ICCEPM 2024

The 10th International Conference on
Construction Engineering and Project Management

*How innovative technology shapes sustainable built
environment beyond limits for research and industry*

Dates: July 29(Mon) -August 1 (Thu), 2024

Venue: Hokkaido University Conference Hall, Sapporo City, Japan

Organizers: ICCEPM2024 Joint Consortium

ICCEPM Consortium

The International Consortium of Construction Engineering and Project Management (ICCEPM) has been reformulated in 2021 on the basis of continued collaborative efforts for ICCEPM conferences since 2005.

ICCEPM is a global academic society committed to promoting advancement in the area of construction engineering and project management. ICCEPM aims to establish a knowledge base for the area, accurately forecast future technology demands, improve industry practices, and facilitate knowledge transfer in the field of construction management through international collaboration.

The co-presidents of ICCEPM, professor Youngsoo Jung of Myongji University and professor Heng Li of Hong Kong Polytechnic University, are honored and grateful to have Japan as our host for 2024!

Please visit our website at https://www.iccepm.org/ for further information about the consortium.

ICCEPM2024 Sapporo

The 10th International Conference on Construction Engineering and Project Management

We are excited to announce that 10th International Conference on Construction Engineering and Project Management (ICCEPM) is hosted in Sapporo from July 29th to August 1st, 2024.

We would like to invite you to attend and participate in various conference activities including academic paper presentations, business seminars and workshops, networking, music performance, dinner banquet, and post-conference excursion. These conference activities will be highly educational, practical and enjoyable for students, academics and practitioners.

The 2024 ICCEPM theme is "How innovative technology shapes sustainable built environment beyond limits for research and industry". Under this theme, the conference will provide inspiring and thought-provoking opportunities through engagement with internationally renowned scholars and industry leaders known for their innovation.

Unlike traditional academic conferences, this ICCEPM conference is uniquely designed to blend creative ideas from academia and innovative practices from industry. Conference participants will experience the powerful synergy between academia and industry that will guide the future direction of the construction industry.

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Sponsors and supporting organizations

The Korea Institute of Construction Engineering and Management (KICEM) is the leading professional membership society of construction engineering and management in Korea. KICEM has held annual conferences and international conferences as well as various seminars and forums since its founding to provide timely information to its members and the general public.
https://www.kicem.or.kr/eng/

Pacific Century Premium Developments Limited* ("PCPD" or the "Group", SEHK: 00432) is principally engaged in the development and management of premium-grade property and infrastructure projects as well as premium-grade property investments

Circle Field Associates is an independent professional firm (regulated by RICS) established in 2015, with offices in London UK and Japan. We are specialized in strategy, management and dispute resolution within Land, Property, Construction and Heritage sectors.
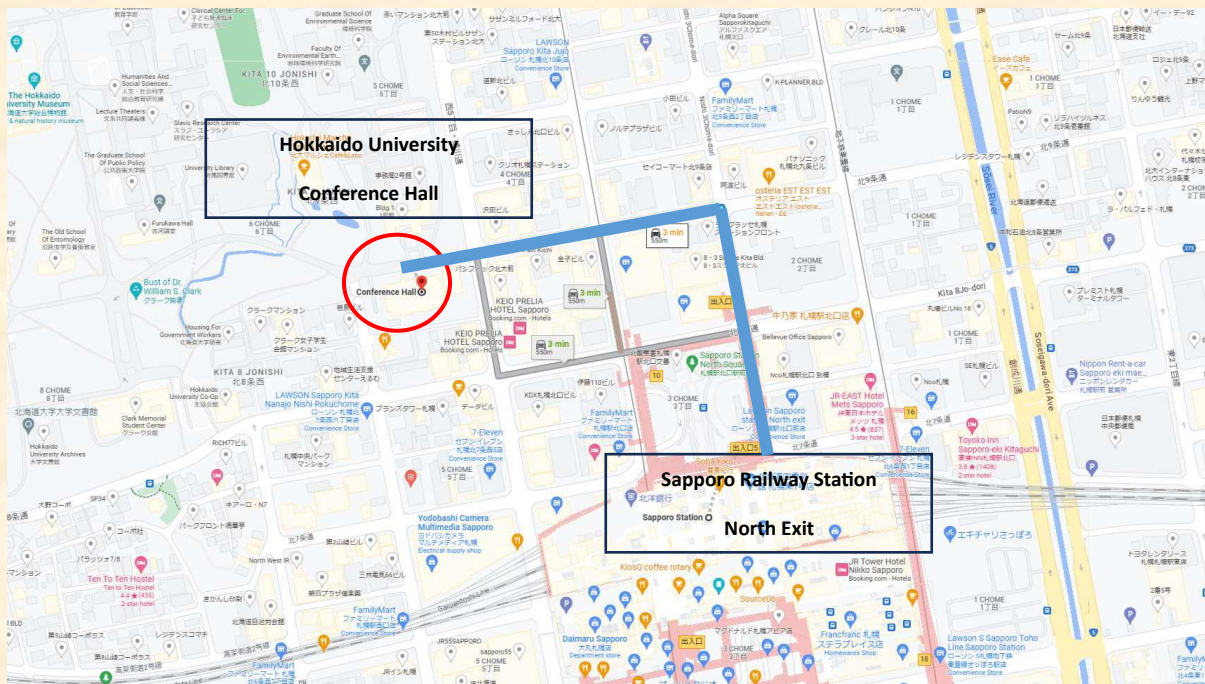
ICCEPM2024 Sapporo

VENUE

Hokkaido University Conference Hall is 10 minutes-walk from Sapporo Railway Station North Exit

https://www.global.hokudai.ac.jp/about/facilities/event-and-seminar-spaces/conference-hall/

ACCESS

ICCEPM2024 Sapporo

TRAVEL

<u>International and Domestic airports to Shin Chitose Airport (CTS)</u>

Direct flights from Seoul, Pusan, Beijing, Shanghai, Hong Kong, Taipei, Bangkok and other cities

Connection flights for 1 hour 50 minutes from Tokyo (Haneda/Narita) to Sapporo (Shin Chitose)

<u>From Shin Chitose Airport (CTS) to Sapporo Railway Station</u>

Rapid Airport Trains for 40 minutes (one way ticket costs 1,150 -1,990 YEN, circa 8-14 USD)

<u>From Sapporo Railway Station to Hokkaido University Conference Hall</u>

Walk for 10 minutes

<u>Hokkaido University Conference Hall</u>

https://www.global.hokudai.ac.jp/about/facilities/event-and-seminar-spaces/conference-hall/

HOTEL

Hotel fee is not included. Please book a nearby hotel such as;

1.Toyoko Inn Sapporo Station West Entrance Hokkaido University (3 stars)- walking distance

   Toyoko Inn Sapporo Station North Entrance (3 stars)- walking distance

2.Keio Prelia Hotel (3 stars) – walking distance

3.Hotel Mystay Sapporo Aspen (4 stars)- walking distance

4.Mitsui Garden Hotel (3 stars)   - Sapporo city center

5.Daiwa Roynet Hotel(4 stars)   - Sapporo city center

6.Keio Plaza Hotel(5 stars)   - Sapporo city center

7.Sapporo Grand Hotel(5 stars)   - Sapporo city center

8.JR Tower Hotel Nikko Sapporo (5 stars) - Sapporo city center

9. Sapporo Prince Hotel (5 stars)   - Sapporo city center
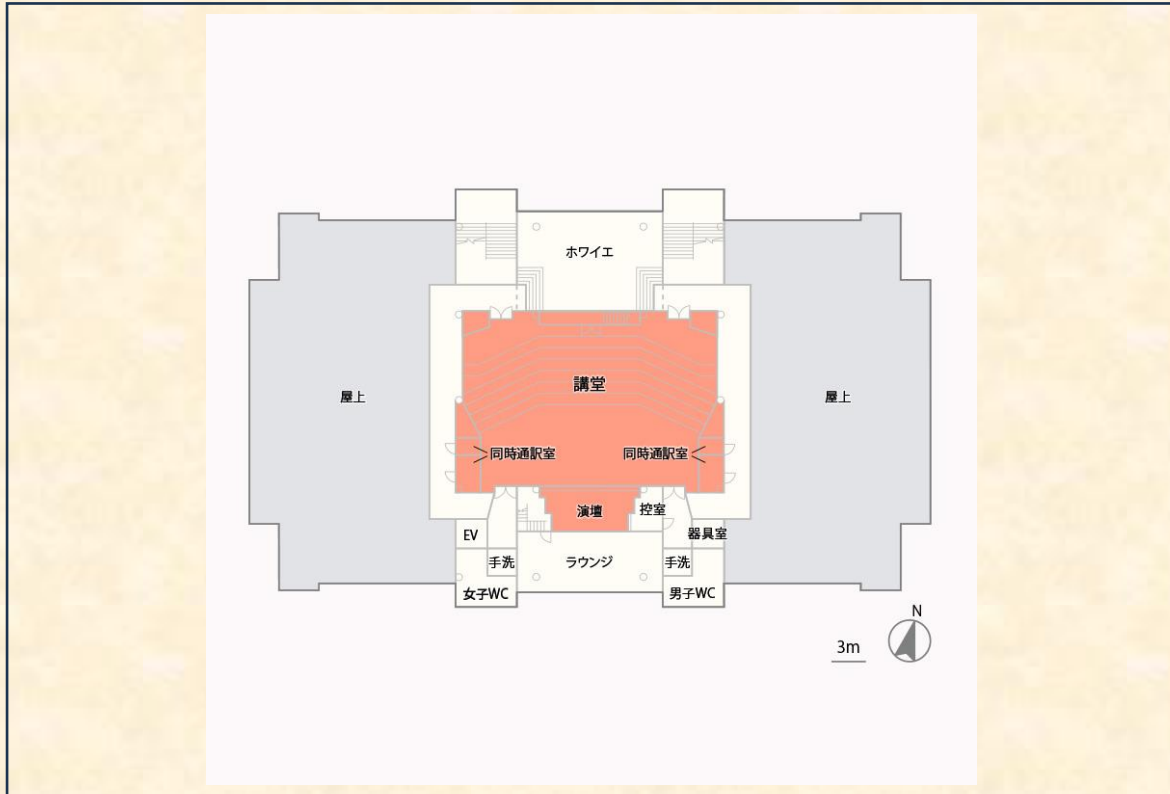
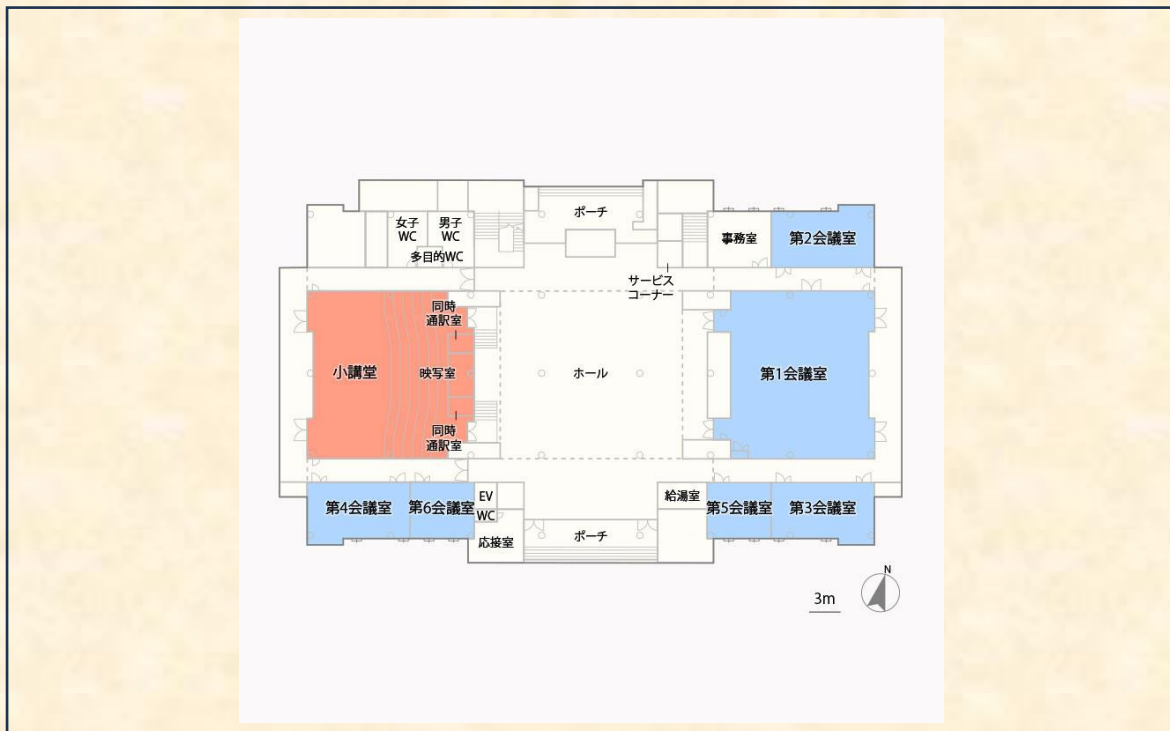10.Sapporo Park Hotel (5 stars)   - South of Sapporo city center

FLOOR PLAN

Hokkaido University Conference Hall

Upper Floor- Auditorium(orange)

Ground Floor – Auditorium(orange) and 6 conference rooms(blue)

ICCEPM2024 Sapporo

CONFERENCE PROGRAM

	Time	Room

Day1- July 29 (Mon), 2024

| Day1 Registration (Online) | 11:00 AM- | Entrance Hall |
| Day1 Opening ceremony | 12:30 PM | Auditorium |

    Dr Tomonari Yashiro (ICCEPM2024 Chair)

    Dr Youngsoo Jung (ICCEPM Co-President)

    Dr Bonsang Koo, Dr JoonOh Seo (ICCEPM2024 Organizers)

    Architect Hideyuki Hatakenaka (Studio Sinfonica)

Day 1 Keynote speeches	13:30 – 17:00 PM	Auditorium
Day 1 Academic Paper proceedings	16:00 -17:00 PM	Conference rooms
Day 1 Business Seminars and Workshops	16:00 -17:00 PM	Auditoriums

Day2- July 30 (Tue), 2024

Day 2 Opening	9:00 AM	Auditoriums
Day 2 Keynote speeches	9:30 -10:30 AM	Auditoriums
Day 2 Academic Paper proceedings	10:30 AM -17:00 PM	Conference rooms
Day 2 Business Seminars and Workshops	10:30 AM -17:00 PM	Auditoriums

Day3- July 31 (Wed), 2024

Day 3 Opening	9:00 AM	Auditoriums
Day 3 Keynote speeches	9:30 -10:30 AM	Auditoriums
Day 3 Academic Paper proceedings	10:30 AM -17:00 PM	Conference rooms
Day 3 Business Seminars and Workshops	10:30 AM -17:00 PM	Auditoriums
Conference Closing	17:00PM	Auditoriums
Awards & Banquet Dinner	18:00 -20:00 PM	Sapporo Garden Palace Hotel

Day 4- August 1 (Thu), 2024

| Excursion to Niseko | 9:00 AM | Departing Hotel Mystays Sapporo Aspen |
| Park Hyatt Niseko- tour, drinks & canapes | 11:00 AM– 13:00 PM | Park Hyatt Niseko Hanazono |

Post 13PM is for participants' own choices (e.g. summer activities & hotel stay).

 *free tour buses departing 13:30(via Chitose airport), 15:30 and 16:30 PM, back to Sapporo.

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PROGRAM CHART

	Time	Auditoriums(2FL)	Auditorium(1FL)	Time	Room1	Room2	Room3	Room4	Room5	Room6
DAY1	12:30PM-13:30PM	Opening ceremony	-	12:30PM-16:00PM	-	-	-	-	-	-
	13:30OM-16:00PM	Keynote Speech	-							
	16:00PM-17:00PM		Business seminar	16:00PM-17:00PM	Session1	BoD	Session1	Session1	-	-
	18:30PM-	Invitation only-Sapporo Prince Hotel								

	Time	Auditoriums(2FL)	Auditorium(1FL)	Time	Room1	Room2	Room3	Room4	Room5	Room6
DAY2	9:30AM-10:30AM	Keynote Speech	-	9:30AM-10:30AM	-	-	-	-	-	-
	11:00AM-12:00PM	Business seminar	Business seminar	10:30AM-12:15PM	Session1	Session1	Session1	Session1	Session1	Session1
	12:00PM-13:00PM	Lunch	Lunch	12:15PM-13:15PM	Break	Break	Break	Break	Break	Break
	13:00PM-17:00PM	Business seminar	Business seminar	13:15PM-15:00PM	Session2	Session2	Session2	Session2	Session2	Session2
				15:15PM-17:00PM	-	Session3	Session3	Session3	Session3	Session3
	18:30PM-	Invitation only-Sapporo Prince Hotel								

	Time	Auditoriums(2FL)	Auditorium(1FL)	Time	Room1	Room2	Room3	Room4	Room5	Room6
DAY3	9:30AM-10:30AM	Keynote Speech	-	9:30AM-10:30AM	-	-	-	-	-	-
	11:00AM-12:00PM	Business seminar	Business seminar	10:30AM-12:15PM	Session1	Session1	Session1	Session1	Session1	Session1
	12:00PM-13:00PM	Lunch	Lunch	12:15PM-13:15PM	Break	Break	Break	Break	Break	Break
	13:00PM-17:00PM	Business seminar	Business seminar	13:15PM-15:00PM	Session2	Session2	Session2	Session2	Session2	Session2
				15:15PM-17:00PM	Session3	-	Session3	-	Session3	-
	18:00PM-20:00PM	Banquet Dinner (Sapporo Garden Palace Hotel)								

DAY4	9:00AM-13:00PM	Excursion from Sapporo to Niseko(by bus departing Hotel Mystays Sapporo Aspen)
	13:00PM-	Free Activities. Buses departing Park Hyatt Niseko at 13:30PM(Sapporo via Chitose Airport), 15:30PM(Sapporo), 16:30PM(Sapporo)

KEYNOTE SPEECH

Day1- July 29 (Mon), 2024.   13:30-14:15 PM

Prof.   George Edward Gibson Jr.   President, National Academy of Construction

Arizona State University

Title: Technology is important and so are people…

The implementation of technology and its impact on the integration of project management functions has long been looked at as a game changer.

Day1- July 29 (Mon), 2024.   14:30-15:15 PM

Prof. Hun-Hee Cho   Dean of the Graduate School of Management of Technology

Korea University

Title: Is Smart Construction Now here or Nowhere?

Examining how smart technologies are revolutionizing the construction industry and how we can drive this transformation ourselves

Day1- July 29 (Mon), 2024.   15:30-16:15 PM

Prof. Dongping Fang   Tsinghua University

Title: Cognition-Based Safety + Artificial Intelligence for Construction Safety

Day1- July 29 (Mon), 2024.   16:15-17:00 PM

Prof. Ying-Yi Chih   Australian National University

Title: American Society of Civil Engineers (ASCE)'s Journal of Management in Engineering (JME), its review process and criteria.

KEYNOTE SPEECH

Day2- July 30 (Tue), 2024.   9:30-10:30 AM

Prof. Norio Maki   Kyoto University, Disaster Prevention Research Institute

Title: How can we measure the resilience of building functionality?

Day3- July 31 (Wed), 2024.   9:30-10:30 AM

Prof. Hirotake Kanisawa   Shibaura Institute of Technology

Title: Shortages of skilled construction workers in Japan, and challenges for the construction industry in Japan and Asia.

How to improve education, management and production efficiency?

Prof. Kazuya Shide   Shibaura Institute of Technology

Title: Offsite construction and digital transformation in Construction industry.

How current issues can be solved by practitioners and academic researchers?

SOCIAL EVENTS and MEALS

Lunch box

Please check-in and order your lunch box before July 20 (Sat).
https://iccepm2024.com/registration

Collect it at GFL Entrance Hall, to enjoy it at GFL Auditorium

DAY2 and DAY3: from 12:00 PM to 13:00 PM

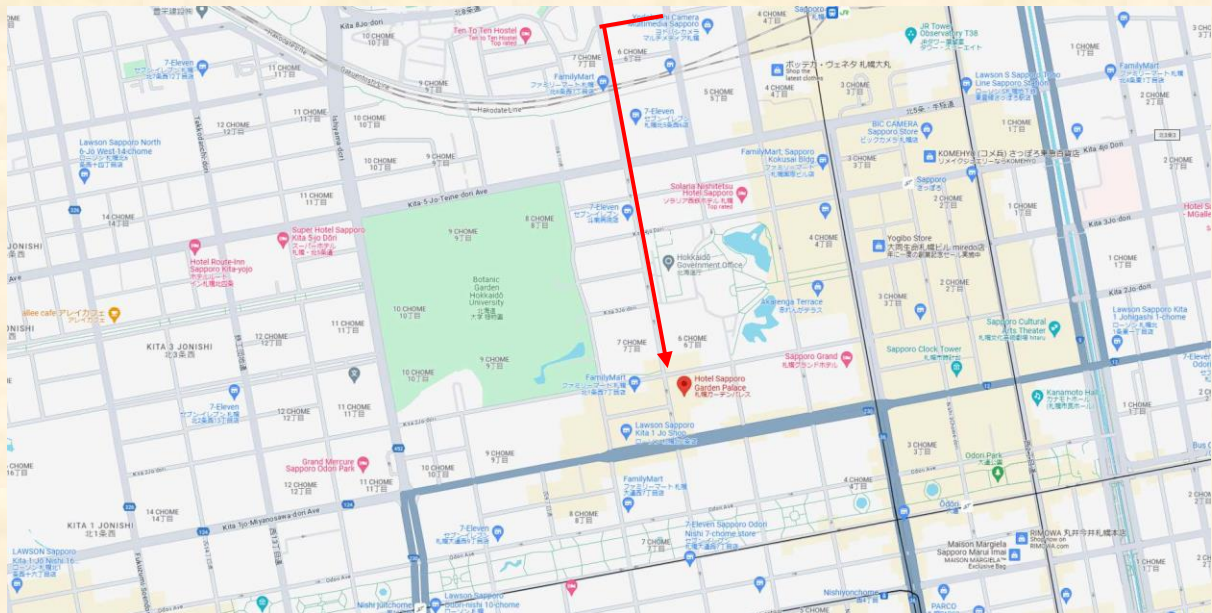Location: GFL Entrance Hall & GFL Auditorium

Banquet Dinner

DAY3:   from 18:00PM to 20:00PM

Location: Sapporo Garden Palace Hotel

From the Conference Hall, please walk straight down to South for 15 min.

https://www.hotelgp-sapporo.com/access/

Excursion

DAY4: Please see page 26 and 27 for details

TECHNICAL PROGRAM PROCEEDINGS

ROOM1,2,3 and4 (DAY1)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY1-SESSION1-ROOM1	1. Industrialized and Modular Construction	Taewan Kim	ROOM1	1,2	DAY1	29-Jul-24	16:00	16:15	79	Zhongfu Li and Ruiyan Zheng	Multi-objective permutation flow shop scheduling in precast production under consideration of embodied carbon emissions
	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities		ROOM1	1,2,8	DAY1	29-Jul-24	16:15	16:30	120	Kyeongtae Jeong, Jongyoung Youn, Chaeyeon Yu and Donghoon Lee	A Study on the Lower Shape of Double-curved and Polygonal Free-form Concrete Panel
	3. Sensing and Data Analytics for Construction (AI & Data Science)		ROOM1	3,7	DAY1	29-Jul-24	16:30	16:45	223	Dahyun Jung, Hakpyeong Kim, Seunghoon Jung, Hyuna Kang, Seungkeun Yeom, Juui Kim and Taehoon Hong	Comprehensive System Framework for Visual Fatigue and Cognitive Performance Management based on Predictive Models
	7. Building Science (Energy Modeling, Facility Management)		ROOM1	7	DAY1	29-Jul-24	16:45	17:00	233	Kyungseok Oh, Hyeonggyun Kim, Juyeon Park, Hwan Namgung, Jaewook Lee, Kwangbok Jeong and Jaehong Lee	A Study of CO2 Emissions Reduction Effect in UK Non-Domestic Buildings according to Energy Performance Certificate Mandate
DAY1- BoD Meeting-ROOM2	BoD Agenda	ICCEPM BoD Presidents & Chairs	ROOM2	BoD	DAY1	29-Jul-24	16:30	17:45	-	ICCEPM BoD Members	BoD Agenda
DAY1-SESSION1-ROOM3	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Muhammad Umair	ROOM3	4	DAY1	29-Jul-24	16:00	16:15	18	Ximing Sun, Jiayu Chen and Xiaodong Li	Parametric modeling of walls based on voxels of slices and line segment detection
			ROOM3	4	DAY1	29-Jul-24	16:15	16:30	21	Muhammad Umair, Joonoh Seo and Choongwan Koo	Impact of Repeated Virtual Reality Safety training on the Construction Worker Risk Habituation
			ROOM3	4	DAY1	29-Jul-24	16:30	16:45	251	Joonho Jeong, Sohyun Kim, Junwoo Park, Jungmin Lee, Kwangbok Jeong and Jaewook Lee	Automated Generation of BIM Models with Indoor Spaces Using Street View Images
			ROOM3	4	DAY1	29-Jul-24	16:45	17:00	295	Jonghyuk Lee, Sangik Lee, Byung-hun Seo, Dongsu Kim, Yejin Seo, Dongwoo Kim, Yerim Jo and Won Choi	Automated Terrain Data Generation for Urban Flood Risk Mapping Using c-GAN and BBDM
DAY1-SESSION1-ROOM4	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Won Choi	ROOM4	4,6	DAY1	29-Jul-24	16:00	16:15	240	Sangkil Song, Juwon Hong, Jinwoo Choi, Minjin Kong, Jongbaek An, Jaewoon Jeoung and Taehoon Hong	Assessing multiple hazard recognition abilities of construction equipment operators in dark environments using virtual reality
	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)		ROOM4	4,6	DAY1	29-Jul-24	16:15	16:30	285	Byung-hun Seo, Sangik Lee, Jonghyuk Lee, Dongsu Kim, Yejin Seo, Dongwoo Kim, Yerim Jo and Won Choi	Structural Safety Diagnosis of Plastic Greenhouse Using 3D Scanning Method
			ROOM4	6	DAY1	29-Jul-24	16:30	16:45	301	Kihun Song	Development of an Enhanced Risk Management System for Construction Defect Control in Industrial Plants

TECHNICAL PROGRAM PROCEEDINGS

ROOM1 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM1	1. Industrialized and Modular Construction	Sungkon Moon	ROOM1	1,3,8	DAY2	30-Jul-24	10:30	10:45	36	Sangmin Park, Maxwell Fordjour Antwi-Afari, Sanghyeok Han and Sungkon Moon	Classification and Improvement Directions for Mobile Crane Path Planning Algorithms: A Comprehensive Review
	Multiple topics		ROOM1	1,4	DAY2	30-Jul-24	10:45	11:00	9	Zhenglu Zhu and Kazuya Shide	Construction Method Research Using Building Information Modeling: A Focus on the Precast Concrete Partitioning Method Leveraging Genetic Algorithms
			ROOM1	1,4	DAY2	30-Jul-24	11:00	11:15	201	Saddiq Ur Rehman and Inhan Kim	Shape Grammar-Driven BIM Model Database for a Modular Building Design Recommender System
			ROOM1	1,4	DAY2	30-Jul-24	11:15	11:30	202	Ke Chen, Weixun Duan, Guichen Zhou and Gang Wang	A framework of welding digital twin for steel structures
			ROOM1	2,10	DAY2	30-Jul-24	11:30	11:45	1	Kwanghyuk Im	IM (Interindustry-Macro) Model on the Construction Sector
			ROOM1	2,10	DAY2	30-Jul-24	11:45	12:00	188	William Collinge	When sustainable technologies are ignored. Socio-technical systems thinking, construction and sustainable development.
			ROOM1	2,4,6	DAY2	30-Jul-24	12:00	12:15	67	Sining Li, Zhihao Ren, Yuanyuan Tian, Jung In Kim, Li Ma and Longyang Huang	Multi-objective optimization model for urban road maintenance planning using BIM, GIS, and DCE
DAY2-SESSION2-ROOM1	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities	Manik Adhikari	ROOM1	2,3	DAY2	30-Jul-24	13:15	13:30	19	Manik Adhikari, Seung-Bin Lee, Seong-Wuk Kim, Hyeon-Jun Kim, Jeremie Tuganishuri, Sang-Guk Yum and Ji-Myong Kim	Monitoring Roadbed Stability to Prevent Cascading Hazards in Daejeon City, South Korea, Using Sentinel-1 SAR Data
	Multiple topics		ROOM1	2,4,8	DAY2	30-Jul-24	13:30	13:45	38	Kieun Lee, Taeyong Kim and Sungkon Moon	Simulation of Urban Environments for Disaster Risk Management: Comprehensive Review of Techniques and Future Directions
			ROOM1	2,4,8	DAY2	30-Jul-24	13:45	14:00	43	Wonwoo Shin, Kyubyung Kang and Sungkon Moon	Enhancing Road Infrastructure Management: Pothole Detection Technology and Classification Standards
			ROOM1	2,7	DAY2	30-Jul-24	14:00	14:15	282	Yerim Jo, Sangik Lee, Jonghyuk Lee, Byung-hun Seo, Dongsu Kim, Yejin Seo, Dongwoo Kim and Won Choi	Nonlinear Finite Element Method for Local Buckling in Plastic Greenhouse
			ROOM1	3,4,7	DAY2	30-Jul-24	14:15	14:30	192	Thanh Luan Le and Sung-Ah Kim	Mixed-input neural networks for daylight prediction
			ROOM1	3,6	DAY2	30-Jul-24	14:30	14:45	50	Haneul Lee, Yeongchae Yun, Seokheon Yun and Youkyung Kim	The optimal method for imputing missing data in the preprocessing phase to enhance the performance of a DNN-based construction period prediction model
			ROOM1	3,4	DAY2	30-Jul-24	14:45	15:00	59	Shadi Alathamneh, Busra Yucel, Junshan Liu and Scott Kramer	A Comparative Analysis of Point Clouds Acquired from Terrestrial Laser Scanning, UAV Photogrammetry, UAV-based LiDAR, and 3D Virtual Tours in the Built Environment
SESSION CODE	**SESSION THEME**	**SESSION CHAIR**	**ROOM**	**Theme**	**DAY**	**DATE**	**START**	**FINISH**	**Paper Number**	**Authors**	**Title**
DAY3-SESSION1-ROOM1	3. Sensing and Data Analytics for Construction (AI & Data Science)	Minkoo Kim	ROOM1	3,4	DAY3	31-Jul-24	10:30	10:45	69	Francis Xavier Duorinaah, Samuel Olatunbosun, Jeong-Hun Won and Minkoo Kim	Advancing Construction Safety Through a Combination of Immersive Technologies and Physiological Monitoring – A Systematic Review.
	Multiple topics		ROOM1	3,6	DAY3	31-Jul-24	10:45	11:00	149	Nasrullah Khan, Syed Farhan Alam Zaidi, Aqsa Sabir, Muhammad Sibtain Abbas, Rahat Hussain, Dongmin Lee and Chansik Park	DTR : A Unified Detection-Tracking-Re-identification Framework for Dynamic Worker Monitoring in Construction Sites
			ROOM1	3,6	DAY3	31-Jul-24	11:00	11:15	271	Junhee Jung, Seohyeon Yang, Emmanuel Kimito, Dohyeong Kim, Chansik Park and Dongmin Lee	Worker Customized Stress Monitoring through Body Composition Analysis and Wearable Bio-Sensor
			ROOM1	3,8	DAY3	31-Jul-24	11:15	11:30	182	Wei Yi Hsu, Aritra Pal, Jacob J. Lin and Shang-Hsien Hsieh	Real-time Construction Progress Monitoring Framework leveraging Semantic SLAM
			ROOM1	4,12	DAY3	31-Jul-24	11:30	11:45	127	Mehrtash Soltani, Akeem Pedro, Rahat Hussein, Si Van Tien Tran, Aqsa Sabir, Doyeop Lee and Chansik Park	Enhancing Construction Jobsite Safety Training Through iSAFEEducation: A Novel Approach Using Industry 4.0 Technologies
			ROOM1	2,8	DAY3	31-Jul-24	11:45	12:00	215	Chen Li, Ke Chen and Hanlin Li	Cross-Learning Enhanced Semi-Supervised Point Cloud Semantic Segmentation for Sewer Inspection
			ROOM1	3,12	DAY3	31-Jul-24	12:00	12:15	142	Syed Farhan Alam Zaidi, Muhammad Sibtain Abbas, Rahat Hussain, Aqsa Sabir, Nasrullah Khan, Jaehun Yang and Chansik Park	iSafe Chatbot: Natural Language Processing and Large Language Model driven Construction Safety Learning through OSHA Rules and Video Content Delivery
			ROOM1	3,6	DAY3	31-Jul-24	12:15	12:30	281	Byunghee Yoo, Yuncheul Woo, Jinwoo Kim, Moonseo Park and Changbum Ryan Ahn	Improving Explainability of Generative Pre-trained Transformer Model for Classification of Construction Accident Types: Validation of Saliency Visualization
DAY3-SESSION2-ROOM1	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Fahran Alam Zaidi /Chansik Park	ROOM1	4,12	DAY3	31-Jul-24	13:15	13:30	133	Aqsa Sabir, Rahat Hussain, Syed Farhan Alam Zaidi, Muhammad Sibtain Abbas, Nasrullah Khan, Chansik Park and Dr. Doyeop Lee	Integrating Conversational AI-Based Serious Games to Enhance Problem-Solving Skills of Construction Students
	Multiple topics	recorded presentation	ROOM1	4,12	DAY3	31-Jul-24	13:30	13:45	135	Rahat Hussain, Aqsa Sabir, Muahmmad Sibtain Abbas, Nasrullah Khan, Syed Farhan Alam Zaidi, Chansik Park and Doyeop Lee	Multi-agent Conversational AI System for Personalized Learning of Construction Knowledge.
		recorded presentation	ROOM1	4,12	DAY3	31-Jul-24	13:45	14:00	136	Rahat Hussain, Akeem Pedro, Mehrtash Soltani, Tran Van Tien Si, Syed Farhan Alam Zaidi, Chansik Park and Doyeop Lee	Enhancing Leadership Skills of Construction Students Through Conversational AI-Based Virtual Platform
			ROOM1	4,6	DAY3	31-Jul-24	14:00	14:15	66	Shuhan Yang, Ke Dai, Zhihao Ren, Jung In Kim, Bin Xue, Dan Wang and Wooyong Jung	Excavation schedule optimization for hardrock tunnels based on Q-learning
			ROOM1	4,6	DAY3	31-Jul-24	14:15	14:30	236	Thai-Hoa Le and Jacob J. Lin	An On-site and Off-site Collaborative Safety Monitoring Framework using Augmented and Virtual Reality for Near-miss Incidents
			ROOM1	4,7	DAY3	31-Jul-24	14:30	14:45	141	Shuhei Tazawa, Yui Sato, Stephanie Bay, Yoko Nagayama and Jun Inoue	Improving Efficiency of University Campus Facility Management Using Digital Twin
			ROOM1	3,4	DAY3	31-Jul-24	14:45	15:00	151	Jinwu Xiao, Jiashu Hu, Sungkon Moon and Kyubyung Kang	Reconstructing and Visualizing Construction Progress Using Neural Radiance Fields
			ROOM1	2,10	DAY3	31-Jul-24	15:00	15:15	287	Kwanghyuk Im	Interindustry-Macro (IM) Model on the Construction Sector
DAY3-SESSION3-ROOM1	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Christina Gross	ROOM1	4,9,11	DAY3	31-Jul-24	15:15	15:30	259	Changmin Pyo, Donghwi Yoo and Jaewoong Kim	Design of considering distortion after high energy manufacturing with Finite element analysis & Deep learning
	Multiple topics		ROOM1	5,6	DAY3	31-Jul-24	15:30	15:45	46	Christina Gross, Philip Sander and Christian Trapp	A novel Approach to Risk Management for University Research Projects
			ROOM1	5,6,10	DAY3	31-Jul-24	15:45	16:00	35	Wonwoo Shin, Sanghyeok Han and Sungkon Moon	Advancing Defect Resolution in Construction: Integrating Text Mining and Semantic Analysis for Deeper Customer Experiences
			ROOM1	6,10	DAY3	31-Jul-24	16:00	16:15	95	Jaehyun Park and Sungkon Moon	STRATEGIC FRAMEWORK FOR DIGITAL TRANSFORMATION IN ARCHITECTURE, ENGINEERING, AND CONSTRUCTION ORGANIZATIONS
			ROOM1	6,10,12	DAY3	31-Jul-24	16:15	16:30	247	Keito Sadamatsu	A Survey of the Structure of Construction Projects Using BIM –Focusing on Malaysia and Vietnam–
			ROOM1	2,11	DAY3	31-Jul-24	16:30	16:45	261	Jason Ting, Foo Wei Lee, Ming Kun Yew, Ren Jie Chin and Chun Chieh Yip	Particle Size Dependent Enhancement of Compressive Strength and Carbonation Efficiency in Steel Slag Cementitious Composites
			ROOM1	2,11	DAY3	31-Jul-24	16:45	17:00	262	Jason Ting, Foo Wei Lee, Ming Kun Yew, Kim Hung Mo and Yip Chun Chieh	STRUCTURAL PERFORMANCES OF RUBBERIZED CONCRETE WALL PANEL UTILIZING FIBER CEMENT BOARD AS SKIN LAYER.

TECHNICAL PROGRAM PROCEEDINGS

ROOM2 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM2	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities	Jong Han Yoon	ROOM2	2	DAY2	30-Jul-24	10:30	10:45	16	Roshan Bandiwadekar, Jong Han Yoon and Vivek Sharma	Systematic Literature Review of Sustainable Construction Projects for Carbon Neutrality
			ROOM2	2	DAY2	30-Jul-24	10:45	11:00	29	Atsushi Tamura, Koya Utsumi and Akinori Konno	Quantitative Study on Sustainability of Building Construction in Japan from Perspective of Recent Changes in Building Status and Trends
			ROOM2	2	DAY2	30-Jul-24	11:00	11:15	90	Hengliang Wu, Bingsheng Liu, Jingke Hong and Yifei Wang	Integrative Assessment of High-Speed Railway System Vulnerability to Future Climate-Induced Flooding in China
			ROOM2	2	DAY2	30-Jul-24	11:15	11:30	93	Chhabi Lal Paudel and Michael Henry	Evaluation of the Effect of Project Delay on Future Benefits in the Nepal Road Infrastructure Construction Sector
			ROOM2	2	DAY2	30-Jul-24	11:30	11:45	94	Myungjin Chae and Jiyong Choi	MACHINE LEARNING BASED ASSET RISK MANAGEMENT FOR HIGHWAY SIGH SUPPORT SYSTEMS
			ROOM2	2	DAY2	30-Jul-24	11:45	12:00	96	Molaka Maruthi, Dong Eun Lee and Bubryur Kim	Enhancement of concrete crack detection using U-Net
			ROOM2	2	DAY2	30-Jul-24	12:00	12:15	98	Yuichi Onuma, Satoshi Fujita, Osamu Furuya, Yusuke Oki and Toshihiro Sankai	Investigation of the Influence of The Story Drift Angle of Buildings Caused by Earthquakes on Elevators
DAY2-SESSION2-ROOM2	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities	Ming Shan	ROOM2	2	DAY2	30-Jul-24	13:15	13:30	112	Zhao Zhai, Li-Rong Lin and Ming Shan	ANALYSIS OF ENVIRONMENTALLY RESPONSIBLE BEHAVIOUR IN CROSS-SEA BRIDGE PROJECTS
			ROOM2	2	DAY2	30-Jul-24	13:30	13:45	113	Takuya Okumura, Takashi Kaneta and Sayaka Nishino	Study on Introductory Situation of Circular Economy in Architectural Design in Japan
			ROOM2	2	DAY2	30-Jul-24	13:45	14:00	131	Jongyoung Youn, Kyeongtae Jeong, Minje Jo, Jihye Kim and Donghoon Lee	Research on the Development of Magnetic Silicone Mold to Prevent Free-form Deformation due to Lateral Pressure
			ROOM2	2	DAY2	30-Jul-24	14:00	14:15	140	Tsaichieh Lin and Masatoyo Ogasawara	Adaptability analysis of water efficiency items in leed certification under different climatic conditions
			ROOM2	2	DAY2	30-Jul-24	14:15	14:30	123	Seoyoung Jung, Yongwoon Cha and Seulki Lee	INFRASTRUCTURE SERVICE QUALITY MODEL BASED ON SERVQUAL: FOCUSED ON SOUTH KOREA
			ROOM2	2	DAY2	30-Jul-24	14:30	14:45	25	Hwarang Kim, Kwang-Pyo Lee and Youngjoon Jun	An ISM-Based Methodology for Analyzing Interrelationships Among Influencing Factors in Reconstruction Projects
			ROOM2	2	DAY2	30-Jul-24	14:45	15:00	101	Kaicheng Shen, Shengyuan Lv and Weina Zhu	How does technological progress impact energy utilization efficiency in the construction industry: A Case of China
DAY2-SESSION3-ROOM2	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities	Kozo Kadowaki	ROOM2	2	DAY2	30-Jul-24	15:15	15:30	144	Ryo Namishima and Kozo Kadowaki	How did the "invisible space stock" in Japan's suburbs arise and what will happen in the future?
			ROOM2	2	DAY2	30-Jul-24	15:30	15:45	169	Changjun Lee, Taeil Park and Yongwoon Cha	Development of Infrastucture Maintenance Map based on GIS Data for Efficient Budget Management
			ROOM2	2	DAY2	30-Jul-24	15:45	16:00	194	Hui Guo and Meng Ye	Achieving competitive advantage for construction companies: Navigating the realm of corporate social responsibility
			ROOM2	2	DAY2	30-Jul-24	16:00	16:15	196	Sang-Bum Kim and Sang-Ho Cha	Synthesis and characterization of cardanol based eco-friendly flame-retardant adhesive for building construction
			ROOM2	2	DAY2	30-Jul-24	16:15	16:30	203	Chi-Feng Chen, Cheng-Ting Wu and Jen-Yang Lin	(Option 2) Material Flow Analysis of Construction and Demolition Wastes in Taiwan and their Sustainable Management
			ROOM2	2	DAY2	30-Jul-24	16:30	16:45	211	Weichung Yeih, Jiang-Jhy Chang and Tai-An Chen	Corrosion rate measurement of multiple reinforcements using the galvanostatic pulse technique with the guard ring
			ROOM2	2	DAY2	30-Jul-24	16:45	17:00	226	Ruixiaoxiao Zhang and Minhyun Lee	Exploring the Impact of Housing Characteristics on Residential Photovoltaic Adoption in Hong Kong: A Comparative Survey of Housing Types and Homeownerships
SESSION CODE	**SESSION THEME**	**SESSION CHAIR**	**ROOM**	**Theme**	**DAY**	**DATE**	**START**	**FINISH**	**Paper Number**	**Authors**	**Title**
DAY3-SESSION1-ROOM2	2. Sustainable Construction and Resilient Infrastructure/Cities/Communities	Huiwen Wang	ROOM2	2	DAY3	31-Jul-24	10:30	10:45	232	Koko Kojima and Kazuya Shide	Modern Building Values from an Economical Viewpoint
			ROOM2	2	DAY3	31-Jul-24	10:45	11:00	286	Shou-Heng Liu and Yu-Rou Lin	Sustainable coatings fabricated from inorganic wastes for indoor humidity control and degradation of formaldehyde
			ROOM2	2	DAY3	31-Jul-24	11:00	11:15	289	Wen Yi, Huiwen Wang, Shuaian Wang and Xiaobo Qu	Artificial Intelligence and Stochastic Optimization Framework for Trip Purpose Based Route Planning
			ROOM2	2	DAY3	31-Jul-24	11:15	11:30	292	Eun Sang Park, Seo Hyeon Kim, A Jin Jo, Ji Min Kim and Hyoun Seung Jang	Risk Analysis of the Sustainability of Energy Markets in Developing Countries Using ISM
			ROOM2	2	DAY3	31-Jul-24	11:30	11:45	268	Hung-Yu Chou, Yu-Te Wei, Yu-Ting Lai, Jun-Teng Zhuang, Jun-Xi Liu and Wen-Chin Chang	Performance Evaluation of Smart Street Lighting Systems Applying the PFI Model
			ROOM2	2	DAY3	31-Jul-24	11:45	12:00	244	Noor Hidayah Sanusi and Alias Mohamed	Modernizing Sewage Treatment Infrastructure: Sustainable Innovations at the Langat Centralized Sewage Treatment Plant
			ROOM2	2	DAY3	31-Jul-24	12:00	12:15	275	Sooin Kim	Artificial Intelligence (AI)-enabled Decision Support System (DSS) for Developing a Disaster-Resilient Built Environment
DAY3-SESSION2-ROOM2	10. Industry Case Studies	Kazuya Shide	ROOM2	10	DAY3	31-Jul-24	13:15	13:30	20	Hiroaki Saito	Changes in Research and Development of Major General Contractors in Japan in the last 10 years: The Building Construction Business Sector
			ROOM2	10	DAY3	31-Jul-24	13:30	13:45	40	Huong-Thi Nguyen, Nguyen Hoang-Tung, Kieu Tri-Cuong and Kazuya Shide	Identifying barriers of BIM implementation in ODA projects in Vietnam
			ROOM2	10	DAY3	31-Jul-24	13:45	14:00	45	Yosuke Tanaka, Yoshiyuki Suzuki and Kensuke Kobayashi	The Effectiveness of Life Cycle Assessment for Building Using Inventory Database "IDEA" in Japan
			ROOM2	10	DAY3	31-Jul-24	14:00	14:15	105	Yusuke Fujita	PARTS COMMERCIALIZATION METHOD IN THE "DESIGNER PARTS DIRECT SALES METHOD"―IN THE CASE OF THE FITTINGS SPECIALTY BRAND "KOTO"
			ROOM2	10	DAY3	31-Jul-24	14:15	14:30	198	Hyejin Son	Research on the redeveloping of Nuclear Power Plant Construction Management System in South Korea
			ROOM2	10	DAY3	31-Jul-24	14:30	14:45	207	Shoya Katsuta and Hirotake Kanisawa	Research on Indian architecture production system
			ROOM2	10	DAY3	31-Jul-24	14:45	15:00	246	Go-eun Choi, Seo-joon Lee, Kyu-Hyup Lee, Jun-sung Seol and Soonwook Kwon	Business Model Development for Automatic Quality Inspection System of Temporary Structure Elements
			ROOM2	10	DAY3	31-Jul-24	15:00	15:15	276	Hyejin Son	Quality Management Process and System of Nuclear Power Plant Construction in South Korea

TECHNICAL PROGRAM PROCEEDINGS

ROOM3 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM3	3. Sensing and Data Analytics for Construction (AI & Data Science)	Tomoyuki Gondo	ROOM3	5	DAY2	30-Jul-24	10:30	10:45	26	Moe Shigaki, Kentaro Hayakawa, Hiroyuki Akita, Michiko Shimizu and Mika Sakuramoto	Development and Verification of Safety Management Support System for Construction Sites Using Pinpoint Weather Information
			ROOM3	5	DAY2	30-Jul-24	10:45	11:00	41	Mathanraj Rajendran, Sung-Han Sim, Min-Koo Kim and Yoon-Ki Choi	Dimensional Quality Assessment of Steel H-Beams Using Terrestrial Laser Scan Data
			ROOM3	5	DAY2	30-Jul-24	11:00	11:15	76	Manideep Tummalapudi, Bradley Hyatt, Premraj Timilsena, Srikanth Bangaru and Omobolanle Ogunseiju	APPLICATIONS OF ARTIFICIAL INTELLIGENCE (AI) IN CONSTRUCTION PROJECT MANAGEMENT: A SYSTEMATIC LITERATURE REVIEW
			ROOM3	5	DAY2	30-Jul-24	11:15	11:30	77	Tomoyuki Gondo and Atsufumi Yoshimura	WORK ANALYSIS OF PLASTERBOARD PASTING WORKERS FOCUSED ON SMOOTHNESS OF ACTIVITIES USING ACCELEROMETERS
			ROOM3	5	DAY2	30-Jul-24	11:30	11:45	81	Jaeho Choi, Ayesha Munira Chowdhury and Eun-Ju Ha	DATA MINING APPROACH FOR IDENTIFYING FACTORS IMPACTING CONSTRUCTION ACCIDENT COSTS: FROM INDIRECT EXPENSES PERSPECTIVES
			ROOM3	5	DAY2	30-Jul-24	11:45	12:00	243	Wei-Chih Chern, Kichang Choi, Vijayan Asari and Hongjo Kim	Vision-Based Context-Aware Safety Monitoring with Safety Strap Analysis
		https://teams.live.com/meet/94799458 8636?p=dGUmJiVnSz7cz5WRUU	ROOM3	3	DAY2	30-Jul-24	12:00	12:15	82	Chengzhang Chai, Yan Gao, Haijiang Li and Guanyu Xiong	Automatic Generation of Bridge Defect Descriptions Using Image Captioning Techniques
DAY2-SESSION2-ROOM3	3. Sensing and Data Analytics for Construction (AI & Data Science)	Sota Seki	ROOM3	3	DAY2	30-Jul-24	13:15	13:30	104	Sota Seki, Kaede Fujita and Manabu Ichikawa	Development of Urban Information Platform for Cross-Domain Urban Design
			ROOM3	3	DAY2	30-Jul-24	13:30	13:45	114	Juhyeon Bae, Gaang Lee and SangHyun Lee	Ear-EEG-based Stress Assessment for Construction Workers: A Comparison with High-Density Scalp-EEG
			ROOM3	3	DAY2	30-Jul-24	13:45	14:00	119	Shogo Inadomi and Pang-Jo Chun	Enhancing Bridge Deterioration Prediction Using Element Adjacency Graphs by OCR-Processed Drawings: A Case Study of Girder Bridges in Japan
			ROOM3	3	DAY2	30-Jul-24	14:00	14:15	138	Inwoo Jung, Hyunseok Moon and Jeongsoo Kim	Analyzing Project Similarity in Korean Bidding Documents Using BERT
			ROOM3	3	DAY2	30-Jul-24	14:15	14:30	162	Youmin Park, Seonghyeon Moon, Jinwoo Kim and Seokho Chi	Application of Domain-specific Thesaurus to Construction Documents based on Flow Margin of Semantic Similarity
			ROOM3	3	DAY2	30-Jul-24	14:30	14:45	174	Ronglu Hong, Dong-Heon Lee, Sang-Jun Park, Ju-Hyung Kim, Seunghyeon Wang and Yong-jin Won	Deep Learning-Based Methods for Inspecting Sand Quality for Ready Mixed Concrete
			ROOM3	3	DAY2	30-Jul-24	14:45	15:00	183	Xiaojing Zhao	Big Data Adoption in the Construction Industry: Status Quo, Drivers and Challenges
DAY2-SESSION3-ROOM3	3. Sensing and Data Analytics for Construction (AI & Data Science)	Minkoo Kim	ROOM3	3	DAY2	30-Jul-24	15:15	15:30	219	Do Namgoong and Seung H. Han	Identification of Social Conflict Stakeholders in Public Infrastructure Projects using ChatGPT
			ROOM3	3	DAY2	30-Jul-24	15:30	15:45	221	Sanghyeong Jeon, Seungju Won, Yoonseok Shin and Wisung Yoo	A Proposal of Unstructured Document-based Safety Management Approach in Building Construction Projects
			ROOM3	3	DAY2	30-Jul-24	15:45	16:00	242	Taegeon Kim, Seokhwan Kim, Minkyu Koo, Minwoo Jeong and Hongjo Kim	Large Multimodal Model for Context-aware Construction Safety Monitoring
			ROOM3	3	DAY2	30-Jul-24	16:00	16:15	206	Gavin Jackson, Junshan Liu and Scott Kramer	UAV-Based Remote Sensing Survey for Quantification of Beach Fill Construction Projects
			ROOM3	3	DAY2	30-Jul-24	16:15	16:30	213	Fansheng Kong and Seungjun Ahn	A framework to automatically transform BIM text file into knowledge graph

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY3-SESSION1-ROOM3	3. Sensing and Data Analytics for Construction (AI & Data Science)	Jacob J. Lin	ROOM3	3	DAY3	31-Jul-24	10:30	10:45	252	Phuong-Linh Le and Jacob J. Lin	Technical Requirements for Applying Digital Technologies in Monitoring Unsafe Activities during the Construction Phase
			ROOM3	3	DAY3	31-Jul-24	10:45	11:00	253	Yejin Shin, Seungwon Seo and Choonwan Koo	Sensitivity Analysis of Excavator Activity Recognition Performance based on Surveillance Camera Locations
			ROOM3	3	DAY3	31-Jul-24	11:00	11:15	264	Minwoo Jeong, Taegeon Kim, Seokhwan Kim and Hongjo Kim	Retrieval-Augmented Generation-based Question Answering Technology for Construction Safety
			ROOM3	3	DAY3	31-Jul-24	11:15	11:30	265	Jungtaek Hong, Jinwoo Song, Ali Akbar, Sungil Son, Sangmin Yang and Soonwook Kwon	Construction Quality Management based on Digital Twin using Autonomous Scanning UGV
			ROOM3	3	DAY3	31-Jul-24	11:30	11:45	269	Junghoon Kim, Insoo Jeong, Seungmo Lim, Jeongbin Hwang and Seokho Chi	3D Visualization and Work Status Analysis of Construction Site Objects
			ROOM3	3	DAY3	31-Jul-24	11:45	12:00	270	Insoo Jeong, Junghoon Kim, Seungmo Lim, Jeongbin Hwang and Seokho Chi	Training Dataset Generation through Generative AI for Multi-Modal Safety Monitoring in Construction
			ROOM3	3	DAY3	31-Jul-24	12:00	12:15	277	Emmanuel C. Kimito, Dongmin Lee, Chansik Park, Eric J. Nyato, Junhee Jung and Seohyun Yang	Understanding the Role of Inter-Individual Variability in Fatigue Monitoring of Construction Workers
DAY3-SESSION2-ROOM3	3. Sensing and Data Analytics for Construction (AI & Data Science)	Habib Sadri	ROOM3	3	DAY3	31-Jul-24	13:15	13:30	290	Habib Sadri and Ibrahim Yitmen	Trends in the Adoption of Artificial Intelligence for Enhancing Built Environment Efficiency: A Case Study Analysis
			ROOM3	3	DAY3	31-Jul-24	13:30	13:45	296	Dinh Quang Duy, Ganesh Kolappan Geetha and Sung-Han Sim	Mobile-based Dimension Measurement for Precast Concrete Panels Using Deep Learning and Image Processing
	8. Automation in Construction (Robotics)	Masaki Chino	ROOM3	8	DAY3	31-Jul-24	13:45	14:00	23	Masaki Chino and Atsushi Yamashita	Location Measurement System for Automated Operation of Construction Machinery Using Visual SLAM
			ROOM3	8	DAY3	31-Jul-24	14:00	14:15	27	Masood Khan, Maxwell Fordjour Antwi-Afari, Joonoh Seo, Shahnawaz Anwer and Kelvin Heung	Applications, Challenges, and Future Research Directions for Passive Exoskeletons in the Construction Industry: A Critical Review
			ROOM3	8	DAY3	31-Jul-24	14:15	14:30	44	Shotaro Takazoe and Kazuya Shide	Global Route Optimization for Autonomous Robots Using BIM
			ROOM3	8	DAY3	31-Jul-24	14:30	14:45	115	Francis Baek, Juhyeon Bae, Changbum Ahn and SangHyun Lee	The Effects of a Co-Worker's Cognitive Response on Human-Robot Team Productivity in Construction
			ROOM3	8	DAY3	31-Jul-24	14:45	15:00	139	Muhammad Sibtain Abbas, Nasrullah Khan, Syed Farhan Alam Zaidi, Rahat Hussain, Aqsa Sabir, Doyeop Lee and Chansik Park	CV-Based Mobile Application to Enhance Real-time Safety Monitoring of Ladder Activities
DAY3-SESSION3-ROOM3	8. Automation in Construction (Robotics)	Brian Guo	ROOM3	8	DAY3	31-Jul-24	15:15	15:30	168	Tae Hun Choi, Do Kuen Kim and Se Jun Jiang	Performance Analysis of Autonomous Mobile Robot Navigation Using ArUco Markers
			ROOM3	8	DAY3	31-Jul-24	15:30	15:45	193	Jia-Chen Xue, Ciao-Yin Liang, Cheng-Xuan Yu, Chia-Yun Huang, Wei-Chien Wang and Ming-Gin Lee	Influence of polypropylene fibers and polyoxymethylene fibers on mechanical property and drying shrinkage of 3d printed concrete
			ROOM3	8	DAY3	31-Jul-24	15:45	16:00	217	Brian Guo, Yonger Zuo, Yang Miang Goh and Jae-Yong Lim	Errors in Human-Robot Interaction Accidents: A Taxonomy and Network Analysis
			ROOM3	8	DAY3	31-Jul-24	16:00	16:15	266	Seokhyeon Jin, Dabin Lee, Dohyeong Kim, Chansik Park and Dongmin Lee	Intelligent Hoist Control Based on Computer Vision
			ROOM3	3	DAY3	31-Jul-24	16:15	16:30	212	Ju-Yong Kim, Youngje Sung, Sanghee Kim and Gwang-Hee Kim	Wireless Construction Strength Monitoring System for Estimating Concrete Strength by the Maturity Method
		https://teams.live.com/meet/94642495 06063?p=ewvSDxi1Zz#hDP59YO	ROOM3	8	DAY3	31-Jul-24	16:30	16:45	152	Tianyu Liang, Hongyang Zhao, Seyedeh Fatemeh Saffari and Daeho Kim	Enhancing Excavator 3D Pose Estimation Using Realism Centric Data Synthetization
			ROOM3	8	DAY3	31-Jul-24	16:45	17:00	170	Young Jae Song and Se Jun Jiang	Comparative analysis of the performance of GPS system for outdoor construction site SLAM(Simultaneous Localization and Mapping) and navigation for mobile robot

TECHNICAL PROGRAM PROCEEDINGS

ROOM4 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM4	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Zeru Liu /Jung In Kim	ROOM4	4	DAY2	30-Jul-24	10:30	10:45	32	Jongwoo Cho, Jiyu Shin and Taewan Kim	A framework for 4D analysis of construction safety using a site information model
			ROOM4	4	DAY2	30-Jul-24	10:45	11:00	42	Heegun Chong and Sung-Ah Kim	Systematic Literarue Review of Korean Research for the Integration of VR, AR, and MR Technologies in Construction BIM: An Exploration Across the Construction Lifecycle
			ROOM4	4	DAY2	30-Jul-24	11:00	11:15	47	Muhammad Tajammal Khan	Building Information Model (BIM) and Geotechnical Baseline Report (GBR) for improving Project Management Tools of Underground Works
			ROOM4	4	DAY2	30-Jul-24	11:15	11:30	49	Qinghao Zeng, Tarek Rakha and Pardis Pishdad-Bozorgi	A Review of BIM-Enabled Daylighting Control System for Office Buildings
			ROOM4	4	DAY2	30-Jul-24	11:30	11:45	64	Zeru Liu, Wuhao Huang, Hejun Xu, Sining Li and Jung In Kim	IFC Data Schema Extension for Railway Track Facility Management
			ROOM4	4	DAY2	30-Jul-24	11:45	12:00	65	Ke Dai, Shuhan Yang, Zeru Liu, Jung In Kim and Min Jae Suh	Slope design optimization for road cross section using genetic algorithm based on BIM
			ROOM4	4	DAY2	30-Jul-24	12:00	12:15	56	Minhyuk Jung, Jaemook Choi, Seonu Joo, Hwikyung Chun and Wonseok Choi	Neural Network-based generative design framework for industrial plant layout planning
DAY2-SESSION2-ROOM4	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Bonsang Koo	ROOM4	4	DAY2	30-Jul-24	13:15	13:30	73	Sihyun Kim, Wonbok Lee, Youngsu Yu, Haein Jeon and Bonsang Koo	Employing Ontology and Machine Learning for Automatic Clash Detection and Classification in Multi-disciplinary BIM Models
			ROOM4	4	DAY2	30-Jul-24	13:30	13:45	75	Jehee Han, Minseo Jang, Do Hyoung Shin and Sungkwon Woo	Technology for classifying point cloud data through AI and automatically deriving location and length information in 3D space based on scan to bim
			ROOM4	4	DAY2	30-Jul-24	13:45	14:00	86	Kieu Tri Cuong, Shide Kazuya and Nguyen Hoang-Tung	LCA calculation methods using BIM at the basic design stage: A focus on matching BOM and CO2 norm data using Uniclass and IDEA
			ROOM4	4	DAY2	30-Jul-24	14:00	14:15	110	Kamyar Fatemifar, Qinghao Zeng, Ali Tayefeh-Yaraghbafha and Pardis Pishdad-Bozorgi	Multi-objective Generative Design Based on Outdoor Environmental Factors: An Educational Complex Design Case Study
			ROOM4	4	DAY2	30-Jul-24	14:15	14:30	122	Moonsun Park, Inseong Kim, Gutaek Kim and Seokyung Won	Establishing an Integrated Control Platform Architecture for Hydrogen Pipe Network
			ROOM4	4	DAY2	30-Jul-24	14:30	14:45	132	Akeem Pedro, Mehrtash Soltani, Rahat Hussain and Chansik Park	The Metaverse in Construction: Foundations, Frameworks, and Potentials
			ROOM4	4	DAY2	30-Jul-24	14:45	15:00	143	Aqsa Sabir, Rahat Hussain, Akeem Pedro, Mehrtash Soltani, Dongmin Lee, Chansik Park and Jae-Ho Pyeon	Synthetic Data Generation with Unity 3D and Unreal Engine for Construction Hazardous Scenarios: A Comparative Analysis
DAY2-SESSION3-ROOM4	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	Sung-Jae Bae	ROOM4	4	DAY2	30-Jul-24	15:15	15:30	154	Ali Khodabandelu, Jee Woong Park and Unmesa Ray	Applications of Agent-Based Modeling (ABM) in Planning and Design of Built Environments
			ROOM4	4	DAY2	30-Jul-24	15:30	15:45	164	Sung-Jae Bae, Minji Song, Eunji Choi, Chan-Jin Kim, Junbeom Park, Young Suk Kim and Jung-Yeol Kim	Point Cloud Segmentation Method Considering Wall Finishing Information Using 2D Material Segmentation and Back Projection
			ROOM4	4	DAY2	30-Jul-24	15:45	16:00	167	Jae-ho Jang, Jin-Bin Im, En-Lian Zhang, Moon-Boo Joo, Shin-Hyun Kang and Ju-Hyung Kim	A Framework for Assessing the Learning Performance and Creativity in Spatial Features by Immersive Virtual Environments
			ROOM4	4	DAY2	30-Jul-24	16:00	16:15	172	Du Li, Hung-Lin Chi and Ying Wang	Enhancing On-Site Construction Machinery Handling through 3D Spatial Gesture-Based Trajectory Interpreter Modeling
			ROOM4	4	DAY2	30-Jul-24	16:15	16:30	199	Chia-Ying Lin and I-Chen Wu	Real-time simulation and control of indoor air exchange volume based on Digital Twin Platform
			ROOM4	4,7	DAY2	30-Jul-24	16:30	16:45	209	Taewon Kim and Inhan Kim	BIM application in Quantitative Assessment of High-Speed Information and Communication Criteria for Building Certification
			ROOM4	4	DAY2	30-Jul-24	16:45	17:00	181	Jae-Wan Park, Woosik Jang, Seoung-Beom Na, Kyung-Ho Chin, Jae-Goo Han and Kwang Pil Park	Estimation of Overcut and Undercut Volume in Tunnel Construction Project using 3D Model
SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY3-SESSION1-ROOM4	4. Visualization, Information Modeling, and Simulation (Digital Twin, AR/VR, BIM)	I-Chen Wu	ROOM4	4	DAY3	31-Jul-24	10:30	10:45	200	Yen-Min Hsu and I-Chen Wu	Automatic Ductwork BIM Generation System for Analyzing HVAC System Conflicts
			ROOM4	4	DAY3	31-Jul-24	10:45	11:00	214	Seohee Jeong, Dayeon Yang and Gwanghee Kim	Importance analysis of BIM utilization by construction management companies
			ROOM4	4	DAY3	31-Jul-24	11:00	11:15	216	Kenneth Park and Sungkon Moon	Is 3D Scanning and Modelling Beneficial for Housing Sector?
			ROOM4	4	DAY3	31-Jul-24	11:15	11:30	227	Myunghoun Jang and Dongkyu Oh	Method to Manage Building Construction Safety Using Photogrammetry
			ROOM4	4	DAY3	31-Jul-24	11:30	11:45	234	Sou Murakami and Kazuya Shide	Proposal of a virtual room using MR technology and research on its effectiveness
			ROOM4	4	DAY3	31-Jul-24	11:45	12:00	254	Dajeong Choi and Choongwan Koo	An Integrated Platform for Assessing the Efficacy of Immersive Virtual Reality Experiences through Biometric Response Analysis
			ROOM4	4	DAY3	31-Jul-24	12:00	12:15	267	Yong-Ju Lee, Linh Nguyen and Man-Woo Park	Superimposing 3D Models on Real Scenes Based on The Reinforcement Learning using Visual Obsenations
			ROOM4	4	DAY3	31-Jul-24	12:15	12:30	288	Jaehong Cho, Sungpyo Kim, Kanghyeuk Lee, Sungjin Choi and Sanghyeok Kang	Development of a BIM Object Partitioning System for 4D Simulation in Mixed Reality
DAY3-SESSION2-ROOM4	7. Building Science (Energy Modeling, Facility Management)	Ryoyu Tanaka / Kosei Ishida	ROOM4	7	DAY3	31-Jul-24	13:15	13:30	58	Keiki Fukumura, Daisuke Nakagawa, Tomohiko Watanabe, Kenji Otsuka, Shunshi Fujii, Daichi Hashiba, Ryuga Otsuka and Kazuya Shide	Proposal for a maintenance management system using point clouds
			ROOM4	7	DAY3	31-Jul-24	13:30	13:45	68	Kyoungyun Jung, Handon Kim, Minjae Lee, Donggeun Oh, Jimin Kim and Hyounseung Jang	Discrepancy between South Korea's ZEB Certification System and its Real Energy Saving Effects: An Empirical Analysis
			ROOM4	7	DAY3	31-Jul-24	13:45	14:00	70	Ryoyu Tanaka and Kosei Ishida	CREATION OF A BIM-BASED FACILITY MAINTENANCE AND MANEGEMENT DATA ANALYSIS PLATFORM
			ROOM4	7	DAY3	31-Jul-24	14:00	14:15	153	Dagem Derese Gebremichael, Zhenhui Jin, Yunsub Lee and Youngsoo Jung	Facility Asset Management (FAM) Business Function from the Context of Smart Buildings (SBs)
			ROOM4	7	DAY3	31-Jul-24	14:15	14:30	160	Zhenhui Jin, Dagem Derese Gebremichael, Seunghee Kang, Yunsub Lee and Youngsoo Jung	Exploring the Functional Breakdown Structure (FBS) of Facility Asset Management (FAM) for Smart Factories
			ROOM4	7	DAY3	31-Jul-24	14:30	14:45	279	Minho Kim, San Jin, Ahmin Jang, Beungyong Park and Sung Lok Do	Simulated Analysis on Cooling System Performance Influenced by Faults Occurred in Enthalpy Sensor for Economizer Control
			ROOM4	7	DAY3	31-Jul-24	14:45	15:00	283	Ahmin Jang, San Jn, Minho Kim, Hyoungchul Kang and Sung Lok Do	Evaluation of Cooling Energy Consumption Varying Economizer Control and Heat Generation Rates from IT Equipment in Data Center
			ROOM4	7	DAY3	31-Jul-24	15:00	15:15	291	Minji Baek, Hyunsang Cho, Doyoung Lee, Jeonghwan Seo, Hyounseung Jang and Jimin Kim	Analysis of Optimal Placement Proposal of HVAC System in Smart Greenhouse using CFD Simulation

TECHNICAL PROGRAM PROCEEDINGS

ROOM5 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Koji Tanaka	ROOM5	6	DAY2	30-Jul-24	10:30	10:45	2	Chang-Yong Yi, Young-Jun Park, Tae-Yong Go, Jin-Young Park, Hyung-Keun Park and Dong-Eun Lee	Automated Data Collection and Intelligent Management System for Construction Site Disaster Prevention
			ROOM5	6	DAY2	30-Jul-24	10:45	11:00	6	Koji Tanaka	Problems of construction cost measurement models from the aspect of users in England
			ROOM5	6	DAY2	30-Jul-24	11:00	11:15	10	Shi Tang and Kazuya Shide	Comparative Analysis of BIM-Enabled Construction Cost Estimation Practices: A Case Study of Japan and China
			ROOM5	6	DAY2	30-Jul-24	11:15	11:30	11	Vivek Sharma, Vijaya Ravi Prasanth Reddi, Abdul Sohail Mohammed and Jong Han Yoon	Quality-based performance comparison of design-build and design-bid-build project delivery methods for warehouses and self-storage facilities
			ROOM5	6	DAY2	30-Jul-24	11:30	11:45	22	Jeseop Rhie, Minseo Jang, Do Hyoung Shin, Hyungseo Han and Seungwoo Lee	Methodology To Prevent Local Optima And Improve Optimization Performance For Time-Cost Optimization Of Reinforcement-Learning Based Construction Schedule Simulation
			ROOM5	6	DAY2	30-Jul-24	12:00	12:15	195	Mohd Nasir Saari and Mustafa Man	J-Selaras: A new innovation model for rate rationalization in contract documents
DAY2-SESSION2-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Jacob J. Lin	ROOM5	6	DAY2	30-Jul-24	13:15	13:30	28	Mik Wanul Khosiin, Jacob J. Lin and Chuin-Shan Chen	Worker Accountability in Computer Vision for Construction Productivity Measurement: A Systematic Review
			ROOM5	6	DAY2	30-Jul-24	13:30	13:45	52	Hyunbee Kim, Zhenjie Zhao, Woohyuk Jeon, Sungik Kim and Byungsoo Kim	Research on the Risk weight setting method for NATM Tunnel Project Construction Risk assessment
			ROOM5	6	DAY2	30-Jul-24	13:45	14:00	53	Batagalle Vinuri Gimanthika Karunarathne, Dong Il Kim, Nam Ju Park and Byung Soo Kim	Establishment of High-risk Management Standards for NATM Tunnels by Combining the ALARP Method and SML
			ROOM5	6	DAY2	30-Jul-24	14:15	14:30	71	Hyunchul Oh, Sungoh Byun and Kihyun Baek	A Study on Productivity Analysis of Quality Management System in Construction Site
			ROOM5	6	DAY2	30-Jul-24	14:30	14:45	39	WooWon Jo, Yejun Lee, Daegyo Jung, Hyunjung Park and JungHo Jeon	Computer Vision-based Construction Hazard Detection via Data Augmentation Approach using Generative-AI
DAY2-SESSION3-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Yaning Zhang	ROOM5	6	DAY2	30-Jul-24	15:15	15:30	80	Da Hee Kim, Chan Hyuk Park, Wang Young Jung, Wi Sung Yoo, Joon Seo Lee and Seong Mi Kang	Analyzing Productivity Enhancement and Task Replacement Rates in Digitized Construction Supervision Process: A Comprehensive Study with Construction Supervision Checklists in South Korea
			ROOM5	6	DAY2	30-Jul-24	15:30	15:45	107	Yaning Zhang, Yue Teng and Xiao Li	Tabu search-based multi-objective optimization of work package schemes to minimize project costs and carbon emissions
			ROOM5	6	DAY2	30-Jul-24	15:45	16:00	121	Ju Hui Lee, Sangbeak Lee, Jiyong Choi and Sungmin Yun	Benchmarking Complaint Management of Public Construction Projects in Korea
			ROOM5	6	DAY2	30-Jul-24	16:00	16:15	137	Taegwan Yoon and Seulbi Lee	Identifying Environmental Factors near Construction Sites Affecting Pedestrian Safety
			ROOM5	6	DAY2	30-Jul-24	16:15	16:30	156	Anintya Hapsari and Ying-Yi Chih	Exploring the Effect of Beneficiary Engagement on International Development Projects' Performance: A Project Life Cycle Perspective
			ROOM5	6	DAY2	30-Jul-24	16:30	16:45	157	Elfida Mustofa and Ying-Yi Chih	Exploring the Effects of Shared Leadership on Project Virtual Team Performance
			ROOM5	6	DAY2	30-Jul-24	16:45	17:00	179	Horiguchi Nobuyoshi	Research on Improving the Decision-Making Environment in Architectural Projects Through the Use of General Digital Technology
SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY3-SESSION1-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Nan Li	ROOM5	6	DAY3	31-Jul-24	10:30	10:45	197	Yutaka Hayasaka, Kazuya Matsumoto and Yusuke Ida	Nomura Real Estate Initiatives & Promotion Structure System
			ROOM5	6	DAY3	31-Jul-24	10:45	11:00	205	Karen Camago, Junshan Liu and Scott Kramer	Enhancing Construction Safety through Wearable Technology – A Study of Employee Acceptance and Adoption in the USACE
			ROOM5	6	DAY3	31-Jul-24	11:00	11:15	208	Taisei Hiruma and Kazuya Shide	Clarification of question and answer documents in cost estimation work using quantitative analysis
			ROOM5	6	DAY3	31-Jul-24	11:15	11:30	218	Eric Joshua Nyato, Chansik Park, Dongmin Lee and Emmanuel C Kimito	A Conceptual Blockchain and Token-Incentive Approach for Near Miss Reporting in Construction
			ROOM5	6	DAY3	31-Jul-24	11:30	11:45	225	Yiqin Yu, Yao Wang, Wenqi Li, Yuecheng Huang and Dongping Fang	Comparative Analysis of Construction Safety Culture in Australia and China: A Systematic Literature Review
			ROOM5	6	DAY3	31-Jul-24	11:45	12:00	228	Seungwon Seo and Choongwan Koo	Optimization of 3D ResNet Depth for Domain Adaptation in Excavator Activity Recognition
DAY3-SESSION2-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Atsushi Tamura	ROOM5	6	DAY3	31-Jul-24	13:15	13:30	229	Soeun Han and Choongwan Koo	Enhancing Automated Recognition of Small-Sized Construction Tools Using Synthetic Images: Validating Practical Applicability Through Confidence Scores
			ROOM5	6	DAY3	31-Jul-24	13:30	13:45	235	Yuting Zhang and Jiayu Chen	Challenges and Improvement Methods for Monitoring Workload of Construction Workers through EEG
			ROOM5	6	DAY3	31-Jul-24	13:45	14:00	238	Junhak Lee, Jinwoo Won and Seung H. Han	Challenges for implementing smart construction in Korean construction industry using MICMAC-ISM approach
			ROOM5	6	DAY3	31-Jul-24	14:00	14:15	248	Wenxin Shen, Xiaofan Zhai and Jingjie Xiong	Enhancing Program Risk Management: A Social Network Approach
			ROOM5	6	DAY3	31-Jul-24	14:15	14:30	255	Kazuto Otani	Risk management of international construction joint ventures - Analysis of factors for success or failures of international JV projects in global areas (OPTION 2)
			ROOM5	6	DAY3	31-Jul-24	14:30	14:45	260	Kaoru Haga and Kazuya Shide	Research on Estimation Price Creation Methodology for RC Structures in BIM
DAY3-SESSION3-ROOM5	6. Advanced Project Management & Control (Scheduling, Estimating, QA/QC, Risk/Safety Management)	Heesung Cha	ROOM5	6	DAY3	31-Jul-24	15:15	15:30	272	Seongkyun Ahn, Seungwon Seo and Choongwan Koo	Enhancing Automated Multi-Object Tracking with Long-Term Occlusions across Consecutive Frames for Heavy Construction Equipment
			ROOM5	6	DAY3	31-Jul-24	15:30	15:45	293	Ziqi Zhang and Kazuya Shide	A Systematic Literature Review on Integrated AI in Construction Project Scheduling with BIM
			ROOM5	6	DAY3	31-Jul-24	15:45	16:00	17	Soun Jo, Hyunsang Cho, Seeun Choi, Minji Baek, Hyounseung Jang and Jimin Kim	KOREAN CONSTRUCTION PROJECT MANAGER'S CAPABILITY CHANGE OVER THE LAST DECADE
			ROOM5	5	DAY3	31-Jul-24	16:00	16:15	78	Seung-Mo Choi, Heesung Cha and Bo-Sik Son	HYBRID DEEP LEARNING ALGORITHM ON COMPUTER VISION-BASED DEFECT DETECTION FOR BUILDING CONSTRUCTION

TECHNICAL PROGRAM PROCEEDINGS

ROOM6 (DAY2&DAY3)

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY2-SESSION1-ROOM6	1. Industrialized and Modular Construction	Jeeyoung Lim	ROOM6	1	DAY2	30-Jul-24	10:30	10:45	34	Jeeyoung Lim, Sunkuk Kim and Ayomi Dita Rarasati	A Basic Study on Comparative Analysis of the Characteristics and Performance of Different Types of Mechanical Rebar Coupler for Sustainable Built Environment
			ROOM6	1	DAY2	30-Jul-24	10:45	11:00	87	Wei-Yi Quan, Yun-Tsui Chang and Shang-Hsien Hsieh	The Nexus of Modularity, MEP, and BIM: Rethinking High-Rise Housing Developments
			ROOM6	1	DAY2	30-Jul-24	11:00	11:15	100	Chaeyeon Yu, Hojeong Jeong and Sungjin Kim	Survey-based User Perception Analysis for Off-site Construction in Institutional Building
			ROOM6	1	DAY2	30-Jul-24	11:15	11:30	108	Xiaohan Wu, Yue Teng, Geoffrey Qiping Shen and Jingke Hong	Measuring and reducing the embodied carbon in high-rise buildings through innovative modular construction
			ROOM6	1	DAY2	30-Jul-24	11:30	11:45	186	Shuyan Ji, Yuechuan Wang and Yingmin Li	Option1 : Research on Risk Quantification of PC Components Production Scheduling Based on DBR
			ROOM6	1	DAY2	30-Jul-24	11:45	12:00	249	Xiaokang Zou, Jiang Huang, Wenjie Lu, Jun Shi, Zhen Zhao and Tian Shi	A New Composite Wall Inner Tie System Applied in Reinforced Concrete Modular Integrated Construction
DAY2-SESSION2-ROOM6	5. Advanced Project Delivery and Contracting	Jun Okoshi	ROOM6	5	DAY2	30-Jul-24	13:15	13:30	5	Jun Okoshi and Kazuya Shide	Study on Front-Loading Utilizing Engineering and BIM in Steel Fabricators
			ROOM6	5	DAY2	30-Jul-24	13:30	13:45	88	Yujia He and Lei Shi	Effect of internal conflicts among private sponsors on bundling and risk sharing in PPP projects
			ROOM6	5	DAY2	30-Jul-24	13:45	14:00	190	Danlami Salla, Shehu Bustani, Sani Kunya, Anas Adamu and Janet Nwaogu	SOFT TEAM-BUILDING SUPPORT SYSTEM ON TENDER EVALUATION COMMITTEES IN PUBLIC PROCURING ENTITIES
			ROOM6	5	DAY2	30-Jul-24	14:00	14:15	224	Hirotada Kobayashi and Kazuya Shide	Research on BEP/EIR formulation methodology
		recorded presentation	ROOM6	5	DAY2	30-Jul-24	14:15	14:30	150	Samuel Quashie and Peter Farrell	PhD Research Design and Descriptive Theory Building: Theoretical Framework for Development of a Post-Disaster Reconstruction Management Phase Integrated Management System.
			ROOM6	5	DAY2	30-Jul-24	14:45	15:00	220	Toshihiko Omoto and Shingo Ohno	Navigating Construction Conflicts: The Role of Dispute Boards in Achieving Efficient Resolution
DAY2-SESSION3-ROOM6	9. Lean Design and Construction	Sei Hayashi	ROOM6	9	DAY2	30-Jul-24	15:15	15:30	63	Sei Hayashi and Tomoyuki Gondo	Practical training of "from production to design" by using digital fabrication tool in the university education
			ROOM6	9	DAY2	30-Jul-24	15:30	15:45	116	Mekonnen Tibebu Chekol and Michael Henry Henry	FACTORS AFFECTING ROAD CONSTRUCTION PROJECT PERFORMANCE IN ADDIS ABABA, ETHIOPIA
			ROOM6	9	DAY2	30-Jul-24	15:45	16:00	280	Dongsu Kim, Sangik Lee, Jonghyuk Lee, Byung-hun Seo, Yejin Seo, Dongwoo Kim, Yerim Jo and Won Choi	Domain Knowledge Based Approach for Design Optimization of Arch Dams Using Genetic Algorithms
			ROOM6	9	DAY2	30-Jul-24	16:00	16:15	284	Dongwoo Kim, Sangik Lee, Jonghyuk Lee, Byung-hun Seo, Dongsu Kim, Yejin Seo, Yerim Jo and Won Choi	Cost Optimization of Doubly Reinforced Concrete Beam through Deep Reinforcement Learning without Labeled Data
			ROOM6	9	DAY2	30-Jul-24	16:15	16:30	231	Ayako Omura	Integrating Design, Construction and Logistics in Japan and Overseas CLT Building Projects

SESSION CODE	SESSION THEME	SESSION CHAIR	ROOM	Theme	DAY	DATE	START	FINISH	Paper Number	Authors	Title
DAY3-SESSION1-ROOM6	11. Construction in Extreme Environments (Future of Space Exploration)	Rumiko Sasaki	ROOM6	11	DAY3	31-Jul-24	10:30	10:45	55	Yusuke Hozumi, Takehiro Wakita, Ayato Doki, Hiroto Takaguchi, Tatsuya Inden, Shinjiro Umezu and Yuji Miyazu	3D Printed Joining System Inspired by Traditional Japanese Wooden Joinery for ISRU
	12. Education and Diversity/Inclusion in Construction Workforce		ROOM6	12	DAY3	31-Jul-24	10:45	11:00	8	Rumiko Sasaki and Tomoyuki Gondo	A study on migrant workers in Japanese construction industry
			ROOM6	12	DAY3	31-Jul-24	11:00	11:15	30	Changbaek Son, WonSang Shin and Junyong Lee	Analysis of Job Stress of Construction Engineers and Resolution Plan
			ROOM6	12	DAY3	31-Jul-24	11:15	11:30	161	Sayaka Nishino	Transformation of Expertise and Adaptation Process in Changing Professional Occupation
			ROOM6	12	DAY3	31-Jul-24	11:30	11:45	173	Haolei Lin, Junyu Chen and Hung-Lin Chi	KnowLearn: Evaluating cross-subjects interactive learning by deploying knowledge graph
			ROOM6	12	DAY3	31-Jul-24	11:45	12:00	273	Amo Suzuki	The Future of Tatami Outside Japan
			ROOM6	None	DAY3	31-Jul-24	12:00	12:15	297	Ahmed Ghaithan	Factors influencing turnaround projects duration in petrochemical industry in Saudi Arabia
DAY3-SESSION2-ROOM6	Multiple topics	Leting Zu	ROOM6	None	DAY3	31-Jul-24	13:15	13:30	13	Ren Sakuragawa, Hideto Kaneko and Tomoyuki Gondo	Changes in the Information Transfer of Wooden Post and Beam Construction with Pre-cutting in Japan
			ROOM6	None	DAY3	31-Jul-24	13:30	13:45	134	Leting Zu and Wenzhu Liao	Multi-objective production scheduling of precast concrete based on reinforcement learning
			ROOM6	None	DAY3	31-Jul-24	13:45	14:00	146	Jingqi Zhang and Shaohua Jiang	Prevention and treatment of Construction Quality Problems Based on Text Mining
			ROOM6	None	DAY3	31-Jul-24	14:00	14:15	298	Jewook Lee and Sung Ho Hong	Analysis of the Building Demolition Process of the Republic of Korea Based on Case Study
			ROOM6	None	DAY3	31-Jul-24	14:15	14:30	299	Zhongnan Ye, Xiaoyi Liu and Shu-Chien Hsu	Towards Carbon Neutrality in Steel Construction: Cradle-to-Cradle Carbon Management through Life-Cycle Assessment

BUSINESS SEMINARS & WORKSHOPS

Auditoriums (Upper Floor and Lower Floor)

Business Seminars	Date	AM/PM	Auditorium	Start	Finish	Speaker
Business Seminars	29th July	PM	Lower Floor	16:00	17:00	Nomura Real Estate
Business Seminars	30th July	AM	Upper Floor	11:00	12:00	Autodesk APAC
		AM	Lower Floor	11:00	12:00	Shimizu Corporation
		PM	Upper Floor	13:00	14:00	Dispute Resolution Board Foundation
		PM	Lower Floor	13:00	14:00	Nohara Group
		PM	Upper Floor	14:00	15:00	Yamashita PMC
		PM	Lower Floor	14:00	15:00	CYPE
		PM	Upper Floor	15:00	16:00	CBRE
		PM	Lower Floor	15:00	16:00	Japan Federation of Construction Industry Specialized Group Society
Business Seminars	31st July	AM	Upper Floor	11:00	12:00	Tokyo Electric Power Company
		AM	Lower Floor	11:00	12:00	Growup
		PM	Upper Floor	13:00	14:00	Oracle
		PM	Lower Floor	13:00	14:00	Naya Company
		PM	Upper Floor	14:00	15:00	Turner & Townsend
		PM	Lower Floor	14:00	15:00	Photoruction
		PM	Upper Floor	15:00	16:00	Pacific Century Premium Developments
		PM	Lower Floor	15:00	16:00	Takenaka Corporation
		PM	Lower Floor	16:00	17:00	Oracle seminar for students

Day1- July 29(Mon), 2024   Auditoriums

Nomura Real Estate   16:00-17:00PM

Shuhei Yamamura, Yusuke Ida

Seven Arrows: Our Strategic Compass for Value Creation

ICCEPM2024 Sapporo

Day2- July 30(Tue), 2024   **Auditoriums**

Autodesk APAC   **11:00AM-12:00PM**

Dr. Liyuan Takahashi

Case studies of Autodesk platforms applied to the built environment sectors.

Shimizu Corporation   **11:00AM-12:00PM**

Jun Okoshi

Development and application of BIM and Digital transformation (DX) from contractors' perspective

Dispute Resolution Board Foundation   **13:00-14:00PM**

Prof Toshihiko Omoto, Shingo Ohno

Navigating construction conflicts: The role of dispute boards in achieving efficient resolution

Nohara Group   **13:00-14:00PM**

Kosuke Nohara

A view from construction supply chain company. What are the pains at the construction sites and practical solutions

ICCEPM2024 Sapporo

Day2- July 30(Tue), 2024   **Auditoriums**

Yamashita PMC   14:00-15:00PM

Yasuyuki Gonai

> Variations and project management methods in international construction projects into Japan and from Japan

CYPE   **14:00-15:00PM**

Kentaro Tanaka

> Open BIM CDE- its transmitting capability and case studies on analysis energy demand & consumption

CBRE   **15:00-16:00PM**

Hisanao Kajiura

> Current issues of project management professionals in Japan, Asia and beyond

Japan Federation of Construction Industry Specialized Group Society   15:00-16:00PM

Shogo Iwata

> The future of sustainable construction industry from the specialist builders' perspective

ICCEPM2024 Sapporo

Day3- July 31(Wed), 2024   **Auditoriums**

Tokyo Electric Power Company   **11:00AM-12:00PM**

Dr. Hiroshi Okamoto, Dr. Masahiro Tanaka

The fourth industrial revolution empowered by End-to End Electric Power System, for sustainable built environment

Growup   **11:00AM-12:00PM**

Yoshihide Yoneda

Case studies of "Hand-thrown fire extinguisher"- technological and legal challenges to secure an escape route for buildings and other facilities in Japan and Asia.

Oracle   **13:00-14:00PM**

James Read

Project Management Information Systems – Leveraging the future today

Naya Company   **13:00-14:00PM**

Ayako Omura

Integrating Design, Construction and Logistics in Japan and Overseas CLT Building Projects

ICCEPM2024 Sapporo

Day3- July 31(Wed), 2024   **Auditoriums**

Turner & Townsend   **14:00-15:00PM**

Ben Samways, Hiroyuki Murase

Global and Japan Construction Costs Report

Photoruction   **14:00-15:00PM**

Takaharu Nakajima

Enhancing Productivity through Digital Integration in Construction Production -A Case Study Utilizing BPaaS 'Photoruction' for the Construction Industry

Pacific Century Premium Developments   **15:00-16:00PM**

Dr. Koichiro Sumino

How to clear the hurdles to the entry of foreign luxury design into Japan

Takenaka Corporation   **15:00-16:00PM**

Ryusuke Kojio

Sustainable Project Delivery - Various Delivery Schemes in Europe, Singapore and Japan

-Beyond Design-Bid-Build or Design-Build

Oracle seminar for students   **16:00-17:00PM**

Nobuyuki Sawano

Learn how to implement schedule planning, progress updates and Earned Value Management (EVM) using Primavera P6, the global standard for schedule management in the construction industry.

ICCEPM2024 Sapporo

Excursion Plan on Day4 (1 August 2024)

As one of fun part of ICCEPM2024, we are delighted to present the excursion plan to Niseko on 1August 2024, sponsored by Pacific Century Premium Developments and Hyatt.

"With a landscape that changes dramatically between winter and summer seasons, Niseko stands as a unique mountain destination providing a variety of outdoor, sport and cultural experiences for all tastes and ages. The best powder snow in the world during winter for the most exiting rides of your life and the clearest river water of Japan within a majestic forest during summer, enabling you to connect with the nature during a timeless getaway in Niseko" by Park Hyatt Niseko Hanazono.

   *This event is free of charges but limited to capacity. Early registration is strongly recommended.

Itinerary

9:00 AM: Travel from Sapporo (Hotel MyStays Aspen Sapporo) to Niseko by tour bus

11:00-13:00 PM: Drink & Canape at Park Hyatt Niseko Hanazono.   ICCEPM2024 adjourned

Options: To travel back to Airport and/or Sapporo by tour bus (dep 13:30/15:30/16:30 PM)

                         To participate in Summer Activities at a special discount rate for ICCEPM2024

                         To stay at Park Hyatt Niseko Hanazono at a special discount rate for ICCEPM2024

For enquiries, please contract ICCEPM2024@gmail.com

ICCEPM2024 Sapporo

Excursion Plan on Day4 (1 August 2024)

Summer activities are available for the ICCEPM2024 participants.

https://www.hyatt.com/en-US/hotel/japan/park-hyatt-niseko-hanazono/ctsph/area-attractions

Hanazono Zipflight in Niseko

Rafting in Niseko

Fireworks and Mountain Lights in Niseko

Shikotsu Lake (17km from Niseko)

SUBMISSION

To encourage participation from both academics and industry practitioners, the prospective presenters/participants have two different options for this conference: (OPTION 1) Paper & Presentation (recommended for academic researchers); and (OPTION 2) Extended Abstract & Presentation (recommended for practitioners).

For the Paper & Presentation option (OPTION 1), once the full paper is accepted, the full paper will be published in proceedings, and a presentation should be delivered during the conference. For the Extended Abstract & Presentation option (OPTION 2), there is no need to submit a paper; only an extended abstract and a PowerPoint are required.

It is optional, but it is recommended to submit an abstract for both options by the deadline below. It will be peer-reviewed by the Technical Committee, who will provide feedback on their suitability for the conference.

Abstract, extended abstract and full paper must be original and cannot be simultaneously submitted to another journal or conference. All of them should be written in English because the official language of the conference is English. For preparing an abstract, extended abstract, or full paper, please follow the formatting instructions available in the templates, and submit it through Easy Chair.

Highly-rated peer-reviewed papers will be selected and nominated to ASCE's Journal of Management in Engineering (JME). Invited papers will need to have at least 50% new content and will undergo the standard JME peer-review process.

Submitted papers will be given the option of publishing their full paper on KICEM's official journal, the Korean Journal of Construction Engineering and Management (KJCEM). The best papers selected from the conference will be given benefits, including partial discount of processing charges and fast tracking of the publication process.

The journal is in the process of being indexed on SCOPUS in the near future.

Please visit https://www.kicem.or.kr/eng/ for further information.

Protocols

1) Proceeding title: Proceeding of the 2024 International Conference on Construction Engineering and Project Management

2) Publisher: The International Consortium of Construction Engineering and Project Management

3) Editors: Dr.Han Tian, Dr. Tamura Atsushi, Dr.Nagumo Yosuke, Dr.Jung In Kim

4) City: Sapporo, Hokkaido, Japan

5) Publication Date: July 31, 2024

6) Sample citation: Han,T., Tamura,A.,Nagumo,Y., Kim,J.(2024). Cutting-edge Technologies to Achieve a Higher Level of Modular Construction – Literature Review, Proceeding of the 2024 International Conference on Construction Engineering and Project Management, Sapporo, Hokkaido, Japan, 29-31 July 2024.

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SUBMISSION OPTIONS

Option 1: Paper & Presentation

This option is recommended for academic researchers and is in a three-step process.

• Step 1 – Abstract Submission (Optional): Abstracts must not exceed 250 words.

• Step 2 – Full Paper Submission (Required): Full papers must be limited to 8 pages. It must be prepared using the formatting instructions available in the full paper template. All papers will follow a single-blind review process.

• Step 3 – Presentation (Required): The presentations will be conducted in a lecture format and limited to 13 minutes (10 minutes for presentation and 3 minutes for questions/discussion). For presentation slides, you can refer to our template. It is recommended that you use the template, but it is NOT required.

Important dates

Abstract Submission: December 13, 2023

Full Paper Submission: March 15, 2024

Notification of Full Paper Acceptance: April 1, 2024

Early Bird Registration April 20, 2024.   Early Bird Online Card Payment May 20, 2024

Camera-ready Submission: June 1, 2024

Option 2: Extended Abstract & Presentation

This option is recommended for practitioners and is in a three-step process. For this option, there is no need to submit a paper; only an extended abstract is required.

• Step 1 – Abstract Submission (Optional): Abstracts must not exceed 250 words.

• Step 2 – Extended Abstract Submission (Required): An extended abstract must be limited to one page. It must be prepared using the formatting instructions available in the extended abstract template. All extended abstracts will follow a single-blind review process.

• Step 3 – Presentation (Required): The presentations will be conducted in a lecture format and limited to 13 minutes (10 minutes for presentation and 3 minutes for questions/discussion). For presentation slides, you can refer to our template. It is recommended that you use the template, but it is NOT required.

Important dates

Presentation only (recommended for industry speakers):

Extended Abstract Submission: March 15, 2024

Notification of Extended Abstract Acceptance: April 1, 2024

Early Bird Registration April 20, 2024.   Early Bird Online Card Payment May 20, 2024

Camera-ready Submission: June 1, 2024

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REGISTRATION FORM

Once payment of the registration fee is processed, please fill in the registration form for each of your paper, on the registration page of our conference website and submit it to us.
https://iccepm2024.com/registration

ICCEPM2024 registration form

The contents of the registration form are as below, which needs to be filled in on our website for each participating author or each non-author.

1.I will attend ICCEPM2024

Yes

No

2.I have paid the registration fee

Yes, standard fee

Yes, early bird non-student fee

Yes, early bird student fee. I will bring along student cards etc in July

3.Please state your paper number and your name.

   If you have not submitted any papers, please state your email address and your name

4.I will attend the banquet dinner on the third day 31 July2024.

   Please note that this event may be subject to capacity of 180-220 participants.

Yes

No

5.I will attend the excursion trip on the fourth day 1August2024.

   Please note that this event may be subject to capacity of 50 participants.

Yes

No

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CHECK-IN FORM

1.I will check-in the conference now

Yes/No

2.Please write your name. State just one name for each check-in form

3.Please write one of your paper numbers. State "None" if you have no papers

4.Please write your email address

5.I have read the proceedings and conference brochure

Yes/Not yet, but I will

6. DAY2 Lunch box

I do not need Day2 lunch box / I will eat Japanese lunch box/I will eat sandwich lunch box(vegetarian)

7. Day3 Lunch box

I do not need Day3 lunch box/I will eat Japanese lunch box/I will eat sandwich lunch box(vegetarian)

8. Day3 Banquet dinner -for 227 registrants only to answer

I have registered online for banquet dinner before 30 April, and I will attend

I have registered online for banquet dinner before 30 April, however will not be able to attend

9. Day4 Excursion to Niseko -for 125 registrants only to answer

I have registered online for excursion before 30April, and I will attend

I have registered online for excursion before 30April, however will not be able to attend

10. Day4 Excursion- options for post to 13PM

I want to go to Chitose Airport(then Sapporo) by tour bus departing 13:30PM

I want to participate outdoor activities etc, and take tour bus departing 15:30PM

I want to participate outdoor activities etc, and take tour bus departing 16:30PM

I want to stay at Park Hyatt Niseko etc and do not need tour bus back to Sappor

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REGISTRATION FEE

Registration Fee (Japanese Yen)

CATEGORY	Wire transfer payment	Online card payment
Regular	80,000 JPY and transfer costs	83,200 JPY
Early Bird	60,000 JPY and transfer costs	62,400 JPY
Student	50,000 JPY and transfer costs	52,000 JPY

DETAILS

・Early Bird Registration April 20, 2024. Early Bird Online Card Payment May 20, 2024

・Access to all academic paper presentations and business seminars & workshops is included.

・Dinner banquet on the 3rd day is included, subject to capacity.

・Post-conference excursion on the 4th day is included, subject to capacity.

・Package lunch is included.

   There are also two dining facilities within Hokkaido University.

   Memorial center: 30 seats, 5 minutes-walk from Conference Hall

   University main dining hall: 500 seats, 10 minutes-walk from Conference Hall

・Hotel fee is <u>not</u> included.

・All registrants, including industry practitioners and scholars, should register as regular registrants.

・To receive the student rate, lead and co-authors of each paper must be active full-time students in Spring 2024. Provide your affiliation information during the registration process.

・Conference regular (including early bird) registration allows the attendee to have up to 2 papers included in the conference and proceedings, with the exception of student registration, which allows 1 paper to be included.

・ Authors must register online and pay registration fee, or their paper will be withdrawn.

・All accepted papers must be presented at the conference.

・ ICCEPM 2024 will follow applicable local laws and health protocols as necessary.

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PAYMENT INSTRUCTION

Please process your payment of the registration fee for each of your paper, stating your paper number and name.

1.Payer's Reference must be used, when processing payment

For example, if your paper submission number is 6, and your name is Jack Martin

(Example) Payer's Reference: 6 Jack Martin

2.Registration Fee (Wire Transfer)

Standard registration fee is 80,000 Japanese Yen and transfer costs, after 20 April 2024.

Early bird registration fee is 60,000 Japanese Yen and transfer costs, before 20 April 2024.

Student registration fee is   50,000 Japanese Yen and transfer costs, before 20 April 2024.

3.Payment is required for each author who is presenting or participating, as well as for each non-author who is participating. Co-authors who are not coming to Sapporo are exempted from paying registration fee. If the registration fee above is not paid, your papers will be withdrawn from the conference.

4. We accept institutional/corporate credit cards(visa/master): please see Q&A section for details

Otherwise, your payment must be sent to Barclays Bank UK PLC, stating following IBAN (or Sort Code and Account Number), and payee who is acting on behalf of ICCEPM2024.   Payee's account is Japanese Yen account, and you can send in Japanese Yen or any foreign currency equivalent to the registration fee. Costs of money transfer and currency conversion must be paid by the Payers.

For International Payment (From outside UK to UK)

Bank Name: Barclays Bank UK PLC

Bank Address: 1 Churchill Place, London E14 5HP, UK

IBAN: GB69BUKB20498688864422

Swift BIC: BUKBGB22

Payee: Circle Field Associates Limited

Payee's address: 31 St Mildreds Road London SE12 0RD UK.   https://circlefield.com/

For UK Domestic Payment (From UK to UK)

Bank Name: Barclays Bank UK PLC

Sort Code: 20-49-86

Account Number: 88864422

Payee: Circle Field Associates Limited

Payee's address: 31 St Mildreds Road London SE12 0RD UK. https://circlefield.com/

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Q&A

Q1. Can I pay by credit card?

  A. Yes, we accept institutional and corporate credit cards(visa/master.) Please access to the registration page of our conference website and click "Payment" button, and follow its links to circlefield.com (which is acting on behalf of ICCEPM2024) and Barclays Bank payment page. https://iccepm2024.com/registration

  Registration fee for online credit card payment includes card companies' transaction costs

  Online payment- Standard registration fee is <u>83,200 Japanese Yen</u>

  <u>Early bird rate is available for those who have already registered before 20 April 2024.</u>

  Online payment- Early bird registration fee is <u>62,400 Japanese Yen</u>

  Online payment-Student registration fee is   <u>52,000 Japanese Yen</u>

Please state your paper number such as "paper6" at :Add a note to your order" at Checkout Page. If no paper submitted, please state "None"

Q2. Can I pay by cash at the conference venue, or by any alternative method?

  A. If you are struggling to process payment as above, please contact ICCEPM2024@gmail.com

Q3. How much does it cost for money transfer

  A. For wire transfer, please inquire your instructing bank. Cost related with money transfer and currency conversion must be paid by the Payers.

Q4. Can I have an invitation letter, registration notice or invoice/receipt?

  A. Yes, please contact ICCEPM2024@gmail.com, and we will issue. Please allow us a little time to process theses, post to your payment and registration. Thank you for your patience.

Q5. Who is this payee, Circle Field Associates Limited?

  A. It is a registered company in England &Wales (Company Number 9805160), acting for and on behalf of ICCEPM2024, and one of the sponsors of the conference.

Notice:

The registration fee does not include any insurance cost etc to cover participants' safety and other risks etc during this conference, as such each participant is responsible for their own safety and other risks and requested to procure any appropriate travel insurance or any other insurance etc to cover their safety and other risks associated with this conference.

CONTACT

ICCEPM2024 Secretariat and Administration Committee Email: ICCEPM2024@gmail.com