

### Special Edition

A special edition publication in currently available international journals is being considered (e.g. Journal of Composites for Construction, Advances in Structural Engineering or International Journal of Concrete Structures and Materials).

### Awards

The Local Organizing Committee and International Scientific Committee will select three types of excellent papers as follows:

- Best Basic Research Paper
- Best Applied Research Paper
- Best Student Paper

### Correspondence and Inquiries

Anna Song

email : [apfis2009.loc@gmail.com](mailto:apfis2009.loc@gmail.com)

### Sponsorship and Commercial booth

Various sponsorship packages and commercial booths will be prepared to meet a wide variety of marketing objectives.

### Conference venue and Accommodations

This information will be provided if the conference venue is finally confirmed.

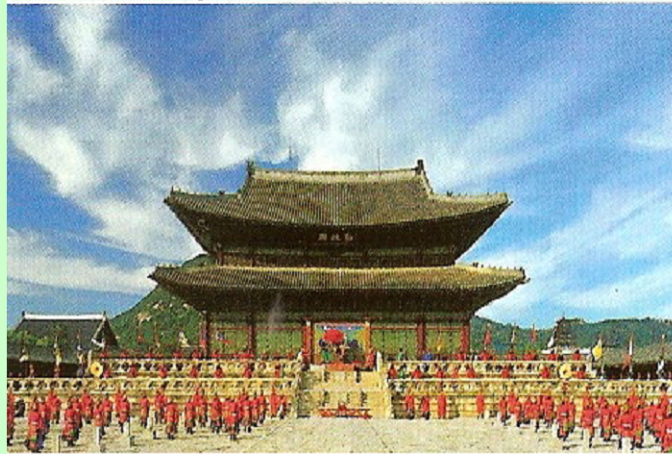
### Seoul-city information pertaining to APFIS 2009

Seoul is the capital of South Korea with over 600 years of history and is the world's 10th-largest city. It was home to the 1988 Summer Olympic Games and the 2002 FIFA World Cup. It is the heart of Korea's culture and education as well as politics and economics. The Seoul municipality tries to develop itself into a hub of Northeast Asia, under the master plan for the 21st century. Seoul is the city of continuous growth and development with its enhanced function suitable for the new era of information technology and globalization. With its great history, culture and entertainment, Seoul will make a great place for APFIS 2009.

### Attractive Sight-Seeing in Seoul

#### ▪ Gyeongbokgung

The greatest traditional attractions of Seoul are the royal palaces. Seoul's historical legacy as the capital city of the Chosen Dynasty (1392-1910) is visible in these beautifully designed structures dotted around downtown Seoul, offering oases of tranquillity in the midst of the city's bustle.



#### ▪ Insadong

The entire area is a virtual living museum. This area's alleys are lined with traditional and modern buildings, home to art theatres, galleries, antiques, handicraft shops, traditional restaurants and tea shops. The famous Insadong Festival is held every year in Insadong. Among the events are antique art exhibitions, masquerades and a pottery making competition. Queen Elizabeth II of the United Kingdom enjoyed the festival during a state visit in 1999.



### First Announcement and Call for Papers

# APFIS 2009

Asia-Pacific Conference on  
FRP in Structures

Seoul, Korea  
9-11 December 2009



The Second Official Regional Conference of  
International Institute for FRP in Construction(IIFC)  
for Asia-Pacific Region

Organized by  
Dept. of Civil Engineering  
Hanyang University

## About APFIS 2009

APFIS 2009 (Asia-Pacific Conference on FRP in Structures) is the second IIFC (International Institute for FRP in Construction) biennial conference which will be held in Seoul, Korea from 9 to 11 December 2009. APFIS 2009 will inherit the main themes from the first conference: basic research and application of FRP in civil and architectural engineering structures in the Asia-Pacific region and elsewhere in the world.

## Aim and Scope

The aim of APFIS 2009 is to share the latest developments in research and application of FRP in civil and architectural engineering areas. Papers dealing with fundamental research and application of FRP composites to civil and architectural engineering structures will be considered for publication in the conference proceedings and presentation at the conference, including but not limited to:

- Materials
- Strengthening of concrete, metallic, timber and masonry structures
- Bond behaviour and debonding failures
- Confinement and Seismic retrofit
- Reinforcing or prestressing of concrete, timber or masonry structures with FRP
- Durability and long-term performance
- Fire and blast loading
- FRP structures
- Structural health monitoring and intelligent sensing
- Field applications and case studies
- Codes and Standards
- Hybrid Structures

## Call for Papers

Participants wishing to present a paper are invited to submit a 250-300 word abstract in English (text only). The papers should present original and unpublished advances of knowledge in accordance with the Conference's themes. Abstracts should be submitted by email in MS-WORD or pdf format to [apfis2009.loc@gmail.com](mailto:apfis2009.loc@gmail.com). Detailed guidelines for preparing and submitting abstracts and full length papers may be found in the conference web site. Abstracts and

final papers will be reviewed by the International Scientific Committee and Local Organizing Committee. Authors of accepted papers are expected to attend and present their papers at the Conference. All papers accepted with paid registration will be published in Proceedings and on CD, available at the Conference. Selected papers will be considered for publication in special journal issues.

## Key Dates

Submission of Abstracts	October 31, 2008
Abstract Acceptance Notification	December 31, 2008
Submission of Papers for Review	April 30, 2009
Paper Acceptance Notification	July 31, 2009
Submission of Final Camera	
Ready Papers	September 30, 2009
Conference	December 9-11, 2009

## Conference Chair

**Prof. J. Sim**

Department of Civil Engineering, Hanyang University, KOREA

## Local Organizing Committee (Tentative)

D.H. Choi	Hanyang University
D.U. Choi	Hankyung National University
O.C. Choi	Soongsil University
M.Y. Han	Ajou University
H.S. Jang	Pukyung National University
S.M. Jeong	Handong University
B.S. Kim	Korea Institute of Construction and Technology
J.H.J. Kim	Yonsei University
K.D. Kim	Konkuk University
G.B. Kim	Dongbu Corporation
S.E. Kim	Sejong University
J. Lee	Yeungnam University
H. Lee	Korea Advanced Institute of Science and Technology
S.W. Lee	Kookmin University
H. Oh	Jinju National University
C. Park	Kangwon National University
S.Y. Park	Jeju National University
S. Park	Daejeon University
S.K. Park	Sungkyunkwan University

Y.H. Park	Korea Institute of Construction and Technology
S. Shim	Daelim Technology Research Institute
A. Song	Embassy of Canada in Seoul
J.P. Won	Konkuk University
C.K. Yi	Korea University
S.J. Yoon	Hongik University
S. G. Youn	Seoul National University of Technology
G. Zi	Korea University

## International Scientific Committee (Proposed)

K. Neale (Chair), <i>Canada</i>	M. Mottavalli, <i>Iran</i>
B. Bakht, <i>Canada</i>	A. Mufti, <i>Canada</i>
C.E. Bakis, <i>USA</i>	A. Nanni, <i>USA</i>
L.C. Bank, <i>USA</i>	D.J. Oehlers, <i>Australia</i>
N. Banthia, <i>Canada</i>	S.H. Rizkalla, <i>USA</i>
J. A.O.D. Barros, <i>Portugal</i>	B. Samali, <i>Australia</i>
J.F. Chen, <i>UK</i>	R. Seracino, <i>USA</i>
E. Cosenza, <i>Italy</i>	J. Sim, <i>Korea</i>
H. Fukuyama, <i>Japan</i>	S.T. Smith, <i>China</i>
I.E. Harik, <i>USA</i>	L. Taerwe, <i>Belgium</i>
L.C. Hollaway, <i>UK</i>	B. Täljsten, <i>Denmark</i>
A. Ilki, <i>Turkey</i>	K.H. Tan, <i>Singapore</i>
V.M. Karbhari, <i>USA</i>	J.G. Teng, <i>China</i>
A. Katz, <i>Israel</i>	T. Triantafillou, <i>Greece</i>
T. Keller, <i>Switzerland</i>	T. Ueda, <i>Japan</i>
R. Kotynia, <i>Poland</i>	G. Van Erp, <i>Australia</i>
P. Labossière, <i>Canada</i>	P. Waldron, <i>UK</i>
L.D. Lorenzis, <i>Italy</i>	Z.S. Wu, <i>Japan</i>
Z.T. Lu, <i>China</i>	L.P. Ye, <i>China</i>
A. Machida, <i>Japan</i>	Q.R. Yue, <i>China</i>
U. Meier, <i>Switzerland</i>	X.L. Zhao, <i>Australia</i>
A. Mirmiran, <i>USA</i>	

## Registration

Full registration fee is tentatively set as US\$750<sup>1)</sup> (US\$500<sup>2)</sup> for students). With the payment of the registration fee, IIFC members and non-IIFC members who are qualified to join IIFC will be provided with a one year complimentary IIFC membership of 2010.

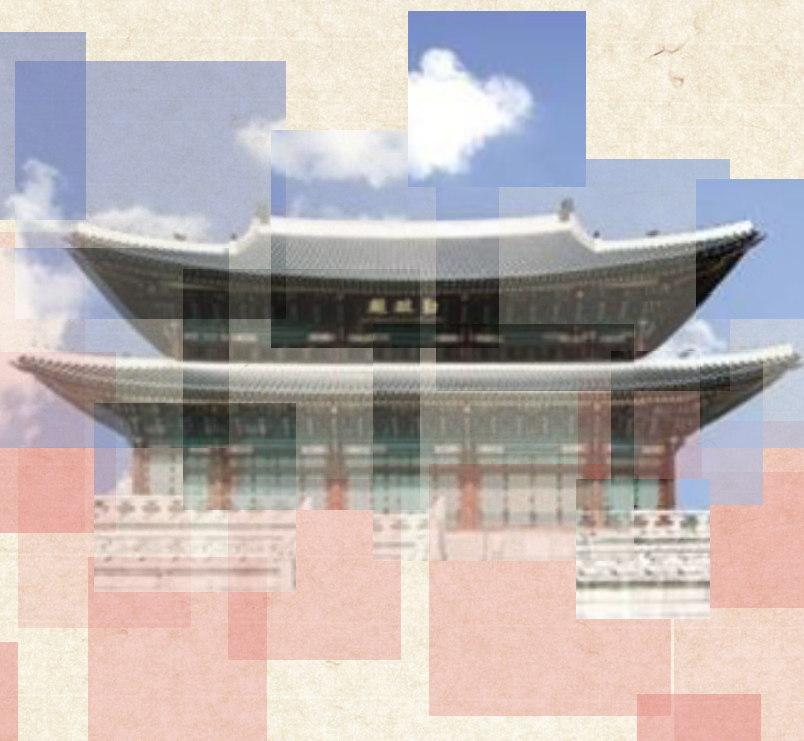
<sup>1)</sup> Registration covers attendance at the conference, the conference proceedings, the welcome reception, all lunches and refreshments.

<sup>2)</sup> Registration covers attendances at the conference, the conference proceedings, and all lunches and refreshments.



# APFIS 2009

Asia-Pacific Conference on FRP in Structures



9-11 December 2009  
Seoul, Korea



## PREFACE

As the Conference Chair, I am pleased to announce that the Second Asia-Pacific Conference on FRP in Structures (APFIS 2009) will be held December 9-11, 2009 in Seoul, Korea.



The APFIS is a biennial conference focusing on the research, development and application of fiber reinforced polymer (FRP) reinforcement externally or internally applied for concrete and other structures. This conference is one of the few FRP-related conferences that has been held in the Asia-Pacific region, and will present a unique opportunity for engineers, researchers and manufacturers in the region to share their experiences, ideas, and latest technologies as well as to explore various collaboration opportunities for potential projects in the field.

This three-day conference will consist of wide variety of sessions with a balance between research and practice to permit the widest possible participation. Six keynote lectures will help to fulfill the audience's appetite for learning. All the keynote lectures will be scheduled during the plenary sessions such as opening ceremony, lunch, banquet and closing ceremony.

I hope all participants to have a fruitful outcome and success from APFIS2009 and wish a pleasant stay in Seoul, Korea. Thank you.

Sincerely Your,

A handwritten signature in black ink, appearing to read 'Jongsung Sim'.

Jongsung Sim  
Conference Chair  
APFIS-2009



**Session F2A**

Session : PULTRUDED FRP STRUCTURES

Room : Great Room 1

Chair : A. Ilki (Istanbul Technical University)

- F2A1** Vibration of Debonded Laminated Fibre Composite Sandwich Beams  
W. Karunasena, T. Aravinthan and A.C. Manalo\*
- F2A2** Effect of Elevated Temperature on Structural Performance of RC Columns Confined by CFRP  
A. Khalifa, A. El-Kourdi, A. Eldarwish and A. Morsy\*
- F2A3** Dynamic Behaviour of Externally Bonded CFRP : Application to Reinforced Concrete Column Externally Reinforced under Impact Loading  
E. Ferrier\* and P. Hamelin
- F2A4** Seismic Performance of Concrete Columns Reinforced by Steel-FRP(Fiber Reinforced Polymer) Composite Bar  
Z.Y. Sun, G. Wu\*, Z.S. Wu and M. Zhang
- F2A5** The Influence of Transverse CFRP Strengthening on Rheological Strains of Compressed Concrete Elements  
T. Trapko, M. Musiał\* and W. Trapko

**Session F2B**

Session : HYBRID STRUCTURES

Room : Great Room 3

Chair : U. Meier (Swiss Federal Laboratories for Materials Research(EMPA))

- F2B1** Flexural RC Members Strengthened with Mechanically Fastened FRP Laminates: Test Results and Numerical Modeling  
A. Napoli\*, F. Matta, E. Martinelli, A. Nanni and R. Realfonzo
- F2B2** Bowstring Arch Bridge Made of CFRP, GFRP and Glulam  
U. Meier\*, R. Brönnimann, R. Widmann, A. Winistoerfer and P. Irniger
- F2B3** Use of Uni-Axial Pseudo-Ductile Hybrid FRP Sheet to Strengthen Existing RC Flexural Members  
D.U. Choi\*, S.S. Ha and K.H. Kim
- F2B4** Effectiveness of Strengthened RC Beams with a Hybrid Multi Layer under Cyclic Loading  
S.K. Ha\*, H.K. Lee and I.S. Kang
- F2B5** A Study on the Flexural Behavior of Concrete Beams Reinforced with GFRP Rebars under Fatigue  
J. Sim, C. Park, T. Kang, H.G. Lee and M. Shahid\*



# KEYNOTE SPEAKERS

	Name	Affiliation	Lecture title
	D.J. Oehlers	Univ. of Adelaide	A Unified Generic RC Model for FRP Plating : Intermediate Crack Theory
	L.C. Bank	Univ. of Wisconsin	Behavior of Pultruded Fiber-Reinforced Polymer (FRP) Beams Subjected to Concentrated Loads in the Plane of the Web
	B. Benmokrane	Univ. of Sherbrooke	GFRP Reinforcing Bars for Concrete Structures : Durability, Design and Field Applications
	S. Lee	Kookmin Univ.	The Current and Future Applications of FRP Decks
	T. Ueda	Hokkaido Univ.	Structural Performance of Members Strengthened by FRP Jacketing with High Fracturing Strain
	S.T. Smith	Hong Kong Univ.	FRP Anchors : Recent Advances in Research and Understanding



# CONFERENCE ORGANIZATION

## INTERNATIONAL SCIENTIFIC COMMITTEE (ISC)

The LOC has invited those with notable accomplishments in the civil engineering professions worldwide to sit on the ISC. Following 51 individuals have agreed to serve on the ISC for the APFIS2009.

Name	Affiliation	Country
K. Neale (Chair)	University of Sherbrooke	Canada
B. Bakht	JMBT Structures Research Inc.	Canada
L.C. Bank	University of Wisconsin, Madison	USA
N. Banthia	University of British Columbia	Canada
J.A.O. Barros	Escola de Engenharia da Universidade de Minho	Portugal
B. Benmokrane	University of Sherbrooke	Canada
J.F. Chen	University of Edinburgh	UK
E. Cosenza	University of Naples Federico II	Italy
S. El-Gamal	University of Sherbrooke	Canada
R. El-Hacha	University of Calgary	Canada
E. El-Salakawy	University of Manitoba	Canada
A. Fam	Queen's University	Canada
H. Fukuyama	Building Research Institute	Japan
N.F. Grace	Lawrence Technical University	USA
I.E. Harik	University of Kentucky	USA
A. Ilki	Istanbul Technical University	Turkey
J.O. Jirsa	The University of Texas, Austin	USA
V.M. Karbhari	University of California at San Diego	USA
A. Katz	Israel Institute of Technology	Israel
T. Keller	Swiss Federal Institute of Technology	Switzerland
R. Kotynia	Technical University of Lodz	Poland
P. Labossière	University of Sherbrooke	Canada
L.D. Lorenzis	University of Lecce	Italy



Name	Affiliation	Country
F. Matta	University of Miami	USA
S. Matthys	Ghent University	Belgium
U. Meier	Swiss Federal Laboratories for Materials Research (EMPA)	Switzerland
A. Mirmiran	Florida International University	USA
M. Mottavalli	University of Tehran	Iran
A. Mufti	University of Manitoba	Canada
A. Nanni	University of Miami	USA
D.J. Oehlers	University of Adelaide	Australia
C.E. Ospina	Berger/ABAM Engineers Inc.	USA
K. Pilakoutas	University of Sheffield	UK
S.F.A. Rafeeqi	NED University of Engineering and Technology	Pakistan
S.H. Rizkalla	North Carolina State University	USA
B. Samali	University of Technology, Sydney	Australia
R. Seracino	North Carolina State University	USA
C.K. Shield	University of Minnesota	USA
J. Sim	Hanyang University	Korea
S.T. Smith	Hong Kong University	China
L. Taerwe	Ghent University	Belgium
B. Täljsten	Technical University of Denmark	Denmark
K.H. Tan	National University of Singapore	Singapore
J.G. Teng	Hong Kong Polytechnic University	China
G. Thiagarajan	University of Missouri-Kansas City	USA
T. Triantafillou	University of Patras	Greece
T. Ueda	Hokkaido University	Japan
P. Waldron	University of Sheffield	UK
Z.S. Wu	Ibaraki University	Japan
L.P. Ye	Tsinghua University	China
X.L. Zhao	Monash University	Australia