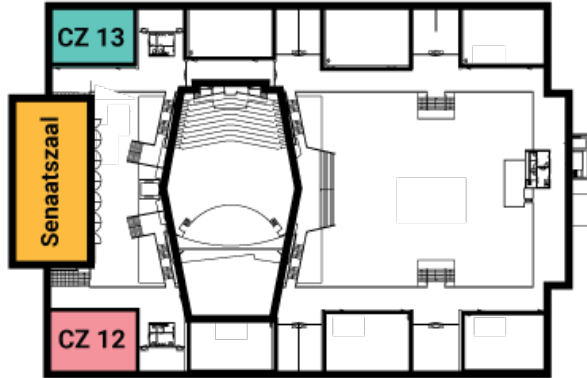


Program of the CIB W78 conference 2015



Left:

Simplified floorplan of the TU/e Main Lecture hall "Auditorium" (on campus location see here ([venue.html](#))) showing the rooms where the sessions will be located.

- Collegezaal 12 (CZ 12, pink), location of all sessions in the first column
- Collegezaal 13 (CZ 12, teal), location of all sessions in the second column
- Senaatszaal (yellow), location of all sessions in the third column as well as all plenary events
- Lunch and coffee breaks will be had in the atrium adjacent to these three

Friday, Oct. 23rd- Oct. 25th



AEC Hackathon.nl (<http://www.aechackathon.nl/>)

Monday, October 26th

8:30 - 9:00 Workshop Registration



9:00 - 17:00 Accelerating BIM workshop
See the separate **workshop page (workshops.html)** for a detailed schedule.

buildingSMART BeNeLux
General Assembly Meeting

17:00 Welcome Reception
Zwarte Doos ([venue.html#zwartedoos](#))

Tuesday, October 27th

8:00 - 8:30 Registration

8:30 - 9:15 Opening and Welcome
Keynote Pieter Pauwels

Construction Management

Chair: *Timo Hartmann*

João Patacas, Nashwan Dawood, Mohamad Kassem

A framework for the development of Asset Information Models to support Asset Information Requirements throughout the lifecycle of buildings



Semantic Web

Chair: *Chi Zhang*

Gonçal Costa, Pieter Pauwels

Building product suggestions for a BIM model based on rule sets and a semantic reasoning engine



Visualization





Chair: *Raymond Issa*

Semiha Ergan, Xue Yang







Value of 3D Gaming Engine Based Virtual Models in Understanding Behaviors of Facility Operators during FM



9:30 - 10:45	<p><i>Ningshuang Zeng, Markus König, Yan Liu, Bo Xu</i> Supply Chain Modeling for BIM-oriented Construction Schedule Management: CODP-based Classification Approach</p>	<p><i>Jyrki Oraskari</i> Computationally Efficient IFC File Comparison Using RDF Graph Paths</p>	<p><i>Miriam R. A. Addor, Eduardo Toledo Santos</i> BIM Coordination Room Layout: Assessment Criteria and Metrics</p>
<p><i>Christian Koch, Felix Hegemann, Markus König</i> Tunnel information modelling to support interactions in mechanized tunnelling</p>	<p><i>Nam Vu Hoang, Seppo Törmä</i> Implementation and Experiments with an IFC-to-Linked Data Converter</p>	<p><i>Jennifer Whyte, Tim Broyd</i> Viewing Asset Information: Future Impact of Augmented Reality</p>	
<p><i>Musa Adamu Musa, Henry Abanda, Henry Oti</i> Assessment of BIM for Managing Scheduling Risks in Construction Project Management</p>			
10:30 - 11:00	Break		
<p>Construction Planning and Monitoring <i>Chair: Karsten Menzel</i></p>	<p>Semantic Web 2 <i>Chair: Nam Vu Hoang</i></p>	<p>Visualization and Education <i>Chair: Jennifer Whyte</i></p>	
<p><i>Giulia Luci, Zhigang Shen</i> A Critical Review of Recent Progress on Construction Workspace Planning Using BIM</p>	<p><i>Cheikh Kacfeh Emani, , Catarina Ferreira Da Silva, Bruno Fiès, Parisa Ghodous, Marc Bourdeau</i> Automated Semantic Enrichment of Ontologies in the Construction Domain</p>	<p><i>Qiao Zhang, Jason Lee Davis, Nilo Tsung</i> A 4-D Project Control System with Information Visualization Technology</p>	
11:00 - 12:00	<p><i>Amadeusz Kargul, Willibald A. Günthner, Birgit Vogel-Heuser</i> Model in the loop simulation towards the development of a smart fleet management system</p>	<p><i>Ralph Kreider, John Messner</i> A Model Use Ontology</p>	<p><i>Nathan Blinn, Michael Robey, Hamzah Shanbari, Raja R. A. Issa</i> Using Augmented Reality to Enhance Construction Management Educational Experiences</p>
<p><i>SooWon Chang, JeongWook Son, WoonSeong Jeong, June-Seong Yi</i> BIM-Integrated Construction Operation Simulation for Reliable Production Management</p>	<p><i>Tarcisio Mendes de Farias, Ana-Maria Roxin, Christophe Nicolle</i> IfcWoD, Semantically Adapting IFC Model Relations into OWL Properties</p>	<p><i>Ketil Bråthen, Anita Moum</i> Bridging the gap: taking BIM to the construction site</p>	
12:00 - 13:30	Lunch		
<p>Structural <i>Chair: Miriam Addor</i></p>	<p>Modeling and Standardization <i>Chair: Leon van Berlo</i></p>	<p>Education and Training <i>Chair: Anita Moum</i></p>	
<p><i>Xiao Yuan, Chimay J. Anumba, M. Kevin Parfitt</i> Real-time Cyber-Physical Systems (CPS)-based Monitoring of Temporary Structures: a Scaffolding System Example</p>	<p><i>Jason Lucas, Amin Khademi, Brandon Ross, Greg Fulaytar</i> A Reliability Model for BIM-Related Automated Processes</p>	<p><i>Eilif Hjelseth</i> Use of BIM for learning engineering – Change of paradigm</p>	
13:30 - 14:30	<p><i>Michael Polter, Raimar Scherer</i> An integrated web platform for grid-based advanced structural design and analysis</p>	<p><i>Vincent Kuo</i> Management of Constructability Knowledge for Design Integration using Textual Latent Semantic Analysis</p>	<p><i>Kathryn Davies, Dermott McMeel, Suzanne Wilkinson</i> Soft skills requirements in a BIM project team</p>
<p><i>Saeed Ghaffarpour Jahromi, Parinaz Arashnia</i> An Experimental and Numerical Study on the Pultruded GFRP I-Sections Beams</p>	<p><i>Aras Jaly-Zada, Christian Koch, Walid Tizani</i> IFC Extension for Design Change Management</p>	<p><i>João Gaspar, Leonardo Manzione</i> Case studies for a new methodology for BIM training on enterprises</p>	
14:30 - 15:00	Break		

	Management of Changes, Risks, and Production Workflows <i>Chair: Bahriye Ilhan</i>	Modeling and Standardization <i>Chair: Jakob Beetz</i>
	<i>Yang Zou, Arto Kiviniemi, Stephen W. Jones</i> BIM-based Risk Management: Challenges and Opportunities 	<i>Mehmet Yalcinkaya, Vishal Singh</i> Examining the Evolution of COBie Standards in Building Information Modelling for Facilities Management 
	<i>Øystein Mejlænder-Larsen</i> Using a change control system and BIM to manage change requests in design 	<i>Ruwini Edirisinghe, Kerry London</i> Comparative Analysis of International and National Level BIM Standardization Efforts and BIM adoption
15:00 - 16:45	<i>Lee, JeeHee, Son, JeongWook, Yi, June-Seong</i> Multilevel project-oriented risk-mining approach for overseas construction project's preemptive action 	<i>Robert Amor</i> Analysis of the Evolving IFC Schema
	<i>Fangxiao Liu, Chimay J. Anumba, Abdou Karim Jallow</i> An Automated Integrated Change and Knowledge Management System	<i>Vitaly Semenov, Stephan Jones</i> IFChub: Multimodal Collaboration Platform with Solid Transactional Guarantees
	<i>Zhiliang Ma, Zhitian Yang</i> Flowshop Scheduling Model of Multiple Production Lines for Precast Production	<i>Léon van Berlo, Gijs Derks, Cyrille Pennavaire, Paul Bos</i> Collaborative Engineering with IFC: common practice in the Netherlands
17:00	ASCE Board meeting (ASCE board members only)	W78 committee meeting (open to everyone)
18:00	Campus tour Guided tour through some facilities on the TU/e campus with demos a	
19:30	Dinner Effenaar (venue.html#effenaar) Restaurant in walking distance between campus and most inner-city hotels	

Wednesday, October 28th

	Welcome and coffee		
8:45 - 9:30	Plenary session Keynote René Dorleijn		
	Facility Mangement <i>Chair: Ralph Kreider</i>	Assessment and QA <i>Chair: Bahriye Ilhan</i>	As-Built Models <i>Chair: Thomas Krijnen</i>
	<i>Sérgio V. Pinheiro, James O'Donnell</i> Requirements for a BIM-Based Life-Cycle Performance Evaluation Framework to Enable Optimum Building Operation 	<i>Xuechen Lei, Minkyung Kang, Mario Bergés, Burcu Akinci</i> Assessment of Industry Foundation Classes (IFC) in Supporting Building Energy Benchmarking 	<i>Reem Zeibak-Shini, Ling Ma, Rafael Sacks</i> Mapping the Structural Frame of a Damaged Reinforced Concrete Building using As-Damaged Scans and As-Built BIM 
9:30 - 10:30	<i>Charles-Edouard Tolmer, Christophe Castaing, Denis Morand, Youssef Diab</i> Information management for linear infrastructure projects: conceptual model integrating Level Of Detail and Level Of Development 	<i>Samaneh Zolfagharian, Prof. Charles M. Eastman</i> Processes and Challenges to Develop Precast Concrete Test Cases for the National BIM Standard (NBIMS) 	<i>Ioannis Anagnostopoulos, Ioannis Brilakis, Patricio Antonio Vela</i> A Review on Methods for Generating As-built Building Information Models 

Victoria Fillingham, Stephen R. Gulliver,
Dragana Nikolic

**Building Information Modelling for the
Optimisation of Facilities Management: A
Case Study Review**



Isolda Agustí-Juan, Guillaume Habert

**Environmental assessment of Digital
Fabrication: contribution of IT design to
the overall life cycle impacts**



Marianna Kopsida, Ioannis Brilakis, Patricio
Antonio Vela

**A Review of Automated Construction
Progress Monitoring and Inspection
Methods**



10:30 - Break
11:00

Design and Decision support

Chair: Leon van Berlo

Leonardo Manzione, Silvio B. Melhado

**Design Process Maturity Level: the Four
Interfaces**



Rule and code compliance checking

Chair: Robert Amor

Nawari O. Nawari, Adel Alsaffar

**Practical Approaches for Computable
Building Codes**



Cultural Heritage

Chair: Ioannis Brilakis

Elaheh Gholami, Arto Kiviniemi, Steve Sharples

**Implementing Building Information
Modelling (BIM) in Energy-Efficient
Domestic Retrofit: Quality Checking of
BIM Model**

11:00 -
12:00

Fabian Ritter, Philipp Geyer, André Borrmann

**Simulation-based Decision-making in
Early Design Stages**



Sibel Macit, M. Emre İlal, Georg Suter, H. Murat
Günaydin

**A Hybrid Model for Building Code
Representation Based on Four-Level and
Semantic Modeling Approaches**



Omar Tapponi, Mohamad Kassem, Graham
Kelly, Nashwan Dawood, Ben White

**Renovation of Heritage Assets using
BIM: a Case Study of the Durham
Cathedral**

Farid Fouchal, Jonathan Masiar, Shen Wei,
Tarek Hassan, Steven Firth

**Decision Support to Enable Energy
Efficient Building Design for Optimised
Retrofit and Maintenance**

Donghoon Yang, Charles M. Eastman

**Validation of IFC model based on high-
level interface: Specifications for rule-
checking error reporting**



Eloisa Dezen-Kempter, Lucio Soibelman, Meida
Chen, Alexandre Victor Müller Filho

**An integrated laser and image surveying
approach in support of model-based
information technology for inventory of
campus historic buildings**

12:00 -
13:30

Lunch

Infrastructure

Chair: Sander van Nederveen

Pei-Long Tian, Zhen-Zhong Hu, Heng-Wei
Wang, Jian-Ping Zhang, Dong Zou

**BIM-based Meticulous Construction
Management for Metro Station Projects:
A Case Study**

Rule and code compliance checking

Chair: Goncal Costa

Pieter Pauwels, Sijie Zhang

**Semantic Rule-checking for Regulation
Compliance Checking: An Overview of
Strategies and Approaches**



Energy

Chair: Tristan Gerrish

Stephan Hoerster, Thomas Willwacher, Karsten
Menzel

**Algorithmic Cleansing of Metered
Building Performance Data**



13:30 -
14:45

Jiarui Lin, Jianping Zhang, Qiao Wen, Feng
Wang

**Leveraging BIM in Settlement Monitoring
and Impact Management for Subway
Excavation**

David Marchant

**Capturing and Integrating the Design
Brief in Building Information Models**



Bahriye Ilhan, Hakan Yaman

**IFC-Based Sustainable Construction:
BIM and Green Building Integration**



Andrej Tibaut, Sašo Pečnik, Mojca Roženičnik
Korošec, Klara Mihalič, Iztok Zábrennik,

**BIM-based parametric modeling of roads
and infrastructure objects**

Wawan Solihin, Charles Eastman

**A Knowledge Representation Approach
to Capturing BIM Based Rule Checking
Requirements Using Conceptual Graph**



Murat Altun, Asli Akcamete-Gungor

**BIM-based Multi-Objective Building Life
Cycle Energy Performance Evaluation
Using Particle Swarm Optimization**

Imriyas Kamardeen, Raufdeen Rameezdeen

**Modelling Accident Severity in the
Construction Industry**

14:30 - Break
15:00

Infrastructure 2

Chair: Andrej Tibaut

Sander van Nederveen, Bart Luiten, Michel

Compliance checking

Chair: David Marchant

Yong-Cheol Lee, Charles M. Eastman

Böhms
Linked Data for Road Authorities

The Validation Logic and Structures of a Building Information Model Pertaining to the Model View Definition



Yan Liu, Sander van Nederveen
Sustainable Infrastructure Design Approach through Integration of Rating Systems and BIM Tools

Johannes Dimyadi, Pieter Pauwels, Michael Spearpoint, Charles Clifton, Robert Amor

Querying a Regulatory Model for Compliant Building Design Audit



15:00 -
16:20

Mazdak Nik-Bakht, Moein Hosseini, Tamer E. El-Diraby

Sustweetability: Infrastructure Sustainability-Related Topic Classification in Social Media

Chi Zhang, Jakob Beetz

Model Checking on Semantic Web: IFC Validation Using Modularized and Distributed Constraints

Xiao-Hua Jin, Ryan Villari-Kohlert, Chunlu Liu, Rebecca Yang, Peng Wu

Safety Communication Patterns in Small Work Groups – A Pilot Study Using Social Network Analysis

16:00 -
16:30

Break

Infrastructure 3

Chair: Charles-Edouard Tolmer

Compliance checking roundtable/workshop

Juan Manuel Dávila Delgado, Ioannis Brilakis, Campbell Middleton

Open data model standards for structural performance monitoring of infrastructure assets

Robert Amor

Compliance checking roundtable/workshop

16:30 -
17:30

The management of information over the life-cycle of a construction project using open-standard BIM

Steffen Hempel, Joachim Benner, Karl-Heinz Häfele

Generating Early Design Alternatives Based on Formalized Requirements and Geospatial Data

17:45

Busses leave to guided tour

Guided tour (venue.html#strip) through the old industrial area of the Philips factories now turned into a modern quarter with many start-ups and cultural locations.

19:30

Conference dinner

Radio Royal

Thursday, October 29th

Welcome and coffee

8:45 - 9:30

Plenary Session

Keynote Jantien Stoter

Design and collaboration

Chair: Leon van Berlo

Project Management and Planning

Chair: Imriyas Kamardeen

Shi, Jianyong, Liu, Pai, Tian, Jidong, Chen, Yongxing

Integration of BIM and GIS for Design

Faikcan Kog, Hakan Yaman

A Multi Agent Systems based Contractor Pre-qualification Model

and Management of Infrastructure Project		
9:30 - 10:30	<p><i>Preetam Singh Heeramun, Dragana Nikolic, Chris Harty</i></p> <p>Technology-enabled collaborative spaces for design and construction reviews</p>	<p><i>Zhulin Wang, Tanyel Bulbul, Andrew McCoy</i></p> <p>A Comparative Case Study for Using COBie in Project Turnover</p>
	<p><i>Richelle Fosu, Kamal Suprabhas, Zenith Rathore, Clark Cory</i></p> <p>Integration of Building Information Modeling (BIM) and Geographic Information Systems (GIS) – a literature review and future needs.</p>	<p><i>Mikael Viklund Tallgren, Mattias Roupé, Mikael Johansson, Roger Andersson</i></p> <p>A BIM-supported framework for enhancing joint planning in construction</p>
10:30 - 11:00	Break	
	<p>Decision Support <i>Chair: Preetam Singh Heeramun</i></p>	<p>CM and safety <i>Chair: Mikael Viklund Tallgren</i></p>
	<p><i>Ilse Pieterse-Quirijns, Andreas Moerman, Ewald Slingerland, Wim de Groot, Mirjam Blokker</i></p> <p>Sustainable design of building's installations by taking into account real drinking water use</p>	<p><i>Wang Hengwei, Zhang Jianping, Hu Zhenzhong, Wang Hongdong</i></p> <p>BIM-based Onsite Location-dynamic Information Integration and Management</p>
11:00 - 12:15	<p><i>Álvaro Sicilia, Gonçal Costa, Vincenzo Corrado, Alice Gorrino, Fulvio Corno</i></p> <p>A Semantic Decision Support System to optimize the energy use of public buildings</p>	<p><i>Xiao-Hua Jin, Ryan Villari-Kohlert, Chunlu Liu, Rebecca Yang, Peng Wu</i></p> <p>Safety Communication Patterns in Small Work Groups – A Pilot Study Using Social Network Analysis</p>
	<p><i>Tristan Gerrish, Kirti Ruikar, Malcolm Cook, Mark Johnson, Mark Phillip</i></p> <p>Attributing In-Use Building Performance Data to an As-Built Building Information Model for Lifecycle Building Performance Management</p>	<p><i>Imriyas Kamardeen</i></p> <p>Mobile Computing for Accident Prevention through Design</p>
		<p><i>Imriyas Kamardeen, Raufdeen Rameezdeen</i></p> <p>Modelling Accident Severity in the Construction Industry</p>
12:00	Closing	
12:30 - 13:30	Lunch	