

CONFERENCE PROGRAM



**CIB W78 25TH INTERNATIONAL CONFERENCE ON
INFORMATION TECHNOLOGY**

IMPROVING THE MANAGEMENT OF CONSTRUCTION PROJECTS THROUGH IT ADOPTION

Editor :Leonardo Rischmoller

15 • 17 July 2008
Santiago Chile

ORGANIZED BY:
Department of Construction Engineering and Management
Faculty of Engineering
Universidad de Talca
Center for Integrated Facility Engineering (CIFE)
Stanford University



CIB-W78
25th International Conference on Information Technology in Construction
 Improving the management of Construction Projects through IT adoption

CONFERENCE PROGRAM

<u>DAY 01</u>		<u>DAY 02</u>			<u>DAY 03</u>	
TUESDAY 15th		WEDNESDAY 16th			THURSDAY 17th	
	Room G-ABC		Room D	Room E		Room D
08:00 - 09:00	Registration					
09:00 - 09:30	Welcome & Opening: Leonardo Rischmoller, Universidad de Talca Manuel Navarro, CDT Juan Antonio Rock, Universidad de Talca					
9:30 - 10:15	Dr. Martin Fischer THE RETURN-ON-INVESTMENT OF VIRTUAL DESIGN AND CONSTRUCTION: EXAMPLES SHOWING TACTICAL AND STRATEGIC CONSIDERATIONS	09:00 - 10:45	Session II: PRODUCT AND PROCESS MODELING	Session III: COLLABORATIVE ENGINEERING AND DESIGN	09:00 - 10:20	Session Va: VISUALIZATION AND VIRTUAL REALITY (VR)
10:15 - 11:00	Dr. Mike Williams APPLICATION OF VIRTUAL DESIGN AND CONSTRUCTION TECHNOLOGIES ON INFRASTRUCTURE PROJECTS					
11:00 - 11:30	Coffee Break				10:20 - 10:40	Coffee Break
11:30 - 12:15	Dr. Hojjat Adeli INNOVATIVE COMPUTING AND INFORMATION TECHNOLOGIES FOR ADVANCING THE CONSTRUCTION INDUSTRY: FROM CONSTRUCTION SCHEDULING AND COST OPTIMIZATION TO SMART STRUCTURES OF THE FUTURE	10:45 - 11:10	Coffee Break			
		11:10 - 12:50	Session IV: IT ADOPTION / IMPLEMENTATION	Session VI: e-BUSINESS, e-GOVERNMENT AND e-CONSTRUCTION	10:40 - 11:40	Session Vb: VISUALIZATION AND VIRTUAL REALITY (VR)
12:15 - 13:00	Questions & Answers to Keynote Speakers				11:40 - 12:40	CIB W78 Meeting
		13:00 - 14:30	Lunch		12:45 - 14:15	Lunch
13:30 - 15:00	Lunch				15:30	Departure to Concha & Toro Vineyard
15:15 - 17:15	Session I: BIM (BUILDING INFORMATION MODELING)	14:45 - 16:30	Session VII: CONSTRUCTION MANAGEMENT	Session VIII: OTHER IT IN CONSTRUCTION RELATED THEMES	16:40 - 18:00	VISIT TO CONCHA & TORO VINEYARD (wine tasting & buffet) http://www.conchaytoro.com/
						CONFERENCE CLOSING
18:50	CONFERENCE DINNER	18:50	CONFERENCE DINNER			

Monday 14th, 19:00: Welcome Cocktail, Santiago Marriott Hotel



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Papers Presentation Program

DAY 01

JULY, TUESDAY 15th

Day: Tuesday 15th

Hour: 09:00 – 13:00

Session: KEYNOTE PRESENTATIONS

Location: Room G-ABC

Chair: LEONARDO RISCHMOLLER, Universidad de Talca

**THE RETURN-ON-INVESTMENT OF VIRTUAL DESIGN AND CONSTRUCTION:
EXAMPLES SHOWING TACTICAL AND STRATEGIC CONSIDERATIONS**

Dr. Martin Fischer

**APPLICATION OF VIRTUAL DESIGN AND CONSTRUCTION TECHNOLOGIES ON
INFRASTRUCTURE PROJECTS**

Dr. Mike Williams

**INNOVATIVE COMPUTING AND INFORMATION TECHNOLOGIES FOR ADVANCING
THE CONSTRUCTION INDUSTRY: FROM CONSTRUCTION SCHEDULING AND COST
OPTIMIZATION TO SMART STRUCTURES OF THE FUTURE**

Dr. Hojjat Adeli

Day: Tuesday 15th

Hour: 15:15 – 17:15

Session I: BUILDING INFORMATION MODELING

Location: Room G-ABC

Chair: E. William East, Construction Engineering Research Laboratory

**CASE STUDIES: EVALUATING BUILDING INFORMATION MODELING IMPACT ON
UNITED STATES ARMY CORPS OF ENGINEERS CONSTRUCTION**

Patrick C. Suermann, Raja R.A. Issa

CAD-BIM REQUERIMENTS FOR MASONRY DESIGN PROCESS OF CONCRETE BLOCKS

Scheer, Sérgio; Ayres Filho, Cervantes; Azuma, Fabíola ;Beber, Michelle

A BETTER BIM: IDEAS FROM OTHER INDUSTRIES

Robert Amor

**A CONTEXT-ADAPTIVE BUILDING INFORMATION MODEL FOR REAL-TIME
STRUCTURAL ANALYSIS IN A DISASTER MANAGEMENT SYSTEM**

Rüdiger SCHÜTZ, Thomas Bernoulli, Thomas Wießflecker1, Ulrich Walder

**BUILDING INFORMATION MODELLING DEMYSTIFIED:
DOES IT MAKE BUSINESS SENSE TO ADOPT BIM?**

Guillermo Aranda-Mena, John Crawford, Agustin Chevez, Thomas Froese

**TOWARDS METHODOLOGY FOR HARMONIZATION OF
SEMANTICALLY DIFFERENT BIM's**

Andrej Tibaut, Danijel Rebolj



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DAY 02

JULY, WEDNESDAY 16th
(09:00 – 10:45)

Day: Wednesday 16th

Hour: 09:00 – 10:45

Session II: PRODUCT AND PROCESS MODELING

Location: Room D

Chair: Robert Amor, University of Auckland

A PROCESS MODEL FOR CONSTRUCTION SYNCHRONISATION USING TIME-SPACE PLANNING METHODS AND FIELD FORCE AUTOMATION

Håkan Norberg and Thomas Olofsson

DEVELOPMENT OF 5D-CAD BASED WORK PROCESS MODEL FOR AGED-HOUSING REVAMP PROJECTS

Hee-Sung Cha, Kyungrai Kim, Dong-Woo Shin

MODELLING MULTI-CRITERIA DECISION ANALYSIS FOR BENCHMARKING MANAGEMENT PRACTICES IN PROJECT MANAGEMENT

Hemanta DOLOI, Xiao-Hua JIN

GPOP: REPRESENTATION OF SUSTAINABILITY CONSIDERATIONS ON BUILDING PROJECTS

Mauricio Toledo, Martin Fischer, Jerry Yang and Akiko Yamazaki

GENERIC PROCESS TEMPLATE DESCRIPTION FOR THE EFFECT OF RISKS ON PROJECT SCHEDULE

Raimar J.Scherer, Wael Sharmak

Day: Wednesday 16th

Hour: 09:00 – 10:45

Session III: COLLABORATIVE ENGINEERING AND DESIGN

Location: Room E

Chair: Walid Thabet, Virginia Tech

ALIGNING INTERESTS KEY TO DEVELOPING TRUST IN DEPLOYING COLLABORATIVE TECHNOLOGIES IN CONSTRUCTION

D. Zuppa, Raja R.A. Issa

INTERACTIVE VISUALISATION AS A POWERFUL DECISION SUPPORT TOOL FOR CONCEPTUAL DESIGN

Yaqub Rafiq, Martin Beck, and Neill Hughes

BUILDING DESIGN COORDINATION: COMPARING 2D AND 3D METHODS

Eduardo Toledo SANTOS, Ph.D, Rita Cristina FERREIRA, M.Sc.

FUTURE INTEGRATED DESIGN ENVIRONMENTS

Per Christiansson, Kjeld Svidt, Kristian Birch Sørensen

COOPERATIVE DIGITAL STUDIO IT-SUPPORTED COOPERATION FOR AEC STUDENTS

Sylvain Kubicki, Jean-Claude Bignon, Pierre Leclercq



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DAY 02

JULY, WEDNESDAY 16th
(11:20 – 12:50)

Day: Wednesday 16th

Hour: 11:10 – 12:50

Session IV: IT ADOPTION / IMPLEMENTATION

Location: Room D

Chair: Guillermo Aranda Mena, RMIT University

**UNDERSTANDING ADOPTION AND USE OF ICT IN CONSTRUCTION PROJECTS
THROUGH THE LENS OF CONTEXT, ACTORS AND TECHNOLOGY**

Henrik CJ Linderoth, Mattias Jacobsson

**ASSESSING INDIVIDUALS' RESISTANCE PRIOR TO IT IMPLEMENTATION IN THE AEC
INDUSTRY**

Kirsten A. Davis

**COST DATABASE SYSTEM APPLIED TO REFURBISHMENT OF SOCIAL HOUSING IN
BRAZILIAN CONTEXT**

Sérgio Leal Ferreira, Guilherme Kazuhisa Tanabe

**REQUIREMENTS ON 3D BUILDING INFORMATION MODELS AND ELECTRONIC
COMMUNICATION – EXPERIENCES FROM AN ARCHITECTURAL COMPETITION**

Kjeld Svidt, Per Christiansson, Aalborg University

BARRIERS OR CONSTRAINTS?

A REVIEW OF DEVELOPMENT ISSUES AS THEY APPLY TO CONSTRUCTION IT

Kathryn Davies

Day: Wednesday 16th

Hour: 11:10 – 12:50

Session VI: e-BUSINESS, e-GOVERNMENT AND e-CONSTRUCTION

Location: Room E

Chair: Per Christiansson, Aalborg University

**CITAX: A COLLABORATIVE ICT STANDARDS MODEL FOR THE IRISH
CONSTRUCTION INDUSTRY**

A.V. Hore

POSSIBLE BENEFITS OF WEB 2.0 TO CONSTRUCTION INDUSTRY

Robert Klinc, Matevž Dolenc, Žiga Turk

**ELECTRONIC TENDERING: DELIVERING BUSINESS EFFICIENCIES FOR THE IRISH
CONSTRUCTION INDUSTRY**

R.P. West, A.V. Hore, L O'Connell

IMPACT OF E-GOVERNMENT ON FEDERAL FACILITY DELIVERY

E. William East

EFFECTIVE SEMANTIC WEB-BASED SOLUTIONS FOR CIVIL ENGINEERING

Tamer E. El-Diraby, Sherif Kinawy



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DAY 02

JULY, WEDNESDAY 16th
(14:45 – 16:30)

Day: Wednesday 16th

Hour: 14:45 – 16:30

Session VII: CONSTRUCTION MANAGEMENT

Location: Room D

Chair: Raymond Issa, University of Florida

INTEGRATING TRUST CONCEPTS IN A DASHBOARD INTENDED FOR THE BUILDING CONSTRUCTION COORDINATOR

Annie Guerriero, Gilles Halin, Sylvain Kubicki

A VISION FOR A FRAMEWORK TO SUPPORT MANAGEMENT OF AND LEARNING FROM CONSTRUCTION PROBLEMS

Tarek Elghamrawy, Frank Boukamp

CHANGE MANAGEMENT IN CONSTRUCTION PROJECTS

Qi Hao, Weiming Shen, Joseph Neelamkavil, Russ Thomas

IMPROVING COMMUNICATION OF SCHEDULING INFORMATION OF EARTHWORK CONSTRUCTION PROCESS USING 4D VISUALISATION MODEL IN ROAD PROJECTS

R. K. Shah, N. Dawood

Day: Wednesday 16th

Hour: 14:45 - 16:30

Session VIII: OTHER THEMES

Location: Room E

Chair: Raimar Scherer, Technische Universität Dresden

CONCURRENT ENGINEERING IN EDUCATIONAL PROJECTS:

CASE STUDY SVARTÖBERGET

Gustav Jansson, Helena Johnsson

TOWARDS LINKING VIRTUAL MODELS WITH PHYSICAL OBJECTS IN CONSTRUCTION USING RFID - REVIEW OF ONTOLOGIES

Kristian Birch Sørensen, Per Christiansson, Kjeld Svidt, Kim Jacobsen, Thomas Simoni

REDUCING COMPLEXITY OF CUSTOMIZED PREFABRICATED BUILDINGS THROUGH MODULARIZATION AND IT SUPPORT

Patrik Jensen, Thomas Olofsson, Marcus Sandberg, Linus Malmgren

RELATIONSHIPS BETWEEN ON-SITE RFID TAGS – OPPORTUNITIES, BENEFITS AND CHALLENGES

Reza Shiftehfar and Frank Boukamp

THE INTEROPERABILITY ACT FOR EMCOMPASING SEMANTICS IN CONSTRUCTION DOCUMENTS

Ivan Mutis, Raja R.A. Issa



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DAY 03

JULY, THURSDAY 17th
(09:00 – 11:40)

Day: Thursday 17th

Hour: 09:00 – 10:20

Session V a: VISUALIZATION AND VIRTUAL REALITY (VR)

Location: Room D

Chair: Nashwan Dawood, University of Teesside

AN EVALUATION SCHEME FOR TWO SAFETY TRAINING APPLICATIONS

Jason Lucas, Poonam Worlikar, Walid Thabet

SCIENTIFIC VISUALIZATION AND VIRTUAL REALITY TECHNIQUES INTEGRATED TO CAD/CAE SYSTEMS FOR ILLUMINATION DESIGN

Tiago Martinuzzi Buriol, Sergio Scheer, Eduardo K. Saldanha

USING VIRTUAL PROTOTYPING TECHNIQUES FOR IMPLEMENTATION OF A VIRTUAL CONSTRUCTION ENVIRONMENT (VCE)

Jason Lucas, Walid Thabet, Dean Bowman

ENHANCEMENT OF VIRTUAL DESIGN AND CONSTRUCTION METHODS

Manfred Breit, Manfred Vogel, Fritz Häubi, Fabian Märki,

Marco Soldati, László István Etesi, Nicky Hochmuth, Andreas Walther

Day: Thursday 17th

Hour: 10:40 – 11:40

Session Vb: VISUALIZATION AND VIRTUAL REALITY (VR)

Location: Room D

Chair: Heesung Cha, Ajou University

IFC BIM-BASED METHODOLOGY FOR SEMI-AUTOMATED BUILDING ENERGY PERFORMANCE SIMULATION

Vladimir Bazjanac

A PROPOSAL FOR REUSING SIMULATION MODELS IN THE DESIGN OF PRODUCTION SYSTEMS IN CONSTRUCTION

Fabio K. Schramm, Guilherme L. Silveira, Carlos T. Formoso

ENTERPRISE SIMULATION OF THE PRECAST CONCRETE MANUFACTURING INDUSTRY

Ammar Al-Bazi

Day: Thursday 17th

Hour: 11:40 – 12:40

Session Vb: VISUALIZATION AND VIRTUAL REALITY (VR)

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Chair: Robert Amor, University of Auckland

CIB W78 MEETING



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