Program

4th International Congress on Construction History

3-7 July 2012
# Program

**Tuesday 3 July 2012**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>13:00</td>
<td>Registration - Welcome [Palais des Etudes]</td>
</tr>
<tr>
<td>14:30</td>
<td>Introduction [Amphi Binet]</td>
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<tr>
<td>15:15</td>
<td>Keynote Lecture: Dominique Barjot</td>
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<tr>
<td>16:15</td>
<td>Coffee Break</td>
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<tr>
<td>17:00</td>
<td>7 Simultaneous Sessions</td>
</tr>
<tr>
<td>19:00</td>
<td>Welcome Cocktail and MRU Exhibit Opening</td>
</tr>
</tbody>
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**Wednesday 4 July 2012**

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>9:00</td>
<td>Keynote Lecture: Ledlie Klosky</td>
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<tr>
<td>10:15</td>
<td>Coffee Break</td>
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<tr>
<td>10:45</td>
<td>8 Simultaneous Sessions</td>
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<tr>
<td>12:45</td>
<td>Lunch at Paris-Malaquais</td>
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<tr>
<td>14:00</td>
<td>8 Simultaneous Sessions</td>
</tr>
<tr>
<td>16:00</td>
<td>Coffee Break + Transport to the CNAM</td>
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<tr>
<td>16:45</td>
<td>Visit of the Musée des Arts et Métiers</td>
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<tr>
<td>18:30</td>
<td>Keynote Lecture: Shigeru Ban</td>
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<tr>
<td>19:30</td>
<td>CNAM Cocktail Dinner</td>
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**Thursday 5 July 2012**

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<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>9:00</td>
<td>8 Simultaneous Sessions</td>
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<tr>
<td>11:00</td>
<td>Coffee Break</td>
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<tr>
<td>11:30</td>
<td>6 Simultaneous Sessions</td>
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<tr>
<td>13:00</td>
<td>Lunch at Paris-La Villette or Box Lunch</td>
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<tr>
<td>14:00</td>
<td>Visits</td>
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**Friday 6 July 2012**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Keynote Lecture: Antonio Becchi</td>
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<tr>
<td>10:00</td>
<td>Coffee Break</td>
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<tr>
<td>11:00</td>
<td>8 Simultaneous Sessions</td>
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<tr>
<td>13:00</td>
<td>Lunch at Paris-Malaquais</td>
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<tr>
<td>14:00</td>
<td>Transport to Versailles</td>
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**Saturday 7 July 2012**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Keynote Lecture: Susan Venti Webster</td>
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<tr>
<td>10:00</td>
<td>Coffee Break</td>
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<tr>
<td>10:30</td>
<td>7 Simultaneous Sessions</td>
</tr>
<tr>
<td>12:30</td>
<td>Closing</td>
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**Program Location**

**ENSA Paris-Malaquais**, 14 rue Bonaparte, 75006 Paris
Metro Station: St. Germain-des-Prés [Line 4], Mabillon [Line 10].

**ENSA Paris-La Villette**, 144 avenue de Flandre, 75019 Paris
Metro Station: Corentin Cariou [Line 7].

**ENSA Versailles**, 5 avenue de Scéaux, 78006 Versailles
RER C: Musée d’Orsay to Versailles Château Rive Gauche Station.

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**ENSA Paris-Malaquais Site**

**ENSA Paris-La Villette Site**

**ENSA Versailles Site**
Tuesday 3 July

08:00-08:30  MALAQUAIS SITE
08:30-09:00  Registration-Welcome [Palais des Etudes]
09:00-10:00  Keynote Lecture [Amphi Binet]

Dominique Barjot
Université Paris-Sorbonne, France
"Why was the World Construction Industry Dominated by European Majors [Late 19th-Early 21st Centuries]?"

10:00-10:30  Coffee Break

10:30-12:00  MALAQUAIS SITE
401. Construction History, Epistemology & Historiography
404. Architectural & Structural Design 1
411. Transfer of Knowledge, Colonial Situations 1
415. Craftsmanship, Gender, Individuals & Communities
420. The Real Estate Market, the Cost of Construction
423. Brick & Tile
440. Industrialization & Rationalization

12:00-13:00  Welcome Cocktail and MRU Exhibit Opening:
Photographs at Work: The Reconstruction of French Towns [1945-1958]

At the Liberation, the Ministry of Reconstruction and Urbanism [MRU] was given the responsibility of dealing not only with the devastation of war but also the country’s antiquated housing stock. As of 1945, an in-house photographic service accompanied the activity of the MRU, documenting the conditions of existing buildings and, especially, new constructions. More than 36,000 photos were taken by 1958, date when the term ‘reconstruction’ disappeared from the Ministry’s title. With the 5th Republic, a new era began, that of the grands ensembles and the ‘Zones to Urbanize in Priority’ (ZUP). The exhibit presents a selection of photographs from this collection, held today by the Photothèque of the Ministry of Ecology, Sustainable Development, Transport and Housing (MEDDE) which is largely unpublished, all the while focusing on a few remarkable construction sites and inquiries undertaken in Noisy-le-Sec, Orleans, Marseille, Le Havre, Nanterre, Strasbourg, etc...

The exhibition was organized by le Jeu de Paume in partnership with Le Pôle Image Haute-Normandie, Le Centre d’Art Editeur Le Point du Jour and the Ministère de l’Écologie, du Développement Durable, des Transports et du Logement.

Exhibition Curators: Didier Mouchel, assisted by David Renassayag and Daniel Contelier. Léa Mosconi adapted the exhibition for the 4th International Congress on Construction History.
Sessions

Tuesday 3 July, 17:00-19:00
Malaquais Site

401. Construction History, Epistemology & Historiography
Chair: Linda Clarke, University of Westminster, London, UK
Room 312
Knut Stegmann, Institute of Historic Building Research and Conservation, ETH Zurich, Switzerland
Analysing Historical Timber Structures - A Case Study on Ernst Gladbach [1812–1896] and His Research on the "Swiss Style"

João Mascarenhas-Mateus, CES - Univ. of Coimbra, Portugal
Ethnographic Studies and Their Contribution to Construction History in Portugal

Torsten Meyer, Institute of Historic Building Research and Conservation, ETH Zurich, Switzerland
The Science of Building as a Polytechnic Discipline in the 19th c.

Sascha Rosler, ETH Zurich, Switzerland
Architectural Anthropology: A Knowledge-Based Approach

404. Architectural & Structural Design 1
Chair: Enrique Rabasa Díaz, Universidad Politécnica de Madrid, Spain
Room 104
Richard A. Elliot, School of Architecture, Planning, and Preservation, Univ. of Maryland, College Park, MD, USA
Toward an Iconography of Stereotomy

María Antón Barco, Eva J. Rodríguez Romero, Juan Tejela Juez, CEU San Pablo Univ., Inst. of Technology [EPS], Madrid, Spain
Builders' Inventioness in Madrid's Baroque Convents: Construction Invariables

Dominic Boulerice, York Univ., Toronto, ON, Canada
The Narthex Vaults of the Church of Saint-Germain-l'Auxerrois in Paris

James W.P. Campbell, Univ. of Cambridge, UK
The First Complete List of All the Models Made for the Construction of St. Paul's Cathedral, London 1675-1720

415. Craftsmanship, Gender, Individuals & Communities
Chair: Susan Verdi Webster, College of William and Mary, USA
Room 308
Shelley E. Rolf, Univ. of Texas at San Antonio, TX, USA
Building Construction in Medieval Spain: The Female Perspective

Nina Baker, Univ. of Strathclyde, Glasgow, UK
Who Paints the House? Scottishwomen as Housepainters and Decorators from 1820

Gemma Domènech Casadevall, Catalan Institute for Cultural Heritage Research, Girona, Spain
Building Trades in Catalonia during the Modern Era: The Case of Immigration to Girona City

Cristina González-Longo, Dimitris Theodossopoulos, Architects, Univ. of Edinburgh, UK
From Master Mason to Architect: James Smith's Construction Techniques at the End of 17th Century in Scotland

420. The Real Estate Market, The Cost of Construction
Chair: Albert Malaspina, Fondation Palladio, Altea-Copelem, France
Room 206
Virginie Mathé, Université C. de Gaule-Lille 3, France

Arnaldo Melo, Maria Do Carmo Ribeiro, Univ. of Minho, Braga, Portugal
Construction Financing in Late Medieval Portuguese Towns [14th-16th c.]

Michela Barbot, Institutions et Dynamiques Historiques de l'Économie, École normale supérieure de Cachan, France
Between Market and Architecture: The Role of the College of Engineers, Architects and Land Surveyors in Real Estate Pricing in 16th-17th Century Milan

Gema Ramírez Pacheco, Federico García Erríñu, Faculty of Architecture at the Polytechnic Univ. of Madrid [ETSIA-UPM], Spain
Maria Jesús Pola Pérez Martínez, Juan Francisco Maciá Sánchez, Faculty of Architecture at the Polytechnic Univ. of Cartagena [ARQUIDE UPCT], Spain
Building Expropriation Process for the Construction of the New Dock at the Port of Cartagena [Spain] in the 18th Century

423. Brick & Tile
Chair: Lynne C. Lancaster, Ohio Univ., USA
Room 103
Gerald Elfer, Vienna Univ. of Technology, Austria
Masonry Constructions as Built Archives: An Innovative Analytical Approach to Reconstructing the Evolution of Imperial Opus Testaceum Brickwork in Rome

Moses Jenkins, Historic Scotland / Univ. of Dundee, UK
Three Key Aspects of the History of Brick Construction in Scotland

Sara Wermiel, Independent Scholar, Boston, MA, USA
Against Replication: Curved Brick at the Dunn of the Terraces Age

Miles Lewis, Univ. of Melbourne, Australia
The Marseilles Tile

440. Industrialization & Rationalization
Chair: TBA
Room 2
Kônda Fares, HTTP-CNAM, Paris, France
The Dismantled War: Barracks and Industrialization of Light Construction [1914-1918]

Vanessa Fernandez, ENSA de Toulouse / HTTP-CNAM, Paris, France
The Simplification of the Frame: Window Experiments in the Work of Le Corbusier in the 1920s

Rafael Hernando De La Cuerva, School of Architecture, Univ. de Alcalá ETSIA-UAH, Madrid, Spain
Rationalization of Systems and Materials in Construction in the Spanish Modern Movement: Fernando García Mercadal, 1921-1937

Leda Dimitriadi, ENSA Paris-Malaquais, France
Post-War Industrialized Construction Processes in France and Architectural Flexibility

Architectural Flexibility
Chair: ENSA Paris-Malaquais
Ensemble ENSA Paris-Malaquais, France

Architectural Anthropology: A Knowledge-Based Approach
Chair: Sascha Rosler, ETH Zurich, Switzerland
Sascha Rosler, ETH Zurich, Switzerland
Architectural Anthropology: A Knowledge-Based Approach
Wednesday 4 July

**Keynote Lecture**

**Men of Action - French Influence on the Founding of American Civil and Military Engineering**

Ledlie Klosky
Professional Engineer, United States Military Academy, West Point, NY, USA

**Coffee Break**

10:15-10:45

**Sessions**

10:45-12:45

402. Construction History, Education & Diffusion
405. Architectural & Structural Design 2
416. Contractors
424. Structural Bricks & Tiles
432. Vaults & Stereotomy 1
436. Wood Structures 1
441. Prefabrication 1
443. Hydraulics

12:45-14:00 Lunch at Paris-Malaquais

**Sessions**

14:00-16:00

403. Construction History, Heritage & Restoration
406. Applied Sciences 1
413. Transfer of Knowledge, Political Initiatives
417. Organization of the Construction Site
425. Stone
433. Vaults & Stereotomy 2
444. Infrastructure & Public Works, Bridges
396. Rules & Standards, Building Regulation Compared

16:00-16:45 Coffee Break + Transport to the CNAM

**Visit of the Musée des Arts et Métiers**

16:45-18:00

**Keynote Lecture:**

Amphi Paul Painlevé
Shigeru Ban
Architect, Tokyo (Japan)

*Works and Humanitarian Activities*

18:30-19:30

**CNAM Cocktail Dinner**

19:30-22:00
Wednesday 4 July, 10:45-12:45
MALAQUIS SITE

--- 402. Construction History, Education & Diffusion
Chair: Malcolm Dunkeld, London South Bank Univ., UK
Room 312
José Carlos Palacin Gonzalo, Sandra Cynthia Bravo Guerrero, Universidad Politécnica de Madrid, Spain
Construction of a Pendente Grid Crossing Vault
Denis Zastavni, Université catholique de Louvain [UL], Louvain-la-Neuve, Belgium
Maillard’s Practices for Structural Design [ETH-Bibliothek’s Virtual Exhibition]
Tullia Foi, Sergio Pietroiti, Università di Roma Tor Vergata, Italy
The Nervi System: A Model-Game to Understand
Werner Lorenz, Roland May, BTU Cottbus, Germany
Chair:

--- 405. Architectural & Structural Design 2
Chair: Anne Cormier, Université de Montréal, Canada
Room 104
Laurent Koetz, HTTP-CNAM Paris / LHAC-ENSA de Nancy, France
The Development of Belgian Ironworks in the 19th Century: Case Vrije Universiteit Brussel, Belgium
Private Archives of the 18th and 19th Centuries: Sources for the J.A. Coderch 1940-1964, School of Architecture, Universidad de Asia Minor
Calculation Tools for Use by Building and Civil Engineers up to the Early 20th Century
Bill Addis, Co-Editor, Construction History, Cambridge, UK
Parabola as Constructive and Symbolic Form
Sandeep Mukherjee, Indian Institute of Technology, New Delhi, India
Structural Morphology Presented on Surface Cladding: From Structural Brick to Ornamental Tile in the Westernised Far East
Nan-Wei Wu, Universidad Europea de Madrid, Spain
Tests on Tile Vaults in France in the 19th Century
José Calvo-lópez, Universidad Politécnica de Cartagena, Spain
Load-Bearing Wall Structures in the Works of Lluís Nadal
Enrique Rabasa Díaz, Miguel Ángel Alonso-rodríguez, Tomás Gil López, Ana López-Mozo, Universidad Politécnica de Catalunya, Spain

--- 416. Contractors
Chair: Dominique Burjot, Université Paris-Sorbonne, France [TBC]
Room 308
Joëlle Petit, HTTP-CNAM, Paris, France
Private Archives of the 18th and 19th Centuries: Sources for the History of Marble-Working in Belgium
Koen Verswijver, Ine Bertels, Ine Wouters, Quentin Collette, Vrije Universiteit Brussel, Belgium
The Development of Belgian Ironworks in the 19th Century: Case Studies and Reflections on Sources and Historiography
Maria Luiza de Freitas, Federal Univ. of Pernambuco [UFPE], Recife, Brazil
Architecture and Reinforced Concrete in Brazil: The Action of the Largest Construction Companies in Brazil, Christiansi & Nielsen and Ways & Freytag
Javier Martínez-Gonzales, Marta García-Alonso, School of Architecture, Univ. of Navarra, Pamplona, Spain
Building Modern Spain: Some Notes on Huarte y Cia

--- 424. Structural Bricks & Tiles
Chair: Tom F. Peters, Lehigh Univ., USA [TBC]
Room 103
Jennifer Zessin, John Ochsendorf, MIT, Cambridge, MA, USA
Efficiency in Forms: Thomas Jefferson’s Serpentine Walls at the University of Virginia
Esther Redondo Martínez, Dept. of Building Technology, Universidad Europea de Madrid, Spain
Tests on Tile Vaults in France in the 19th Century
Non-Wai Wu, Univ. of Edinburgh, UK
Structural Morphology Presented on Surface Cladding: From Structural Brick to Ornamental Tile in the Westernised Far East
Gemma Madina Soria, Universitat Politècnica de Catalunya, Spain

--- 432. Vaults & Stereotomy 1
Chair: Richard A. Edlin, Univ. of Maryland, USA
Room 206
Ursula Quatemberg, Austrian Archaeological Institute, Vienna, Austria
Building Archaeology and Restoration, Dept. for History of Architecture and Building Archaeology, Univ. of Technology, Vienna, Austria
Opus reticuum in Dome and Barrel Vault Constructions in Roman Asia Minor
Enrique Rahaba Diaz, Miguel Angel Alonso-Rodriguez, Tomás Gil López, Ana López-Mozo, Universidad Politécnica de Madrid, Spain
José Calvo-lópez, Universidad Politécnica de Cartagena, Spain
Alberto Sanjurjo Alvarez, Universidad San Pablo-CEU, Madrid, Spain
The 100 Fi Vault: The Construction and Geometry of the Sala dei Baroni of the Castel Nuovo, Naples
Marina Šimunić Buršić, Faculty of Architecture, Univ. of Zagreb, Croatia
Construction of Early Rib-Vaults in Croatia
Alberto Sanjurjo Alvarez, Univ. CEU-San Pablo, Madrid, Spain
The Chambers and the Construction of Vaulted Stone Spiral Staircases

--- 436. Wood Structures 1
Chair: François Fleury, ENSA de Lyon, France
Room 302
Silvia Dandria, Politecnico di Milano, Verona, Italy
Commercial Categories and Applications of Construction Timber in the Trentino-Venona Area [14th-16th Centuries]
Giuseppe Rocioli, ICAR Department, Politecnico di Bari, Italy
Wooden Embankments in the Lagoon Territory of Cappadocia between the 13th and 19th Centuries
Anja Winzenmann, Stefan M. Holzer, Universität der Bundeswehr München, Neubiberg, Germany, Clemens Voigts, Deutsches Archäologisches Institut, Rome, Italy
Wooden Italian Wide-Span Roofs of German 19th Century Theatre Buildings
Stephen Buonopane, Bucknell Univ., Lewisburg, PA, USA, Sarah Erbright, Univ. of Wyoming, Laramie, WY, USA, Alex Smith, Aup, New York City, NY, USA
The Timber Trusses of R.W. Smith: History, Design and Behavior

--- 441. Prefabrication 1
Chair: Volker Witzig, Brandenburg University of Technology, Germany
Room 314
Francis Guilmard, CNAM, Paris, France
Charles Moullard Bernard de Quelen: A Precursor of Prefabricated Construction
Rafael García García, Universidad Politécnica de Madrid, Spain
Concrete Mecanics: Precast Constructions after the Second World War in the Netherlands
Hernando Vargas, Universidad de los Andes, Bogota, Colombia
RecTel: The Development of Floor and Roof Assemblies of Precast Concrete Cells in Colombia, 1949-1989
Laura Greco, Univ. of Calabria, Cosenza, Italy
The First ENI-SNAM Headquarters in San Donato Milanese: Some Features of Industrialization in Construction Techniques Applied to Office Buildings in the Post Second World War Period in Italy

Sessions

Wednesday 4 July, 14:00-16:00

MALAQUAIS SITE:

403. Construction History, Heritage & Restoration
Chair: Serge Fedorov, Karlsruhe Institute of Technology, Germany
Room 312

Ishashosen Odiana, Université Paris 1, France, Abraham A. Taiwo, Rosemary Ajjo, Dept. of Architecture, Federal Univ. of Technology, Akure, Nigeria

Use of Modern Materials in the Conservation of Traditional African Buildings

Damiana Lucia Paternò, Politecnico di Milano, Italy
The Interpretation of Palladio’s Building Techniques: Palazzo Chiericati and the Restorations of the 19th Century

Chiericati and the Restorations of the 19th Century

Francisco Prado, María F. Vargas, renato D’alençon, Daniel Korwan, Développement durable, France

room 312

406. Applied Sciences
Chair: Hermann Schlömm, Max Planck Institute for Art History, Italy
Room 103

Sara Franceschelli, Università di Lecce, Italy

The Aeolian-Style Polygonal Masonry in Larisa [Buruncuk] and Its Regional Context

Massimo Gomi, AOC Archaeology Group, Loanhead, UK

413. Transfer of Knowledge, Political initiatives
Chair: Patrick Février, Conseil général de l’environnement et du développement durable, France
Room 302

Francisco Prado, María F. Vargas, P. Universidad Católica de Chile, Santiago, Chile, Renato D’Alencar, Daniel Korwan, Johanna Moser, Technische Universität, Berlin, Germany

Traces of Construction Following Migration: Transverse Gable; Massive Timber and Carpenter’s Marks in the Houses of the 19th Century German Settlers in Southern Chile

Martin Trusca, RWTH Aachen, Germany, Friedmar Voormann, Karlruhe Institute of Technology, Germany

Early Iron Bridge Construction for the Grand Duche of Baden and for Central Europe

Hilal Tağış Örneçoğlu, Dept. of Architecture, Akdeniz Univ.

FFA, Antalya, Turkey, Bilge Kıcıkökdelen, Gazi Univ. NIKER-TR Project Office, Ankara, Turkey, Ash Er Akan, Ministry of Science, Industry and Technology, Ankara, Turkey

The Roots of Foreign Effects in the Turkish Construction Sector [1797-1933]

Ričič Miyake, Fuj Women’s Univ., Sapporo, Hokkaido, Japan, Michelà Macjima, Keio Univ., Tokyo, Japan

A Study of Military Facility Planning from the Viespoint of Technological Transfer from France to Japan

Andre Guillerme, HTTP-CNAM, France

417. Organization of the Construction Site
Chair: André Guillerme, HTTP-CNAM, France
Room 206

Lisa Barelli, Sapienza Università di Roma, Italy

Construction Methods in Cathedrals in Rome [Eighth-Ninth Centuries]

Andrea Bonavita, Università Iuav di Venezia, Italy

Building the New Prisons of Venice and Their Bridge [1591-1604]

Matthieu Plano, GSA-ENS Paris-Malaquais, France

The Building of the Arsenal of Le Havre in the 17th and 18th Centuries

Anne Conchon, Université Paris 1-IDHEE, France, Katherine McDonough, Stanford Univ., CA, USA

Road Construction Sites in 18th Century France: Labor and Administration in Action

425. Stone
Chair: Jacques de Mandat-Grancey, Fondation du Patrimoine, France
Room 308

Dimitris Thesosdopoulos, Univ. of Edinburgh, UK, John Barber, Graeme Cavers, Andy Head, AOC Archaeology Group, Lozahed, Midlothian, UK

The Achievement of Structural Stability in the Drystone Iron-Age Broch Towers in North Scotland

Turkg Sauer, Kaan Sag, ITU, Istanbul, Turkey

The Aeolian-Style Polygonal Masonry in Larisa [Buruncuk] and Its Regional Context

Wido J. Quist, TU Delft, Netherlands, Timo G. Nijland, TNO, Delft, Netherlands

A Mining Engineer in Heritage Land: A.I.W.E. Van der Veen and Early Research on Natural Stone for the Netherlands State Commission on Conservation [1920-1936]

Angelo Bertoluzi, Dept. of Civil, Environmental and Architectural Engineering, Univ. of Padua, Italy / GSA-ENS Paris-Malaquais, France

Stone Cladding Techniques in French Modern Architecture [1920-1940]

433. Vaults & Stereotomy
Chair: Jacques Heyman, Univ. of Cambridge, UK
Room 206

Rosa Senent Dominguez, Miguel Ángel Alonso Rodriguez, Enrique Rabana Díaz, Polytechnic Univ. of Madrid, Spain, José Calvo López, Polytechnic Univ. of Cartagena, Spain

The Irregular Ribbed Vault of the Sacristy of the Cathedral of Saint-Jean Baptiste in Perpignan

Rafael Martín Taveranos, Carmen Pérez De Los Ríos, Rosa Senent Dominguez, Polytechnic Univ. of Madrid, Spain

Late German Gothic Methods of Vault Design and Their Relationships with Spanish Ribbed Vaults

Stefania Petralla, Faculty of Architecture, Polytechnic of Bari, Italy, Safdar Ribbed Vaults as a Masterpiece of Iranian Construction Techniques

Giuseppe Fallacara, Facoltà di Architettura, Dipart. ICAR, Politecnico di Bari, Italy

The Lece Vault: History, Construction Techniques and New Design Perspectives

444. Infrastructure & Public Works, Bridges
Chair: Teruhiko Yoda, Waseda Univ., Japan
Room 104

Ivan Ferrari, Univ. of Salerno, Lecce, Italy

The Roman Bridges of the Via Traiana: An Innovative Building System

Stefan M. Holzer, Universität der Bundeswehr München, Neubiberg, Germany

Innovation in 19th Century Vaulted Bridge Construction

Dario A. Gasparini, Case Western Reserve Univ., Cleveland, OH, USA

Sandlender, Birdall and the Roebling Co: Development and Diffusion of Construction Technologies for Suspension Bridges, 1928-1952

Eberhard Pelle, Hessen Mobili – Roads & Traffic Management, Wiesbaden, Germany, Karl-Eugen Kuree, Ernst & Sohn, Berlin, Germany

The Development of Multi-Cable-Stayed Bridges

430. Rules & Standards, Building Regulation Compared
Chair: Musa Sroor, Birzeit Univ., Palestine
Room 306

Julien Paget, UMR 6170 TELEMM – MASH, Aix-en-Provence, France

Construction Market Organization in the 17th Century: Norms, Actors and Practices Examples of Extension Plans in Aix and Marseille

Maria Teresa Palla Mondnate, Univ. of Salamanca, Spain

Limitations Stemming from the Legal Regulation of Designs of Foreign Architects in Spain in the 19th Century: The Case of the Basque Country

Robert Carvins, CNRS-Université Panthéon-Assas, Paris / ENSA de Versailles, France

For a Comparative Study of Construction Laws
Thursday 5 July
LA VILLETTE SITE

Sessions 9:00-11:00
410. Structural Analysis & Modeling 1
414. Technical Literature, Images & Representation
418. Scaffolding and Machines
426. Reuse & Recycling
427. Earthen & Plaster Structures
434. Shells & Thin Vaults
442. Natural & Technical Risk, Earthquake Design
445. Infrastructure & Public Works, Transportation

11:00-11:30 Coffee Break

Sessions 11:30-13:00
303. Transfer of Knowledge, Colonial Situations 2
304. Rules & Standards, Specifications
310. Technical Literature, Publications
314. Deconstruction & Reconstruction
316. Reinforced Concrete, The Hennebique Companies
317. Metal Structures 1

13:00-14:00 Lunch at Paris La Villette or Box Lunch

14:00-19:00 Visites [TBC]
CNAM Central Library: Roof Framing & Collection
Concrete Roofs in Reims: Boulingrin Hall & Cathedral
Constructing Other Worlds: Desert of Retz and Aqueduct
Constructive History in Saint-Denis: Reserves of the CNAM & Basilica
Exploring Structure at the Louvre: Apollo Gallery & Carrousel Arch
In Construction: Jean Bouin Stadium & Louis Vuitton Foundation
Innovative Construction: Maison de Verre & Saint Pierre de Montmartre
Metal Framed Churches: Saint Eugène-Sainte Cécile, Sainte Marguerite, Notre-Dame de Travail
Observing the Paris Observatory
On the Traces of Roman Paris: Frigidarium, Lutetia Arena, Archeological Crypt
Renovation in Progress: BnF Richelieu & Hôtel des Monnaies
Urban Renewal: Paris Rive Gauche & Freyssinet Hall
Versailles Château Roof Framing: Chapel & Opera
Versailles: Hydraulic Networks & Cathedral Roof Framing
Sessions

Thursday 5 July, 9:00-11:00
LA VILLETTESITE

410. Structural Analysis & Modeling I
Chair: Patricia Radel-St-Grave, Université catholique de Louvain, Belgium
Amphi 4
David Wendland, TU Dresdens, Germany
Arches and Spires: The Geometrical Concept of the Curvilinear Rib Vault in the Alteburgschul at Meissen and Some Considerations on the Construction of Late-Gothic Vaults with Double-Curved Ribs

Thierry Ciblac, ENSA Paris La Villette / CNRS MAP-MAACC, Paris, France
Analysis of Philippe de la Hire’s Arch Theory Using Graphic Statics

Javier Suárez, Laura Cirera, School of Architecture, Univ. of Granada, Spain
Structural and Constructive Analysis of the Acropéa Real Aquaduct in the Alhambra, Granada

Sanchez Huerta, Universidad Politécnica de Madrid, Spain
Structural Analysis of Thin Tile Vaults and Domes: The Inner Oval Room of the Basílica de la Virgen de los Desamparados in Valencia

411. Technical Literature, Images & Representation
Chair: Chen Zhan, Nanjing University, China
Room 112
Maria Graziella D’Amello, Università Tor Vergata, Italy
A Study on Distribution and Reuse of Tram Line Paving Stones in Bergama, Turkey

Martin Bachmann, German Archaeological Institute, Istanbul, Turkey
The Reuse of Granite Columns in Rome, 15th-16th Centuries

412. Reuse & Recycling
Chair: Joël Sakarovitch, GSA-ENSA Paris-Malaquais, France [TBC]
Amphi 5
Stéphane Büttner, Centre d’études médiévales d’Auxerre, CNRS / Université de Bourgogne, Auxerre, France
The Use of the “Already There”: Reuse and Recycling for Monumental Building in the West in Late Antiquity and the Medieval Period

Emanuela Montelli, Università degli Studi “La Sapienza”, Rome, Italy
The Reuse of Granite Columns in Rome, 15th-16th Centuries

Martin Bachmann, German Archaeological Institute, Istanbul, Turkey
The Revival of Classical Building Techniques in Late Ottoman Architecture in Bergama, Turkey

Sachiko Okada, Ichiro Kobayashi, Dept. of Civil & Environmental Eng., Graduate School of Science & Tech., Kumamoto Univ., Japan
Koichi Nakama, Dept. of Civil Eng., Graduate School of Tech., Kyushu Inst. of Tech., Kitakyushu City, Japan
A Study on Distribution and Reuse of Tram Line Paving Stones in Japan

413. Earthen & Plaster Structures
Chair: Dimitris Theodossopoulos, Univ. of Edinburgh, UK
Amphi 7
Annick Danet, Universidade Nacional Autónoma de México, Mexico City
Earth Behnado Guerrero-Raga, Universidad Autónoma Metropolitana Xochimilco, Mexico City, Mexico
Earthen Building Techniques in the Humid Tropics: The Archaeological Site of La Joya, Veracruz, Mexico

Anaustin Arévalo, Politecnico di Milano, Italy
Prevariance of the Perishable: Wattle-and-Daub Architectures in the Roman Period: A Census of the Archaeological Findings in Gallia Cisalpina and the Case of Medieval

Fernando Vegas, Camilla Miletto, Mario Diodato, José García Soriano, Carlos Gran Giménez, Universitá Politécnica de Valencia, Spain
Traditional Structures Made with Gyproom Pillars: A Reasoned Hypothesis

Lucia Boiardi, Maria Regina Teschini, Riccardo Galli, Bolonga Univ., Italy
History and Technique of an Italian Wooden Floor System Based on Reeds and Gyproc Plaster Frame: The Case of Reggio Emilia

414. Natural & Technical Risk, Earthquake Design
Chair: TBA
Room 112B
Hélène Dessalles, École normale supérieure, AOROC, Paris, France
Notes on Vulnerability and Construction Techniques in Roman Times

Giovanni Fatta, Tiziana Campisi, Calogero Vinci, Dipartimento di Architettura, Università degli Studi di Palermo, Italy
The Use of Vaults in Western Sicily: Originality and Continuity of an Imported Building Technique

João Caldas, Rita Lisboa, Instituto Superior Técnico-Universidade Técnica de Lisboa, Portugal
The Use of Vaults in the Reconstruction of Pombaline Downtown Lisbon

Aki Sasa, RFR Engineers, Paris, France
The First Earthquake-Resistant Structures in Japan: Forgotten Lessons from the Earthquake of Ise-Jima [1855], Nobi [1891] and San Francisco [1906]

415. Infrastructure & Public Works, Transportation
Chair: Masato Tanaka, Kumamoto Univ., Japan
Room 110
Matteo Perin, ENSA Strasbourg / GSA-ENSA Paris-Malaquais, France
Notes on Technological and Architectural Aspects of London Transport Power Stations and Substations, 1880-1915

Ted Shelton, Univ. of Tennessee, Knoxville, TN, USA
The Highway Comes to the American City: Automobility, Urbanity and the Functioning of City Streets

Evangelia Chatzikonstantinou, Paschalis Samarianis, National Technical Univ. / Athens, Greece
Notes on the Construction of the Interurban: The Makris Project

Yoji Hoshino, Sachiko Okada, Dept. of Civil and Environmental Engineering, Graduate School of Science and Technology, Kumamoto Univ., Kumamoto City, Japan
Database for Cultural Affairs, Tokyo, Japan
Historical Research for the Planning and Construction of Minami Port
**Sessions**

**Thursday 5 July, 11:30-13:00**  
**LA VILLETTTE SITE**

____ 303. Transfer of Knowledge, Colonial Situations  
Chair: Margareta De Silva Pereira, Universidade Federal do Rio de Janeiro, Brazil  
Room 110

Jorge Gallardo Díaz, Universidad Nacional de Colombia, Manizales  
Barbetti Serafini. Builder of Vaucluse Bridges in South-Western Colombia [c. XIX]

Hsin-Yao Hsu, Graduate School of Engineering, Univ. of Tokyo, Japan  

Hélène Vacher, ENSA de Nancy / HTTP-CNAM, Paris, France  
Research and Construction in the Late Colonial Settings: Institutions, Technology and Development Programs in Africa, 1948-1958

____ 304. Rules & Standards, Specifications  
Chair: Brian Bowen, Georgia Institute of Technology, USA  
Room 112A

Beatrice Maria Fracchia, Politecnico di Torino, Italy  
History of Construction in the 18th Century through the “Istruzioni” Written by Filippo Juvarra

Jeroen Cornilly, Catholic University of Louven, Belgium  
Contractors of 19th Century Public Works in Belgium: Looking for a Research Approach for the Rural Areas

____ 310. Technical Literature, Publications  
Chair: Javier Girón, Universidad Politécnica de Madrid, Spain [TBC]  
Room 112B

Dermot O’Dwyer, Ronald Cox, Dept. of Civil, Structural and Environmental Engineering, Trinity College Dublin, Ireland  
George Simple and the Reconstruction of Essex Bridge in Dublin 1753-1755

Christoph Raubut, Institute of Historic Building Research and Conservation, ETH Zurich, Switzerland  
Handbooks on Construction Site Supervision in the 19th Century

Emmanuelle Minault-richomme, Bibliothèque du CNAM, Paris, France  
The Conservatoire Numérique: A Reservoir of Digitized Resources for Construction History

____ 314. Deconstruction & Reconstruction  
Chair: Stéphane Büttner, Centre d’études médiévales d’Aix-en-Provence, CNRS / Université de Bourgogne, France  
Amphi 4

Philippe Bernardi, CNRS-Lamop, Paris, France, Daniela Espoito, Dip. di Soilv, Disegno e Restauro dell’Architettura, Supesina, Università di Roma, Italy  
For a History of Deconstruction

Nick Beech, Bartlett UCL, London, England, UK  
Rescue, Recon? The Demolition Industry and Its Relationship to the London County Council Architect’s Department in the Second World War

Richard Burt, Auburn Univ., Auburn, AL, USA  
The Builder’s Flying Squads: An Analysis of the Ministry of Works Special Repair Service Activities during WWII

____ 316. Reinforced Concrete, The Hennènique Companies  
Chair: Paul Acker, Lafarge, France  
Amphi 7

Hermann Schlimm, Bibliotheca Hertziana, Max Planck Institute for Art History, Rome, Italy  
François Hennènique’s Patents as Applied on the Building Site: The Mercurio-Oriental in Genoa [1886-1889] and The Creation of a Local Construction Network

Mónica Silva-Conteras, Universidad Iberoamericana, Mexico City, Mexico  
Béton Armé in a Sinking City: Mexico 1902-1914

Stephanie Van De Voorde, Ghent Univ. / Centre for Flemish Architectural Archives (CVAa), Antwerp, Belgium, Rika Devos, Ghent Univ. / Univ. College of St. Lucas Architectuur, Brussels, Belgium  
The ‘Scientification’ of Reinforced Concrete in Belgium during the Interwar Period: Development and Dissemination of Scientific, Theoretical and Technical Knowledge

____ 317. Metal Structures 1  
Chair: Werner Lorenz, Brandenburg Univ. of Technology, Germany  
Amphi 5

Lara Silvnik, Faculty of Architecture, Univ. of Ljubljana, Slovenia  
A Prefabricated Cast Iron Three-Hinged Arch Bridge in Ljubljana

Volker Wetzk, Brandenburg Univ. of Technology, Cottbus, Germany  
Historic Bridge Bearings: Material Research on Cast Steel

Bernard Espin, Université Libre de Bruxelles, Belgium  
The Viervenne Bridge at its Heyday: Rational Design, Experiments and Brittle Failure

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**Friday 6 July**

**10:15-11:00**  
**MALAQUAIS SITE, AMPHI BINET**

Antonio Becchi  
Max Planck Institute for the History of Science, Berlin, Germany  
Looking for an Equilibrium Point: A Moonwalk with Vitruvius and Gyro Gearloose

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**Sessions**

11:00-13:00  **MALAQUAIS SITE**

307. Applied Sciences 2  
407. Applied Sciences 2

408. Structural Analysis & Modeling 2  
419. Management of the Construction Site

421. Institutions  
428. Mortar

429. Reinforced Concrete, Reception & Dissemination  
435. Wood Structures 2

438. Interior Environment, Heating  
439. Wood Structures 2

13:00-15:00  Lunch at Paris-Malaquis + Transport to Versailles

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**Sessions 15:00-16:30**  
**VERSAILLES SITE**

302. Construction History, Sources & Methods 1  
305. Rules & Standards, Architectural and Urban Norms

308. Training & Education 1, Engineers  
309. Technical Literature, Manuscripts  
311. Craftsmanship & Technical Tasks  
315. Metal  
320. Prefabrication 2

16:30-16:50  Coffee Break

16:50-18:20  **VERSAILLES SITE**

301. Construction History, Sources & Methods 2  
307. Training & Education 2, Architects

312. Labor Market  
313. Ownership of Property  
318. Interior Environment, Lighting

319. Saving & Recovery Energy  
322. Infrastructure & Public Works

18:20-18:40  Coffee Break

18:40-19:40  **VERSAILLES SITE, AUDITORIUM DE LA FORGE**

Keynote Lecture

Robin Middleton  
Columbia University, New York City, NY, USA  
Jean Rondel’s Pioneering Attempt to Write a History of Construction, 1801-02

19:40-21:30  Training Session at the Academy of Equestrian Arts

21:30-23:00  Cocktail at Versailles City Hall

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Detail from drawing, Jean Rondel.  
Reconsidering the “Considerable Expense” Involved in Building
Université de Toulouse II – Le Mirail, France

Reconstructing Fuengirola in 1485
Building during the War of Granada: The Project for
Spain
Valencia, Spain,
University of Navarra, France
raúl romero Medina

Chair: Malaquais-GSA, France

Floriana Mondardini, GSA-ENSA Paris-
Maurizio Brocato

On the As-Built Geometry of the Vaults of the Basilica of Maxentius
Dept. of Engineering
alejandra albuerne, Martin Williams

Roman Dome
The Membrane Analysis of Thin Masonry Shells
Univ. of Cambridge, UK
Jacques Heyman

room 206
Chair: Studi di Genova, Italy

Dip. di Scienze per l'Architettura, Università
di Genova, Italy

Same Title, New Contents: Saint-Venant’s Revised Edition [1864] of
Navier’s Résumé Des Leçons Sur L’Application De La Mécanique
[1826, 1833]

Friday 6 July, 11:00-13:00

407. Applied Sciences 2
Chair: Antonella Mastrorilli, ENSA de Lyon, France
Room 103

Alberto Grimoldi, Politecnico di Milano, Italy
Guarini’s Flat Vaults and Thin Vaults on Wooden Beams in the
Duchy of Modena

Carlo Biaschini, Dip. di Storia, Disegno e Restauro dell’Architettura, Sapientia-Università di Roma, Italy
The Role of Stereotomy in Guarini Guarini’s Space Research
Andrew Kohler, Univ. of Applied Sciences Potsdam, Germany
Theory and Practice in Timber Construction 1800-1830

Federico Focis, Dip. di Scienze per l’Architettura, Università degli Studi di Genova, Italy
Same Title, New Contents: Saint-Venant’s Revised Edition [1864] of
Navier’s Résumé Des Leçons Sur L’Application De La Mécanique
[1826, 1833]

408. Structural Analysis & Modeling 2
Chair: Bill Addis, Co-Editor, Construction History, UK
Room 206

Jacques Heyman, Univ. of Cambridge, UK
The Membrane Analysis of Thin Masonry Shells

Timothy Cooke, John Ochsendorf, MIT, Cambridge, MA, USA
The Temple of Diana at Baia: History and Structure of an Imperial
Roman Dome

Alejandro Alburquerque, Martin Williams, Dept. of Engineering
Science, Univ. of Oxford, UK, Janet Delaine, Faculty of Classics,
Univ. of Oxford, UK
On the As-Built Geometry of the Vaults of the Basilica of Maxentius

Maurizio Breato, Lucio Mondardini, GSA-ENSA Paris-Malaquais-GSA, France
An Insight into Abbéil’s Flat Vault through Numerical Analyses

419. Management of the Construction Site
Chair: Armando Melo, Univ. of Minho, Portugal
Room 308

Raúl Romero Medina, Universidad CEU-Cardenal Herrera,
Valencia, Spain, Manuel Romero Becjarano, Universidad de Sevilla,
Spain
Building during the War of Granada: The Project for
Reconstructing Fuengirola in 1485

Catherine Isaac, Université de Toulouse II – Le Mirail, France
Reconsidering the “Considerable Expense” Involved in Building
the Lavane Bridge in Languedoc [1769-1791]
Kenneth F. Robson, Univ. of Oklahoma, Norman, OK, USA
Managing the Design and Construction of the Empire State
Building: Are Those Lessons for Today’s Projects?

Camilo Villate, Brando Tamayo, Univ. of Los Andes, Bogota,
Colombia
The Aravaca Tower: Practices Driving Technical Innovations in a
Construction Firm in the 60s

421. Institutions
Chair: Tricia Mheehan, ACS-ENSA Paris Malaquais / UIUC-SAPV, France
Room 306

Malcolm Dunkeld, London South Bank Univ., London, UK
The Great Hall of the Institute of Civil Engineers Headquarters
Building

Christiane Weber, Karlsruhe Institute of Technology, Germany,
Volker Ziegler, Universitätsszitgarten, Stuttgart, Germany
Construction Material Testing at MPI Stuttgart during the Third Reich

Alejia Grawoka, Instituto of Art History, Univ. of Warsaw, Poland
An Institution for Structural Innovation: Office for the Study and
Design of Industrial Building Types (BISTYP) in Postwar Poland

Ana Paula Koury, São Judas Tadeu Univ., São Paulo, Brazil
Brazilian Construction Center: Initiative for Management of the
Brazilian Housing Construction Industry [1969-1972]

428. Mortar
Chair: TBA
Room 2

Frédéric Davidovits, Geopolymer Institute, Saint Quentin, France
Geological Origin of the Reagents Constituting Roman Mortar,
According to Vitruvius

Reinhard Heinz, Vienna, Austria
The First Verifiable Application of Cast Mortar in Prefabricated
Construction in the Cofferdamed of the Early Hellenistic
Mausoleum of Beleri

Barbara Thudwaldner, Institute of History of Art, Building
Archaeology and Restoration, Dept. for History of Architecture and
Building Archaeology, Univ. of Technology, Vienna, Austria
The Use of Mortar in Late Hellenistic Construction: The Case of
the Octagon in Ephesos

Marco Cofani, Politecnico di Milano – DIAP, Italy
The Knowledge and the Development of Mortars between the 18th
and 19th Centuries: The Case-Study of the Verona Amphitheatre
Restoration

429. Reinforced Concrete, Reception & Dissemination
Chair: Thomas Leslie, Iowa State Univ., USA
Room 104

Cédric Avenier, Anne Coste, Laboratoire Cultures constructives-
ENSA de Grenoble, France
Auguste Perret: The Grenoble Orientation Tower – Architecture,
Art and the Press

Eduardo Curra, Dept. of Civil, Building and Environmental
Engineering, Univ. of Rome Sapienza, Italy
Manual Abilities and Modern Constructive Techniques in a
Building by Arturo Gianesini: The S. A. Superfive Plant and the
System Barroni-Lüling, Rieti-Italy, 1926

Andrew Babenuek, Imperial College, London, UK
The Transformation of Construction by Concrete

Jesús Anuya Díaz, Universidad Politécnica de Madrid, Spain
Reinforced and Prestressed Concrete in High-Rise Construction in
Spain, 1930-1975: Technique and Innovation

435. Wood Structures 2
Chair: James W.P. Campbell, Univ. of Cambridge, UK
Room 102

Zeynep Eres, Istanbul Technical Univ., Turkey, Eylem Özdönmez,
Istanbul Univ., Turkey
A New Approach in Studying the Structural Systems of Prehistoric
Wooden Post Buildings: A Case Study from Aşağı Pınar in Eastern
Thrace

Dietmar Kurapkat, German Archaeological Institute, Berlin,
Germany
A Roof under One’s Feet: Early Neolithic Roof Constructions at
Göbekli Tepe, Southeastern Turkey

Alexandra Harree, Tsinghua Univ., Beijing, China
Fan-Shaped Bracerr Set and Their Application in Different
Building Materials: A Discussion of the Chinese Fangguo Tradition
and Jin-Dynasty Tomb Architecture in Southwest Shanxi Province

Christof Krauskopf, Brandenburg State Office for the Preservation
of Monuments and Sites, Wünsdorf, Germany
Medieval Timber Structures in Eastern Germany: Archaeological
Evidence from Eberswalde

438. Interior Environment, Heating
Chair: Emmanuel Gallo, HTTP-CNAM / ENSA Paris-Belleville, France
Room 312

Lynne C. Lancaster, Ohio Univ., Athens, OH, USA
Heated Vaulting in Roman Britain and the Invention of Hollow
Terracotta Vessours

Rainer Atzback, Aarhus Univ., Denmark
The Stove: Constructive Evidence for the Concept of a Smoke-Free
Heated Living Room between the Alps and Scandinavia

Syrödon Papavassiliou, Magdalini Makrodimitri, James
Campbell, Univ. of Cambridge, UK
The Construction and Integration of Historic Heating Systems in
Churches in the United Kingdom from the 17th to the Early 20th
Century

Carlo Manfredi, Politecnico di Milano, Italy
Comfort Versus Industry: Maintenance of the Royal Palaces of
Milan during the 1800s
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### 308. Training & Education 1, Engineers
**Chair:** Gay Lambert, ENSA Paris-Belleville / HTTP-CNAM, France  
**Room E221**
- Willemjine Linnos, Krista De Jonge, Univ. of Leuven, Belgium  
  *How Belgian Engineers Paved on Their Knowledge between 1830 and 1865: Education, Association and Publication*
- Mike Chrimes, Institution of Civil Engineers, London, UK  
  *Short of Education or Short of Engineers: British Civil Engineering 1890-1910*
- Simona Tacenti, Univ. of Salerno, Italy  
  *A Study on the Traditional Production of Lime: The Role of Oral Sources*

### 309. Technical Literature, Manuscripts
**Chair:** Joël Sakarovitch, GSA-ENSA Paris-Malaquais, France  
**Room E229**
- Paola Travaglini, Politecnico di Milano, Italy  
  *“De Fenestris”: An Unpublished Treatise from the Mid-15th Century on the Construction of Windows and Stained Glass*
- Francesco Menchetti, Laura S. Pelissetti, Faculty of Science and Architecture, Polytechnic of Milan, Italy  
  *Guidohaldo del Monte as Architect and the Construction of Santa Maria degli Angeli in Peurano*
- Marisa Tabarrini, Sapienza Università di Roma, Italy  
  *An Unpublished Treatise on Waters by Vincenzo Della Greca: A Source of Carlo Fontana’s Utilissimo Trattato Delle Acque Correnti*

### 310. Rules & Standards, Architectural and Urban Norms
**Chair:** Robert Carvais, CNRS-Université Panthéon-Assas / ENSA de Versailles, France  
**Room E102**
- Juliette Heru-Bialard, Univ. of Nantes / Institut national d’histoire de l’art, Paris, France  
  *The Architecture pratique by Pierre Bullet (1691) and the Normalization of the Construction Process*
- Esperanza González Redondo, Alcalá Univ., Madrid, Spain  
  *The Structure of Houses in Madrid 1669-1900: Buildings and Documents*
- Silvia Amaral Palazzi Zakia, Faculdade de Arquitetura e Urbanismo de São Paulo [FAU-USP], Brazil  
  *The First Building Code of Campinas – 1934: A Legal Instrument of the Urban Modernization Process of the City*

### 311. Craftsmanship & Technical Tasks
**Chair:** Valérie Nègre, ENSA Paris-La Villette / HTTP-CNAM, France  
**Room E221**
- Silke Kupp, Ana Paula Baltazar, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil  
  *Metropolitan Vernacular: On the History of Informal Construction in a Brazilian City*
- Gülşah Çelik, Faculty of Architecture, Middle East Technical Univ., Ankara, Turkey  
  *A Case Study of Local Builders’ Carpentry Tools: Traditional Constructions of Ürüşlu, Turkey*
- Elizabeth Cook, College of William and Mary, Williamsburg, VA, USA  
  *Building Culture and Competence: Demonstrating Knowledge on Construction Sites in 18th Century Virginia*

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301. Construction History, Sources & Methods 2
Chair: João Mascarenhas-Mateus, CES-Univ. of Coimbra, Portugal
Amphitheater 217
Amparo Graciani, Univ. of Seville, Spain
Metropolitan Foundation Deposits in the Lower Museum
Dirk Bühler, Deutsches Museum, Munich, Germany
Carolina Heldt D’Almeida, Instituto de Arquitectura e Urbanismo da Universidade de São Paulo, São Carlos, Brazil
Analysis of the Construction Site as a Historical Document of its Production Process

307. Training & Education 2, Architects
Chair: Robin Middleton, Columbia Univ., USA
Room E226
Hélène Roosteau-Chambon, Université de Nantes, France
Teaching Construction in the Académie Royale d’Architecture
Valérie Negro, ENSA Paris-La Villette / HTTP-CNAM, Paris, France
Oral Transmission and the Use of Models in the Teaching of Architecture and Construction at the Turn of the 19th Century
Guy Lambert, ENSA Paris-Belleville / HTTP-CNAM, Paris, France
“Purpose” and “Means” of Architectural Design: Construction in Julien Guadet’ s Teachings in Architectural Theory

312. Labor Market
Chair: Claes Cadenby, Chalmers Univ. of Technology, Sweden
Room E221
Linda Clarke, Charlie McGuire, Christine Wall, Univ. of Westminster, London, UK
The Significance of Building Labour to the Production of the Built Environment

313. Ownership of Property
Chair: Jean-Louis Halpérin, École Normale Supérieure, France E102
Musa Suroor, Dept. of History, Birzeit Univ., Palestine
The Role of the Islamic Pious Foundations [Waqf] in Building the Old City of Jerusalem during the Islamic Periods (637-1917)
Claire Pimenta Do Vale, Centre for Architecture and Urbanism, Faculty of Architecture, Univ. of Porto, Portugal, Vitor Trindade Abreantes, Faculty of Engineering, Univ. of Porto, Portugal
Urban Dynamics and Horizontal Property: Case Study of the Bouvista Axis, Porto, Portugal
Miguel Artola Blanco, Universidad Autónoma de Madrid, Spain
Changing Patterns in Residential Construction and the Real Estate Market: Spain, 1910-1960

318. Interior Environment, Lighting
Chair: Nathalie Simonnot, Léa-ENSA de Versailles, France E229
Laura Balboni, Paolo Corradini, Angelo Landi, Politecnico di Milano, Italy
Artificial Light in the Aristocratic Palaces in the Po Valley between the 17th and 18th Centuries
Giulio Sampoli, Accademia di Architettura, Mendrisio, Switzerland
Artificial Light in Architecture in France and Italy during the First Years of the 20th Century: From Gas Light to Electric Light
Giulia Marino, EPFL, ENAC – LA-TSAM, Lausanne, Switzerland
The World Health Organization Headquarters in Geneva (1960-1966): How Mechanical and Electrical Services are Integral to Reading Built Form

319. Saving & Recovery Energy
Chair: Carlo Mandrini, Politecnico di Milano, Italy
Room E221
Kamille Mosthtaghe Gohari, GSA-ENSA Paris-Malaquais, France
The Morphological Evolution of the Vertical Axle Windmill between the Second and the 18th Centuries A.D.
Daniel A. Barber, Barnard College / Columbia Univ., New York City, NY, USA
Constructing a Solar House, c. 1959
Samarah Wannous, HTTP-CNAM, Paris, France
The Thermal Insulation of Facades after the Oil Crisis of 1974 to the 90s

322. Infrastructure & Public Works
Chair: Matteo Porrino, ENSA de Strasbourg / GSA-ENSA Paris Malaquais, France
Room E223
Carla Maria Amici, Univ. del Salento, Lecce, Italy
A Choca Maxima in the Roman Town of Privernum, Lazio, Italy: The Project, the Plan, the Construction
Rosana Muñoz, Federal Univ. of Bahia, Salvador, Brazil
The Most Important Construction in Bahia’s 19th Century History: Salvador’s Mountain Retaining Wall
Davide Del Caro, Francesco Carlo Too, Politecnico di Milano, Italy
Technical Systems and Networks for a Modern High Altitude Settlement: The Construction of the Sanatorium Village in Sondalo [1902-1946]
Saturday 7 July
MALQUAIS SITE

09:00-10:00 AMPH 2
Keynote Lecture

Susan Verdi Webster
Jane Williams Mahoney Professor of Art History and American Studies,
College of William and Mary, Williamsburg, Virginia, USA

The Secret Lives of Buildings in Colonial Quito: People, Processes and Cultural Optics

10:00-10:30 Coffee Break

Sessions 10:30-12:30

409. Structural Analysis & Modeling 3
412. Transfer of Knowledge, Scientific Exchanges
422. Politics & Policies
430. Innovations in Reinforced Concrete
431. Foundations & Masonry
437. Metal Structures 2
439. Interior Environment, Heating, Ventilation & Hygiene

12:30 – 13:00 Closing Discussion [Amphi 2]
Sessions
Saturday 7 July, 10:30-12:30
MALAQUAIS SITE

409. Structural Analysis & Modeling 3
Chair: Santiago Huerta, Univ. Politécnica de Madrid, Spain [TBC]
Room 104
Paula Fuentes. Universidad Politécnica de Madrid, Spain
The Islamic Crossed-Arch Domes in Cordoba: Geometry and Structural Analysis of the “Capilla de Villaviciosa”
Fouad Ghomouri, Abdoulaye Ballkaid Univ., Timcen, Algeria
The Minaret of the Mosque of Manosourah: A Half-Ruin Elucidated
Maria Teresa Coma, Universidade degli studi Suer Orosia Benincasa, Naples, Italy
Structural Devices Concerning the Progressive Outer Shell Construction in Brunelleschi’s Dome
José Antonio García Ares, Ignacio Gómez Crespo, Polytechnic Univ. of Madrid, Spain
The Ciborium or Lantern Tower of Valencia Cathedral: Geometry, Construction and Stability

412. Transfer of Knowledge, Scientific Exchanges
Chair: TBA
Room 302
Arturo Zaragóz Catalán, Academia de Bellas Artes de San Carlos de Valencia, Spain
Dos Calvo-López, Pau Natxivid-Viví, Universidad Politécnica de Cartagena, Spain
Stenastic Exchanges between Iberia and France in the 16th Century: Benoît Auguste, Vlaamse Staatstraaten and the Escalet de Toulouse
Hentie Louw, SAPL Newcastle Univ., UK
‘Machine pour ouvrire une fenêtre par contre-poids’: A Case Study Revealing the Nature of Invention and Innovation in Late-17th Century Northern European Architecture
Fabio Tellia, Jose Carlos Palacios Gonzalo, Escuela Técnica Superior de Arquitectura, Universidad Politécnica de Madrid, Spain
The Spanish Vaults in Joseph Ribes’s L’Église De Trons De Vias Y Manta
Linnéa Rollenhagen Tilby, HTTP-CNAM, Paris, France
Knowledge of Architecture and Building Technologies in 18th Century Sweden

422. Politics & Policies
Chair: Robert Carvais, CNRS-Univ. Panthéon-Assas, Paris / ENS Architecture Versailles, France [TBC]
Room 308
Roberto Ensaíma-Po dos Santos, Universidade Federal de Minas Gerais, Brazil
The Plot of a Concrete in Brazil: A History of the Technology Diffusion of Reinforced Concrete
Ricardo Tolosa, Jorge Galindo Díaz, Universidad Nacional de Colombia, Manizales branch, Colombia
Construction of Railway Workshops in Colombia during the First Half of the 20th Century: A National Engineering Triumph
Christel Faprix, Architectural Historian, Paris, France
Concerning the Industrialization of Construction in France in the 1950s

430. Innovations in Reinforced Concrete
Chair: Thomas Leslie, Iowa State University, USA
Lecture 2
Armande Hellebois, Yves Rammer, Jean-Claude Verbrugge, Building, Architecture and Town Planning Dept., École Polytechnique de Bruxelles, Univ. Libre de Bruxelles, Belgium
Concrete Piling: Major Developments in the Historical Practice of Pile Foundations
Alessandra Bellico, Dept. of Architecture and Urban Planning, Univ. of L’Aquila, Italy
Technological Innovation and Traditional Building Methods in the First Application of Reinforced Concrete in L’Aquila: The “New Provincial Insane Asylum” [1905-1916]
John McGuinness, Maidenhead, UK
Air Raid Shelters in the United Kingdom 1939-1945: An Initial Investigation
Pierre Jarrous, Association Eugène Freyssinet, Paris, France
Eugène Freyssinet’s Life and Works [1879 -1962]

431. Foundations & Masonry
Chair: Maria Grazia D’Amelio, Università Tor Vergata, Italy
Lecture 3
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