

Saturday - June 29, 2024

18:30 Welcome reception

Sunday - June 30, 2024

8:20 - 8:30		Opening ceremony		
8:30 - 9:20		Amin Hammad: Digital Twins in Construction and Infrastructure Management		
9:20 - 9:30		Disperse to sessions		
9:30 - 10:45		Sustainable Construction, Health & Safety: Farzad Rahimian John Smallwood: Health and Safety (H&S) Specifications: H&S Practitioners' Experiences Wenyu Zhang, Shu-Chien Hsu: Green Innovation and Carbon Reduction Efficiency: Empirical Evidence from China Christian Koch: Post Sustainability construction - concepts for regenerative building Zuzanna Woźniak, Tomasz Nowobilski, Bożena Hola: Characteristic of hazardous events in a Polish construction company using time series Zixuan Kang, Shu-Chien Hsu, Zhongnan Ye: Joint optimization of energy storage and power modulation for electric vehicle charging coordination	Creative Management: Miklós Hajdu Zoltán Sebestyén, Erdel János: Subjective vs. Objective Success in Projects: Exploring Stakeholder Perspectives Sabrina Pustal, Florian Groß, Bert Leerkamp: Challenges and opportunities of digitalization in construction logistics István Hajnal: Can housing construction be accelerated by legislation? A case study of former socialist Hungary Liuqing Zhu, Xinyan Han, Liang Ma: Exploring Key Factors Influencing Resilience in Large-Scale Infrastructure Projects Muammer Semih Sonkor, Paul Wright, Engie Mohsen, Jodie Reindorf, Borja Garcia de Soto: Survey Findings on Cybercrime and Cybersecurity Practices in the MENA	Automation and Robotics in Construction: Miroslaw Skibniewski Mario Wolf, Oliver Vogt, Detlef Gerhardt: Asset Administration Shell Integration for IoT Sensors: An Automated Process for Precast Concrete Elements Bikash Lamsal, Masata Oka, Aimal Kumar KC, Matteo Sardelli, Naofumi Matsumoto: Smartphone based Indoor localization and navigation system for non-GPS environment Jeongwoon Choi, Juhyeon Kim, Seokho Chi: Automated Construction Specifications Digitalization for Efficient Compliance Checking on Sites Juan Wang, Hanbin Luo: Collaborative robotics applications in construction: A framework for human_cobots scheduling Scott Sheenan, Faris Elghaish, Tara Brooks : A Digital Twin Framework for Predictive Maintenance Systems Promoting Net Zero Principles
10:45 - 11:15		Coffee Break		
11:15 - 12:30		Sustainable Construction, Health & Safety: Borja Garcia de Soto Scott Kelting, Gavin Beadle, Maryam Kouhi: Perceptions of Major Barriers on the LEED Scorecard Preventing Projects from Reaching the Platinum Level Mario Wolf, Jochen Teizer, Joshua Fazel, Benjamin Weber: Creation of large language model-based agent for construction safety dialogs in virtual reality Dalel Daleevy, Staus Philipp, Iva Kovacic: A Shear Wall Layout Optimization Strategy Aimed at Prioritizing ReUse and Prefabrication of Reinforced Concrete Walls Federica Madaschi, Chiara Brattoli, Federica Madaschi, Marco Lorenzo Trani : The OpenBIM standard IFC for the Building Safety File Gökçen Arslan, Aynur Kazaz: Prioritization of Barriers to Sustainability Practices in the Turkish Construction Sector	Creative Management: István Hajnal Liuqing Zhu, YunYing Yuan, Liang Ma: Seize the Initiative Proactively: Unraveling Resilience Mechanism for Mega Projects Carl Philipp Friedinger, Simon Christian Becker, Philip Sander: Probabilistic Cost Estimation for Major Construction Projects in Infrastructure Aynur Hurriyet Turkyilmaz, Gul Polat, Aysegül Gurkan: Why Construction 4.0 Technologies are not Widely Used in the Construction Industry Mariela Sjekavica, Miladen Radujkovic: Beyond the blueprint: Investigating the relationship between project managers' personality types and soft skills in construction projects Felipe Herrera, Ximena Ferrada, Claudia Valderama-Ulloa: Constructing Change: Empowering Women in Chile's Construction Industry	Automation and Robotics in Construction: Miroslaw Skibniewski Song Yinhao, Zhiqiang Ma, Liu Gang, Zeng Bo, Tan Xiao: A Comprehensive Review of the Application of Digital Twin Technology in Construction Engineering Jiajing Liu: Self-adaptive Parameters Optimization of a Physics-data Hybrid Driven Model for Surface Settlement Prediction Ali Ghelmani, Amin Hammad: DIGERv2: Single-stage simultaneous construction worker and equipment activity recognition through multi-scale path aggregation Jonathan Mattheil, Peter Bohnenkamp, Katharina Klemt-Albert: An Approach for AI-based Object Management in the Context of Public Participation Sophie Kalisch, Jan-Wo Jäkel, Katharina Klemt-Albert: Concept Development for a Rating System reflecting a Validity Index for Structural Data in Existing Bridge Structures in Germany
12:30 - 13:30		Lunch		
13:30 - 14:20		Ziga Turk: Limitations of large language models in creative engineering design		
14:20 - 14:30		Disperse to sessions		
14:30 - 15:45		Sustainable Construction, Health & Safety: Miklós Hajdu Solu Idris, Giovanni C. Migliaccio, Idris Abdulfar: Toward a Circular Built Environment: Exploring the Research Trends and Knowledge Gap Alon Urfalini, Igal M. Shohet: Integrating Maintenance into Seismic Risk Assessment: A Comprehensive Approach to Infrastructure Resilience Yuncheul Woo, Park Moonsso, Changbum Ryan Ahn: Exploring the impact of display and interaction fidelity in fire virtual environment on immersion in virtual reality environments Abroon Qazi, Charf Mohammedi, Alan O'Connor, Ali A. Karakhan, Farzad Rahimian, Ali Hassan: Enhancing Risk Response Strategy Selection in Oil and Gas Construction Projects: A Fuzzy-based Optimisation Approach Igal M. Shohet, Amos Hassan: Theory of Faults (ToF) in residential construction	Creative Management: Zoltán Sebestyén Simon Christian Becker, Carl Philipp Friedinger, Philip Sander: Criteria and List of Questions for Selecting the Project Delivery Model Aynur Hurriyet Turkyilmaz, Ayse Feride Armani Gokalp, Gul Polat: A Bibliometric Review of Disputes in The Construction Projects Dilan Durmus, Jože Rožanec, Alessandro Carbonari, Alberto Giretti, Ziga Turk, Marko Grobelnik: Potential of Large Language Models for Ontology Development in Construction Domain Negar Mansouri Asl, Amira Eltahan, Ahmed Hammad, Ahmed, Farook Hamzeh: The need for a novel perspective on project management in construction	Automation and Robotics in Construction: Zhiqiang Ma Reza Akhavan, Kunal Nandanwar : Optimizing Construction Site Surveys: BIM-Based Position Planning for Robotic Indoor Scanning Sungboon Yoon, Chaeun Lee, Sanghyun Lee, Moanseo PARK, Changbum R. Ahn: A Taxonomy of Extended Reality for Human-Robot Interaction in Construction Based on a Systematic Literature Review Nikola Spicak, Miroslaw J. Skibniewski, Svetlana Beskubova: Impact of 3D printing on meeting Construction 5.0 Anoop Sattineni, John Greenbeck, Ben Farrow: Modular construction for affordable housing in western United States: A qualitative study Lukasz Sadowski: Self-sensing mechanism of cement mixes containing spent equilibrium catalyst and graphene-based material
15:45 - 16:30		Coffee Break		
16:30 - 17:45		Sustainable Construction, Health & Safety: Miklós Hajdu Malik Khalfan, Rajesh Mahadeva: Promoting the Systematic Adoption of Circular Economy Principles in the Construction Sector: A Bibliometric Analysis of Sustainable Built Environment Practices Felipe Herrera, Claudia Valderama, Ximena Ferrada: Chronic and Metabolic Diseases in Construction Workers: A Systematic Review and Its Productivity Implication Zhongnan Ye, Xiaoyi Liu, Lebing Ying, Shu-Chien Hsu: Pioneering Carbon-Neutral Pathways in High-Strength Steel Construction: A Process-Based Life-Cycle Modeling Approach Ender Yetim, Aynur Kazaz: Investigation of Energy Efficiency in the Housing Sector within the Framework of Sustainable Building Design Hiam Khoury, Mohamad Hajj-Hassan: Energy use and Occupant Behavior: An Agent-Based Modeling Approach	Creative Management: Anoop Sattineni Mariela Sjekavica, Domagoj Knežević, Hrvoje Meštrović: Strategic Forecasting: Unleashing the Power of AI for Smart Predictions in Public Procurement of Infrastructure Projects Rita Elias Awwad, Zeina Thabet: Impact of Sustainable Construction Management on Selected Claims' Reduction Seoktae Kim, Gitaek Lee, Hwang, Jaehyun Hwang, Seokho Chi: Real-time Ground Vibration Estimation on Construction Sites Anna Stefańska, Agnieszka Chudzińska, Saurav Dixit: Microclimate-supporting solutions in urban spaces: A Central- European perspective Machi Zawidzi, Jacek Katzer: Folding Mechanisms of Selected Extremely Modular Systems	Visualization, Virtual reality, BIM and 3D printing: Zhiqiang Ma Shervin Rahnama, Wafic El Sabbagh, Fabian Edenhofner, Katharina Klemt-Albert: Exploration of VR-based training with a prototype for the installation of building-integrated photovoltaic and thermal systems Gerrit Placzek, Patrick Schwerdtner: Comparison of technical- and performance-specific properties of 3D concrete printers Xinyu Yan, Zhongnan Ye, Xiaoyi Liu, Shu-Chien Hsu: A simulation framework for estimating status of trapped occupants in residential building fires Yusuke Nishizawa, Michiru Mishima: Acquisition of tower crane operational performance using hook mounted RTK positioning and image recognition Ali Ezzeddine, Borja Garcia de Soto: Developing Simulation Models for Modular Construction using Game Engine Technology

Monday - July 1, 2024

9:00 - 9:50		Zhiqiang Ma: Specialization of Generative LLMs for Application in Construction: Taking Named Entity Recognition as Example		
9:50 - 10:00		Disperse to sessions		
10:00 - 11:15		Sustainable Construction, Health & Safety: Miklós Hajdu Ender Yetim, Aynur Kazaz: The Effect of Opaque-Transparent Surface Ratio on Building Energy Performance Gili Sherzer Lifshitz, Alon Urfalini, Shani Moyal, Igal M. Shohet: Assessing Seismic Risks and Cost-Effective Strategies for Continuous Operation of Critical Infrastructure Reem Zeibak Shini, Hafej Maharabani, Kun-Chi Wang, Igal M. Shohet: Root factors and effective mitigation methods for construction safety: an analytical empirical model Fadi Shahin, Nadav Fisher, Kun-Chi Wang, Igal M. Shohet: Safety Climate in Large Construction Enterprises Gal Shany, David Ormai, Igal M. Shohet and Robert Levy: Risk Analysis and Assessment Methodology of Underground Critical Infrastructures Exposed to Munitions Hits	Creative Management: Saurav Dixit Lauren Redden, Richard Burt, Liam O'Daniel: Diversity and Inclusion in U.S. Construction Industry: An Analysis of Website Branding Zhiyuan Guo, Hanbin Luo, Weiya Chen, Yue Kong: Ontology-based survey knowledge modeling to support the renovation of historical buildings Fengyi Guo, Fu Shuang, Sun Jun: Multi-modal Knowledge Graph-Based Question Answering System for High-Rise Building Construction Technologies Jing Yang: Smart Trading Method Using BIM and Blockchain Technology for Procurement of Prefabricated Components Efraim Ljung, Mikael Viklund Tallgren : The Significance of Work Preparation Planning for A Predictable Execution	
11:15 - 11:45		Coffee Break		
11:45 - 13:00		Sustainable Construction, Health & Safety: Miklós Hajdu Saurav Dixit, Anna Stefańska, Dhruv Chaudhry, Subhav Singh, Bhviraj Suthar, Priyanka Singh: A Review of Decarbonization Strategies in the Construction Sector: Building a Sustainable Future Zihan Liu, Wenli Liu, Yongping Di : Application of DNN and HEC-RAS model for pollutant dispersion patterns in rivers Farzad Rahimian, Nazarin Moazzen, Touraj Ashrafian: Evaluating the life cycle environmental impact of cement based materials in residential construction John Smallwood, Peter Dobson : The Performance of Key Stakeholders relative to Construction Health and Safety in South Africa Lauren Redden, Brian Brandt: Mental Health and Stress Management of Construction Professionals Lauren Redden, Brian Brandt	Creative Management: Ziga Turk Mark Tatum, Junshan Liu: Applications of Unmanned Aerial Vehicles in Construction With a Case Study on Levee Inspection Mahmoud Elshamy, Faris Elghaish, Tara Brooks: Analyzing pre-construction risk factors in Gulf region: An industrial qualitative perspective Saurav Dixit, Vishal Francis, Anna Stefańska, Subhav Singh: Circular Economy and Sustainability Aspects of 3D Printed Parts: Challenges, Opportunities and Barriers Jan-wo Jaekel, Eva Heinlein, Katharina Klemt-Albert: Formalisation of knowledge on non-destructive inspection methods for bridge structures through the development of the SODIA ontology Agnieszka Chudzińska, Przemyslaw Kielb, Anna Stefańska, Saurav Dixit and Radoslaw Achramowicz: Pandemic covid-19 as a lesson for war field hospitals: an analysis of three architectural cases	
13:00 - 14:15		Lunch		
14:15 - 14:20		Disperse to sessions		
14:20 - 15:35		Creative Construction Technology and Materials: Zoltán Sebestyén Yifan Lu, Weili Fang, Hanbin Luo: Knowledge-Driven Adversarial Attacks on Deep-Neural-Network-Based Tunneling-Induced Ground Settlement Prediction Models and Its Defense Ruben Vrijhoef: Control tower approach to improve urban construction logistics Peter Niemczak, Anna Stefańska, Eugeniusz Koda: Smarter cities and the key to net zero emissions Christian Koch: Prolonging the life-time of New Deal bridges Reza Maalek, Mustafa Al-Salih: Terrestrial Laser Scanner Location and Path Planning on Construction Projects	Visualization, Virtual reality, BIM and 3D printing: Zhiqiang Ma Charf Mohammedi, M.K.S. Al-Mhdawi, Xiaqun Luo, Farzad Pour Rahimian: Towards the Creation of BIM-based Decision Support System to Assist Designers to Design-Out Brownfield Site Hazards Taeheon Kim, Juho Han, Seben Yoon, Mingyun Kang, Sanghyeon Na: Approach for improving panoramic image segmentation quality on construction sites using SAM Na Wang, Yujie Lu, Ruihan Bai, Jianyu Wang, Wei Wei: Efficiency improvement of blurring construction panoramic inspection based on improved NAFNet Ziga Turk, Sara Dotta: Surveying BIM's impact on Education Samuel Adekunle, Clinton Aigbavboa, Andrew Ebekozien, Shola Akinshipe, Babatunde Ogunbayo: The missing puzzles for Macro BIM diffusion in South Africa	
15:35 - 16:15		Coffee Break		
16:15 - 17:15		Creative Scheduling: Miklós Hajdu Ahmad Hadavi, Sepheh Alizadehsalehi: Integrating the Last Planner System and Metaverse Adel Francis: Develop artifacts to automate and optimize construction schedules for multi-storey buildings using a spatio-temporal model Israel Mariana Clavel, Laura Florez-Perez, Carlos Galera Zarc: Automating construction scheduling data through BIM models, machine learning, WBS, and resource constraints applied to bridge construction		
19:00 - 23:00		Conference dinner		

Tuesday - July 2, 2024

9:00 - 16:00		Excursion+ Lunch		
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