

ICCEPM 2015

The 6th International Conference on
Construction Engineering and Project Management

October 11(Sun) - 14(Wed), 2015
Paradise Hotel Busan, Busan, Korea

*Global Collaboration for
Asia's Construction Challenges*

Final Program

Hosted by

Asian Consortium for Construction Engineering and Project Management Research

Organized by



In cooperation with



Supported by



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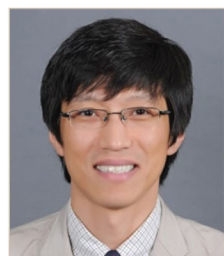
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Welcome Message

Welcome to the 6th International Conference on Construction Engineering and Project Management (ICCEPM 2015) in the beautiful and dynamic harbor city of Busan, Korea. Following the successful conferences in Seoul (2005), Singapore (2007), Jeju (2009), Sydney (2011) and LA (2013), ICCEPM 2015 in Busan will further promote international collaboration with Asian construction communities in exploring research and practices in the areas of construction engineering and project management.

Global collaboration is critical to meet Asia's upcoming construction challenges. The immense need for building and infrastructure has generated the advancement of modernized construction practices such as sustainable project delivery, international and interoperable standards settings, and knowledge-based communication, and process automation. Furthermore, the roles of international owners and A/E/C firms are rapidly evolving to pull demands for continuous improvement in every single construction sector. ICCEPM 2015 will provide the venue to showcase and exchange state-of-the-art CEPM knowledge and lessons learned that promote mutual benefits for researchers and industry practitioners.

We extend our warmest welcome to Busan, and hope you enjoy informative and prestigious meetings with outstanding construction professionals.



Youngsoo Jung

Youngsoo JUNG, Ph.D., PMP

Conference Chair, ICCEPM 2015



Leen-Seok Kang

Leen-Seok KANG, Ph.D.

President, KICEM

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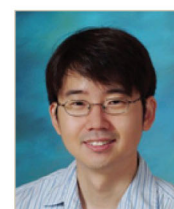
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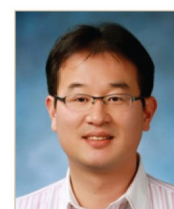
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Conference Information

Overview

- **Title** The 6th International Conference on Construction Engineering and Project Management (ICCEPM 2015)
- **Conference Theme** Global Collaboration for Asia's Construction Challenges
- **Date** October 11 (Sun) ~ 14 (Wed), 2015
- **Venue** Paradise Hotel Busan, Busan, Korea
- **Hosted by** Asian Consortium for Construction Engineering and Project Management Research
- **Organized by** Korea Institute of Construction Engineering and Management (KICEM)
- **Secretariat** The Plan Co.
4F, Jung E&C Bldg., 31-5, Seocho-daero 58-gil, Seocho-gu, Seoul 137-881 Korea
T. +82-2-538-2042~3 · F. +82-2-538-1540 · E. info@iccepm2015.org

Registration Information

■ On-Site Registration Desk Information

■ Location & Operating Hours

Date	Operating Hours	Location
October 11 (Sun)	16:00 - 19:00	Grand Ballroom Foyer (2F, Paradise Hotel Busan)
October 12 (Mon)	08:00 - 17:00	
October 13 (Tue)		

■ Registration Fee Includes

Category	Participant	Student	Accompanying Person
■ Welcome Reception (Oct. 11)	O	X	X
■ Scientific Program	O	O	X
■ Closing Ceremony & Farewell Dinner (Oct. 13)	O	X	X
■ Coffee Breaks	O	O	O
■ Lunches (Oct. 11~13)	O	O	O
■ Conference Materials (Final Program Book, USB Proceedings)	O	O	X
■ Certificate of Attendance	O	O	X

■ Receipt

The official receipt for your registration fee can be printed out from the "My Page" on the official website of the ICCEPM 2015 at www.iccepm2015.org. The receipt is only available for those who complete his/her payment by a credit card or bank transfer properly.

■ Certificate of Attendance

The certificate of attendance can be printed out at the "My Page" on the official website of the ICCEPM 2015 at www.iccepm2015.org about two weeks after the conference.

Conference Information

Scientific Program Information

■ Oral Presentation Guidelines

- Microsoft PowerPoint 2010 is recommended for presentation file(s). Please note that the computers in the session rooms are being supplied with **Windows 7 and MS Office 2010**.
- **It is NOT allowed to use your own laptop at the session room due to technical risk and time delay.** You may supply your own laptop computer **as a back-up**. Particularly in the case of using **MACs**, you may have **compatibility problems**.
- All speakers are required to come to the session room at least 10 minutes before the session begins. The seats for speakers will be reserved in the **FRONT ROW** facing the podium and it will be marked as "NEXT SPEAKER".
- Be sure to meet the presentation time limit as below in order to be on schedule;

Category	Keynote Session	Special Session	Oral Presentation Session
Session Time	80 min	75 - 80 min	75 - 80 min
No. of Speakers per Session	3	3 - 5	4 - 6
Presentation Time per Speaker	25 min (No Q&A)	15-25 min (Including Q&A)	12 min (Including 2 min Q&A)

■ Speaker's Ready Room

■ Location & Operating Hours

Date	Operating Hours	Location
October 11 (Sun)	16:00 - 19:00	Venice Room (2F, Paradise Hotel Busan)
October 12 (Mon)	08:00 - 17:00	
October 13 (Tue)		

- Be sure to check or modify your presentation material(s) at the Speaker's Ready Room at least **2 hours before the start of the session**.
- If combining video clips with PowerPoint, it is strongly recommended that you check your presentation file at least **ONE DAY BEFORE** your presentation so if there are any problems, we can deal with it.
- If you do not check your presentation file at the Speaker's Ready Room, you will be responsible for uploading your presentation file on to the computer system in the session room.

■ Poster Presentation Guidelines

■ Location & Operating Hours

Category	Date	Operating Hours	Location
Mounting	October 11 (Sun)	16:00 - 19:00	Sicily Room (1F, Paradise Hotel Busan)
	October 12 (Mon)	08:00 - 09:30	
Display	October 12 (Mon) & October 13 (Tue)	09:30 - 17:30	
Demounting	October 13 (Tue)	17:30 - 19:00	

- The poster size is fixed to **90cm x 120cm (Width x Height)**.
- Materials for mounting will be prepared at the reception desk near the poster session area. However, it is encouraged to bring your own suppliers in case that they could be run out and not be sufficiently available for all of presenters.
- **DO NOT** write or paint on the poster boards. **DO NOT** use nails, push pins, screws or any tools that will puncture the poster boards.
- Any remaining posters left behind at the end of the day will be taken down and disposed. The organizers will not be responsible for saving the posters which are taken down at the end of the conference.

Conference Information

On-Site Poster Review for Award

- There will be a short Q&A time by track during the Coffee Break & Poster Viewing as below. Please make sure that at least one author of the paper has to stand by each poster at the designated time and do not miss the opportunity to be one of the Best Poster Awardees.

Date	Time	Track
October 12 (Mon)	10:00 - 10:30	Track 5
	14:20 - 14:50	Track 3 & 4
October 13 (Tue)	10:00 - 10:30	Track 2
	14:20 - 14:50	Track 1

- The detailed poster list and layout by track will be available at the poster session at Sicily Room (1F) and on the website, www.iccepm2015.org.

Social Events

Welcome Reception

- Date & Time:** October 11 (Sun), 18:30~20:30
- Location:** Capri Room (2F, Paradise Hotel Busan)
- Type:** Standing Buffet
- Dress Code:** Business Casual

**Only ticket holders can attend the Welcome Reception. Please present the ticket in your name tag to the staff at the entrance.*

Opening Ceremony

- Date & Time:** October 12 (Mon), 08:30~08:40
- Location:** Grand Ballroom (2F, Paradise Hotel Busan)

Closing Ceremony & Farewell Dinner

- Date & Time:** October 13 (Tue), 18:30~21:00
- Location:** Capri Room (2F, Paradise Hotel Busan)
- Type:** Formal Dinner (Set Menu)
- Dress Code:** Business (Black Tie Optional)

**Only ticket holders can attend the Closing Ceremony & Farewell Dinner. Please present the ticket in your name tag to the staff at the entrance.*

Lunch

- Date & Time:** October 12 (Mon) ~13 (Tue), 11:45~13:00
- Location:** Capri Room & Foyer (2F, Paradise Hotel Busan)
- Type:** Standing Buffet

**All registered participants, accompanying persons and exhibitors are provided with lunch. Please wear your name tag as it is your admission to lunch.*

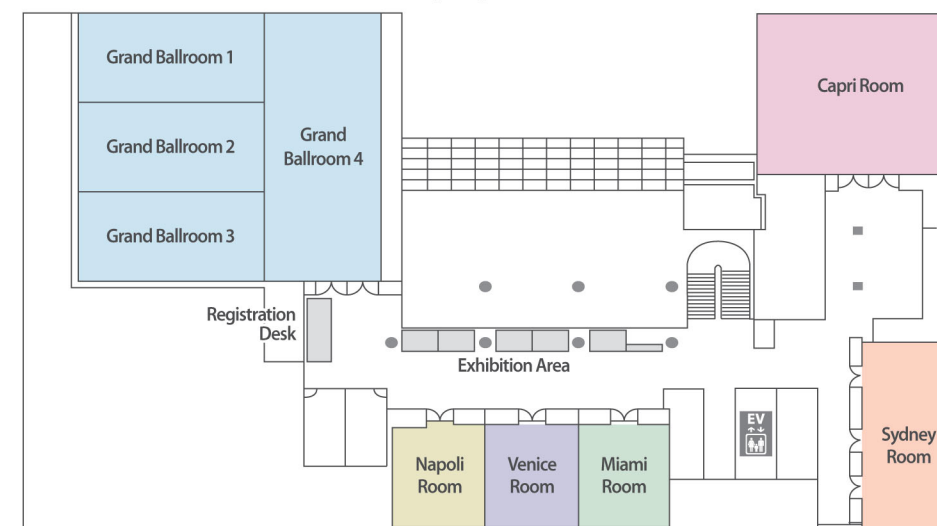
Coffee Break

- Date & Time:** October 12 (Mon)~13 (Tue), 10:00~10:30 & 14:20~14:50 (2 times per day)
- Location:** Sicily Room (1F, Paradise Hotel Busan), Grand Ballroom Foyer (2F, Paradise Hotel Busan)

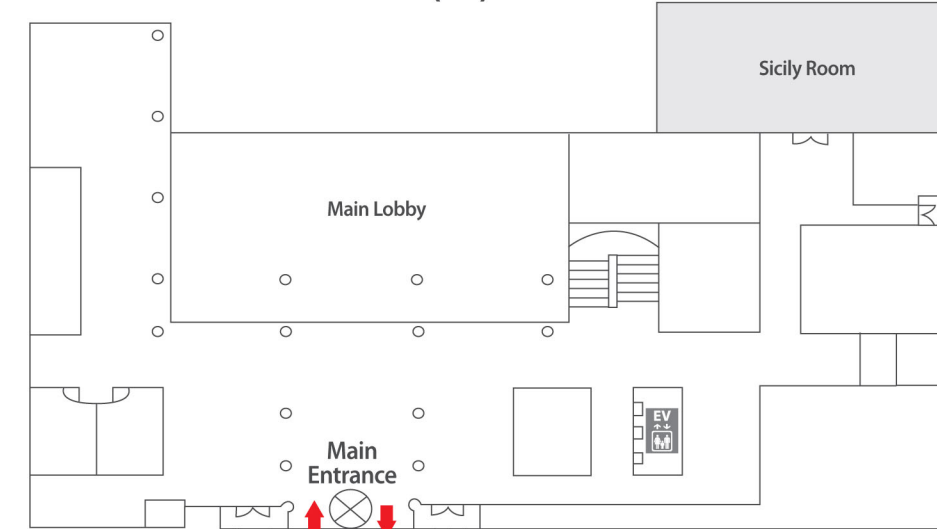
Conference Information

Floor Plan

PARADISE HOTEL BUSAN (2F)



PARADISE HOTEL BUSAN (1F)

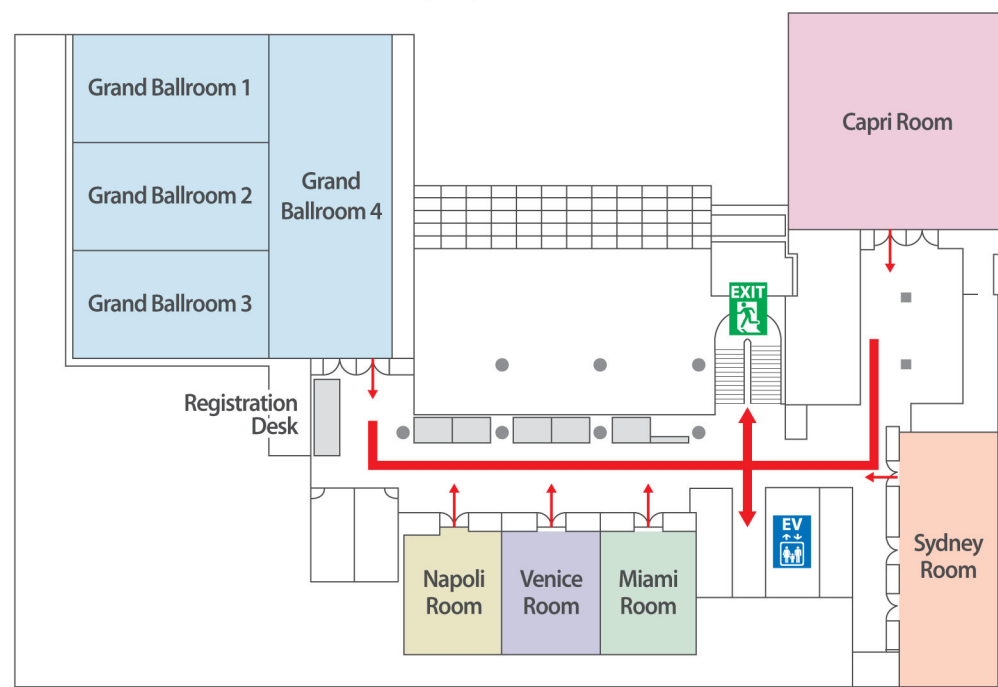


Floor	Room	Function
2nd Floor	Grand Ballroom 1~4	Opening Ceremony, Keynote Session
	Grand Ballroom 1, 2, 3 & Sydney Room	Oral Presentation Session
	Grand Ballroom Foyer	Registration Desk, Exhibition booth, Coffee Break
	Sydney Room	Special Session
	Capri Room	Welcome Reception, Closing Ceremony & Farewell Dinner, Lunch
	Napoli Room	Secretariat Office
	Venice Room	Speaker's Ready Room
	Miami Room	VIP Room & IPC Meeting
1st Floor	Sicily Room	Poster Presentation, Coffee Break

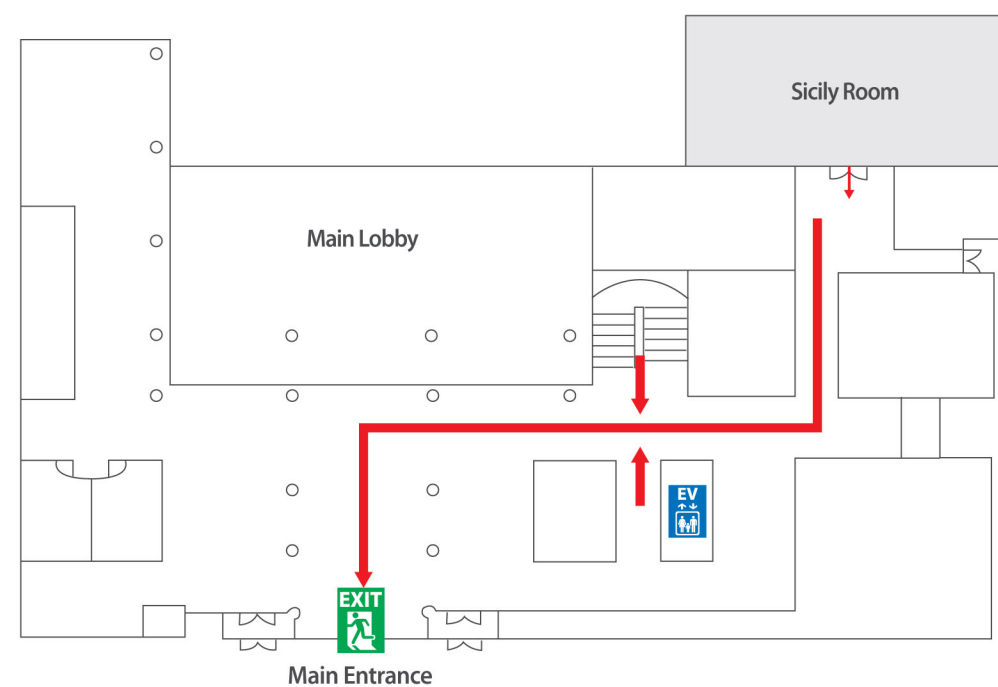
Conference Information

Evacuation Plan

PARADISE HOTEL BUSAN (2F)



PARADISE HOTEL BUSAN (1F)



Program at a Glance

(As of September 25, 2015)

Time	Oct. 11 (Sun)	Oct. 12 (Mon)				Oct. 13 (Tue)				Oct. 14 (Wed)
08:00-17:00		Registration								
08:30-08:40		Opening Ceremony								Committee Meetings (09:00 ~12:00)
08:40-10:00		Keynote Session 1				Keynote Session 3				
10:00-10:30		Coffee Break & Poster Viewing								
10:30-11:45		OP-01	OP-02	OP-03	OP-04	OP-13	OP-14	SS-01	SS-02	
11:45-13:00		Lunch		IPC Meeting		Lunch				
13:00-14:20		Keynote Session 2				OP-15	OP-16	OP-17	SS-03	
14:20-14:50		Coffee Break & Poster Viewing								
14:50-16:05		OP-05	OP-06	OP-07	OP-08	OP-18	OP-19	OP-20	SS-04	
16:05-16:15	Registration (16:00-19:00)	Break								
16:15-17:30		OP-09	OP-10	OP-11	OP-12	OP-21	OP-22	OP-23	SS-05	
18:30	Welcome Reception					Closing Ceremony & Farewell Dinner				

* OP : Oral Presentation Session * SS : Special Session

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Daewoo E&C has been enriching people's lives ever since its establishment in 1973. Operating out of a belief that change is a primary means of bringing about a better world, we have never stopped trying to be creative and innovative. We believe in the power of construction to change the world, and are committed to continuing in our role as a market-leading global construction convergence innovator.

건설 · 환경관리그룹



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Korea Association of Construction Engineering & Management www.ekacem.or.kr

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(주)중앙엔지니어링
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Jung Ang Engineering Co., Ltd. www.jungangeng.co.kr

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posco E&C

POSCO E&C www.poscoenc.com

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Sangji Environment & Architects, Inc. www.sangji21c.co.kr

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Hanwha Engineering & Construction corp. www.hwenc.co.kr

Hanwha E&C is doing business at home and abroad through financial stability, ample experiences and unequaled technology, growing into a construction company with various experiences and capabilities.

HYUNDAI ENGINEERING & CONSTRUCTION

Hyundai Engineering & Construction www.hdec.kr

As the 17th largest global contractor world-wide in 2015, Hyundai Engineering & Construction has been writing new chapters in the history of Korea's construction industry such as winning USD 11 billion projects in overseas orders in 2014 and maintaining USD 10 billion value-mark for 3 consecutive years. Striving to become a global leader in the construction industry, Hyundai Engineering & Construction is pursuing step-change growth in an evolving business environment and planning to reinforce management-by-efficiency and operate a risk management system that will boost overseas orders and spread the company's values globally to wider regions.

(주) 덕성알파이엔지
Duksung Alpha Engineering & Consulting

DUKSUNG ALPHA Engineering & Consulting Co., Ltd. www.daeng.co.kr

DUKSUNG ALPHA ENG is one of engineering consulting firms in the Republic of Korea. Established in 1999, the firm has been devoted to providing high quality consulting services in major engineering fields. We make Creative Design & Technology.

GS E&C

GS E&C www.gsconst.co.kr

GS E&C has established its status as a top-ranking company domestically since its foundation in 1969 by achieving tremendous growth in the fields of architecture, civil engineering, housing, plant, environment and power plant. Through continuous development of its human resource, acquisition of technologies, determined challenges and practices, GS E&C has set forth the stepping stones to leap as a Global Leading Company.

Supported by

KOREA TOURISM ORGANIZATION
www.visitkorea.or.kr

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KOFST THE KOREAN FEDERATION OF SCIENCE AND TECHNOLOGY SOCIETIES

List of Exhibitors

TONGMYONG UNIVERSITY

MYONGJI UNIVERSITY

건설장비 관제 및 스마트 시공 기술 개발 연구단
Fleet management for construction equipment and Smart construction technology using ICT
연경대학교 KAIA

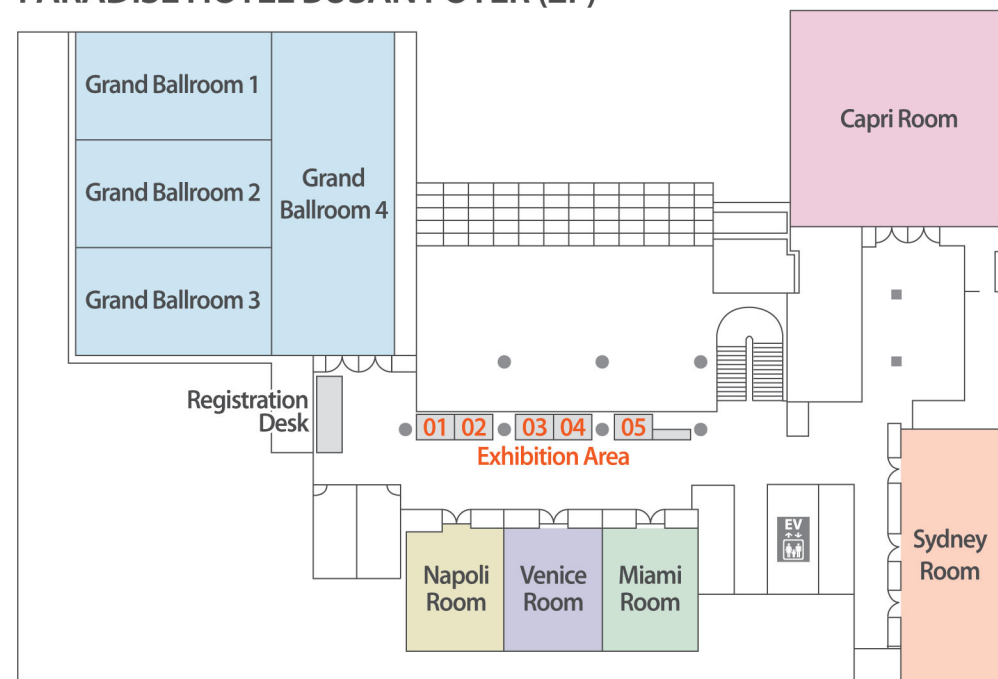
TEKLA®
A TRIMBLE COMPANY

Sponsors & Exhibitors

Booth Layout

- **Location:** Grand Ballroom Foyer (2F, Paradise Hotel Busan)
- **Operating Hours:** October 12 (Mon)~13 (Tue), 08:30~17:00

PARADISE HOTEL BUSAN FOYER (2F)



Company	Booth No.	Company	Booth No.
SAMOOCM ARCHITECTS & ENGINEERS	01	Fleet management for construction equipment and Smart construction technology using ICT	04
Tekla Korea Co., Ltd.	02	Tongmyong University	05
Heerim Architects & Planners Co., Ltd.	03	Myongji University	

General Information

Useful Information in Korea

General Facts

Population	Total population of Korea is 51,448,183 (as of July 2015)
Size	1,030 km (612 miles) long and 175 km (105 miles) wide
Temperatures	+22°C to +30°C (August), -7°C to +1°C (January)
Time Difference	GMT + 9 (Korea Standard Time KST or Japanese Standard Time JST)
Country Dialing Code	+82
Area Code	Busan 051 (when dialing from overseas remove the zero)
Language	Hangeul (Korea's official alphabet)

Visa



All visitors to enter the Republic of Korea must have a valid passport and visa. Visitors with round trip tickets from countries who have a special agreement with Korea may be exempt from the visa requirement, and can stay in Korea visa-free for up to 30 days, or 90 days, depending on the type of agreement between two countries. Please contact the Korean embassy or a consulate in your country as early as possible.

Traveler's Essentials

Electricity & Voltage



The standard voltage in Korea is 220 volts.

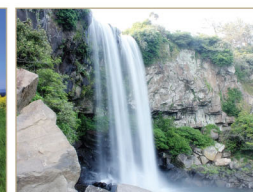
The outlet has two round holes and is the same type used in France, Germany, Austria, Greece, Turkey, and many other countries.

If you do not have a multi-voltage travel adapter, you can borrow one from your hotel's front desk. If you want to buy one in Korea, you can do so at a duty-free shop, convenience shop at Incheon International Airport, or Yongsan Electronics Shopping Town

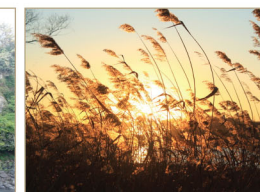
Weather



Spring



Summer



Autumn



Winter

The climate of Korea is characterized by four distinct seasons; spring, summer, autumn, and winter. Busan in October is in the middle of autumn and the average temperature is 17.3°C (63.14°F).

Business Hours



Banks

Weekdays: 09:00 – 16:00
Weekends and National Holidays: Closed

Post Offices

Weekdays: 09:00 – 18:00
Weekends and National Holidays: Closed

Government Offices and Organizations

Weekdays: 09:00 – 18:00
Weekends and National Holidays: Closed





Department Stores





10:30 – 20:00
* Typically one day a month (usually a Monday) department stores are closed to the public. However, closings will vary according to each store.

General Information

■ Korean Currency

The unit of currency is the Korean Won (Indicated as ₩). Coin denominations are ₩10, ₩50, ₩100 and ₩500. Bank notes are ₩1,000, ₩5,000, ₩10,000 and ₩50,000. Foreign bank notes and traveler's checks can be converted into Korean Won at foreign exchange banks and other authorized money exchangers. International credit cards, such as Visa, Master Card, American Express, Diners Club, and JCB are widely accepted at major hotels, department stores and restaurants. US\$1 is equivalent to approximately ₩1,181.00 as of October 2015.

Bills			
			
1,000 won	5,000 won	10,000 won	50,000 won

Coins			
			
10 won	50 won	100 won	500 won

■ Tax & Tipping



Value-added tax is levied on most goods and services at a standard rate of 10% and is included in the retail price. Tipping is not customary in Korea. Sometimes, expensive restaurants and luxury hotels may add a service charge of 10%. Thus, you do not necessarily have to prepare for extra charges since it will be included in the bill.

■ Emergency Call



- 112 Police
- 119 Emergencies for Fire / Rescue & Hospital Services
- 129 First Aid Patients
- 1330 Korea Tourism Organization Headquarters
- 02-735-0101 Tourist Complaint Center
- Local area code+114 Local telephone number guide

General Information

About Busan

Busan is Korea's largest port city filled with endless excitement and pleasant surprises. Every year, tens of thousands of visitors from all over the country and around the world flock to Haeundae, Songdo and Gwangalli Beaches to relax or to attend festivals. The city annually hosts the International Fireworks Festival and the Busan International Film Festival, while regularly holding various events at Centum City, the world's largest department store. Other must-see tourist sites include Taejongdae Resort overlooking the sea, Yongdusan Park, Yongsungsa Temple on a cliff, and the Jagalchi Market.

■ Hot Places

■ Haeundae Beach



Swoosh! Waves invade the sands of the beach, refreshing completely your fatigued soul, washing away all your troubles. The ocean embraces you. Seagulls fly over as your toes are tickled by the sands' soft touch all along the golden shore. This is Haeundae, a beach that will fill your heart with a longing that you could stay here forever.

■ Gwangalli Beach



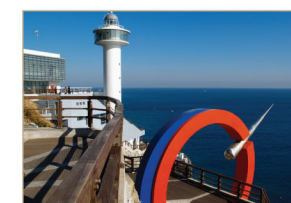
The key words for Gwangalli are youth, passion and luxury. Even the silence of the dawn shines at the sound of the waves lapping the sands and even the quiet seashore of the late afternoon awakens you to the value of life. Gwangalli surprises you because things transcend reality here. In Gwangalli, you are pleasantly surprised by small acts of compassion because you did not expect them. These are the attractions of Gwangalli and the reasons why you have to visit Gwangalli.

■ Nampodong



Many refugees from other parts of the country settled in Busan during the Korean War. Busan was designated as the country's temporary capital city and Nampodong was at its center. Since then, people and cultures from other parts of the country have mingled here and this mingling has resulted in a harmonious diversity, among people of different backgrounds. Nostalgic memories of the old days still live on in Nampodong. Harmony also exists here among the ultramodern urban facilities, the land and the ocean. Nampodong is full of human stories

■ Taejongdae



Close your eyes and picture the waves, wind and feel the smell the aroma of the ocean coming from the white spray. Then open your eyes and you will be enraptured by the exquisite scenery of Taejongdae

Keynote Speakers

Keynote Session 1

Chair: June Seong YI (Ewha Womans University, Korea)

Date & Time: Oct. 12 (Mon), 08:40-10:00

Venue: Grand Ballroom 1~4 (2F)



Safety Leadership in Construction

Dongping FANG

Tsinghua University (China)

Dr. Dongping FANG is a Professor and head at Dept. of Construction Management, School of Civil Engineering, Tsinghua University. He is the founding director of (Tsinghua-Gammon) Construction Safety Research Center. His research, teaching and consulting are in the area of safety and risk management in construction, sustainability and green construction in which more than 200 reports, papers and books in English, Japanese and Chinese have been published. Dongping is a vice president of CIB (International Council for Research and Innovation in Building and Construction, 2013-2016) and a member of the executive committee of GLF-CEM (Global Leadership Forum for CEM programs). He has been honored as Visiting Professors at UNSW in Australia, Chalmers University in Sweden and Loughborough University in the UK and serves as members of editorial board of several international journals, such as Safety Science and Construction Management and Economics.



Present and Future of Risk Management of Construction Practice in Asia

Tsunemi WATANABE

Kochi University of Technology / JSCE (Japan Society of Civil Engineers) (Japan)

Dr. Tsunemi WATANABE is a Vice Chair of Construction Management (CM) Committee at the Japan Society of Civil Engineers (JSCE). He is also a professor at School of Management, Kochi University of Technology, Japan. His research, education, and outreach activities are construction and environmental management, with a particular focus on application of multi-party risk and uncertainty management process into project risk management and risk communication in a public pollution problem. He has served as the Chair of International Alliance Subcommittee in CM Committee at the JSCE and organized international joint seminars in Indonesia and Vietnam to share current problems and discuss future of construction practices in each country. He has also served as the president of Geo Risk Society in Japan and promoted case studies to develop geological risk management process and introduce geo-advisors for governmental organizations.



Managing Mega-Project Complexity in Five Dimensions

Douglas D. GRANSBERG

Iowa State University (United States)

Douglas D. Gransberg holds the Donald and Sharon Greenwood Endowed Chair and is a professor of Construction Engineering at Iowa State University. A Montana native, he received both his B.S. and M.S. degrees in Civil Engineering from Oregon State University and his Ph.D. in Civil Engineering from the University of Colorado at Boulder. He is also a registered Professional Engineer in Oklahoma, Texas and Oregon, a Certified Cost Engineer, a Designated Design-Build Professional and a Fellow of the Royal Institution of Chartered Surveyors in the UK. Before moving to academia in 1994, he spent over twenty years in the U.S. Army Corps of Engineers retiring at the rank of Lieutenant Colonel. His research spans the full life cycle of highway engineering, construction and maintenance, from the procurement of new projects using alternative methods such as Construction Manager/General Contractor (CMGC) and Design-Build (DB) to the preservation and maintenance of pavements and bridges. He was on the Oklahoma Governor's Task Force on Construction Law for 12 years and helped draft DB and CMGC legislation for that state. He also assisted officials in California, Minnesota, and Texas in drafting enabling legislation on alternative project delivery. His research has received awards from the Transportation Research Board, several US state departments of transportation and the New Zealand Transport Agency. He is the author of over 150 journal articles, conference papers, and research/technical reports.

Keynote Session 2

Chair: Youngki HUH (Pusan National University, Korea)

Date & Time: Oct. 12 (Mon), 13:00-14:20

Venue: Grand Ballroom 1~4 (2F)



Looking Back at the History of CEPM in Asian Countries

Dongwoo SHIN

Ajou University (Korea)

Dr. Dongwoo SHIN is a Professor and head at Department of Architectural Engineering, Ajou University. He graduated from Seoul National University and received his M.S. and Ph.D degrees at the University of Michigan. He was the founding president of Korea Institute of Construction & Management (KICEM), president of Korea Association of Procurement & Supply Management (KAPSM), and president of KIBIM (Korea Institute of Building Information Management). His research, teaching and consulting are in a variety of areas, including system development for construction project management, construction information integration, industrialized building construction, construction-related policies, and property management of building projects. He was the head of CART (Center for Aged-Housing Remodeling Technology), approximately \$10 million worth of funded project, sponsored by MLIT (Ministry of Land, Infrastructure & Transportation). He currently serves as an active member of a variety society, which Architectural Institute of Korea (AIK, 1988), Korean Concrete Institute (KCI, 1989), Korean Institute of Project Management and Technology (PROMAT, 1991), Korean Society of Civil Engineer (KSCE, 1992), Korean Commercial Arbitration Board (KCAB, 2001) and National Academy of Engineering of Korea (NAEK, 2009).



Identifying Unsafe Habits of Construction Workers based on Real-time Location

Heng LI

The Hong Kong Polytechnic University (Hong Kong, China)

Professor Heng Li is a Chair Professor of Construction Informatics at The Hong Kong Polytechnic University. Heng started his academic career from Tongji University since 1987. Heng then researched and lectured at the University of Sydney, James Cook University and Monash University before joining Hong Kong Polytechnic University. During this period, Heng have also worked with engineering design and construction firms and provided consultancy services to both private and government organizations in Australia, Hong Kong and China. Heng has conducted many funded research projects related to the innovative application and transfer of construction information technologies, and he has published 2 books, more than 200 journal papers in major journals of his field and numerous conferences papers in proceedings.



Overseas Construction Industry and International Development Cooperation - Korean Experience

Man-Hee HAN

University of Seoul (Korea)

Man-Hee Han is the dean and a professor of International School of Urban Sciences (ISUS) at the University of Seoul. He received his Bachelor's degree in Business Administration and Master's degree in Public Administration from Yonsei University and his Ph.D. in Urban and Regional Studies from the University of Birmingham, U.K. He worked over thirty years for the Korean government mainly in the fields of regional development, real estate, and construction industry. Before moving to academia in 2013, he served as Chairman of Multi-functional Administrative City Construction Agency, and then 1st Vice Minister of the Ministry of Land, Infrastructure and Transport. His research interests encompass regional policy, land and housing policy, real estate finance, construction industry and overseas construction. In the ISUS, he is teaching Korean students who will work in overseas construction on the one hand, and foreign government officials to share Korea's development experience and know-hows on the other.

Invited Session

Keynote Session 3

Chair: Jongwon SEO (Hanyang University, Korea)

Date & Time: Oct. 13 (Tue), 08:40-10:00

Venue: Grand Ballroom 1~4 (2F)



Global Collaboration During Front End Planning of Capital Projects

Edward G. GIBSON

Arizona State University (United States)

Dr. Edd Gibson is a Professor and the Sunstate Endowed Chair in the Construction Management and Engineering at Arizona State University. He is also the Director of the School of Sustainable Engineering and the Built Environment (SSEBE) at ASU where he oversees several educational programs encompassing 60 faculty and 75 staff members, 1400 students, research expenditures of over \$10.5 million per annum and a yearly operational budget of over \$10 million. He has been investigator on over \$9 million worth of funded research in his career with research and teaching interests that include front end planning, organizational change, asset management, alternative dispute resolution and risk management; he has received many awards for excellence including CII's Outstanding Researcher award in 1996 and 2004, and CII's Outstanding Instructor award in 1998 and 2014. He is the developer of the CII Project Definition Rating Index tools, the Alignment Thermometer, and the Integrated Project Risk Assessment (IPRA) tool among others. He is an elected member of the National Academy of Construction and a Fellow in the American Society of Civil Engineers.



Building Smarter City through Big Data - Best Practices in Seoul Metropolitan Gov.

Ki-Byoung KIM

Seoul Metropolitan Government (Korea)

He is CDO(Chief Data Officer), a director of Data & Statistics Division, Seoul Metropolitan Government (SMG) and has been leading big data, open data initiative and statistics of SMG since Jan. 2015. Previously, he was a director of Information Systems Division, SMG and led administration IT system and porta as well as big data initiatives in SMG. He successfully carried out solution & technology group leader, product planning manager and business development manager in LGE and took a marketing leader and project manager roles for various e-government for the government, business intelligence projects for major banks and security companies in Hewlett-Packard. He is an opinion leader in ICT industry and takes a various roles in IT associations such as a board member of Korea statistics promotion institute, a former board member of Korean Institute of Information Scientist and Engineers, an editorial board member, a former vice chair of editorial board of Korea Information Processing Society communication journal. He graduated from Dept. of Computer Science & Statistics, Seoul National University (BS) and a graduate school of Seoul National University (MS). He was a visiting researcher of Fraunhofer institute(GMD) in Darmstadt, Germany, and, a visiting researcher of Electronics Technology Lab in Tsukuba, Japan.



Setting the New Trends for BIM in Construction: Productivity, Performance, Competitiveness, and Innovation

Xiangyu WANG

Curtin University (Australia)

Professor Xiangyu Wang holds the position of Curtin-Woodside Chair Professor for Oil, Gas & LNG Construction and Project Management, and is the Curtin Director of the Australasian Joint Research Centre for Building Information Modelling (BIM). Professor Wang is an internationally recognised leading researcher in the field of Construction IT, BIM, Lean, Visualisation Technologies, Project Management, and Training, having obtained over AUD \$5 million in research funds and published over 300 peer-reviewed technical papers. He is the Chair of the Australian National Committee of the International Society in Computing in Civil and Building Engineering. He has presented over 20 keynote speeches at international and industrial conferences on BIM, construction and project management, VR and AR research and practice. He is Editor-in-Chief of Visualization in Engineering which is an international research journal hosted by Springer-Verlag. His work with Woodside Energy Ltd. and other industries wins numerous awards including Runner-Up of the 2012 Curtin Commercial Innovation Award.

Invited Session

Special Sessions

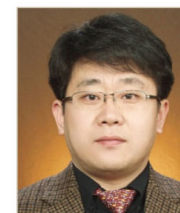
Special Session 1

Workshop: LEAN Construction, Fabrication and Maintenance in Oil & Gas Industry

Date & Time: Oct. 13 (Tue), 10:30-11:45

Venue: Grand Ballroom 3 (2F)

Organizers



Jae Myung LEE

*Pusan National University
Korea*



Lean Construction: State of the Art and Future Trends from the Australian Perspective*

Xiangyu WANG

*Curtin University
Australia*

*Prof. Xiangyu Wang is a session organizer and a speaker of special session 1.

Speakers



Development of Automatic Dimensional Quality Control System for Lean Production in Design Phase of Shipbuilding

Hojung KIM

*Samsung Heavy Industries Co., Ltd.
Korea*



FLNG Gas Trial for Nearshore Commissioning

Herbert MOON

*Daewoo Shipbuilding and Marine Engineering, Ltd.
Korea*

Invited Session

Special Session 2

Global EPC Business Model for Assembly and Process Plant of Automobile Industry - Towards A New Market Driver

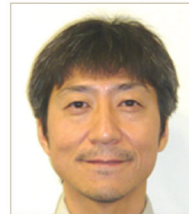
Date & Time: Oct. 13 (Tue), 10:30-11:45
Venue: Sydney Room (2F)

Organizer



Beom Yong SUNG
Chung-Ang University
Korea

Speakers



The Global Standard Realizing Process of Automobile Assembly Facility

Tomoo NASHIMOTO
TAKENAKA EUROPE GmbH
Japan



Global Standard Realizing Process of Automobile Assembly Line

Sang Weon LEE
Hyundai Architects & Engineers Associates Co., Ltd.
Korea



The Global Standard Realizing Process of Tire Production Facility and Process Line

Takeshi SUZUKI
TAKENAKA EUROPE GmbH
Japan

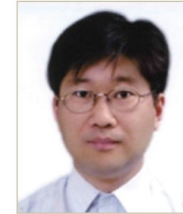
Invited Session

Special Session 3

Global PPP Experiences in International Development Cooperation

Date & Time: Oct.13 (Tue), 13:00-14:20
Venue: Sydney Room (2F)

Organizer



Young-Tae KIM
Ministry of Land, Infrastructure and Transport (MOLIT)
Korea

Speakers



Green Growth as a Mechanism to Achieve Sustainable Development - Taking a Holistic Innovative Approach

Eun Joo Allison YI
The World Bank Group
United States



Public-Private Partnerships in International Development Cooperation: Avoiding the Pitfalls to Make a Difference

Kattie LUSSIER
Hankuk University of Foreign Studies
Korea



Lessons Learned from Multinational Parties Involved Program Management Consortiums in Korea

Ok-Yeol KO
Se-Jong University & To-Moon A/E
Korea

Invited Session

Special Session 4

Emerging Big Data Paradigms in the AEC Industry

Date & Time: Oct. 13 (Tue), 14:50-16:05
Venue: Sydney Room (2F)

Organizer



Urban Informatics: Using Big Data for City Scale Analytics*

Bonsang KOO

Seoul National University of Science and Technology
Korea

* Prof. Bonsang Koo is a session organizer and speaker of special session 4.

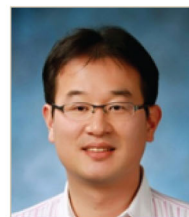
Speakers



Creating Knowledge from Construction Documents Using Text Mining

Seokho CHI

Seoul National University
Korea



A Multilevel Project-Oriented Risk-Mining Framework for Overseas Construction Projects

JeongWook SON

Ewha Womans University
Korea



Forecasting Housing Demand with Big Data

Do Hyoungh SHIN

Inha University
Korea



Development of International Project Risk Index (IPRI)

Wi Sung YOO

Construction Economy Research Institute of Korea
Korea

Invited Session

Special Session 5

Research Studies from Land & Housing Institute (LHI)

Date & Time: Oct. 13 (Tue), 16:15-17:30
Venue: Sydney Room (2F)

Organizer



Hyo-Jin KIM

Land & Housing Institute
Korea

Speakers



Developing an Urban Planning Model for Climate Change Adaptation

Jooho RHIM

Land & Housing Institute
Korea



Low Impact Urban Development for Climate Change and Natural Disaster Prevention

Jung-Min LEE

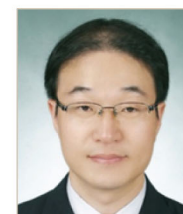
Land & Housing Institute
Korea



Establishment of Disaster Response and Safety Management Systems in LH

Sang-Yeon KIM

Land & Housing Institute
Korea



Requirements for Effective Program Management of Public Owners

Sanghoon SONG

Land & Housing Institute
Korea



Optimal Implementation Strategies of Building Information Modeling for Construction Projects of LH

Ji-Eun LEE

Land & Housing Institute
Korea

Daily Program

Opening Ceremony Time: 08:30-08:40 Venue: Grand Ballroom 1~4 (2F)

KS-01 Keynote Session 1 Time: 08:40-10:00
Chair: June Seong YI (Ewha Womans University, Korea) Venue: Grand Ballroom 1~4 (2F)

- 08:40-09:05 **Safety Leadership in Construction**
Dongping FANG (Tsinghua University, China)
- 09:05-09:30 **Present and Future of Risk Management of Construction Practice in Asia**
Tsunemi WATANABE (Kochi University of Technology / JSCE (Japan Society of Civil Engineers), Japan)
- 09:30-09:55 **Managing Mega-Project Complexity in Five Dimensions**
Douglas D. GRANSBERG (Iowa State University, United States)

Coffee Break & Poster Viewing Time: 10:00-10:30 Venue: Sicily Room (1F)

OP-01 Schedule and Cost Management I Time: 10:30-11:45
Chair: H. David JEONG (Iowa State University, United States) Venue: Grand Ballroom 1 (2F)

- 10:30-10:42 **FP-001 Construction Workers Fall Accidents from Scaffolding in Gaza Strip**
Adnan ENSHASSI (Islamic University of Gaza, Palestinian National Authority)
Sobhy SHAKALAIH
- 10:42-10:54 **FP-069 Project Cost Management in Construction Industry in Ho Chi Minh City**
Kiet NGUYEN TUAN (Pukyong National University, Vietnam)
Truong-Van LUU, Soo Yong KIM, Tam LE THUONG
- 10:54-11:06 **FP-103 Cost Normalization Procedure for Phase-Based Performance Measurement**
Youngcheol KANG (University of Seoul, Korea)
Sungmin YUN, Jiyong CHOI, Daniel OLIVEIRA, Stephen MULVA
- 11:06-11:18 **FP-161 Spatiotemporal Visualization of Unit Price Data of Highway Projects**
H. David JEONG (Iowa State University, United States)
Deepanshi JAIN, Joseph SHRESTHA
- 11:18-11:30 **FP-215 Causes of Delay in Construction Projects in Bangladesh**
Adel ALSHIBANI (King Fahd University of Petroleum and Minerals, Saudi Arabia)
Bambang Trigunaryah SUHARIADI, Mohammad Saiful ISLAM, Mohammad HASSANAIN, Sadi ASSAF

OP-02 Risk and Safety Management I Time: 10:30-11:45
Chair: Brian GUO (The University of Auckland, New Zealand) Venue: Grand Ballroom 2 (2F)

- 10:30-10:42 **FP-016 Visualization Based Building Anatomy Model for Construction Safety Education**
Hai Chien PHAM (Chung-Ang University, Korea)
Chansik PARK, Quang Tuan LE
- 10:42-10:54 **FP-017 Study on the Safe Evacuation Management in the Power Supply Disturbed Emergency**
Nobuyuki SUZUKI (Toyo University, Japan)
James WHORLOW, Tsubasa OHASHI
- 10:54-11:06 **FP-037 A System Dynamics View of Safety Management in Small Construction Companies**
Brian GUO (The University of Auckland, New Zealand)
Tak Wing YIU, Vicente GONZÁLEZ
- 11:06-11:18 **FP-058 A View from the Bottom: Project-oriented Risk Mining Approach for Overseas Construction Projects**
JeeHee LEE (Ewha Womans University, Korea)
JeongWook SON, June Seong YI

Daily Program

- 11:18-11:30 **FP-093 Estimating the Physical Demand Level of Waterproofing Activity**
Taekyung LIM (Kyungpook National University, Korea)
Dong Eun LEE
- 11:30-11:42 **FP-210 A Study of Non-Working Days Estimation in the High-rise Construction with Wind Load Data by Radiosonde**
Sehoon KIM (Sungkyunkwan University, Korea)
Yeasang KIM, Seunghoon PARK, Jisoo YANG

OP-03 Building Information Model I Time: 10:30-11:45
Chair: Sangyoon CHIN (Sungkyunkwan University, Korea) Venue: Grand Ballroom 3 (2F)

- 10:30-10:42 **FP-011 Application of BIM on Quantity Estimate for Reinforced Concrete and Formwork**
Ying-Mei CHENG (China University of Technology, Taiwan)
- 10:42-10:54 **FP-084 A Linked Data System Framework for Sharing Construction Defect Information**
Doyeop LEE (Chung-Ang University, Korea)
Chansik PARK
- 10:54-11:06 **FP-186 Key Indicators for Evaluating BIM Collaboration Performances**
Lou SACCHETTINI (Seoul National University, France)
Jin Gang LEE, Hyun-soo LEE, Moonseo PARK
- 11:06-11:18 **FP-245 Exploring a BIM-based Approach of Project Management**
Feng XIONG (Sichuan University, China)
Xiaozhi MA, Na DONG
- 11:18-11:30 **FP-294 Developing a 3D BIM for Earthwork Construction**
Sungwoo MOON (Pusan National University, Korea)

OP-04 Local or International Issues in Construction I Time: 10:30-11:45
Chair: Bon-Gang HWANG (National University of Singapore, Singapore) Venue: Sydney Room (2F)

- 10:30-10:42 **FP-009 International Construction Joint Ventures with Developing Countries: Singapore's Case for Risk Assessment and Allocation**
Bon-Gang HWANG (National University of Singapore, Singapore)
Xianbo ZHAO, Eileen Wei Yan CHIN
- 10:42-10:54 **FP-042 Survey of Korean CM Contracts for Current Status and Future Direction: Based on 1997 to 2013 Statistics**
Jiwon HA (Myongji University, Korea)
Youngsoo JUNG, Jong soon PARK
- 10:54-11:06 **FP-137 Construction Industry Maturity Model**
Byung-Ki KWON (Seoul National University, Korea)
Kwang-Pyo LEE, Moonseo PARK, Hyun-Soo LEE
- 11:06-11:18 **FP-226 Analysis of Factor Affecting for Improving Construction Engineering Market**
Junho PARK (Kwangwoon University, Korea)
Jungho YU
- 11:18-11:30 **FP-299 Influence of National Culture on Staff Preferences to Knowledge Sharing Practices: the Case of Saudi Arabia**
Sherif MOHAMED (Griffith University, Australia)
Hassan AL HAZMI

Lunch Time: 11:45-13:00 Venue: Capri Room (2F)

Oct.
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The 6th International Conference on
Construction Engineering and Project Management

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The 6th International Conference on
Construction Engineering and Project Management

Daily Program

IPC Meeting Time: 11:45-13:00 Venue: Miami Room (2F)

KS-02 Keynote Session 2 Time: 13:00-14:20 Venue: Grand Ballroom 1~4 (2F) Chair: Youngki HUH (Pusan National University, Korea)

- 13:00-13:25 Looking Back at the History of CEPM in Asian Countries Dongwoo SHIN (Ajou University, Korea)
- 13:25-13:50 Identifying Unsafe Habits of Construction Workers based on Real-time Location Heng LI (The Hong Kong Polytechnic University, Hong Kong, China)
- 13:50-14:15 Overseas Construction Industry and International Development Cooperation - Korean Experience Man-Hee HAN (University of Seoul, Korea)

Coffee Break & Poster Viewing Time: 14:20-14:50 Venue: Sicily Room (1F)

OP-05 Schedule and Cost Management II Time: 14:50-16:05 Venue: Grand Ballroom 1 (2F) Chair: Dong Eun LEE (Kyungpook National University, Korea)

- 14:50-15:02 FP-050 Critical Factors Causing Delay on State-funded Construction Projects in Vietnam Kiet NGUYEN TUAN (Pukyong National University, Vietnam) Truong-Van LUU, Soo Yong KIM, Thanh-Long NGUYEN, Nguyen-The-Thanh PHAM
- 15:02-15:14 FP-104 Exact Activity Overlapping Method for Time-cost Tradeoff Han-Seong GWAK (Kyungpook National University, Korea) Dong Eun LEE
- 15:14-15:26 FP-106 Quantifying Monetary Value of Float Young Jun PARK (Kyungpook National University, Korea) Dong Eun LEE
- 15:26-15:38 FP-109 Stochastic Time-Cost Tradeoff Using Genetic Algorithm Hyung-Guk LEE (Kyungpook National University, Korea) Dong Eun LEE
- 15:38-15:50 FP-185 Task-Technology Fit in Construction Scheduling Juneseok YANG (Illinois Institute of Technology, United States) David ARDITI

OP-06 Risk and Safety Management II Time: 14:50-16:05 Venue: Grand Ballroom 2 (2F) Chair: Yong Han AHN (Hanyang University, Korea)

- 14:50-15:02 FP-022 Credit Enhancement and Its Risk Factors of IPP Projects in Asia: an Analysis by Network Theory Abu Naser CHOWDHURY (University of Asia Pacific, Bangladesh)
- 15:02-15:14 FP-073 A Study of the Health and Safety Management Practices of Contractors in Southern Vietnam Manh Van PHUNG (University of the West of England, United Kingdom) Patrick MANU, Abdul-Majeed MAHAMADU
- 15:14-15:26 FP-150 Analyzing Construction Workers' Recognition of Hazards by Estimating Visual Focus of Attention Yihai FANG (Georgia Institute of Technology, United States) Yong kwon CHO
- 15:26-15:38 FP-177 Applying Unit Modular In-Fill Construction Method for High-Rise Buildings Sang-Deok MOON (Seoul National University of Science and Technology, Korea) Jong-Ho OCK, Ha-Yan JANG

Daily Program

- 15:38-15:50 FP-183 Understanding the Relationship between Construction Workers' Psychological Conditions and Safety Factors Soram LIM (Seoul National University, Korea) Seokho CHI
- 15:50-16:02 FP-266 Developing of Construction Project Risk Analysis Framework by Claim Payout and Its Application Yeong Jin YU (University of Ulsan, Korea) Ji-Myong KIM, Young-Jae KIM, Young Jun PARK

OP-07 Building Information Model II Time: 14:50-16:05 Venue: Grand Ballroom 3 (2F) Chair: Seongah KIM (Sungkyunkwan University, Korea)

- 14:50-15:02 FP-108 BIM for Constnuction Quality Record Sang-Hyuk SON (Kyungpook National University, Korea) Dong Eun LEE
- 15:02-15:14 FP-155 Automated Safety Planning of Scaffolding-Related Hazards in Building Information Modeling (BIM) Yong Kwon CHO (Georgia Institute of Technology, United States) Kyungki KIM
- 15:14-15:26 FP-159 A Case Study on Assessing the Productivity of a BIM Team in a Construction Company Chien-Hsun HUANG (National Taiwan University, Taiwan) Shang-Hsien HSIEH
- 15:26-15:38 FP-197 How Much Discrepancy Can Happen from the BIM-based Quantity Take? Seongah KIM (Sungkyunkwan University, Korea) Sangyoon CHIN
- 15:38-15:50 FP-200 BIM Application Process for Facility Condition Assessment Documentation Work Seung Eun YOO (Kwangwoon University, Korea) JungHo YU

OP-08 Local or International Issues in Construction II Time: 14:50-16:05 Venue: Sydney Room (2F) Chair: JeongWook SON (Ewha Womans University, Korea)

- 14:50-15:02 FP-081 A Study on the Improvement of Construction Building Standard Specifications in Korea Hyosoo MOON (Seoul National University, Korea) Bo-Sik SON, Hyun-Soo LEE, Eunbae KIM, Moonseo PARK, Joseph AHN
- 15:02-15:14 FP-181 Investing for the Future: Developing Strategic Roadmap and Action Plans for Southeast Asian Construction Markets Hwikyung CHUN (Seoul National University, Korea) Seokho CHI, Heesung CHA, Jinhyuk YOO
- 15:14-15:26 FP-187 Preliminary Study on Market Risk Prediction Model for International Construction Using Fractal Analysis Seonghyeon MOON (Seoul National University, Korea) Duyon KIM, Seokho CHI
- 15:26-15:38 FP-196 A Study on Classifications and Characteristics of Declined Rural Area in Chungcheong Region Jinhee JO (Chungbuk National University, Korea) Hyungkeun PARK
- 15:38-15:50 FP-207 Analysis of Business Implementation Strategy and Construction Management Techniques in Spearheading Overseas Construction Kyungrog PARK (Ewha Womans University, Korea) June Seong YI

Break Time: 16:05-16:15

Daily Program

OP-09 Schedule and Cost Management III			Time: 16:15-17:30
Chair: Adel ALSHIBANI (King Fahd University of Petroleum & Minerals, Saudi Arabia)			Venue: Grand Ballroom 1 (2F)
16:15-16:27	FP-096	Optimizing Construction Alternatives for Scheduling Repetitive Units Sang Min PARK (Kyungpook National University, Korea) Dong Eun LEE	
16:27-16:39	FP-098	Delay Factors Affecting the Completion of the Government Construction Projects in Vietnam Thanhviet NGUYEN (Pukyong National University, Vietnam) Soo Yong KIM, Truong-Van LUU	
16:39-16:51	FP-114	Stochastic Scheduling for Repetitive Construction Project Hong chul LEE (Kyungpook National University, Korea) Dong Eun LEE	
16:51-17:03	FP-292	A Stochastic Linear Scheduling Method Using Monte Carlo Simulation Chase SODERLUND (Illinois State University, United States) Borinara PARK	
17:03-17:15	FP-304	Forecasting Project Cost and Time Using Fuzzy Set Theory and Contractors' Judgment Adel ALSHIBANI (King Fahd University of Petroleum & Minerals, Saudi Arabia)	

OP-10 Organization System and Social Issues of Construction			Time: 16:15-17:30
Chair: Boong Yeol RYOO (Texas A&M University, United States)			Venue: Grand Ballroom 2 (2F)
16:15-16:27	FP-018	Individual Factors Influence on Client Involvement: the Case Construction Projects in Saudi Arabia Bambang Trigunaryah SUHARIADI (King Fahd University of Petroleum and Minerals, Saudi Arabia) Sultan ALSOLAIMAN	
16:27-16:39	FP-169	Indicators for Assessing Neighbourhood Satisfaction in State Provided Housing in South Africa Clinton AIGBAVBOA (University of Johannesburg, South Africa, Republic of) Wellington THWALA	
16:39-16:51	FP-231	Scenario-based Learning: Experiences from Construction Management Courses Benson T.H. LIM (University of New South Wales, Australia) Bee OO	
16:51-17:03	FP-287	Project Learning Enablers within Fragmented Construction Projects Ali ALASHWAL (University of Malaya, Malaysia)	

OP-11 Building Information Model III			Time: 16:15-17:30
Chair: Sangwon HAN (University of Seoul, Korea)			Venue: Grand Ballroom 3 (2F)
16:15-16:27	FP-202	Ontology-based Facility Maintenance Information Integration Model Using IFC-based BIM Data Karam KIM (Kwangwoon University, Korea) Jungho YU	
16:27-16:39	FP-237	A Study on the Development of BIM-based Quality Pre-checking System in Architecture Design Phase Jihye SHIN (Kyung Hee University, Korea) Jungsik CHOI, Inhan KIM	
16:39-16:51	FP-241	Schematic Estimation Process Using Architectural Object BIM Library Jiyong LEE (Kyung Hee University, Korea) Inhan KIM, Jungsik CHOI	
16:51-17:03	FP-301	Quantifying Values from BIM-projects Life Cycle with Cloud-based Computing Michelle Mang Syn CHOI (Kyung Hee University, Hong Kong, China) Inhan KIM	

Daily Program

OP-12 Local or International Issues in Construction III			Time: 16:15-17:30
Chair: Jeung-Hwan DOH (Griffith University, Australia)			Venue: Sydney Room (2F)
16:15-16:27	FP-006	A Relationship of Managing Impacts of FOREX Fluctuations and Organizational Capabilities in Construction Business Mohd Amizan MOHAMED (Queensland University of Technology, Australia)	
16:27-16:39	FP-019	Assessing Indonesian Construction Regulations on Quality and Performance Debby WILLAR (Manado State Polytechnic, Indonesia) Robert J. M MANDAGI, Rilya RUMBAYAN, Selfy MANUEKE	
16:39-16:51	FP-253	Utilizing SWOT Model to Define a Strategy for the Korean Construction Companies in Preparation of the Changes in the Global Construction Market Hwarang KIM (Seoul National University of Science and Technology, Korea) Hyouonseung JANG	
16:51-17:03	FP-298	Organisational Innovation Diffusion: the Case of Saudi Arabian Project-based Organisations Sherif MOHAMED (Griffith University, Australia) Abdulaziz ALGHADEER	
17:03-17:15	FP-316	Data-Driven Approaches for Evaluating Countries in the International Construction Market Kang-Wook LEE (Yonsei University, Korea) Seung Heon HAN	

Daily Program

KS-03 Keynote Session 3		Time: 08:40-10:00
Chair: Jongwon SEO (Hanyang University, Korea)		Venue: Grand Ballroom 1~4 (2F)
08:40-09:05	Global Collaboration During Front End Planning of Capital Projects Edward G. GIBSON (Arizona State University, United States)	
09:05-09:30	Building Smarter City through Big Data - Best Practices in Seoul Metropolitan Gov. Ki-Byoung KIM (Seoul Metropolitan Government, Korea)	
09:30-09:55	Setting the New Trends for BIM in Construction: Productivity, Performance, Competitiveness, and Innovation Xiangyu WANG (Curtin University, Australia)	
Coffee Break & Poster Viewing		Time: 10:00-10:30 Venue: Sicily Room (1F)
OP-13 Sustainable Construction and Green Building I		Time: 10:30-11:45
Chair: Younghan JUNG (Old Dominion University, United States)		Venue: Grand Ballroom 1 (2F)
10:30-10:42	FP-036 Understanding College Students' Perception of Green Building Products Younghan JUNG (Old Dominion University, United States) Carol CONSIDINE, Myung Goo JEONG	
10:42-10:54	FP-060 A Study on Analyzing the Factors Affecting Environmental Loads in the Planning Stage of Korean National Highway Projects June-Seok PARK (Kyungpook National University, Korea) Byung-Soo KIM, Jin-Young PARK, Myeong-Jin KIM, Sang-Ryong KIM	
10:54-11:06	FP-095 LOTUS: a Vietnamese Green Building Rating System and Implementation Issues Chau Ngoc DANG (Pukyong National University, Korea) Young Dai LEE, Duy Hung NGUYEN, Long LE-HOAI, Sun Ho LEE	
11:06-11:18	FP-176 Assessing Awareness, Understanding, Construction Practices and Innovation Towards Green Construction Afzan AHMAD ZAINI (Universiti Teknologi MARA, Malaysia) Intan Rohani ENBUT	
11:18-11:30	FP-291 Bayesian Theorem-based Prediction of Success in Building Commissioning Borinara PARK (Illinois State University, United States)	
OP-14 Automation and Data Sensing I		Time: 10:30-11:45
Chair: Julian KANG (Texas A&M University, United States)		Venue: Grand Ballroom 2 (2F)
10:30-10:42	FP-030 Spatiotemporal Impact Assessments of Highway Construction: Autonomous SWAT Modeling Junseo BAE (Texas A&M University, United States) Kunhee CHOI	
10:42-10:54	FP-076 Challenges and Suggestions in Dealing with Flexible Space in Predicting Space Utilization Xingbin CHEN (City University of Hong Kong, Hong Kong, China) Tae Wan KIM	
10:54-11:06	FP-174 Robust Real-time Object Detection on Construction Sites Using Integral Channel Features Jinwoo KIM (Seoul National University, Korea) Seokho CHI	
11:06-11:18	FP-188 Small Unmanned Aerial System (SUAS) for Automating Concrete Crack Monitoring: Initial Development Julian KANG (Texas A&M University, United States) Byeong Cheol LHO, Jong Woo KIM, Sang Hyuk NAM	
11:18-11:30	FP-244 Vision-Based Identification of Personal Protective Equipment Wearing Man-Woo PARK (Myongji University, Korea) Zhenhua ZHU	

Daily Program

SS-01 Workshop: LEAN Construction, Fabrication and Maintenance in Oil & Gas Industry		Time: 10:30-11:45
Chairs: Xiangyu WANG (Curtin University, Australia) Jae Myung LEE (Pusan National University, Korea)		Venue: Grand Ballroom 3 (2F)
10:30-10:55	Lean Construction: State of the Art and Future Trends from the Australian Perspective Xiangyu WANG (Curtin University, Australia)	
10:55-11:20	Development of Automatic Dimensional Quality Control System for Lean Production in Design Phase of Shipbuilding Hojung KIM (Samsung Heavy Industries Co., Ltd., Korea)	
11:20-11:45	FLNG Gas Trial for Nearshore Commissioning Herbert MOON (Daewoo Shipbuilding and Marine Engineering Ltd., Korea)	
SS-02 Global EPC Business Model for Assembly and Process Plant of Automobile Industry - Towards A New Market Driver		Time: 10:30-11:45
Chair: Beom Yong SUNG (Chung-Ang University, Korea)		Venue: Sydney Room (2F)
10:30-10:55	The Global Standard Realizing Process of Automobile Assembly Facility Tomoo NASHIMOTO (TAKENAKA EUROPE GmbH, Japan)	
10:55-11:20	Global Standard Realizing Process of Automobile Assembly Line Sang Weon LEE (Hyundai Architects & Engineers Associates Co., Ltd., Korea)	
11:20-11:45	The Global Standard Realizing Process of Tire Production Facility and Process Line Takeshi SUZUKI (TAKENAKA EUROPE GmbH, Japan)	
Lunch		Time: 11:45-13:00 Venue: Capri Room (2F)
OP-15 Sustainable Construction and Green Building II		Time: 13:00-14:20
Chair: Youngjib HAM (Florida International University, United States)		Venue: Grand Ballroom 1 (2F)
13:00-13:12	FP-010 Schedule Management for Green Building Projects in Singapore: Schedule Delay, Causal Factors and Solutions Bon-Gang HWANG (National University of Singapore, Singapore) Xianbo ZHAO, Lay Peng LEONG	
13:12-13:24	FP-100 Updating BIM: Reflecting Thermographic Sensing in BIM-based Building Energy Analysis Youngjib HAM (University of Illinois at Urbana-Champaign, United States) Mani GOLPARVAR-FARD	
13:24-13:36	FP-107 Optimization of Earthwork Operation for Energy-saving Using Discrete Event Simulation Chang Yong YI (Kyungpook National University, Korea) Dong Eun LEE	
13:36-13:48	FP-111 A Methodology of Optimal Design for Solar Heating and Cooling System Using Simulation Tools Dong Kyu LEE (Hyundai Engineering & Construction, Korea) Byoung Doo LEE, Dae-Oh KANG, Hyun-Min NAM, Kinam KANG	
13:48-14:00	FP-251 An Information Model to Facilitate Sustainable Design of Building Projects in the UAE Essam ZANELDIN (United Arab Emirates Univiersity, United Arab Emirates)	

Daily Program

OP-16 Automation and Data Sensing II			Time: 13:00-14:20
Chair: Man-Woo PARK (Myongji University, Korea)			Venue: Grand Ballroom 2 (2F)
13:00-13:12	FP-090	Information Requirements for Model-based Monitoring of Construction Via Emerging Big Visual Data and BIM Mani GOLPARVAR-FARD (University of Illinois at Urbana-Champaign, United States) Kevin HAN	
13:12-13:24	FP-151	Advance Crane Lifting Safety through Real-time Crane Motion Monitoring and Visualization Yihai FANG (Georgia Institute of Technology, United States) Yong Kwon CHO	
13:24-13:36	FP-236	Activity Segmentation and 3D-Visualization of Pusher-Loaded Earthmoving Operations from Position Data SangHyung AHN (The University of Queensland, Australia) Julio C. MARTINEZ, Phillip S. DUNSTON, Amr KANDIL	
13:36-13:48	FP-273	Construction Site Scene Understanding: a 2D Image Segmentation and Classification Hongjo KIM (Yonsei University, Korea) Hyoungkwan KIM, Susie HA, Sungjae PARK	
13:48-14:00	FP-305	Architecture for Integrated Real-Time Health Monitoring Using Wireless/Mobile Devices Boong Yeol RYOO (Texas A&M University, United States) Kunhee CHOI	
14:00-14:12	FP-322	Developing a Safety Scaffold Monitoring System Using Wireless Sensor Network Technology Han-Tang HUANG (National Taiwan University, Taiwan) H. Ping TSERNG, Hung-Jui HUANG, Xin-Yan LI	

OP-17 Contract and Industrial Application			Time: 13:00-14:20
Chair: Jinu KIM (University of New South Wales, Australia)			Venue: Grand Ballroom 3 (2F)
13:00-13:12	FP-056	Study on the Analysis of Domestic Construction Management Orders Jaeho CHO (Dankook University, Korea) Jae Youl CHUN, Changhyun SHIN, Kyunghwan ANN, Keunwon LEE, Jongsoon PARK	
13:12-13:24	FP-067	What Is a Critical Factor for Determining the Issue-Resolving Time in the BIM-based Coordination Process? Sejun JANG (Hyundai Engineering & Construction, Korea) Ghang LEE, Dongmin LEE	
13:24-13:36	FP-252	Adjudication in Australia: a Study of Adjudication Activity in New South Wales for 2013/14 Jinu KIM (University of New South Wales, Australia) Michael BRAND	
13:36-13:48	FP-275	A Production-Installation Simulation Model of Free-Form Concrete Panels Jeeyoung LIM (Kyung Hee University, Korea) Sunkuk KIM, Donghoon LEE	
13:48-14:00	FP-286	Recycled Concrete Aggregate in Structural Concrete of Developing Nation: a Case Study of Ethiopian Construction Industry Mitiku DAMTIE (Bahir Dar University, Ethiopia) Asregedew WOLDESENBET	

SS-03 Global PPP Experiences in International Development Cooperation			Time: 13:00-14:20
Chair: Young-Tae KIM (Ministry of Land, Infrastructure and Transport, Korea)			Venue: Sydney Room (2F)
13:00-13:25		Green Growth as a Mechanism to Achieve Sustainable Development – Taking a Holistic Innovative Approach Eun Joo Allison YI (The World Bank Group, United States)	
13:25-13:50		Public-Private Partnerships in International Development Cooperation: Avoiding the Pitfalls to Make a Difference Kattie LUSSIER (Hankuk University of Foreign Studies, Korea)	
13:50-14:15		Lessons Learned from Multinational Parties Involved Program Management Consortiums in Korea Ok-Yeol KO (Se-Jong University & To-Moon AVE, Korea)	

Coffee Break & Poster Viewing	Time: 14:20-14:50	Venue: Sicily Room (1F)
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Daily Program

OP-18 Sustainable Construction and Green Building III			Time: 14:50-16:05
Chair: Yong Han AHN (Hanyang University, Korea)			Venue: Grand Ballroom 1 (2F)
14:50-15:02	FP-046	Who Occupies the Green Building: a Case of Australia Sumin KIM (University of New South Wales, Australia) Benson T.H. LIM, Jinu KIM	
15:02-15:14	FP-143	A Study on the Supply Process of Unit Modular Housing through a Comparison of Cases Young Hun JUN (Korea Institute of Civil Engineering and Building Technology, Korea) Kyoong Tai KIM	
15:14-15:26	FP-230	Comparison of the Performance of Clustering Analysis Using Data Reduction Techniques to Identify Energy Use Patterns in Buildings Kwonsik SONG (Seoul National University, Korea) Joseph AHN, Hyun-Soo LEE, Moonseo PARK	
15:26-15:38	FP-319	The Contribution of Column Optimization on the Embodied Energy Performance of Concrete Framed Buildings Jeung-Hwan DOH (Griffith University, Australia) Tim PETERS, Dane MILLER, Nhat Minh HO	

OP-19 Productivity and Performance Management I			Time: 14:50-16:05
Chair: Adnan ENSHASSI (Islamic University of Gaza, Palestinian National Authority)			Venue: Grand Ballroom 2 (2F)
14:50-15:02	FP-002	Key Motivating Factors Affecting Skilled Workers' Productivity in Construction Projects Adnan ENSHASSI (Islamic University of Gaza, Palestinian National Authority) Mahdi MAHDI	
15:02-15:14	FP-025	Methods for Reviewing Constructability of Nuclear Power Plants Utilizing a Data-based Technology Woojoong KIM (Korea Hydro & Nuclear Power Plant Corporation, Korea) Byung-ki LIM, Su Jin BYON	
15:14-15:26	FP-051	Design-Build Change Order Impacts in Highway Projects Kyeong Rok RYU (Texas A&M University, United States) Boong Yeol RYOO, Kunhee CHOI, Julian KANG	
15:26-15:38	FP-055	The Preliminary Feasibility on Big Data Analytic Application in Construction Yongho KO (Inha University, Korea) Seungwoo HAN, Hyerin LEE, Minha PARK	
15:38-15:50	FP-072	Investigating the Construction Industry from Key Performance Measurements Junseo BAE (Texas A&M University, United States) Kyeong Rok RYU, Kunhee CHOI	
15:50-16:02	FP-116	Modeling Laborers' Learning Processes in Construction: Focusing on Group Learning Bogyeong LEE (Seoul National University, Korea) Hyun-Soo LEE, Moonseo PARK	

OP-20 Facility and Infrastructure Management			Time: 14:50-16:05
Chair: Clinton AIGBAVBOA (University of Johannesburg, South Africa, Republic of)			Venue: Grand Ballroom 3 (2F)
14:50-15:02	FP-043	Critical Financial Variation of Ratios between Healthy and Workout Construction Firms Haekyung IM (Korea University of Technology and Education, Korea) Jaehyun CHOI	
15:02-15:14	FP-132	A Comparative Analysis on the Merits and Demerits in Domestic and Overseas Public Facilities Management (P-FM) Seung Wook YOON (Mokwon University, Korea) Chun Kyong LEE, Tae Keun PARK, JunYoung PARK	
15:14-15:26	FP-228	Public Building Value Evaluation Using Contingent Valuation Method Based on Market Value Estimation Jieun PARK (Kwangwoon University, Korea) Jungho YU	
15:26-15:38	FP-278	Implementing Application Tool of Life Cycle Cost Analysis (LCCA) for Highway Maintenance and Rehabilitation in California Eul-Bum LEE (Pohang University of Science and Technology, Korea) Chang Mo KIM	
15:38-15:50	FP-315	Government's Roles in Public Private Partnerships (PPP) Toll Road Projects Mohammad Arif ROHMAN (University of Melbourne, Australia) Christopher HEYWOOD, Hemanta DOLOI	

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SS-04 Emerging Big Data Paradigms in the AEC Industry		Time: 14:50-16:05
Chair: Bonsang KOO (Seoul National University of Science and Technology, Korea)		Venue: Sydney Room (2F)
14:50-15:05	Creating Knowledge from Construction Documents Using Text Mining <i>Seokho CHI (Seoul National University, Korea)</i>	
15:05-15:20	A Multilevel Project-Oriented Risk-Mining Framework for Overseas Construction Projects <i>JeongWook SON (Ewha Womans University, Korea)</i>	
15:20-15:35	Urban Informatics: Using Big Data for City Scale Analytics <i>Bonsang KOO (Seoul National University of Science and Technology, Korea)</i>	
15:35-15:50	Forecasting Housing Demand with Big Data <i>Do Hyung SHIN (Inha University, Korea)</i>	
15:50-16:05	Development of International Project Risk Index (IPRI) <i>Wi Sung YOO (Construction Economy Research Institute of Korea, Korea)</i>	

Break	Time: 16:05-16:15
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OP-21 Construction Engineering and Technologies		Time: 16:15-17:30
Chair: Hunhee CHO (Korea University, Korea)		Venue: Grand Ballroom 1 (2F)
16:15-16:27	FP-013 Front End Engineering and Design (FEED) for Project Management of Thermal Power Plant Construction <i>Namjoon KIM (Myongji University, Korea)</i> Youngsoo JUNG	
16:27-16:39	FP-101 Success Factors for Partnering Implementation in Construction: a Survey from Vietnam <i>Chau Ngoc DANG (Pukyong National University, Korea)</i> Soo Yong KIM, Long LE-HOAI	
16:39-16:51	FP-121 Optimization of Luffing-Tower Crane Location in a Tall Building Construction <i>Dongmin LEE (Korea University, Korea)</i> Hunhee CHO, Taehoon KIM, Hyunsu LIM, Kyung-In KANG	
16:51-17:03	FP-232 Virtual Reality and Augmented Reality - a New Approach for Construction Safety Education <i>Quang Tuan LE (Chung-Ang University, Korea)</i> Chansik PARK, Chung Rok LIM, Hai Chien PHAM	
17:03-17:15	FP-274 Automatic Panelizing Algorithms of Free-form Buildings <i>Donghoon LEE (Kyung Hee University, Korea)</i> Sunkuk KIM, Jeeyoung LIM	

OP-22 Productivity and Performance Management II		Time: 16:15-17:30
Chair: Youngcheol KANG (University of Seoul, Korea)		Venue: Grand Ballroom 2 (2F)
16:15-16:27	FP-190 Virtual Design and Construction (VDC)-Aided System for Logistics Monitoring: Supply Chains in Liquefied Natural Gas (LNG) Plant Construction <i>Xiangyu WANG (Curtin University, Australia)</i> Sungkon MOON, John FORLANI, Hung-Lin CHI	
16:27-16:39	FP-205 10-10 Project Campaign: 10 Input Measures Influencing Project Outcomes <i>Youngcheol KANG (University of Seoul, Korea)</i> Jiyong CHOI, Sungmin YUN, Stephen MULVA, Daniel OLIVEIRA	
16:39-16:51	FP-216 Current Practices of Collecting and Utilizing Daily Work Report Data and Areas for Improvements <i>H. David JEONG (Iowa State University, United States)</i> Krishna SHRESTHA, Douglas D. GRANSBERG	

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16:51-17:03	FP-238 An Empirical Study on the Applicability of Growth-share Matrix in the Construction Industry <i>Seulbi LEE (Seoul National University, Korea)</i> Moonseo PARK, Hyun-Soo LEE	
17:03-17:15	FP-283 A Decision Support System for Small & Medium Construction Companies (SMCCs) at the Early Stages of International Projects <i>Chan young PARK (Yonsei University, Korea)</i> Seung Heon HAN, Geunouk HWANG, Woosik JANG, Kang-Wook LEE	
17:15-17:27	FP-314 A System for Evaluating the Overseas Business Capability of Small & Medium Construction Companies <i>Changjun LEE (Yonsei University, Korea)</i> Seung Heon HAN, Woosik JANG	

OP-23 Simulation and Visualization		Time: 16:15-17:30
Chair: Tae Wan KIM (City University of Hong Kong, Hong Kong, China)		Venue: Grand Ballroom 3 (2F)
16:15-16:27	FP-024 A Prototype of Distributed Simulation for Facility Restoration Operation Analysis through Incorporation of Immediate Damage Assessment <i>Minji CHOI (Seoul National University, Korea)</i> Sungjoo HWANG, SangHyun LEE, Richmond STARBUCK, Moonseo PARK	
16:27-16:39	FP-065 Labor Vulnerability Assessment through Electroencephalogram Monitoring: a Bispectrum Time-frequency Analysis Approach <i>Jiayu CHEN (City University of Hong Kong, Hong Kong, China)</i>	
16:39-16:51	FP-119 Individual Behavioral Competences for Construction Project Risk Manager <i>Kwang-Pyo LEE (Seoul National University, Korea)</i> Byung-Ki KWON, Moonseo PARK, Hyun-Soo LEE, Hosang HYUN	
16:51-17:03	FP-122 Development of a Project Schedule Simulation System by a Synchronization Methodology of Active nD Object and Real Image of Construction Site <i>Hyeonseung KIM (Gyeongsang National University, Korea)</i> Leen-Seok KANG, Sangmi PARK, Jongmyeong SHIN	
17:03-17:15	FP-141 Agent-based Lift Operation Group Operation Optimization Model in High-rise Building Construction <i>Minhyuk JUNG (Seoul National University, Korea)</i> Hyun-Soo LEE, Moonseo PARK	
17:15-17:27	FP-290 Towards More Accurate Space-Use Prediction: a Conceptual Framework of an Agent-Based Space-Use Prediction Simulation System <i>Tae Wan KIM (City University of Hong Kong, Hong Kong, China)</i> Seung Hyun CHA	

SS-05 Research Studies from Land & Housing Institute (LHI)		Time: 16:15-17:30
Chair: Hyo-Jin KIM (Land & Housing Institute, Korea)		Venue: Sydney Room (2F)
16:15-16:30	Developing an Urban Planning Model for Climate Change Adaptation <i>Jooho RHIM (Land & Housing Institute, Korea)</i>	
16:30-16:45	Low Impact Urban Development for Climate Change and Natural Disaster Prevention <i>Jung-Min LEE (Land & Housing Institute, Korea)</i>	
16:45-17:00	Establishment of Disaster Response and Safety Management Systems in LH <i>Sang-Yeon KIM (Land & Housing Institute, Korea)</i>	
17:00-17:15	Requirements for Effective Program Management of Public Owners <i>Sanghoon SONG (Land & Housing Institute, Korea)</i>	
17:15-17:30	Optimal Implementation Strategies of Building Information Modeling for Construction Projects of LH <i>Ji-Eun LEE (Land & Housing Institute, Korea)</i>	

Closing Ceremony & Farewell Dinner	Time: 18:30 Venue: Capri Room (2F)
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Track 1: Construction Planning and Control

T1-1 Schedule and Cost Management

- EA-031 Web-based Daily Report for Data Repository of Standard Cost Data for Modernized Korean Housing (Hanok)**
Suji KIM (Myongji University, Korea)
 Youngsoo JUNG
- EA-035 Comparative Study on Similarity Measurement Methods in CBR Cost Estimation**
Kwonsik SONG (Seoul National University, Korea)
 Joseph AHN, Sae-Hyun Ji, Jeong Hoon LEE, Moonseo PARK, Hyun-Soo LEE, Sung Jin AHN, Sooyoung KIM, Kwonsik SONG
- EA-040 Development of Delay Responsibility Determination Model Based on the Probabilistic Risk Analysis**
Ji Hoon CHO (Dongguk University, Korea)
 Dong Yui LIM, Sang Bum KIM
- EA-068 Framework for Estimating Appropriate Construction Duration of CFRD in the Planning Phase ICCEPM**
In Kyum KIM (Chung-Ang University, Korea)
 Kyong ju KIM, Won gun YUN
- EA-082 The Analysis of User Cost According to Timing of National Highway Pavement Maintenance - Focusing on the Maesang Bridge Section in Korea**
Yun Sik KIM (Chungnam National University, Korea)
 Minjae LEE
- EA-086 Influence Factors of Aerial Environment on Project Schedule Management**
Hyoung-chul LIM (Changwon National University, Korea)
- EA-124 A Study on Optimal Duration Estimation for Construction Activity**
Leen-Seok KANG (Gyeongsang National University, Korea)
 Bit Na CHO, Younghwan KIM, Minseo KIM, Taewoon JEONG, Chang Hak KIM
- EA-195 A Preliminary Study on the Determination of Road Maintenance for Each Region Using Multiple Regression Analysis**
Ki nam KIM (Chungnam National University, Korea)
 Minjae LEE
- EA-221 A Presentation of a Cost Classification System for Gas Plant Construction Projects**
Yong-Su KIM (Chung-Ang University, Korea)
 Moon-Sun PARK
- EA-265 Risk-sharing Strategies on EPC Contracts: Lessons-learned from Sabine Pass Liquefaction Project**
Jung-Heon LEE (Pohang University of Science and Technology, Korea)
 Eul-Bum LEE, Sang-Moon YOON
- EA-320 Staffing-Technology Fit in Construction Scheduling**
Juneseok YANG (Illinois Institute of Technology, United States)
 David ARDITI

T1-2 Productivity and Performance Management

- EA-061 Reinforced-concrete Works Productivity Analysis on Nuclear-power-plant Project**
JinHo LIM (Pusan National University, Korea)
 Youngki HUH, Hyeon Taek SEO, JaeHun OH
- EA-191 Work Productivity Analysis of High-performance PC Slab Installation**
Young-su SHIN (Chosun University, Korea)
 Kyuman CHO, Chang-geun CHO
- EA-209 Multi-Criteria Decision-Making Model Using Quality Function Deployment (QFD) Method for the Most Suitable Temporary Earth Retaining System**
Sang jin HAN (Dankook University, Korea)
 Yu jung BAE, Han byung CHO, Jae youl CHUN, Won KWON, Jaeho CHO

T1-4 Risk and Safety Management

- EA-063 Analysis of Improvement Methods of Safety Management Guidelines with Design for Safety**
Minjung KIM (Seoul National University, Korea)
 Moonseo PARK, Hyun-soo LEE, Doowan LEE
- EA-154 Development of a Computerized Risk Management System for International EPCS Projects**
Wi Sung YOO (Construction Economy Research Institute of Korea, Korea)
 Yookyung SUNG, Woo-young KIM
- EA-219 Establishment of Change Order Database for Reducing Change Order in Construction Phase**
Hyun-Kyung SHIN (University of Seoul, Korea)
 Yongwoon CHA, Sangwon HAN, Chang-Taek HYUN
- EA-261 Interrelationship Analysis between Causal Factors of Construction Defect Using Association Rule Mining**
Sang deok LEE (University of Seoul, Korea)
 Sangwon HAN, Chang Taek HYUN

Track 2: Information Technology in Construction

T2-1 Simulation and Visualization

- EA-045 Application of BIM-integrated Construction Simulation to Construction Production Planning**
Soowon CHANG (Ewha Womans University, Korea)
 JeongWook SON, June Seong Yi, WoonSeong JEONG
- EA-165 A Comparison of Three Multi-objective Evolutionary Algorithms for Optimal Building Design**
Jimin KIM (Yonsei University, Korea)
 Taehoon HONG, Myeonghwi LEE, Choongwan KOO, Jaemin JEONG
- EA-171 Assessment of GCM and Scenario Uncertainties under Future Climate Change Conditions**
Kwang-Suop LIM (K-water Institute, Korea)
 Su Hyung JANG, Jin-Hyeog PARK, Manha HWANG
- EA-239 A Study on Construction Site of Virtual Desktop Infrastructure(VDI) System Model for Cloud Computing BIM Service**
Kyu Hyup LEE (Sungkyunkwan University, Korea)
 Gyuseoung CHOI, Soonwook KWON, Daeyoon MOON

T2-2 Building Information Model

- EA-026 Automated Methodology for Linking BIM Objects with Cost and Schedule Information by Utilizing Geometry Breakdown Structure (GBS)**
Kwangjin LEE (Myongji University, Korea)
 Youngsoo JUNG
- EA-064 Development of a 3D Earthwork Model Based on Reverse Engineering**
Sung-Keun KIM (Seoul National University of Science and Technology, Korea)
- EA-088 Analysis of the BIM Technology Status and the Development Strategy in Korea**
Seok heon YUN (Gyeongsang National University, Korea)
 NamHun LEE, Sang-Chul KIM
- EA-102 Evaluating Effectiveness of BIM-based Idea Bank during VE Workshop**
Hojun KIM (Chung-Ang University, Korea)
 Chansik PARK
- EA-173 Empirical Analysis of Man-hour Data to Support a Cost-Plus Pricing Approach for Estimating BIM Service Costs**
Byungjin SHIN (Seoul National University of Science and Technology, Korea)
 Bonsang KOO, Cheong-woon KIM, Ghang LEE
- EA-227 Existing Building Approval Submission Process Improvement Effect Analysis Thru Utilization of BIM**
Changjae YEO (Kwangwon University, Korea)
 Jungho YU

T2-3 Automation and Data Sensing

- EA-071 A Strategy on Performance Assessment Information System of Building Remodeling**
Gyujiin KIM (Dankook University, Korea)
Eunhwa HONG, Jongsik LEE, Sangchul LEE, Jaeho CHO, Jaeyoul CHUN
- EA-211 A Conceptual Design of around View Monitoring System for Construction Equipment**
Dongjun YEOM (Inha University, Korea)
Youngsuk KIM, Jonghyun HONG, Junghoon SEO
- EA-243 A Study on Automatic Space Analysis for Plant Facilities Based on 3D Octree Algorithm by Using Laser Scanning Information**
Donghyun KIM (Sungkyunkwan University, Korea)
Soonwook KWON, Donghyun KIM
- EA-262 3D Ground Terrain Processing Platform for Automated Excavation System**
Seok KIM (Korea Institute of Civil Engineering and Building Technology, Korea)
Taeyeon KIM
- EA-293 Automated 3D Model Reconstruction of Disaster Site Using Aerial Imagery Acquired by Drones**
Changyoon KIM (Korea Institute of Civil Engineering and Building Technology, Korea)
Woosik LEE, Hyounseok MOON
- EA-295 Attributes for Developing a Database for Construction Information Interface**
Sungwoo MOON (Pusan National University, Korea)
Kyeongsu CHO, Changgon MOON, Eungi CHOI, Byongsoo YANG
- EA-303 Evaluation and Comparison of 3D Reconstruction Methods to Create 3D Indoor Model with Different LODs**
Sungchul HONG (Korea Institute of Civil Engineering and Building Technology, Korea)
Hyunsang CHOI
- EA-318 Feature Template-Based Sweeping Shape Reverse Engineering Algorithm Using a 3D Point Cloud**
Taewook KANG (Korea Institute of Civil Engineering and Building Technology, Korea)
Changhee HONG, Jieun KIM, Gunhwa CHO

T2-4 Geographic Information Systems

- EA-310 Adopting Cloud Service in the National Spatial Data Infrastructure**
Junhee YOUN (Korea Institute of Civil Engineering and Building Technology, Korea)

T2-5 Big Data Analytics

- EA-085 Development of a Metadata-based Green Building Information Management System for AEC Industries**
Minho OH (Ecosian, Korea)
Taedong LEE, Yonghee KIM, Seyoung LIM
- EA-117 The Effect of Real-time Traffic Information System Relieving Traffic Congestion**
Hojun KANG (Inha University, Korea)
Do Hyoung SHIN, Kanghyeok LEE, Taenam MOON, Youngdo SONG
- EA-144 Knowledge Sharing and Using on Community of Practice in Construction Industry: an Identifying Stimulate Model**
Inyoung BAE (Seoul National University, Korea)
Kwonsik SONG, Hyunsoo LEE, Moonseo PARK, Youngkyun BAE
- EA-311 Big Data Analytics Applied to the Construction Site Accident Factor Analysis**
Joonsoo KIM (Kyungpook National University, Korea)
Byungsoo KIM, Jisu LEE

Track 3: Finance and Property Development

T3-1 Asset and Facility Management

- EA-139 The Effect of the Contingent Liabilities Caused by Project Financing of the Domestic Construction Firms**
Hyun Jung KIM (Korea University of Technology and Education, Korea)
Namhee KANG, Jaehyun CHOI
- EA-157 Critical Criteria Based on Facility Condition Index for Supporting Priority Decision-making in Educational Facilities**
Seungwoo SHIN (Ewha Womans University, Korea)
Juneseong YI, JeongWook SON
- EA-192 Variation in Multi-family House Prices Following Remodeling Work**
Jaesung KIM (Chosun University, Korea)
Kyuman CHO
- EA-272 A Study on the Introduction of the Work Breakdown Structure for Infrastructure Asset Management**
Seongyun JEONG (Korea Institute of Civil Engineering and Building Technology, Korea)

T3-2 Urban Planning and Development

- EA-146 A Review on Urban Resilience Assessment Methods**
Dongping FANG (Tsinghua University, China)
Jaime BARJAU, Francis WONG
- EA-309 Study on an Integrated System Using an ER Diagram for Chungcheong Rural Communities**
Hyeonseok JANG (Chungbuk National University, Korea)
Hyungkeun PARK

Track 4: Practical Issues in Construction

T4-2 Construction Engineering and Technologies

- EA-053 Web-system Development for the Feasibility Study of National Road**
Taehil PARK (Korea Institute of Civil Engineering and Building Technology, Korea)
Yoosub LEE, Wonyoung PARK, Eunyoung SHIN, Taikyung KANG
- EA-153 Development of the Selection of Optimal Conceptual Design for the Noise-reduced Aluminum System Form**
Jonghyun HONG (Inha University, Korea)
Youngsuk KIM, Junghoon SEO, Dongjun YEOM
- EA-250 Revisions on the Payline for Overbreak in Tunnel**
Taehil PARK (Korea Institute of Civil Engineering and Building Technology, Korea)
Yongho TAE, Bangryul AHN, Seungho BAEK
- EA-260 Analysis on the Problems of Construction Temporary Work through Review on Technology System**
Junmo PARK (Chungbuk National University, Korea)
Namgi LIM, Okkyue KIM, Jinlee KIM

T4-3 Contract and Legal Issues

- EA-120 Development of Project Delivery System for Modular Building in Korea**
Sung Hoon NAM (Ajou University, Korea)
Kyungrai KIM
- EA-156 Basic Research on Nuclear Power Plant Construction Claims and Dispute Management Process Development**
Hyejin SON (KHNP CRI, Korea)
- EA-242 Suggestions for Detection System of Bid-rigging in Public Construction Projects**
Sanghoon SONG (Korea Land & Housing Corporation, Korea)
Jeong-Rak SOHN, Gun-Hee CHO, Jong-Dae BANG
- EA-281 Development of Review Processes and Tools for Liquidated Damages for EPC/Turnkey Projects: Contractor's Perspective**
Ki Jeong HAHN (Pohang University of Science and Technology, Korea)
Eul-Bum LEE, Young Ho KIM

T4-4 Case Studies and Industrial Applications

- EA-014 Practical Issues of Earned Value Management Systems (EVMS) for Nuclear Power Plant (NPP) Construction**
Youngsoo JUNG (Myongji University, Korea)
Byeong-Suk MOON, Sungrae KIM
- EA-097 Development and Application of Integrated Management System in Nuclear Power Plant Construction Project**
Sang Hyun LEE (KHNP CRI, Korea)
Su-Jin BYON
- EA-115 Correlation Analysis between Building Damage Cost and Major Factors Affected by Typhoon**
Seongpil YANG (University of Ulsan, Korea)
Kiyong SON, Sang-Ho KIM, Yeong Jin YU
- EA-135 A Case Study of Electricity Usage Monitoring for Deterioration and Economic Analysis of Main Equipment in University Laboratory**
Jun-Young PARK (Mokwon University, Korea)
Chun kyong LEE, Tae Keun PARK, Seung Wook YOON

Track 5: Emerging Issues in Construction

T5-1 Local or International Issues in Construction

- EA-038 Competitiveness Benchmarking of Overseas Construction through the SWOT Analysis of Leading Construction Firms in Spain and France**
Jae-Goo HAN (Korea Institute of Civil Engineering and Building Technology, Korea)
Hwan-Pyo PARK
- EA-152 An Analysis on the International Construction Market and the Business Performance of Top Contractors after the Global Financial Crisis**
Yookyung SUNG (Construction Economy Research Institute of Korea, Korea)
Seok-In CHOI
- EA-198 Market Expansion Strategies for Small or Medium-sized Construction Companies by Developing Quantitative Risk Assessment Model**
Jinhyuk YOO (Ajou University, Korea)
Heesung CHA

- EA-203 Analysis of Data and Information Flow for Pipeline in Permafrost Area**
Do Yun LEE (Kyung Hee University, Korea)
Junbok LEE, Ji Hwan PARK, Choong Hee HAN, Seokyeung WON
- EA-218 Capability Evaluation for Improving Competitiveness of the Korean Construction Firms**
Jin-Woo KIM (Seoul National University, Korea)
Moonseo PARK, Nahyun KWON, Bo-Sik SON, Hyun-Soo LEE, Hyounseung JANG
- EA-254 A Comparative Analysis of Korean and Central African Construction Laborers Job Consciousness**
Michael Bulunda MBALE (Daegu University, Congo, Democratic Republic of)
Bauma Frigeant BITAMBA, Songhoon AN, Jihoon JEAN

T5-3 Sustainable Construction and Green Building

- EA-070 Basic Research for Causal Analysis of a Low-rate of G-SEED Certified Apartment Buildings**
Jung-Hwa KIM (Seoul National University, Korea)
- EA-083 Development of Framework to Estimate Environmental Loads of PSC Beam Bridges Based on LCA**
Wan Ryul LEE (Chung-Ang University, Korea)
Kyong Ju KIM, Won Gun YUN, In Kyum KIM
- EA-112 A Basic Study on City Gas Consumption Difference According to the Exclusive Dwelling Area**
Sang Ho KIM (University of Ulsan, Korea)
Kiyong SON, Yeong Jin YU, Seongpil YANG
- EA-113 City Gas Consumption Analysis Per 1m2 According to Exclusive Dwelling Area in Residential Buildings - Focused on Case of Ulsan**
Yeong Jin YU (University of Ulsan, Korea)
Kiyong SON, Seongpil YANG, Sang Ho KIM
- EA-321 Structural Monitoring of Two Korean Traditional Timber Houses**
Yeong-Min KIM (Myongji University, Korea)

T5-5 Other Issues

- EA-162 Spatial Downscaling of Precipitation from GCMs for Assessing Climate Change over Han River and Imjin River Watersheds in Korea**
Su Hyung JANG (K-water Institute, Korea)
Jaeeung YI, Manha HWANG, Youngteck HUR
- EA-163 Climate Change Assessment on Air Temperature over Han River and Imjin River Watersheds in Korea**
Su Hyung JANG (K-water Institute, Korea)
Manha HWANG

Industry Poster

- Risk Management in Construction Project, National Radio Research Agency**
Seong Mi KANG (Shinsung Architects & Engineers Associates Co., Ltd., Korea)
- A Case of CM Services on Dongdaemun Design Plaza and Amorepacific Headquarters Complex**
Yumi WOO (Kunwon Engineering Co., Ltd., Korea)
- CM, Construction of South-Western Dome Baseball Stadium**
Gyeongju KIM (Hyewonkaci Architects, Korea)
- CM, Construction of Incheon International Airport 3rd Phase Ancillary Building**
Sung-phil RYU (Hyewonkaci Architects, Korea)

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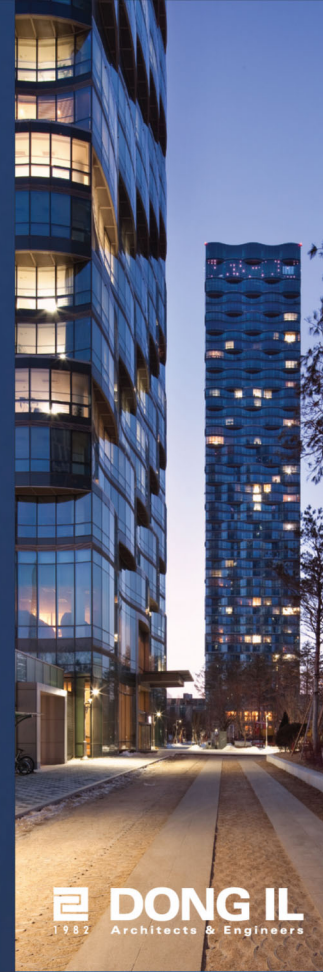


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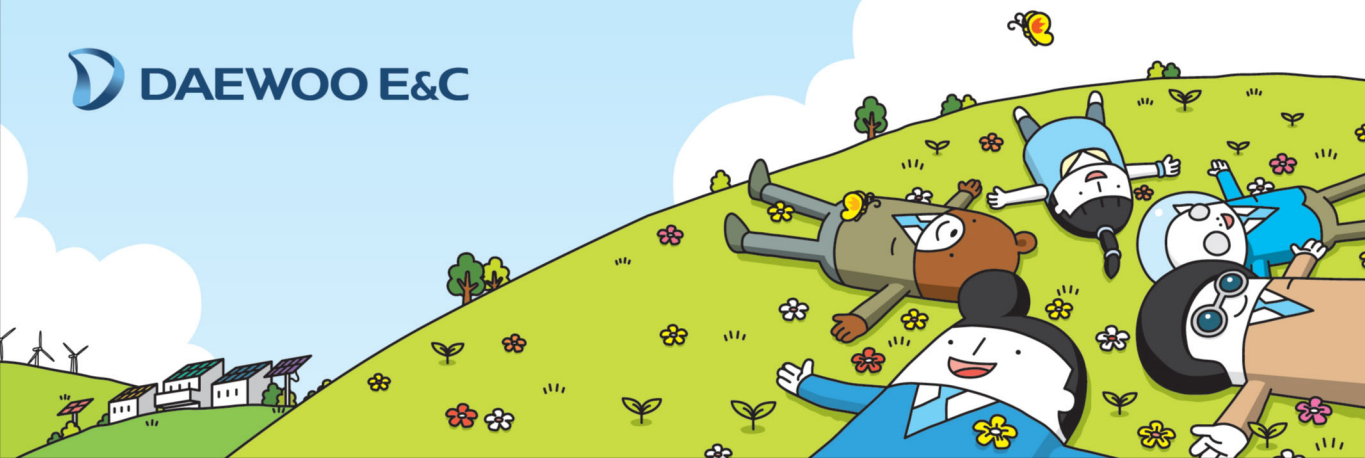
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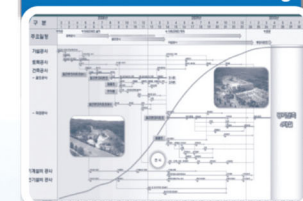
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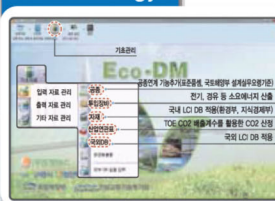
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