



*Preliminary Invitation and Call for Papers*

18<sup>th</sup> IABSE Congress on

## **INNOVATIVE INFRASTRUCTURES - TOWARD HUMAN URBANISM**



*Banpo Bridge's Moonlight Rainbow Fountain*

---

**Seoul, Korea**

**September 19-21, 2012**

---

Organised by the  
**Korean Group of IABSE**

Co-organiser  
**Seoul National University**

## INTRODUCTION

Social infrastructures play a crucial role in improving our quality of life. While social infrastructures were rather limited in their functionality in the past, today social infrastructures take additional significance as assets and symbols of society. To achieve that goal, the construction of social infrastructures has restlessly absorbed new and advanced technologies through technology fusion, not only with other branches of engineering but also with diversified domains like economy, politics, and human sciences.

Since most of our industrialised societies have reached a sufficient level of development, time is now to enhance and maintain our living environment by means of nature-friendly and human-oriented technologies. Therefore, the next generation of social infrastructures will undoubtedly emphasise the need for technology fusion together with ubiquity. The renewal of our urban environment as well as the creation of new urban areas that takes place in Korea and the rest of the world, will offer benchmarks for discussions. This will help us derive the roles of structural engineers in the evaluation and prevention of social risks caused by the side effects of modern technology.

Seoul, as the host city of the 2012 IABSE Congress and Annual Meetings, is the economic and cultural center of Korea where 1986 Asian Games, 1988 Olympic Games and 2010 G20 Summit were held. Seoul is remarkably accessible through Incheon International Airport with almost 4,000 flights per week, to 163 cities in 49 countries. In addition, 1.5 billion people live within a 3 hours flight of Incheon.



*Changgyeonggung Palace, Seoul*

## THEMES AND TOPICS

The Congress theme is “Innovative Infrastructures - Toward Human Urbanism”. Papers are to be submitted for consideration within the overall theme for this Congress and the sub-themes identified below:

### • Sustainable Infrastructures – A Service Life Perspective

- Solutions for Quality Control, Monitoring, Maintenance and Repair
- Smart Structures: Cognitive, Responsive and Intelligent
- Structures for Green and Alternative Energy
- Dealing with Harsher Environmental Conditions
- Strategies for the Revitalisation of Decaying Urban Areas
- Rehabilitation of Heritage Structures
- Governance: the Role of Civil Engineers

### • New Urban Transportation Structures

- New Transportation Means (MAGLEV, electric vehicles, etc.)
- Sustainable Urban Transport Projects
- Tunnels, Harbors, Stations, Highways, Airports
- Sustainable Exploitation of Rivers for Transport
- Exploitation of Underground and Undersea Spaces
- Construction Management and Financing

### • Structures & Materials – Extending the Limits

- The Choice of Materials and Structures
- Super-Long Span Bridges & Super-High-Rise Buildings
- Innovative Steels and Cables
- High Performance Materials
- Automated and Accelerated Construction

### • Innovative Design Concepts

- Assessing and Accepting Risks
- Shifting from Deterministic Approach to Probabilistic Approach
- Smart Design Codes for Smart Structures
- Design for Durability and Extreme Events
- New Analysis Techniques for Simulation and Evaluation
- Dealing with Innovative Materials in Codes
- Facing the Needs for Shortened Construction Periods

## CALL FOR PAPERS

Participants wishing to present a paper in accordance with themes and topics are invited to submit 200 to 300 word abstract in English without illustrations. Abstracts should be submitted online using the web-based submission platform operated by the Congress Secretariat. Other methods including hard copy, email, or fax submissions will not be accepted.

To submit an abstract, please visit the Seoul 2012 Congress homepage at [www.iabse.org/seoul2012](http://www.iabse.org/seoul2012). Instructions and a template are available at this site.

The abstract should summarise the contents of paper and clearly indicate the relevance to the theme of the Congress.

Abstracts must be received before September 30, 2011. Authors of accepted papers are expected to attend the Congress.

## PUBLICATION

All papers accepted by the Scientific Committee for oral or poster presentation will be available on the Congress CD-ROM. A short version of the accepted papers will be published in the Congress Report. Report and CD-ROM will be available at the beginning of the Congress.

## YOUNG ENGINEERS PROGRAMME

All participants born in or after 1977 will benefit from a reduction in their registration fee. An independent jury will select two contributions by young authors, either oral or poster, and each will receive a prize. The prizes will be presented at the Closing Session of the Congress.



*Incheon Bridge, Incheon*

## TIME SCHEDULE

Important dates for the organisation of the 2012 Congress

October 31, 2011	Deadline for receipt of Abstracts - <i>Extended!</i>
November 30, 2011	Notification of acceptance of Abstracts
February 28, 2012	Mailing of Final Invitation
February 28, 2012	Submission of Full Paper
April 30, 2012	Notification of acceptance of Full Papers
September 16-18, 2012	IABSE Annual Meetings
September 19-21, 2012	Congress Dates

## CONGRESS FORMAT

The Scientific Programme includes Plenary, Concurrent and Poster Sessions for three days. Invited keynote speakers will address the Congress at the plenary sessions.

Selected papers will be presented in parallel sessions. Posters will be structured in an order to enable contact with authors of papers and authors will be available during poster sessions.

## PARTICIPANTS

The Congress is intended for civil and structural engineers and associated professionals interested in the latest achievements and developments in the research, design, construction, monitoring, maintenance and rehabilitation of civil engineering structures. Owners, consultants, designers, operators, researchers, contractors, educators, suppliers, governmental agency personnel interested in the Congress themes and topics are invited.

## LANGUAGE

The official language at the Congress will be English and no simultaneous translation will be provided.

## IABSE ANNUAL MEETINGS

IABSE Annual Meetings will be held at Sheraton Grande Walkerhill, Seoul from Sunday, September 16 to Tuesday, September 18, 2012. Specific details concerning the annual meetings will be sent to committee members and guests.

## COMMERCIAL EXHIBITION

An exhibition of related products and services will be organised at the Congress Venue. Companies interested in exhibiting should contact the Congress Secretariat for more information.

## TECHNICAL VISITS

Technical visits to a number of interesting structures either build or under construction in Seoul and other areas will be offered. These visits will also be available to all interested accompanying persons.

## SOCIAL PROGRAMME

An exciting social programme will be organised for all participants and accompanying persons. Final Invitation will include details.

## CONGRESS VENUE AND HOTELS

The Congress will take place at Sheraton Grande Walkerhill, Seoul. Several Hotels within a variety of price ranges will be offered to participants.

### **Sheraton Grande Walkerhill, Seoul**

21 Gwangjang-dong, Gwangjin-gu, Seoul, Korea

Tel: +82-2-455-5000, Fax: +82-2-452-6867

[www.sheratonwalkerhill.co.kr/eng](http://www.sheratonwalkerhill.co.kr/eng)



*Incheon International Airport, Incheon*



*Sheraton Grande Walkerhill, Seoul*

## POST-CONGRESS TOURS

Several Post-Congress tours to many famous destinations in Korea will be offered. Details will be provided in the Final Invitation.



*Insadong, Seoul*



*Mokpo Bridge, Mokpo*



*Tri-bowl, Incheon*



*Seongsan Ilchulbong, Jeju*

## SCIENTIFIC COMMITTEE

Hyun-Moo Koh, Korea, Rep. of (Chair)

Fernando Branco, Portugal (Vice-Chair)

Jinkyoo François, Choo, Korea, Rep. of (Secretary)

Bruno Briseghella, Italy

Joan Casas, Spain

Christian Cremona, France

Stephanos Dritsos, Greece

Yaojun Ge, China

Carmelo Gentile, Italy

Niels Peter Høj, Switzerland

Naeem Hussain, Hong Kong

Mamoru Iwata, Japan

Vesa Järvinen, Finland

Markus Knobloch, Switzerland

Ulrike Kuhlmann, Germany

Jonathan McGormley, USA

AnnaLisa Meyboom, Canada  
Yoshiaki Okui, Japan  
Marion Rauch, Germany  
Fathy Saad, Egypt  
Bert Snijder, The Netherlands  
Juan Almunia Sobrino, Spain  
Limin Sun, China  
Doreen Zauft, Germany

## ORGANISING COMMITTEE

Sung-Pil Chang, Sungkyunkwan University (Chair)  
Jaegyun Park, Dankook University (Secretary)  
Chang-Sik Choi, Hanyang University  
Dong-Ho Choi, Hanyang University  
Yoon Chul Chun, Samsung C&T Corporation  
Hee Yong Chung, Chungbuk Eng. Co., Ltd.  
Sung-Gul Hong, Seoul National University  
Bo Soon Kang, Pai Chai University  
Byung Suk Kim, KICT  
Chee Kyeong Kim, Sun Moon University  
Ho-Kyung Kim, Seoul National University  
Jaehong Kim, Daelim Industrial Co., Ltd.  
Jongho Kim, Chang Minwoo Structural Consultants  
Moon Kyum Kim, Yonsei University  
Soo-Bo Kim, Dong Il Eng. Consultants Co., Ltd.  
Sun Won Kim, BnS Eng. Co., Ltd.  
Tae Hoon Kim, POSCO E&C Co., Ltd.  
Woo-Jong Kim, DM Eng. Co., Ltd.  
Youngjin Kim, Daewoo E&C Co., Ltd.  
Hak-Eun Lee, Korea University  
Joon Ha Lee, Daewoo E&C Co., Ltd.  
Jungwhee Lee, Dankook University  
Man-Seop Lee, VSL Korea Co., Ltd.  
Moon-Gon Lee, TSEC Group  
In-Keun Lee, Seoul Metropolitan Government  
Pil Won Lee, Super Tall Buildings R&BD Center  
Sang Hyun Lee, Dankook University  
Sung Woo Lee, Kookmin University  
Yun Mook Lim, Yonsei University  
Jin Won Oh, SK E&C Co., Ltd.  
Chan Min Park, COWI Korea Co., Ltd.  
Hyo Seon Park, Yonsei University  
Jong In Park, GS E&C Co., Ltd.  
Sun Kyu Park, Sungkyunkwan University

Young Suk Park, Myongji University  
Jongsung Sim, Hanyang University  
Hyo-Won Sohn, Hyundai E&C Co., Ltd.  
Pil-Yong Song, Super Long Span Bridge R&D Center  
Dong Ho Yoo, ENVICO Consultants Co., Ltd.  
Tae Yang Yoon, RIST  
Young-Koo Yoon, Daelim Industrial Co., Ltd.

## ABOUT SEOUL AND KOREA

### Seoul

Seoul, a historically cultural city, has been the capital of Korea for more than 600 years, a metropolis of over 10 million. Being one of the world's largest and advanced cities, Seoul serves as the political, economic, and educational hub of Korea. The city lies in a natural basin, surrounded by a series of mountains and hills, and its grandeur and magnificent scenic beauty makes it one of the most attractive metropolitan cities of the world. Aside from bustling pace of life and modern architecture, a number of invaluable cultural assets in Seoul take pride in its long history. ([www.seoul.go.kr](http://www.seoul.go.kr))



*Bongeun-sa Temple, Seoul*



*Talchum (Traditional Mask Dance)*



*Geogyeum Bridge, Goheung-gun*

## Korea

Korea is a nation that boasts its fast growing economy and a lifestyle that brings the old and the new together. Once known simply as a quiet nation in the East, the peninsula now hardly sleeps as it is pulsating with life and commerce. Numerous branch offices of international corporations and businesses as well as western franchises can be found throughout the country. In the face of modernity, Koreans still greatly value their 5 millennia of culture and history and the Confucian philosophy that has governed the lives of their ancestors. The country's natural beauty, unique cultural heritage and warmhearted people makes Korea an attractive and memorable place to visit. With its modern infrastructure, Korea has become the destination for global events which amongst are the 2002 FIFA Football World Cup, the APEC Summit 2005, the ASEAN-Republic of Korea Commemorative Summit 2009, and the G20 Seoul Summit 2010.



*N Seoul Tower, Seoul*



*Boutique Monaco, Seoul*

## ABOUT IABSE

The International Association for Bridge and Structural Engineering was founded in 1929. Today, IABSE has about 4,000 members in over 100 countries. The mission of IABSE is to promote the exchange of knowledge and to advance the practice of structural engineering worldwide in the service of the profession and society. To accomplish the mission IABSE organises conferences and publishes the quarterly journal Structural Engineering International (SEI), as well as reports and other monographs. IABSE also presents annual awards for outstanding achievements in research and practice that advance the profession of structural engineering.

IABSE  
ETH Zurich  
Hoenggerberg HIL E 21.3  
8093 Zurich  
Switzerland

Tel: +41 44 633 2647  
Fax: +41 44 633 1241  
secretariat@iabse.org  
www.iabse.org

## FURTHER INFORMATION

All additional inquiries should be addressed to:

IABSE Seoul 2012 Secretariat  
Organising Committee  
37-115 Seoul National University  
599 Gwanak-ro, Gwanak-gu  
Seoul 151-744  
Korea

Tel : +82 2 880 9083~4  
Fax: +82 2 884 8339  
secretary@iabse2012.org  
www.iabse.org/seoul2012



*Busan-Geoje Fixed Link, Busan*



*Bulguksa Temple, Gyeongju*



*Yi Sun Sin Suspension Bridge, Catwalk Work, Gwangyang* (photo: Si-Chul Kim)