Reinforcement for Asphalt Pavement



Tim Morris, Regional Sales Manager, Crafc
Effective Treatment of Large Cracks in Asphalt PCC Pavements



Join us **LIVE** on Facebook during select sessions

/IRFhq

WS1

Benefits of Galileo for ITS Applications

October 17, 11:00 – 15:30

SUMMARY

The Galileo global navigation satellite system is expected to create many new market opportunities for transportation market actors. The Galileo GNSS, will create numerous new opportunities for ITS applications, such as easing deployment of autonomous driving through precise positioning or tracking dangerous or expensive goods with reliable and safe positioning services. This workshop will present the outcome of the JUPITER support actions, financed by the European GNSS Agency, showing different E-GNSS-based applications of relevance to transportation actors across the Asian continent. It will also provide an introduction to the expected cost benefit, as well as best practices, which are critical to foster the development of new E-GNSS market opportunities for intelligent transport systems.

INSTRUCTOR



Yves Capelle, Head Space Services & Application Business Unit, Telespazio France

WS2

Performance-Based Contracts

October 18, 14:00 – 17:30

SUMMARY

This workshop includes a 1/2 day program of presentations and discussions about Performance-Based Contracts and how they can help road agencies meet their desired outcomes. Participants will engage in discussions with experts who are actively involved in maintenance contracting and asset management to discuss the application of best practices under different country conditions.

INSTRUCTORS



Rowan Kyle, Principal Asset Manager, OPUS International Consultants



Mehran Avini, Senior PPP Advisor



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Use hashtag #ASRC2 during the event

Building and Maintaining Climate Resilient Rural Roads

October 19, 09:00 – 16:00

SUMMARY

This workshop addresses the growing concern about climate change and its impacts on roads and other infrastructure. The impacts on roads from intense storms will be discussed and what mitigation measures can be used to lessen those impacts. Efforts include measures transportation agencies are implementing to help reduce greenhouse gases and their carbon footprint, and deal with climate extremes. Assessment methods to evaluate risk will be discussed. There are a number of design and maintenance measures that can be taken to reduce road damage and impacts from major storms, or to “stormproof” roads.

Specific measures include: Cleaning channels of debris that can plug culverts and bridges; Using trash racks; Preventing culvert diversion; Protecting structures against scour; Moving roads away from stream channels; Positive road surface drainage measures; Using low-water crossings that don’t plug rather than culverts; Strengthening marginally unstable slopes using Geosynthetics, biotechnical slope stabilization methods, and deep-rooted vegetation; and applying erosion control measures. Engineering “Best Practices” will reduce the damage from storms, protect our investment in the roads, as well as protect the environment.

LEARNING OUTCOMES

- Understanding the significance of global climate change on infrastructure.
- Recognizing the role transportation agencies have to minimize the problem.
- Addressing the role of climate resilience in roads infrastructure planning, design and maintenance.
- Learning tools to help assess the risks to infrastructure from storms.
- Learning the specific measures planners and engineers can implement to reduce their risk to road damage from storms.

INSTRUCTOR



Gordon Keller, retired US Forest Service

AGENDA

9:00-9:30

Introduction to Climate Resilient Roads with Engineering Best Practices

9:30-10:15

Climate Change-What We Know and What We've Seen

10:15-10:30 Recess

10:30-11:00

Transportation Sector Efforts to Reduce the Carbon Footprint, Minimize Climate Change, and Develop Climate Resilient Roads

11:00-12:00

Climate Resilient Road Mitigations- “Stormproofing” Roads!

12:00-13:30 Lunch

13:30-15:00

Roadway Drainage and Water Quality Issues

- *Hydraulic Design Tools*
- *Roadway Surface Drainage for Low-Volume Roads*
- *Culvert Location, Installation, and Sizing*
- *Low-Water Fords and Bridges*

15:00-16:00

Stability of Roadway Slopes Erosion Control Concepts

TS1.1

Safety Performance

PAPERS & PRESENTERS

- 012: Safe Road Infrastructure from the iRAP Methodology**
María Saucedo Rojas, Alberto Mendoza Díaz
- 042: GIS Mapping and Geospatial Database for Road Safety Management**
Eriadi Eriadi
- 044: A Basic Study on Comparison of Lane Width Measured with Sensors**
Jaehong Park Dukgeun, Yun Chunjoo Yun
- 059: Cars – Motorcycles Collisions Prediction Model Based on Road Design Consistency**
Joewono Prasetyo
- 097: Motorcycles Gap Acceptance At Merging Point Of Egress And Ingress Of Exclusive Motorcycle Lane In Malaysia**
Norfaizah Khaidir, Nusayba Megat Johari

TS1.2

Safety Treatments

PAPERS & PRESENTERS

- 004: Innovative Urban Signalized Junctions**
Tarek Eweida
- 014: Safety Effectiveness of Surface Treatment: A Comparison of Empirical Bayes and Naïve Before and After Study**
Nasreen Hussein, Rayya Hassan
- 017: Safety Improvements To National Route Two Section 27 in Kwazulu-Natal, South Africa**
Ridhwaan Mahomed
- 019: A Proactive and Systematic Approach to Investing in Road Safety Shows Measurable Results – A Case Study of Road Upgrade Project in Samar**
Yohannes Abebe, Jason Jones
- 114: Weight Impact Tests of Light-Weighted Barriers on Expressways**
Ryoji Okamoto, Koichi Sukioga

TS1.3

Traffic Safety Culture

PAPERS & PRESENTERS

- 025: Protecting Vulnerable Road Users: Traffic Separation with Colored Pavement Markings**
Viviana Steiner, Benjamin Schaefer
- 050: Study on Changes of Risk Awareness, Safety Behavior and Position**
Naoki Meyama
- 061: Determining the Real Impact of Speed Limit Enforcement Cameras in the UK**
John Lambert
- 077: Investigating the Characteristics of Drives with Multiple Crashes**
Mohamed Shawky Ahmed, Iyad Sahnoon, Abdulla Al-Ghaffi
- 089: The Impacts of Climate Change on Transportation Safety and Consequences**
Emre Demir, Beste Cubukcuoglu

TS1.4

Safety Data Analysis

PAPERS & PRESENTERS

- 063: Do Crash Rates Really Increase With Increases in Average Speed?**
John Lambert
- 062: Analysis of the Collision Types of Motorcycle Involved Accident and Countermeasures**
Tien-Pen Hsu
- 066: Probability of Crash Involvements Based on Drivers' Characteristics and Traffic Rule Violation Records**
Mohamed Shawky Ahmed, Iyad Sahnoon, Yousef Al-Badi
- 069: Characteristics of Severe Crashes During the Holy Month of Ramadan**
Mohamed Shawky, Ahmed Mohamed Kishta, Ahmed Al Zaidi
- 085: Road Accidents in Urban and Rural Areas of Tanzania**
Bruno Kinyaga

TS1.5

Safety Management Initiatives

PAPERS & PRESENTERS

- 100: Strategies for Road Safety in the Caribbean - Exploiting The Lowest Hanging Fruit**
Terrence Fletcher
- 101: Evaluation of Authorised Left (Alt) Traffic Control: A Case Study in Kuala Lumpur**
Jensim Ho
- 120: Investigating the Contributing Factors Affecting Traffic Crash Caused by Young Drivers**
Nuha M. Albusaedi, Mohammed Kishta, Mohamed Shawky Ahmed
- 124: Construction on Traffic; Dilemma Between Progress, Quality and User**
Ir. Mohd Shuhaimi Bin Hassan

TS2.1

Paving Materials & Technologies 1

PAPERS & PRESENTERS

- 002: Evaluation of Long Term Performance of Warm Mix Asphalt Using Advanced 3-D Imaging Technique and Indirect Tensile Test**
Meor Othman Hamzah, Sek Yee Tehe, Mohd Rosli Mohd Hasan
- 011: Design, Production, Construction and Performance Evaluation of Recycled Asphalt Concrete**
Jian-Shiuh Chen, Cheng-Te Lee
- 020: Development of Development of Non-contact Wireless Power Supply Pavement**
Nagato Abe, Masaya Tsukamoto
- 051: Sustainable Pavement Design - Delivering Sustainable Options Considering Existing Materials and Pavement Lifecycle**
Ernesto Urbaz
- 081: Structural Pavement Design for Saudi Arabian Roads: Outline of the Proposed Research**
Ibrahim Aldubabe

TS2.2

Paving Materials & Technologies 2

PAPERS & PRESENTERS

- 024: Resonant Rubblization as a Method to Rehabilitate Concrete Pavement**
Richard Koch
- 032: Effect of Long-term Aging on Properties of Asphalt**
Hirato Toshiaki, Kobayashi Mai, Murayama Masato, Takahasi Shikegi
- 048: Engineering Properties of PAC Thin Surfacing for Pavement Rehabilitation**
Min-Chih Liao, Yen-Yu Lin
- 083: Performance Evaluation of Developed Rejuvenators for Warm-in Place Recycling Asphalt Pavement**
Chisu Lim
- 094: Energy Usage and Greenhouse Gas Emissions of Pavement Preservation Processes for Asphalt Concrete Pavements**
Tim Morris

TS2.3

Pavement Adaptation to Climate Change

PAPERS & PRESENTERS

- 035: Geocells for Affordable Low Volume Pavements**
Oliver Whalley
- 038: Does Climate Change Do More Damage to a Road Than Traffic? A Case Study**
John Yeaman, Sachi Kodippily, Susan Tighe
- 039: Climate Change Adaptation for Asian Roads**
Jamie Leather
- 074: Road Pavement Design for the Pacific Region – Desk Research on the Use of Locally Available Materials**
William Gray
- 078: Investigating the Impact of Various Climate Change Scenarios on Pavement Service Life**
Shih-Hsien Yang, Sillah Abdou

TS2.4

Paving Materials & Technologies 3

PAPERS & PRESENTERS

- 095: The Effect of Rejuvenators on the Properties of Repetitive Recycled Asphalt**
Michito Konno
- 098: Cracking Performance Evaluation of Asphalt Mixtures Using Semicircular Bending Test: Experimental Evaluation and Box-Beam Optimization**
Gourab Saha, Krishna Biligiri
- 107: Investigation on Engineering Properties of Bio-Based Binder Derived from Palm Oil Plantation as Replacement of Bituminous Binder**
Mohab Alamawi
- 119: Performance Evaluation of HMA Mixtures Having Different Bitumen Binder Grade Using Simple Performance**
Muhammad Irfan, Muhammad Junaid

TS2.5

Paving Materials & Technologies 4

PAPERS & PRESENTERS

- 099: Statistical Evaluation of Crumb Rubber Modification Procedure in Asphalt Binder Modification**
Veena Venudharan, Krishna Biligiri
- 102: Advanced Use of Solar Heat-blocking Pavement Technology**
Masahiko Iwama
- 111: Cost Analysis of Fiber-Reinforced Pavements**
Waleed Zieada, Kamil Kaloush, Shane Underwood

TS3.1

Mobility and Planning

PAPERS & PRESENTERS

- 003: Optimizing Potential Value Added of Sunda Strait Bridge Construction in Accessibility Function Model**
Dinihari Mulya Lestari
- 010: A Review of Psychological Impact of Improving Bus Service Reliability on Passengers Experience**
Seyed Moosavi, Amiruddin Ismail
- 055: The Influence of Trips Generated from New Projects Development to the Efficiency of the Road Network**
Badrul Rahim, Jamilah Mohd Marjan
- 073: How Mass Affects Safety in Transportation, Case Study**
Arthur de Waal
- 103: The Effective Use on Expressway to Reduce Traffic Accidents in Tokyo Metropolitan Area**
Arata Motoki
- 104: Urban Transport Solutions / BRT vs Tram**
Maria Ortega

TS3.2

Smart Traffic Management Systems

PAPERS & PRESENTERS

- 007: Intelligent Transport Planning System**
Kevin Gu
- 015: Active Traffic Management with Congestion mitigation Tools in Japan**
Jun Takeuchi, Toshiyuki Oka
- 058: The Italian its Logistics Platform for the Management of Dangerous Goods Transport and Parking Area for Heavy Trucks**
Leonardo Domanico, Olga Landolfi, Rodolfo De Dominicis, Nicola Bassi
- 023: Decision Support in Real-Time Traffic Management**
Johannes Schlaich
- 033: New Integrated System to support the London Streets Tunnels Operations Control Centre (LSTOC)**
Olga Molina
- 034: Kuala Lumpur Integrated Control Centre - Monorail, LRT, BRT, High Speed and Mass Rapid Transit Systems**
Javier Gomez

TS4.1

Infrastructure Management

PAPERS & PRESENTERS

- 005: A New Approach for Estimating Pavement Rutting Progression**
Nahla Alaswadko, Rayya Hassan, Bayar Mohammed
- 018: Calibration of HDM-4 Road Deterioration Models for Rural Arterials in Victoria**
Bayar Mohammed, Rayya Hassan, Nahla Alaswadko
- 027: Asset Management on the Main Cables of Suspension Bridges**
Masahiro Takeguchi, Muneo Okawa, Yoshiji Oura
- 029: Asset Management to Highway: Soil-Cement Stabilization Technique**
Norehsan Abu Bakar, Zulkhairi Hasan, Mohd Mustaqim Mohd-Nordin
- 036: Pavement Sustainability Index for Highway Infrastructures: A Case Study of Flexible Pavements**
Stella Obazee-Igbinedion
- 118: Performance Based Key Performance Indicators for Expressway Concessions in Malaysia**
Suhaimi Abd Aziz, Zainuddin Abdullah, Abdullah Hashim

TS4.2

Infrastructure Maintenance Policies & Programs

PAPERS & PRESENTERS

- 006: Lessons from Liberia: Monitoring and Supervision of a 10-Year Performance Based Road Contract**
Rowan Kyle
- 079: 6 Critical Steps to Manage Your Pavement Assets without Breaking the Bank**
Sui Tan
- 080: Establishing Optimal Long Term Funding Allocation Systematic Approach based on Network Needs & Availability of Funds**
Alan Roland, John Yeaman, Mark Porter
- 084: Maintenance of Infrastructures Using GIS and Point Cloud Data**
Yoshifumi Nagata, Naruhiko Kawada, Kazuhiro Tsuno, Takuji Hiraoka
- 096: Long Segment Roads: The Indonesian Way to Adopt a Policy of Performance-Based Maintenance Contracts**
Slamet Muljono, Max Antameng
- 117: Slope Maintenance Program in Designing and Constructing Slopes**
Eddie Sunaryo, Djoko Purnomo

TS4.3

Infrastructure Inventory & Inspection

PAPERS & PRESENTERS

- 008: Road Surface Condition Surveys at Traffic-Speed**
Kars Paul Drenth, Feng Hua Ju, Jun Yew Tan
- 016: Development of Thresholds for Travel Quality Assessment In Colombian Urban Roads**
Luis Fuentes
- 021: Development of the Three-Dimensional Road Surface Measurement Technology by the High-Speed Road Surface Measurement Vehicle**
Shikegi Ando
- 043: Review of Estimation Method of Crack Depth in Asphalt Paving**
Jin Hatakeyama, Toshiharu Chisaka, Manabu Kouhei, Motoo Takahasi
- 072: Mobile Mapping Applications for Data Collection and Evaluation of the Rural Road Assets**
Phisan Santitamnont, Chakree Bumroongwongse, Preecha Soparatana, Kawin Saiprasertkit
- 121: A New Bridge Condition Index Considering Potential of Evolution and Extent of Deterioration Process**
Saleh Abu Dabous, Ghadeer Al-Khayyat, Daniel Llort

TS4.4

Infrastructure Preservation

PAPERS & PRESENTERS

- 046: Application Of Micro-Surfacing System – PLUS Experience along North South Expressway (NSE)**
Abdul Rahim Mohd, Shafie Zulkhairi Hasan
- 052: Integrated Asset Management System for The Second Penang Bridge**
Mohd Ashari Alias
- 053: Development of Sustainable and Customized Road Asset Management System In Vietnam**
Bhoj, Raj Pantha
- 054: Risk Evaluation and Management on Role of Government Authority in Expressway Project under PPP Model**
Qiang Luo
- 092: Preliminary Report for Iri Changes after Kumamoto Earthquake Japan, by Using Smartphone Roughness Measurement**
Koichi Yagi
- 113: Uncertainty in Deterioration Modeling and Life-Cycle Cost Evaluation of Road Bridges**
Masahiro Shirato, Takashi Tamakoshi, Junichi Hoshikuma, Yuuki Matsumura

TS4.5

Asset Management in Practice 1

PAPERS & PRESENTERS

- 105: Wheel Load Running Tests on the Embedded Expansion Joint Using High-Flexibility Stone Mastic Asphalt**
Ayaka Ishii
- 106: Network Evaluation of Flood Impact for Rural Highways Management**
Thanit Witthayamet
- 108: The Natural Frequency Measurement of Pedestrian Bridge Using Smartphone**
Ba Hoang Nguyen, Tien Thuy Nguyen, Binh LeQuang
- 028: Influence of Roadside Vegetation on Roughness Progression for Pavements Founded on Expansive Soils**
Md Yeasin Ahmed, Robert Evans, Monzur Imteaz
- 030: Removal Method for Ceiling Board of the Hanshin Expressway's Tunnels**
Masahide Takahashi, Shorato Hirayama, Hideki Takada
- 013: Sustainable Airport Pavement Management System: Effects of Delay in Maintenance Approach Based on Life-Cycle Cost Analysis and Life-Cycle Assessment**
Peyman Babashamsi, Nur Izzi Yusoff, Halil Ceylan

TS4.6

Asset Management in Practice 2

PAPERS & PRESENTERS

- 065: New Low-Activity Nuclear Gauge for Soil Wet Density Measurement with Low Regulatory Burden**
Linus Dep, Robert Troxler, William Troxler
- 070: Development and Deployment of Asset Management Systems for Ashghal**
Marcuerquiaga Ruiz De Alda, Ahmed Al Kubaisi
- 067: Road Tunnel Inspection with High-Performance Devices**
Fernando Sanchez-Dominguez, Jose Antonio Ramos Garcia
- 109: Requirements of an Asset Information Management System**
Teh Hing Wan
- 112: Automated Detection Of Sealed Cracks Using 2D And 3D Road Surface Data**
John Laurent, Jean-François Hébert, Mario Talbot
- 122: The Fight Against Sand Encroachment**
Humod Al-bdrani

TS5.1

Sustainable Transport Practices

PAPERS & PRESENTERS

- 022: Innovative Improvement to Restrooms in Rest Areas**
Gaku Suzuki
- 045: The Needs of Life Cycle Cost Application for Malaysia Green Highway Projects**
Muhammad Rahman
- 056: Empowering Distressed Women Through Maintaining Rural Roads In Bangladesh**
Momin Shamaji
- 115: Layout Design of Korean-Type Road Debris Remover Instrument**
Jinguk Kim, Choongheon Yang
- 116: Implementation of Indonesia Green Roads Rating System 2015 Greece Lawalata, Agus Sailendra**
Hendro Saitro
- 123: TransNet 2.0 - An Integrated Transportation System for the 21st Century**
Giorgio Gaviraghi

TS6.1

Transport Financing & Economics

PAPERS & PRESENTERS

- 037: Managing Traffic Demand Risk in Road Sector PPPs Through the Use of Put and Call Option Agreements**
George Nwangwu
- 041: Reasonable Concession Fee for Public Private Partnership in Motorway Service Area**
Watcharapon Wisanbannawit
- 057: Operators' and Users' Perspective on Service Quality Dimensions of Toll Road PPP**
Herry Zuna
- 001: PPP Global Experience on Infrastructure & Transportation**
YoHao Chen
- 108: Financing Rural Roads : Approach in Bangladesh**
Abdul Quader
- 040: Current Status of Electronic Toll Collection and the Development of a New Traffic Information Service Based on ETC in Korea**
Hwanpil Lee, Sangmin Park

TECHNICAL SITE VISITS

October 20, 8:30 – 12:30

The IRF will offer multiple technical site visits to relevant locations. This is a chance to get a behind the scenes look at large-scale projects either under construction or recently finished. The IRF will provide round-trip transportation and local experts will provide a guided tour of each site, giving you a unique experience reserved only for Congress participants. An array of enlightening technical visits has been arranged which will showcase Malaysia's efforts to meet the accelerating demands for an efficient road and transportation infrastructure. Delegates are requested to select and indicate one (1) visit of their choice in the Registration Form.

TV1

Duta Ulu Kelang Expressway 2

SUMMARY

Duta Ulu Kelang Expressway 2 (DUKE 2) is a prominent element in the Kuala Lumpur Road Master Plan acting as an extension to the existing DUKE and is designed to be a dual-three lane tolled carriageway. It will connect the east and west of Kuala Lumpur via a seven-kilometre link from Sri Damansara and a nine-kilometre link from Jalan Tun Razak. The construction works for DUKE 2 commenced in 2014 and is expected to be completed by end of 2016.



TV2

Mass Rapid Transit Line 1 - Sungai Buloh To Kajang

SUMMARY

The 51-kilometre MRT Sungai Buloh to Kajang Line (MRT Line 1) is the first of the three planned Klang Valley Mass Rapid Transit lines to be constructed. The line has a total of 31 stations consisting of 7 underground and 24 elevated stations. Divided into two phases. Phase One will become operational by the end of 2016, while Phase Two will be commissioned by July 2017.



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TV3

Rawang Bypass

SUMMARY

The Rawang Bypass project, which is 85% complete, involves the construction of new road alignment to bypass the busy Rawang town. The project cuts through a hilly and environmentally-sensitive forested heritage park which has been a traditional location for family outings, nature lovers and eco-tourists. Major mitigation initiatives were considered in its engineering design, including the construction of a viaduct and localised cutting of the slopes. Movement of wildlife is possible below the entire stretch of the viaduct.



TV4

Maju Expressway 2 (MEX 2)

SUMMARY

MEX 2 with a total length of 18 kilometres, is an extension of the existing MEX 1 which was completed in 2007 and runs from KL to Putrajaya. When completed, MEX 2 will provide a fast and direct connection from KL and Putrajaya to the Kuala Lumpur International Airport (KLIA). MEX 2 is part of the Privatisation of the Dedicated Highway for KL – Putrajaya – KLIA approved by the Government of Malaysia through the Build-Operate-Transfer method in 1996. The construction works for MEX 2 will commence in 2016 and is expected to be completed by mid of 2019.



TV5

Malaysian Highway Authority Traffic Management Centre

SUMMARY

The Traffic Management Centre (TMC) of Malaysian Highway Authority (MHA) was established to further enhance the implementation of Intelligent Transportation System (ITS) at all highway networks. The objective of TMC is to ensure smooth track movement as well as improving road safety aspects. TMC monitors track conditions at all highway networks and provides real time track information to highway users via variable message signboards (VMS), portal web, short messaging system (SMS) and multimedia messaging systems (MMS).



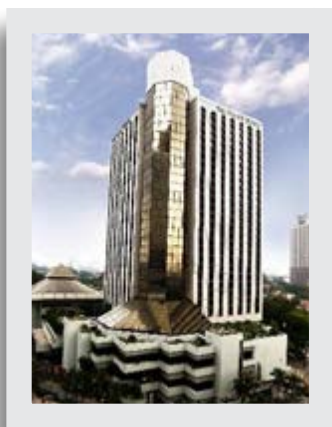
ACCOMMODATION CHOICES

There are numerous hotels with various star ratings within the vicinity of the Congress venue. Delegates wishing to stay in the following hotels closest to the Congress venue are advised to communicate *directly* with the hotels for their requirements.

SERI PACIFIC HOTEL KUALA LUMPUR



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Attached to resv@seripacific.com
Convention Center +603 4042 5555

DYNASTY HOTEL KUALA LUMPUR



**ACCESS
SPECIAL
RATE**



From US \$ www.dynasty.com.my
3 min, 1.3 km resvn@dynasty.com.my
17 min, 1.3 km +603 4043 7777

KUALA LUMPUR GRAND SEASONS HOTEL



From US \$ www.grandseasons.com
5 min, 2.2 km reservations@grandseasons.com
17 min, 1.4 km +603 2697 8888

QUALITY HOTEL KUALA LUMPUR



**ACCESS
SPECIAL
RATE**

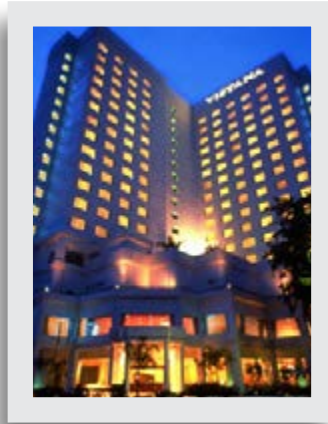


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5 min, 1.7 km qhcc@quality.com.my
21 min, 1.7 km +60 03 26148000

**VISTANA HOTEL
KUALA LUMPUR**



**ACCESS
SPECIAL
RATE**



From US \$

www.vistanahotels.com

3 min, 1.1 km

viskl@ytlhotels.com.my

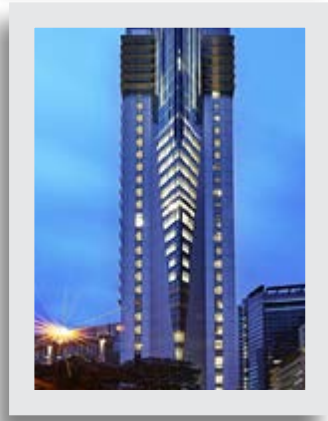
18 min, 1.4 km

+603 4042 8000

**PREMIERA HOTEL
KUALA LUMPUR**



**ACCESS
SPECIAL
RATE**



From US \$

www.premiera.com.my

6 min, 3.6 km

info.phkl@impiana.com

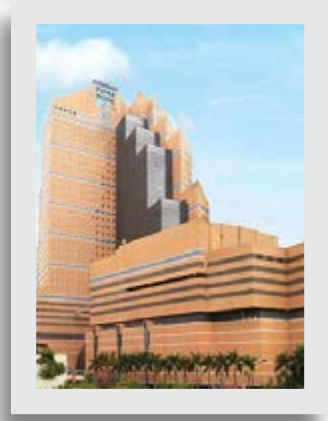
22 min, 1.7 km

+603 2615 1000

**SUNWAY PUTRA
HOTEL KUALA
LUMPUR**



**ACCESS
SPECIAL
RATE**



From US \$

putra.sunwayhotels.com

1 min, .4 km

bookroomsph@sunwayhotels.com

5 min, .4 km

+603 4040 9888

**HOTEL GRAND
CONTINENTAL
KUALA LUMPUR**



From US \$

www.grandcontinental-kl.com

4 min, 1.4 km

sales_reservation@ghihotels.com.my

18 min, 1.4 km

+603 2693 9333

SHOWCASING INNOVATION

Place your company’s brand, products and services at center stage during this high-level industry event. With an exhibit or sponsorship package you can build greater market awareness by increasing your exposure in front of top decision makers, government officials and buyers who are directly involved with the region’s road and transport infrastructure industry.

The 2nd IRF Asia Regional Congress & Exhibition offers a wide variety of sponsorship packages, as well as individual defined benefits, all designed to increase your corporate visibility and ensure your brand is seen. As a sponsor at IRF’s premier 2016 regional event, you will be in a strategic position to showcase your products and services in front of an Asian and international market.

EXHIBIT RATES

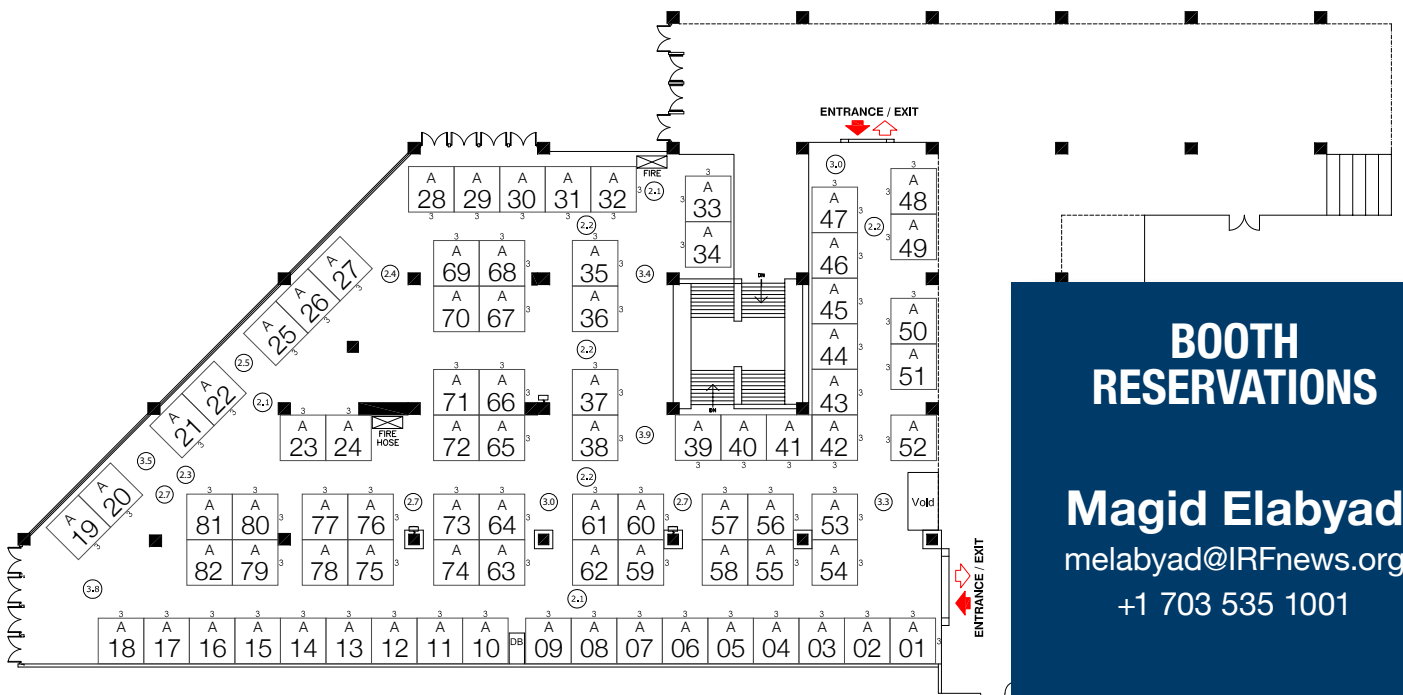
OPTIONS	IRF MEMBER	NON MEMBER
INCLUDES SHELL SCHEME*	US \$270/m ² *	US \$330/m ² *
NO SHELL SCHEME	US \$200/m ²	US \$270/m ²

*Shell schemes include: 1 information desk, 2 folding chairs, electricity, 2 fluorescent lights, 1 wastebasket, 2 exhibit passes (no delegate registration included)

EXHIBITION AREA ‘A’

Booths A01-A54 are Shell Schemes, measuring 9m² (3m x 3m) each

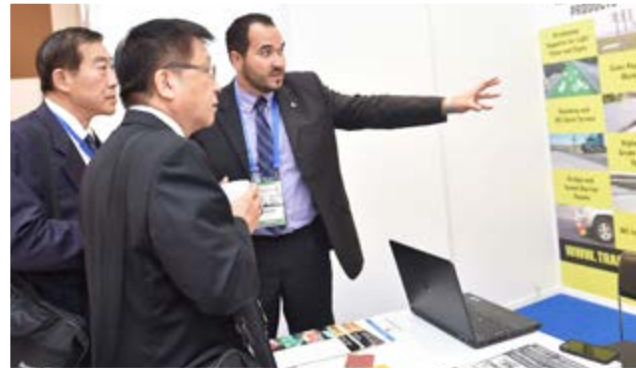
Booths A55-A82 are Raw Space, measuring a minimum 18m² (3m x 6m)



BOOTH RESERVATIONS

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 melabyad@IRFnews.org
 +1 703 535 1001

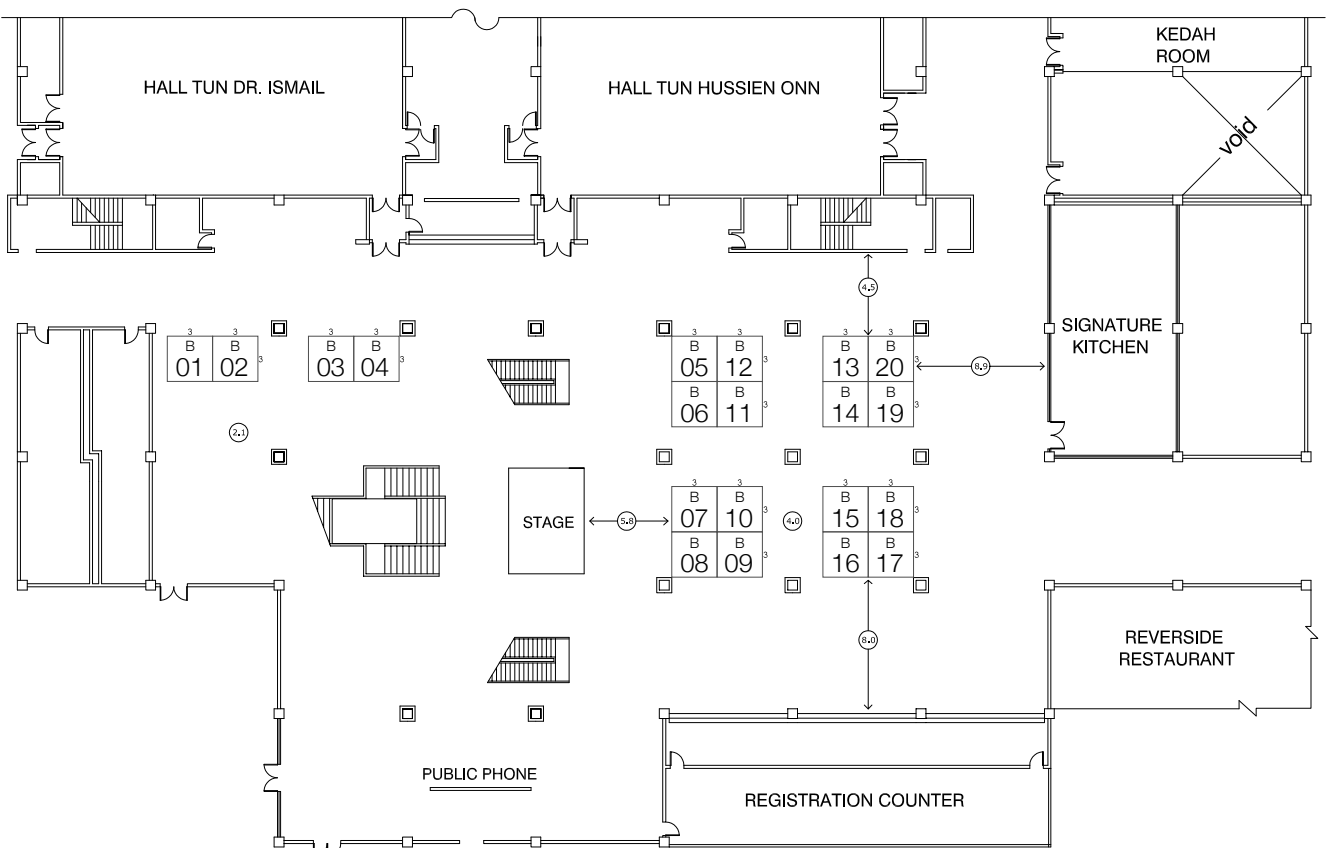
ASRC.IRFNEWS.ORG



EXHIBITION AREA 'B'

Booths B05-B20 are Shell Schemes, measuring 9m² (3m x 3m) each

Booths B01-B20 are Raw Space, measuring a minimum 18m² (3m x 6m)



By identifying the sponsorship & exhibition opportunities that suit your business development objectives, you can enjoy an array of benefits that will amplify your return on investment and ensure your participation is successful.

BENEFITS OF SPONSORSHIP

- Raise your profile and strengthen your brand awareness
- Position your brand as a market leader
- Differentiate your brand from competitors
- Maximize exposure of your brand to the media and visitors
- Maximum ROI with exclusive access to a targeted audience
- Generate leads

AVAILABLE SPONSORSHIP PACKAGES

SPONSORSHIP LEVELS	PLATINUM	GOLD
COST: IRF MEMBER NON MEMBER	US \$30,000 US \$40,000	US \$20,000 US \$25,000
Total Available	3	5
Included Registrations	12	10
Opportunity to Present	✓	✓
Featured article in Congress Daily	✓	✓
Sponsorship Recognition at Coffee Break		✓
Logo In Event Program**	✓	✓
Gala Dinner Sponsorship	✓	—
Exhibit Space	18m ²	18m ²
Advanced Publication / Website Link	✓	✓
Logo Recognition at Event	✓	✓
Database of Attendees	✓	✓
Materials In Congress Brief Case	✓	✓
Access To VIP Refreshment Lounge	✓	✓
Access to VIP Dinner	4	3
Complimentary Spouse Program	2	1
Advertisement in Exhibitor Guide	Full Page	Full Page

DEFINED BENEFIT PACKAGES

OPTIONS	GALA DINNER	WELCOME RECEPTION	TECHNICAL TRACKS
COST	US \$25,000	US \$10,000	US \$5,000
TOTAL AVAILABLE	3	1	8

MORE INFORMATION

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+1 703 535 1001

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20%
DISCOUNT
for
IRF
MEMBERS

SPONSORSHIP LEVELS	SILVER	BRONZE
COST: IRF MEMBER	US \$15,000	US \$10,000
NON MEMBER	US \$20,000	US \$12,500
Total Available	15	OPEN
Included Registrations	7	3
Opportunity to Present	✓	—
Featured article in Congress Daily	—	—
Sponsorship Recognition at Coffee Break	✓	✓
Logo In Event Program**	✓	✓
Gala Dinner Sponsorship	—	—
Exhibit Space	18m²	9m²
Advanced Publication / Website Link	✓	✓
Logo Recognition at Event	✓	✓
Database of Attendees	✓	—
Materials In Congress Brief Case	✓	—
Access To VIP Refreshment Lounge	—	—
Access to VIP Dinner	2	1
Complimentary Spouse Program	—	—
Advertisement in Exhibitor Guide	Half Page	Quarter Page

LUNCH BREAK

US \$7,500

2

WIFI

US \$10,000

1

DELEGATE BAG

US \$10,000

5

OVERVIEW

Malaysia is known for its rich and diverse flora and fauna, iconic monuments, intricate and colourful handicraft and as a nation steeped in history, culture and traditions. An exciting selection of destinations has been arranged for the discerning tastes of attending congress delegates. There is cost involved for participation in this programme. Interested delegates are requested to register at the Social Programme Desk during the congress.

SP1

Putrajaya

SUMMARY

Putrajaya is Malaysia's third and latest Federal Territory. Built on an expansive marshland and former oil palm estate in, the city spans an area of almost 5,000 hectares and lies 25 km from Kuala Lumpur. This city takes over the administrative functions of the capital city Kuala Lumpur and is part of the Multimedia Super Corridor project of the Malaysian government. Take a memorable trip down the serene Putrajaya Lake, an incredible man-made wonder spanning across 650 hectares of beautiful waters and exotic wetlands. Soak up the magical atmosphere that is Putrajaya; discover this enchanting garden city while cruising. This is where all the greens and modern architectural wonders intertwine seamlessly and form the largest landmark in Malaysia.

SP2

Kuala Lumpur Bird Park

SUMMARY

Located in the serene and scenic Kuala Lumpur Lake Gardens, the park is home to more than 3,000 birds of approximately 200 species unique environment.

SP3

Kuala Lumpur Tower

SUMMARY

Reaching 421 metres, this is the seventh tallest free standing tower in the world. It is said that one's perspectives and views change as one moves higher. This tower holds true to this fact. Experience the lives and panoramic view of this metropolitan city at the height of 276 metres above ground level. There is a revolving restaurant providing diners with breath taking view of the city.

SP4

Kuala Lumpur Butterfly Park

SUMMARY

This butterfly garden is the largest in the world with over 5,000 butterflies dancing nonchalantly over clumps of fern amidst scented multi-coloured flowers and flowering vines. Other attractions include Japanese Koi Fish, fresh water turtles, insects and a museum with a large collection of butterflies and insects from around the world.

SP4

Petronas Towers

SUMMARY

Also known as the Petronas Twin Towers, they were the tallest buildings in the world from 1998 to 2004 and still ranked as the tallest twin towers. Towering at 451.9 metres with 88 storeys, the view is majestic by day and dazzling at night.



2nd IRF Asia Regional Congress & Exhibition
Exhibit & Sponsor Application

**FOR OFFICE USE ONLY**

Payment Received Date

REFERENCE CODE (IF APPLICABLE)

YEAR MONTH DAY

Contact Information

ORGANIZATION NAME	JOB TITLE	WEBSITE	
LAST NAME	MOBILE PHONE (WITH COUNTRY CODE) PREFERRED CONTACT NUMBER		
FIRST NAME	OFFICE PHONE (WITH COUNTRY CODE) PREFERRED CONTACT NUMBER		
EMAIL	FAX NUMBER (WITH COUNTRY CODE)		
ORGANIZATION ADDRESS			
CITY	STATE/ PROVINCE	POSTAL CODE	COUNTRY

Sponsor (check the one box that applies; all amounts in US dollars)

IRF MEMBERS Platinum: US \$30,000 Gold: US \$20,000 Silver: US \$15,000 Bronze: US \$10,000	NON MEMBERS Platinum: US \$40,000 Gold: US \$25,000 Silver: US \$20,000 Bronze: US \$12,500	DEFINED BENEFIT PACKAGES Gala Dinner: US \$25,000 Welcome Reception: US \$10,000 Technical Track: US \$5,000 Lunch Break: US \$7,500 Wi-Fi: US \$10,000 Delegate Bag: US \$10,000
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Exhibit (check the one box that applies; all amounts in US dollars)

IRF MEMBERS Raw Space Only: US \$200/m² Raw Space + Shell Scheme: US \$270/m²	NON MEMBERS Raw Space Only: US \$270/m² Raw Space + Shell Scheme: US \$330/m²		
SQUARE METERS REQUESTED	BOOTH NUMBER (FIRST CHOICE)	BOOTH NUMBER (SECOND CHOICE)	BOOTH NUMBER (THIRD CHOICE)

Payment

PAYMENT TYPE Invoice Check Credit Card	CARD TYPE Visa MasterCard AMEX	CARD NUMBER
CARD EXPIRATION DATE (MM/YY)	CARD SECURITY CODE	NAME ON CARD
AMOUNT TO BE CHARGED (IN US DOLLARS)	TODAY'S DATE (YYYY/MM/DD)	SIGNATURE

By signing this document, I agree to comply with the Terms and Conditions applicable to IRF Events and provide full release of my likeness and voice to be used for promotional purpose by the IRF. This release covers photos and videos taken during the event.

PRINTED NAME	SIGNATURE	DATE OF APPLICATION (YYYY/MM/DD)
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PLEASE RETURN THIS FORM TO THE IRF:

Magid Elabyad: melabyad@IRFnews.org or fax +1 703 535 1007

Important Note:Registration can also be completed online at: www.irfnews.org/event/2nd-asia-regional-congress

2nd IRF Asia Regional Congress & Exhibition: KL, October 2016

Delegate Registration**FOR OFFICE USE ONLY**

Payment Received Date

Contact Information

LAST NAME		REFERENCE CODE (IF APPLICABLE)	YEAR	MONTH	DAY
FIRST NAME		MOBILE PHONE (WITH COUNTRY CODE) PREFERRED CONTACT NUMBER			
EMAIL		OFFICE PHONE (WITH COUNTRY CODE) PREFERRED CONTACT NUMBER			
ORGANIZATION NAME	JOB TITLE	FAX NUMBER (WITH COUNTRY CODE)			
ORGANIZATION ADDRESS					
CITY	STATE/ PROVINCE	POSTAL CODE	COUNTRY		
ORGANIZATION CATEGORY Government Academia Industry Association Private Sector					

Additional Registrants (please list the names of any additional delegates you are registering)

LAST NAME	EMAIL
FIRST NAME	JOB TITLE
LAST NAME	EMAIL
FIRST NAME	JOB TITLE

Registration Rates (check the one box that applies; all amounts in US dollars; all prices are per person)

IRF MEMBERS/FELLOWS IRF Fellows: US \$440/person Speakers: US \$440/person Gov't, Academic: US \$550/person Non-Profit: US \$550/person Private Sector: US \$770/person	NON IRF MEMBERS Speakers US \$495/person Gov't, Academic: US \$605/person Non-Profit: US \$605/person Private Sector US \$880/person	MALAYSIAN DELEGATES Malaysian delegates should register directly at: http://www.2irfasiacon2016.com/
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OPTIONAL ADD-ONS

Gala Dinner: **US \$50** Accompanying Other Person: **US \$350**

TECHNICAL SITE VISITS (Registration held on-site)

VISA INVITATION

Do you require a visa invitation letter? Yes No

Payment

PAYMENT TYPE Invoice Check Credit Card	CARD TYPE Visa MasterCard AMEX	CARD NUMBER
CARD EXPIRATION DATE (MM/YY)	CARD SECURITY CODE	NAME ON CARD
AMOUNT TO BE CHARGED (IN US DOLLARS)	TODAY'S DATE (YYYY/MM/DD)	SIGNATURE

By signing this document, I agree to comply with the Terms and Conditions applicable to IRF Events and provide full release of my likeness and voice to be used for promotional purpose by the IRF. This release covers photos and videos taken during the event.

PRINTED NAME	SIGNATURE (IF FAXING)	DATE OF APPLICATION (YYYY/MM/DD)
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Important Note:Registration can also be completed online at: www.irfnews.org/event/2nd-asia-regional-congress

THE INTERNATIONAL ROAD FEDERATION

BETTER ROADS. BETTER WORLD.

The International Road Federation is a non-governmental, not-for-profit membership organization founded in Washington, DC in 1948 with the mission to encourage and promote development and maintenance of better, safer and more sustainable roads and road networks around the world.

The IRF has a major role to play in all aspects of road policy and development worldwide:

- For governments and financial institutions, the IRF provides a wide base of expertise for planning road development strategy and policy.
- For the private sector, the IRF is a business network, a link to multilateral institutions, such as United Nation agencies and the World Bank, and a platform to access government officials and decision makers.
- For the community of road professionals, including national road associations, engineering societies, advocacy groups, and institutes of higher learning, the IRF provides an invaluable information and knowledge platform.

Through the International Road Educational Foundation, the IRF awards grants to graduate engineers and other transportation professionals from around the world in support of full-time academic training. With this, the IRF actively supports future generations of industry leaders.

The International Road Federation also takes pride in honoring and recognizing road-industry projects demonstrating excellence and innovation in road development worldwide, via the Global Road Achievement Awards program. The competition, designed to elicit information on successful projects and programs from leading industry organizations, will draw attention to these leading projects and organizations, providing a road map for others to follow in continuously improving and advancing road development worldwide.

With a wide network spanning 118 countries across six continents, the IRF believes that it can make a difference by providing best practices and expert advice to face today's multifaceted world of transport.



Use hashtag #ASRC2 during the event

Join us **LIVE** on Facebook during select sessions



/IRFhq

GLOBAL

KNOWLEDGE • SOLUTIONS • EDUCATION
BUSINESS OPPORTUNITIES • BEST PRACTICES



Building Industry Partnerships

Better Roads. Better World.



International Road Federation

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