Time Zone: UTC+7

CONFERENCE PROGRAM

ICCEA 2024

2024 7th INTERNATIONAL CONFERENCE ON CIVIL ENGINEERING AND ARCHITECTURE

ICEEI 2024

2024 6TH INTERNATIONAL CONFERENCE ON ENGINEERING EDUCATION And INNOVATION

December 7-9, 2024 | Da Nang, Vietnam

Co-sponsor

Technical Support

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NOTE

WELCOME MESSAGE

We are pleased to welcome you to attend the 2024 7th International Conference on Civil Engineering and Architecture (ICCEA 2024), along with 2024 6th International Conference on Engineering Education and Innovation (ICEEI 2024), which will be held in Da Nang, Vietnam on December 7-9, 2024.

This event will provide a unique opportunity for international scholars, researchers and practitioners working in a wide variety of scientific areas with a common interest in civil engineering and architecture & engineering education and innovation.

The conference will include discussions on topics such as Building Environment and Urban Planning; Sustainable Building Materials and the Properties; Building Information Technology and Construction Project Management; Educational Information Technology and Engineering Education Innovation; Advanced Building Materials and the Structural Performance; Transportation, Seismic Safety, and Structural Health Monitoring; Building Materials, Structures, and Engineering Education; Geotechnical Engineering, Spatial Planning, and Construction Project Management. The conference will be composed of 6 onsite sessions and 2 online sessions. In addition, 4 keynote speeches will be delivered by *Prof. Thomas Kang* (Seoul National University, Korea), *Prof. Youngjin Lee,* (D.TO, Inc. and Boston Architectural College, USA), *Prof. Atsuko K. Yamazaki* (Graduate School of Digital Hollywood University, Japan) and *Dr. Luu Thi Hong* (Vietnam Institute for Building Materials, Vietnam).

We would like to deeply express our heartfelt appreciation to all our delegates, keynote speakers, invited speaker, session chairs, international reviewers as well as all the committee members involved in the technical evaluation of conference papers and in the conference organization for your time, effort, and great contributions. Apart from that, we'd like to extend our thanks to all the authors and external reviewers for your contribution. It is your high competence, enthusiasm, valuable time and expertise that have enabled us to prepare the final program with high quality and make the conference a great success.

We wish to thank all attendees for participating in the conference and hope you have a fruitful and memorable experience at ICCEA 2024 & ICEEI 2024!

Finally, we wish you a very successful conference! Hope you will enjoy your stay in Da Nang, Vietnam!

With Warmest Regards,

Conference Organizing Committee

ICCEA 2024 & ICEEI 2024

Da Nang, Vietnam | December 2024

GENERAL INFORMATION

Onsite Registration

Registration desk→ Inform the staff of your paper ID→ Sign-in→ Claim your conference kit.

Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

Materials Provided by the Presenter

Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred.

Official language: English.

Duration of Each Presentation

Keynote Speech: 40min, including 5 min Q&A. Invited Speech: 25min, including 5 min Q&A.

Oral Session: 15min, including 3 min Q&A.

Notice

- Please wear your delegate badge (name tag) for all the conference activities. Lending your participant card to others is not allowed.
- Please take good care of your valuables at any time during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.

※ **UTC+7. Time in Da Nang, Vietnam. Please be aware of time difference between this and your region/country.**

Virtual Presentation Tips

	Room	Meeting ID	Link
zoom Zoom Download	**A**	**897 2729 6603**	**https://us02web.zoom.us/j/89727296603**
	B	**812 3644 0121**	**https://us02web.zoom.us/j/81236440121**

Note:

- **Participants who are going to do an online presentation are required to join the rehearsal in ZOOM on Saturday, December 7. Duration: 3min apiece. Feel free to leave after you finish the test.**
- **We recommend to install the Zoom platform beforehand. New users can login the Zoom meeting without registration.**
- **Please set your display name before joining the online meeting. For instance,**
  Author/Presenter: Paper ID_Name < E001_Lily >
  Delegate: Delegate_Name < Delegate_Lily >

Contacts

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Ms. Nina Lee
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GENERAL INFORMATION

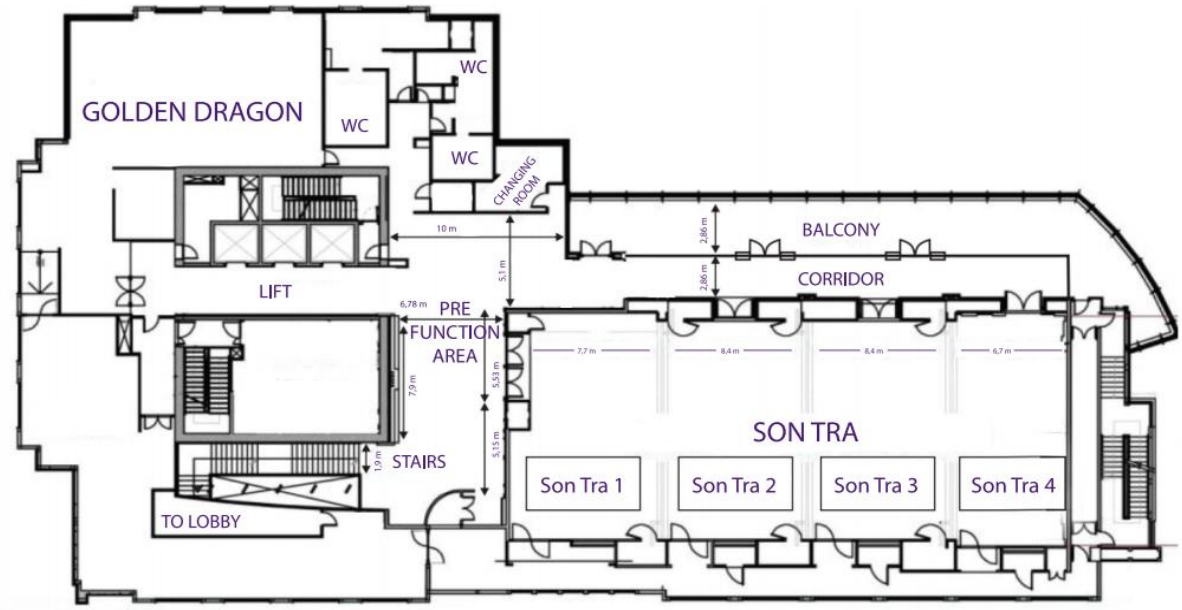
Onsite Conference Venue

Grand Mercure Danang

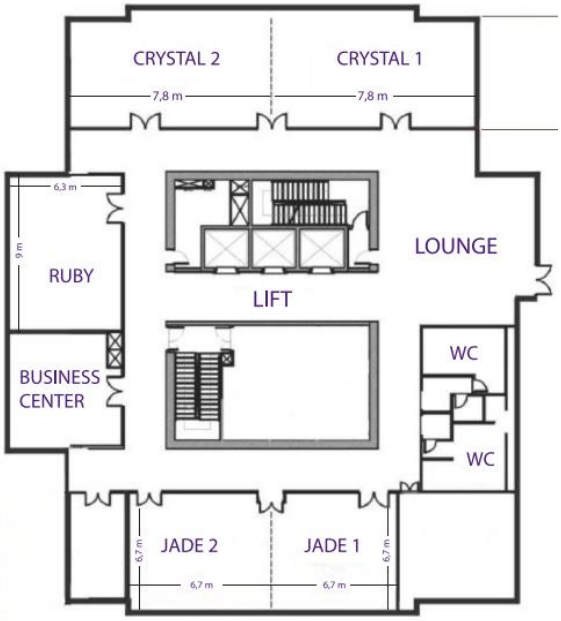
Add: Green Island, Hai Chau District,
Danang City, Vietnam
Web: https://grandmercuredanang.com/
Contact: DANG THI THU HANG (MS.)
Email: h7821@accor.com
Tel.: +84 236 379 7777

Floor Plan

MEETING ROOMS-2nd FLOOR



MEETING ROOMS-3rd FLOOR



CONFERENCE COMMITTEE 2024

(in no particular order)

Conference Organizing Committees

Conference General Chair

Thomas Kang, Seoul National University, South Korea

Conference Co-Chair

Shingo Ashizawa, Kansai University of International Studies in Kobe, Japan
Le Trung Thanh, Vietnam Institute for Building Materials, Vietnam

Conference Program Chair

Youngjin Lee, Boston Architectural College, USA
Atsuko K. Yamazaki, Graduate School of Digital Hollywood University, Japan

Conference Program Co-Chair

Xiangguo Wu, Harbin Institute of Technology, China
Luisa Maria Arvide Cambra, University of Almeria, Spain

Conference Publicity Chair

Lapyote Prasittisopin, Chulalongkorn University, Thailand

Conference Technical Program Committees

Danielle Riverin-Simard, Université Laval, Canada
Esther Akinlabi, University of Johannesburg, South Africa
Ghani Albaali, Princess Sumaya University for Technology, Jordan
Mohammad Amin Kuhail, Zayed University, UAE
Muhammad Nur Adilin Mohd Anuardi, Hiroshima University, Japan
Md Alamgir Hossain, Sonargon University, Bangladesh
Saiful Bahri Mohamed, Universiti Sultan Zainal Abidin, Malaysia
Eric Dimla, RMIT University Vietnam, Vietnam
Lola Domnina Pestaño, University of Santo Tomas, Philippines
Nur Farhana Diyana Mohd Yunos, Unversiti Malaysia Perlis, Malaysia
Mohammad Arif Rohman, Institut Teknologi Sepuluh Nopember, Indonesia
Roshina Babu, The University of Utah Asia Campus, South Korea
Shavkat Buriboev, Samarkand State Architectural and Civil Engineering institute (SSCI), Uzbekistan
Sunliang Cao, The Hong Kong Polytechnic University, Hong Kong
Chunho Chang, Keimyung University, South Korea
Yue Chen, Southeast University, China
Dat Doan, Auckland University of Technology, New Zealand
Miktha Farid Alkadri, University of Indonesia, Indonesia
Mousa Fayiz Attom, American University of Sharjah, UAE
Lyn Dee Goh, Universiti Teknologi MARA (UiTM), Malaysia
Orlean G dela Cruz, Polytechnic University of the Philippines, Philippines
Ashok Gupta, Indian Institute of Technology Delhi, India
Fadi HAGE CHEHADE, Lebanese University, Lebanon
Mohd Hisbany Mohd Hashim, Universiti Teknologi MARA Pahang Branch, Malaysia
Muneerah Jeludin, Universiti Teknologi Brunei, Brunei Darussalam
Chavanont Khosakitchalert, Chulalongkorn University, Thailand
Mahdi Kioumarsi, Oslo Metropolitan University, Norway

Yee Ling Lee, Universiti Tunku Abdul Rahman, Malaysia
Seong-Cheol Lee, Kyungpook National University, South Korea
Elsaid Mamdouh Mahmoud Zahran, University of Nottingham Ningbo China, China
Md Maruf Mortula, American University of Sharjah, UAE
Chayut Ngamkhanong, Chulalongkorn University, Thailand
Grit Ngowtanasuwan, Mahasarakham University, Thailand
Le-Minh NGO, Ton Duc Thang University, Ho Chi Minh City, Vietnam
Bakhriev Nuritdin, Samarkand State Architectural and Civil Engineering institute (SSCI), Uzbekistan
Vachara Peansupap, Chulalongkorn University, Thailand
Christiono Utomo, Institut Teknologi Sepuluh Nopember, Indonesia
Wong Wah Sang, University of Hong Kong, Hong Kong
Taki Eddine Seghier, Effat University, Jeddah, Saudi Arabia
Wardah Fatimah Mohammad Yusoff, National University of Malaysia, Malaysia
Rajesh Rai, Indian Institute of Technology (Banaras Hindu University), India
Hazrina Haja Bava Mohidin, University of Malaya, Malaysia
Doris Toe Hooi Chyee, Universiti Teknologi Malaysia, Malaysia
Wasaporn Techapeeraparnich, Mahidol University, Thailand
Hafshah Salamah, Bandung Institute of Technology, Indonesia
Andhika Sahadewa, Bandung Institute of Technology, Indonesia
Tan Soon Jiann, Universiti Teknologi Brunei (UTB), Brunei Darussalam
Ting Zhang, Politecnico di TORINO, Italy
Joao Garrott Marques Negreiros, Zayed University, UAE
Samuel Gqibani, University of Johannesburg, South Africa
Kapil Gupta, University of Johannesburg, South Africa
Md. Shahadat Hossain Khan, Islamic University of Technology (IUT), Bangladesh
Wan Hasrulnizzam Wan Mahmood, Universiti Teknikal Malaysia Melaka, Malaysia
Vesna Marija Potočić Matković, University of Zagreb Faculty of Textile Technology, Croatia
Margaret Morgan, Ulster University, UK
Grace Lorraine Diaz Intal, Mapua University, Philippines
Galina Ilieva, University of Plovdiv Paisii Hilendarski, Bulgaria
William P. Rey, Mapua University, Philippines
Songlak Sakulwichitsintu, Sukhothai Thammathirat Open University, Thailand
K. S. Vijay Sekar, SSN College of Engineering, India
Tsukasa Yamanaka, Ritsumeikan University, Japan
Sze Yi Mak, The University of Hong Kong, Hong Kong
Abdallah Yusuf Mefleh Al Zoubi, Princess Sumaya University for Technology, Jordan
Anika Zafiah Mohd Rus, Universiti Tun Hussien Onn Malaysia, Malaysia
Mohammad Arif Kamal, Aligarh Muslim University, India
Chaiwat Riratanaphong, Thammasat University, Thailand
Reazul Ahsan, University of Utah Asia Campus, Korea
Nakhon Kokkaew, Chulalongkorn University, Thailand
Meysam Bayat, Southern University of Science and Technology, China
Mayas Ahmad Taha, Al Yamamah University, South Africa

AGENDA OVERVIEW

PROGRAM DAY 1	December 7 | Saturday (UTC+7)	
10:00-16:00	**Onsite Registration**	**Lobby | Grand Mercure Danang**
09:30-11:00	**Online Pre-test Session**	**Meeting Room A: 897 2729 6603** zoom

Online Test Timetable

09:30-10:00	E019 E020-A E021 E058 E061 E088 E160 E105 E0009 E0017 E007 E1001
10:00-10:30	E031 E142 E146 E166 E174 E032 E044 E102 E103 E137 E167 E083 E120 E141
10:30-11:00	Alternative time for participants who are make online presentation, includes but not limited to keynote speaker, session chair, committee member, presenters, delegates.

Presenters who are going to make online presentation are required to join the rehearsal in ZOOM Meeting on Saturday, December 7, 2024. Duration: 3min apiece. Feel free to leave after you finish the test.

Name Setting before Entry

You are required to set your display name before joining the online meeting.

Keynote Speaker: Keynote-Name Author: Paper ID-Name
Committee: Position-Name Delegate: Delegate-Name

Useful Link

Conference Banner

Zoom Background

Presentation Certificate

Presenters will be awarded certificate after the conference event. An excellent presentation will be selected from each session and the presenter will receive a certificate of "Best Presentation".

AGENDA OVERVIEW

PROGRAM DAY 2	December 8 | Sunday (UTC+7)
< Ballroom 3&4 | 2F>	**ZOOM Room A: 897 2729 6603**

Chairman: **Prof. Thomas Kang,** Seoul National University, Korea

09:00-9:10	Opening Remarks	**Prof. Thomas Kang,** Seoul National University, Korea
09:10-09:50	<Keynote Speech I>	Innovative Wind Design for Skyscraper **Prof. Thomas Kang,** Seoul National University, Korea
09:50-10:30	<Keynote Speech II>	From Blueprints to Smart Builds: The AI Revolution in AEC **Prof. Youngjin Lee,** D.TO, Inc. and Boston Architectural College, USA
10:30-10:50	**Group Photo & Morning Coffee Break**	
10:50-11:30	<Keynote Speech III>	VR Materials for Communication Education and Evaluation Methods **Prof. Atsuko K. Yamazaki,** Graduate School of Digital Hollywood University, Japan
11:30-12:10	<Keynote Speech IV>	Utilization of Fly and Bottom Ashes as Aggregates in the Manufacturing of Concrete Wall Panels **Dr. Luu Thi Hong,** Vietnam Institute for Building Materials, Vietnam
12:10-13:30	**Lunch Time**	**< Veranda| 1F >**

Time	Venue	Onsite Parallel Sessions
13:30-16:00	**<Ballroom 3&4 | 2F>**	**Onsite Session 1:** Building Environment and Urban Planning *Chairperson: Prof. Atef Badr, The Military Technological College, Oman* E133 E125 E012 E145 E148 E175-A E100 E022
	<Crystal 1 | 3F>	**Onsite Session 2:** Sustainable Building Materials and the Properties *Chairperson: Dr. Lapyote Prasittisopin, Chulalongkorn University, Thailand* Invited Talk- Dr. Lapyote Prasittisopin E025 E008-A E114 E107 E104 E072 E090 E143
	<Crystal 2 | 3F>	**Onsite Session 3:** Building Information Technology and Construction Project Management *Chairperson: Asst. Prof. Wasaporn Techapeeraparnich, Mahidol University, Thailand* E098 E034 E093 E112 E037-A E086 E041 E130-A E127 E091
16:00-16:20	Afternoon Coffee Break and Networking	
16:20-18:35	**<Ballroom 3&4 | 2F>**	**Onsite Session 4:** Educational Information Technology and Engineering Education Innovation *Chairperson:* E0012 E0023 E0015-A E0019-A E10004-A E0016 E0026
	<**Crystal 1 | 3F>**	**Onsite Session 5:** Advanced Building Materials and the Structural Performance *Chairperson: Prof. Rendy Thamrin, Universitas Andalas, Indonesia* E027 E015 E028 E126 E161 E095 E082 E131-A
	<Crystal 2 | 3F>	**Onsite Session 6:** Transportation, Seismic Safety, and Structural Health Monitoring *Chairperson: Asst. Prof. Annisa Prita Melinda, Toyohashi University of Technology, Japan* E097-A E055 E099 E115-A E076-A E096-A E168 E089 E147
18:35-20:00	**Dinner Time < Ballroom 1&2 | 2F>**	

AGENDA OVERVIEW

PROGRAM DAY 3 December 9 | Monday (UTC+7)		
Time	**ZOOM Meeting Room**	**Online Parallel Sessions**
09:00-12:15	Meeting Room A ZOOM ID: 897 2729 6603	**Online Session 1:** Building Materials, Structures, and Engineering Education *Chairperson: Dr. Miktha Farid Alkadri, University of Indonesia, Indonesia* E019 E020-A E021 E058 E061 E088 E160 E105 E0009 E0017 E007 E1001 E169
09:00-12:15	Meeting Room B ZOOM ID: 812 3644 0121	**Online Session 2:** Geotechnical Engineering, Spatial Planning, and Construction Project Management *Chairperson: Asst. Prof. Reazul Ahsan, University of Utah Asia Campus, Korea* E031 E142 E146 E166 E174 E032 E044 E102 E103 E137 E167 E083 E141

Note

* Online Meeting conference room will be open 30 mins before scheduled time. Please enter your room 10-15 minutes early.

*All online attendees are required to join the pre-test on Saturday, December 7 Start from 9:30 (UTC+7).

*A paper not presented or presented by a non-author without prior written approval by the Conference TPC will be removed from the final conference proceedings.

INTRODUCTION OF KEYNOTE SPEAKER (UTC+7)

09:10-09:50 Dec. 8 (Sunday), 2024	< Ballroom 3&4 | 2F >

Prof. Thomas Kang

Seoul National University, Korea

Thomas Kang is a Professor in the Department of Architecture & Architectural Engineering and Director for Engineering Education Innovation Center at Seoul National University, Korea. Prior to that, he was an Assistant Professor in the School of Civil Engineering and Environmental Science at the University of Oklahoma, Norman, OK, USA. He has held various affiliated positions in the U.S. and Japan, including Adjunct Professor at the University of Oklahoma, Adjunct Professor at the University of Illinois at Urbana-Champaign, and Lecturer at UCLA, the University of Hawaii at Manoa and the University of Tokyo. Prof. Kang received his PhD from UCLA, his MS from Michigan State University, and his BS from Seoul National University.

Prof. Kang is a Fellow of Post-Tensioning Institute (PTI) and a Fellow of American Concrete Institute (ACI). Prof. Kang received the Kenneth B. Bondy Award for Most Meritorious Technical Paper as Lead Author from PTI in 2012, and the Wason Medal for Most Meritorious Paper as Lead Author from ACI in 2009 with the subject of post-tensioned concrete. He regularly teaches the course of Post-Tensioned Concrete Structures at the University of Illinois at Urbana-Champaign every other summer (both on campus and online) and at the University of Hawaii at Manoa every fall (live online lectures). Prof. Kang is an Editor-in-Chief for three journals: International Journal of Concrete Structures and Materials, Journal of Structural Integrity and Maintenance, and Advances in Computational Design; and Associate Editor for PTI Journal of Post-Tensioning Institute. He is one of the founding and voting members of PTI DC-20 Committee, Building Design, and has been a voting member for ACI Committee 369, Seismic Repair and Rehabilitation; Joint ACI-ASCE Committees 335, Composite and Hybrid Structures, 352 Joints and Connections in Monolithic Concrete Structures, and Joint ACI-ASCE Committee 423, Prestressed Concrete; and Joint ACI-ASME Committee 359, Concrete Containments for Nuclear Reactors, as well as various committees in Korea.

Prof. Kang published more than a hundred international journal papers and more than a hundred international conference proceedings, including 40 in ACI Structural Journal and 10 in PTI Journal. He has chaired many sessions/symposiums of structural engineering; delivered many keynote/invited speeches; and organized international conferences/workshops as a Chair. Additionally, Dr. Kang has done a lot of practice as a consulting engineer in Korea and the U.S. Prior to joining the academia, he had a working experience in California, USA (e.g., John A. Martin & Associates), and was a licensed Professor Engineer (PE) in California.

Speech Title: Innovative Wind Design for Skyscraper

Abstract: This keynote presentation aims to provide a comprehensive overview of wind resistance design, a critical factor in the architectural planning of skyscrapers. In particular, it is essential to recognize the significance of wind load in regions like coastal cities of East Asia, where high-rise buildings exceeding 30 stories are situated in areas where design wind forces, rather than design seismic forces, govern. A thorough understanding of this aspect is indispensable, particularly during the initial design and planning stages. In recent years, the increasing frequency and intensity of super typhoons have exacerbated the risk of wind-related damage to buildings, especially in densely built urban and coastal areas with a high concentration of skyscrapers. Given this evolving threat, the need for advanced and refined design strategies has become more pressing, underscoring the importance of innovative performance-based wind design (PBWD). This presentation will aim to present these technical concepts in an accessible manner, with a particular focus on explaining PBWD and relevant wind tunnel testing in a clear and understandable way.

INTRODUCTION OF KEYNOTE SPEAKER (UTC+7)

09:50-10:30 **ZOOM ID: 897 2729 6603**
Dec. 8 (Sunday), 2024

Prof. Youngjin Lee

D.TO, Inc. and Boston Architectural College, USA

Youngjin Lee is a co-founder and CEO of D.TO, Inc, a startup in the AEC, and a faculty of the Boston Architectural College in Massachusetts, US. Before D.TO, he was a Senior Associate at Sasaki Associates, Inc. in Massachusetts, US as a licensed architect with 20-plus years of experience. He received a BS (1998) in Aeronautical Engineering and a BS (2000) in Architecture from Seoul National University, Korea, and an M.Arch (2007) from the School of Architecture at Yale University, U.S. Prof. Lee is a member of the American Institute of Architects (AIA), a member of the Boston Society of Architects (BSA), a member of U.S. Green Building Council (USGBC), and a member of the Architectural Institute of Korea (AIK). He is also a peer reviewer of international journals, including Nexus Network Journal and Architectural Research.

Prof. Lee has been teaching multiple Master's Thesis Studios and advanced architectural workshops of design computation and digital fabrication at Boston Architectural College since 2011, with a unique pedagogy focusing on integrating digital design between multiple disciplines.

Prof. Lee is also an active part of an emerging generation of designers deeply immersed in the exploration of emanating technologies in architectural practice, with a particular interest in design computation and digital fabrication while maintaining practical relevancy in their application to professional practice. He explores the reciprocal relationship of computational design and fabrication processes in design methodology, helps students apply the algorithmic approach to architectural design context, and further redefines the practice's future. As a design computation group leader at Sasaki Associates, he explores diverse digital technologies and workflow to expand design capability.

Prof. Lee's research stems from his experience in academia and practice and his efforts to improve design methodology, which offers design possibilities through integrative design media and generative algorithms. He has published in many journals, including Architectural Research, Journal of Asian Architecture and Building Engineering, Automation in Construction, Nexus Network Journal, Advances in Computational Design, and presented his works at International Conference on Sustainable Building Asia 2016, AIA Conference on Architecture 2017, and ASHRAE 2017 Building Performance Analysis Conference.

Speech Title: From Blueprints to Smart Builds: The AI Revolution in AEC

Abstract. Artificial Intelligence (AI) is no longer a futuristic concept; it is transforming industries today, with the Architecture, Engineering, and Construction (AEC) sector at the forefront of this revolution. This presentation, From Blueprints to Smart Builds: The AI Revolution in AEC, examines AI's evolution, its applications in the AEC industry, and its implications for the future of human creativity and innovation.

The exploration begins with an introduction to AI's foundational principles and a historical perspective, illustrating how this technology has gradually advanced to address increasingly complex challenges. AI's capabilities, such as decision-making, visual analysis, and automation, are not the result of overnight breakthroughs but decades of iterative development. This evolution lays the groundwork for understanding AI's transformative role in AEC.

Focusing on the AEC context, the presentation highlights AI's diverse applications across design, construction, and post-construction phases. Generative design tools now enable architects to create optimized, sustainable structures, while AI-powered project management solutions streamline schedules and mitigate risks. Autonomous construction robots, predictive maintenance systems, and digital twins are reshaping how projects are executed and managed.

Real-world examples, supported by research on productivity gains and quality improvements, showcase AI's measurable impact on the industry.

Finally, the presentation addresses the broader implications of AI adoption, including ethical considerations and workforce adaptation. Will AI replace jobs or augment human creativity? The discussion explores this balance, emphasizing the potential for collaboration between humans and machines. AI's role as a tool for discovery and problem-solving, rather than mere efficiency, underscores its value in fostering innovation while addressing challenges like sustainability and complexity.

This presentation invites the audience to reflect on AI's past, present, and future, particularly in the AEC context. It advocates for embracing AI as a partner in creativity, enabling human ingenuity to thrive in an increasingly technological world.

INTRODUCTION OF KEYNOTE SPEAKER (UTC+7)

10:50-11:30 **< Ballroom 3&4 | 2F >**
Dec. 8 (Sunday), 2024

Prof. Atsuko K. Yamazaki

Graduate School of Digital Hollywood University, Japan

Atsuko K. Yamazaki serves as a Specially Appointed Professor at the Graduate School of Digital Hollywood University, Japan. Her expertise lies in communication studies, information science, systems engineering, human and digital communication studies, and global education in engineering. She holds a Bachelor of Science in Chemistry from Ibaraki University, a Master of Arts in TESOL from the Monterey Institute of International Studies, a Master of Science in Computer Science from the University of Maryland, and a Ph.D. in Systems Engineering from Wakayama University. Previously, she served as an adjunct research instructor at the Naval Postgraduate School in Monterey, California, and as a visiting researcher at the Woods Hole Oceanographic Institution. In 2021, she joined DHU Graduate School after spending 13 years as a Professor at Shibaura Institute of Technology. Her research has been published in journals such as Ecological Modelling, Deep-Sea Research, IEEE, KES, Japan Society for Artificial Intelligence, Japanese Society for Information and Systems in Education, among others. Her current research and projects focus on communication studies utilizing UI, VR, brain function measurement, and simulation. She is also actively involved in global talent development and corporate DX projects. Furthermore, she has contributed to academic societies as an editor and officer, including IEEE Professional Communication and the Japan Leadership Society.

Speech Title: VR Materials for Communication Education and Evaluation Methods

Abstract: Recent advancements in head-mounted displays and graphics technology have led to the possibility of immersive pseudo-experiences in Virtual Reality (VR) environments. In communication education, where the effects of experiential learning are considered significant, there is growing interest in experiences within VR spaces. Replicating communication scenarios experientially is challenging with traditional video materials or classroom exercises. Particularly in foreign language communication education, VR materials are anticipated to be effective in providing simulated experiences as substitutes for overseas experiences. Additionally, there is ample research indicating that VR training can effectively reduce anxiety and tension in communication. However, various factors are slowing down the introduction of VR materials into communication education settings. Challenges include development and implementation costs, resistance to new equipment, and the difficulty of aligning educational curricula with VR content development. Furthermore, there is a lack of sufficient validation of the educational effectiveness of VR materials, and their utility has not been conclusively demonstrated. In her talk, the speaker will introduce her project of VR educational material development and methods for assessing the effectiveness of VR materials developed for English communication education. The VR materials that speaker's research group is developing are designed to target specific communication goals and scenarios, such as academic presentations in English and English-language customer service in hotel settings. The talk will also discuss research findings, including perspectives on global communication, competency evaluation, and neuroscientific approaches, to validate the educational effects of the materials. Additionally, her talk will explore strategies for leveraging the advantages of technology in communication education based on these research findings.

INTRODUCTION OF KEYNOTE SPEAKER (UTC+7)

11:30-12:10 **< Ballroom 3&4 | 2F >**
Dec. 8 (Sunday), 2024

Dr. Luu Thi Hong

Vietnam Institute for Building Materials, Vietnam

Dr. Luu Thi Hong studied chemistry at Hanoi University of Technology, Vietnam, and received her Doctoral degree in 2010. She has worked at Vietnam Institute for building Materials (VIBM) for 24 years and became its Vice director in 2014. Her main research and technology transfer focus on specialty cements and recycles raw materials for Building Materials. She manages VIBM's science and technology projects and international cooperation efforts, Advises the Ministry of Construction on national strategies, and planning for building materials development, and oversees building materials managerment policies.

Speech Title: Utilization of Fly and Bottom Ashes as Aggregates in the Manufacturing of Concrete Wall Panels

Abstract: The escalating demand for construction aggregates in Vietnam has led to a significant depletion of natural sand resources, adversely affecting the cost, quality, and performance of concrete materials. Concurrently, the expanding energy sector necessitates the research, treatment, recycling, and utilization of substantial quantities of coal ash produced by thermal power plants. Investigating the use of coal ash (fly ash and bottom ash) as a substitute for natural aggregates in concrete holds both scientific and practical significance, addressing the dual challenges of diminishing natural sand supplies and coal ash disposal.

This study presents findings on the utilization of coal ash from thermal power plants as a replacement for natural aggregates in semi-dry concrete mixtures used to produce precast hollow wall panels via extrusion technology. Experimental results indicate that substituting 20% of natural aggregates with coal ash enhances the concrete mixture's strength by up to 15%. Complete substitution of natural aggregates with coal ash results in a 20% reduction in unit weight, accompanied by a 50% increase in water absorption. Despite these changes, the concrete mixture with up to 100% coal ash substitution meets the strength requirements outlined in TCVN 11524:2016 for precast concrete hollow wall panels manufactured using extrusion technology.

INTRODUCTION OF INVITED SPEAKER (UTC+7)

13:30-13:55 **< Crystal 1 | 3F >**
Dec. 8 (Sunday), 2024

Dr. Lapyote Prasittisopin

Chulalongkorn University, Thailand

Lapyote Prasittisopin is a Director of the Center of Excellence on Green Tech in Architecture and Assisted Dean in Faculty of Architecture, Chulalongkorn University, Bangkok, Thailand. He also serves as Arbitrator with Thailand Arbitration Center in Bangkok. He earned Ph.D in Civil Engineering, M.S. in Materials Science at Oregon State University, USA, B. Eng. in Chemical Engineering, Chulalongkorn University, and LL.B. law in Sukhothai Thammathirat, Thailand. Dr. Prasittisopin was also a former advisor and secretary in The National Committee on Foreign Affairs, Secretariat of the Senate of Thailand and The National Committee on Economics, Monetary and Finance, Secretariat of the House Representative of Thailand. Currently, he held 14 patents and has published around 100 articles. Dr. Prasittisopin has served on editorial boards for leading academic publications in civil engineering and materials science. His research focuses on the development of high-performance concrete composites, innovative fiber-reinforced systems, and the integration of cutting-edge technology in construction to enhance durability, energy efficiency, and environmental impact. His work has been widely recognized for bridging the gap between theoretical advancements and practical applications in the construction industry. His research interests ranges from chemistry, materials science, digital technology, to social sciences in built environments and sustainable cities.

Speech Title: Graphene Quantum Dot Technology in Constuction and Built Environment Applications

Abstract: Graphene quantum dots (GQDs), the zero-dimensional derivatives of graphene measuring 2–20 nm and a subset of carbon dots (CDs), are emerging as a transformative material in construction technology due to their unique attributes, including exceptional mechanical strength, high thermal conductivity, superior optical properties, and remarkable chemical stability. This research investigates the prospective uses of GQDs within the construction sector, emphasizing their incorporation into sophisticated composite materials such as cement, sheet steel, and asphalt, along with functional coatings. The integration of GQDs into cementitious and polymeric matrices has shown considerable enhancements in mechanical characteristics, including tensile and compressive strength, as well as durability, particularly under adverse climatic conditions. Their nanoscale dimensions and quantum confinement effects improve bonding at interfaces and enable fracture bridging, aiding in the creation of durable infrastructure. Moreover, the photoluminescent and photocatalytic attributes of GQDs are utilized in intelligent coatings for self-cleaning, energy-harvesting, and pollutant-degrading purposes, thereby contributing to sustainability objectives in building. This research emphasizes the function of Carbon capture and storage (CCUS)-GQDs in improving thermal and electrical conductivity in construction materials including cement, metal, and asphalt, facilitating the development of multifunctional construction components including energy-efficient buildings and sensor-integrated infrastructure. Existing challenges, such as extensive production, economic viability, and ecological consequences, are rigorously evaluated to offer a comprehensive viewpoint on their practicality in real-world scenarios. By integrating nanotechnology with architectural and civil engineering applications, GQD technology has the capacity to transform material performance, diminish carbon emissions using CCUS technique, and advance the development of intelligent and sustainable building methodologies. The speech seeks to motivate multidisciplinary collaboration and innovation to fully exploit the promise of GQDs for intelligent built environments and future smart cities.

ONSITE SESSION 1 (UTC+7)

December 8 (Sunday)
13:30-15:30

<Ballroom 3&4| 2F>

Onsite Session 1: Building Environment and Urban Planning
Chairperson: Prof. Atef Badr, The Military Technological College, Oman

13:30-13:45	E133	Hoa gio' in Ho Chi Minh City's Public Buildings, Built during the 1950s-1980s: A Modern Vietnamese Architectural Element Beyond the Ventilation Block **Huynh Son Kat**, Chulalongkorn University, Thailand
13:45-14:00	E125	Pathways – Proposed Playscape, Education, and Therapy Center in Davao City: A Study on Gestalt Design Principles to Create a Therapeutic Learning Environment for Neurodi-vergent Children **Martinee L. Llemit,** Mapua Malayan Colleges Mindanao, Philippines
14:00-14:15	E012	Long-term Thermal Environment Measurement of Elementary Schools in Hot-humid Tropics **Ai Siti Munawaroh,** Mie University, Japan
14:15-14:30	E145	Nearly Net Zero Buildings – A Solution for Conflicting Challenges in Developing Countries **Atef Badr,** The Military Technological College, Oman
14:30-14:45	E148	Spatial Function Transformation and the Effect on Utility Aspect of Residential Property Value **Yosephine Sitanggang,** Universitas Multimedia Nusantara, Indonesia
14:45-15:00	E175-A	Green Spaces in Cheongna and Songdo and Mental Health Indicators in the IFEZ **Jimin Jung,** University of Utah Asia Campus, South Korea
15:00-15:15	E100	Flood Disaster Early Prediction System Using Machine Learning Based on Internet of Things (IoT) on the ADHI Construction Project **Ratih Dwi Anggraeni,** PT Adhi Karya (Persero) Tbk, Indonesia
15:15-15:30	E022	Correlation between Compactness and Condominiums — Analysis by the Size of Cities in Japan **Nobuo Kawahara,** Yokohama City University, Japan

ONSITE SESSION 2 (UTC+7)

December 8 (Sunday) **13:30-15:55**	**<Crystal 1 | 3F>**

Onsite Session 2: Sustainable Building Materials and the Properties
Chairperson: Dr. Lapyote Prasittisopin, Chulalongkorn University, Thailand

13:30-13:55	Invited Talk	Graphene Quantum Dot Technology in Construction and Built Environment Applications **Dr. Lapyote Prasittisopin,** Chulalongkorn University, Thailand
13:55-14:10	E025	Modification Effect of Silicate-based Surface Impregnation on Mortar Incorporating Blast Furnace Slag Fine Powder **Tomohiro Hamada,** Kochi National Colleage of Technology Advanced Course, Japan
14:10-14:25	E008-A	Patterns of Using Bamboo as A Sustainable Construction Material in Contemporary Bamboo Architecture in Thailand **Rutchanoophan Kumsingsree,** Kasetsart University/ Mahasarakham University, Thailand
14:25-14:40	E114	Experimental Study on Utilization of Wood Ash and Bamboo Fiber in Concrete **Meryl Mae C. Rodriguez,** Mapúa Malayan Colleges Mindanao, Philippines
14:40-14:55	E107	Assessment of Physical and Mechanical Properties of Concrete Roof Tile Utilizing Mud Crab (Scylla Serrata) Shells as Partial Fine Aggregate Replacement **Kenneth D. Marcos,** Mapua Malayan Colleges Mindanao, Philippines
14:55-15:10	E104	The Effect of Polyethylene Terephthalate as a Partial Replacement of Sand on Mechanical Properties of Mortar and Concrete Mixture **Luckyboy Mohale,** University of South Africa, South Africa
15:10-15:25	E072	Effect of Utilizing Local Steel Slag as a Coarse Aggregate Replacement on Durability and Mechanical Properties of Concrete **Palesa Anastasia Tshetlanyane,** University of South Africa, South Africa
15:25-15:40	E090	Sustainability in Pavement Engineering: A Review of Rubberized Bitumen and Its Performance **Juland A. Padilla,** Polytechnic University of the Philippines, Philippines
15:40-15:55	E143	Analysis of Mechanical Strengths of Fly Ash-Based Geopolymer Concrete **Kenneth D. Marcos,** Mapua Malayan Colleges Mindanao, Philippines

ONSITE SESSION 3 (UTC+7)

December 8 (Sunday) **13:30-16:00**	**<Crystal 2 | 3F>**

Onsite Session 3: Building Information Technology and Construction Project Management
Chairperson: Asst. Prof. Wasaporn Techapeeraparnich, Mahidol University, Thailand

13:30-13:45	E098	BIM-GIS Integration for Port Planning: Case Study of Hai Phong Port Cluster in Vietnam **Khoi Phuc Minh Tran,** Ho Chi Minh City University of Technology (HCMUT), Vietnam
13:45-14:00	E034	Mitigation Problems in the Closeout Phase of Public Sector Construction Projects **Pyae Pyae Aung,** Mahidol University, Thailand
14:00-14:15	E093	Enhancing Cement Routing Decision-making through Multi-objective Trade-off in Construction Management **Van Nam Nguyen,** Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Ho Chi Minh City, Vietnam
14:15-14:30	E112	Covid-19 Impact on Construction Projects and Mitigation Measures of the Thai Government **Wasaporn Techapeeraparnich,** Mahidol University, Thailand
14:30-14:45	E037-A	GNSS Data Based Worker Access Restriction Technology in Crane Hazard Zones **Eun-Yul Lee,** Dongguk University WISE Campus, Republic of Korea
14:45-15:00	E086	An Integrated BIM-Based Framework for Enhancing Safety Risk Management in Fall Prevention **Le Anh Tran,** Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Ho Chi Minh City, Vietnam
15:00-15:15	E041	Integration of Advanced Surveying Technologies into BIM-GIS Systems of Port infrastructure **Khoi Phuc Minh Tran,** Portcoast Consultant Corporation & Ho Chi Minh City University of Technology (HCMUT), Vietnam
15:15-15:30	E130-A	Experimental Investigation of LVL Timber Beam under Bending Tests Using Digital Image Correlation (DIC) Technique **Annisa Prita Melinda,** Toyohashi University of Technology, Japan
15:30-15:45	E127	Applied Engineering Software and Delay Analysis Techniques for Presentation of Delay's Impacts During Construction Phase **Charoensub Ngoichunsri,** King Mongkut's University of Technology Thonburi, Thailand
15:45-16:00	E091	Artificial Intelligence in Construction Safety Risk Management: A Comprehensive Review and Future Research Perspectives **Le Anh Tran,** Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Ho Chi Minh City, Vietnam

ONSITE SESSION 4 (UTC+7)

December 8 (Sunday) **16:20-18:05**	**<Ballroom 3&4| 2F>**

Onsite Session 4: Educational Information Technology and Engineering Education Innovation
Chairperson:

16:20-16:35	E0012	Integrating Virtual Reality in STEM Education: Enhancing Student Engagement and Understanding through Immersive Learning Environments **Gibson Lam,** Hong Kong University of Science and Technology, Hong Kong
16:35-16:50	E0023	Communication as a Core Competency in Engineering: Insights from PROG Test Surveys **Mayu Shintani,** Shibaura Institute of Technology, Japan
16:50-17:05	E0015-A	Project Mingde: Experience and Prospect of Experiential Learning in Civil Engineering Education **R.C.P. Wong,** The University of Hong Kong, China
17:05-17:20	E0019-A	Heart Rate Variability Analysis in High School Students During Programming Learning **Katsuyuki Umezawa,** Shonan Institute of Technology, Japan
17:20-17:35	E10004-A	A Conceptual Framework of Leveraging Enterprise Social Media for Enhancing Student Engagement in Open Universities **Songlak Sakulwichitsintu,** Sukhothai Thammathirat Open University, Thailand
17:35-17:50	E0016	Predicting Course Demand at CatSU CICT: A Linear Regression Analysis to Estimate Future Student Enrollment for the Upcoming Academic Year **Gemma Guerero Acedo**, Catanduanes State University, College of Information and Communication Technology, Philippines
17:50-18:05	E0026	A Gaming Simulation for Evaluating the Ability Of. Systems Thinking: A Case Study on Railway Systems **Yuta Yamazaki,** Shibaura Institute of Technology, Japan

ONSITE SESSION 5 (UTC+7)

December 8 (Sunday)
16:20-18:20

<Crystal 1 | 3F>

Onsite Session 5: Advanced Building Materials and the Structural Performance
Chairperson: Prof. Rendy Thamrin, Universitas Andalas, Indonesia

16:20-16:35	E027	Durability Evaluation of Cement Paste with Ginger by Adding Defoaming Agent **Mio Kawashima,** National Institute of Technology, Kochi College, Japan
16:35-16:50	E015	Mechanical Properties of Concrete Incorporate with Luffa Cylindrica Fibre and Cuttlefish Bone **Lyn Dee Goh,** Universiti Teknologi MARA, Penang Branch, Malaysia
16:50-17:05	E028	Physical Properties of Cementless Materials Using Classified Woody Biomass Combustion Ash **Kanta Shimura,** Kochi National Colleage of Technology Advanced Course, Japan
17:05-17:20	E126	Simulation-Based Assessment of the Impact of Internal and Surface-Breaking Cracks on Reinforced Concrete Electrical Resistivity **Kevin Paolo Valerozo Robles,** Dong-A University, South Korea
17:20-17:35	E161	Self-Healing Concrete with Two-Component Macro-Encapsulated Epoxy: Optimizing Compressive Strength and Compressive Strength Recovery **Jade Vanessa Ching,** De La Salle University - Manila, Philippines
17:35-17:50	E095	Flexural Performance of Reinforced Concrete Beams with Cement Grouting Layer in the Tension Zone **Rendy Thamrin,** Universitas Andalas, Indonesia
17:50-18:05	E082	Enhancing the Mechanical Properties of Soft Soil Using Cement and Fiber Reinforcement **Meysam Bayat,** Southern University of Science and Technology, Shenzhen, China
18:05-18:20	E131-A	Experimental Investigation of Cyclic Loading at FRCM Composite Reinforced Columns **Jongeok Lee,** Keimyung University, South Korea

ONSITE SESSION 6 (UTC+7)

December 8 (Sunday)
16:20-18:35

<Crystal 2 | 3F>

Onsite Session 6: Transportation, Seismic Safety, and Structural Health Monitoring
Chairperson: Asst. Prof. Annisa Prita Melinda, Toyohashi University of Technology, Japan

16:20-16:35	E097-A	Implementation of Seismic Detection Alarm System for Greater Jakarta Light Rail Transit, Indonesia **Grace Rumondang Pangaribuan,** PT Adhi Karya (Persero) Tbk, Indonesia
16:35-16:50	E055	Damage Conditions and Structural Performance Assessment for Small Bridges Subjected to Seismic Forces **Le Trung Kien,** Kanazawa University, Japan
16:50-17:05	E099	Problems of Prefabricated Steel Structure from Design to Construction; Case Study of Thailand **Sorawit Kamnuengkarn,** Mahidol University, Thailand
17:05-17:20	E115-A	Seismic Performance of Self-Centering Prestressed Steel Frame Joints Based on Shape Memory Alloys **Yutao Feng,** Southeast University, China
17:20-17:35	E076-A	Experimental Investigation on the Applicability of Self-Sensing UHPFRC with Carbon Nanotubes **Sang-Hoon Lee,** University of Seoul, Republic of Korea
17:35-17:50	E096-A	Integrated Drainage System in the Depot Jabodebek LRT PT Adhi Karya (Persero) Tbk: A Sustainable Approach **Dera Rachmawaty Kusuma,** PT Adhi Karya (Persero) Tbk, Indonesia
17:50-18:05	E168	Assessing the Effectiveness of 2D Fluid-Structure Interaction Models in Simulating Vortex-Induced Vibrations on a Rectangular Prism Body **Audy Maulizar,** Bandung Institute of Technology, Indonesia
18:05-18:20	E089	Trade-Off Analysis in Fragility Curve Development: A Value Engineering Perspective on Site-Specific and Generic Models **Jhon Philip P. Camayang,** Polytechnic University of the Philippines, Philippines
18:20-18:35	E147	Design and Evaluation of a Dedicated PCB Using MEMS Accelerometers for Bridge Structural Health **Le Hoang Giang,** VNU Information Technology Institute, Hanoi, Vietnam

ONLINE SESSION 1 (UTC+7)

December 9 (Monday)
09:00-12:15

Meeting Room A: 897 2729 6603

Online Session 1: Building Materials, Structures, and Engineering Education

Chairperson: Dr. Miktha Farid Alkadri, University of Indonesia, Indonesia

09:00-09:15	E019	Pushover Analysis of a Structure in Accordance with the Most Recent and Oldest SNI **Sadvent M Purba,** Pelita Harapan University, Indonesia
09:15-09:30	E020-A	Research on Thermal Stimulation Effects to Superplasticzers **Yuto Hidai,** Tokai University, Japan
09:30-09:45	E021	Potential Application of High-Volume Fly Ash Concrete in the Production of Precast Reinforced Concrete Piles **Ninh Hoai Phuong Duy,** Can Tho University, Vietnam
09:45-10:00	E058	Optimal Dosage of Polypropylene and Steel Fibers to Improve Compressive Strength of Concrete at 350 °C **Alejandro Daniel Pareja Jordan,** Peruvian University of Applied Sciences, Lima, Peru
10:00-10:15	E061	The Role of Color Performance on Indoor Surfaces based on Indoor Environmental Quality (IEQ) Parameters: Visual Comfort, Thermal Comfort, Air Quality **Hayfa Farhah,** Universitas Indonesia, Indonesia
10:15-10:30	E088	Performance Evaluation of Anionic and Cationic Emulsions in Cement Asphalt Mortar Incorporating Waste Plastic Aggregates for Stabilizing Railway Ballast **Trong-Phuoc Huynh,** Can Tho University, Vietnam
10:30-10:45	E160	Experimental and Numerical Study of the Flexural Capacity of Laminated Bamboo T-Beams with Steel Reinforcement Using the Near Surface Mounted (NSM) Method **I Ketut Hendra Wiryasuta,** Politeknik Negeri Banyuwangi, Indonesia
10:45-11:00	E105	Evaluation of Rheological, Mechanical, and Durability Properties of Self-compacting Concrete with Microsilica and Diatomite for Application in Buildings Exposed to Marine Environments **Fiorela Del Pilar Aguilar Taboada,** Peruvian University of Applied Sciences, Lima, Peru
11:00-11:15	E0009	Exploring the Impact of Role-Playing and Peer Feedback on Students' Learning Experience in Practical Based Physics Classrooms: A Qualitative Study **Jeevanithya Krishnan,** Sunway University, Malaysia
11:15-11:30	E0017	Reconstruction and Teaching Model of TRIZ Innovation Method Course Construction in Science and Engineering Innovation Experi-mental Class **Chengyong Gong,** Lanzhou University of Technology, China
11:30-11:45	E007	Comparison between Peruvian Standards E.030 from 2006 and 2016 through a Static Nonlinear Analysis in a Sixstory Reinforced Concrete Building **Christian Jeanpier Seminario Soriano,** Universidad Peruana de Ciencias Aplicadas, Peru
11:45-12:00	E1001	Bamboo Modular Stereometric Structures for Emergency Classrooms in Response to the Fenomeno del Niño (FEN) in Piura, Peru **Génesis Candelario Rivera,** Ricardo Palma University (URP), Peru
12:00-12:15	E169	Comparative Analysis of Drained Triaxial Compression Behavior of Railway Ballast Materials Using NorSand and SANISAND04 Models **Meletetsega Gashaw,** Khalifa University of Science and Technology, United Arab Emirates

ONLINE SESSION 2 (UTC+7)

December 9 (Monday)
09:00-12:130

Meeting Room B: 812 3644 0121

Online Session 2: Geotechnical Engineering, Spatial Planning, and Construction Project Management
Chairperson: Asst. Prof. Reazul Ahsan, University of Utah Asia Campus, Korea

09:00-09:15	E031	Towards Sustainable Community: Urban Physical Examination Indexes for Residential Historic Area in Jiangsu Province, China **Yue Chen**, Soochow University, China
09:15-09:30	E142	Analyzing the Stress-strain Characteristics of High Arch Dam Under the Condition both Discharging Water Using Outlets in Dam Structure and Artificial Seismic Acceleration based on Fluid-structure Coupling Finite Element Method and PSO-BP Neural Network **Cheng-yong Gong**, Lanzhou University of Technology, China
09:30-09:45	E146	Fire Evacuation Path Dynamic Planning System based on Improved A* Algorithm **Lan Yale,** Xi'an University of Architecture and Technology, China
09:45-10:00	E166	The Effect of Building with Nature Structure on Estuary Mitigation: A Case Study of Muara Beting Beach, Muara Gembong, Indonesia **Siska Wulandari,** Institut Teknologi Bandung, Indonesia
10:00-10:15	E174	Analysis of Stability and Reinforcement of River Banks Against Erosive Processes Caused by Rising Water Levels in Lurín, Perú **Leonardo Sebastián Chunga Zapata,** Peruvian University of Applied Sciences, Lima, Peru
10:15-10:30	E032	Vulnerability Assessment of the Chamelecón Bridge through the PIEVC Methodology Following the Climato-logical Events of ETA and IOTA **Gabriela Monserrath Giron,** Dario Eliezer Lagos, Universidad Tecnológica Centroamericana, Honduras
10:30-10:45	E044	Methodical Approach for the Definition of a Synergetic Planning Procedure for Hospitals Using the Design Structure Matrix Method **Lena Wecken,** Institute of Production Systems and Logistics, Germany
10:45-11:00	E102	Effect of Bedding Plane Orientations and Scratching Directions on CERCHAR Abrasivity Index of Soft to Medium-hard Rocks **Thiti Patcharaarpakul,** Suranaree University of Technology, Thailand
11:00-11:15	E103	Effect of Rock Joint Frequency and Aperture on CERCHAR Abrasivity Index **Ratchapon Mingkhwan,** Suranaree University of Technology, Thailand
11:15-11:30	E137	Selection of the Multidisciplinary BIM Modeler: Using the CBA and Visual Integration Tool for Continuous Improvement **Jhoan Jaime Ruiz Figueroa,** Peruvian University of Applied Sciences, Lima, Peru
11:30-11:45	E167	A Computational Procedure to Preserve Vernacular House of Wae Rebo Using 3D Scanning and Photogrammetry Technology **Yuliana,** Universitas Indonesia, Indonesia
11:45-12:00	E083	Optimization-based Real-time Mobile Intelligent Dispatching Schedule for Ready-mixed Concrete Transportation **Nguyen Thi Nha Trang,** Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Ho Chi Minh City, Vietnam
12:00-12:15	E120	Fiscal Implications of Government's Collective VGF Support in Multiple PPP Toll Roads in Bangladesh **Rakibul Hasan,** Chulalongkorn University, Thailand

12:15-12:30	E141	Title Utilizing School Sites for Regional Revitalization and Changes in School Facilities **Haeyeon Yoo,** School of Architecure, Soongsil University, South Korea

POSTER DISPLAY

December 8 (Sunday)		Meeting Room: <Ballroom 3&4| 2F>
#1	E004	Form of Traditional Architecture in the Northern Delta - Vietnam **Diem Thanh Tran**
#2	E036	Key Factors of Passive Design for Industrial Buildings located in Southern Vietnam towards Green Architecture **Quyen Hoang Dang, Thuong Van Le, and Ngoc Tran Minh**
#3	E038	Sustainable Urban Development in the Cultural Dimension **Diem Thanh Tran and Quynh Thi Thuy Nguyen**
#4	E084	Equivalent Stiffness and Modal Analysis of Fan Tower Barrel based on Bolt Connection **Hongyou Li, Liyuan Liu, Enzhi Cao, and Yang Luo**
#5	E134	Research on the Identification and Dynamic Evolution of Spatial Agglomeration in Urban Creative Parks from a High Quality Perspective **Zhou Qi and Gao Chang-chun**

DELEGATE LIST

Chunho Chang, Keimyung University, South Korea

Fahzrin Perwitasari, PT Adhi Karya (Persero) Tbk, Indonesia

Han-Soo Kim, Konkuk University, South Korea

Herlien Dwiarti Setio, Bandung Institute of Technology, Indonesia

Iseo Choi, University of Utah Asia Campus, South Korea

Judith Ching, N/A

Kang Su Kim, University of Seoul, Republic of Korea

Patria Kusumaningrum, Bandung Institute of Technology, Indonesia

Sutarto, PT Adhi Karya (Persero) Tbk, Indonesia

Yeonhwan Jeong, Keimyung University, South Korea

Takuya Kondo, Kochi National College of Technology, Japan

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