

ROOM	E2021	E2022	E2023	E2024	E2025
	E-1 : Advancing Construction Planning & Scheduling Chair: Edmond Miresco	L-5 : Big Data, data mining, machine learning and artificial intelligence Chair: Sara Rankohi	B-5 : Building Information Modelling Chair: Conrad Boton	T-1 : Technologies and smart data management Chair: Shang-Hsien Hsieh	S-1 : Digital Twins Chair: Jenn McArthur
9:50	50 - Semi-automated Digital Planning Assistant for Frame Bridges Amelie Becker, Jakob Grave, Niels Bartels , Steffen Marx	123 - Automated Hierarchical Object Clustering for Multi-Image Documentation: A Comprehensive Image Analysis Pipeline Michael Disser SC , Maximilian Gehring, Uwe Ruppel	95 - Heritage Building Air Diffusion Performance Index: HVAC Diffuser Layout Evaluation for Heritage Building Preservation Jiaying ZHANG SC , Helen H.L. Kwok, Jack Cheng	136 - Integrating Privacy-Preserving Occupancy Estimation Using Thermal Camera with a Digital Twin Platform Benjamin Rafatian SC , Pezhman Sharafdin, Ali Motamedi	11 - A System-of-Systems Approach for Deploying Containerized Construction S- Digital Twins using Linked Data Philipp Hagedorn , Ekaterina Petrova, Markus König
10:10	97 - What Quantitative Indicators do Construction Companies Use to Manage ESG?: A Case Study in South Korea Moobin Kim , Youngcheol Kang, Wonkyoung Seo	143 - Evaluating the capabilities of machine learning surrogate modeling to support high-resolution building perform simulation and control: A Review Elin Markarian SC , Seif Qiblawi, Shivram Krishnan, Anagha Divakaran, Albert Thomas, Elie Azar	109 - Semantic Web for BIM-Based Automated Project Management and Control: A Review Asha Palihakkara SC , Carlos Osorio-Sandoval, Walid Tizani	238 - Exploring Critical Success Factors for Cloud Data Management in the South African Construction Industry Wanda Mpigana SC , Opeoluwa Akinradewo, Clinton Aigbavboa	42 - Correcting Road Image Annotations Percy Lam SC , Weiwei Chen, Lavindra De Silva, Ioannis Brilakis
10:30	100 - An Automated Vision-based Construction Efficiency Evaluation System with Recognizing Worker's Activities and Counting Effective Working Hours Chao Mao, Chaojun Zhang, Yunlong Liao, Jiayi Zhou, Huan Liu	148 - Federated Learning in Infrastructure Predictive Models: A Case Study of Utah's Culverts Pouria Mohammadi, Abbas Rashidi, Sadegh Asgari	120 - Enhancing Information Extraction from Building Standards Using Kosmos-2: A Multimodal Approach Sven Zentgraf SC , Markus König	146 - Automated Registration of Ground 3D Point Cloud Data for Individual Buildings Huaiyuan Weng, Chul Min Yeum SC , Derek Robinson, Bruce MacVicar	165 - A blockchain-enabled Urban Digital Twin: Decentralized Asset Management using City Information Modeling Oluwatoyin Lawal, Nawari Nawari, Adel Alsaffar
10:50	168-Enhancing Volumetric Modular Construction Efficiency through Integrated Project Planning and Virtual Reality Simulations Nishanth Purushotham, Smit Panchal, Ivan Mutis		282 - Using Change Orders to Measure the Impact of Building Information Modeling: A Case Study Constantine Katsanis , Conrad Boton, Gabriel Lefebvre, Carlos Bedoya	162 - Automated Stakeout Survey Solution for Earthwork Construction Projects Ming Lu, Sida Wang SC	
	E2 : Advancing Construction Planning & Scheduling Chair: Conrad Boton	L-6 : Big Data, data mining, machine learning and artificial intelligence Chair: Claudiane Ouellet-Plamondon	B-6 : Building Information Modelling Chair: Walid Tizani		
11:30	215 - An Advanced Work Packaging Inspired Ontology for Industrial Construction Projects Mohamed ElMenshawey SC , Lingzi Wu, Ulrich Hermann (Rick), Travis Zubick, Simaan AbouRizk	189 - Dimensionality Reduction in Structural Reliability Analysis I-Tung Yang SC , Jonathan Aloysius	153 - S- Digital Twins for Smart Decision Making in Facilities and Asset Management (FAM) Chady Elias, Isabelle Southern, Raja Issa		
11:50	216-Exploring the Characteristics of Effective Project Control Methods Elyar Pourrahimian, Farook Hamzeh, Simaan AbouRizk. Presenter : Mohamed ElMenshawey SC	192 - Building the Blueprint for AI-powered Compliance Checking: Analyzing ChatGPT-4 & Gemini by Question Category in Engineering Regulations Entesar Al Nama SC , Maqsood Mahmud	235 - Integrating S- Digital Twins and Web3 on the Carbon Offsetting Industry for Transparency: A New Framework Approach Ricardo Gallopp, Raja Issa		
12:10	176 - The Mechanism of Construction Workers' Intentional Unsafe Behavior: In Perspective of Theory of Planned Behavior Jeonghyeun Chae SC , Youngcheol Kang	182 - Artificial Intelligent Design Sys. for Shear Wall Structures with Large Language Model Controlling Generation and Optimization Sizhong Qin SC , Hong Guan, Wenjie Liao, Yi Gu, Zhe Zheng, Hongjing Xue, Xinzheng Lu	207 - HBIM For Historic Concrete Buildings: Benefits of Documentation and Analysis for Historic Preservation Anne Marie Sowder, Raja Issa		
	E3 : Advancing Construction Planning & Scheduling Chair: Lufan Wang	L-7 : Big Data, data mining, machine learning and artificial intelligence Chair: I-Tung Yang	B-7 : Building Information Modelling Chair: Claudiane Ouellet-Plamondon	O-1 : Structural engineering and materials modelling Chair: Kristo Mela	A1424
14:10	179 - Spatiotemporal Mapping for Buildings Construction Site Planning and Control Adel Francis , Edmond Miresco	199 - Gray-box Modeling of an Energy Recovery Ventilator using Streamed Data Neda Adimi SC , Jenn McArthur	121 - A Design Thinking approach for BIM acceptance based on use case identification in a manufacturer company Cloé Arnould SC , Erik Poirier	187 - A novel approach of layout optimization for reusable reinforced concrete walls within a predefined structural geometry Dalel Daleyev SC , Philipp Stauß, Julia Reisinger, Iva Kovacic	244-Classification of Physical Fatigue Levels in Shoveling Gravel Using Heart Rate, Electrodermal Data, and Skin Temperature Xinran Hu , Xingzhou Guo, Yunfeng Chen, Jiansong Zhang
14:30	239 - Planning the evolution of the sectors of a construction project over time with the Dynamic Location Breakdown Structure Stephane Morin-Pépin SC , Adel Francis	223 - Efficient and Rapid Optimal Chiller Loading Using a Simplified Two-Stage Algorithm Mohamed Kandil , Gary Chang, Jenn McArthur	212 - A case-study investigating the integration of ISO 19650 and OpenBIM principles Adam Yousefi , Cloé Arnould, Nathalia De Paula, Brenda Da Silva Laurindo, Megan Doume Ekale, Ivanka Iordanova, Ali Motamedi, Erik Poirier	72-Experimental investigations of a reinforced concrete beam under shear force failure for the validation of nonlinear numerical calculations with acoustic emission analysis Manuel Koob, Niklas Lingner , Dennis Bohn, Gerd Manthei, Jens Minnert	233 - A BIM-based Digital Twin for Construction Pollution Management in Building Renovation Projects Truong-An Pham, Veeraskal Likhitrungsilp , Photios G. Ioannou
14:50	245 - The Effects of Incorporating Artificial Intelligence (AI) into Lean Construction Thalya Nunes SC , Silvio Melhado	243 - Data Mining and Feature Selection in Large Hospital Central Heating Plant Marjan FatehJananloo SC , Jenn McArthur, Helen Stopps	252 - Re-modeling built asset information to improve and optimize asset management Amine Souilah SC , Erik Poirier	116-Integrating inspection data from non-destructive tests on in-service infrastructure into OpenBIM data models Mahsa Mirboland, Paul-Christian Schuler SC , Christian Koch, Mathias Artus	89 - From Concept to Reality: A Systematic Review of Digital Twin Frameworks and Their Applications in Smart Cities Hao Huang , Jin Yeu Tsou
15:10	251 - Untangling the Complexities of the Uptake of Smart Construction Sites in South Africa Matthew Ikuabe , Clinton Aigbavboa, Ntebo Ngcobo, Lerato Aghimien	254 - Autonomous Crack Segmentation based on Segment Anything Model Ghodsiyeh Rostami SC , Po-Han Chen, Yang Wang	200 - Comparative Analysis of two BIM Model Transfer Processes in Cave Automatic Virtual Environments. Ilyass latissami, Conrad Boton	144 - Using Linked Data Containers for structural inspection data: A sustainable data integration for bridge inspection tests Paul-Christian Schuler , Mahsa Mirboland, Christian Koch, Chris Voigt	90 - Enriching IFC Models with Spatial Design Logic and Parametrics to Improve Design Adaptability – the case of alignment grids Jiabin Wu , Sebastian Esser, Stavros Nousias, André Borrmann
	P-1 : Estimation and risk assessment Chair: Niels Bartels	L-8 : Big Data, data mining, machine learning and artificial intelligence Chair: Arianna Fonsati	B-8 : Building Information Modelling Chair: Constantine Katsanis	F-1 : Visualization Chair: Raymond Issa	V-2 : Virtual session Chair: Stéphane Morin-Pépin
15:50	19 - Automatic Drawing and Cost Estimations of Reinforced Concrete Structure Takashi Hara , Satoshi Nishio	257 - Near-Real-Time Steel Rust Recognition Using Transformer-Based Convolutional Neural Networks Shahinuzaman Shahinuzzaman SC , Po-Han Chen, Luh-Maan Chang	156 - A Digital Twin Platform Based on Building Information Models and Smart Sensors for a Net Zero Energy and WELL Campus- A Case Study of National Taiwan University Yun-Tsui Chang, Wei-Liang Kuo, Tzong-Hann Wu, Zhong-Lun Jeng, Ding-Heng Liu, Shang-Hsien Hsieh	21 - A Novel UAV View Planning Strategy for High Quality 3D Reconstruction of Irregular-Shaped Architecture Zhenyu Liang SC , Zhaolun Liang, Mingzhu Wang, Liu Yang, Jack Cheng	105 - Evaluating Automated Floorplan Generation: Benchmark on Residential Buildings Abdullah Elsafty SC , Timo Hartmann
16:10	184 - Automatic Construction Safety Report using Visual Question Answering and Segmentation Models Dai Quoc Tran , Yuntae Jeon, Seongwoo Son, Almo Kulinan, Changjun Lee, Seunghee Park	260 - Modelling silicon-based materials with machine learning potential Claudiane Ouellet-Plamondon , Karim Zongo, Laurent Béland French Presentation	213 - Literature review on semantic enrichment of BIM models to consider occupational health and safety requirements Feriel Moalla SC , m Feno, Tommy Messaoudi, Adriana Savesci, Gilles Halin	217 - Guidelines for Designing a Facility Management Digital Twin Dashboard Andrea Mata Celis SC , Karim El Mokhtari, Jenn McArthur	3 - Automated inspection in mechanical and electrical construction leveraging OpenVSLAM and instance segmentation Wei Wei SC , Yujie Lu, Lijian Zhong, Yufan Chen, Ruihan Bai, Yijun Lin
16:30	28 - Gamification for Immersive Hazard Identification and Safety Training in Construction Lufan Wang , Varsha Munawat, Alexander Delatour, Morgan Stewart, George Franco		234 - BIM-based Life Cycle Assessment for Integrated Energy and Seismic Retrofit of Existing Buildings Yuwadee Kulthanaphanich SC , Szu-Yun Lin	171 - A survey of Visualization techniques for Digital Twins Mahsa Paziraei SC , Ali Motamedi	258 - A Semantic Deep Classifier of Vehicle Components for Fine-grained Highway Vehicle Classification Cheng Peng SC , Yi Jiang