

## Received abstracts

### (B) Material and structural configuration of historical buildings

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
B01	Influence of mortar strength and water retention on the mechanical properties of lime-mortar / brick masonry.	A. Costigan and S. Pavía.	
B02	Munich Roofs 1800-1900	S. M. Holzer <sup>1</sup> and C. Voigts <sup>2</sup>	Germany
B03	A Fundamental Construction Material in Ottoman Architecture At The Modernisation Period: Solid Brick	A. Ciftci <sup>1</sup> , U. Yergun <sup>2</sup>	
B04	Constitutive laws and modeling of grout to masonry unit interfaces	E. Vintzileou <sup>1</sup> and Ch.-E. Adami <sup>2</sup>	Greece
B05	Geotechnical Aspects of the N1 Tower, Prasat Sour Prat, Angkor Thom, Cambodia	Yoshinori Iwasaki, Ph.D., Dr.Eng., PE	Japan
B06	A strong future for a light structure: the Victoria Regia greenhouse at Meise (B)	I. Wouters	Belgium

B07	The Ardant truss: a forgotten rival of the well-known Polonceau truss	M. de Bouw	Belgium
B08	19th century iron and glass architecture: the structural contribution of glass plates to the iron frame	L. Lauriks	Belgium
B09	Domination of commercial patents in the evolution of early reinforced concrete. Case-study of the region of Brussels.	Hellebois Armande1, Espion Bernard2	Belgium
B10	Analysis of mechanical characteristics of masonry made of natural stone used for patrimonial constructions and their quantification in structural calculation	Univ. Prof. Dr. Eng. Gramescu Ana Maria* Dr. Ec. Barbu A.M.Daniela ** Univ. As. drd Eng. Dragoi Mihaela* Univ. As. drd. Eng. Pericleanu Dan*	
B11	From Simple Roof Structure Calculus Based on 2D Modelling to 3D Models – Case study: Reformed Church in Cluj-N., Romania	D. Makay1, B. Sándor2, B. Bordás3, Zs. Blénesi4	Romania
B12	Steel Frame Construction Technology in Ottoman Architecture and “Metro Han”	U. Yergun1, B. Celebioglu2	Turkiye
B13	Gothic structural theories ca. 1930: the contribution of Victor Sabouret	I. Tarrío1	Spain

B14	Survey and Realistic Modelling of Ancient Austrian Roof Structures	am Meisel <sup>1</sup> , tm Moosbrugger <sup>2</sup> , gs Schickhofer <sup>3</sup>	Austria
B15	The suspension iron bridge of the early XIX century Villa Borghese in Florence (Italy)	A. Cecchi <sup>1</sup> ; A. Passerini <sup>2</sup>	Italy;
B16	Composite Constructions of Timber and High-Performance Concrete	H. Kieslich <sup>1</sup> , K. Holschemacher <sup>1</sup>	Germany
B17	Material and structural problems of Cappadocian rock-hewn environments	F. KIVILCIM <sup>1</sup>	Turkey
B18	Unique air-conditioning system in the Tugendhat Villa, Czech Republic	J. Hirš <sup>1</sup> , L. Špačková <sup>2</sup> , J. Sedlák <sup>3</sup>	Czech Republic
B19	Preliminary Study on Memorial Archway in Ancient Huizhou of China	Tao Chen <sup>1</sup> , Zeneng Wei <sup>2</sup>	China
B20	Numerical investigation of wooden diaphragms-masonry walls interaction in existing masonry buildings	,R. Tomasi <sup>1</sup> , M. Piazza <sup>1</sup>	Italy
B21	A Case study of the Korean Traditional Wood House-Mindori	Sehee Park <sup>1</sup> , Minsup Lee <sup>2</sup> , Sungjin Jung <sup>3</sup> , Ho Soo Kim <sup>4</sup> , Derkmoon Kim <sup>5</sup>	Korea
B22	Seismic Retrofitting of Historic Masonry Buildings – Case Study	A.R.Santha Kuma	India

		r1, M.S.Mathews2,, S.Thirumurugan 3, Uma Rao4	
B23	Becoming unsafe overnight: Managing historic buildings as building regulations and standards change	Peter Phillips1	Australia
B24	The case study of Santa Maria Paganica Church damaged by 2009 L'Aquila earthquake	C.F. Carocci1, S. Cattari2, S. Lagomarsino2 and C. Tocci3	Italy
B25	Hagios Gregorios Theologos Church in Cappadocia	B. Celebioglu 1, S. Limoncu2	Turkiye
B26	Structural Restoration of Historic Constructions Built with Gypsum Pillars and Floors for New Standards of Living	F. Vegas1, C. Mileto2, A. Adolfo3 and A. Martínez Boquera4	Spain
B27	Retrofit interventions of damaged churches after the Lombardy seismic event (November 2004)	S. Podestà and E. Curti	Italy
B28	Italy-China Significant Bilateral Project on Safety Identification and Advanced Protection of Cultural Assets Exposed to Vibrations	M. Mezzi	Italy
B29	"Cell Vaults"-Research on Construction and Design Principles of a Unique Late-Media	David Wendland	Germany

	eval Vault Typology		
B30	The complexity and the logic behind historical buildings the case-study of Palazzo del Podestà in Mantova, Italy.	M. Cofani <sup>1</sup> , V. Frignani <sup>1</sup> , A. Landi <sup>1</sup>	Italy
B31	The earliest reinforced concrete constructions making up part of the urban renewal of a provincial city in Italy	M. P. Gatti <sup>1</sup> , G. Cacciaguerra <sup>1</sup>	Italy
B32	Behavior of circular concrete columns repaired with steel bars and wire mesh-mortar	Fengfeng LI, and Xiaoyong WU, Zhou YAN, Guangjing XIONG	China
B33	Safety Assessment of an Ancient Chinese Temple Palace	H HUANG <sup>1,2</sup> , M-J HE <sup>2</sup>	China
B34	Research on the realkalisation's impacts for the carbonated concrete on the stirrup	Wen huajie, Qu wenjun	China

**(C) Structural inspection and monitoring of historical buildings**

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
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C01	NHL and natural pozzolana mortars: mechanical behavior investigations based on aging and pozzolana characteristics	E. Sala, I. Giustina, G. Plizzari	
C02	Elasticity of Calcium Silicate Brick Masonry Wall due to Sulfate Attack	Wan Ibrahim M. H1*, Abu Bakar B. H2, Megat Johari M. A3, Ramadhansyah P. J4	Malaysia,
C03	Influenced of Sulfate on the Shrinkage of Calcium Silicate Brick Masonry Wall	Wan Ibrahim M. H1*, Abu Bakar B. H2, Megat Johari M. A3, Ramadhansyah P. J4	Malaysia,
C04	Rapair and health monitoring for historical structures	Mohamad Hossein Maleki Tabrizi1, Ali Akbar Bigdeli2	Iran
C05	Stresses quantification in metallic structural elements by means of X-Ray diffraction technique	S. Sánchez-Beitia	(Spain)
C06	Predicting the time to failure in heavily loaded masonry specimens with the acoustic emission technique	E. Verstryngel, L. Schueremans2,	Belgium

		D. Van Gemert <sup>3</sup>	
C07	Minor Destructive Testing of XVIII century brick wall using Compact Diagnostic Test CoDiT	M. Skłodowski	Poland
C08	Investigation and Monitoring of Historic Roof-structures During Conservation	B. Magó <sup>1</sup> , A. Nicuşan <sup>1</sup> , B. Szabó <sup>2</sup> , I. Kirizsán <sup>1</sup>	Romania
C09	Evaluation for Durability of Hinged Joint in Highway Bridge	Wei Jun <sup>1</sup> , Li Pei <sup>1</sup> , Li Wencai <sup>1</sup> , Dong Rongzhen <sup>1</sup> , Xu Yue <sup>2</sup>	China;
C10	Strength inspection for steel rebars in historical buildings using hardness method	Lin Feng, Gu Xianglin, Xiao Binghui	China
C11	Investigation of Masonry Arch Bridges Using Nondestructive Evaluation (NDE) Techniques	C. Citto <sup>1</sup> , D. W. Harvey <sup>1</sup> , and M. P. Schuller <sup>1</sup>	USA
C12	Parametric Modeling of Typical Chinese Traditional Building on the Basis of 3dMaxScript	W. Wang, B. Xie	China
C13	Correlation between hardness and strength for wrought iron and mild steel in historic buildings	A. Younes	Belgium

C14	Tube-jack testing for irregular masonry walls: first studies	Luís F. Ramos and Ziba Sharafi	Portugal
C15	Experimental Studies of Reinforced Concrete Column Capacity Affected by Core Drilling	Zhu Lei <sup>1,2</sup> Xu Qingfeng <sup>1,2</sup> Li Xiangmin <sup>1,2</sup> Zhu Chunming <sup>1,2</sup>	China;
C16	Structure health monitoring and test experiment for Cangzhou iron lion	Xiao-fei JIN <sup>1</sup> , Feng FAN <sup>1</sup> , Wei WANG <sup>1</sup> , Qing- lin MA <sup>2</sup> ,	China
C17	Long term evaluation of historic constructions with wireless sensor networks	D. Zonta <sup>1</sup> , H.Y. Wu <sup>1</sup> , M. Pozzi <sup>1</sup> , P. Zanon <sup>1</sup> , M. Ceriotti <sup>2</sup> , L. Mottola <sup>3</sup> , G.P. Picco <sup>1</sup> , A.L. Murphy <sup>2</sup> , S. Guna <sup>1</sup> , M. Corrà <sup>4</sup>	Italy
C18	Monitoring the thermal behavior of the masonry dome of Holy Shrine of Imam Reza (a) to evaluate its structural system	Mahmood Golabchi <sup>1</sup> , Peyman Homami <sup>2</sup> , Pooya Farzaneh	Iran

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C19	Competition between hydration and carbonation in hydraulic lime and lime-pozzolana mortars	Özlem Cizer <sup>1</sup> , Koenraad Van Balen <sup>1</sup> , Dionys Van Gemert <sup>1</sup>	Belgium
C20	Real-time monitoring of the church of Santa Maria Maggiore in Trento	D. Zonta <sup>1</sup> , M. Pozzi <sup>1</sup> , R. Zandonini <sup>1</sup>	Italy
C21	Determination of the Elastic Modulus of Stone Masonry Walls	M. Sorour <sup>1</sup> , A. Elmenshawy <sup>1</sup> , D. Duchesne <sup>2</sup> , J. Paquette <sup>2</sup> , A. Mufti <sup>3</sup> , L. Jaeger <sup>4</sup> , and N. Shrive <sup>1</sup>	Canada
C22	Determining Modulus of Elasticity of Wood Members in Historical Structures	Houjiang Zhang <sup>1</sup> , Xiping Wang <sup>2</sup> , Robert J Ross <sup>2</sup> , Brian K Bradshaw <sup>3</sup>	China
C23	The effect of the realkalisation on the corroded reinforcing bar	Wenjun QU , Kun Wang , Yan Xiong	China

C24	Microbial biodeterioration of stone monuments of cultural heritage in eastern region of India and their possible conservation	S. P. Adhikary	India
C25	Historical analysis and structural monitoring. Cases – studies for an integrated approach	L. Balboni <sup>1</sup> , P. Corradini <sup>2</sup> , D. Del Curto, <sup>3</sup> L. Valisi, <sup>4</sup>	Italy
C26	The analysis of damage in Brunelleschi's Dome in Florence, Italy: from historical analysis to modern monitoring system.	F. Ottoni, E. Coisson, C. Blasi	Italy
C27	Preliminary Observations on Structural Condition of a Byzantine Monument in Historic Peninsula of Istanbul: Pantokrator Church	U. Almac <sup>1</sup>	Turkey
C28	Real-time diagnosis of historical artworks by laser-induced fluorescence	L. Fiorani, L. Caneve, F. Colao, R. Fantoni	Italy
C29	Commercial ready-mixed mortars for the conservation of cultural heritage: characterization and preliminary durability test	D. Gulotta <sup>1</sup> , L.Toniolo <sup>1</sup> , C. Tedeschi <sup>2</sup> and L. Binda <sup>2</sup>	Italy
C30	Terrestrial laser scanning for the digital protecting of historical architecture	R. XIE <sup>1,2</sup> , X. J. CHENG <sup>1</sup> , H.F. ZHANG <sup>1</sup>	China
C31	Non-destructive tests of mechanical properties of timber members of historical buildings	Xiaobin Song <sup>1</sup> , Xianglin Gu <sup>1</sup> , W	China

		eiping Zhang1	
C32	The Technical Specification of Building Inspection before Realkalization	QU Wenjun1, ZHANG Chi2	China
C33	Study on the accuracy of terrestrial 3D laser scanning modeling	Yintao Shi1, Xiaojun Cheng1,2, Hongfei Zhang1	China
C34	Surveying and Mapping the Interior Structure of Existing Buildings with Laser Reticle Image Technique	Xiang Li, Xianglin Gu, Xiaobin Song	China
C35	Comparison of two surface reconstruction algorithms: the micro-cutting plane method and the moving least of square method	D.F.Jia1, X.J.Cheng 2, Y.P.Liu3	China
C36	Numerical analysis of tunneling effects on masonry buildings: the influence of tunnel location and orientation on damage assessment	G. Giardina1, M.A.N. Hendriks1, and J.G. Rots1	The Netherlands

**(D) Structural analysis and assessment of historical buildings**

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
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D01	The properties of archs under loading especially for historical buildings	Mohamad Hossein Maleki Tabrizi, Ali Akbar Bigdeli	
D02	AN EXAMPLE FOR SOLVING (ANALYZING) HISTORICAL MASONARY BUILDINGS: (St. SERGIUS and BACCHUS CHURCH)	A. Koçak & T. Köksal	
D03	Structural Analysis of a 17th century Pilgrimage Church	B. Köck <sup>1</sup> and S. M. Holzer <sup>2</sup>	Germany
D04	Comparative Analysis of the Structural System in Two Churches on the Island of Brac (Croatia)	E. Lokošek <sup>1</sup> , H. Podnar <sup>2</sup>	Croatia
D05	Analysing Buildings from Context to Detail in time - ABCD? research method. Provincial Library Leeuwarden.	H. Zijlstra <sup>1</sup>	The Netherlands.
D06	The properties of archs under loading in historical buildings	Mohamad Hossein Maleki Tabrizi <sup>1</sup> , Ali Akbar Bigdeli <sup>2</sup>	Iran
D07	EVALUATION OF MORE THAN 40 YEARS OLD ADMINISTRATIVE BUILDING IN MUSCAT	J.A.Solomon Charles* Sanjaya Pujari**	
D08	Numerical assessment of the Ebe schooner-brig	Stefano Invernizzi <sup>1</sup> , Clara Bertolini-Cestari <sup>1</sup> , and Emanuele Chiab	Italy

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D09	Experimental and numerical analysis of a two-span model masonry arch bridge subjected to pier scour	Alberto Carpinteri <sup>1</sup> , Alessandro De Stefano <sup>1</sup> , Stefano Invernizzi <sup>1</sup> , Gianluca Ruocci <sup>1</sup> , Giuseppe Lacidogna <sup>1</sup> , Amedeo Manuello <sup>1</sup> , Rosario Ceravolo <sup>1</sup> , Luisa Degiovanni <sup>1</sup> and Antonino Quattrone <sup>1</sup>	Italy
D10	Experimental and numerical analysis of masonry arch bridges	DOMEDE Nathalie <sup>1</sup> , SELLIER Alain <sup>2</sup> , STABLON Thomas <sup>3</sup>	FRANCE ;
D11	Masonry walls as orthotropic no tension structures	M. Basili <sup>1</sup> , A. Sinopoli <sup>1</sup>	Italy

D12	Connections with wood pins: the influence of dowel bearing strength	C. Ceraldi, M. Lippiello, F. Portioli, and E. Russo Emolli,	Italy
D13	Structural assessment of masonry domes: the case of Donnalbina's dome in Naples	C. Ceraldi, R. Landolfo, M. Lippiello and F. Portioli	Italy
D14	The masonry as no tension material: yield domain of a section subjected to combined compressive and bending stress	C. Anselmi 1, E. Saetta 1	Italy
D15	Structural analysis and numerical verification of the main pathology of the Katholikon of Hosios Loukas Monastery	A. Miltiadou-Fezans <sup>1</sup> , E. Vintzileou <sup>2</sup> , N. Delinikolas <sup>3</sup>	Greece,
D16	The stability of the Basilica of Maxentius in Rome.	A. Albuerne <sup>1</sup>	Spain
D17	Long-term reliability of historical monuments built with low quality sandstone	E. Verstryngne <sup>1</sup> , L. Schueremans <sup>2</sup> , D. Van Gemert <sup>3</sup> , E. Bourel <sup>4</sup>	Belgium
D18	Evaluation of Timber Structures' Safety by means of Stochastic Analysis	H. S. Sousa <sup>1</sup> , P. B. Lourenço <sup>2</sup> , L. C. Neves <sup>3</sup>	Portugal

D19	Analysis and demolition of some vaults of the church of La Peregrina in Sahagún (Spain)	Santiago Huerta Paula Fuentes	Spain
D20	The function of “frenelli” in vault masonry’ static	M. Candela, V. Ceradini, R. Fonti	Italy
D21	Analytical and Numerical Approaches of the Romanian Mediaeval Church Structures	B.Szabó1, I.Kirizsán2 L. Vass2	Romania
D22	Two-step pushover analysis of an ancient masonry oil-mill in the Southern Italy	G.A. Cundari1, G. Milani2, G. Failla1, F. Nucera1, A. Santini1	Italy
D23	Modeling the static behavior of a double curvature brickwork vault	A. Anzani1, P. Condoleo1, A. Gobbo1 and A. Taliercio1	Italy
D24	Structural Characteristics of Airship Hangar in Augusta, Italy	T. Aoki1, Y. Takino2, Y. Nakano3, and N. Takahashi3	Japan
D25	Research on Structural Safety Evaluation of Historical Masonry Structures	T. Aoki1 and Y. Tosaki2	Japan

D26	Victor Horta's iron architecture: a structural analysis	Q. Collette 1	Belgium
D27	Laterral-torsional buckling of I-girders with discrete torsional bracings under non-uniform bending	Canh-Tuan Nguyen <sup>1</sup> , Hyun-Sung Joo <sup>2</sup> , Hak-Eun Lee <sup>3</sup>	South Korea
D28	Simplified formulations for flutter instability bridge analysis	Tan-Van Vu <sup>1</sup> , Seung-Young Yoo <sup>2</sup> , Ho-Yup Lee <sup>3</sup> and Hak-Eun Lee <sup>4</sup>	South Korea
D29	Effects of changes in structural system on the inclination of the St. George basilica tower	Petr Fajman <sup>1</sup>	,Czech
D30	Stability analysis on the roof trusses of the Broumov group of churches to underline statical sense of Dientzenhofers	Pavel Kuklík <sup>1</sup> , Peter Duinker <sup>2</sup> , and Justin Hettinga <sup>3</sup>	Czech Republic
D31	Prince of Wales Fort: Structural Wall Analysis	A. Isfeld <sup>1</sup> , N. Shrive <sup>2</sup>	Canada
D32	Assessment of structural stability and restoration method of Bayon Central Tower, in Cambodia	S.YAMADA <sup>1</sup> , M.ARAYA <sup>2</sup> , Y.IWASAKI <sup>3</sup>	Japan
D33	A Comparison of Analysis Approaches for Vaulted Masonry	P. Block <sup>1</sup> , M. J. D	Switzerland

		eJong <sup>2</sup> , E. Whiting <sup>3</sup> , and J. A. Ochsendorf <sup>4</sup>	
D34	“SATABILITY ANALYSIS OF MONUMENT (A CASE STUDY-SAFDARJUNG TOMB)”	Adil Ahmad <sup>1</sup> and Khalid Moin <sup>2</sup>	India
D35	Analysis of structural effects of brick arrangement and span length changes in mid-pointed arches	Mehrdad Hejazi <sup>1</sup> , Farshad Jafari <sup>2</sup>	Iran.
D36	A study of construction method related to tower styles in Bayon	S.Sakurai 1, M.Araya1, S.Yamada1	Japan
D37	Flexural and Shear Strength of Granite Reinforced by Metal Rods	Sung-Gul Hong	Korea
D38	Experimental Study On The Injected Anchors Behaviour On Historical Masonry	C. Algeri <sup>1</sup> , E. Poverello <sup>2</sup> , G. Plizzari <sup>3</sup> , E. Giuriani <sup>4</sup>	Italy
D39	Kinematic Factor of Safety of Masonry Arches	P. Smars <sup>1</sup>	Taiwan
D40	FE modeling of an historic masonry tower and vibration-based systematic model tuning	Carmelo Gentile <sup>1</sup> and Antonella Saisi <sup>1</sup>	Italy

D41	Structural Analysis of the bell Tower of the Basilica of Our Lady of the Merced in Lima-Peru	Eduardo Torres Peceros	Perú
D42	Analytical modelling of traditional composite timber-masonry walls	I.N. Doudoumis	Greece
D43	Thrust and thrust-line directions in masonry elements	Agustín Orduña <sup>1</sup> , Guillermo M. Roeder <sup>1</sup> , and Roberto Valdez <sup>1</sup>	Mexico
D44	A discrete model for modelling masonry vaults	I.Caliò, F.Cannizzaro, M.Marletta	Italy
D45	Prediction of the Total Load-Carrying Capacity of “Sumiya”, an Important National Cultural Treasure in Kyoto, Japan	K.Komatsu <sup>1</sup> , M. Minami <sup>2</sup> , T. Mori <sup>3</sup> and A.Kitamori <sup>3</sup>	JAPAN
D46	The seismic assessment of the Curia in the Roman Forum through simplified models	S. Parodi and S. Podestà	Italy
D47	Limit in-plane analysis of masonry walls by simple equilibrium models. Application to solid and hollow shear walls.	F. Sima, P. Roca, C. Molins	Spain
D48	The load-carrying behaviour of Japanese traditional Kokabe timber frame.	A.Kitamori <sup>1</sup> , A. Tabuchi <sup>2</sup> and K.Komatsu <sup>3</sup>	JAPAN

D49	Structural analysis of the Paderno d'Adda Bridge (Italy, 1889)	Rosalba FERRARI *, Mattia FACHERIS, Egidio RIZZI **	Italy
D50	Analytical and numerical analysis on the collapse mode of circular masonry arches	Egidio RIZZI 1,*, Giuseppe COCCHETTI 1,2, Giada COLASANTE 1, Fabio RUSCONI 1	Italy
D51	The ancient "reinforced beams" as model of consolidation.	Alberto Grimoldi1	Italy
D52	Experimental and Numerical Analysis of Traditional Column Connections with the Possible Retrofit Concept	D. Lazarević, J. Atalić, J. Krolo, M. Uroš and M. Šavor	Croatia
D53	Roof and floor diaphragms: connections to the masonry walls	Alessandra Marini1, Giovanni Metelli1, and Ezio Giuriani1	Italy
D54	Equilibrium Analysis of Rose Windows	P. Block1, and J.	Switzerland

		A. Ochsendorf <sup>2</sup>	
D55	Masonry Analysis Interpretation and Data Archive system	E. Adorni <sup>1</sup> , C. Blasi <sup>2</sup> , E. Giorgi <sup>3</sup>	Italy
D56	Structural Analysis of the bell Tower of the Basilica of Our Lady of the Merced in Lima-Peru	Eduardo Torres Peceros	Perú
D57	Small-Scale Models for the Analysis of Masonry Structures	A. Quinonez <sup>1</sup> , A. Nutzel <sup>2</sup> , J. Zessin <sup>3</sup> , and J. Ochsendorf <sup>4</sup>	U.S.A.
D58	Thrust line in masonry structures using linear elastic finite element analysis	Mahesh N.Varma <sup>1</sup> , R. S. Jangid <sup>2</sup> , and Siddhartha Ghosh <sup>3</sup>	India
D59	First dating and structural interpretation of composite beams in North-East Italy	S. Dandria <sup>1</sup> , J. Badalini <sup>1</sup> , D. Penazzi <sup>1</sup> , L. Fasani <sup>2</sup>	Italy
D60	Structural Behavior Analysis of Masonry Stone Pagoda Considering the Inner Construction Types of Stylobate	H. L. Choi <sup>1</sup> , Y. S. Park <sup>1</sup> , S. I. Hong <sup>2</sup> , S. J. Jung <sup>3</sup> , H. S. Kim	Korea

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D61	Structural analysis of the rose window of the Cathedral of Modena, Italy	S. Silvestri <sup>1</sup> , G. Gasparini <sup>1</sup> , T. Trombetti <sup>1</sup> , C. Ceccoli <sup>1</sup>	Italy
D62	Numerical modeling of the Armstrong, Mitchell & Co. hydraulic crane of the Arsenal of Venice	G.Bettio <sup>1</sup> , M.R.Valluzzi <sup>2</sup> , E.Garbin <sup>3</sup> , C.Menichelli <sup>4</sup> , A.Lionello <sup>5</sup> , C.Modena <sup>6</sup>	Italy
D63	Structural analysis of historical metal bridges in Italy	A.Pipinato <sup>1</sup> , C. Pellegrino <sup>1</sup> , C.Modena <sup>1</sup>	Italy
D64	The Structural Analysis of The Historical Constructions of West China Campus -Sichuan University	LUO Linglong, XIE Zhentao, WU Ti, XIAO Chengbo, LING Chengjian	China
D65	Slab-cloum system with steel bars along diagonal line	WU Shanneng, ZHANG Tao	China
D66	A numerical method for ultimate strength analysis of composite cross-sections under secondary loading	Hui Wang <sup>1</sup> , Xianglin Gu <sup>2</sup> , Ka	China

		i Sun3	
D67	Development and Application of Reliability Assessment Software for Historic Masonry Structures	Dongjie Sun1, Xianglin Gu2, Guanghong hu3 , Kai Sun4	China
D68	Structural analysis of the “3Ponti” of Comacchio (Ferrara ITALY)	M.Pizzolato*, M.Monti°, P.Pigozzi^, A. Tralli**	Italy

**(E) Seismic analysis and evaluation of historical buildings**

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
E01	Investigation of the rail traffic-induced vibrations on a masonry historical building: Little Hagia Sophia Mosque,	Dr. Aykut Erkal	
E02	AN EXAMPLE FOR SOLVING (ANALYZING) HISTORICAL MASONARY BUILDINGS: (St. SERGIUS and BACCHUS CHURCH)	A. Koçak & T. Köksal	
E03	Seismic assessment of bell towers of Mexican colonial churches	Fernando Peña1 and Juan Miguel Meza1	

E04	Seismic hazard and nonlinear dynamic analyses: avoiding collapse in architectural heritage	P. Pineda, A. Sáez, and A.J. Martín	
E05	Experimental Study On Seismic Characteristics Of Typical Mortise-Tenon Joints of Chinese Traditional Timber Frame Buildings	Chun Qing	China
E06	Evaluation of dynamic characteristics of masonry arch bridges: linking full-scale experiment and FEM modeling	J. M. Dulinska <sup>1</sup>	Poland
E07	?STANBUL GRANDBAZAAR EVACUATION SYSTEM VULNERABILITY ASSESSMENT	G. Yücel <sup>1</sup> , G. Arun <sup>2</sup>	Turkey
E08	Evaluation of seismic loading on historical buildings	Mohamad Hossein Maleki Tabrizi <sup>1</sup> , Ali Akbar Bigdeli <sup>2</sup>	Iran
E09	RESEARCH ON SOIL-BASED GROUTING OF HISTORIC EARTHEN BUILDINGS IN SEISMIC AREAS	Amila Ferron	United States
E10	Seismic Assessment of a Historical Tower with Advanced Numerical Modelling Tuned on Ambient Vibration Data	A. D'Ambrisi <sup>1</sup> , V. Mariani <sup>1</sup> , M. Mezzi <sup>2</sup>	
E11	Soil-based Grouting of Earthen Buildings in Seismic Areas	A. Ferron <sup>1</sup> , N. Tarque <sup>2</sup> , C. Cancino <sup>3</sup> , and B. Bicer-Simsir <sup>4</sup>	United States

E12	Mechanical analysis for the assessment of the seismic capacity of masonry buildings' classes in the city centre of Sulmona (Italy)	M. MUNARI <sup>1</sup> , G. BUSOLO <sup>1</sup> , M.R. VALLUZZI <sup>1</sup>	Italy
E13	Evaluation of the Seismic Resistance of Traditional Ottoman Timber Frame "Hımış" Houses: A Proposal for Strengthening	Y. D. Aktas Erdem <sup>1</sup> , A. Turer <sup>2</sup> , B. Erdil <sup>2</sup> , U. Akyuz <sup>2</sup> and N. Sahin Guchan <sup>1</sup>	Turkey
E14	Evaluation and reduction of vulnerability of ancient masonry buildings	N. Mendes <sup>1</sup> , P.B. Lourenço <sup>2</sup> , and A. Campos-Costa <sup>3</sup>	Portugal
E15	Seismic damage to churches: observations from the L'Aquila, Italy, earthquake and considerations on a case-study	L. Binda, C. Chesi, and M. A. Parisi	Italy
E16	EVALUATION OF HIGHER MODE DAMPING RATIOS IN BUILDINGS	A. Hemmati, Lecturer,	Iran
E17	Shaking table tests on multi-leaf stone masonry structures: analyses of stiffness decay and hysteretic behaviour	N. Mazzon <sup>1</sup> , M. M. Chavez Cano <sup>2</sup> , M. R. Valluzzi <sup>1</sup> , F. Casarin <sup>1</sup> , C. Modena <sup>1</sup>	Italy

E18	Seismic safety assessment of the “Tekyeh Amir Chakhmagh” by simplified kinematic limit analysis	Seyed Rohollah Pashanejati <sup>1</sup> , Climent Molins <sup>2</sup>	Iran
E19	Dynamic Analyses of a Historical Building Using Data from Temporary and Permanent Arrays	D. Rinaldis <sup>1</sup> , P. Clemente <sup>2</sup>	Italy
E20	DAMAGE ASSESSMENT OF HISTORIC EARTHEN SITES AFTER THE 2007 EARTHQUAKE IN PERU	Claudia Cancino et al	Perú
E21	The examination of performance level of flat and single layer space structures by capacity spectrum for vertical load of earthquakes	H. Shahrabadi <sup>1</sup> , and M. A. Shayanfar <sup>2</sup>	Iran
E22	On the dynamic behavior of rehabilitated stone masonry walls	A. Elmenhawi <sup>1</sup> , M. Sorour <sup>2</sup> , D. Duchesne <sup>3</sup> , J. Paquette <sup>4</sup> , A. Mufti <sup>5</sup> , L. Jaeger <sup>6</sup> , and N. Shrive <sup>7</sup>	Canada
E23	Seismic Performance of a Pre-1930 building with dual wall-frame lateral load resisting system	A. Gebreyohannes <sup>1</sup> , G.C. Clifton <sup>2</sup> , and J. Butturworth <sup>3</sup>	New Zealand
E24	Seismic Response of RC Structure Retrofitted by ACM Braces	Tomiya Takatan	, Japan

		i* and Katsuhiko Ofuji*	
E25	Seismic Vulnerability of Historical Masonry Structures in Chile: A State-of-the-Art Review	G.E. Valdebenito and M.I. Sánchez	Chile
E26	Seismic assessment of the superstructure of the Naghare Khaneh edifice after base isolation by simplified kinematic limit analysis	Mahmood Golabchi1, Peyman Homami2, Seyed Rohollah Pashanejati 3	Iran
E27	Numerical Simulation of the seismic response of a Mexican colonial temple previously tested in a shaking table	M.M. Chávez1, R. Meli1	Mexico
E28	Sensitivity of seismic response of long medieval walls to earthquake and material uncertainty	A.G. Sextos1, K.- A. Stylianidis2, K. Mykoniou3 and S. Tselegaridis4	Greece
E29	Study on relationship between elastic wave profile and stones' condition in Angkor Monument	S.TACHINO1, M.ARAYA2, Y.IWASAKI3	Japan
E30	Assessment of Seismic Performance of Hagia Sophia	Mustafa Gokhan Kesti1 and Ozde	Turkey

		n Ates <sup>2</sup>	
E31	Dynamic Analysis and Seismic Performance of A Historical Mosque In Istanbul : A Case Study on Dolmabahce Mosque	Ozden Ates <sup>1</sup> and Mustafa Gokhan Kesti <sup>2</sup>	Turkey
E32	Effects of Tunnel Excavations on the Seismic Performance of Hagia Sophia	Ozden Ates <sup>1</sup> and Mustafa Gokhan Kesti <sup>2</sup>	Turkey
E33	Hysteretic behavior of Korean traditional wooden frames	Sung-Gul Hong	Korea
E34	Comparison of seismic performance of the ordinary and chevron knee braced frames	Hossein Abbaszadeh <sup>1</sup> , Mahmoud Miri <sup>2</sup> , Abdolreza Zare <sup>3</sup>	Iran
E35	Vulnerability and seismic damages of three churches in San Demetrio ne' Vestini (AQ) struck by 2009 L'Aquila earthquake	C. F. Carocci <sup>1</sup> and C. Tocci <sup>2</sup>	Italy
E36	Dynamic assessment of the iron bridge at Paderno d'Adda (1889)	Carmelo Gentile <sup>1</sup> and Antonella Saisi <sup>1</sup>	Italy
E37	Behavior of Ottoman period ashlar walls under cyclic loading	C. Demir <sup>1</sup> , E. Dogu <sup>2</sup> , and A. Ilki <sup>3</sup>	Turkey

E38	Temple of Apollo Epikourios: Numerical study of the seismic response of perimeter columns	K. Papadopoulos1 and E. Vintzileou2	, Greece
E39	NUMERICAL INVESTIGATIONS ON THE SEISMIC RESPONSE OF MASONRY BUILDING AGGREGATES	Ilaria Senaldi1, Guido Magenes2 and Andrea Penna3	Italy
E40	FULL-SCALE SHAKE-TABLE TESTING OF A STONE MASONRY BUILDING	Andrea Penna1, Guido Magenes2 and Alessandro Galasco2	
E41	Assessment of Seismic Resistance of Monastery of Stoudios (Imrahor Mosque) in Istanbul	Bilge Küçükdoğan	
E42	Intervention of earthen historical buildings in seismic areas and the conservation charts	J. Vargas-Neumann, M. Blondet, and C. Iwaki	Peru
E43	The vulnerability assessment of historical masonry buildings against earthquakes by the modified Equivalent Frame Method	Faramarz Alemi1, Peyman Homami2, Mahmood Golabchi3, Mohsen Akbarian4	Iran

E44	Seismic vulnerability assessment of timber structures: a case study	M.A. Parisi <sup>1</sup> , M.P. Riggio <sup>2</sup> , C. Tardini <sup>1</sup> and M. Piazza <sup>2</sup>	Italy
E45	Dynamic analysis of masonry structures based on a flexibility formulation	F. Sima, P. Roca, C. Molins	Spain
E46	Seismic analysis for the structural retrofit of “Palazzo della Civiltà Italiana” in Rome EUR, Italy	T. Trombetti <sup>1</sup> , C. Ceccoli <sup>1</sup> , G. Gasparini <sup>1</sup> , S. Silvestri <sup>1</sup>	Italy
E47	Seismic vulnerability of the Concordia temple	S.Caddemi, I.Caliò, F.Cannizzaro, M.Marletta, B.Pantò	Italy
E48	Seismic Vulnerability of Historical Structures. Damage state of the Abruzzo (Italy) churches, in the sequence of the 2009 earthquake	Bruno Silva <sup>1</sup> , Catarina Costa <sup>1</sup> , Francesca da Porto <sup>1</sup> , M. R. Valluzzi <sup>2</sup> , Claudio Modena <sup>1</sup>	Italy
E49	The behaviour of S. Agostino church during 6th April earthquake in L’Aquila: damage assessment and seismic analysis.	C. Calderini, S. Lagomarsino <sup>1</sup>	Italy

E50	Seismic analysis of a reinforced concrete frame retrofitted with buckling-restrained braces	Ouyang Yu1, Zhang WenJie1	China
E51	Experimental Research on Seismic Behavior of Non-rigid Beam-column Connections of Steel Frames with Plain Concrete	Lixue Jiang1 , Feng Zhou2, Qiaowen Zheng3	China
E52	Seismic assessment by numerical analyses and shaking table tests for complex masonry structures: the Hagia Irene case study	G. Croci1, A. Viskovic2, A. Herzalla3, G. de Canio4 L. Antonelli3	Italy
E53	Experimental investigation on seismic properties of vertical load-bearing members in protective historical buildings	PENG Bin	China

**(F) Strengthening of historical buildings**

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
F01	Experimental Study of Torsional Behavior of Full-scale L-shaped Reinforced Concrete Beams Rehabilitated by Fiber Reinforced Polymers	Saleh H. Alsayed (1), Tarek H. Almusallam ( 1), Yousef A. Al-Salloum (1), Hussein M. Elsanadedy (2) and Ghassan Al-Chaar (3)	

F02	A Technical Study on Reinforcing and Restoring Pingyao Ancient City Wall	Zhang Wenge, Xi Xiangdong, Zhu Lihua, Li Yonglu	
F03	Safety Risk Management in the Reformation of the Existed Industrial Single-storey Building Bracket Girder and Cut Column	Tingsheng ZHAO1 Liping DING1 Dongbing LI2 Fuquan XV2 Jingjing Tang1	
F04	THE RESTORATION AND THE INCREASING OF EARTHQUAKE PERFORMANCE OF A HISTORICAL BUILDING IN ANTALYA , TURKEY	A. Koçak,İ.K. Sönmez,Z. Kilit	Kilit Construction, Antalya, Turkey
F05	Development of a design method for the retro-reinforcement of masonry arches	S. W. Garrity	
F06	Experimental and Computational Validation of Dissipative Prototypes for the Seismic Protection of Heritage Buildings	S. Paganoni, D. F. D' Ayala	UK
F07	Studying application of base isolation in reduction of earthquake force of high rise buildings	Hamidreza Khososi- Hamed Hemati - Alimohamad Mirgoza	
F08	Efficiency of CFRP strengthening of arches tested by failure of historical building after the inappropriate repair intervention	K. Flaga1, A. Kwiecień2	Poland
F09	Reinforcement and Repair Design of Historic Buildings In Yaowan Town	Chun Qing	China
F10	Thermal retrofitting of historical building enclosures by using VIP- (vacuum insulation) sandwich panels	Dr. Christoph Buxbaum 1, Sandra Kircher 1, Albert Seiler 3, Oskar Pankratz 4	Austria

F11	Seismic risk mitigation of ancient masonry towers by means of pre-stressing devices	A. Preciado <sup>1</sup> , S. Sperbeck <sup>1</sup> , H. Budelmann <sup>1</sup> , and G. Bartoli <sup>2</sup>	Germany
F12	Seismic behavior of a byzantine groin-vaulted structure before and after structural restoration interventions	Ch. Mouzakis <sup>1</sup> , A. Miltiadou-Fezans <sup>2</sup> , N. Delinikolas <sup>3</sup>	Greece
F13	Innovative strengthening solution based on Textile Reinforced Mortar for stone masonry structures	L. Garmendia <sup>1</sup> , J.T. San-José <sup>1,2</sup> , D. García <sup>1</sup> , P. Alonso <sup>1</sup> and J. Díez <sup>1</sup>	Spain
F14	Strengthening layout using FRP in industrial masonry chimneys under earthquake load	F. Pallarés <sup>1</sup> , S. Ivorra <sup>2</sup> , L. Pallarés <sup>3</sup> , J. Adam <sup>4</sup>	Spain
F15	Restoration and strengthening of the cathedral of Zagreb (analysis of interventions in the past)	M. Šimunić Buršić <sup>1</sup>	Croatia
F16	The Grancia of S. Anna in Montauro: the employment of a particular steel-concrete structure in a borderline case of conservation and restoration in an high seismic area	M. Candela, R. Fonti	Italy
F17	Improving Hurricane Survivability of Heritage Structures	S. Patrick Sparks, PE <sup>1</sup>	USA

F18	Structural evaluation and strengthening of Zeynelbey Tomb in Hasankeyf, Turkey.	A. Turer <sup>1</sup>	Turkey
F19	Study on the Degradation of Bearing Capacity and Strengthening Method of the Nanjing City Wall	MU Baogang <sup>1</sup> , XIE Richeng <sup>2</sup> and ZHAO Xueliang <sup>2</sup>	CHINA
F20	Structural Analysis of the Use of Wooden Beams as Anti-Seismic Techniques in Stone Masonry in Qasr el-Bint, Petra, Jordan	Shaher M. Rababeh <sup>1</sup> , Husam Al Qablan <sup>2</sup>	Jordan
F21	Strengthening proposals for the Trigonio Tower at the city walls of Thessaloniki	V. Delizisi <sup>1</sup> , M. Axiotidou <sup>1</sup> , I.N. Doudoumis <sup>2</sup> , Ch. Ignatakis <sup>2</sup>	Greece
F22	Strengthening of Masonry Walls Using Externally Bonded Systems	K. H. Tan <sup>1</sup>	Singapore
F23	The Research on the Rust of Reinforced Bar and the Strengthening Measures to the Existed R.C. Frame nearby the Sea	Miao Ji-Jun <sup>1</sup> , Qi Bo <sup>2</sup> , Liu Yan- Chun <sup>3</sup>	China
F24	Stabilization and strengthening the foundation of the two entrance gates in holy shrine of Imam Reza (a)	Peyman Homami <sup>1</sup> , Mahmood Golabchi <sup>2</sup>	Iran
F25	Strength design of adobe walls reinforced with geogrids	D Torrealva <sup>1</sup> ,	Peru

F26	Blasting near old foundations and strengthening the foundations walls of the Ministry for Foreign Affairs of Finland	K. Avellan <sup>1</sup>	Finland
F27	Strengthening of historical masonry buildings with Fiber Reinforced Polymers (FRP)	A. Kheyroddin , M. H. Saghafi , S. Safakhah <sup>2</sup>	Iran
F28	Study on Effect of FRP Reinforced Manners on Seismic Performance of Concrete Frame Structure	Ya-ping Peng <sup>1</sup> , Ming Ma <sup>1</sup>	China
F29	Condition Assessment and Strengthening of the Basilica Maria Auxiliadora in Lima, Perú	Daniel Torrealva <sup>1</sup> , Jose Acero <sup>2</sup> , Bilge Kucukdogan <sup>3</sup> and Erika Vicente <sup>4</sup>	Peru
F30	Effectiveness of distinct techniques to strengthen beams failing in bending under monotonic loading	José Sena-Cruz <sup>1</sup> , Joaquim Barros <sup>2</sup> , and Mário Coelho <sup>3</sup>	Portugal
F31	Bond between concrete and multi-directional CFRP laminates	José Sena-Cruz <sup>1</sup> , Joaquim Barros <sup>2</sup> , and Mário Coelho <sup>3</sup>	Portugal
F32	Lightweight ribs for the strengthening of single leaf vaults undergoing seismic actions	Luca Ferrario <sup>1</sup> , Egidio Marchina	Italy

		2, Alessandra Marini <sup>2</sup> , Marco Preti <sup>2</sup> , Ezio Giuriani <sup>2</sup>	
F33	System Based Seismic Strengthening Design Method for Historic Buildings	L Wang <sup>1</sup> , Y P Peng <sup>2</sup> , X L Gu <sup>1</sup> , H Wang <sup>1</sup>	China
F34	Strengthening Structures with Partially Aged Wall	Ouyang Yu <sup>1</sup> , Hu Ying <sup>1</sup> , Cai Zhihong <sup>2</sup>	China
F35	Retrofitting and Strengthening the Former Yihe Spinner Factory of Shanghai	Ouyang Yu <sup>1</sup> , Yu Yi <sup>1</sup> ,	China
F36	RC compression column with low strength concrete strengthened using angle steels	Ouyang Yu <sup>1</sup> , Qi Jiliang <sup>1</sup> , Cai Zhihong <sup>2</sup>	China

**(G) Rehabilitation and retrofitting of historical buildings**

	<b>Title</b>	<b>Authors</b>	<b>Address 2</b>
G01	Spandrel wall repairs for a single span masonry arch highway bridge: analysis and design	S. W. Garrity	

G02	Research on Restoration Plan of Sakyamuni Pagoda	Jianli YUAN, Wei CHEN and Jue WANG	China
G03	On 4R Principle in Rehabilitation of Concrete Historic Buildings	Jianzhuang Xiao, Wengui Li	China
G04	Strike a Balance -Repair or Replace?	Eddy S.T.LEUNG <sup>1</sup> , Evita S.YEUNG <sup>2</sup> , and S.W.CHAN <sup>3</sup>	
G05	Structural restoration and adaptation to the modern architecture of Baroque Oppersdorf Palace, Wrocław, Poland	P. Berkowski, G. Dmochowski, M. Y. Minch, J. P. Szolomicki	Poland
G06	Revitalisation of historical building in Wrocław's city centre, Poland	P. Berkowski, G. Dmochowski, M. Y. Minch, J. P. Szolomicki	Poland
G07	Preservation, Safeguard and Valorization of Masonry Decorations in the Architectural Historical Heritage of Piedmont	Alberto Carpinteri <sup>1</sup> , Stefano Invernizzi <sup>1</sup> , Giuseppe Lacidogna <sup>1</sup> and Amedeo Manuello <sup>1</sup>	Italy

G08	Conservation and Preservation of historical Earthen Structures	A. Osman1	Egypt
G09	The consolidation activities applied on the Ahi Çelebi Mosque in İstanbul	Rabia Özakın1, Ayten Erdem2	Turkey
G10	The restoration of a wood-frame house in Anatolia, the Yakup Aga Mansion	Ayten Erdem1, Rabia Özakın 2	Turkey
G11	Centro de Difusão Científica do Instituto Nacional do Câncer – Rio de Janeiro, Brazil	Benedito Tadeu de Oliveira, Ouro Preto, MG -	Brazil
G12	Structure recovery simulation analysis on the six-dynasty tomb in Nanjing jiangning	Zhao Guo- dong1,2, Sun Hui-she2, Yu Li- qiang2, and Sheng Qin-zhu2	China
G13	The theory and practice of restoration in England in the second half of XIX century: The work of George E. Street	López F.,	Spain
G14	Intervention on the Roof Structure of the Lutheran Church in Bistrita (Romania)	I.Kirizsan1, B.Szabó2, L. Vass1	Romania
G15	Protecting the Tangible and Intangible Heritage of Rani ki Vav a unique subterranean step well in Gujarat	Author: Ms T.Lakshmi Priy	India

		a,	
G16	Research, Planning and Interventions Guide for Historic Roof Structures with Baroque Character	D. Makay <sup>1</sup> and E. Olosz <sup>2</sup>	Romania
G17	Lime-based materials and practices for surface refitting of cultural heritage	Dai Shibing <sup>1</sup> , Wang Jinhua <sup>2</sup> , Hu Yuan <sup>2</sup> & Zhang Debing <sup>3</sup>	China;
G18	Assessment of the compatibility of repair mortars in restoration projects	Özlem Cizer <sup>1</sup> , Gerty Serre <sup>1</sup> , Elke Janssens <sup>1</sup> , Luc Schueremans <sup>1</sup> , Koenraad Van Balen <sup>1</sup> , Jan Elsen <sup>2</sup>	Belgium
G19	Guideline Suggestion For The Sustainable Conservation Procedure of The Modern Architectural Heritage	P.Ronca <sup>1</sup> , P. Crespi <sup>1</sup> , A. Franchi <sup>1</sup> , A.Zichi <sup>2</sup>	Italy
G20	Design of field operations for the structural retrofit of the Holy Shroud Chapel in Turin	Claudia Cennamo <sup>1</sup> , Bernardino Chiaia <sup>2</sup> , Giulio	Italy

		Ventura <sup>2</sup> , Cristina Zannini Quirini <sup>3</sup>	
G21	A new technique and its application in the conservation of historical masonry constructions —underpinning by manual pipe-jacking	Weixi ZHANG <sup>1</sup> , Ping CHEN <sup>1</sup> , Dong ZHAO <sup>1</sup>	China
G22	Structural Rehabilitation of Siad Hashim Historical Mosque in Gaza	M. M. Ziara	Palestine
G23	Restoration of the Chapel of Padre Faria in Ouro Preto, MG - Brazil	Rodrigo Octávio de Marco Meniconi, Benedito Tadeu de Oliveira	
G24	Methodology for Housing Rehabilitation: how to transform existing dwellings to meet current ICT and dwellers demands	S. Eloy <sup>1</sup> , J. P. Duarte <sup>2</sup> , and I. Plácido <sup>3</sup>	Portugal
G25	Realistic Modelling and Repair of Ancient Austrian Roof Structures with Wood-based Panels	am Meisel <sup>1</sup> , tm Moosbrugger <sup>2</sup> , gs Schickhofer <sup>3</sup>	Austria
G26	Retrofitting of timber beam ceilings with the Timber-Concrete Composite Construction	K. Holschemacher 1, H. Kieslich <sup>1</sup>	Germany
G27	Emergency Seismic Retrofit of Suleymaniye Mosque	Mustafa Gokhan Kesti <sup>1</sup>	Turkey

		and Ozden Ates2	
G28	Preservation and seismic enhancement in the social reuse of historic buildings	M. Mezzi1, A. Dusi2	Italy
G29	Structural assessment and conservation of historic wooden structures	E. Manzoni1, A. Dusi1 and C. Dusi2	Italy
G30	Comparison of in situ and laboratory testing for the characterization of old timber beams before and after intervention	A. Angeli1, M. Piazza2, M. Riggio2, and R. Tomasi2	Italy
G31	"Respecting the diversity". The restoration of the Loggia's timbers in the Thun Castle (Italy).	G. Massari1, M. Riggio2, and F. Gadotti3	Italy
G32	A methodology for approaching the reconstruction of historical centres heavily damaged by 2009 L'Aquila earthquake	C. F. Carocci1, S. Cattari2, C. Circo1, D. Indelicato1 and C. Tocci3	Italy
G33	PERPETUATE project: the proposal of a performance-based approach to earthquake protection of cultural heritage	S. Lagomarsino1, H. Modaresi2,	Italy

		K. Pitilakis <sup>3</sup> , V. Bosiljkov <sup>4</sup> , C. Calderini <sup>1</sup> , D. D'Ayala <sup>5</sup> , B. Djillali <sup>6</sup> , S. Cattari <sup>1</sup>	
G34	Recommendations for the Conservation of Earthen Architectural Heritage in Chile	C. Aldunate Montes <sup>1</sup> , C. Guzmán Giesen <sup>2</sup>	Spain.
G35	Structural upgrading of the monastery 'Padre Pio Giovane' di Serracapriola. Yard and project	Tommaso Maria Massarelli	
G36	Timber structure in the missional churches of Chiquitos (Bolivia): origins, evolution and restoration	Vladimir Rodríguez Trujillo <sup>1</sup> , Eckart Kühne <sup>2</sup>	Spain
G37	Restoration of the Cibali Tobacco and Cigarette Factory and its consolidation	B. Alper <sup>1</sup> , M. Alper <sup>2</sup>	Turkey
G38	Second World War damages of the architectural heritage: St. Maria del Popolo agli Incurabili church in Naples	V. Russo <sup>1</sup> , G.P. Lignola <sup>2</sup> , E. Vassallo <sup>1</sup> , G. Ceniccola <sup>1</sup> , A. Zinno <sup>2</sup>	Italy

G39	Structural and Seismic Rehabilitation of the Senate Chamber of the Portuguese National Parliament	J. Appleton <sup>1</sup> , P. Ribeiro <sup>2</sup> , M. Figueiredo <sup>3</sup> and M. Oom <sup>4</sup>	Portugal
G40	Evaluation of Architectural Characteristics for Conservation Decisions of Değirmendağı, İzmir, Turkey	Ç.D. Kaplan <sup>1</sup> , F. Murtezaoğlu <sup>1</sup> , Ö. Akbulut <sup>2</sup> , and B. İpekoğlu <sup>1</sup>	Turkey
G41	Structural Interventions for Conservation of the 15th Century Tahtakale Bath, Tire, Turkey	F. Murtezaoğlu, Ç.D. Kaplan, and B. İpekoğlu	Turkey
G42	A Old Masonry Walls' Translocation, Restoration and Reconnection with a New Building	X.M. Zhai <sup>1</sup> , L.P Liu <sup>2</sup> , and H. Wu <sup>3</sup>	China
G43	Restoration of the Tsar-Bell Pedestal in the Moscow Kremlin	Prof., Dr. Andrew Shilin, General Director, ZAO "Triada-Holding",	Russia
G44	Repair and Rehabilitation Works in the Moscow State Conservatoire	Prof., Dr. Andrew Shilin,	Russia

		General Director, ZAO "Triada-Holding",	
G45	Remediation of Historic Buildings and Patrimony by Bacterially Induced mineralization	P.H. Li 1,2, W. J. Qu 2	China
G46	Structural Restoration of the west part of the Church of Aghia Eirini in Athens	A. Miltiadou-Fezans	Greece