11th International Conference of The International Institute for Infrastructure Resilience and Reconstruction (I3R2) : Complex Disasters and Disaster Risk Management

1st August 26

17:00 ~ 20:00 Reception at University of Seoul (Mirae Hall’s Lobby)

2nd August 27

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<th>Time</th>
<th>Room 1</th>
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<tr>
<td>09:30~10:10</td>
<td>Opening Ceremony</td>
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<td>10:10~10:30</td>
<td>Coffee Break</td>
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<td>10:30~12:30</td>
<td>Keynote Speech</td>
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<td>12:30~14:00</td>
<td>Lunch (2F Main Auditorium)</td>
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<td>14:00~15:30</td>
<td><strong>Special Session I-1</strong></td>
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<td>Seoul Special Session : Urban Risk and Management Practices</td>
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<td>15:30~16:00</td>
<td>Coffee Break</td>
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<td>16:00~17:30</td>
<td><strong>Special Session I-2</strong></td>
<td><strong>Special Session II</strong></td>
<td><strong>Session I</strong></td>
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<td>Seoul Special Session : Urban Risk and Management Practices</td>
<td>Complex Disasters and Disaster Risk Management</td>
<td>Disaster Resilience</td>
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<tr>
<td>18:30~</td>
<td>Banquet at Holiday-Inn(Seongbuk) Hotel</td>
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### 3rd August 28

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<tr>
<td><strong>09:00~10:40</strong></td>
<td><em>Special Session III</em> Disaster Risk Management (DRM) By World Federation of Engineering Organizations (WFEO)</td>
<td><em>Special Session IV</em> Cities, Infrastructure and Cascading natural disasters</td>
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<td><strong>10:40~11:00</strong></td>
<td>Coffee Break</td>
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<td><strong>11:00~12:30</strong></td>
<td><em>Session II-I</em> Disaster Factor Analysis and Assessment 1</td>
<td><em>Session III</em> Hazard mitigation, emergency response and recovery planning</td>
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<td><strong>13:30~15:00</strong></td>
<td><em>Session IV</em> Physical infrastructure – transportation, construction, materials and methods</td>
<td><em>Session II-2</em> Disaster Factor Analysis and Assessment 2</td>
<td><em>Session V</em> Database and data models development</td>
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<td><strong>15:00~15:20</strong></td>
<td>Coffee Break</td>
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<td><strong>15:20~16:50</strong></td>
<td><em>Special Session V</em> Institute Utilization and Role of High Technologies for Disaster Management by World Bank Disaster Management Team</td>
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<td><strong>16:50~17:20</strong></td>
<td>Closing Ceremony</td>
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18:30 Conference Dinner at FI Convention (Floating island)

### 4th August 29

10:00~ Technical Tour (Lotte World Tower & Lotte World Mall)

**Special Session VI**: TIEMS initiative of a Global Educational Network for Emergency Resilience and Training Excellence

12:30 ~ 14:00 Lunch

14:00 ~ I3R2 Steering Committee Meeting
Programs:

August 27

Opening ceremony (Room 1) 09:30~10:10 (Moderator : Prof. Seungjae Lee, Univ. of Seoul)

Opening Speech
Myungo Yoon (Organization Chair)
Janaka Ruwanpura (IIIRR Convener)

Welcome Speech
Yunhi Won (President of Univ. of Seoul)

Congratulatory Speech
J. W. Lee (Vice-Mayor of Seoul)
Soohyun Kim (President of Seoul Institute)

Keynote Speech (Room 1) 10:30~12:30

Analytical Approach to Tornado Preparedness
S. C. Wirasinghe, Professor of University of Calgary

Forecast based Financing of Humanitarian aid
K. Harald Drager, President of TIEMS

Disaster mitigation through large-scale evacuation: Simple insights for complex systems
Hani Mahmassani, Professor of Northwestern University

Overview on major disaster history and the public disaster protection systems in Korea
Myungo Yoon, Professor of University of Seoul

Special Session I-1 : Seoul Special Session (Room 1) 14:00~15:30 (Chair : Prof. Seungjae Lee, Univ. of Seoul)

Resilient Mobile Preventive Operations and Control on Contagious Respiratory Diseases
Seungjae Lee, Jooyoung Kim, Sungyoung Na, Chanhee Oh

The Development and Application of VR(Virtual Reality) Based Training System
Myungo Yoon, Youngpal Lee, Sogu Yang, Seunghee Ham, and Wooseung Song

Extending fire-fighting vulnerability concept and applications in Korea
Kyeong Park, Yunsoo Choi, Eunmi Chang, Seonggon Kim

A Comprehensive Framework of Disaster and Safety Management for Seoul
Sang-Young Shin
Special Session I-2: Seoul Special Session (Room1) 16:00~17:30 (Chair: Dr. Sang-Young Shin, Seoul Institute)

Towards Safe Seoul in the Rise of Risk Society
Kwonjoong Choh

The Endeavor to Prevent Landslide in Wumeyon Mountain
Yoon-Shin Bae

Improvement Strategies for Road Facilities Maintenance and Management in Seoul
Seongil Shin

Urban Snow Removal and Disposal in Seoul: Focused on Local Roads
Jong-Seok Won

Bridge Management in Seoul Metropolitan Government
Sungil Jo

How to create a training scenario for an effective response training
Youngju Lee

Special Session II: Complex Disasters and Disaster Risk Management (Room2) 16:00~17:30 (Chair: Dr. Daewon Jang, LIG System)

Smart System for Disaster Management: Smart Big Board
Jinyoung Kim

Development of Safety Information Management System – Public Safety Map & Local Safety Diagnosis system
Sinhoi Goo

The Real-time Monitoring System of Social Media for Disaster Management
Seonhwa Choi

Future Risk Analysis using Horizon Scanning
Dowoo Kim

Large-scale disaster monitoring and analysis using satellite imagery
Jung Hum

Disaster Scientific Investigation -Case Study: Gymnasium Collapse Accident(2014)
Miran Lee

Global Disaster Risk Reduction through Official Development Assistance(ODA)
Chihun, Lee
Session 1: Disaster Resilience (Room3) 16:00~17:30 (Chair: Dr. Iftekhar Ahmed, RMIT University)

Public Utility Commissions to Foster Resilience Investment in Power Grid Infrastructure

Sayanti Mukhopadhyay and Makarand Hastak

A Flow-based Vulnerability Measure for the Resilience of Urban Road Network

Sungmoon Kim and Hwasoo Yeo

Measuring Community Disaster Resilience using Entropy Method in Korea

Jung Eun Kang, Gunhui Chung and D.K.Yoon

Resilience of air transportation network with adaptive capacity

Suhyung Yoo and Hwasoo Yeo

Building Resilience of Urban Slums in Dhaka, Bangladesh

Iftekhar Ahmed

August 28

Special Session III: Disaster Risk Management (DRM) By World Federation of Engineering Organizations (WFEO) (Room1) 09:00~12:30 (Chair: Prof. Toshimistu Komatsu, Kyushu University)

Experimental study on the wake structure behind a cylindrical rotator with asymmetric protrusions in a unidirectional flow

Hideo Oshikawa

Numerical simulations of storm-surge inundation based on past violent typhoons - case studies along innermost coast of Ariake Sea, Japan

Masaki Yokota

Severity of earthquake events - statistical analysis and classification

S. Chan. Wirasinghe

Rainfall-induced soil erosion and sediment sizes of a residual soil with soil suction monitoring during heavy rainfall

Khonesavanh Vilayvong

Developing mitigation strategy for compound sediments disasters in Taiwan

Wen-Chi Lai
Consideration on disaster recovery system to improve resilience of frequent-landslide dangerous area

Noriyasu Kachi

Protect the life of mothers and children by utilizing regional force in the event of a natural disaster

Kazutoshi Kan

Special Session IV: Cities, Infrastructure and Cascading natural disasters (Room2) 09:00~10:40
(Chair: Dr. Bingunath Ingirige, University of Salford)

Cities and cascading impacts of critical infrastructure: Some critical reflection points and work of the Centre for Disaster Resilience at Salford

Bingu Ingrige and Chaminda Pathirage

Knowledge Sharing on Critical Energy Infrastructure Facilities for Improved Disaster Resilience

Chaminda Pathirage and Bingu Ingrige

Impact of flood disaster in Malaysia: A case study on public hospital

Norafish Sulaiman, Udayangani Kulatunga and Menaha Thayaparan

Minimising the cascading impacts of flooding through property-level flood adaptation: Incentivising Property-level Flood Adaptation

Jamie Brown and Gayan Wedawatta

Session II-1: Disaster Factor Analysis and Assessment 1 (Room2) 11:00~12:30 (Chair: Prof. Ryuji Kakimoto, Kumamoto University)

The Factors of Promoting and impeding Precautionary Evacuation Behavior

Ryuji Kakimoto, Toshio Fujimi, Mamoru Yoshida and Hwayoung Kim

Disaster Induced Resettlement: Multi-Stakeholder interactions and decision making following Tropical Storm Washi in Cagayan de Oro, Philippines

Sandra Milena Carrasco Mansilla, Kenji Okazaki and Chiho Ochiai

Public Perception about Stakeholders Who Engage in Activities for Disaster Reduction

Mamoru Yoshida and Ryuji Kakimoto

Risk Factors Assessment considering Change Degree for Mega-Projects

Jungeun Park, Beomsuk Park, Yongwoon Cha and Changtaek Hyun

Road Reconstruction and Redundancy Analysis on the Road Network – A Case Study of the Ateneo de Manila University Network
Session III: Hazard mitigation, emergency response and recovery planning (Room 3) 11:00~12:30 (Chair: Prof. Hwasoo Yeo, KAIST)

The Yonmenkaigi System Method for disaster recovery of a local community in Korea

Jong-Ill Na

Analyze on Effect and Building Regulation in Northern Thailand’s Earthquake, May 2014: Chiangmai’s Residents Risk Perception and Response to Earthquake

Titaya Sararit

Performance-Based Fire Behavior Analysis for Underground Parking Structure.

Inwook Heo, Hyun Kang, Deuckhang Lee, Jae-Yuel Oh, Jung-Min Lee and Kang Su Kim

Electricity saving in residential sector for adaptation to electricity crisis

Toshio Fujimi, Yoshio Kajitani, Ryuji Kakimoto and Mamoru Yoshida

Cooperating catastrophe retrofit and insurance through Public-Private Partnership: a flood case

Igal Shohet, Xijun Yao, Hsi-Hsien Wei and Miroslaw Skibniewski

Session IV: Physical infrastructure – transportation, construction, materials and methods (Room 1) 13:30~15:00 (Chair: Prof. Ranjith Dissanayake, University of Peradeniya)

Increase in Stress on Infrastructure Facilities due to Natural Disasters

Juyeong Choi, Abhijeet Deshmukh and Makarand Hastak

Optimization of Pavement Inspection Schedule with Traffic Demand Prediction

Soomin Woo and Hwasoo Yeo

Sustainable Solution for Retrofitting of Flood Damaged Bridge

Ranjith Dissanayake and Chaminda Bandara

Investigation of seismic response on girder bridges: the effect of displacement restriction and wing wall types

Desy Setyowulan, Toshitaka Yamao and Keizo Yamamoto

Session II-2: Disaster Factor Analysis and Assessment 2 (Room 2) 13:30~15:00 (Chair: Dr. Nobuaki Kimura, Kyushu University)
Assessment of key factors in the mechanism of river flood caused by driftwood accumulation at a bridge

Nobuaki Kimura, Akira Tai and Akihiro Hashimoto

Research on the disaster coping capability of a historical village in a mountainous area of China: Case study in Shangli, Sichuan

Fei Du, Kenji Okazaki, Hirohide Kobayashi and Chiho Ochiai

An analysis of pedestrian evacuation under disaster situation in complex shopping center

Chiwon Ahn, Jooyoung Kim and Seungjae Lee

A Factor Analysis of Urban Railway Casualty Accidents and Establishment of Preventive Response Systems

Hyunju Kim, Jayoung Jeong, Jangwook Kim and Jaekyung Oh

Session V: Database and data models development (Room3) 13:30~15:00 (Chair: Prof. Kangsu Kim, University of Seoul)

Comparative analysis of informational evacuation guidance by lane-based routing

Myungsik Do and Yunseung Noh

Analysis Pressure Transitions of a small scale model in the Variable-air Volume Smoke Control System

Suckhwan Joung, Wonsin Oh and Myoung-Oh Yoon

Map Analysis For Estimating The Total Population In Landslide Hazard Zone As Disaster Risk Reduction (Case Study of Banjarmangu Sub-District, Banjarnegara Regency, Central Java, Indonesia)

Noorhadi Rahardjo, Inneke Karlinasari Haryana and Brianardi Widagdo

Analysis of Metro Manila Road Network Robustness through Reachability Matrix

Leandro Isla and Kardi Teknomo
**Special Session V : Institute Utilization and Role of High Technologies for Disaster Management by World Bank Disaster Management Team (Room1) 15:20~16:50 00 (Chair : Mr. Iwan Gunawan, World Bank)**

Special Speech (World Bank) : Lessons learnt from Vietnam

**Dzung Huy Nguyen (Disaster Risk Management Specialist, World Bank)**

Special Speech (Disaster Committee of FEIAP) : Lessons learnt from Korea

**Sugkyong Yoon (Chairman of Disaster Committee of FEIAP)**

**Panel**

Mr. Heri Lantjono (Head of Emergency and Logistic Division, Yogyakarta Regional Disaster Management Agency, Special Province of Yogyakarta)

Dr. Mikio Ishiwatari (Senior Water and Sanitation Specialist, the World Bank)

Mr. Dung Anh Hoang (Senior Transport Specialist, World Bank; and Mr. Dzung Huy Nguyen, Disaster Risk Management Specialist, World Bank)

**Closing ceremony (Room 1) 16:50~17:20**

Closing Speech

**Seungjae Lee (Organization Chair)**

August 29 (Technical Tour : Lotte World Tower) 10:00 ~ 12:30

**Special Session VI: TIEMS initiative of a Global Educational Network for Emergency Resilience and Training Excellence (Lotte World Tower) 10:00~12:30**

Global Educational Network for Emergency Resilience and Training Excellence

**Harald Drager**