

Napoli, 30 giugno/1 luglio

ISTEA

ITALIAN SOCIETY OF SCIENCE, TECHNOLOGY
ENGINEERING OF ARCHITECTURE

2016

INTERNATIONAL CONFERENCE
**BACK TO 4.0:
RETHINKING
THE DIGITAL CONSTRUCTION
INDUSTRY**

NAPLES - Historical Complex of SS. Marcellino and Festo

SPONSORED BY



IN COLLABORATION WITH



CONFERENCE PROGRAMME

30th JUNE

8,30 CONFERENCE REGISTRATION

OPENING SESSION

- 9,15 WELCOME SPEECH [Maurizio Giugni, *University of Naples Federico II, Dean of Department of Civil, Architectural and Environmental Engineering*]
9,30 OPENING REMARKS [Angelo Ciribini, *President of ISTeA* - Roberta Vitale, *President of ANCE Giovani* - Mario Losasso, *President of SITdA* - Marco D'Orazio, *President of ArTec*]
10,30 DIGITAL STRATEGIES AND GOVERNMENTAL MANDATES
Elisa Grande, *Head of Legislative Office of the Ministry of Infrastructure and Transport*
11,00 COFFEE BREAK
11,30 PREDICTIVE AND COGNITIVE BUILDINGS AND INFRASTRUCTURES
Claire Penny, *IBM, Worldwide Solution Leader for BIM & IOT*
12,20 THE 4.0 PARADIGM AND THE CONSTRUCTION INDUSTRY
Volker Krieger, *Head of BIM, Lab Planning, MENA Projects at Fact GmbH*
13,10 DISCUSSION
13,40 LIGHT LUNCH

2nd SESSION: Energy

- 14,40 THE THERMAL INSULATION OF STIFERITE FOR SUSTAINABLE AND ZERO CONSUMPTION BUILDINGS BY STIFERITE s.r.l.
F. Raggiotto
15,00 Energy management of the smart city through information systems and models
A. Pasquinelli, L. C. Tagliabue, E. De Angelis, F. Guzzetti, A. Ciribini
15,10 Nearly zero energy multifunctional modules for public use
M. Caini, R. Paparella
15,20 Earthworks fuel consumption in residential building projects
B. Bossi, M. L. Trani
15,30 Integration of BIM-GIS systems for energy-efficient hospital buildings. The Streamer research and the case study of the Careggi Polyclinic (Florence)
L. Marzi, R. Di Giulio, B. Turillazzi, F. Terzaghi, A. Giuntini
15,40 5D BIM for construction site surveying
M. L. Trani, M. Cassano, S. L. Cavalli Pontiroli, G. Zoia
15,50 COFFEE BREAK

3rd SESSION: Building Performance Engineering

- 16,20 USE OF DRONES FOR BUILDINGS: FLIGHT DEMONSTRATION IN THE CLOISTER BY ISARAIL S.p.A.
16,30 UAV application for buildings monitoring
E. Miraglia
16,50 Performance analysis of Model Predictive Control for the thermal control of buildings
M. Lemma, M. Luzia, A. Carbonari, M. Vaccarini
17,00 Vapour barriers or whole building hygrothermal design? When using the standards may yield to building pathologies
R. Paolini, T. Poli
17,10 Predicting energy performance of an educational building through artificial neural network
F. Re Cecconi, L.C. Tagliabue, A. L. C. Ciribini, E. De Angelis
17,20 Empirical approach for estimating reduced-order models of buildings
M. Benedettelli, B. Naticchia, A. Carbonari, M. Vaccarini

17,30 Normalized Total Global Cost for environmental sustainability assessments: a BIM approach
F. Iannone, A. Pavone, L. Ferrante
17,40 VPL for Building Performance Simulation: a case study in light analysis
C. Zanchetta, R. Paparella
17,50 Digital information and hedonic models to improve decision making processes (BIM-GIS)
A. Pavan, C. Mirarchi
18,00 ISTEa SHAREHOLDERS' MEETING
19,00 EXCLUSIVE VISIT TO S. SEVERO CHAPEL AND CRISTO VELATO
20,00 DEPARTURE OF PULLMANS FOR GALA DINNER IN VILLA DOMI (20,00)

1st JULY

4th SESSION: Building Information Management & Information and Communications Technology

9,30 Integrating real-time information in BIMs for building sustainability in operational stage
D. Pasini, B. Daniotti
9,40 Multi-scale integrated assessment of existing building assets through BIM
V. Leggieri, G. Uva, F. Iannone
9,50 HBIM-AIDED refurbishment process of cultural heritage
S. Bruno, M. De Fino, F. Fatiguso
10,00 Definition of a WBS methodology building-element and IFC relations dependent
C. Zanchetta, P. Borin, P. Scarparo
10,10 Interoperability for building process. Model and Method.
L. M. Papa, M. Nicolella, P. D'Agostino
10,20 From BIM to BEM for the management of the existing school buildings
G. M. Di Giuda, V. Villa, F. Paleari
10,30 LOD
G. M. Di Giuda, V. Villa, L. Loreti
10,40 BIM and database integration for asset management optimisation
G.M. Di Giuda, M. Dejacco, S. Maltese, V. Villa
10,50 Digital communication platform between man and machine
M. Ferrari
11,00 Adaptive Manufacturing: a new perspective for construction industry
I. Paoletti
11,10 Digitally enabled project management strategies. Managing risk to support digital transition of construction industry
M. Bonanomi, C. Talamo, G. Paganin
11,20 COFFEE BREAK

5th SESSION: Sustainability

11,50 TECHNOLOGICAL INNOVATION AND SUSTAINABILITY OF CONSTRUCTION PRODUCTS BY LINVEA s.r.l.
12,10 The innovative and environmentally friendly construction techniques. The house of wood and straw
F. Fascia, F. Sannino, E. La Mantia
12,20 Window sustainability assessing tools
E. Antoniol
12,30 Requalification of the Tobacco Factory in Palermo with destination to social finalities
S. Pennisi
12,40 The educational building in the circular economy: an extended concept of asset quality
L. C. Tagliabue, L. Consalez, A. L. C. Ciribini, S. Mastrolembo Ventura
12,50 Sustainability for emergency and reception

R. Caponetto
13,00 Relational synergy in the strategy of environmental systems and in the innovation of the culture of sustainability
M. Di Marzo, D. Forenza
13,10 LIGHT LUNCH

6th SESSION: Design and consultancy management & Models for design and construction

14,10 A Process Map for managing façade retrofit
E. Seghezzi, G. Maserà
14,20 Airport planning and design. The airport projects development within the Italian regulatory framework
M.A. Esposito, E. Fossi
14,30 Performative ceramics: 3D printing for architecture
P. Cascone, A. Giglio, E. Ciancio, F. Galdi
14,40 Renovation of historic buildings with demountable and deployable systems: the case of Sant'Agostino Monastery in Bergamo
A. Pizzigoni, G. Ruscica
14,50 Behavioural design for building construction: from human behaviours to smart spaces
G. Bernardini, E. Quagliarini, M. D'Orazio
15,00 Parametric configuration and comfort parameters for dynamic learning spaces
V. Villa, L. C. Tagliabue, G. M. Di Giuda, A. L. C. Ciribini, L. Loreti
15,10 Transforming learning spaces: preschool and primary school buildings in Italy
P. Fiore, P. Carullo
15,20 Lean mindset integration for the improvement of Airport design process
F. Bosi, M. A. Esposito, R. Sacks
15,30 Building Information Modeling and Gamification for educational facilities
S. Mastrolembo Ventura, D. Simeone, D. Ghelfi, E. Oliveri, A. L. C. Ciribini
15,40 COFFEE BREAK

7th SESSION: Life Cycle Management & Project construction and integrated system management

16,10 HOLOBUILD: process optimization by the introduction of Mixed Reality in construction site
F. L. Rossini, G. Novembri, A. Fioravanti, C. Insola
16,20 Hypothesis for an application of the Factor Method to reinforced concrete
M. Nicolella, C. Scognamillo
16,30 LCA data structure analysis for BIM applications
C. Cavalliere, G. R. Dell'Osso, A. Pierucci
16,40 Application of the of the depreciation cost approach in the choice of the maintenance strategies
V. Del Giudice, P. De Paola, M. Nicolella, A. Pino
16,50 The effects of a saline environment on the durability of commercial photocatalytic paints
D. Enea, G. Alaimo, P. Scalisi
17,00 Adding construction workspace modeling and planning to a 4D BIM-based simulation model
V. Getuli, G. Peretoli, T. Sorbi, P. Capone
17,10 Construction health and safety code checking: a BIM-based validation process
S. Mastrolembo Ventura, V. Getuli, P. Capone, A. L. C. Ciribini
17,20 A planning and scheduling paradigm for construction strategy of a building rehabilitation project
M.A. Bragadin, K. Kähkönen
17,30 BIM and Multi-Agent Distributed Constraint Optimization
G. Novembri, A. Fioravanti, F. L. Rossini, C. Insola

CONCLUSIONS