

# Sixth International Congress on Construction History, Brussels, 9-13 July, 2018

Program overview (Academy Palace - Hertogstraat/Rue Ducale 1 - 1000 Brussels)

	Monday	Tuesday	Wednesday	Thursday	Friday
8h00	Welcome coffee	Welcome coffee	Visits half day and full day tours	Welcome coffee	Welcome coffee
9h00	Registration	<b>3. Open session</b> Medieval Vaults Nervi & Ferrocement Towers & Tall buildings Warehouses & Factories Vernacular & Earth		<b>6. Open session</b> Gothic vaults & Spires Materials & Forms Representation Stone, gypsum and brick	<b>9. Open session</b> Contractors 19th C Process of building Trades & Contracts Forts & Castles Modernity & Locality
10h00	<b>Opening</b>	Coffee break		Coffee break	Coffee break
11h00	<b>Keynote</b> Thomas Coomans	<b>Keynote</b> Robert Thorne		<b>Keynote</b> Werner Lorenz	<b>Keynote</b> Tullia Iori
12h00	Lunch time	Lunch time		Lunch time	Lunch time
13h30	<b>1. Open session</b> (Alternative) Sources Timber Vaults & Arches Iron & Steel	<b>4. Open session</b> Timber & Iron Policy & Politics Baroque Vaults Modern construction		<b>7. Open session</b> Concrete Regulations Bridges 1 Building services	<b>10. Open session</b> Ancient world Bridges 2 Contractors 20th C Innovations in concrete
15h30	Coffee break	Coffee break		Coffee break	Coffee break
16h00	<b>2. Thematic session</b> Building maintenance Modern comfort Early thin shells (1/2)	<b>5. Thematic session</b> Experts Historic precast concrete Transnational exchange		<b>8. Thematic session</b> Architects and bureaucrats Early thin shells (2/2)	<b>Closing session &amp; awards</b>
18h00	Welcome reception at 19h00	Event for PhD students		Gala dinner at 20h00	

# Sixth International Congress on Construction History, Brussels, July 9-13 2018

Academy Palace - Hertogstraat/Rue Ducale 1 - 1000 Brussels - Program (version July 3, 2018)

MONDAY July 9, 2018		
8h00	Welcome coffee	Marble Gallery
9h00	Registration	
10h00	<b>Opening 6ICCH</b>	Aula
	Bernard Espion - Stephanie Van de Voorde - Stéphane Demeter - Robert Carvais - Michael de Bouw	
11h00	<b>KEYNOTE</b>	Aula
-12h00	<b>Thomas Coomans: East Meets West on the Construction Site. Churches in China 1840s-1940s</b>	
	Lunch time	Atrium
13h30 -15h30	<b>1. OPEN SESSION - 4 parallel sessions</b>	
	<b>1a (Alternative) sources for Construction History</b> chaired by Karl-Eugen Kurrer	Albert I
	Doors in English published books on architecture and building construction 1550-1800 Karey L. Draper, James W.P. Campbell Geometry on paper and on the ground in the last third of the seventeenth century. Leclerc's and Manesson-Mallet's contribution and influence Javier Giron Transfer of knowledge through books and prints: Jesuit design for the Western buildings and fountains in the Yuanmingyuan in Beijing Hermann Schlimme Hydrotechnical models of the 'Modellkammer' (chamber of models) in Augsburg, Germany Raimund Mair, Christiane Weber	
	<b>1b Timber construction</b> chaired by David Yeomans	Rubens
	The caisson – review of a unique wooden construction typology in China Corentin Fivet, Jingxian Ye, Peilang Xu Historic timber framed courtyard houses: origin and development of the <i>corralas</i> in Madrid (1494-1908) Esperanza González-Redondo Sixteenth-century development from common rafter roofs to ridge purlins in Leiden (NL) Edwin Orsel Wooden survey towers in Germany Philip S. C. Caston The Munich state opera house. Constructing between tradition and progress at the beginning of the nineteenth century Clemens Knobling	
	<b>1c Vaults, arches and structural design and analysis</b> chaired by David Wendland	Marie Therese
	The graphic statics of the systems of space by Benjamin Mayor Thierry Ciblac Inquiring into the structural identity of the <i>Sala dei Baroni</i> vault Maria Teresa Como Arch bridge design in eighteenth-century France: the rule of Perronet Santiago Huerta Fernández The dome of Saint-Paul-Saint-Louis in Paris, a historical and structural analysis Laurens Moubax, Krista De Jonge Assessing geometrically the structural safety of masonry arches Jean-François Rondeaux, Aurélie Deschuyteneer, Denis Zastavni	
	<b>1d Iron and steel construction</b> chaired by Tom Leslie	Aula
	The rise and fall of the cast iron breast panel in Britain (c. 1906-60) Jonathan Clarke Experimental school constructions by Jean Prouvé. The benefit of closed prefabrication Adrian Leander Pöllinger Steel heritage: Olivetti's factories in Ivrea in the fifties and sixties Danilo Di Donato, Renato Morganti, Alessandra Tosone, Matteo Abita TPI – the Italian popular theatre: an architectural, technological and building experiment of a space in motion Alessandra Como, Luisa Smeragliuolo Perrotta, Simona Talenti, Annarita Teodosio The evolution of the cast node of the Pompidou Centre: from the 'friction collar' to the 'gerberette' Boris Hamzeian	
	Coffee break	Marble Gallery
16h00 -18h00	<b>2. THEMATIC SESSION - 3 parallel sessions</b>	
	<b>2a Building maintenance in ancient times (up to the early modern period)</b> chaired by Philippe Bernardi, Charles Davoine, Hélène Dessales, Maxime L'Héritier	Rubens
	Maintenance of the parietal coverings in ancient Rome: confrontation between legal norms and archaeological evidence Pauline Ducret, Mathilde Carrive Maintaining an <i>atrium</i> house during the principate in Ostia Grégory Mainet Municipal management of wooden bridges in the fifteenth century: Pont de la Daurade in Toulouse and Pont Notre-Dame in Paris Cécile Sabathier, Nicolas Moucheront Regular building maintenance and long-term conservation in ancient times Maxime L'Héritier, Charles Davoine, Hélène Dessales, Philippe Bernardi	
	<b>2b Modern 'comfort' in colonial/postcolonial settings beyond the 'centre/periphery' framework</b> chaired by Johan Lagae, Jiat-Hwee Chang	Stevin
	Viet-cool: thermal comforts in Vietnam Andrew Cruse Cross-cultural thermal knowledge: the case of large-scale tobacco barns in Sumatra (Indonesia) Sascha Roesler Detropicalizing comfort research: the climate and house design program in Australia (1945-47) Daniel Ryan	
	<b>2c Early thin shells - players, impulses, and effects (1/2)</b> chaired by Roland May	Aula
	The first concrete dome in Germany? A church building using modern techniques Jörg Rehm Hangars built of concrete reinforced in various ways, 1908-21: toward a majestic nave without ribbing Beatrice Lampariello Oldest surviving hangars with shallow domes (1918) Christina Czymay Thin concrete shells by Eugène Freyssinet Bernard Espion	
19h00	<b>Welcome reception in Brussels Town Hall at 19h00</b>	

**TUESDAY July 10, 2018**

8h00	Registration & Welcome coffee	Marble Gallery
9h00 -10h30	<b>3. OPEN SESSION - 5 parallel sessions</b>	
	<b>3a Medieval vaults</b> chaired by Santiago Huerta Reverse engineering marvellous machines: the design of Late Gothic vaults from concept to stone planning and the prehistory of stereotomy David Wendland, Marie José Ventas Sierra Two- and three-dimensional geometry in Tierceron vaults: a case study of Exeter cathedral Alexandrina C. Buchanan, Nicholas J. Webb King's College Chapel: the geometry of the fan vault Jacques Heyman Knowledge transfer in the early medieval art of vaulting in Dalmatia Marina Simunic Bursic	Rubens
	<b>3b Nervi and ferrocement</b> chaired by Ilaria Giannetti Influences of the engineer Pier Luigi Nervi on the work of the architect Marcel Breuer Miguel Á. Calvo-Salve Pier Luigi Nervi and Fiat. The expansion of Officine Mirafiori in Turin Laura Greco Pier Luigi Nervi's idea of " <i>verità delle strutture</i> " Patricia Radelet-de Grave Education on the production chain: Lelé's transitory schools in Brazil Adalberto Vilela	Aula
	<b>3c Towers and big buildings</b> chaired by Donald Friedman Porto tower buildings in the 1960s: challenges to architects and engineers Rui Fernandes Póvoas, Clara Pimenta do Vale Quintã Innovations in the structural systems in tall buildings in Bogota during the decade of the sixties - case study: Bavaria building Camilo Villate Matiz Interdisciplinary research on the heritage of housing complexes in France (1945-75) Raphaël Labrunye, Gauthier Bolle, Karim El Alami, Ignacio Requena, Daniel Siret Concrete capital: John McShain's Construction of Washington, DC (1930-70) Vyta Baselice	Marie Therese
	<b>3d Warehouses and factories</b> chaired by Sara Wermiel Built to stock. Versatility of Hennebique's urban warehouses in Belgium (1892-1914) Ine Wouters, Stephanie Van de Voorde, Marianne De Fossé, Inge Bertels At the intersection of foreign building know-how: Plovdiv in the early twentieth century Iva Stoyanova The construction of Ghent's textile industry warehouses Marianne De Fossé, Inge Bertels, Ine Wouters, Linda Van Santvoort	Albert I
	<b>3e Vernacular architecture and earthen buildings</b> chaired by Chang-Xue Shu Earthen buildings in Ireland Alejandro Jiménez Rios, Dermot O'Dwyer Nubia vernacular: the villages of Bigge Bernadeta Schäfer Earthen mortar walls in Cremona: the complexity and logic behind a construction technique Angelo Giuseppe Landi Adobe constructions in Yun-lin county, Taiwan Pierre Smars	Stevin
	Coffee break	Marble Gallery
	<b>KEYNOTE</b>	Aula
11h00 -12h00	<b>Robert Thorne: The rebuilding of the Crystal Palace 1851-54: permanent and better?</b>	
	Lunch time	Atrium

13h30 -15h30	<b>4. OPEN SESSION - 4 parallel sessions</b>		
	<b>4a Timber and iron structures (18th-20th centuries)</b> chaired by James Campbell Beyond Grubenmann: Swiss carpentry 1750–1850 Jasmin Schäfer, Stefan M. Holzer Joining techniques in nineteenth- and early twentieth-century Belgian timber roofs Louis Vandenabeele, Inge Bertels, Ine Wouters What hides behind the plaster? Hollow-brick and iron vaults in Europe between the eighteenth and the twentieth century Paola Condoleo The roof of the Marble Palace in Saint-Petersburg: a structural iron ensemble from the 1770s Aleksandra Kosykh, Werner Lorenz, Konrad Frommelt Iron roof structures by Bosshard & Cie: case studies in Switzerland Aikaterina Maria Chalvatzi, Stefan M. Holzer	Aula	
	<b>4b Policy and politics</b> chaired by Christine Wall Gustave Andreas Royers (1848-1923), from Antwerp city engineer to Belgian politician Inge Bertels Competing visions of community, commerce and construction in the first Ohio River railroad bridge David A. Simmons Documenting depression-era construction: the University of Virginia's PWA buildings Benjamin J. Hays Recent geopolitics of construction - origins and consequences Andrew Rabeneck	Stevin	
	<b>4c Vaulting during Renaissance and Baroque</b> chaired by Paula Fuentes Alonso de Vandelvira's approach to the geometrical design of templates for <i>caissons</i> in <i>crossing trellis vaults</i> María Aranda Alonso The vaulted system of the Basilica of S. Ambrogio in Milan: a cross-feature in the Basilica's life. Restorations and interpretations Chiara Stanga, Chiara Spinelli Knowledge transfer in vaulting. The Assier church and Valencian stonecutting Pablo Navarro-Camallonga, José Calvo-López, Miguel Ángel Alonso-Rodríguez The vaulted roof of San Vittore in Milan: an unusual sixteenth-century construction Alberto Grimaldi	Marie Therese	
	<b>4d Modern architecture and construction</b> chaired by Rika Devos The thirties summer holiday camps in the Abruzzo region: from design to building Alessandra Tosone, Renato Morganti, Alessandra Bellicoso Luigi Moretti and the program of the <i>case albergo</i> in Milan (1947-1950) Roberta Lucente, Laura Greco Innovation of construction systems versus reproducibility of the architectural image. Multiple constructional processes in the 'Unité d'Habitation' (1945-67) The first Luanda's skyscraper: comfort through natural and artificial control methods Ana Tostões, Margarida Quintã Exploring the visual material within the building process of the Villa Savoye Veronique Boone, Bénédicte Gandini	Rubens	
	Coffee break	Marble Gallery	
16h00 -18h00	<b>5. THEMATIC SESSION - 3 parallel sessions</b>		
	<b>5a Experts and building assessments. An international comparison (thirteenth-twentieth century)</b> chaired by Robert Carvais, Valérie Nègre Siena 1357. The failure of a great plan Klaus Tragbar The public architect's role as surveyor of the construction site in the nineteenth century: the example of Belgian provincial architects Jeroen Cornilly The engineer as expert: early structural forensic reports in the United States Donald Friedman Surveyors and building appraisals. Conceptualizing a comparative project (thirteenth—twentieth centuries) Robert Carvais	Rubens	
	<b>5b Historic precast concrete</b> chaired by Herdis A. Heinemann Building breakwaters with precast concrete blocks (1834-67) Stefan M. Holzer Concrete matter: building the Bruges submarine pens (1917-18) Willem Bekers, Ronald De Meyer Stone and concrete: a review of the coevolution of the surface finishes of two buildings materials Herdis A. Heinemann, Wido J. Quist The NEMAVO Airey system: a wealth of options Lidwine G.K. Spoomans, Hielkje Zijlstra, Wido J. Quist Prefabricated elements and typification in communist Poland Piotr Marciniak	Aula	
	<b>5c Transnational exchange in the construction worlds of nineteenth and twentieth century Asia: the diffusion of materials and processes in the Global South</b> chaired by Amit Srivastava, Peter Scriver "Elle pousse, la Capitale Champignon!" Questioning skill in the Belgian Congo's building industry Robby Fivez Construction technology transfer in Shanghai in the nineteenth to twentieth centuries Jingxian Ye, Corentin Fivet Cement and 'Shanghai plaster' in British Hong Kong and Penang (1920s-1950s) Chun Wai Charles Lai Learning from the 'other': early modern emulation and trans-imperial exchange of 'native' building technologies Pedro Guedes	Stevin	
	<b>Special event for PhD students only</b>		

WEDNESDAY July 11, 2018			
City Tours			Meeting point Academy Palace
Tour	Contact person 6ICCH	Departure place	Exact Hour of departure
<b>Brussels</b>			
Iron tour	Ine Wouters	Academy Palace	9h30
Timber tour	Louis Vandenabeele	Academy Palace	9h30
Contractors tour	Rika Devos	Academy Palace	9h00
Horta tour	Linsy Raaffels	Academy Palace	9h00
Royal tour	Marianne Defossé	Academy Palace	13h00
Concrete tour	Stephanie Van de Voorde	Academy Palace	9h00
<b>Outside Brussels</b>			
Antwerp towers	Inge Bertels	Academy Palace	8h30
Brugges' craftsmanship	Heidi Deneweth	Academy Palace	8h00
Liegeois engineering	Bernard Espion	Academy Palace	8h30

**THURSDAY July 12, 2018**

8h00	Registration & Welcome coffee	
9h00 -10h30	<b>6. OPEN SESSION - 4 parallel sessions</b>	
	<b>6a Gothic vaults and spires</b> chaired by <a href="#">Pierre Smars</a> Iron on top. The use of wrought iron armatures in the construction of late Gothic openwork spires <a href="#">Christian Kayser</a> Abandonment of sexpartite vaults: construction difficulties and evolution <a href="#">Rocío Maira Vidal</a> Late Gothic constructions in Mústair and Meran <a href="#">Manuel Maissen</a> , <a href="#">Martin Gantner</a> , <a href="#">Stefan M. Holzer</a> Late Gothic system in the church of Saint-Séverin (Paris) <a href="#">Enrique Rabasa-Díaz</a>	Aula
	<b>6b Materials and forms</b> chaired by <a href="#">Stephen Buonopane</a> New experiences with reinforced tile for Eladio Dieste when building the Cristo Obrero Church <a href="#">Mónica Silva-Contreras</a> Braided rope with vegetable fibers for the construction of the Inca bridge of Q'eswachaka (Peru) <a href="#">Eugenia Muscio</a> , <a href="#">Jesús Anaya Díaz</a> Earthquake-resistant foundations systems in Italy in the first decade of the twentieth century <a href="#">Federica Scibilia</a> (presented by <a href="#">Vincenzina La Spina</a> ) Frederick Lanchester and the invention of the air-supported roof <a href="#">Will McLean</a>	Marie Therese
	<b>6c Representation and official architecture</b> chaired by <a href="#">Susan Galavan</a> The institutional organisation of Belgium's cellular prison building campaign (1830-WWI) <a href="#">Jozefien Feyaerts</a> The Chinese teahouse at the 1873 Vienna world exposition <a href="#">Alexandra Harrer</a> Catetinho: the first presidential house in Brasília, Brazil <a href="#">Marina M. Mennucci</a> , <a href="#">Pedro P. Palazzo</a> Business-card buildings: corporate architecture and promotional strategies in buildings and projects for Eternit in Belgium (1955-75) <a href="#">Stephanie Van de Voorde</a> , <a href="#">Rika Devos</a>	Rubens
	<b>6d Stone, gypsum and brick</b> chaired by <a href="#">Joao Mascarenhas-Mateus</a> Study of traditional gypsum in Spain: methodology and initial results <a href="#">Vincenzina La Spina</a> Fire brick in China: from mining to architecture <a href="#">Chang-Xue Shu</a> , <a href="#">Yi-Bing Fang</a> Sturdy as stone, vibrant as ceramics: Italklinker and Modern Movement architecture in Italy <a href="#">Emilia Garda</a> , <a href="#">Marika Mangosio</a> Nineteenth-century stone protection: the invention and early research on fluosilicates and their dispersion into Europe <a href="#">Timo G. Nijland</a> , <a href="#">Wido J. Quist</a>	Stevin
	Coffee break	Marble Gallery
11h00	<b>KEYNOTE</b>	Aula
-12h00	<b>Werner Lorenz: 152 Tons of Bronze – the Metal Roof Truss of the Pantheon's Portico in Rome</b>	
	Lunch time	Atrium

13h30 -15h30	<b>7. OPEN SESSION - 4 parallel sessions</b>	
	<b>7a Concrete construction in 20th century</b> chaired by <a href="#">Jos Tomlow</a>	Rubens
	<p>The mushroom column: origins, concepts and differences <a href="#">Andreas Thuy</a>, <a href="#">Mario Rinke</a></p> <p>Hidden modernity: reinforced concrete trusses in Brussels parish churches (1935-40) <a href="#">Romain Wibaut</a>, <a href="#">Thomas Coomans</a>, <a href="#">Ine Wouters</a></p> <p>Handmade' pre-cast concrete: the Italian experience between structural engineering and industrial design (1950-80) <a href="#">Ilaria Giannetti</a></p> <p>Onsite precast concrete: a critical approach to concrete in the faculty of engineering, Prince of Songkla University, Thailand <a href="#">Pinai Sirikiatikul</a></p> <p>The hyperbolic paraboloids of the Tor di Valle racetrack in Rome <a href="#">Stefania Mornati</a></p>	
	<b>7b Regulations and specifications</b> chaired by <a href="#">Heidi Deneweth</a>	Stevin
	<p>Contracting blunders and innovative regulations of US military construction 1861 to 1918 <a href="#">Jeffrey L. Beard</a></p> <p>From master builder to subcontractor: the Guastavino Company and the role of specifications <a href="#">Jessica Garcia Fritz</a></p> <p>Recommended minimum requirements for small dwelling construction'. A forgotten ancestor of the modern USA building code <a href="#">Nigel P. Isaacs</a></p> <p>Specifications and the standardisation of Ireland's local harbours <a href="#">Elizabeth Shotton</a></p> <p>Victor Horta and building site photography <a href="#">Dirk Van de Vijver</a></p>	
	<b>7c Bridges 1 - constructional aspects</b> chaired by <a href="#">Dario Gasparini</a>	Aula
	<p>Innovative or derivative? The design of the bridge structures on the world's first intercity railway between Liverpool and Manchester <a href="#">Mike Chrimes</a></p> <p>Iron bridges for Rome, the capital of the Kingdom of Italy <a href="#">Renato Morganti</a>, <a href="#">Alessandra Tosone</a>, <a href="#">Matteo Abita</a>, <a href="#">Danilo Di Donato</a></p> <p>European iron bridges in Puerto Rico: the example of the Guamaní bridge <a href="#">Jorge Ortiz-Colom</a></p> <p>The influence of Howe's structural typology on Galician wooden bridges <a href="#">Chiara Tardini</a></p> <p>Fabrication and erection of large steel bridges in the twentieth century: from structural analysis to optimization of fabrication <a href="#">Eberhard Pelke</a>, <a href="#">Karl-Eugen Kurrer</a></p>	
	<b>7d Building services</b> chaired by <a href="#">Leen Lauriks</a>	Marie Therese
	<p>Glasgow city chambers: the construction and building services history of a major municipal building from the Victorian period <a href="#">Nina C. Baker</a></p> <p>Built-in, exposed or concealed comfort services. Attempts to industrialise collective housing after 1945 <a href="#">Giulia Marino</a></p> <p>A masterpiece in the use of light, Johnson Wax headquarters. Racine, Wisconsin, USA <a href="#">Giulio Sampaoli</a></p> <p>Richard Neutra and the history of the vertical louvered solar control system <a href="#">Clifton Fordham</a></p> <p>Sheltered. Parked. Respirated. Three underground spaces by Gottfried Schindler <a href="#">Andreas Putz</a></p>	
	Coffee break	Marble Gallery
16h00 -18h00	<b>8. THEMATIC SESSION - 2 parallel sessions</b>	
	<b>8a Architects and bureaucrats: centralised governments and the administrative pre-conditions of building before 1750</b> chaired by <a href="#">Merlijn Hurx</a>	Rubens
	<p>The impact of bureaucratic procedures on architectural planning in the Late Middle Ages in the Low Countries <a href="#">Merlijn Hurx</a></p> <p>Building for the Crown: contracts and administration under the Spanish monarchy in the sixteenth and seventeenth centuries, the Monastery of El Escorial <a href="#">Pilar Chías</a>, <a href="#">Tomás Abad</a></p> <p>Bureaucratization and dynamization of construction processes in the electorate of Bavaria <a href="#">Andreas Gommel</a></p> <p>The director, the first architect of the academy and the professor: the roles of these figures in the academic teaching of eighteenth-century France <a href="#">Hélène Rousteau-Chambon</a></p> <p>Architects and institutions in the construction of the new city of Cervia <a href="#">Iacopo Benincampi</a></p>	
	<b>8b Early thin shells - players, impulses, and effects (2/2)</b> chaired by <a href="#">Roland May</a>	Aula
	<p>The diffusion of the Zeiss-Dywidag system in Italy: two cases in Rome <a href="#">Martina Russo</a>, <a href="#">Edoardo Currà</a></p> <p>A great achievement of the Soviet construction technology in Siberia: the reinforced concrete cupola of the Novosibirsk Theatre <a href="#">Ivan Nevzgodin</a></p> <p>Wooden shells in pre-war Soviet Union (1925-39) <a href="#">Olga Arkhipkina</a></p> <p>Laborious and difficult': the evolution of Pier Luigi Nervi's hangar roofs (1935-41) <a href="#">Thomas Leslie</a></p> <p>Contemporary light vaults in Colombia. The origin of a modern tradition <a href="#">Julian Garcia</a>, <a href="#">Fernando Magdalena</a>, <a href="#">Juan M. Medina</a></p>	
20h00	<b>Gala Dinner in Plaza Theatre at 20h00</b>	

**FRIDAY July 13, 2018**

8h00	Registration & Welcome coffee	Marble Gallery
9h00 -10h30	<b>9. OPEN SESSION - 5 parallel sessions</b>	
	<b>9a Contractors and architects (19th century)</b> chaired by Hermann Schlimme	Aula
	General contractors and architects in the late nineteenth-century America Brian Bowen Emergence of heavy contracting in the United States in the nineteenth century Sara E. Wermiel The work and professional status of John (1787-1852) and Benjamin Green (1813-58), architects and engineers Paul W. R. Bell Spatial management of contractors. An analysis of the industrial sites of the Louis De Waele enterprise in Brussels (1867-1988) Matthijs Degraeve, Jelena Dobbels, Inge Bertels, Heidi Deneweth, Stephanie Van de Voorde	
	<b>9b Process of building (16th-18th century)</b> chaired by Christoph Rauhut	Rubens
	A dispute on Venetian techniques of foundation: Vincenzo Scamozzi in San Nicolò da Tolentino (1591-95) Marco Capponi The foundations of the <i>Nieuwe Kerk</i> Tower in Amsterdam (1645-1652) Gabri Van Tussenbroek The Church of Peace in Jawor: a few remarks on the organization of its construction in the years 1654-56 in the light of written and iconographic sources Ulrich Schaaf <i>Accouplement</i> : vicissitudes of an architectural motif in classical France Pedro P. Palazzo	
	<b>9c Trades and contracts</b> chaired by Robert Carvais	Stevin
	Building contracts in the city of Girona from the fourteenth to the eighteenth century Miquel Àngel Chamorro, Jordi Soler, Ramon Ripoll, Elena Vilagran Renovating early modern Leiden: new perspectives on the building trades Heidi Deneweth German stonemasons and fort architecture of the Texas frontier Liane Hancock	
	<b>9d Forts and castles</b> chaired by Thomas Coomans	Albert I
	Sasanian construction technology in the Maiden Tower Complex as evidence of Late Antiquity building activities in Baku (Azerbaijan) Marina Döring-Williams, Luise Albrecht Geometry and proportions of the medieval castles of Latvia Arturs Lapins Evolutionary traces in European nail-making tools Chris How	
	<b>9e Modernity and locality</b> chaired by Philippe Sosnowska	Marie Therese
	Modernity and locality in the use of brick in Spanish architecture (1870s-1930s) Ryohei Kumagai, Yoshihiko Ito, Fuuko Kimura From pickaxes to steam saws: the construction of the row house in Dublin (1730-1888) Susan Galavan Dutch natural stone: interpretation of a vernacular building material in modern architecture Wido J. Quist	
	Coffee break	Marble Gallery
11h00 -12h00	<b>KEYNOTE</b>	Aul; Aula
	<b>Tullia Iori: The language of structures. The Italian School of Engineering. Tribute to Sergio Poretti</b>	
	Lunch time	Atrium

13h30 -15h30	10. OPEN SESSION - 4 parallel sessions	
	<b>10a Ancient world</b> chaired by Krista De Jonge New typology for Old & Middle Kingdom stone tools: studies in the Hatnub quarries in Egypt Olivier Lavigne Schematic reconstruction of a type of Roman scaffolding used for the Basilica of Maxentius Luise Albrecht, Marina Döring-Williams The secret of zoomorphic impost: a new reading of the Achaemenids' roofing system Mahdi Motamedmanesh Early Greek stone construction and the invention of the crane Alessandro Pierattini	Stevin
	<b>10b Bridges 2: structural aspects</b> chaired by Andreas Kahlow Navier's 1823 <i>Mémoire</i> : analyses and observations on displacements and stiffness of suspension bridges Dario A. Gasparini, Stephen G. Buonopane John A. Roebling's Allegheny Aqueduct and Smithfield Street Bridge: nineteenth-century innovation in multi-span suspension bridges Stephen G. Buonopane, Dario A. Gasparini The Boyne Viaduct: early indeterminate lattice girder analysis and design Dermot O'Dwyer, Ronald Cox Origins of the modern cable-stayed bridge: the Dischinger story Roland May	Marie Therese
	<b>10c Contractors (20th century)</b> chaired by Brian Bowen A business-historical analysis of Entreprises générales Henri Ruttiens (1878-2000) Jelena Dobbels, Inge Bertels, Bernard Espion, Ine Wouters History of the Italian contractors of large reinforced concrete structures in the twentieth century Carolina Di Pietro Building in (times of) war. Blaton's construction activities in occupied Belgium Rika Devos, Bernard Espion William Arrol and Peter Lind: demolition, construction and workmanship on London's Waterloo Bridges (1934-46) Christine Wall	Aula
	<b>10d Innovations in concrete: material, structures and engineering</b> chaired by Mario Rinke François Coignet (1814-88) and the industrial development of the first modern concretes in France Gilbert Richaud The Portland cement industry and reinforced concrete in Portugal (1860–1945) Joao Mascarenhas-Mateus, Caio Rodrigues de Castro 'Theory' and systematic testings – Emil Mörsch, Carl Bach and the culture of experimentation into reinforced concrete construction at the turn of the twentieth century Christoph Rauhut, Torsten Meyer From invention to production: the introduction of prestressed concrete Jørgen Burchardt Reinforced concrete in Italy through the work of two generations of engineers: Mario and Giorgio Baroni Edoardo Currà, Martina Russo	Rubens
	Coffee break	Marble Gallery
16h00 -18h00	Closing session & Best paper awards	Aula