




International Symposium Commemorating the 10th Anniversary of Earthquake Engineering Society of Korea

September 21-22, 2006

Hoam Faculty House
Seoul National University, Seoul, Korea

<http://2006symposium.eesk.or.kr/>



Organized by
Earthquake Engineering Society of Korea (EESK)

The Earthquake Engineering Society of Korea(EESK) was founded to stimulate the research and development activities for advanced technologies in the field of earthquake engineering and to promote their applications to large civil infra-structures and critical industrial facilities in 1996. Since then, the EESK has played important roles in promoting a number of national research projects to develop advanced technologies in earthquake engineering, seismic design codes, and seismic hazard/disaster monitoring systems for earthquake disaster mitigation and management in Korea.

Introduction

Prof. **Chung-Bang Yun**, President of EESK

The EESK is organizing an International Symposium on Innovative Technologies for Earthquake Disaster Mitigation to commemorate its 10th anniversary. It is going to be held in Seoul, Korea on 21-22 September 2006. The objectives of the symposium are to provide a forum to discuss the recent developments in earthquake disaster mitigation technologies and to promote international cooperation on the subject.

The technical program consists of panel discussion sessions and paper presentation sessions. The topics will cover crustal characteristics, ground motion, seismic design codes, seismic performance evaluation of existing structures, performance-based design methods, structural control, geotechnical aspects for earthquake, and seismic hazard mitigation and managements. Experts are going to be invited from domestic and abroad.

●● Program on September 21, 2006

Registration

12:30-18:00

Opening Ceremony

13:00-14:00

13:00-14:00 **Opening Ceremony** (*Hoam Faculty House Convention Center Mugunghwa Hall*)

Chair: Prof. **Sung-Gul Hong** (*Seoul National Univ.*)

1. Opening Address: Prof. **Chung-Bang Yun** (*President of EESK*)
2. Congratulatory Remarks
3. Brief History of EESK: Prof. **Jae Kwan Kim** (*Vice-President of EESK*)

Panel Sessions

14:00-18:00

14:00-15:50 **Session 1-A: Seismic Hazard Mitigation and Management**

Chair: Prof. **Hyung Ghee Park** (*Univ. of Incheon*)
 Prof. **Jae Kwan Kim** (*Seoul National Univ.*)

Panel: Dr. **M.M. Zadeh** (*Samsung Everland*)
 Prof. **Sung-Pil Chang** (*Seoul National Univ.*)

1. Seismic Risk Management of Existing Structures
 - Prof. **H. Kameda** (*Kyoto Univ., Japan*)
2. Emergency Management Policy Direction of Korea Earthquake Disaster Mitigation
 - Mr. **Ki-Sung Bang** (*Headquarters of Disaster Prevention and Management*)

15:50-16:10 Coffee Break

16:10-18:00 **Session 2-A: Future Development of Seismic Design Codes**

Chair: Prof. **WonKi Kim** (*Hoseo Univ.*)
 Prof. **Han Seon Lee** (*Korea Univ.*)

Panel: Prof. **James M. Kelly** (*UC Berkeley, USA*)
 Prof. **Hyun Moo Koh** (*Seoul National Univ.*)

1. A Simplified Procedure for Performance-Based Design
 - Prof. **Helmut Krawinkler** (*Stanford Univ., USA*)
2. Seismic Design of Structures in Low Seismicity Areas
 - Prof. **Dong-Guen Lee** (*Sungkyunkwan Univ.*)

18:00-20:00 Reception (*Faculty House in Seoul National Univ.*)

●● Program on September 22, 2006

Registration

09:30-15:30

Technical Sessions

10:00-17:40

10:00-11:50 **Session 3-A: Crustal Characteristics and Ground Motion**

Chair: Dr. **Ik Bum Kang** (*KIGAM*)

Dr. **Weon Hack Choi** (*CRIEPI*)

1. Lessons from the 2004 Mid-Niigata and 2005 Pakistan Earthquake
 - Dr. **Yuich Sugiyama** (*NAIST, Geological Survey of Japan, Japan*)
2. Deterministic Earthquake Scenarios for Prediction of Strong Ground Motion in Moderate Seismicity Region
 - Dr. **Tae-Seob Kang** (*KIGAM*)
3. Analysis of Seismic Sources and Crustal Velocity Structure beneath Broadband Seismic Stations in the Gyeongsang Basin by Using Receiver Function Analysis
 - Prof. **Jung-Mo Lee** (*Kyongbuk National Univ.*)
4. Characteristics of Horizontal-to-Vertical Spectral Ratio: The Case of Several Seismic Stations in Southern Korean Peninsula
 - Prof. **Jun-Kyong Kim** (*Semyong Univ.*)

Session 3-B: Structural Analysis and Control

Chair: Prof. **Kyung-Won Min** (*Dankook Univ.*)

Prof. **Hyung-Jo Jung** (*Sejong Univ.*)

1. Role and Significance of "Artificial" Nonlinearity in Structural Control
 - Prof. **Akira Nishitani** (*Waseda Univ., Japan*)
2. Cost-Effectiveness Based Optimal Design of MR Damper System for Seismic Response Control of Cable-Stayed Bridges
 - Dr. **Wonsuk Park** (*Bridge Design & Engineering Research Center, Seoul National Univ.*)
3. Seismic Protection of Highway Bridge Using MR Damper-based Control System with Electromagnetic Induction Part
 - Prof. **Hyung-Jo Jung** (*Sejong Univ.*)
4. A Study on Suboptimal Design Procedure of Magnetorheological Dampers for Structural Control
 - Dr. **Seok Jun Moon** (*e-Engineering Research Center, Korea Institute of Machinery & Materials*)
5. Toggle Systems for Installation of MR Dampers in a Building Structure
 - Prof. **Kyung-Won Min** (*Dankook Univ.*)

11:50-13:00

Lunch

13:00-14:50

Session 4-A: Seismic Analysis and Modeling of Geotechnical Structures

Chair: Prof. **Dong-Soo Kim** (KAIST)

Prof. **Jae-Soon Choi** (Seo-Kyeong Univ.)

1. Physical Modeling of Soil-Structure Systems Response to Earthquake Loading
- Prof. **Tarek Abdoun** (Rensselaer Polytechnic Institute, USA)
2. Development of Site Classification System and Modification of Design Response Spectra Considering Geotechnical Characteristics in Korea
- Prof. **Dong-Soo Kim** (KAIST)
3. Calibration of Similitude Law in 1g Shaking Table Tests of Geotechnical Structures
- Prof. **Sung-Ryul Kim** (Dong-A Univ.)
4. Liquefaction Evaluation Method in Korea
- Prof. **Jae-Soon Choi** (Seo-Kyeong Univ.)

Session 4-B: Seismic Performance Evaluation of Building Structures

Chair: Prof. **Cheol-Ho Lee** (Seoul National Univ.)

Prof. **Byung-Jung Choi** (Kyung-gi Univ.)

1. Cyclic Behavior of Light Metal Structures
- Prof. **Chia-Ming Uang** (Univ. of California at San Diego, USA)
2. Effects of Panel Zone Strength on Cyclic Seismic Performance of RBS Steel Moment Connections
- Prof. **Cheol-Ho Lee** (Seoul National Univ.)
3. New Modal Combination Method For Prediction of Earthquake load Profiles
- Prof. **HongGun Park** (Seoul National Univ.)
4. Seismic Performance of Flat Plate Buildings
- Prof. **Jin-Kyu Song** (Chonnam National Univ.)

14:50-15:10

Coffee Break

15:10-17:40

Session 5-A: Seismic Hazard Mitigation for Structures

Chair: Prof. **Yang Hee Joe** (Univ. of Incheon)

Dr. **Eu Kyeong Cho** (Hyundai Engineering & Construction Company)

1. The assessment of the seismic behaviour of buildings in regions of moderate seismicity
- Dr. **Xiaonian Duan**

2. Verification and Mitigation of Seismic Failure in Concrete Piers under Near-Field Earthquakes

- Dr. **Shoji Ikeda** (Hybrid Research, Japan)

3. Seismic Risk Management of Lifeline Systems

- Prof. **M. Shinozuka** (Univ. of California at Irvine, USA)

4. Strategic Policies for Earthquake Disaster Mitigation

- Prof. **Dong-Ho Ha** (Konkuk Univ.)

5. Seismic Design of Bridges by the LRFD Approach

- Dr. **Hyun Yang Shin** (Samsung Corporation)

Session 5-B: Innovative Seismic Design for Building Structures

Chair: Prof. **Han Seon Lee** (Korea Univ.)

Prof. **Lan Chung** (Dankook Univ.)

1. The Historical Development of Seismic Isolation and Its Implementation in United States

- Prof. **James M. Kelly** (UC Berkeley, USA)

2. An Overview of HAZUS-MH Earthquake Loss Estimation Module

- Dr. **Masoud M. Zadeh** (Samsung Everland)

3. Development of Special Seismic Codes against Unexpected Severe Earthquakes in Korea

- Prof. **Han-Seon Lee** (Korea Univ.)

4. Seismic Retrofitting Technologies of Aged-Housing

- Prof. **Lan Chung** (Dankook Univ.)

5. Development of Approximate Method for Seismic Performance Evaluation

- Prof. **Sang Whan Han** (Hanyang Univ.)

18:00-20:00

Farewell Dinner: (Invitees, Presenters, Organizers)

Place will be notified.

●● Symposium Theme

Innovative Technologies for Earthquake Disaster Mitigation

●● Language

Official language for the Symposium will be English.

●● Technical Program

a. Panel Sessions (September 21, 2006)

Session 1-A: Seismic Hazard Mitigation and Management

Session 2-A: Future Development of Seismic Design Codes

b. Technical Sessions (September 22, 2006)

Session 3-A: Crustal Characteristics and Ground Motion

Session 3-B: Structural Analysis and Control

Session 4-A: Seismic Analysis and Modeling of Geotechnical Structures

Session 4-B: Seismic Performance Evaluation of Building Structures

Session 5-A: Seismic Hazard Mitigation for Structures

Session 5-B: Innovative Seismic Design for Building Structures

●● Organizing Committee

Chair: Prof. **Yong-Seok Kim** (*Vice-President of EESK, Mokpo National Univ.*)

Secretariat: Prof. **Sung-Gul Hong** (*Seoul National Univ.*)

Prof. **Soobong Shin** (*Inha Univ.*)

Committee: Prof. **Jai-Bok Kyung** (*Korea National Univ. of Education*)

Prof. **Dong-Soo Kim** (*KAIST*)

Prof. **Kyung-Won Min** (*Dankook Univ.*)

Prof. **Han Seon Lee** (*Korea Univ.*)

Prof. **Yang Hee Joe** (*Univ. of Incheon*)

Prof. **Cheol-Ho Lee** (*Seoul National Univ.*)

●● Registration Fee

Registration fee is ₩100,000 or US\$100.00 covering one copy of proceedings, reception dinner, lunch, and refreshments.

●● Proceedings

Symposium proceedings will be published as a book and distributed at the symposium site.

●● Sponsors

Korea Research Foundation (KRF)

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Bridge Inspection Robot Development Interface (BIRDI)

Complex for Technology Fusion in Civil Engineering (Yonsei Univ.)

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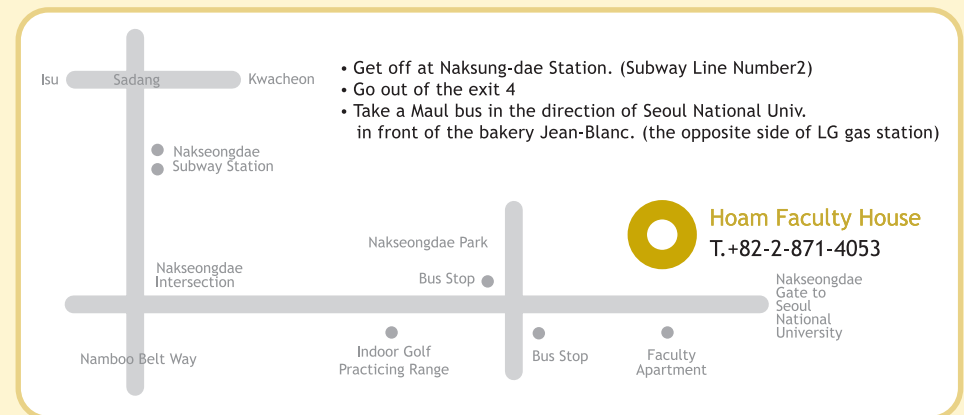
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●● Symposium Venue



●● Correspondence

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