



TIME ZONE CONVERSION TABLE

		Sessions 1, 3, 5				Sessions 2, 4, 6				
CEST Central European Summer Time	0	08	09	10	11	05	06	07	08	
		AM	AM	AM	AM	PM	PM	PM	PM	
AMERICAS	Los Angeles PDT	-9	11	12	01	02	08	09	10	11
			PM	AM	AM	AM	AM	AM	AM	AM
	Houston CDT	-7	01	02	03	04	10	11	12	01
			AM	AM	AM	AM	AM	AM	PM	PM
Miami EDT	-6	02	03	04	05	11	12	01	02	
		AM	AM	AM	AM	AM	PM	PM	PM	
São Paulo GMT-3	-5	03	04	05	06	12	01	02	03	
		AM	AM	AM	AM	PM	PM	PM	PM	
EUROPE	London BST	-1	07	08	09	10	04	05	06	07
			AM	AM	AM	AM	PM	PM	PM	PM
Berlin CEST	0	08	09	10	11	05	06	07	08	
		AM	AM	AM	AM	PM	PM	PM	PM	
ASIA-PACIFIC	Dubai GMT+4	+2	10	11	12	01	07	08	09	10
			AM	AM	PM	PM	PM	PM	PM	PM
	Beijing CST	+6	02	03	04	05	11	12	01	02
			PM	PM	PM	PM	PM	AM	AM	AM
	Tokyo JST	+7	03	04	05	06	12	01	02	03
		PM	PM	PM	PM	AM	AM	AM	AM	
Sydney AEST	+8	04	05	06	07	01	02	03	04	
		PM	PM	PM	PM	AM	AM	AM	AM	
Auckland NZST	+10	06	07	08	09	03	04	05	06	
		PM	PM	PM	PM	AM	AM	AM	AM	



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GENERAL INSTRUCTIONS FOR ATTENDING

- Technical sessions **will be streamed live** on the conference channels on YouTube.
 - There are two YouTube channels, **one for each parallel Live Session A and B**;
 - Only questions posted on **YouTube chat** during streaming will be answered by authors on the respective live Q&A slot;
 - Sessions **1, 3 and 5** are time zone friendly for **Europe and Asia-Pacific**;
 - Sessions **2, 4 and 6** are time zone friendly for **Americas and Europe**.
- Technical sessions **will be recorded** and made available for later viewing.
- By registering on the virtual conference system (free) you will have access to:
 - Full conference program along with **title, authors, abstract** and **keywords** for each paper of each session;
 - Links to **full papers**, both from the 37th CIB-W78 and the 18th ICCCBE (only the links in the conference system allows **free** download of papers from Springer, for a limited time);
 - Links to Conference channels for **technical sessions live streaming** on YouTube;
 - **Discussion forums** for each technical session to post your questions to paper authors, before or after the live session.

Registration:

- Go to <http://moodle.pcc.usp.br/course/view.php?id=16>
- Create an account on the system ([first time here? link](#))
- Confirm e-mail address with the confirmation link sent to you
- You should “enrol” in the “course” ICCCBE/CIB W78 2020 Virtual Joint Conference (Miscellanea category).
 - Use the Enrolment Key: **ICCCBE+W78**
- Check session times on the program and enjoy the conference!



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FINAL CONFERENCE PROGRAM

(all times are CEST/UTC+2)

Note: This document has the final, updated YouTube direct links. Any other previously announced links are outdated.



CHANNEL A: <https://www.youtube.com/channel/UC-QH2J9QN6RFdsbF3VyR-Jg/>

CHANNEL B: <https://www.youtube.com/channel/UCI84itWNIhzGGOuzO1DOozA/>

Recorded	YouTube Channel A: https://youtu.be/MEXvHmHMSM
Opening Session	
	Sergio Scheer (Conference Co-chair) Eduardo Toledo (Conference Chair) Raymond Issa (ISCCBE President) Robert Amor / Jakob Beetz (CIB W78 Coordinator) Vahan Agopyan (University of São Paulo Rector)

20 August 7:30 PM	YouTube Channel A: https://youtu.be/2-SIBU0Ovm8
Closing Session	
	Sergio Scheer (Conference Co-chair) Eduardo Toledo (Conference Chair) Robert Amor / Jakob Beetz (CIB W78 Coordinators) Raymond Issa (ISCCBE President) Sylvain Kubicki (Next conference Chair - CIB W78 2021) Sebastian Skatulla (Next conference Chair – ICCBE 2022)




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KEYNOTE PRESENTATIONS

18 August 7:00 PM	YouTube Channel A: https://youtu.be/kW8OIUGOlyA
Keynote session 1	Mani Golparvar-Fard University of Illinois at Urbana-Champaign
	<p>ABC of Construction: Artificial Intelligence and Digital Twins (BIM + Computer Vision) for proactive project controls on construction projects</p> <p>This talk presents the underlying theories and methods of a new visual production management system that easily and quickly captures, communicates and analyzes actual and potential performance problems during construction. To ensure its implementation does not take away from actual productivity, this system extends the value of 4D (3D+time) Building Information Models (BIM) -commonly used for constructability review- as a benchmark for performance. Likewise, it takes advantage from images and videos frequently collected by project participants or professional services via smartphones, 360 cameras or drone cameras to visually document actual performance. These images and videos are used together with new computer vision and learning algorithms to continuously map the current state of production in 3D and then 4D. The 4D point clouds and their associated images and videos are integrated and compared continuously and automatically with the 4D BIM in a Digital Twin environment to expose actual waste and highlight potential issues by forecasting reliability in project look-ahead schedules.</p>




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19 August 7:10 PM	YouTube Channel A: https://youtu.be/qfZFIGWBm_M
Keynote session 2	Timo Hartmann Technical University of Berlin
	Digitizing Building Renovation Projects <p>Most of the existing building stock has reached the age for renovation: in Europe 90% of the total stock was built before 1990 and over 75% of the total floor area of the existing stock can be attributed to residential buildings. Despite the pressing need, the required renovation of building stocks is slow. In Europe, only 2% of the existing building stock is renovated yearly. Even worse, many conducted renovations do little to improve the energy efficiency of our building stock. Digitizing the building renovation life-cycle might be key in accelerating the renovation rate and increasing the quality of conducted renovations, but decision making, information requirements and digital processes for renovation are quite different from those for new construction. This talk discusses the specific requirements for digital tools for supporting the life-cycle of renovation projects. In particular, it will provide insights about how to best establish, calibrate, and maintain digital twins of existing buildings that can support renovation projects, discuss level of detail (LOD) requirements for information, not only for digital twin models, but also BIM design models, to support the life-cycle of renovation projects, and suggests ontologies for formalizing required knowledge for different stakeholders that need to be involved on renovation projects.</p>



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20 August 10:00 AM	YouTube Channel A: https://youtu.be/TWe0YGkcYbo
Keynote session 3	Bilal Succar ChangeAgents / BIME Initiative
	<p>Facilitating digital transformation through a common knowledge sharing model and an international community effort</p> <p>The digitalisation of the Construction Industry requires new conceptual constructs to frame emerging practices and facilitate process innovation. While numerous standards, guides and protocols are released on a near-daily basis, these tend to deliver either closed, localised, top-down, or pre-processed offerings from established institutions. An alternative approach to these offerings would be to make available open, international, bottom-up, and customisable knowledge structures for experts to formulate into their own custom solutions. While such an alternative is better able to respond to rapid digital transformation across markets, it requires unifying conceptual foundations and consorted efforts by loosely organised specialists. Starting in 2009 as an individual undertaking and extending in 2020 to include more than 130 volunteers from 40 countries, the Building Information Modelling Excellence Initiative (BIME Initiative) is a research-based, community-driven alternative to prescriptive top-down offerings. The BIME Initiative builds-upon clear conceptual constructs to deliver an extensible modular language and open-access knowledge management platform. The constructs are organised into five Knowledge Sets derived from the Conceptual BIM Ontology: (1) Knowledge Foundations representing the peer-review research underlying all deliverables - frameworks, models, taxonomies, classifications, ontologies, and dictionaries; (2) Knowledge Blocks representing the language needed to define inputs, processes and outputs in modular reusable fashion; (3) Knowledge Tools representing the digital modules and templates needed to conduct assessment, learning, and performance improvement activities; (4) Knowledge Workflows representing the processes and procedures necessary to capture, organise, and share knowledge; and (5) Knowledge Views representing the varied media – e.g. peer-reviewed papers, videos, and social media posts - to communicate research activities and its deliverables.</p>



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18 August, 2020

Session Live 1A

YouTube Channel A:

<https://youtu.be/h8Ux1zehMzY>

Start time	Theme	Session Chair	
8:00 AM CEST	Artificial Intelligence Applied to the Built Environment	Fabiano R. Corrêa	
ID	Time	Paper Title	Presenter
1A.1	8:00 AM	Classification of the Requirement Sentences of the US DOT Standard Specification Using Deep Learning Algorithms	Kahyun Jeon
1A.2	8:08 AM	Enriched and Discriminative Human Features for Person Re-identification based on Explainable Behaviors of Convolutional Neural Networks	Peter Kok-Yiu Wong
1A.3	8:16 AM	Artificial Intelligence Techniques for Smart City Applications	Daniel Luckey
1A.4	8:24 AM	Surface Scratch Detection of Monolithic Glass Panel Using Deep Learning Techniques	Zhufeng Pan
-	8:32 AM	Q&A (papers 1A.1 to 1A.4)	
1A.5	8:44 AM	Assessment of Effect of Strain Amplitude and Strain Ratio on Energy Dissipation using Machine Learning	Jamal A. Abdalla
1A.6	8:52 AM	An interview-based method for extracting knowledge of skilled workers at construction sites using photographs and deep learning	Yuichi Yashiro
1A.7	9:00 AM	Automating the generation of 3D multiple pipe layout design using BIM and heuristic search method	Jyoti singh
1A.8	9:08 AM	Building a Next Generation AI Platform for AEC: A review and research challenges	Zihao Wang
1A.9	9:16 AM	Deep Neural Networks for Drone View Localization and Mapping in GPS-Denied Environments	Yalong Pi
-	9:24 AM	Q&A (papers 1A.5 to 1A.9)	
-	9:39 AM	Session End	



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Session Live 1B



YouTube Channel B:

<https://youtu.be/pBamLm0BOYY> (changed)

Start time	Themes		Session Chair
8:00 AM CEST	Rule-based Systems Applications BIM and IoT Frameworks and Applications Blockchain Applications for AEC		Jack C. P. Cheng
ID	Time	Paper Title	Presenter
1B.1	8:00 AM	The Relationship between Requirements Subjectivity and Semantics for Healthcare Design Support Systems	Joao Soliman-Junior
1B.2	8:08 AM	Rule-based Semantic Validation for Standardized Linked Building Models	Philipp Hagedorn
1B.3	8:16 AM	BIM and Automation of Building Operations in Japan: Observations on the State-of-the-Art in Research and Its Orientation	Jeferson Shin-Iti Shigaki
1B.4	8:24 AM	Digital Twins in Architecture, Engineering, Construction & Operations. A brief review & analysis	Ramy Alsehrayw
1B.5	8:32 AM	Using Blockchain technology to implement Peer-to-Peer Network in Construction Industry	Meiling Shi
1B.6	8:40 AM	A Secure and Distributed Construction Document Management System Using Blockchain	Moumita Das
-	8:48 AM	Q&A (papers 1B.1 to 1B.6)	
-	9:06 AM	Session End	



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Session Live 2A



YouTube Channel A:

<https://youtu.be/LPKJe8BI3IM>

Start time		Themes	Session Chair
5:00 PM CEST		BIM-enabled Design Tools, Information Management and Collaborative Environments	Edmond Miresco
ID	Time	Paper Title	Presenter
2A.1	5:00 PM	Value Diversity as a Driver for Renovation Design Support: A clustering-based approach to accelerate the exploration of design space	Aliakbar Kamari
2A.2	5:08 PM	Collaborative Workflows and Version Control through Open-Source and Distributed Common Data Environment	Paul Poinet
2A.3	5:16 PM	Discrete-Event Simulation and Building Information Modelling Based Animation of Construction Activities	Carlos Arturo Osorio-Sandoval
2A.4	5:24 PM	Using BIM and GIS Interoperability to Create CIM Model for USW Collection Analysis	Carolina Yosino
2A.5	5:32 PM	BIM-GIS Implementation for Rebuilding After Disaster: A Critical Evaluation	Lucky Pratama
-	5:40 PM	Q&A (papers 2A.1 to 2A.5)	
2A.6	5:55 PM	Towards a BIM-based Decision Support System for Integrating Whole Life Cost Estimation into Design Development	Mariangela Zanni
2A.7	6:03 PM	A Knowledge-based Model for Constructability Assessment for Buildings Design using BIM	Abdelaziz Fadoul
2A.8	6:11 PM	BIM to develop integrated, incremental and multiscale methods to grasp comfort and quality of public spaces	Thibaut Delval
2A.9	6:19 PM	Augmented BIM workflow for structural design through data visualization	Luiza Boechat
2A.10	6:27 PM	People, Process, Technology in Construction 4.0 - Balancing knowledge, distrust and motivations	Pedro Mêda
2A.11	6:35 PM	Project management after the BIM introduction: paradigm shift or reiteration?	Raissa Freitas
-	6:43 PM	Q&A (papers 2A.6 to 2A.11)	
-	7:00 PM	Session End	



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Session Live 2B



YouTube Channel B:

<https://youtu.be/Ptj9Vhtoq1Y>

Start time	Theme		Session Chair
5:00 PM CEST	BIM Implementation, Current Status and Practice		Dayana Bastos Costa
ID	Time	Paper Title	Presenter
2B.1	5:00 PM	An Investigation of Contractual Requirements for BIM Adoption in the Brazilian Public Sector	Douglas Malheiro de Brito
2B.2	5:08 PM	A practice-based conceptual model on Building Information Modelling (BIM) benefits realisation	Thayla Zomer
2B.3	5:16 PM	Germany's governmental BIM initiative – The BIM4INFRA2020 project	André Borrmann
2B.4	5:24 PM	An IFC representation for process-based cost modeling	Eduardo Luís Isatto
2B.5	5:32 PM	Improving the Design Process Quality using BIM: a case study	Luiz Fernando Domingues
-	5:40 PM	Q&A (papers 2B.1 to 2B.5)	
2B.6	5:55 PM	BIM in Latin American countries: an analysis of regulation evolution	Fernanda Machado
2B.7	6:03 PM	An Approach for Data Extraction, Validation and Correction Using Geometrical Algorithms and Model View Definitions on Building Models	Johan Luttun
2B.8	6:11 PM	Challenges of District Information Modeling (DIM) Applied for Heritage Preservation	Eloisa Dezen-Kempter
2B.9	6:19 PM	Management Procedure for Sensitive Projects in the Context of a BIM Adoption in a Public Organization	Giuseppe Miceli Junior
-	6:27 PM	Q&A (papers 2B.6 to 2A.9)	
-	6:39 PM	Session End	



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Session Live 3A



YouTube Channel A:

https://youtu.be/orHEGn8_4c

Start time	Themes	Session Chair	
8:00 AM CEST	Vision and Image-Based Applications in Construction Unmanned Aerial Systems (UAS) Applications in Construction Virtual Reality for AEC	Robin Drogemuller	
ID	Time	Paper Title	Presenter
3A.1	8:00 AM	A real-time automated approach for ensuring proper use of Personal Protective Equipment (PPE) in construction site	Shi Chen
3A.2	8:08 AM	Image Sensing-based In-building Human Demand Estimation for Installation of Automated External Defibrillators	Wen-Xin Qiu
3A.3	8:16 AM	Vision-based pavement marking detection – A case study	Shuyuan Xu
3A.4	8:24 AM	Vision-based Pose Forecasting of Construction Equipment for Monitoring Construction Site Safety	Han Luo
-	8:32 AM	Q&A (papers 3A.1 to 3A.4)	
3A.5	8:44 AM	Integrating UAV tilt photogrammetry and terrestrial laser scanning for three-dimensional geometrical modeling of post-earthquake county of Beichuan	Xiaoxi Chen
3A.6	8:52 AM	Scenario simulation of indoor post-earthquake fire rescue based on building information model and virtual reality	Xinzheng Lu
3A.7	9:00 AM	Design principles affecting motivational and cognitive requirements for VR learning environments in engineering education	Judith Krischler
3A.8	9:08 AM	Integrated Application of BIM and eXtended Reality Technology: A Review, Classification and Outlook	Shaoze Wu
3A.9	9:16 AM	BIM-GIS Integration in HoloLens	Ralph Tayeh
-	9:24 AM	Q&A (papers 3A.5 to 3A.9)	
-	9:39 AM	Session End	



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Session Live 3B



YouTube Channel B:

<https://youtu.be/JZM2rKbMQg>

Start time	Themes		Session Chair
8:00 AM CEST	BIM-Enabled Design Tools, Information Management and Collaborative Environments Simulation, Parametric Modelling and Other Technologies for Innovation in AEC		Ricardo Codinhoto
ID	Time	Paper Title	Presenter
3B.1	8:00 AM	Information Management in AEC Projects: A Study of Applied Research Approaches	David Fürstenberg
3B.2	8:08 AM	Qualitative and Traceable Calculations for Building Codes	Beidi Li
3B.3	8:16 AM	Semantic Web and Linked Data for Information Exchange between the Building and Manufacturing Industries: a literature review	Rehel Zeleke
3B.4	8:24 AM	Classifying IFC Entities by Their Relative Importance for accurate Interoperability Measurement	Joseph Jabin
3B.5	8:32 AM	Validation and Inference of Geometrical Relationships in IFC	Thomas Krijnen
3B.6	8:40 AM	A 4D BIM System Architecture for the Semantic Web	Calin Boje
	8:48 AM	Q&A (papers 3B.1 to 3B.6)	
3B.7	9:06 AM	Analysis of Whole Building Life Cycle Environmental Impact Assessment (EIA) Tools	Thais Sartori
3B.8	9:14 AM	Framework Proposal for a BIM-based Digital Platform for Flexible Design and Optimization of Industrial Buildings for Industry 4.0	Julia Reisinger
3B.9	9:22 AM	From Forecasting to Real-Time Process Controlling with Continuous Simulation Model Updates	Yara Salloum
3B.10	9:30 AM	An openBIM based data mapping methodology towards structural analysis using FEM	Fangzheng Lin
3B.11	9:38 AM	Real-time Evaluation of Room Acoustics using IFC-based Virtual Reality and Auralization Engines	Kjeld Svidt
3B.12	9:46 AM	A Participative Framework Covering Urban Planning Process with a Parametric Approach	Elie Daher
-	9:54 AM	Q&A (papers 3B.7 to 3B.12)	
-	10:12 AM	Session End	



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Session Live 4A



YouTube Channel A:

<https://youtu.be/J6M4bi-BIE0>

Start time	Themes		Session Chair
5:00 PM CEST	BIM for Planning and Cost Estimating BIM for Infrastructure Projects		Eduardo Luis Isatto
ID	Time	Paper Title	Presenter
4A.1	5:00 PM	Strategic Planning of Work and the Use of 4D BIM for Multiple Floor Buildings	Luiz Reynaldo de Azevedo Cardoso
4A.2	5:08 PM	Conceptual Framework for Integrating Cost Estimating and Scheduling with BIM	Mírian Caroline Farias Santos
4A.3	5:16 PM	SINAPI and CPOS review proposal to effective BIM incorporation of these measurement criteria in public works	Sérgio Leal Ferreira
4A.4	5:24 PM	Time-Cost Trade-Off Optimization Incorporating Accident Risks in Project Planning	Ming Lu
4A.5	5:32 PM	A metaheuristic procedure combined with 4D simulation as an alternative for the scheduling process of housing complexes	Pedro Bezerra
	5:40 PM	Q&A (papers 4A.1 to 4A.5)	
4A.6	5:55 PM	BIM support in the tendering phase of infrastructure projects	Stefania Limp Muniz Correa
4A.7	6:03 PM	BIM component library for subway public works	Sarah Nunes
4A.8	6:11 PM	BIM in the pre-construction phase: an infrastructure project case study	Aline Valverde Arrotéia
4A.9	6:19 PM	Whole Life Cycle Construction Information Flow using Semantic Web Technologies: a case for infrastructure projects	Yasir Alani
4A.10	6:27 PM	Recommendations to BIM Approach for a Brazilian Infrastructure Contractor	Flavia de Souza
4A.11	6:35 PM	Study of Building Information Modeling Implementation on Railway Infrastructure	Ali Aryo Bawono
4A.12	6:43 PM	Strategy for Defining an Interoperability Layer for Linear Infrastructure	Robin Drogemuller
-	6:51 PM	Q&A (papers 4A.6 to 4A.12)	
-	7:10 PM	Session End	



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Session Live 4B



YouTube Channel B:

<https://youtu.be/xD3ZEgYmClk>

Start time		Themes	Session Chair
5:00 PM CEST		BIM on the Operation and Maintenance Phase / Facilities Management Artificial Intelligence Applied to the Built Environment Rule-Based Systems Applications	Nawari Nawari
ID	Time	Paper Title	Presenter
4B.1	5:00 PM	Extracting bridge components from a laser scanning point cloud	Linh Truong-Hong
4B.2	5:08 PM	Scan to BIM for the Semi-Automated Generation of a Material Passport for an Existing Building	Meliha Honic
4B.3	5:16 PM	Optimization of a User-Involved Floor Layout Recommendation System at the Operation Stage	Junhan Wen
4B.4	5:24 PM	BIM and AM to manage critical and relevant water & wastewater utilities assets	Wagner Oliveira de Carvalho
4B.5	5:32 PM	Impact of COBie on Design Activities	Daibee Bose
4B.6	5:40 PM	Automating BIM Objects Quantity Take-Off for Lifecycle Costing of Cleaning Operations	Adam Piaskowski
-	5:48 PM	Q&A (papers 4B.1 to 4B.6)	
4B.7	6:06 PM	Machine Learning for Whole-Building Life Cycle Assessment: a systematic literature review	Natália Nakamura Barros
4B.8	6:14 PM	Advanced BIM platform based on spoken dialogue for end-user	Sangyun Shin
4B.9	6:22 PM	Automatic Generation of Architectural Layouts using Genetic Algorithms in BIM	Garbo Zhu
4B.10	6:30 PM	Analysis of urban legislation of engineering projects using Building Information Modeling (BIM) with the aid of graphic programming	Victor Igor Barros Farias
4B.11	6:38 PM	Virtual Permitting Framework for Off-site Construction Case Study: A Case Study of the State of Florida	Mouloud Messaoudi
4B.12	6:46 PM	Converting Brazilian Accessibility Standard for BIM-based Code Checking using RASE and SMC	Eduardo Alves de Mendonça
-	6:54 PM	Q&A (papers 4A.7 to 4A.12)	
-	7:10 PM	Session End	



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Session Live 5A



YouTube Channel A:

<https://youtu.be/RerTrI6ZSpQ>

Start time	Themes		Session Chair
8:00 AM CEST	BIM for Planning and Cost Estimating BIM for Infrastructure Projects BIM on the Operation and Maintenance Phase / Facilities Management Information Technologies Applications on the Construction Site		Shang-Hsieh Hsien
ID	Time	Paper Title	Presenter
5A.1	8:00 AM	Development of BIM-based 4D simulation system for construction schedule planning	Fumio Hatori
5A.2	8:08 AM	Digital Twinning Construction Objects: Lessons Learned from Pose Estimation Methods	Fan Xue
5A.3	8:16 AM	Implementation, Performance and Waste Management Analysis of Decentralized Wastewater Treatment Systems using BIM technology	Matheus Alves Dariva
5A.4	8:24 AM	Integrated Platform for Interactive and Collaborative Exploration of Tunnel Alignments	Marcel Stepien
5A.5	8:32 AM	Exploring the development of a BIM-Enabled Processo Framework for the LCA of Rail Tracks	Anderson Akponeware
-	8:40 AM	Q&A (papers 5A.1 to 5A.5)	
5A.6	8:55 AM	A framework for utilization of occupants' trajectory data to enhance building management	Hsu Shun-Hsiang
5A.7	9:03 AM	3D Reverse Geometrical Modeling and Building Information Modeling of Historic Buildings	Ruilin Wang
5A.8	9:11 AM	Digital Situation Picture in Construction – Case of Prefabricated Structural Elements	Rita Lavikka
5A.9	9:19 AM	Construction Field Management Using a Popular Text Messenger	Jehyun Cho
5A.10	9:27 AM	Trends of research and development on construction robotics considering the supporting technologies and successful applications	Shiyao Cai
5A.11	9:35 AM	Study of IMU Installation Position for Posture Estimation of Excavators	Jingyuan, Tang
-	9:43 AM	Q&A (papers 5A.6 to 5A.11)	
-	10:00 AM	Session End	



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Session Live 6A



YouTube Channel A:

<https://youtu.be/bp52MjdvA0>

Start time	Themes		Session Chair
5:00 PM CEST	BIM and IoT Frameworks and Applications Unmanned Aerial Systems (UAS) Applications in Construction IT Applications at the Construction Site		Mohamad Kassem
ID	Time	Paper Title	Presenter
6A.1	5:00 PM	Conceptual framework for tracking metallic formworks on construction sites using IoT, RFID and BIM technologies	Caroline Silva Araújo
6A.2	5:08 PM	An ontology-based mediation framework for integrating federated sources of BIM and IoT data	Mehrzad Shahinmoghadam
6A.3	5:16 PM	BIM, IoT and MR Integration Applied on Risk Maps for Construction	Paula Mota
6A.4	5:24 PM	Unmanned Aerial Vehicles and Digital Image Processing with deep learning for the detection of pathological manifestations on facades	Ramiro Daniel Ballesteros Ruiz
6A.5	5:32 PM	Using UAS for Roofs Structure Inspections at Post-Occupational Residential Buildings	Bruno Falcón Silveira
6A.6	5:40 PM	Multi-scale flight path planning for UAS building inspection	Paul Debus
	6:28 PM	Q&A (papers 6A.1 to 6A.6)	
6A.7	6:31 PM	Dynamic Crane Workspace Update for Collision Avoidance During Blind Lift Operations	Leon Price
6A.8	6:39 PM	Installing Reinforcement Rebars Using Virtual Reality and 4D Visualization	Martina Mellenthin Filardo
6A.9	6:47 PM	BIM-based concrete printing	Patricia Peralta
6A.10	6:55 PM	Field BIM: Establishing a Requirements Framework for Mobile BIM Technologies	Benjamin Jowett
6A.11	7:03 PM	Improving Site Access Verification and Operator Safety in Smart and Sustainable Cities: a pilot study in a UK decarbonisation project	James Wakefield
-	7:11 PM	Q&A (papers 6A.7 to 6A.11)	
-	7:26 PM	Session End	



ICCCBE/CIB W78 Virtual Joint Conference

18-20 August, 2020

<http://www.pcc.usp.br/icccbe-w78-2020>

20 August, 2020

Session Live 6B



YouTube Channel B:

<https://youtu.be/6okTuUwhQpY>

Start time	Themes		Session Chair
5:00 PM CEST	Blockchain Applications for AEC Simulation, Parametric Modelling and other Technologies for Innovation in AEC		Sergio Scheer
ID	Time	Paper Title	Presenter
6B.1	5:00 PM	Blockchain Technologies: Hyperledger Fabric in BIM Work Processes	Nawari Nawari
6B.2	5:08 PM	A Proposed Framework for Blockchain and Smart Contract-Based Automation of Maintenance and Repairs During Operation of Built Assets	Jennifer Li
6B.3	5:16 PM	Framework for Automated Billing in the Construction Industry using BIM and Smart Contracts	Xuling Ye
6B.4	5:24 PM	The influence of wall boundary modeling on the unphysical frictional loss inside horizontal main drain	Lucas Soares Pereira
6B.5	5:32 PM	An overview of state-of-the-art technologies for data-driven construction	Junghoon Woo
6B.6	5:40 PM	Intelligent control of noise and vibrations in building	Walid Larbi
	5:48 PM	Q&A (papers 6A.1 to 6A.6)	
6B.7	6:06 PM	Constructechs: knowledge systematization and case studies	Micheli Tomaz Vasconcelos Fialho
6B.8	6:14 PM	Quantifying Resource Inter-activity Utilization Efficiency Through Simulation-Based Scheduling	Leila Zahedi
6B.9	6:22 PM	Evaluation of Multi-Skilled Labor in an Off-site Construction Facility using Computer Simulation	Beda Barkokebas
6B.10	6:30 PM	BAS data streaming for smart building analytics	Jenn McArthur
6B.11	6:38 PM	Semantic enrichment of association rules discovered in operational building data	Ekaterina Petrova
6B.12	6:46 PM	A Real-time Approach to Evaluate Occupants' Thermal Comfort in the Indoor Environment	Mustafa Al-adhami
-	6:54 PM	Q&A (papers 6B.7 to 6B.12)	
-	7:12 PM	Session End	