# TABLE OF CONTENTS

## Foreword

## Organizing Body

## I. Keynote Lectures

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP01</td>
<td>Historic Cairo Conservation Project</td>
<td>Ayman Abdul Mun'im</td>
</tr>
<tr>
<td>KP02</td>
<td>The Arab Contractors Experience in the Conservation of the Built Heritage in Egypt</td>
<td>Ibrahim Mahlab</td>
</tr>
<tr>
<td>KP03</td>
<td>Integrating Sustainability and Compatibility in Conserving the Darb al-Ahmar and Cairo’s Eastern Ayyubid Fortifications</td>
<td>Frank Matero</td>
</tr>
<tr>
<td>KP04</td>
<td>The Difficult Choice of Materials Used for the Repair of Brick and Stone Masonry Walls</td>
<td>Luigia Binda</td>
</tr>
<tr>
<td>KP05</td>
<td>Structural Restoration of Monuments: Recommendations and Advances in Research and Practice</td>
<td>Paulo B. Lourenço</td>
</tr>
</tbody>
</table>

## II. Materials

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>Bond Behavior of Near Surface Mounted FRP Composites with Unreinforced Masonry</td>
<td>El-Sayed A. Nasr, Ayman A. Embaby, Hany M. Elshafie and A. Rashad</td>
</tr>
<tr>
<td>P02</td>
<td>Development of a New Accelerated Crystallization Test to Assess the Durability of Restoration Plasters</td>
<td>Tomas J. Wijffels and Barbara Lubelli</td>
</tr>
<tr>
<td>P03</td>
<td>Durability of Historic Brick Masonry</td>
<td>Ahmad A. Hamid and Mona Orphy</td>
</tr>
<tr>
<td>P04</td>
<td>Modelling of Historical Brickwork Masonry Strengthened by Composite Materials</td>
<td>Roberto Capozucca and Giuseppe Pace</td>
</tr>
<tr>
<td>P05</td>
<td>Normal/Shear Cracking of Brickwork Masonry</td>
<td>E. Reyes, M.J. Casati and J.C. Gálvez</td>
</tr>
<tr>
<td>P06</td>
<td>The Use of Fiber Reinforced Polymers in Preserving Masonry Heritage Structures</td>
<td>Bahira A. Abdul-Rahman, Nasser F. El Shafey and Wael M. El Degwy</td>
</tr>
</tbody>
</table>
III. Assessment

P07 Multiple-Path Diagnosis for Restoration
David T. Biggs

P08 NDE for Assessment and Rehabilitation of Ancient Masonry Structures - a State of the Art
K. M. A. Hossain and M. Lachemi

P09 Non Destructive Techniques Applied to the Pillars of the Syracuse Cathedral in Sicily
Luigia Binda, Lorenzo Cantini, Antonella Saisi and Luigi Zanzi

P10 On Site and Laboratory Investigation on Some Churches Hit by a Recent Earthquake, in Order to Assess the Damages to Materials and Structures
Binda L., Anzani A. Cantini L. Cardani G. Tedeschi C. and Saisi A

P11 Structural Assessment of the Hoist Tower of the Arsenale of Venice
Maria Rosa Valluzzi, Filippo Casarin, Claudio Modena and Giovanni Zanotti

P12 Vulnerability Assessment of Masonry Building Typologies in Seismic Area and Proposals for Suitable Structural Improvement
Claudio Modena, Maria Rosa Valluzzi, Luigia Binda, Giuliana Cardani, Antonella Saisi and Luciano Marchetti

IV. Performance

P13 An Expert System for Restoration of Infra-Structure of Historical Buildings
Walid Abdel Latif Attia and Adel Abdel-Mohsen A.

P14 Environment: A Mode of Thinking for Sustainable Heritage
Ali O. Mikkawi

P15 Evaluation of Safety Coefficient of Axi-Symmetric Masonry Domes with Variable Profile, Carrying its Own Weight Only
C. Anselmi, E. De Rosa, F. Galizia and D. Maniello

P16 Evaluation of the Dynamic Characteristics of the Cairo Aquifer Wall
Mohamed A. Zaki, Mhamed A. Abdel-Mooty and Sherif A. Mourad

P17 Geotechnical Studies for the Rehabilitation of the Islamic Museum in Cairo
Amr M. Radwan and Mona B. M. Anwar

P18 Practices of Brick Masonry Construction in Turkey and their Seismic Behaviors during Earthquakes
Ali Ural, Adem Doğangün
V. Retrofit

P19 Contribution of Joint Mortar Thickness on Seismic Hazard Mitigation of Heritage Masonry Structures  
María Josefa Cassinello Plaza

P20 Dynamic Analyses and Seismic Retrofit of the Canadian Museum of Civilization Digester Tower  
Wael W. El-Dakhakhni, Robert G. Drysdale and Heinz Keller

P21 Heritage Masonry Buildings and Seismic Risk: Slovenian Experience  
Miha Tomaževič

P22 Probabilistic Approach to the Rigid Body Rocking Problem  
Mohamed A. ElGawady, Quincy Ma, John Butterworth and Jason Ingham

P23 Rehabilitation of Masonry Arches  
Pardeep Kumar and N. M. Bhandari

P24 Retrofitting Historic Stone Masonry Walls: the Egyptian Experience  
Tarek A. Elsayed, Gouda M. Ghanem, Amr Ezzat Salama and Ahmad A. Hamid

VI. Analysis

P25 Bam Citadel: Action Plan for Restoration  
Mehrdad Hejazi and Wolfram Jaeger

P26 Macro-Micro Seismic Damage Assessment Procedure for Heritage Building Components  
Samir E. Chidiac

P27 Modal Identification for the Historical North Wall of Old Cairo City from Ambient Response  
Ashraf Osman, Mohamed A. Zaki, and Ahmad F. Hassan

P28 Stone Masonry Arch Bridges in Turkey and Analysis of a Sample Bridge Including Nonlinear Behavior  
Ali Ural, Adem Doğangün and Selçuk E. Görkem

P29 The Restoration of the Knights Tower at Krak des Chevalliers in Syria  
Wolfram Jäger, Dassar Ghanem, Toralf Burkert, Beate Boekhoff and Eyas el-Khateeb

P30 The Structural Analysis of the Cathedral of León Based on the Classical Methods  
M.J. Casati and J.C. Gálvez
VII. Case Studies

P31 Experimental Investigations on Dry stone Masonry Walls
G. Vasconcelos; P. B. Lourenço; H. Mouzakis and L. Karapitta

P32 Performance of Masonry Minarets against Earthquakes and Winds in Turkey
Adem Doğangün, Ramazan Acar, Ramazan Livaoğlu and Ö.İskender Tuluk

P33 The Conservation of Az-Zahir Baybars Al Bunduqdari Mosque
Tariq Al Murri and Akram Awad

P34 Traditional Turkish Minarets on the Basis of Architectural and Engineering Concepts
Adem Doğangün, Ö.İskender Tuluk, Ramazan Livaoğlu and Ramazan Acar

P35 Transportation and Relocation of Ramsis II Statue
Ibrahim Mahlab, Wagdi Hmada, Nasr el-deen Mahmoud Abdalla and Ahmed Shawky

Authors Index