

Day1(4/16) 14:00 - 15:30

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TS6-15-1 Chair: William E. Kelly <i>(ASCE)</i>	TS7-3 Chair: Ken Kawamoto <i>(Saitama University)</i>	TS6-8-1 Chairs: Akira Ooka <i>(Taisei Corp.)</i> , Akira Kashida <i>(Kajima Corp.)</i> , Kayoko Higashiawatoko <i>(Obayashi</i>
ASCE's support for sustainable infrastructure education and practice William E. Kelly <i>(ASCE)</i>	Management of landfills reclaimed with construction and demolition wastes - Strength characterization for stability assessment Purbashree Sarmah <i>(Kyoto University)</i>	Automated construction in Oita-gawa dam project Takayuki Kambe <i>(Kajima Corp.)</i>
Transforming civil engineering education and practice to achieve the United Nations sustainable development goals: Where we are - Indian perspective Ajit Sabnis <i>(InCiCon AG)</i>	Measures taken in Construction and Demolition Waste (CDW) recycling in Japan Fumiaki Zikihara <i>(Ministry of Land, Infrastructure, Transport and Tourism)</i>	Design and construction of the tunnel with artificial ground freezing for the 100m passenger adit of MTR West Island Line C704 in Hong Kong Tejiro Saito <i>(Nishimatsu Construction Co., Ltd.)</i>
Status of Bangladesh in educating future civil engineers and practitioners on sustainable infrastructure practices Mohammad Ali Ashraf <i>(Southern University Bangladesh)</i>	Sources, barriers and good practices to reduce construction waste Lilliana Abarca-Guerreo <i>(Instituto Tecnológico de Costa Rica)</i>	Post-pile cap static axial loading test Muhammad Rizal <i>(WIKI Engineering and Research Institute)</i>

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<p>New Zealand's provision for sustainable infrastructure education and practice April J. Lander (<i>ASCE</i>)</p>	<p>Policy on excavated soil generated Tokyo Outer Ring Road (Kanetsu-Tomei) construction Yoshio Shibata (<i>Ministry of Land, Infrastructure, Transport and Tourism</i>)</p>	<p>Historic Flankline Avenue Bridge Rehabilitation Stephen Kaldenbach (<i>Kraemer North America</i>)</p>
<p>Sustainability practice in the Philippine Infrastructure Design and Construction Ernesto S. de Castro (<i>ESCA Inc./ PICE</i>)</p>	<p>Opportunities and challenges of construction and demolition waste utilization: case of concrete waste utilization in Bangkok Metropolitan Region, Thailand Vilas Nitivattananon (<i>Asian Institute of Technology</i>)</p>	<p>As-built management using the execution history of construction machines in pavement construction Genzaburo Matsuura (<i>Tokyo City University</i>)</p>
<p>Continual Learning Center in Nepal for Sustainable Infrastructure Practices Dhrub Rai Thapa (<i>Nepal Engineer's Association</i>)</p>	<p>Current situation and new regulations on construction and demolition waste management in Vietnam Nguyen Hoang Giang (<i>National University of Civil Engineering</i>)</p>	

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TS6-14-1 Chair: Yoshihiro Katsuhama (<i>Nippon Koei Co., Ltd.</i>)	TS4-3 Chair: Akimasa Fujiwara (<i>Hiroshima University</i>)	TS6-12 Chair: Nobuyoshi Yabuki (<i>Osaka University</i>)
Transdisciplinary approach for scientific-knowledge based decision making for building societal resilience to disasters Kuniyoshi Takeuchi (<i>University of Yamanashi</i>)	An evaluation of traffic and safety efficiency of Single Point Urban (SPUI) and Diverging Diamond Interchange (DDI) interchange. Amir Masoud Rahimi (<i>University of Zanjan</i>)	Stereo vision based framework for on-site tracking of multiple workers Man-Woo Park (<i>Myongji University</i>)
Transdisciplinary approach in the preparedness phase of a debris flow prone village in Taiwan Ting-Chi Tsao (<i>Sinotech Engineering Consultants, Inc.</i>)	Potential and challenges of big data for transportation planning and management in the context of developing nations Arnab Jana (Indian Institute of Technology Bombay)	Image sensing of traffic flow characteristics and its application for traffic safety Albert Y. Chen (<i>Taiwan National University</i>)
How tsunami disaster risk reduction influenced social capital in enhancing coastal business community resilience Harkunti Pertiwi Rahayu (<i>Institute Technology of Bandung</i>)	The effectiveness of collected travel-time data on travel time saving in a shared autonomous taxi system Zhiguang Liu (<i>Nagoya University</i>)	Productivity improvements in the field of construction by ICT Masahiko Takeda (<i>Japan Construction Information Center</i>)

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<p>Factors and mechanisms that make transdisciplinary approach workable -case of recovery project of Tacloban city of the Philippines after the 2013</p> <p>Senro Kuraoka (<i>Nippon Koei Co., Ltd.</i>)</p>	<p>An analysis of trucks' tour pattern using GPS trajectory data of freight vehicles in the Tokyo Metropolitan Area</p> <p>Hideki Oka (<i>The Institute of Behavioral Sciences</i>)</p>	<p>Efforts for the practical use of BIM/CIM in Japan</p> <p>Hiroataka Sekiya (<i>Ministry of Land, Infrastructure, Transport and Tourism</i>)</p>
<p>Status of Vietnam coastal erosion and proposed policies for protection</p> <p>Kien Hoang Pham (<i>University of Transport and Communications</i>)</p>	<p>An analysis of traffic accident factors using ETC2.0 data</p> <p>Canh Xuan Do (<i>Hiroshima University</i>)</p>	<p>Action of the productivity improvement that a construction company practices</p> <p>Fumihiko Ojima (<i>Tokyu Construction Co., Ltd.</i>)</p>
<p>Trans disciplinary approach in retrofitting ready made garments factory building in Bangladesh</p> <p>Abdul Malek Sikder (<i>IEB</i>)</p>		
<p>The case study of cooperation between local government and community on disaster risk management in Japan</p> <p>Masashi Inoue (<i>Eight-Japan Engineering Consultants, Inc.</i>)</p>		

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Seismic risk assessment and good reconstruction practices in Pakistan after Kashmir Earthquake Sarosh H. Lodi (<i>NED University of Engineering & Technology, Pakistan</i>)		
Relocation and land-use regulation following the Great East Japan Earthquake: How can scientific knowledge be incorporated into recovery? Mikio Ishiwatari (<i>Japan International Cooperation Agency</i>)		
Consensus building process after the earthquake, case of Kumamoto Castle Masaru Arakida (<i>Asian Disaster Reduction Center</i>)		

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	<p>TS2-7 Chairs: Hiroyasu Kawai <i>(Port and Airport Research Institute), Wen-Son Chiang</i> <i>(National Cheng Kung University)</i></p>
	<p>Characteristics of coastal disasters due to swell overtopping in Japan Katsuya Hirayama <i>(Port and Airport Research Institute)</i></p>
	<p>Impact of wave height and sea level increasing on shoreline recession Wen-Son Chiang <i>(National Cheng Kung University)</i></p>
	<p>Introduction to the new web-based wave information system of Korea Sang-Ho Oh <i>(Korea Institute of Ocean Science and Technology)</i></p>
	<p>Flow characteristics of undular bore propagating over sloping beach Chang Lin <i>(National Chung Hsing University)</i></p>

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		Current status and challenges of wave observation for ports and harbours in Japan Takashi Fujiki (<i>Port and Airport Research Institute</i>)
		Investigation of tropical depression characteristics and its associated surge along the coast of Bangladesh Md Abdul Al Mohit (<i>Kyushu University</i>)

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<p>TS6-15-2 Chair: William E. Kelly <i>(ASCE)</i></p>	<p>TS3-1 Chair: Chiwan W. Hsieh <i>(National Pingtung University of Science and Technology)</i></p>	<p>TS6-8-2 Chairs: Akira Ooka <i>(Taisei Corp.)</i>, Akira Kashida <i>(Kajima Corp.)</i>, Kayoko Higashiawatoko <i>(Obayashi Corp.)</i></p>
<p>Next steps to ensure civil engineers in the U.S. can support achievement of the SDGs William E. Kelly <i>(ASCE)</i></p>	<p>RECP installation effect on vegetation growth, soil erosion and Manning coefficient in channel flow Motsa Thabo <i>(National Pingtung University of Science and Technology)</i></p>	<p>Design and construction of 6m diameter segmental tunnel in NIPE Contract C4, Singapore Ong Ai Bin <i>(Penta Ocean Construction Co., Ltd.)</i></p>
<p>Next steps to ensure civil engineers in Japan can support achievement of the SDGs Yoshinori Fukubayashi <i>(University of Miyazaki)</i></p>	<p>Model tests on geosynthetic-reinforced soil foundation subjected to normal faulting Jung Chiang <i>(National Taiwan University)</i></p>	<p>Historic Franklin Avenue Bridge rehabilitation Stephen Kaldenbach <i>(Kraemer North America)</i></p>
<p>Technical cooperation and its contribution to the realization of the SDGs' "Data Revolution" Hiroshi Takeuchi <i>(Japan International Cooperation Agency)</i></p>	<p>Applications of geosynthetics for countermeasures against nuclide contamination Takeshi Katsumi <i>(Kyoto University)</i></p>	<p>On the volume restriction operation of artificially frozen ground for suppression of frost heaving by warm-water piping around frozen ground Hiroshi Ogura <i>(Seiken Co., Ltd.)</i></p>

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	<p>Analysis of model test results on combined use of EPS and geogrid to improve seismic stability of bridge abutments</p> <p>Junichi Koseki (<i>The University of Tokyo</i>)</p>	
	<p>Investigation of geosynthetic reinforced soil embankments</p> <p>Tomohiro Fujita (<i>Public Works Research Institute</i>)</p>	
	<p>Lateral shear resistance of triangular geogrid-reinforced aggregate layer overlaying poorly-graded sand layer</p> <p>Jiro Kuwano (<i>Saitama University</i>)</p>	
	<p>Application of vertical drains for the construction of embankment</p> <p>Li-Sheng Tseng (<i>Sinotech Engineering Consultants, Ltd.</i>)</p>	

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TS6-14-2 Chair: Yoshihiro Katsuhama (<i>Nippon Koei</i>) History of TC 21 Activities Yoshihiro Katsuhama (<i>Nippon Koei Co., Ltd.</i>)	TS6-6 Chair: Sang-Ho Lee (<i>Yonsei University</i>) The BIM application of Danjiang Bridge Project, Taiwan Ting Far Teng (<i>Sinotech Engineering Consultants, Ltd.</i>)	TS3-2 Chair: Shinichi Akutagawa (<i>Kobe University</i>) On-Site visualization for advanced safety management and maintenance for tunnels Shinichi Akutagawa (<i>Kobe University</i>)
Roundup of case studies Senro Kuraoka (<i>Nippon Koei Co., Ltd.</i>)	Planning of the Infra BIM implementation for construction site offices Hee Won Park (<i>TAESUNG SNI Singapore</i>)	Case study on recovery of over-deformed metro tunnel in Shanghai by soil grouting Dongming Zhang (<i>Tongji University</i>)
Forthcoming TC21 Activities/ Announcement of TC21 Publication Kenichi Tsukahara (<i>Kyushu University</i>)	Now and future of Infra BIM mandate and projects Yoshihiko Fukuchi (<i>Autodesk Inc.</i>)	Consideration for supporting creation of 3-D model of underground structure Takeshi Okamoto (<i>Takenaka Civil Engineering & Construction Co., Ltd.</i>)
Overview lecture: What is TDA? Outcome of TC21 Activities Kuniyoshi Takeuchi (<i>Yamanashi University</i>)	Development of BIM-based information management system for railway infrastructure projects Sung-Hoon Kim (<i>TAESUNG SNI</i>)	Construction challenges and characteristic considerations for a metamorphic rock tunnel in Taiwan Zong-Han Wu (<i>CECI Engineering Consultants, Inc.</i>)
	Development of BIM based standard technology for railway infrastructure Sang-Ho Lee (<i>Yonsei University</i>)	

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	<p>TS2-1 Chair: Yoshimitsu Tajima <i>(The University of Tokyo)</i></p>
	<p>Integration of remote sensing and GIS to study erosion and accretion at estuaries and coastal zone in Thua Thien Hue province Hung Thanh Nguyen <i>(Vietnam Academy for Water Resources)</i></p>
	<p>Investigation of dynamic morphological changes around the potential cross-dams sites at the north-eastern part of the Meghna Estuary of Bangladesh Mohammad Asad Hussain <i>(Bangladesh University of Engineering and Technology)</i></p>
	<p>Development of economic evaluation framework for adaptation to future beach loss Keiko Udo <i>(Tohoku University)</i></p>
	<p>Potential use of discharge channel for beach recovery in Pamanukan - Subang Regency, Indonesia Takayuki Suzuki <i>(Yokohama National University)</i></p>
	<p>Thailand's economic and adaptation assessment to future beach loss due to sea level rise Chatuphorn Somphong</p>

Day2 (4/17) 09:00 - 10:30		
TS4-1 Chair: Masaaki Okada <i>(Kindai University)</i>	TS6-9 Chairs: Tsunemi Watanabe <i>(Kochi University of Technology), Hai Luong Nguyen</i> <i>(University of Transport and Communications)</i>	TS6-8-3 Chairs: Akira Ooka <i>(Taisei Corp.), Akira Kashida</i> <i>(Kajima Corp.), Kayoko Higashiuwatoko</i> <i>(Obayashi Corp.)</i>
Redesign of historical structures for succession and to create a story of bridges and people Yoh Sasaki <i>(Waseda University)</i>	Investigation of users' viewpoints in post appraisal of ODA infrastructure projects: the case of Vietnam Luong Hai Nguyen <i>(University of Transport and Communications)</i>	Construction of a sharp-curved balanced cantilever bridge over a highway in Jakarta Mass Rapid Transit Project Koushi Seki <i>(Tokyu Constructin Co., Ltd.)</i>
An actual proof of Tokushima's Museum of Bridges Shuichi Takeichi <i>(Tokushima Prefecture Land Development Public Corporation)</i>	Evaluation approaches to improve efficiency of Japan's development assistance projects Satoshi Yamaoka <i>(Utsunomiya University)</i>	Construction of Bang Pa-in-Korat Section 28-31 Project (Thailand) Piyadit Atsavasirisuk <i>(The Civil Engineering Co., Ltd.)</i>
The importance of autonomous management by a local community for sustainable use of traditional water infrastructure: a case study in Gujo Hachiman Seiya Inomata <i>(School of the Water in Gujo-hachiman, Specified Nonprofit Corporation)</i>	Introduction of users' viewpoint into post evaluation for ODA infrastructure projects focusing on appropriate technology Junji Yokokura <i>(Yachiyo Engineering Co., Ltd.)</i>	Applying computer vision technology to inclination monitoring of a drainage gallery in a landslide I-Hui Chen <i>(National Chung Hsing University)</i>
The new guide map of bridges gain much more interests of high school students Kei Suzuki <i>(Nihon University)</i>	Competitiveness of China's large international contractors in 2017 Shuangliang Tai <i>(Harbin Institute of Technology)</i>	Design and construction of linkway with underpinning and SCL tunnels with ground freezing crossing underneath existing MRT live tunnels for Thomson-East Coast Line Marina Bay Station in Singapore Hiromitsu Tada <i>(Taisei Corp.)</i>

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	Lesson learned and direction for performance improvement of ODA infrastructure project in Indonesia Dewi Larasati (<i>Institute of Teknologi Bandung</i>)	Tokyo Outer Ring Road, Main Line Tunnel Project (Tomei-North) Masami Moriguchi (<i>Kajima Corp.</i>)
	Estimation method to measure effectiveness of consulting engineers for public works in Japan Takashi Goso (<i>Tokyo City University</i>)	The first and largest membrane-based water treatment plant in the Philippines Ronaldo C. Padua (<i>Maynilad Water Services, Inc. </i>)
	Motivation of construction engineers and users' satisfaction in infrastructure projects Tsunemi Watanabe (<i>Kochi University of Technology</i>)	Prediction of ground deformation and freezing earth pressure with anisotropy of frost heave in artificial ground freezing method Masato Oishi (<i>Seiken Co., Ltd.</i>)
		Novotel Hotel extension project - planning, design and construction of a seismic isolated structure above an underground metro station Shih-Pu Kuo (<i>Sinotech Engineer Consultants Ltd.</i>)
		Development of new road pavement condition visualization technology utilizing smartphone Hiroshi Sasaki (<i>Fujitsu Traffic & Road Data Service Ltd.</i>)

Day2 (4/17) 09:00 - 10:30		
TS4-6 & TS6-3 Chairs: Koki Hirota <i>(Japan International Cooperation Agency),</i> Tamon Ueda <i>(Hokkaido University)</i>	TS2-6 Chairs: Toshio Koike <i>(Public Works Research Institute),</i> Eko Winar Irianto <i>(Research and Development Center for Water Resources, Bandung)</i>	TS4-4 Chair: Shunsuke Kamijo <i>(National Institute for Land and Infrastructure Management, MLIT)</i>
Estimating demand for flood protection infrastructure Mikio Ishiwatari <i>(Japan International Cooperation Agency)</i>	Water and disasters - Toward building resilient society under climate change - Toshio Koike <i>(Public Works Research Institute)</i>	Logistics vehicle management system using ETC2.0 probe data Yuji Ikeda <i>(National Institute for Land and Infrastructure Management)</i>
Quality and resilient infrastructure in Asia: How can investment gap be bridged? Koki Hirota <i>(Japan International Cooperation Agency)</i>	Policy vision on rebuilding flood-conscious societies Hirotsada Matsuki <i>(Ministry of Land, Infrastructure, Transport and Tourism)</i>	ITS development and its new trends Shunsuke Kamijo <i>(National Institute for Land and Infrastructure Management, MLIT)</i>
An analysis of the future demand for urban railways in Asia Hiroshi Takeuchi <i>(Japan International Cooperation Agency)</i>	Management system for mitigation of flooding disaster in Tainan Cheng-Lun Shieh <i>(National Cheng Kung University)</i>	Impacts of driver's compliance levels on effectiveness of reactive variable speed limit control under freeway bottleneck congestion Sorawit Narupiti <i>(Chulalongkorn University)</i>
Unlocking the spillover effect of Infrastructure and improving quality of life: new insights for private sector investment in developing countries in Asia Ke Seetha Ram <i>(Asian Development Bank Institute)</i>	Integrated flood modelling and monitoring in Indonesia Eko Winar Irianto <i>(Research and Development Center for Water Resources, Bandung)</i>	Development of mobility as a service in Taiwan Jason Chang <i>(National Taiwan University)</i>
The economics of investment in flood risk reduction in developing countries: an application to the Rocha River Basin, Bolivia David Corderi Novoa <i>(Natural Resources and Disaster Risk Management Division)</i>	Activities for risk reduction of water-related disasters through the IFI platform in the Philippines Maximo L. Carvajal <i>(Department of Public Works and Highways, the Philippines)</i>	

Day2 (4/17) 09:00 - 10:30		
Status and challenges of quality management for infrastructure in Taiwan Wu Te Ko (<i>Cheng Shiu University</i>)		

Day2 (4/17) 09:00 - 10:30		
GS-6-1 Chair: Yoshinori Fukubayashi (<i>Miyazaki University</i>)	GS-1 & GS-5-1 Chair: Hikaru Nakamura (<i>Nagoya University</i>)	TS2-3-1 Chair: Natsuhiko Otsuka (<i>Hokkaido University</i>)
Anti corruption, ethics, sustainable infrastructure and the UN sustainable development goals William E. Kelly (<i>ASCE</i>)	Structural design of the Danjiang Bridge, Taiwan - The largest asymmetric single tower cable stayed bridge Kilian Karius (<i>Leonhardt, Andra und Partner</i>)	Overview of recent shipping activities along the Northern Sea Route Xiaoyang Li (<i>Hokkaido University</i>)
A new engineering management contribution to SDGs in Asia Rikuo Katsumata (<i>The Tokyo City University</i>)	Design of Chung Cheng Steel Arch Bridge in Taipei Hsin-Yang Tsai (<i>CECI Engineering Consultants, Inc.</i>)	Characteristics of sea ice condition for safe navigation along the Northern Sea Route Natsuhiko Otsuka (<i>Hokkaido University</i>)
GS-6 challenges and experiences: the professional construction management consultancy service of renovating sports venues for 2017 Taipei Summer Universiade Ting En Wu (<i>Moh &</i>)	A study on the design of experimental DB based on BIM for small and medium-sized aging Concrete bridge Se-Hyun Park (<i>KOCED CMI</i>)	Estimation of sailing speed through ice covered waters based on the satellite observation along the Northern Sea Route Kazutaka Tateyama (<i>Kitami Institute of Technology</i>)
Risk analysis of PPP urban railway project in Asia Hidetoshi Matsushita (<i>National Graduate Institute for Policy Studies</i>)	Seismic risk assessment of bridges in Indonesia: methodology & case study Mutiara Puspahati Cripstyani (<i>IUSS Pavia, PT Wiratman</i>)	
A Real Options Analysis (ROA) framework for resilient gas station projects Jatupol Siripongvakin (<i>Kasetsart University</i>)		

Day2 (4/17) 11:00 – 12:30		
Hold	TS2-5-1 Chairs: Hitoshi Tanaka <i>(Tohoku University),</i> Il Won Seo <i>(Seoul National University)</i>	Hold
	Probable Maximum Precipitation (PMP) evaluation in Northeast Vietnam region in the context of climate change Thuy Thi Thanh Le <i>(Fukushima University)</i>	
	Levee breaches at the confluence of the Satsunai and Tottabetsu Rivers in Hokkaido, Japan Yoshiaki Ishida <i>(Hokkaido University)</i>	
	Estimating low flows in the flow duration curve of catchments in the humid tropics Chris Leong <i>(Fukushima University)</i>	
	Analysis of rainfall-induced shallow landslide using hydrological-geotechnical model Thapthai Chaithong <i>(Tohoku University)</i>	
	Characteristics of the disaster by Northern Kyushu Heavy Rain in July, 2017 Shinichiro Yano <i>(Kyushu University)</i>	

Day2 (4/17) 11:00 - 12:30		
TS6-3 & TS6-7 Chair: Tamon Ueda <i>(Hokkaido University)</i>	TS4-7 Chairs: Yoko Kabaki <i>(Eight-Japan Engineering Consultants, Inc.), Rubel Das (Nippon Koei Co., Ltd.)</i>	TS6-16 Chair: Yoh Sasaki <i>(Waseda University)</i>
Assessing quality of infrastructure in the United States William E. Kelly (ASCE)	The role of urban planning in building disaster resilient cities and the demonstration case of Denpasar city in ASEAN Region Kien To (Eight-Japan Engineering Consultants, Inc.)	The role and challenges of girl's class in civil engineering - Kanto Gakuin University Sachiko Oyama (Shimizu Corp.)
Optimised management of aging infrastructure in Australia Paul Louis Mitchell <i>(Centre for Pavement Excellence Asia Pacific Ltd.)</i>	On the progress and prospect for promoting sponge city in Taiwan Shen-Hsien Chen <i>(Sinotech Engineering Consultants Inc.)</i>	SWCE's influence and expectations in Japanese construction industry Kiko Yamada Kawai <i>(Tokyo Institute of Technology)</i>
TBA Katsuji Fukumoto <i>(Obayashi Road Corporation)</i>	The key learned from the leaders in regional revitalization Shu Takahashi (Nippon Koei Co., Ltd.)	Women in civil engineering: attracting and retaining Robin A. Kemper (ASCE)
MLIT's initiative for promoting infrastructure investment Okumura Yasuhiro <i>(Ministry of Infrastructure, Land, Transport and Tourism)</i>	Regeneration of urban functions by improving underground pedestrian network of The Otemachi-Marunouchi- Yurakucho districts Isao Muto (Mitsubishi Jisho Sekkei Inc.)	Diversity & inclusion management supporting women's active participation - introduction of Pacific Consultant's actions- Ayako Okawa (Pacific Consultants Co., Ltd.)
Discussion: policies of infrastructure development in Jakarta Sutanto Soehodho <i>(Jakarta Local Government; University of Indonesia)</i>	The study on drainage and sewerage improvement project in Phnom Penh metropolitan area Kazuhiro Nakamura (CTI Engineering Co., Ltd.)	Civil engineering: career prospects for women in the Middle East Dima Jawad (Notre Dame University)
Disaster risk reduction through resilient public infrastructure Maria Catalina E. Cabral <i>(Philippine Institute of Civil Engineers, Inc.)</i>	Development of tidal embankment and area management after the Typhoon Yolanda in Philippines Masaaki Chida (Pacific Consultants Co., Ltd.)	Women in (Australian) civil engineering leadership Rebecca Gravina (EA)

Day2 (4/17) 11:00 - 12:30		
GS-6-2 & GS-3 Chair: Moonkyung Chung <i>(Korea Institute of Construction Engineering)</i>	GS-1 & GS-5-3 Chair: Hikari Nakamura <i>(Nagoya University)</i>	TS2-3-2 Chair: Natsuhiko Otsuka <i>(Hokkaido University)</i>
Basic study on efficiency improvement of road degradation analysis using floating car data and mobile mapping system Kunihiro Ishii <i>(Aisa Air Survey Co., Ltd.)</i>	Design of steel beams strengthened using low modulus carbon fiber reinforced polymers Mahendrakumar Madhavan <i>(Idian Institute of Technology Hyderabad)</i>	Sailing route optimization for the NSR to minimize the fuel consumption Hajime Yamaguchi <i>(The University of Tokyo)</i>
Applying time domain reflectometry technology to measure slope deformation in landslides I-Hui Chen <i>(National</i>	Effect of crack path on shear load carrying mechanism of RC beams Yuta Yamada <i>(Nihon University)</i>	A semi-supervised sea ice SAR image segmentation strategy based on WGANs Yu-Huan Zhao <i>(Fudan University)</i>
Network of large scale testing facilities in Korea established by KOCED program Gyeongjung Kim <i>(KOCED CMI)</i>	Shear strengthening of RC beams reinforced by FRP grid-PCM Lianheng Cai <i>(Southwest Jiaotong University)</i>	Route search system in ice sea using dynamic window approach Toshiyuki Takagi <i>(National Institute of Technology, Kushiro)</i>
Standardization of test procedures in construction field of Korea Taehyeong Kim <i>(Korea Construction and Transport Engineering Development Collaboratory Management Insititute)</i>	Elimination of transverse reinforcement in new RC beam-column joints by using highly flowable strain hardening fiber reinforced concrete (HF-SHFRC) Wen-Cheng Liao <i>(National Taiwan University)</i>	
	Investigation of axial force effect on the seismic response of RC piers using real-time hybrid simulation Minseok Park <i>(Myongji University)</i>	
	A novel analysis method of SDOF dynamic structure response considering soil structure interaction by soil impedance function Chiehcheng Chen <i>(National Taipei University of Technology)</i>	

Day2 (4/17) 14:00 - 15:30		
TS1-1 Chairs: Dong Soo Kim <i>(Korea Advanced Institute of Science and Technology), Riki Honda</i> <i>(The University of Tokyo)</i>	TS2-5-2 Chairs: Hitoshi Tanaka <i>(Tohoku University), Il Won Seo</i> <i>(Seoul National University)</i>	TS6-4 Chairs: Hironori Kato <i>(The University of Tokyo), Le Binh Phan</i> <i>(Vietnam Japan University)</i>
Evaluation of seismic coefficients for pseudo static analysis of gravity type quay wall by centrifuge tests Dong Soo Kim <i>(Korea Advanced Institute of Science and Technology)</i>	Evaluation of landuse cover change and climate change impact to hazard area in Laos PDR Sengphrachanh Phrakonkham <i>(Tohoku University)</i>	Engineering education for civil engineers in Asia: lessons from International Engineering Program of the University of Tokyo, Japan Hironori Kato <i>(The University of Tokyo)</i>
Seismic design methods for resilience against intense earthquake in Chile Victor Diaz <i>(Ministry of Public Works)</i>	Drone-based tracer tests for observing the spatio-temporal distributions of pollutant spilled into river Donghae Baek <i>(Seoul National University)</i>	Engineering education for civil engineers in Vietnam Japan University toward a sustainable development Le Binh Phan <i>(Vietnam Japan University)</i>
Implementation and new approach for resilience design against extreme events: seismic design of highway bridges in Japan Shojiro Kataoka <i>(National Institute for Land and Infrastructure Management)</i>	Feasibility of velocity-based method for transverse mixing coefficients of 2D mixing analysis in natural rivers Sung Hyun Jung <i>(Seoul National University)</i>	AUN/SEED-Net to develop educational program among developing countries with Japanese university Tamon Ueda <i>(Hokkaido University)</i>
Strong ground motions to be employed during the design and performance analysis of building type of structures according to the New Turkish Seismic Code Beyza Taskin <i>(Istanbul Technical University)</i>	Study of flow and mixing characteristics in open channel flow with rigid vegetation Il Won Seo <i>(Seoul National University)</i>	Some challenges in designing an educational curriculum in civil engineering Sudhir Misra <i>(Indian Institute of Technology)</i>
Overview of the state of the art in performance-based design of port waterfront structures Stephen E. Dickenson <i>(New Albion Geotechnical, Inc.)</i>	Analysis of regional characteristics of natural disasters in the Philippines Keisuke Ono <i>(CTI Engineering International Co., Ltd.)</i>	Building blocks for quality in engineering education Paul Louis Mitchell <i>(Centre for Pavement Excellence Asia Pacific Ltd.)</i>

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Hold	GS-1 & GS-5-2 Chair: Hikaru Nakamura <i>(Nagoya University)</i>	TS2-2 Chair: Atsushi Fujii <i>(National Institute of for Land and Infrastructure Management, MLIT)</i>
	Alkali-activated cements: overview on current robustness of the technology Joonho Seo <i>(Korea Advanced Institute of Science and Technology)</i>	Technical standards development, the present state of technical standards and technical cooperation in the ports and harbors field in Japan Masafumi Miyata <i>(National Institute of for Land and Infrastructure Management, MLIT)</i>
	Evaluation of concrete frost damage depth using thermography Yutaka Takashina <i>(Kobe City College of Technology)</i>	Development of design code for port and harbor facilities in Asian countries by university side Osamu Kiyomiya <i>(Waseda University)</i>
	Early age behavior of crack movement in RCC base of HMA-RCC composite pavement Tetsya Sok <i>(Gangneung-Wonju National University)</i>	Development of quality port infrastructure through the establishment of the national technical regulations and standards Hau Duc Nguyen <i>(Institute of Transport Science and Technology)</i>
	Performance of exposed aggregate concrete pavement Jae Hoon Kim <i>(Gangneung-Wonju National University)</i>	High quality infrastructure initiatives through the establishment of the national technical standard for port facilities Sinya Mori <i>(Ministry of Land, Infrastructure, Transport and Tourism)</i>
		The Cambodia ports and terminals management including the development of national technical standards and regulation for ports construction and operations Ros Sophornna <i>(Ministry of Public Works and Transport, Kingdom of Cambodia)</i>

Da3 (4/18) 11:00 - 12:30		
TS7-2 Chair: Tomohito Yamada <i>(Hokkaido University)</i>	TS5-1 Chair: Tetsuya Ishida <i>(The University of Tokyo)</i>	TS2-4 Chair: Shinji Yamaguchi <i>(National Institute for Land and Infrastructure Management, MLIT)</i>
Adaptation strategies to address water crises in Kara Region, Togo Muhammad Mumta <i>(Getulio Vargas Foundation)</i>	Potential utilizations of off-standard fly ashes Somnuk Tangtermsirikul <i>(Thammasat University)</i>	Climate change and countermeasures against sediment disaster in Japan Taro Uchida <i>(National Institute for Land and Infrastructure Management, MLIT)</i>
A decision support system for highway infrastructure protection planning against sea level rise Jinwoo Lee <i>(The Hong Kong Polytechnic University)</i>	Application of fly ash and bottom ash from coal fired thermal power plants in Sri Lanka S. M. A. Nanayakkara <i>(University of Moratuwa)</i>	Overview of current landslide hazard zonation mapping methodology utilize in Sri Lanka M.A.K. Kumari <i>(National Building Research Organisation)</i>
The analysis of future flood risk in Hokkaido, northern Japan, using database for policy decision making for future climate change (d4PDF) Tomohito Yamada <i>(Hokkaido University)</i>	High-volume utilization of supplementary cementitious materials in concrete buildings toward sustainability Takafumi Noguchi <i>(The University of Tokyo)</i>	Hazard mitigation and preparedness of potential deep-seated landslide and debris flow torrent in Taiwan: introduction of recent government actions Ching-Ying Tsou <i>(Hirosaki University)</i>
Climate change adaptation in water sensitive urban design strategies Paul Louis Mitchell <i>(Centre for Pavement Excellence Asia Pacific Ltd.)</i>	Efficient production of alkali-activated geopolymers from low-calcium fly ash Kolluru V.L. Subramaniam <i>(Indian Institute of Technology)</i>	Prompt maximum damage estimation against sediment disaster based on sediment movement magnitude Shinichiro Hayashi <i>(Hokkaido University)</i>
The analysis of future heavy rainfall in Hokkaido, northern Japan, using database for Policy Decision making for Future climate change (d4PDF) Tsuyoshi Hoshino <i>(Hokkaido university)</i>	Application of mineral admixtures in hot weather conditions Shingo Asamoto <i>(Saitama University)</i>	Estimating end of life for Sabo dams Kihwan Lee <i>(University of Yeungnam)</i>

Da3 (4/18) 11:00 - 12:30		
	<p>Current situation on the utilization of industrial by-products for construction in Vietnam</p> <p>Huu Duy Quoc Phan <i>(Shimizu Corp.)</i></p>	<p>The megadisaster of the mountain region of the Rio de Janeiro State, Brazil, and advances of knowledge about debris flows in Brazil</p> <p>Ingrid Ferreira Lima <i>(Federal University of Rio de Janeiro)</i></p>
	<p>Multiphase model for predicting temperature-dependent pozzolanic reaction of low-calcium fly ash in cement systems</p> <p>Tetsuya Ishida <i>(The University of Tokyo)</i></p>	

Day3 (4/18) 11:00 - 12:30		
TS6-5 Chairs: Mitsuyasu Iwanami (<i>Tokyo Institute of Technology</i>) Thomas W. Smith, III (<i>ASCE</i>)	GS-2 Chairs: Akiyuki Kawasaki (<i>The University of Tokyo</i>), Jinwoo Lee (<i>The Hong Kong Polytechnic University</i>)	GS-4-1 Chairs: Kuniaki Sasaki (<i>Waseda University</i>), Arnab Jana (<i>Indian Institute of Technology Bombay</i>)
Enhancing citizens' understanding on importance of infrastructure based on Infrastructure Health Report Mitsuyasu Iwanami (<i>Tokyo Institute of Technology</i>)	Computational calculations of different heavy metal binding onto magnetic cored dendrimer Jae-Woo Park (<i>Hanyang University</i>)	Analysis of basic characteristics of ETC2.0 probe data Toshikazu Mathushima (<i>Chuo Fukken Consultants Co., Ltd.</i>)
Trial version of Infrastructure Health Report on river sector Yuji Toda (<i>Nogoya University</i>)	Forest fire severity in the 2017 Kamaishi Forest Fire using remote sensing and post-fire observations Grace Puyang Emang (<i>Tohoku University</i>)	The impact of truck lane on vehicular flow along an arterial road in Metro Manila Alexis Morales Fillone (<i>De La Salle University</i>)
Enhancing citizens' understanding on importance of infrastructure based on Infrastructure Health Report Thomas W. Smith III (<i>ASCE</i>)	Model design of concentrator photovoltaic with thermal and waste heat recovery system Chi Xu (<i>University of Florida</i>)	Analysis of vehicle behavior under heavy snowfall using commercial vehicle probe data Hiroshi Inagaki (<i>Fujitsu Traffic & Road Data Service Ltd.</i>)
Infrastructure Health Report of JSCE Hikaru Nakamura (<i>Nagoya University</i>)	Dependence of drag coefficient on sea spray, raindrop and wave state Hiroki Okachi (<i>Hokkaido University</i>)	Analysis of requirements of data used for grasping the situation of urban spaces and aging of population Takato Uehara (<i>Tokyo City University</i>)
Australian infrastructure development Shalendra Ram (<i>AECOM, EA</i>)	Heat storage in salinity aquaculture ponds observed in the tropics Akinori Ozaki (<i>Institute of Tropical Agriculture, Kyushu University</i>)	

Day3 (4/18) 11:00 -	Day3 (4/18) 14:00 - 15:30	
GS-6-3 Chair: Kazuyoshi Tateyama (<i>Ritsumeikan Univesity</i>)	TS7-4 Chair: Minoru Yoneda (<i>Kyoto University</i>)	TS5-2 Chairs: Tadashi Hara (<i>Kochi University</i>), Rihong Zhang (<i>Ningbo University</i>)
Next step of worksite model utilizing ICRT Hiroshi Yamamoto (<i>Komatsu Ltd.</i>)	Quantifying the environmental impacts of structural elements of standard bidge designs Andres Winston C. Oreta (<i>PICE</i>)	Wood utilization in civil engineering Tadashi Hara (<i>Kochi University</i>)
Initatives for the use field robots and AI in infrastructure management Yasushi Nitta (<i>Public Works Research Institute</i>)	Role of civil engineering in mitigation of climate change - proposal from Japan Society of Civil Engineers - Minoru Yoneda (<i>Kyoto University</i>)	Development of timber guardrail using round logs of Japanese cedar Rihong Zhang (<i>Ningbo University</i>)
An study on understanding the behavioral phenomenon of transportation engineering by implementation of AI: an approach to provide effective solutions of a complex problem in transportation engineering Rafiur Rahman Khan (<i>European University of Bangladesh</i>)	Carbon footprint assessment for resilient Infrastructure construction using discrete-event simulation Jakkawarn Somboonpisan (<i>Kasesart University</i>)	Climate change mitigation potential of wood use in civil engineering in Japan through 2050 Chihiro Kayo (<i>Tokyo University of Agricultura and Technology</i>)
Basic study on prepararion method of road map using three-dimensional data of I-Construction results Minori Yamada (<i>Tokyo City University</i>)	A fundamental study on development of construction standard code considering 4th industrial revolution technology Yeonggyeong Ju (<i>Korea Institute of Civil Engineering and Building Technology</i>)	Working principles and future prospects of timber pile dykes for alluvial river management Hao Zhang (<i>Kochi University</i>)
	Role of civil engineering in mitigation of climate change - the infrastructure of renewable energy resources Barry Ronald Tonkin (<i>EA</i>)	Study on liquefaction countermeasure technique using logs based on field investigation and shaking table test Masaho Yoshida (<i>National Institue of Technology</i>)

Day3 (4/18) 11:00 -	Day3 (4/18) 14:00 - 15:30	
		An application example of log piling method for liquefaction mitigation and carbon stock Atsunori Numata <i>(Tobishima Corp.)</i>
		Future perspectives of sustainable bioenergy development in Japan with local woody biomass Chun Sheng Goh <i>(Institute for the Advanced Study of Sustainability, United Nations Univeristy)</i>

Day3 (4/18) 14:00 - 15:30			
TS6-13 Chair: Hiromasa Iwai <i>(Nagoya Institute of Technology)</i>	GS-7 Chairs: Tetsuya Ikeda <i>(ICHARM), Chjeng-Lun Shieh</i> <i>(National Cheng Kung University)</i>	GS-4-2 Chairs: Kuniaki Sasaki <i>(Waseda University), Arnab Jana</i> <i>(Indian Institute of Technology)</i>	GS-6-4 Chairs: TBA
Study of failure on civil engineering Hiromasa Iwai <i>(Nagoya Institute of Technology)</i>	Hydrological frequency analysis introducing confidence interval based on probability limit method test Keita Shimizu <i>(Chuo University)</i>	Determining high risk road segments using spatial statistical analysis case study: Mount Lebanon Francesco Boutros Rouhana <i>(Notre Dame University)</i>	Using text-mining skills to establish concept maps for construction fatality assessment and control applications Shang-Hsien Hsieh <i>(National Taiwan University)</i>
Study of failures in civil engineering - a Pakistani perspective Hiba Nuzhat Lodi <i>(The Institution of Engineers, Pakistan)</i>	Establishment of smart drainage toolbox for Taoyuan City Hsuan Yu Lin <i>(Sinotech Engineering Consultants, Ltd.)</i>	Street resilience modeling in Beirut disaster management Dima Jawad <i>(Notre Dame University)</i>	Basic study on measurement of empirical knowledge of skilled workers in concrete placement Takuya Yokota <i>(Tokyo City University)</i>
	Sampling downscaling using pattern recognition: A case for Baiu rainfall over northern Kyushu Dzung Nguyen-Le <i>(Hokkaido University)</i>	Optimal inspection, maintenance, and reconstruction policies for pavement system under model uncertainty Jinwoo Lee <i>(The Hong Kong Polytechnic University)</i>	Visualization system of suspended load area for crane operator Masaya Nakahara <i>(Kansai University)</i>
	Rainfall-runoff analysis considering uncertain conditions based on stochastic process theory Daiwei Cheng <i>(Chuo University)</i>	Cable protecting system using DAS (Distributed Acoustic Sensing) and FOC(Fiber Optic Cable) Ahri Lee <i>(AP Technologies)</i>	Underwater unmanned construction machine system for port and airport Muneo Yoshie <i>(Port and Airport Research Institute)</i>
	Application of SEC-HY21 Model on tsunami simulations generated by underwater volcanic explosions or landslides T.H. Arthur Perng <i>(Sinotech Engineering Consultants, Ltd.)</i>		On exploring optimal route about bulldozer spreading work using deep learning reinforcement learning with bulldozer spreading simulator Daisuke Tajima <i>(Kajima Corp.)</i>