The Thirty-Sixth KKHTCNN Symposium on Civil Engineering

2 – 5 December 2025, Hong Kong, China

https://36kkhtcnn.iasdm.org/ or http://kkhtcnn36.iasdm.org/

Day 1: 14:00 – 18:00, Tuesday, 2 December 2025 **Venue: Lecture Theater A, Academic Building, HKUST**

14:00 – 18:00	REGISTRATION

Day 2: 8:00 – 12:00, Wednesday, 3 December 2025 **Venue: Lecture Theater A, Academic Building, HKUST**

8:00 – 12:00	REGISTRATION
9:30 – 9:35	Welcoming Address Prof. Hong K Lo, Dean of School of Engineering, HKUST
9:35 – 9:40	Opening Address Prof. Limin Zhang, Head of Department of Civil and Environmental Engineering, HKUST
9:40 – 10:10	Photo taking
10:10 – 10:30	BREAK
11:30 – 12:00	KEYNOTE SPEECHES
10:30 – 11:00	Infrastructure Design for Maintenance Ir C M Tang, Project Team Leader, Civil Engineering and Development Department, Hong Kong SAR
11:00 – 11:30	Case Studies – Revolutionizing Construction with Innovation Technologies and AI Ir Derek So, Executive Director, Hip Hing Construction Co., Ltd.; Managing Director, Vibro (HK) Ltd.
11:30 – 12:00	Integrating Lightweight Concrete and DfMA for Streamlined Construction Dr Herbert W Zheng, Chief Executive Officer, Glorious Concrete (H.K.) Ltd. and Orientfunds Precast Ltd.
12:30 – 14:00	LUNCH (Outside of Lecture Theater A, Academic Building)

Day 2: 14:00 – 17:30, Wednesday, 3 December 2025 **Venue: Academic Building, HKUST**

14:00 – 15.30	**TECHNICAL SESSIONS**						
Venue	Track 1 2130A	Track 2 2130B	Track 3 2130C	Track 4 2131A	Track 5 2131B	Track 6 2132A	Track 7 2132B
Track chairs	**Construction Engineering and Management** Manop Kaewmoracharoen	**Geotechnical Engineering** Hiroyuki Goto	**Geotechnical Engineering** Kiyoshi Kishida	**Geotechnical Engineering** Yasuo Sawamura	**Construction Materials** Vachara Peansupap	**Construction Materials** Akihiko Sato	**Hydraulic Engineering** Jiarui Lei
15:30 – 15:45	BREAK						
15:45 – 17:30	**TECHNICAL SESSIONS**						
Venue	Track 1 2130A	Track 2 2130B	Track 3 2130C	Track 4 2131A	Track 5 2131B	Track 6 2132A	Track 7 2132B
Track chairs	**Construction Engineering and Management** Nakhon Kokkaew	**Geotechnical Engineering** Ming Peng	**Geotechnical Engineering** Mamoru Kikumoto	**Construction Materials** Atichon Kunawisarut	**Hydraulic Engineering** Jinwoo Lee	**Structural Engineering** Risa Matsumoto	**Hydraulic Engineering** Zhengzheng Zhou
19:00 – 21:30	WELCOME DINNER (Venue: Hung Kee Seafood Restaurant, No. 4-8, G/F & 1/F, Siu Yat Building, Sai Kung Hoi Pong Square, Sai Kung, Hong Kong) **Gathering time: 18:00 Time Leaving HKUST: 18:20 Meeting Point: HKUST Main Entrance Piazza (next to the Sundial sculpture)**						

Day 3: 9:00 – 14:00, Thursday, 4 December 2025 **Venue: Academic Building, HKUST**

9:00 – 10:30	**TECHNICAL SESSIONS**						
Venue	Track 1 2130A	Track 2 2130B	Track 3 2130C	Track 4 2131A	Track 5 2131B	Track 6 2132A	Track 7 2132B
	Structural Engineering	**Structural Engineering**	**Structural Engineering**	**Environmental Engineering**	**Geotechnical Engineering**	**Geotechnical Engineering**	**Geotechnical Engineering**
Track chairs	Xin Meng	Kyohei Noguchi	Hyo-Gyoung Kwak	Kevin Sze Chiang Kuang	Suched Likitlersuang	Veerayut Komolvilas	Hideaki Yasuhara
10:30 – 10:45	BREAK						
10:45 – 12:30	**TECHNICAL SESSIONS**						
Venue	Track 1 2130A	Track 2 2130B	Track 3 2130C	Track 4 2131A	Track 5 2131B	Track 6 2132A	Track 7 2132B
	Structural Engineering	**Structural Engineering**	**Structural Engineering**	**Structural Engineering**	**Transportation Engineering**	**Transportation Engineering**	**Transportation Engineering**
Track chairs	Tomomi Yagi	Youngchul Kim	Chayut Ngamkhanong	Anqi Gu	Siwarak Unsiwilai	Sorawit Narupiti	Jittichai Rudjanakanoknad
12:30 – 14:00	LUNCH (Venue: Outside of Lecture Theater A, HKUST)						

Day 3: 14:00 – 17:30, Thursday, 4 December 2025 **Venue: Academic Building, HKUST**

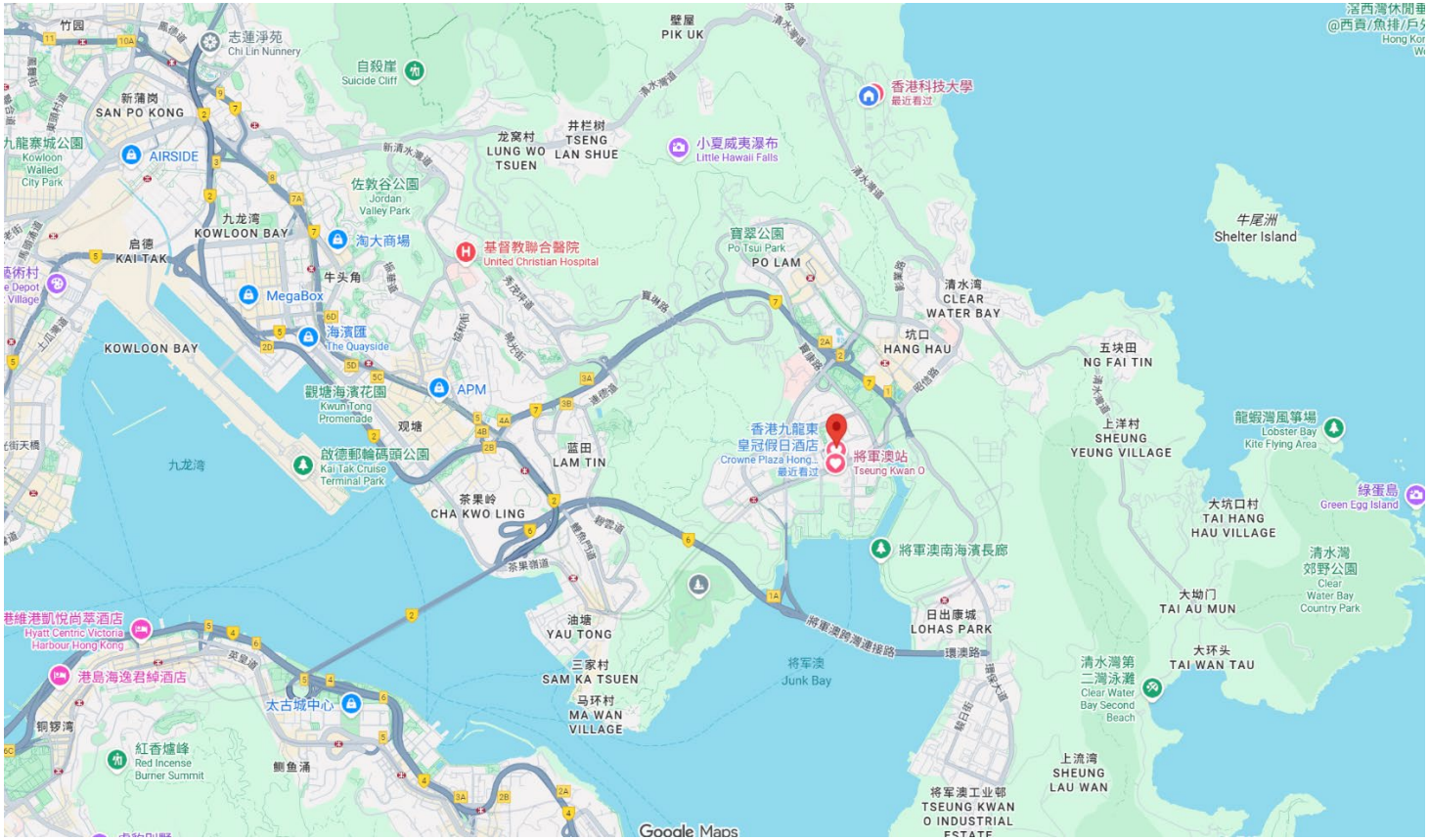
14:00 – 16:00	**TECHNICAL SESSIONS**						
Venue	Track 1 2130A	Track 2 2130B	Track 3 2130C	Track 4 2131A	Track 5 2131B	Track 6 2132A	Track 7 2132B
Track chairs	**Structural Engineering** Tidarut Wisuthseriwong	**Structural Engineering** Xu Jiang	**Structural Engineering** Watanachai Smittakorn	**Others** Shengjie Rui			
15:30 – 17:30	KKHTCNN Coordinators Meeting (Venue: Conference Room (Room 3574) of Department of Civil & Environmental Engineering, HKUST)						
18:30 – 22:00	CONFERENCE BANQUET (Venue: G/F China Garden, HKUST) Keynote Address: Ir Jenny F Yeung, Deputy Head of Geotechnical Engineering Office (Planning and Testing), Civil Engineering and Development Department, Hong Kong SAR						

Day 4: Friday, 5 December 2025

<u>TECHNICAL TOUR:</u> Construction Site Visit & Cultural Tour

Gathering time: 8:50 am
Meeting Point: Crowne Plaza Hong Kong Kowloon East, Tower 5, No. 3 Tong Tak Street, Tseung Kwan O, Hong Kong
Activities:

- Site Visit: Design and Construction of Light Public Housing at Olympic Avenue, Kai Tak
- Visit Kai Tak Sports Park
- Lunch



Time	Wednesday, 3 December 2025, Academic Building, HKUST		
	Track 1 Venue: 2130A	**Track 2 Venue: 2130B**	**Track 3 Venue: 2130C**
	Construction Engineering and Management Chair: *Manop Kaewmoracharoen*	Geotechnical Engineering Chair: *Hiroyuki Goto*	Geotechnical Engineering Chair: *Kiyoshi Kishida*
14:00 – 15:30	Efficient Crack Segmentation using conditional operation of MoE *WooSuk Jang, Gi-Hun Gwon, Jaehwan Seong, Hyung-Jo Jung, Korea Advanced Institute of Science and Technology*	FEM-Based Analysis of Deformation Behaviour of Corrugated Steel Pipes under Building Loads *Deok-Hwi. Hwang, Joohyun. Park, Gye-Chun. Cho, Korea Advanced Institute of Science and Technology*	Assessing the Integrity of a Laboratory-Scale Cement-Bentonite Wall through In-Situ Non-Destructive Testing *Kai En Low, National University of Singapore*
	Fundamental Experiment on the Elongation of C-5 Paint Coating System Using Digital Image Correlation *Minori Takahashi, Akihiko Sato, Kunitomo Sugiura, Yasuo Kitane, Risa Matsumoto, Tomonori Tomiyama and Hideto Kida, Kyoto University*	Influence of Particle Elongation and Interparticle Friction on the Mechanical Behavior of Granular Media *Usman Ali and Mamoru Kikumoto, Kyoto University*	High-Pressure CO_2 Adsorption Behavior and Thermodynamic Analysis of Different Clay Minerals *Guohang Tang, Xianfeng Ma, Jiawei Ma, Bolong Ma, Tongji University*
	Intelligent Tower Crane Layout in Construction Sites Using a Genetic–Ant Colony Algorithm *Yuanjun Nong, Yujie Lu, Man Cui, Tongji University*	The Effect of Particle Size Distribution on the Collapse of Immersed Polydisperse Granular Columns *Jiacheng Xia, Ming Peng, Lu Jing, Tongji University*	Experimental Technique for Micro-to-Macro Investigation of Granular Materials under Biaxial Loading *Pongsapak Kanjanatanalert, Usman Ali, Ying Cui, Mamoru Kikumoto, Kyoto University*
	A Study of the Impact of Climate Change on Pavement Conditions of National Roads in Cambodia under Different Shared Socioeconomic Pathways (SSPs) *Sunny Yin and Nakhon Kokkaew, Chulalongkorn University*	Substructure Method of Pile Foundations Considering Soil Nonlinearity *Siao-Jhuang Wang, Jiunn-Shyang Chiou, National Taiwan University*	Wave Generated by Submarine Landslide with Various Initial Velocities *Nadila Ayu Novanti, Hiromasa Iwai, Hideaki Yasuhara, Kyoto University*
	Mamba Meets Crack Segmentation *Zhili He, The Hong Kong University of Science and Technology*	Modeling of Excavated Soil Discharge in the Screw Conveyor of TBM Using CEL Approach *Jongwon Woo, Joohyun Park, Nichsiree Kuakulkiat, Gye-chun Cho, Korea Advanced Institute of Science and Technology*	Experimental Study on the Liquefaction Behavior of Low Plasticity Ternary Soil Mixtures *Pei-Yun Lee, Yi-Ju Lin, Louis Ge, National Taiwan University*
	Evaluating Ergonomic Risk Through Dual-Method Analysis in Tile installation Work *Yoon Zaw, Vachara Peansupap, Manop Kaewmoracharoen, Chulalongkorn University*	Numerical Simulation of Soil Arching in Trapdoor Tests *Ying-Hsuan Chen, Louis Ge, Yu-Wei Hwang, National Taiwan University*	CO_2 Storage in a Geological Formation: A Numerical Simulation Approach *Sokpheanika Chea, Jung-Tae Kim, Gye-chun Cho, Korea Advanced Institute of Science and Technology*
15:30 – 15:45	BREAK		

Time	Wednesday, 3 December 2025, Academic Building, HKUST			
	Track 4 Venue: 2131A	**Track 5 Venue: 2131B**	**Track 6 Venue: 2132A**	**Track 7 Venue: 2132B**
	Geotechnical Engineering Chair: *Yasuo Sawamura*	Construction Materials Chair: *Vachara Peansupap*	Construction Materials Chair: *Akihiko Sato*	Hydraulic Engineering Chair: *Jiarui Lei*
14:00 – 15:30	Thermo-Hydro-Mechanical Responses of an Energy Raft Foundation in Taipei *Shao-Chi Yang, Kuo-Hsin Yang, Ignatius Tommy Pratama, National Taiwan University*	An Overview on the Role of Recycled Carbon Fibers and Low-carbon Limestone Calcined Clay Cement (LC3) in Improving Heating Stability under Freeze-thaw Attack *Faizan Ali, Jihoon Park, H. K. Lee, Korea Advanced Institute of Science and Technology*	A BIM-Based Framework for Quantifying Embodied Carbon Uncertainty in Early-Stage Structural Design *Ting-Yun, Hsieh, Ying-Chien, Chan, National Taiwan University*	Integrating Hydrological and Economic Assessments of Soil Infiltration Enhancement for Urban Flood Resilience *Xingwei Ren, Zeyu Guo, Qingli Li, Zhengzheng Zhou, Xin Chen, Jiajie Liao, Tongji University*
	Application of Artificial Intelligence to Enhance 3D Subsoil Modelling in Bangkok *Janejira Khamjan, Weeradetch Tanapalungkorn, Manop Kaewmoracharoen, Suched Likitlersuang, Chulalongkorn University*	A Novel Steel Passivation Mechanism in LC3 Concrete *Qiang You, National University of Singapore*	Aqueous Carbonation Technology to Enhance Shape Stability of Cement-based Materials Using Monoethanolamine Solution *Seung Mo Kim, Sung Ho Han, Jae Hong Kim, Korea Advanced Institute of Science and Technology*	Spatial Distribution Patterns of Non-Stationary Extreme Precipitation under Changing Environment in the Yangtze River Delta *Nuo Lei, Zhengzheng Zhou and Shuguang Liu, Tongji University*
	A Simplified Method for Deriving Volumetric Water Content Using a Multi-Spectral Intensity *Yasunari Kijihira, Yusuke Miyazaki, Tanawat Tangjarustritaratorn, Shizuka Eshiro, Yohei Takara, Takayuki Imamura, Kyoto University*	A Retrieval-Augmented Generation Framework for Standardizing Construction Schedule Terminologies *Phuong-Linh Le, Deanne Callista Radiany Wibowo, Raynard Vincent Elsantio, Jacob J. Lin, National Taiwan University*	Molecular Insights into the Onset of Calcium Silicate Hydration *Xinhang Xu, National University of Singapore*	Coupling Fractional Entropy and Stochastic Particle Tracking to Quantify Anomalous Diffusion in Suspended Sediment Transport *Hsuan-Hung Wu, Christina W. Tsai, National Taiwan University*
	Seismic Deformation of Tunnels Considering Spatial Variability of Soil *Li Guo, Dongmei Zhang, Zhongkai Huang, Zhanhu Yao, Tongji University*	Active Rheology Control Based on Magneto-Rheological of Cement Mortar Incorporating Various Magnetic Particles *Jong su Choi, In Kuk Kang, Jae Hong Kim, Korea Advanced Institute of Science and Technology*	An Application of Laminated Bamboo as an Alternative Material for Railway Sleepers *Piyanan Juntawech, Chayut Ngamkhanong, Chulalongkorn University*	Wave-mud Interactions: Numerical and Experimental Studies *Carlos Perez Moreno, National University of Singapore*
	Influence of Plane Strain Ratio on Numerical Simulation of Excavation: A Case Study in Phnom Penh *Rosaka Pitou, Raksiri Sukkarak, Suched Likitlersuang, Chulalongkorn University*	Decision Support Optimization of Urban Greening Schemes for Sustainable Construction *Yu-Cian Lin, Tuan Anh Phan, Ying-Chieh Chan, National Taiwan University*	~~Boosting The Performance of LC3 - Application as Structural and Soil Improvement Material *Xinyu Zeng, National University of Singapore*~~	Revealing Spatial Heterogeneity in Algal Bloom Drivers using Interpretable Machine Learning at Basin Scale *Yan Dai, Xihua Wang, Tongji University*
	CFD-DEM Analysis of the Effect of Material Mixture in Grouting on Permeability *Takuma Yamaguchi, Takako MIYOSHI, Kiyoshi Kishida, Kyoto University*	Strategy for Improving Buildability Of 3D Printing Concrete by Using CO_2 Mixing *Long Li, Tongji University*		European Heatwave Patterns and Forcing: An EOF–ICEEMDAN Perspective *Yu-Feng Chen, Christina Tsai, National Taiwan University*
15:30 – 15:45	BREAK			

Time	Wednesday, 3 December 2025, Academic Building, HKUST		
	Track 1 Venue: 2130A	**Track 2 Venue: 2130B**	**Track 3 Venue: 2130C**
	Construction Engineering and Management Chair: *Nakhon Kokkaew*	Geotechnical Engineering Chair: *Ming Peng*	Geotechnical Engineering Chair: *Mamoru Kikumoto*
15:45 – 17:30	Developing a Framework for an LLM-based AI Agent to Support Dimensional Inspection of Building Elements *Duyen Minh Ngoc Pham, Vachara Peansupap, Tanit Tongthong, Chulalongkorn University*	Long-term Permeability Observation of Fractured Granite Under Saturated Solution Flow-through Tests with X-ray CT Analysis *Zhiqi Li, Sho Ogata, Shinichiro Nakashima, Hideaki Yasuhara, Kiyoshi Kishida, Kyoto University*	Seismic Response of Shallow Foundations on Sandy Ground with Different Deposition Angles *Zhiyuan Yang, Kyohei Ueda, Ryosuke Uzuoka, Kyoto University*
	From Components to Context: A Dual-path Study of Individual's Digital Leadership in Project-Driven Environments *Yuxuan Du, The Hong Kong University of Science and Technology*	Berm-Effect Modification Factor for the Equivalent Thickness Model in Excavation Analysis *Ting-Yu Liu and Jiunn-Shyang Chiou, National Taiwan University*	Liquefaction Behavior of Non-Plastic Binary Mixtures *Tzu-Shan Huang, Yi-Ju Lin, Louis Ge, National Taiwan University*
	A BIM-Enabled Platform for Digital Supply Chain Management in Modular Steel Construction *Tanyapak Sawatpanich, Veerasak Likhitruangsilp, Chulalongkorn University*	Evaluation Method for the Lifespan of Monitoring Sensors in High-Level Radioactive Waste Repositories *C. Park, G.C. Cho, Korea Advanced Institute of Science and Technology*	A New Plane Model for Transversely Isotropic Materials in Ordinary State-Based Peridynamics *Taiga Kato, Fan Zhu, Zirui Lu, Yosuke Higo, Kyoto University*
	Development of a Risk Identification Model for Construction contracts Based on Large Language Models *Chenlong Xu, The Hong Kong University of Science and Technology*	A Numerical Model to Analyze Slaking Behavior of Soft Rock Subjected to Wetting-Drying Cycles *Risa Komuro, Mamoru Kikumoto, Kiyoshi Kishida, Kyoto University*	Subsurface Anomaly Detection using Electrical Resistivity: for Multiple Utilities *DY. Lee, J. Kim, GC. Cho, Korea Advanced Institute of Science and Technology*
	A BIM-Enabled Platform for Assessing Construction Material Values in Building Renovation Projects *Nhi Y Nhi Tran, Chulalongkorn University*	Crystalline Swelling Characteristics of Montmorillonite in GMZ Bentonite *Yiran Zhang, Yucheng Li, Yonggui Chen, Tongji University*	Rock Joints Modelling of Friction Recovery Based on Critical State Theory *Yuki Matsuoka, Mamoru Kikumoto, Sho Ogata, Kiyoshi Kishida, Kyoto University*
	An AI-Driven and Fully Automated Scan-to-BIM Workflow Framework for the Residential Construction Industry *Xiang Gao, The Hong Kong University of Science and Technology*	Fundamental Research on the Structural Responses of a Shield Tunnel Under Normal Active Fault Displacement *Guanxiong Zeng, Yasuo Sawamura, Kiyoshi Kishida, Kyoto University*	Development and Application of Soil Moisture Sensor Based on POF *Haojin Zhang, Haihua Zhang, Yihan Hu, Han Han, Qianman Chen, Tongji University*
	A Study of Criteria and Factors Affecting the Decision to Buy a Senior Housing Project in Thailand *T. Intarak N. Kokkaew, Chulalongkorn University*	Physics-Informed Data-Driven Modelling and Computation in Geotechnics *Pin Zhang, National University of Singapore*	

Time	Wednesday, 3 December 2025, Academic Building, HKUST			
	Track 4 Venue: 2131A	**Track 5 Venue: 2131B**	**Track 6 Venue: 2132A**	**Track 7 Venue: 2132B**
	Construction Materials Chair: *Atichon Kunawisarut*	Hydraulic Engineering Chair: *Jinwoo Lee*	Structural Engineering Chair: *Risa Matsumoto*	Hydraulic Engineering Chair: *Zhengzheng Zhou*
15:45 – 17:30	Enhancing Concrete Performance with Graphene Quantum Dots: A Study on Mechanical Properties and Durability in Aggressive Environments *Thwe Thwe Win, Lapyote Prasittisopin, Withit Pansuk, Chulalongkorn University*	Identification and Interpretation of Hydrometeorological Determinants of Traffic Accidents Through ICEEMDAN-TDIC Analysis: A Case Study in Taipei *Billy Jeremiah Wilianto, Christina Wan-Shan Tsai, National Taiwan University*	Prediction of Pressure-Impulse Diagram of RC Columns Exposed to Blast Loading *Hyunseung Chung, Hyo-Gyoung Kwak, Korea Advanced Institute of Science and Technology*	Unlocking the Potential of Aqueous Fe (II) in Groundwater: A Thermodynamic Modulation Strategy Using Micro-Nanobubbles *Huang Xiaoyi, Dai Chaomeng, Tongji University*
	Thermal Activation and Hydration Behaviour of Singapore Waste Sludge and Marine Clay as SCMs *Zihui Zhan, National University of Singapore*	A Physics Informed Deep Learning Framework for Unsteady Turbulence Modeling *Fredrik Dubay-Myklebust, National University of Singapore*	Seismic Wavefield Estimation near Earthquake Source Based on Physics-Informed Neural Networks *Yujiro Fukuda, Ayaka Nakatsuji, Masayuki Inatani, Hiroyuki Goto, Kyoto University*	Wind Speed Prediction Using Multivariate Variational Mode Decomposition with Graph Neural Networks for Extreme Storm Events in Taiwan *Jui-An Cheng, Christina W. Tsai, National Taiwan University*
	Automation in Construction Technology Based on Vertical Precast Printing *Gwang Min Park, Jae Hong Kim, Korea Advanced Institute of Science and Technology*	~~Strategic Water Demand Assessment for Bihar: A Pathway to Resilient Resource Management~~ ~~*Pradyumna Kumar Behera, Christina W. Tsai, National Taiwan University*~~	Experimental Study on Seismic Isolation and Sloshing Mitigation of LNG Storage Tank under Soft Soil Site *Cong Liao, Qingjun Chen, Xi Chen, Yikun Liu, Tongji University*	A Simplified Modeling Framework for Cross-Shore Profile Evolution *Novi Andriany Teguh, Gene Jiing-Yun You, National Taiwan University*
	Multi-modal Data Fusion for Post-earthquake Building Damage Assessment *Shao-Ming Lu and Szu-Yun Lin, National Taiwan University*	~~Reversible Bio-Sorption and Solute Transport in Floating Vegetated Wetlands~~ ~~*Sourav Hossain, Christina W. Tsai, National Taiwan University*~~	Rehabilitation of Reinforced Concrete Beams by Externally Anchored Rebars *Nyan Soe Lynn, Watanachai Smittakorn, Chulalongkorn University*	Integrating Protective Concrete Planter for Mangrove Seedling Restoration and Coastal Protection *Jiarui Lei, National University of Singapore*
	Investigation of Water Permeability Resistance of One-Part Alkali-Activated Concrete *Ruka Horikawa, Akihiko Sato, Lin An, Kunitomo Sugiura, Risa Matsumot, Yasuo Kitane, Kyoto University*	The Contribution of Lacustrine Groundwater Discharge to Lake Eutrophication *Ya Jiang, Zhi Li, Tongji University*	Pre-Carbonated Furnace Slag: A Sustainable Supplementary Material for Low-Carbon Construction *Chia-Ying Chung, Yi-Cheng Lu, Wei-Hsiu Hu, National Taiwan University*	Prediction of Chlorophyll-a in China's Largest Freshwater Lake Using a Spearman-VMD-RF Hybrid Model *Chengming Luo, Xihua Wang, Tongji University*
	A Two-Stage Framework for Cross-Modal Credibility Analysis of Social Media Posts during Natural Disasters *Tzu-Chun Lo and Szu-Yun Lin, National Taiwan University*		Quantification of the Value of Structural Health Monitoring Information Combined with Expert Heuristics *Kei Akutsu, Zhihao Wang, Chul-Woo Kim, Kyoto University*	

Time	Thursday, 4 December 2025, Academic Building, HKUST		
	Track 1 Venue: 2130A	**Track 2 Venue: 2130B**	**Track 3 Venue: 2130C**
	Structural Engineering Chair: *Xin Meng*	Structural Engineering Chair: *Kyohei Noguchi*	Structural Engineering Chair: *Hyo-Gyoung Kwak*
9:00 – 10:30	Pseudo-nonlinear Structural Analysis of RC Members by Non-layered Sectional Method *Gyeonghwan Won, Hyo-Gyoung Kwak, Korea Advanced Institute of Science and Technology*	Numerical Study on the Ultimate Load Carrying Capacity of Suspension Bridge with Cable Corrosion *Weihang Cheng, Yasuo Kitane, Risa Matsumoto, Akihiko Sato, Kyoto University*	Study on Galloping Instability of Rectangular Cylinder with Angles of Attack based on Surface Pressure *Hiroki Kawabe, Kyohei Noguchi, Hisato Matsumiya, Kaisei Shimobe, Tomomi Yagi, Kyoto University*
	Proposal of Cable Tension and Bending Stiffness Estimation Method Based on Mode Shape Measurements with Correction for Accelerometer Installation Angle Errors *Tetsu Kato, Aiko Furukawa, Tomohiro Takeichi, Kyoto University*	Shaking Table Tests on Restoring Capability of Friction Pendulum Bearings *Yifei Zhang, Aijun Ye, Tongji University*	A Generic Modelling Approach for Structural Dynamics of the Horizontal Axis Wind Turbine *Zekun Ma, Peng Huang, Tongji University*
	Energy-Oriented Design and Experimental Validation of an Inerter-Based Combined Isolated Liquid Storage Tank *Qian Tao, Sunwei Ding, Ruifu Zhang, Tongji University*	Bonding Behavior of One-Part Alkali-Activated Materials Concrete Activated by Sodium Metasilicate Nonahydrate using Pull-Out Specimen *Napath Kraivisitkul, Lin An, Akihiko Sato, Kunitomo Sugiura,Risa Matsumoto, Yasuo Kitane, Kyoto University*	Evaluation of Response Amplitudes of Vortex-Induced Vibration of Structures Using Unsteady Aerodynamic Force Coefficients *Soichiro Yamaguchi, Marouane Fakhy, Hisato Matumiya, Kyohei Noguchi, Tomomi Yagi, Kyoto University*
	Study for Quantitative Evaluation of Fatigue Crack Characteristics in Welded Joints Using a Method for Improving Tensile Residual Stress *Tomohiko Harada, Risa Matsumoto, Yasuo Kitane,Akihiko Sato, Seiichiro Tsutsumi, Kyoto University*	Mechanical Properties of Underwater 3D Printed Concrete from Different Water Depths *Hao Zhang, National University of Singapore*	Thermal Effect Analysis of Reinforced Concrete Pylon Lower Cross-Beam Based on Multi-Physics Coupling *Jianwei Zhang, Dalei Wang, Yunlong Ma, Tongji University*
	Vertical Vibration of an Embedded Rigid Annular Disk in Transversely Isotropic Unsaturated Medium *Kittiphan Yoonirundorn, Teerapong Senjuntichai, Chulalongkorn University*	Investigation on the Framework of Concrete Design Codes Based on Target Service Life *Chang Chun-Cheng, Lin Kang, Liao Wen-Cheng, National Taiwan University*	Experimental Analysis of Simplified Connections Between BRB and RC Frames Using Highly Flowable Strain Hardening Steel Fiber Reinforced Concrete *Wen-Cheng Hsu, Yun-Ting Sie, Wen-Cheng Liao, National Taiwan University*
	Corrosion Durability of Repainted Coatings after CW Laser Cleaning of Painted Steel Plates with C-5 Paint Systems *Shusuke Ryonai, Yasuo Kitane, Risa Matsumoto, Akihiko Sato, Manami Saito, Shumpei Fujio, Kazuyuki Umeno, Kyoto University*	Bridge Damage Detection Using Maximum Displacement Ratio *Akito Hiro, Chul-Woo Kim, Kyoto University*	Study on Transport of Snow Particles and Their Collisions with a Square Prism Using CFD *Ryuki Matsumoto, Kyohei Noguchi, Hisato Matsumiya, Chiho Kajiyama, Kentaro Haruna, Tomomi Yagi, Kyoto University*
10:30 – 10:45	BREAK		

Time	Thursday, 4 December 2025, Academic Building, HKUST			
	Track 4 Venue: 2131A	**Track 5 Venue: 2131B**	**Track 6 Venue: 2132A**	**Track 7 Venue: 2132B**
	Environmental Engineering Chair: *Kevin Sze Chiang Kuang*	Geotechnical Engineering Chair: *Suched Likitlersuang*	Geotechnical Engineering Chair: *Veerayut Komolvilas*	Geotechnical Engineering Chair: *Hideaki Yasuhara*
9:00 – 10:30	Integrated Analysis of Multi-Source Environmental Drivers on River Water Quality: A Case Study of the Yamato River Basin, Japan *Xianbao Zha, Masafumi Yamada, Tomoharu Hori, Kyoto University*	Application of a Compact Triaxial Force Sensor to Stress Ratio Measurement with Constant Normal Stress Direct Shear Tests *Toshinori Yoshimura, Yuusuke Miyazaki, Hiromasa Iwai, Yoshihiro, Kyoto University*	A Hybrid Data-Driven Approach for Predicting Retaining Wall Deformation *Kai Yan, Linlong Mu, Tongji University*	Finite Element Modelling and Stability Assessment of a Deep Excavation Failure in Soft Clay *Yen-Ching Cheng, Kuo-Hsin Yang, National Taiwan University*
	A Hybrid Intelligent Algorithm for Small-Sample Tunnel Carbon Emission Data Generation *Yuxuan Li, Linlong Mu, Tongji University*	Determining Hydraulic Conductivity of Northern Taiwan Sandstone through Triaxial Permeability Tests *Szu-Han Chen, Louis Ge, National Taiwan University*	Physics-Informed Neural Networks for Simulating Permeability within Rock Fractures *Soma Konishi, Hideaki Yasuhara, Hiromasa Iwai, Kyoto University*	Anomaly Detection for Landslide Early Warning Using Quantile Regression of Tilt Sensor Data *Tomoki Nakazora, Hideaki Yasuhara, Kyoto University*
	From Geological Historical Evolution to Intelligent Quantitative Accessment to Analyze Underlying Logic, Research Progress, Bottleneck, and Future Optimization Framework of Landslide Susceptibility Accessment in the Southeast Coastal *Yuxuan Xue, Yu Huang, Zhen Guo, Tongji University*	Evaluating the Potential of Charcoal Waste to Improve Biogrouting Performance through Soybean Crude Urease Carbonate Pracipitation (SCU-CP) *Nuril Charisma, Hideaki Yasuhara, Hiromasa Iwai, Kyoto University*	3D Subsoil Model of Yangon City, Myanmar Using XGBoost-Based Machine Learning *Myo Thiri Aung, Suched Likitlersuang, Chulalongkorn University*	Effects of Strain Rate on CRS Consolidation Tests *Yu-Chiao Wang, Yi-Qian Lu, Louis Ge, National Taiwan University*
	Knowledge-informed BIM-LCA Integration for Environmental Assessment in Metro Station Construction *Linghui Xie, The Hong Kong University of Science and Technology*	Thermal-mechanical Response of Prefabricated Energy Shafts in Coastal Areas under Thermo-hydro-mechanical Coupling Conditions *Xin Wang, Jie Zhou, Tongji University*	Ground Characterization Using Drilling Performance Data and Excavation Analysis of Deeply Overburden Tunnels Based on Damage Theory *Hinako Hachisu, Kiyoshi Kishida, Kyoto University*	Constitutive Model of Soft Rock Coupled with Swelling and Strength Deterioration: Numerical Consideration on Tunnel Invert Heaving *Yasuhiro Kanjo, Mamoru Kikumoto, Kiyoshi Kishida, Kyoto University*
	Spatial-Temporal Variations of Particulate Matter Influenced by Hydro-Meteorological and Gaseous Pollutants Factors: A Case Study of Taiwan Coal-Fired Power Plants *Szu Tung Yao, Christina Tsai, National Taiwan University*	Centrifugal Model Tests on the Effect of Inner Piles on the Vertical Bearing Capacity of Steel Pipe Sheet Pile Foundations *Ryuichi Kato, Yasuo Sawamura, Kyoto University*	Field-Driven Machine Learning Approach for Estimating Wet Bored Pile Capacity in Bangkok Soft Clay *Chawit Preechatiwong, Chayangoorn Sonsena, Veerayut Komolvilas, Chulalongkorn University*	Mooring System-seabed Interaction for Floating Wind Turbines *Shengjie Rui, National University of Singapore*
	Learning Optimal Building Combinations for Energy Self-Sufficiency Using Graph Attention Networks *Jaewon Kim, Youngchul Kim, Korea Advanced Institute of Science and Technology*	Lateral Resistance of Large Diameter Piles Considering Pile Driving Effect *Chen-Wei Sung, Sumin Song, Yu-Wei Hwang, National Taiwan University*	A Multi-Scale Evaluation of Calcite Precipitation in MICP Specimen *Amalia Ula Hazhiyah, Louis Ge, National Taiwan University*	Improving TBM Performance: A Review of Cutter Wear Prediction *Nichsiree Kuakulkiat, Jongwon Woo, Gye-Chun Cho, Korea Advanced Institute of Science and Technology*
10:30 – 10:45	BREAK			

Time	Thursday, 4 December 2025, Academic Building, HKUST		
	Track 1 Venue: 2130A	**Track 2 Venue: 2130B**	**Track 3 Venue: 2130C**
	Structural Engineering Chair: *Tomomi Yagi*	Structural Engineering Chair: *Youngchul Kim*	Structural Engineering Chair: *Chayut Ngamkhanong*
10:45 – 12:30	A Hybrid In-situ Inspection Method Based on Thermal Motion Magnification and Pulse Phase Thermography for Identifying Subsurface Defects in Directed Energy Eeposition *Peipei Liu, Yilei Xiong, Subin Shin, Kiyoon Yi, Liu Yang, Hoon Sohn, Zhao-Dong Xu, Korea Advanced Institute of Science and Technology*	Research on the Reliability of Fatigue Performance of Deck-to-U-rib Joint Based on BPNN and Bridge Detection and Monitoring Data *Ruotong Wang, Xu Jiang, Tongji University*	Construction and Health Monitoring of Externally Prestressed Concrete Frame Structures *Watanachai Smittakorn, Chulalongkorn University*
	Seismic performance of Self-centering Coupled Shear Walls with Open-close Gap Dampers *Xinghua Li, Zheng Lu, Yan Wang, Tongji University*	Fundamental Study on Hybrid Simulation with Data Assimilation for Evaluating Uncertainty in Member Restoring Forces *Hiroki Onishi, Keita Uemura, Ryota Tsutaba, Yuya Morishita, Yoshikazu Takahashi, Kyoto University*	Prediction and Analysis of Canton Tower Structural Dynamic and Static Responses Based on Machine Learning Model *Haixia Yang, The Hong Kong University of Science and Technology*
	Seismic Performance of Stone Arch Bridges Considering Foundation Settlement and Inclination Induced by Scour and Erosion *Keita Yamashita, Aiko Furukawa, Kyoto University*	Numerical Study on Blast Effects of Dynamic TNT Charges using ALE Method *Yunmin Kim, Tae Hee Lee, Jung-Wuk Hong, Korea Advanced Institute of Science and Technology*	Study on Relationship Between Torsional Rigid Body Vibration and Wake-induced Vibration in Two Parallel Cylinders *Satsuki Shimojo, Hisato Matsumiya, Ikuto Murota, Kyohei Noguchi, Tomomi Yagi, Kyoto University*
	Integrating Architectural and Structural Design with Cascaded Diffusion Models: The EESD Framework *Hao Leng, Ying Zhou, Tongji University*	Finite Element Analysis on the Effect of Girder Web Stiffeners on Seismic Damper Connections in Bridges *Aoi Sawada, Keita Uemura, Yoshikazu Takahashi, Kyoto University*	A Novel Nonlocal Macro-Mesoscale Consistent Damage Model for Stochastic Fracture Analysis of Quasi-brittle Material *Jiankang Xie, Jianbing Chen, Tongji University*
	Study on Snow Accretion Shape on Structures Considering Weather Conditions and the Impact Behaviour of Snow Particles *Kentaro Haruna, Hisato Matsumiya, Kyohei Noguchi, Chiho Kajiyama, Ryuki Matsumoto, Kengo Sato, Kazuma Togashi, Tomomi Yagi, Kyoto University*	Physical Modelling and Feature Analysis of Soil Vibration Caused by Leakage in Buried Fluid-filled Pipelines *Yaohua Huang, Suzhen Li, Tongji University*	Evaluation of Crack Behavior in CFRP-Wrapped Hollow RC Columns using the Extended Finite Element Method *Yuki Hirai, Keita Uemura, Daiki Ichikawa, Yoshikazu Takahashi, Kyoto University*
	Fatigue Life Assessment of Prestressed Concrete Sleepers with Under Sleeper Pads *Nattapat Kimpitak, Chayut Ngamkhanong, Chulalongkorn University*	Analytical Solutions of Frequency Response and Parametric Analysis of Vehicle-Bridge Interaction System *Xian-Zheng Hong, Chia-Ming Chang, National Taiwan University*	Investigation into the Reinforcement of Wind Turbine Tower Foundation with Embedded Steel Ring *Ziwei Wang, Dongping Huang, Zheng Li, Tongji University*
12:30 – 14:00	LUNCH (Venue: Outside of Lecture Theater A, HKUST)		

Time	Thursday, 4 December 2025, Academic Building, HKUST			
	Track 4 Venue: 2131A	**Track 5 Venue: 2131B**	**Track 6 Venue: 2132A**	**Track 7 Venue: 2132B**
	Structural Engineering Chair: *Anqi Gu*	Transportation Engineering Chair: *Siwarak Unsiwilai*	Transportation Engineering Chair: *Sorawit Narupiti*	Transportation Engineering Chair: *Jittichai Rudjanakanoknad*
10:45 – 12:30	New Insights on Fatigue Crack Causes of Diaphragm Cutout in Orthotropic Steel Decks *Xu Jiang, Zhilin Lyu, Xuhong Qiang, Tongji University*	Hybrid Approach for Coordinated Traffic Signal Control Capturing Offset-Split Interdependency Using Average Phase Statistics *Hyunsoo Kim, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Sequence-Based Analysis and Application Strategies of Autonomous Vehicle Crash Scenarios *Yeonwoo Yu, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Spillback Mitigation through Coordinated Adaptive Signal Control in Dense Urban Networks *Ya Moen, Sorawit Narupiti, Chulalongkorn University*
	Study on Fatigue and Corrosion Performance of Fillet Welds under the Influence of Residual Stress *Daqian Cao, Xu Jiang, Xuhong Qiang, Tongji University*	Short-Term Speed Prediction on Urban Roads Using Machine Learning *Shun Lai Aung, Sorawit Narupiti, Chulalongkorn University*	Modeling and Predicting Daily Travel Patterns from GPS Trajectories: A Semantic Sequence Learning Framework *Pengxi Liu, National University of Singapore*	Multi-level Traffic Simulation for Urban Networks Using Dynamic Level Assignment for Real-World Network under an Event Condition *Sujae Jeon, Yeeun Kim, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*
	Experimental Study on Estimating Horizontal Displacement of Steel Piers Using Deflection Angles *Ryutaro Nishii, Akihiko Sato, Kunitomo Sugiura, Yasuo Kitane, Risa Matsumoto, Kyoto University*	SwinTSE: Urban Traffic State Estimation for Camera Undetected *Haechan Cho, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Temporal Knowledge Graph-Based Accident Prediction from Dashcam *Keunhee Cho, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Car-following Model for Autonomous Vehicles Under Heterogeneous Road Conditions: Integrating Road Surface Roughness and Slope Gradient *Yiyi Wang, National University of Singapore*
	Development of Low-Carbon, High-Strength, Engineered Cementitious Composites in Taiwan *Yi-Cheng Lu, Chia-Ying Chung, Wei-Hsiu Hu, National Taiwan University*	Lightweight Deep Learning Models for Pavement Condition Assessment *Jun Heng Wisely Ong, National University of Singapore*	Simulation-Based Assessment of Urban Traffic Impact from Trackless Rapid Transit *Dongheon Lee, Sujae Jeon, Pei Jia Pok, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Formally Verifying Multi-Region Perimeter Control with Neural Vector Lyapunov Certificates *Jingyuan Zhou, National University of Singapore*
	Transverse Mechanical Characterization of Full-Culm Bamboo via Edge-Bearing Test *Giorgio Armand M. Robel 1 and Elias G. Dimitrakopoulos, The Hong Kong University of Science and Technology*	Agent-Based Modeling for Equitable EV Infrastructure Planning: A Comparative Analysis of Policy Mechanisms *Pei Jia Pok, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Age-Based Subjective Evaluation of Pavement Markings Under Dry and Wet Conditions in a Simulated Darkroom Setting *Chiapei Chou, Yi Li, Shengyao Yu, Yihsiang Kao, National Taiwan University*	Multi-Agent Reinforcement Learning for Order Assignment and Payment Setting on Food-Delivery Platforms: The Implicit Algorithmic Biases *Zijian Zhao, and Sen Li, The Hong Kong University of Science and Technology*
	Dynamic Response of Piping System in Nuclear Power Plant under Aircraft Impact Conditions *Mengmeng Chen, Zhiguang Zhou, Tongji University*	Cultural Differences in Travel Risk Perception and Adaptation among International Students: A Case Study at Bangkok and Vicinity *Md Sanaullah Shamim, Kasem Choocharukul, Chulalongkorn University*	DRIFT Open Dataset: A Drone-Derived Intelligence for Traffic Analysis in Urban Environmen *Hyejin Lee, Seokjun Hong, Byeongjoon Noh, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Characteristics of Autonomous Vehicle Behaviors and Their Traffic Impacts at Signalized Intersections in Mixed Traffic Situations *Sharon Kim, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*
	Efficient Unsupervised Domain Adaptation for Crack Segmentation with Interpretable Fourier Morphology Blending and Uncertainty-Guided Self-Training *Saheli Bhattacharya, The Hong Kong University of Science and Technology*	Optimization of Modular Autonomous Electric Vehicle System with Mixed-Integer Linear Programming *Chaemin Na, Hwasoo Yeo, Korea Advanced Institute of Science and Technology*	Evaluating Safety and Efficiency in Multi-Incident Freeway Traffic with Connected and Autonomous Vehicles *Mahbub Hassan, Sorawit Narupiti, Chulalongkorn University*	Real-time Coordination of Human Couriers and Drones for On-demand Food-Delivery Platforms: A Multi-stage Risk-aware Multi-agent Reinforcement Learning Framework *Yulong Hu, and Sen Li, The Hong Kong University of Science and Technology*
12:30 – 14:00	LUNCH (Venue: Outside of Lecture Theater A, HKUST)			

Time	Thursday, 4 December 2025, Academic Building, HKUST			
	Track 1 Venue: 2130A	**Track 2 Venue: 2130B**	**Track 3 Venue: 2130C**	**Track 4 Venue: 2131A**
	Structural Engineering Chair: *Tidarut Wisuthseriwong*	Structural Engineering Chair: *Xu Jiang*	Structural Engineering Chair: *Watanachai Smittakorn*	Others Chair: *Shengjie Rui*
14:00 – 16:00	Numerical Modelling of Reinforced Concrete Columns Strengthened by External Steel Collars and Steel Bars *Thin Zar Win, Pochara Kruavit, Sawekchai Tangaramvong, Anat Ruangrassamee, Chulalongkorn University*	Simulation Analysis of an Unbonded Post-Tensioned (UPT) Wall Building with Strength Asymmetric Configurations *Anqi Gu, Yiqiu Lu, Ying Zhou, Tongji University*	Shrinkage and Cracking Behavior of UHPC with Different Steel Fiber Contents *Kan Dang, Zhiping Yu, Ying Li, Chen Xu, Tongji University*	The Efficacy of Green Bonds in Financing Large-Scale Sustainable Infrastructure Projects *Xin Li, The Hong Kong University of Science and Technology*
	Experimental Study on Corrosion Characteristics of CFRP-Bonded Steel Plate by 18-month Salt Water Immersion Test *Chihiro Fukunaga, Yasuo Kitane, Yuji Miyagawa,Kenji Fujita, Risa Matsumoto, Kunitomo Sugiura,Takahiro Matsui, Kyohei Shimozawa, Akihiko Sato, Kyoto University*	Development and Electrochemical Characterization of Carbon Black-Modified Cement-Based Electrodes for Energy Storage Application *Chun-Wei Hsu, Chiao-Jung Yu, Wen-Cheng Liao, National Taiwan University*	Effect of Viscous Damper Modeling Approaches on Seismic Response of Steel Arch Bridges *Taiju Kimbara, Keita Uemura, Yoshikazu Takahashi, Kyoto University*	Towards Automated Urban Concept Planning: A Generative AI Approach *Chulhyun Kim, Youngchul Kim. Korea Advanced Institute of Science and Technology*
	Parametric Study on Cylindrical Concrete Compression using the Continuous Surface Cap Model *Hongwon Lee, Dawon Park, Jung-Wuk Hong, Korea Advanced Institute of Science and Technology*	Substructure Model for Simulating Column and BRB Responses in a Three-Story Steel Frame under Shaking Table Tests *Pei Hua Yu, Chung-Che Chou, National Taiwan University*	Study on the Effects of GGBS and Fly Ash on Carbon Sequestration of Concrete *You-Lin Huang, Yu-Hsiang Wen, Yin-Wen Chan, National Taiwan University*	A Systematic Review of Ontology and Knowledge Graph Applications in Urban Flood Management *Pamela Anna Joya, Youngchul Kim, Korea Advanced Institute of Science and Technology*
	Influences of Rockfall Impact Angle and Rotational Velocity on Dynamic Behavior of RC Slabs *Linke Yang, Hao Wu, Liangliang Ma, Tongji University*	Bayesian MCMC Estimation for Generation of VAR Model *Sunwoo Lee, Chul-Woo Kim, Kyoto University*	Smart Control System for Enhancing Seismic Performance in the Horizontal and Vertical Vibrations of a Cabinet *Seohyun Min, Youjin Kim, Hyung-Jo Jung, Korea Advanced Institute of Science and Technology*	Numerical Evaluation of Aerodynamic Characteristics for the NACA 2412 Airfoil *Sanghoon Kim, Homin Kim, Jung-Wuk Hong, Korea Advanced Institute of Science and Technology*
	The Insufficiency of Spectral Acceleration for Estimating Friction Pendulum Bearing Displacements Compared to Instantaneous Power *Hsin-Fu Ho, Yin-Nan Huang, National Taiwan University*	Metal 3D Printing in Construction: From Fundamental Research to Pilot Applications *Xin Meng, National University of Singapore*	Experimental Study on the Effects of Discrete Fairings on Torsional Aerodynamic Vibrations of Structures *Saeri Hara, Thet Ei, Kyohei Noguchi, Hisato Matsumiya, Tomomi Yagi, Kyoto University*	IRMerg: Enhancing IMERG Infrared Precipitation Estimates with Land Surface Variables and Contributing Factors Analysis Using Explainable Machine Learning *Ho Tin Hung, Li-Pen Wang, National Taiwan University*
	Rocking Isolation Structural Systems and Devices Inspired by Shaka Pagoda and the Parthenon *Liang-Jiu Jia, Yuao Lin, Ping Xiang, Hongtai Zhang, Tongji University*	Enhancing the Accuracy of Real-Time Hybrid Simulation using Machine Learning considering Phase Lag *Ryota Tsutaba, Keita Uemura, Yoshikazu Takahashi, Kyoto University*	Experimental Study on Shrinkage Behavior of Self-Compacting Concrete with Portland Limestone Cement *Ting En Lu, Heng Yu Lai Wen Cheng Liao, National Taiwan University*	1. Designing Learning for An Undergraduate Course on Smart Cities: A Transdisciplinary Framework Integrating Relational Pedagogy and Industry Co-Teaching. 2. Bridging Academic Learning and Real-World Urban Decision-Making: Gamified Simulation as a Catalyst for Design-Thinking and Collaboration in Smart-City Pedagogy 3. The Sixth Team Member and Integrating Generative AI for Feedback and Reflection in Smart-City Studio Pedagogy. *Kevin Sze Chiang Kuang, National University of Singapore*
	Lifecycle Cost and Sustainability Analysis of Steel Building Structures *Alvin Tjahyadi, Chi-Jen Chen, Tung-Yu Wu, National Taiwan University*	Study on the Tensile Mechanical Behavior of MCL Composite Dowel Connectors *Fengyao Liu, Qingtian Su, Xinhui Wang, Tongji University*	Intelligent Strain Field Reconstruction and Crack Quantification Using High-Resolution Distributed Fiber Optic Sensing *Xuanyi Lu, Sudao He, Shenghan Zhang, The Hong Kong University of Science and Technology*	