

TABLE OF CONTENTS

PREFACE	XXIX
ORGANIZATION.....	XXXI

Volume 1

KEYNOTE LECTURES

A. Di Tommaso

STRUCTURAL CONSERVATION OF HISTORICAL CONSTRUCTIONS USING COMPOSITE MATERIALS TECHNIQUE	3
--	---

A. Baratta, O. Corbi

THE STATIC BEHAVIOUR OF THE HISTORICAL CUPOLAS.....	15
---	----

J. Bień, R. Helmerich

THEORETICAL AND EXPERIMENTAL ANALYSIS OF HISTORICAL BRIDGES.....	45
--	----

J. Kościuk

MODERN 3D SCANNING IN MODELING, DOCUMENTATION AND CONSERVATION OF ARCHITECTURAL HERITAGE	64
---	----

S. M. Holzer

NUMERICAL ARCH AND VAULT ANALYSIS	77
---	----

J. M. Izquierdo-Encarnación

CODES AND SPECIFICATIONS AS APPLIED TO HISTORIC PRESERVATION PROJECTS.....	94
---	----

B. Szabo, I. Kirizsán

EUROPEAN HISTORIC ROOF STRUCTURES: CONCEPTS OF COMPOSITION AND INTERVENTION.....	105
---	-----

L. Priya

CONSERVATION OF INDIAN HERITAGE SITES: A MULTIDISCIPLINARY INTEGRATED APPROACH.....	128
--	-----

J. Ochsendorf

STRUCTURAL ASSESSMENT OF MASONRY VAULTS: LESSONS FOR PRESERVATION ENGINEERING.....	133
---	-----

M. Golabchi

CONSERVATION, REPAIR AND EXTENSION OF IMAM REZA HOLY SHRINE	141
---	-----

G. de Felice, O. Al Shawa, A. Mauro, L. Sorrentino

ON THE SEISMIC BEHAVIOUR OF OUT-OF-PLANE LOADED MASONRY WALLS.....	150
---	-----

<i>A. Kadłuczka</i> ARCHITECTURAL HERITAGE AND NEW USES. PRINCIPLES AND DOCTRINES	159
<i>C. Blasi, F. Ottoni</i> THE ROLE OF STRUCTURAL MONITORING IN HISTORICAL BUILDING CONSERVATION	166

STRUCTURAL ANALYSIS AND SAFETY ASSESMENT

<i>A. Alonso Durá, A. Martínez Boquera, V. Llopis Pulido, J. Moreno Puchalt</i> STRUCTURAL BEHAVIOUR ANALYSIS OF THE DOME OF THE CATHEDRAL OF VALENCIA	185
<i>J.-U. Anwand, J. Fleischer, M. Kröning, U. Schröter, D. Wendland</i> A MASONRY STRUCTURE WITH COMPLEX GEOMETRY: RECONSTRUCTING THE LATE-GOTHIC VAULT IN THE PALACE CHAPEL AT DRESDEN USING TRADITIONAL BUILDING TECHNIQUE	193
<i>A. Anzani, A. Baila, P. Bamonte, P. Condoleo, C. Togliani</i> STRUCTURAL SURVEY OF A CHIMNEY BETWEEN XIX AND XX CENTURY	201
<i>G. Boscato, A. Dal Cin, D. Rocchi, S. Russo, F. Sciarretta, E. Sperotto, M. Tommasini</i> STRUCTURAL IDENTIFICATION OF DAMAGED ANIME SANTE CHURCH USING AMBIENT VIBRATION, FORCED VIBRATION AND EARTHQUAKE ACTION	209
<i>P. Clemente, G. Buffarini, L. Platania, F. Saitta</i> STATIC AND DYNAMIC ANALYSES OF THE MINARET IN JAM	218
<i>Q. Collette, S. Vanbeveren, P. Stoffel</i> STRUCTURAL ANALYSIS OF HISTORICAL REINFORCED CONCRETE STRUCTURE: CASE STUDY OF THE DOTREMONT HOUSE (1932)	226
<i>V. Compán, M. Cámara, J. Sánchez</i> STRUCTURAL ANALYSIS OF COMPLEX FORMS IN THE GERMAN BAROQUE	235
<i>I. de Vent, J. Rots, R. Van Hees, G. Hobbelman</i> CONFUSING CRACKS AND DIFFICULT DEFORMATIONS: INTERPRETING STRUCTURAL DAMAGE IN MASONRY	243
<i>A. Gubana, I. Di Gianantonio</i> TRIUMPHAL ARCH COLLAPSE MECHANISMS.....	253
<i>D. Häßler</i> THE “ELLIPTICAL BEAMS” IN THE WINTER PALACE IN SAINT PETERSBURG – STRUCTURAL ASSESSMENT OF A LIGHTWEIGHT STRUCTURE	262
<i>M. Hejazi, M. Daei, S.M. Moayedian, B. Hejazi</i> STRUCTURAL ANALYSIS OF PERSIAN HISTORICAL BRICK MASONRY MINARETS.....	273
<i>M. Hejazi, M. Vafaeian, A.H. Farmanara Bozorgzad</i> FOUNDATION SETTLEMENTS OF THE HISTORICAL BUILDING OF CHAHAR-BAGH MADRASSA CAUSED BY VIBRATIONS INDUCED BY UNDERGROUND TRAINS.....	282
<i>R. Korenkova, P. Krusinsky, F. Bahleda, K. Ďurian</i> STATIC ANALYSIS OF HANGING TRUSS OF BEAMED FLOOR IN EVANGELICAL CHURCH IN VYSNA BOCA.....	289

<i>D.F. Laefer, D. Murphy</i> CHARACTERISTIC DAMAGE CONCENTRATION: A NEW DAMAGE INDEX FOR HISTORIC INTERIORS.....	297
<i>P.B. Lourenço, M. Filippoupolitis, C. Corallo, N. Mendes</i> SAFETY ASSESSMENT OF THE SOUTH OCULUS, CANTERBURY CATHEDRAL (UK)	302
<i>A. Lozano, M. Guaita, J. Portela, J.J. Del Coz, M. Serrano</i> CAUSES OF THE COLLAPSE OF THE FRONT OF THE MONASTERY OF SAN PELAYO (SPAIN)	311
<i>P. Matracchi, L. Giorgi</i> NEW INSIGHTS ON THE STRUCTURAL WEAKNESS OF THE DUOMO NUOVO IN SIENA	317
<i>F. Muñoz, F. Peña, M. Meza</i> STRUCTURAL ASSESSMENT OF ARCHITECTURAL HERITAGE BUILDINGS BY MEANS OF VIRTUAL REALITY MODELS.....	325
<i>F. Pena, M. Meza, M. Chavez</i> MACROELEMENT IDENTIFICATION OF MASONRY CHURCHES BY MEANS OF THEIR DYNAMIC PROPERTIES.....	333
<i>E. Quagliarini, F. Monni, S. Lenci</i> IMPORTANCE OF BUILDING KNOWLEDGE FOR A CORRECT STRUCTURAL ASSESSMENT. THE CASE OF SANTA MARIA DELLA CARITÀ CHURCH IN ASCOLI PICENO (ITALY).....	341
<i>G.M. Roberti, M. Bondanelli, F. Trovò</i> A SAFETY INDEX EVALUATION FOR MASONRY BELL TOWERS IN VENICE	351
<i>P. Roca, M. Cervera, L. Pelà, R. Clemente, M. Chiumenti</i> STRUCTURAL ASSESSMENT OF MALLORCA CATHEDRAL	359
<i>D. Uglešić, A. Uglešić</i> PROTIRON OF THE PERISTYLE IN THE PALACE OF DIOCLETIAN IN SPLIT	368
<i>L. Van Parys, J. Noël, D. Lamblin, S. Datoussaid, A. Tilmant</i> DISORDERS IN NORTH TRANSEPT OF THE CATHEDRAL IN TOURNAI (BE): STRUCTURAL MONITORING, SIMULATIONS AND TEMPORARY STABILIZATION.....	377
<i>J. Yuan, Y. Shi</i> SIMULATION AND EXPERIMENTAL RESEARCH ON ENERGY DISSIPATION BEHAVIOR OF DOU-GONG.....	385
 <i>ANALYTICAL AND NUMERICAL APPROACHES</i>	
<i>A. Albuerne, M. Williams, V. Lawson</i> PREDICTION OF FAILURE MECHANISM OF ARCHES AND BARREL VAULTS UNDER BASE MOTION USING THE NSCD METHOD.....	397
<i>A. Ayensa Pardo, B. Beltrán Pellicer, E. Ibarz Montaner, L. Gracia Villa</i> A METHODOLOGY FOR THE ASSESSMENT OF HISTORICAL STRUCTURES BASED ON FINITE ELEMENT MODELS.....	407
<i>R. Barsotti, S. Bennati</i> MECHANICAL BEHAVIOUR OF MASONRY PANELS UNDER IN-PLANE LOADS.....	416

<i>P. Block, L. Lachauer</i> THREE-DIMENSIONAL EQUILIBRIUM ANALYSIS OF GOTHIC MASONRY VAULTS	424
<i>C. Camós, C. Molins, O. Arnau, J. Gálvez</i> NUMERICAL SIMULATION OF THE STRUCTURAL BEHAVIOUR OF BUILDINGS UNDER TUNNELLING INDUCED SETTLEMENTS: A CASE STUDY IN THE L9 METRO LINE (BARCELONA).....	432
<i>C. Casapulla, F. Portioli, A. Maione, R. Landolfo</i> MACRO AND MICRO-BLOCK MODELLING FOR LIMIT ANALYSIS OF MASONRY STRUCTURES WITH NON-ASSOCIATIVE FRICTIONAL JOINTS	441
<i>N. Cavalagli, V. Gusella, F. Vittori</i> ON THE CONTRIBUTION OF BERNARDO VITTONI IN THE DESIGN OF MASONRY DOMES.....	449
<i>A. Cecchi</i> THE CURVE OF PRESSURE IN VERTICALLY LOADED ARCHES	457
<i>A. Costa, J. Lluís i Ginovart, G. Fortuny, P. Solà-Morales</i> LIMIT ANALYSIS OF MASONRY DOME COLLAPSE MECHANISMS BY MEANS OF FINITE ELEMENTS	465
<i>G. Giardina, S. Boldrini, M. A. N. Hendriks, J. G. Rots</i> PILE FOUNDATION IN 3D MODELLING OF BUILDING DAMAGE DUE TO SETTLEMENT.....	473
<i>M. Guadagnuolo, A. Donadio, G. Faella</i> OUT-OF-PLANE FAILURE MECHANISM OF MASONRY BUILDING CORNERS	481
<i>M. Lippiello, F. Portioli, C. Ceraldi, R. Landolfo</i> MASONRY DOMES STRENGTHENING: A COMPARATIVE STRUCTURAL ANALYSIS	489
<i>G. Milani, M. Pizzolato, A. Tralli</i> SIMPLE HOMOGENIZED PLATE MODEL FOR OUT-OF-PLANE LOADED MASONRY TAKING INTO ACCOUNT MATERIAL AND GEOMETRICAL NON LINEARITY	498
<i>M. Paradiso, G. Tempesta, S. Galassi, E. Perria, G. Berti</i> DEGRADATION AND CONSOLIDATION OF THE DOME OF THE CATHEDRAL OF SANTIAGO DE CUBA.....	508
<i>B. Peng, X.L. Gu, Y. Ouyang, K. Sun, N.K. Liu</i> NUMERICAL SIMULATION FOR RETROFIT OF THE ANDREWS & GEORGE BUILDING IN SHANGHAI	517
<i>M. Pilar Giraldo, V. Rodríguez, C. Burgos</i> NUMERICAL-SIMULATION RESEARCH ON FIRE BEHAVIOR OF A HISTORIC INDUSTRIAL BUILDING	525
<i>F. Portioli, L. Cascini, C. Casapulla, M. D'Aniello, R. Landolfo</i> LIMIT ANALYSIS OF CONFINED MASONRY SHEAR WALLS BY RIGID BLOCK MODELING WITH CRACKING UNITS	534
<i>E. Rizzi, G. Colasante, A. Frigerio, G. Cocchetti</i> ON THE MIXED COLLAPSE MECHANISM OF SEMI-CIRCULAR MASONRY ARCHES.....	541
<i>E. Sacco</i> STRESS APPROACHES FOR THE ANALYSIS OF MASONRY ARCHES.....	550

<i>V. Sarhosis, S. Garrity, Y. Sheng</i> A COMPUTATIONAL MODELLING APPROACH FOR LOW BOND STRENGTH MASONRY.....	559
<i>M. Sebastianelli, A. Amorosi, D. Boldini, G. de Felice, G. Di Mucci, M. Malena</i> SETTLEMENT PREDICTION OF AN HISTORIC MASONRY DUE TO TUNNEL EXCAVATION TAKING INTO ACCOUNT SOIL-STRUCTURE INTERACTION.....	567
<i>B. Silva, A. Pappas, M. R. Valluzzi, F. da Porto, C. Modena</i> CALIBRATION OF A NUMERICAL MATERIAL BEHAVIOUR MODEL FOR THE SIMULATION OF MULTI-LEAF STONE MASONRY WALLS	575
<i>L. Van Parys, J. Noël, D. Lamblin, E. Bultot, L. Delehouzee</i> FE “BLOCK & INTERACTION” APPROACH FOR ESTIMATING THE IMPACT OF BELL TOWER INCLINATIONS ON THE SAFETY OF NORTH TRANSEPT ARCH SYSTEM IN THE OL CATHEDRAL OF TOURNAI (BE)	584
<i>T. J. White, A. D. Sorensen</i> NUMERICAL MODELING OF THE EFFECTS OF TEMPERATURE ON EXPERIMENTAL MODAL ANALYSIS DATA.....	594
<i>Pan Jianwu, Chun Qing</i> FINITE ELEMENT ANALYSIS OF TAIZHOU WATER STATION SITE IN CHINA.....	601

EXPERIMENTAL ANALYSIS

<i>Ch.-E. Adami, E. Vintzileou, Ch. Mouzakis, L. Karapitta</i> DYNAMIC TESTS ON TIMBER-LACED THREE-LEAF STONE MASONRY MODEL.....	609
<i>J. Atalić, D. Lazarević, M. Šavor</i> TRADITIONAL COLUMN CONNECTIONS WITH IRON DOWELS – EXPERIMENTAL AND NUMERICAL ANALYSIS	619
<i>P. Bocca, S. Valente, A. Grazzini, A. Alberto, V. Di Vasto</i> DELAMINATION OF DEHUMIDIFIED REPAIR MORTARS: A NEW EXPERIMENTAL AND NUMERICAL ANALYSIS	628
<i>M. Bovo, C. Mazzotti, M. Savoia</i> ANALYSIS OF STRUCTURAL BEHAVIOUR OF HISTORICAL STONE ARCHES AND VAULTS: EXPERIMENTAL TESTS AND NUMERICAL ANALYSES.....	635
<i>J. Brol, S. Dawczyński, A. Malczyk, K. Adamczyk</i> TESTING TIMBER BEAMS AFTER 130 YEARS OF UTILIZATION.....	644
<i>M. Chávez, R. Sánchez, R. Meli</i> CHARACTERIZATION OF THE HISTORIC MASONRY BUILDINGS OF MEXICO	651
<i>E. Gabrielli, C. Colla</i> LABORATORY INVESTIGATION OF DAMP RISE IN POROUS MASONRY CONSTRUCTION MATERIALS	659
<i>Ł. Hojdys, P. Krajewski</i> EXPERIMENTAL TESTS ON STRENGTHENED AND UNSTRENGTHENED MASONRY VAULT WITH BACKFILL.....	668
<i>X. Li, X.L. Gu, Z.N. Gao, Y. Ouyang, N.K. Liu</i> DETERMINATION OF MECHANICAL PROPERTIES OF HISTORICAL BRICK MASONRY MATERIALS	675

<i>A.-A. Manoledaki, V. Drosos, I. Anastasopoulos, E. Vintzileou, G. Gazetas</i> OUT-OF-PLANE RESPONSE OF THREE-LEAF STONE MASONRY WALLS TAKING ACCOUNT OF SOIL-STRUCTURE INTERACTION: AN EXPERIMENTAL STUDY.....	684
<i>P. Marini, R. Bellopede</i> SANDSTONE DECAY: FROM HISTORICAL BUILDINGS TO LABORATORY TESTS.....	691
<i>J. Milosevic, A. S. Gago, M. Lopes, R. Bento</i> RUBBLE STONE MASONRY WALLS – EVALUATION OF SHEAR STRENGTH BY DIAGONAL COMPRESSION TESTS	697
<i>Ch. Mouzakis, E. Vintzileou, Ch.-E. Adami, L. Karapitta</i> DYNAMIC TESTS ON THREE LEAF STONE MASONRY BUILDING MODEL BEFORE AND AFTER INTERVENTIONS.....	706
<i>L. Pelà, A. Benedetti, D. Marastoni</i> INTERPRETATION OF EXPERIMENTAL TESTS ON SMALL SPECIMENS OF HISTORICAL MORTARS	716
<i>C. Sandoval, P. Roca</i> EXPERIMENTAL AND NUMERICAL STUDY OF THE BUCKING FAILURE OF MASONRY WALLS.....	724
<i>H. Sung-Gul, H. K. Namhee, H. Tae-Wook</i> FRACTURE MECHANICS CHARACTERISTICS OF FLEXURAL STRENGTH OF GRANITE STRUCTURAL COMPONENTS REINFORCED BY METAL.....	732
<i>A. Vatani Oskouei, M. Afzali, M. Madadipour</i> EFFECT OF LIME AND RICE HUSK ASH STABILIZATION AND COMPACTION ON MUD BRICK REINFORCED WITH SYNTHETIC FIBERS.....	740
 <i>INNOVATIVE AND TRADITIONAL MATERIALS/TECHNIQUES</i>	
<i>Ch.-E. Adami, E. Vintzileou, Ch. Mouzakis, E. Badogiannis, A. Kalagri</i> THE EFFECT OF HYDRAULIC LIME POZZOLANIC GROUTS ON THE MECHANICAL PROPERTIES OF THREE-LEAF STONE MASONRY IN COMPRESSION.....	751
<i>A. Ajdukiewicz, B. Kotala, M. Węglorz</i> CONCEPT AND PRACTICAL APPLICATIONS OF TEXTILE REINFORCED CONCRETE	760
<i>M. Avraham</i> REINFORCED CONCRETE AND CONSERVATION OF THE HERITAGE OF THE BUILT ENVIRONMENT	767
<i>E. Badogiannis, A. Miltiadou, A. Kalagri, E. Ipsilanti, C. Dedeloudis, E. Vintzileou</i> MIX DESIGN AND PERFORMANCE EVALUATION OF GROUTS WITH SUPERFINE NATURAL POZZOLAN	773
<i>D. Bansal, R. Gogia</i> INNOVATIVE AND TRADITIONAL BUILDING MATERIALS – SUSTAINABILITY & COST EFFECTIVENESS – AN ANALYSIS OF EEV	781
<i>G. De Blasi</i> TECHNOLOGICAL INNOVATION AND TRADITION IN THE MAINTENANCE STRATEGIES OF THE EUROPEAN CATHEDRALS. TWO CASE STUDIES: SANTA MARIA DEL FIORE, FLORENCE AND WELLS CATHEDRAL, WELLS	790

<i>A. Erdem, U. Yergun, N. Seçkin</i> A PIONEER EXAMPLE OF STEEL FRAME CONSTRUCTION IN OTTOMAN ARCHITECTURE: THE GREAT SYNAGOGUE OF EDIRNE.....	800
<i>B. Faggiano, M. R. Grippa, A. Marzo, F. M. Mazzolani</i> THE STEEL COLLAR CONNECTOR FOR COMPOSITE TIMBER-CONCRETE FLOOR: CONCEPTION, ANALYSIS AND APPLICATIONS.....	807
<i>T. Falborski, A. Kwiecień, M. Strankowski, Ł. Piszczyk, R. Jankowski</i> THE INFLUENCE OF TEMPERATURE ON PROPERTIES OF THE POLYMER FLEXIBLE JOINT USED FOR STRENGTHENING HISTORICAL MASONRIES	816
<i>A. Koss, J. Marczak</i> EVALUATION OF LASER CLEANING PROGRESS AND QUALITY	823
<i>P. Larrinaga, D. García, L. Garmendia, J. Díez, J. T. San-José</i> PATHOLOGIES IN LOW-GRADE CONCRETE STRUCTURES AND TEXTILE REINFORCED MORTAR AS INNOVATIVE RETROFITTING SYSTEM.....	832
<i>L. Miccoli, U. Müller</i> CHARACTERISATION OF EARTHEN ELEMENTS. A COMPARISON BETWEEN EARTH BLOCK MASONRY, RAMMED EARTH AND COB.....	841
<i>O. Ç. Özdemir, A. Ç. Gökyılmaz, B. Gökyılmaz</i> AN APPLICATION DIRECTED AT USING AUTHENTIC MATERIALS WHEN RENOVATING HISTORIC STRUCTURES	850
<i>H. Pachla, F. Pachla</i> REMARKS ON THE USEFULNESS OF DEEP FOUNDATIONS FOR THE STRENGTHENING OF FOUNDATIONS IN HISTORIC AREAS	859
<i>A. Pérez Zuniga</i> PRINCIPLES OF COMPOSITE CONSTRUCTION APPLIED TO STRUCTURAL REHABILITATION OF HISTORICAL CENTRES	867
<i>S. Pineda, R. Bustamante, N. Prendes</i> FERRUGINOUS SHALES LUTITIC SANDSTONE (EYE'S STONE) MASONRY OF TRADITIONAL BUILDINGS IN MARACAIBO, VENEZUELA.....	874
<i>M. Přinosil, P. Kabele</i> PREDICTION OF THE BEHAVIOR OF LIME MORTAR REINFORCED WITH FIBERS BASED ON THEIR MICROMECHANICAL PARAMETERS	883
<i>R. Prusinski, W. S. Wahby</i> PRECAST POLYMER CONCRETE BUILDING PANELS: CASE STUDIES WITH LONGEVITY EXPERIENCE.....	890
<i>I. Rörig-Dalgaard</i> FIRST EXPERIENCES WITH ELECTROCHEMICAL IN-SITU DESALINATION OF BRICKS IN A CHURCH VAULT CONSTRUCTION	897
<i>A. Różańska, I. Burawska, A. Policińska-Serwa, W. Koryciński, A. Mazurek, P. Beer, I. Swaczyna</i> STUDY OF ANTIQUE WOODEN FLOOR ELEMENTS OF CHOSEN BUILDINGS FROM SOUTH-EASTERN POLAND	905
<i>A. Skorek</i> THE HISTORY OF ROMAN CEMENT AND ITS USE IN CONSERVATION OF ARCHITECTURAL MONUMENTS.....	914

<i>A. Vatani Oskouei, M. Afzali, M. Madadipour</i> EFFECT OF SOME NATURAL ADDITIVES ON THE MECHANICAL PROPERTIES OF MUD BRICK.....	920
<i>A. Vatani Oskouei, M. Madadipour, M. Afzali</i> EFFECT OF SOME SYNTHETIC FIBERS ON MECHANICAL PROPERTIES OF MUD BRICK.....	928
<i>E. Verstrynge, K. De Wilder, R. Timmermans, L. Schueremans, L. Vandewalle</i> RETROFITTING OF THIN CONCRETE SLABS WITH VARIOUS TYPES OF EXTERNALLY BONDED REINFORCEMENT	936
<i>W. S. Wahby</i> THE POSSIBLE UTILITY OF POLYMERS IN THE RESTORATION AND PRESERVATION OF EGYPT'S SPHINX	945
<i>J. Jayaprakash, Sharifah Salwa Mohd Zuki, Choong Kok Keong</i> A REVIEW ON REPAIR OF FIRE-DAMAGED CONCRETE COLUMNS WITH FIBRE REINFORCED POLYMER.....	953
<i>Dilek Ekşi Akbulut, Fevziye Aköz</i> EFFECTS OF POZZOLANAS AND FIBERS ON MECHANICAL PROPERTIES OF MORTARS IN HISTORICAL BUILDINGS	961
<i>Bekir Yılmaz Pekmezci, Hakan Nuri Atahan, Işıl Polat Pekmezci, Erman Yiğit Tuncel</i> EFFECTS OF LIME MORTAR DESIGN ON MECHANICAL PROPERTIES OF HISTORICAL MASONRY UNITS	969
AUTHOR INDEX	XXXIII

Volume 2

CONSERVATION AND HISTORY OF CONSTRUCTION BUILDING TECHNOLOGIES AND MATERIALS

<i>K. Afzali</i> ARCHITECTURE AND STRUCTURE DESIGN OF SOLTANIEH DOME OF IRAN	979
<i>K. Ałykow, M. Napiórkowska-Ałykow</i> THE INFLUENCE OF THE 19 th CENTURY TECHNICAL SOLUTIONS OF THE WORK OF THE BAROQUE HALL CHURCHES.....	986
<i>G. Arun</i> TRADITIONAL TIMBER STRUCTURES IN TURKEY	995
<i>K. Babraj, J. P. Kogut, J. Zięba</i> NUMERICAL RECONSTRUCTION OF BEHAVIOUR OF THE ANCIENT POTTERY KILN FROM MAREA (EGYPT) DUE TO OPERATIONAL LOADING.....	1003
<i>D. Bajno</i> THE DETERMINATION OF CAUSES FOR DEFECTS OCCURRING IN THE SEVENTEENTH-CENTURY CHURCH BUILDING IN PRÓSZKÓW, OPOLE PROVINCE, POLAND	1015

<i>T. Basirico</i> THE „MIXED STRUCTURES” OF THE SANATORIUMS BUILT IN THE 30S IN ITALY	1021
<i>H. Cervinkova, J. Ilkosz</i> CENTENNIAL HALL IN WROCLAW – CHALLENGES OF CONSTRUCTION AND PRESERVATION	1029
<i>S. Chatterjee</i> CRITICAL ISSUES OF LAYERED STONE CONSTRUCTIONS AND APPLICATION OF ARCHIVES IN INVESTIGATION – THE CASE OF VITTHALA TEMPLE, HAMPI WORLD HERITAGE SITE	1041
<i>M. Chorowska, P. Błoniewski</i> CONVERSION OF RUINS OF A MEDIEVAL CASTLE IN PŁONINA FOR TOURISTIC PURPOSES	1050
<i>A. Çiftçi</i> THE IMPORTED TILES AND ARCHITECTURAL CERAMICS USED IN 19-20TH CENTURY ISTANBUL’S BUILDINGS	1060
<i>Q. Collette, I. Wouters, C. De Favereau, A. Peters</i> DEVELOPMENT OF RIVETING TECHNOLOGY THROUGH AN ANALYSIS OF BELGIAN PATENTS (1830-1940)	1071
<i>Q. Collette, I. Wouters, L. Lauriks, K. Verswijver</i> MORPHOGENESIS OF THE THEORY AND DESIGN PRINCIPLES OF RIVETED CONNECTIONS IN HISTORICAL IRON AND STEEL STRUCTURES	1080
<i>M. Czarniecki, D. Czerek</i> RENOVATION OF THE CENTENNIAL HALL (UNESCO LIST, WROCLAW, POLAND)	1089
<i>D. De Mattia</i> THE BIRTH OF THE TECTONICS: FROM THE HISTORY OF CONSTRUCTION TO THE STRUCTURAL ANALYSIS AND ARCHITECTURAL DESIGN	1097
<i>L. Dekeyser, A. Verdonck, H. de Clerco, H. Wouters</i> ‘MARBRITE FAUQUEZ’ OPALESCENT AND MASS COLOURED GLASS: HISTORY, PRODUCTION AND COMPOSITION	1106
<i>B. Demetrescu, V. Gioncu</i> HISTORICAL STRUCTURES IN THE ROMANIAN BANAT AREA.....	1114
<i>D. Friedman, G. Pardo Redondo</i> THE NEW YORK CRYSTAL PALACE: IRON STRUCTURE WITHOUT ENGINEERING	1119
<i>L. Giorgi, P. Matracchi</i> STABILITY OF THE STRUCTURE OF THE BASILICAN BODY OF SANTA MARIA DEL FIORE IN FLORENCE DURING CONSTRUCTION OF THE NAVES	1127
<i>A. Grimoldi, A. Landi</i> THE SPREAD OF THE XVIIITH CENTURY VAULTS IN CREMONA. THE CASE-STUDY OF MAGIOGRASSELLI PALACE.....	1136
<i>A. Gryglewska</i> EXEMPLARY MATERIALS AND BUILDING TECHNOLOGIES IN THE HUNDRED-YEAR EDIFICE OF THE FORMER CONSTRUCTION CRAFTS SCHOOL IN WROCLAW	1145

<i>M. Hejazi, M. Daei, S. M. Moayedian, B. Hejazi</i> PERSIAN MINARETS: HISTORY, CONSTRUCTION AND MATERIALS	1154
<i>A. Hellebois, B. Espion</i> INSIGHT INTO TECHNOLOGICAL ASPECTS OF THE EVOLUTION OF THE HENNEBIQUE REINFORCED CONCRETE SYSTEM.....	1160
<i>J. Jasieńko, M. Moczko, A. Moczko, D. Wala, R. Dżugaj</i> CENTENNIAL HALL IN WROCLAW (POLAND) – UNIQUE, HUNDRED YEARS OLD CONCRETE STRUCTURE OF MAX BERG	1171
<i>I. Kirizsán, B. Szabo, I. Kirizsán</i> CRITICAL ANALYSIS OF GOTHIC ROOF STRUCTURE CONFORMATION – THE ROLE OF THE COMPOSING ELEMENTS AND DEVICES	1180
<i>A. Koçak, B. Zengin</i> DETERMINING MATERIAL AND FREE VIBRATION VALUES OF HISTORICAL STRUCTURES BY WAY OF SAMPLING	1189
<i>W. Laska</i> CONCRETE – AUSTERITY, SINCERITY, BEAUTY. FAÇADE AND INTERIORS RENOVATION OF THE CENTENNIAL HALL IN WROCLAW	1205
<i>X. Laumain, Á. López Sabater</i> ROMAN OPUS CRATICIUM, A REDISCOVERED CONSTRUCTION TECHNOLOGY.....	1213
<i>I. Lawrowska</i> ANALYSIS OF THE TERRITORIAL LAYOUT OF BREST-LITOVSKI (XIV-XVI CENTURY)	1220
<i>M. Mosoarca, V. Gioncu, V. Fodor</i> HISTORICAL WOOD BEARING STRUCTURES. STRUCTURAL DEFICIENCIES AND CONSOLIDATION SOLUTIONS FOR CHURCHES LOCATED IN BANAT COUNTY, ROMANIA.....	1231
<i>J. G. Muñoz, J. Grau Engüix, C. M. Jiménez</i> TILE VAULTS IN CONTEMPORARY ARGENTINA	1240
<i>I. Papayianni, V. Pachta, M. Stefanidou, S. Konopissi</i> SURVEY OF TECHNOLOGICAL CHARACTERISTICS OF STRUCTURAL MORTARS OF DIFFERENT HISTORIC PERIODS.....	1248
<i>Ł. Pardela, W. Czamara, D. Olearczyk, R. Stodolak</i> HYDROTECHNICAL STRUCTURES OF WROCLAW FORTIFICATIONS.....	1255
<i>M. Philokyprou, E. Fiouri, E. Limbouri-Kozakou</i> RUINED AND ABANDONED TRADITIONAL SETTLEMENTS. THE CASE OF CYPRUS	1264
<i>D. Roubien</i> CONSTRUCTION TECHNIQUES IN 19TH CENTURY ATHENS AND THEIR IMPACT ON TODAY RESTORATION PROJECTS	1273
<i>A. Säbel, S. M. Holzer</i> 19TH CENTURY CURVED BOARD ROOFS IN BAVARIA	1282
<i>J. Sarrazola Martins, A. Sousa Gago, J. Caldas</i> ROOF AND CEILING WOOD STRUCTURES IN PORTUGUESE CHURCHES FROM THE FIFTEENTH TO THE SEVENTEENTH CENTURY: CONSTRUCTIVE CHARACTERIZATION AND COMPARISON WITH THE SPANISH STRUCTURES	1293

<i>A. Soikkeli, J. Tervaoja</i> WORLD'S LARGEST WOODEN CHURCH IN KERIMÄKI.....	1302
<i>J. Sroczynska</i> ROLE OF ICT TECHNOLOGIES IN THE CONSERVATION OF BUILDING MONUMENTS	1309
<i>R. M. Talaverano</i> SPANISH LATE GOTHIC FLAT RIBBED VAULTS: KEYPOINTS OF THEIR STRUCTURAL DESIGN.....	1317
<i>K.M. Tou, C.C. Lam, V.P. Iu, K.P. Kou</i> CAPACITY SPECTRUM STUDY OF THE RUINS OF ST. PAUL'S, MACAU	1324
<i>K. Verswijver, Q. Collette, R. De Meyer, I. Bertels, I. Wouters</i> CHARLES MARCELLIS AND ARTHUR VIERENDEEL: A CENTURY OF BELGIAN BRIDGE BUILDING (1835-1940)	1332
<i>D. Wendland</i> RESEARCH ON "CELL VAULTS": ANALYTIC AND EXPERIMENTAL STUDIES ON THE TECHNOLOGY OF LATE-GOTHIC VAULT CONSTRUCTION	1339
<i>K. Won-in, C. Khaokheiw, P. Dararutana</i> THERMOLUMINESCENCE DATING OF MAENAM NOI KILN, CENTRAL THAILAND	1347
<i>A. Yousefnezhad</i> RECOGNITION OF A HISTORICAL LIBRARY BY AN APPROACH TO CONSTRUCTION TECHNOLOGY	1351

SEISMIC BEHAVIOR AND RETROFITTING

<i>I. Andreescu, M. Mosoarca</i> THE RECOVERED BEAUTY. RESTAURATION AND RECONVERSION OF THE ROMAN – CATHOLICCHURCH OF BOBDA, ROMANIA	1361
<i>M. Andreini, A. De Falco, M. Sassu</i> DAMAGE MECHANISMS IN MASONRY BUILDINGS AND PEAK GROUND ACCELERATION DURING THE 2009 EARTHQUAKE IN ABRUZZO (ITALY)	1370
<i>J. Appleton, V. Appleton, M.F. da Rocha, R. Pombo</i> STRUCTURAL INTERVENTION AT THE HEADQUARTERS OF BANK OF PORTUGAL	1379
<i>I. Bergamasco, B. Carpani, P. Clemente, V. Papaccio</i> SEISMIC PRESERVATION OF ARCHEOLOGICAL SITES: THE CASE OF POMPEI.....	1386
<i>C. Cancino, S. Lardinois</i> AN ARCHITECTURAL AND ENGINEERING APPROACH TO COLLECT FIELD INFORMATION FOR THE SEISMIC RETROFITTING OF HISTORIC EARTHEN BUILDINGS IN PERU.....	1395
<i>C. F. Carocci, C. Circo, M. Costa, S. Giuffrida, L. Scuderi, M. R. Vitale</i> A RECONSTRUCTION PLAN FOR VILLA SANT'ANGELO AND TUSSILLO (AQ). PRELIMINARY ANALYSES	1405
<i>C. F. Carocci, M. Costa</i> CASENTINO (AQ): A SEISMIC IMPROVEMENT PROJECT FOR MASONRY BUILDINGS.....	1414

<i>C. F. Carocci, C. Tocci</i> L'AQUILA REGION MASONRY WORKS.....	1423
<i>M. A. Chiorino, R. Ceravolo, C. G. Lai, C. Casalegno</i> SURVEY, SEISMIC INPUT AND STRUCTURAL MODELLING OF THE "REGINA MONTIS REGALIS" BASILICA AND LARGE ELLIPTICAL DOME AT VICOFORTE, NORTHERN ITALY	1432
<i>P. Clemente, A. De Stefano, R. Zago</i> SEISMIC RETROFIT OF HISTORICAL BUILDINGS WITH SEISMIC ISOLATION	1441
<i>E. Coisson, F. Ottoni</i> THE PROBLEM OF LARGE SCALE EVALUATION OF MASONRY BUILDINGS SEISMIC RISK IN DEFINING INTERVENTION PRIORITIES.....	1449
<i>A. D'Ambrisi, V. Mariani, M. Mezzi</i> NONLINEAR ANALYSIS OF A TALL HISTORICAL MASONRY TOWER.....	1457
<i>A. Di Mattia</i> SEISMIC RESPONSE ANALYSIS AND REHABILITATION PROJECT FOR A HISTORICAL MASONRY CONSTRUCTION, DAMAGED BY THE L'AQUILA EARTHQUAKE OF 06 APRIL 2009.....	1465
<i>A. Di Tommaso, R. Lancellotta, F. Focacci, F. Romaro</i> SEISMIC STABILITY EVALUATION OF THE GHIRLANDINA TOWER IN MODENA, ITALY.....	1474
<i>M. Drdác'ky, S. Urushadze, M. Wünsche</i> RETROFITTING OF IMPERFECT CARPENTRY JOINTS FOR INCREASED SEISMIC RESISTANCE.....	1485
<i>B. Faggiano, A. Formisano, D. De Gregorio, T. De Lucia, F. M. Mazzolani</i> THE STRUCTURAL BEHAVIOUR ASSESSMENT OF GOLDEN MILES VESUVIAN VILLAS THROUGH A SEISMIC-VOLCANIC QUICK PROCEDURE	1493
<i>L. Ferrario, A. Marini, V. Andreis, S. Zanotti, P. Riva, E. Giuriani</i> BEHAVIOUR AND RETROFITTING OF SINGLE-LEAF VAULTS UNDER DISTRIBUTED HORIZONTAL FORCES.....	1503
<i>C. Fonseca Ferreira, D. D'Ayala</i> NUMERICAL MODELLING AND STRUCTURAL ANALYSIS OF ECCLESIASTICAL BUILDINGS IN PERU FOR SEISMIC RETROFITTING	1512
<i>A. Formisano, G. Florio, R. Landolfo, L. Krstevska, L. Tashkov</i> EXPERIMENTAL AND NUMERICAL INVESTIGATION ON A MONUMENTAL MASONRY BUILDING DAMAGED BY THE ABRUZZO EARTHQUAKE	1520
<i>A. Formisano, F. M. Mazzolani</i> COMPARISON AMONG ANALYSIS METHODOLOGIES FOR SEISMIC VULNERABILITY ASSESSMENT OF MASONRY SCHOOL BUILDINGS IN TORRE DEL GRECO.....	1529
<i>M. Golabchi, M. Khoramirouz</i> STRUCTURAL MODELING OF DOUBLE-SHELL DOME OF IMAM MOSQUE (ISFAHAN) AND SEISMIC MODEL ANALYSIS	1538
<i>O. Gunes, B. Gunes, I. Sozenoglu</i> PERFORMANCE-BASED SEISMIC EVALUATION AND RETROFITTING OF HISTORIC UNREINFORCED CONCRETE WALL BUILDINGS WITH INTERIOR STEEL FRAMES	1546

<i>M. Hejazi, H. Mehdad, B. Hejazi</i> SEISMIC STUDY AND REASTORATION PLAN OF ADOBE TOWER NO. 32 IN THE BAM CITADEL, IRAN	1556
<i>M. Hodjat, S. Asadi</i> INTRODUCTION ON IRAN EARTHQUAKE DAMAGED HISTORICAL SITES	1565
<i>P. Homami, M. Golabchi, M. J. Jabbarzadeh</i> SEISMIC VULNERABILITY ASSESSMENT AND REHABILITATION DESIGN OF NAGHAREH-KHANEH EDIFICE	1573
<i>A. Javani Dizaji</i> BEHAVIOR OF IRANIAN ARCHES IN EARTHQUAKE.....	1582
<i>L. Karapitta, Ch. Mouzakis, Ch.-E. Adami, E. Vintzileou</i> NON LINEAR SEISMIC RESPONSE OF THREE-LEAF MASONRY STRUCTURES	1590
<i>A. Koçak, B. Zengin</i> OBSERVED SEISMIC DAMAGES OF HISTORICAL STRUCTURES WHICH ARE LOCATED IN MARMARA REGION IN TURKEY AND MECHANICAL PROPERTIES OF STRUCTURES	1599
<i>F. Lorenzoni, T. Aoki, F. Casarin, C. Modena, F. da Porto, D. Sabia, V. Sumini</i> POST-EARTHQUAKE ASSESSMENT OF THE CIVIC TOWER IN L'AQUILA: AMBIENT VIBRATION TESTS AND STRUCTURAL HEALTH MONITORING	1612
<i>G. Magenes, A. Penna, M. Rota, A. Galasco, I. Senaldi</i> SHAKING TABLE TEST OF A STRENGTHENED FULL SCALE STONE MASONRY BUILDING WITH FLEXIBLE DIAPHRAGMS.....	1621
<i>C. A. Monguilner, S. B. Aladro, M. E. Castro</i> SEISMIC ASSESMENT OF THE HERITAGE BUILDING IN SAN JUAN CITY – ARGENTINA.....	1630
<i>S. Moreira, L. F. Ramos, D. V. Oliveira, R. P. Fernandes, J. Guerreiro, P. B. Lourenço</i> EXPERIMENTAL SEISMIC BEHAVIOUR OF WALL-TO-HALF-TIMBERED WALL CONNECTIONS	1639
<i>M. Mosoarca</i> INNOVATIVE SYSTEM FOR CONSOLIDATION OF HISTORICAL FEW STOREY MASONRY BUILDINGS SITUATED IN SEISMIC AREAS.....	1647
<i>M. Mosoarca, V. Gioncu</i> FAILURE MECHANISMS OF ORTHODOX CHURCHES SITUATED IN SEISMIC AREAS IN ROMANIA	1656
<i>Ch. Mouzakis, Ch.-E. Adami, L. Karapitta, E. Vintzileou</i> SEISMIC BEHAVIOUR OF A REHABILITATED CROSS VAULT	1665
<i>M. Palmieri, G. Magenes, C. G. Lai, A. Penna, F. Bozzoni, M. Rota, G. Macchi, F. Auricchio, M. D. Mangriotis, A. Menon, A. Meher Prasad, C. V. R. Murty</i> REDUCTION OF SEISMIC RISK OF ROMAN AND HINDU TEMPLES	1674
<i>F. Parisi, N. Augenti</i> MULTI-RISK ASSESSMENT OF A CULTURAL HERITAGE MASONRY BUILDING SUBJECTED TO BOTH EARTHQUAKE AND VOLCANIC THREATS.....	1682
<i>M. A. Parisi, C. Chesi, C. Tardini, F. Altamura</i> SEISMIC STRENGTHENING OF TIMBER ROOF STRUCTURES: A CASE STUDY	1691

<i>N. Quinn, D. D'Ayala, D. Moore</i> EXPERIMENTAL TESTING AND NUMERICAL ANALYSIS OF QUINCHA UNDER LATERAL LOADING	1699
<i>L. Shengcai, L. Yu, Y. Jianli</i> PARAMETERS FITTING ON THE DYNAMIC BEHAVIOURS OF AN ANCIENT PAGODA DAMAGED BY WENCHUAN EARTHQUAKE	1709
<i>L. Sorrentino, L. Ronchetti, E. Raglione, D. Liberatore</i> STRUCTURAL ANALYSIS OF EARTHQUAKE-RESISTANT HISTORICAL DETAILS OF L'AQUILA (CENTRAL ITALY) BUILDINGS.....	1716
<i>D. Torrealva, E. Vicente</i> EXPERIMENTAL EVALUATION OF SEISMIC BEHAVIOUR OF QUINCHA WALLS FROM THE HISTORICAL CENTRE OF LIMA – PERU	1724
<i>A. Vefa Orhon</i> RETROFIT TO PRESERVE: REVIEW OF SEISMIC RETROFITTING METHODS FOR HISTORICAL URM BUILDINGS.....	1731
<i>S. Toker Beeson, C. Ozmen, A. Ihsan Unay</i> TEMPORARY IMMEDIATE STEEL BUTTRESSING THE DAMAGED HISTORICAL STRUCTURES AFTER EARTHQUAKES	1739

REHABILITATION OF MASONRY STRUCTURES

<i>M. Acito, G. Milani</i> SAFETY ASSESSMENT OF AN ANCIENT MASONRY STRUCTURE BY MEANS OF A HOMOGENIZED NON-LINEAR APPROACH.....	1747
<i>M. Andreini, A. De Falco, M. Sassu</i> ON SITE TESTS FOR THE MECHANICAL CHARACTERIZATION OF MASONRY WALLS WITH CHAOTIC TEXTURE	1755
<i>L. G. Baltazar , F. M. A. Henriques, F. Jorne</i> HYDRAULIC LIME GROUTS FOR MASONRY INJECTION – EFFECTS OF ADMIXTURES ON THE FRESH GROUT PROPERTIES	1763
<i>A. Borri, G. Castori, M. Corradi</i> MASONRY CONFINEMENT WITH SRP COMPOSITES	1771
<i>G. Brandonisio, A. De Luca, E. Mele, G. M. Montuori</i> MULTI-STOREY MASONRY BUILDINGS: EVALUATION OF EFFECTIVENESS OF MECHANICAL STRENGTHENING.....	1780
<i>M. Bruggi, G. Milani, A. Taliercio</i> DESIGN OF THE OPTIMAL FIBER REINFORCEMENT FOR MASONRY STRUCTURES VIA TOPOLOGY OPTIMIZATION.....	1789
<i>D. Covatariu, M. Budescu</i> INVESTIGATION ON ADHERENCE CHARACTERISTICS OF LOW-STRENGTH MORTARS USED IN THE DAMAGED HISTORICAL MASONRY STRUCTURES.....	1797
<i>G. Dmochowski, P. Berkowski, J. Szolomicki, M. Y. Minch</i> STRENGTHENING OF THE OVERLOADED MASONRY WALL OF HISTORICAL SERVICE BUILDING.....	1804

<i>A. Formisano, R. Fonti, F. M. Mazzolani</i> THE HISTORICAL CENTRE OF POGGIO PICENZE AFTER L'AQUILA EARTHQUAKE: BEHAVIOUR AND STRENGTHENING OF MASONRY AGGREGATE WALLS	1811
<i>E. Garbin, M. Panizza, M. R. Valluzzi, C. Modena</i> A SIMPLIFIED MODEL TO ESTIMATE THE CONTRIBUTION OF EB-FRP TO THE SHEAR STRENGTH OF MASONRY PANELS	1819
<i>V. Giamundo, G. P. Lignola, A. Prota, G. Manfredi</i> DIAGONAL STRENGTH OF ADOBE BRICK WALL.....	1827
<i>A. A. Hamid, M. Orphy</i> DURABILITY OF HISTORIC BRICK MASONRY	1836
<i>D. W. Harvey Jr., M. P. Schuller, W. T. Ruth</i> INTERNAL STRENGTHENING OF HISTORIC CLAY BRICK MASONRY PUMP HOUSES IN NEW ORLEANS.....	1844
<i>J. Jasieńko, Ł. Bednarz, M. Rutkowski, T. Nowak</i> STATIC ANALYSIS, STRENGTHENING AND MONITORING OF HISTORIC ST. ANN'S CHURCH IN ZĄBKOWICE ŚLĄSKIE (POLAND).....	1852
<i>A. Kwiecień, B. Zajac</i> ENERGY APPROACH IN ANALYSIS OF MASONRY COLUMNS CONFINED WITH GFRP MESH BONDED ON STIFF AND FLEXIBLE ADHESIVES	1864
<i>A. Mauro, G. de Felice</i> SEISMIC ASSESSMENT OF MULTI-LEAF MASONRY STRENGTHEN WITH INJECTIONS OR TRANSVERSAL TIES	1873
<i>M.Y. Minch, J. Szolomicki, P. Berkowski, G. Dmochowski</i> STRENGTHENING OF BAROQUE MONASTERY IN GŁĘBOWICE, POLAND	1880
<i>Y. Ouyang, R. Wang, X. Yang, N.K. Liu, X.L. Gu</i> MECHANICAL ANALYSIS FOR HISTORICAL MASONRY WALLS STRENGTHENED BY REINFORCED CONCRETE LAYER AND STEEL FRAMES.....	1888
<i>I. Papayianni, V. Pachta</i> HIGH PERFORMANCE LIME BASED GROUTS FOR REPAIR OF HISTORIC MASONRIES	1897
<i>E. Quagliarini, F. Monni, S. Lenci</i> MASONRY STRENGTHENING THROUGH BASALT FIBRE ROPES. EXPERIMENTAL AND ANALYTICAL RESULTS.....	1905
<i>E. Rodríguez-Mayorga, E. Yanes, A. Sáez</i> THE RESTORATION OF THE PARISH CHURCH OF SAN DIONISIO IN JEREZ DE LA FRONTERA (SPAIN).....	1914
<i>V. Russo, M. De Gennaro, P. Cappelletti, G. Ceniccola</i> THE BELL TOWER OF THE BASILICA OF SAINT AUGUSTINE MAYOR IN NAPLES (ITALY): INTERDISCIPLINARY RESEARCHES FOR THE CONSERVATION OF AN ARCHITECTURE AT RISK.....	1922
<i>B. Silva, E. Pigouni, M. R. Valluzzi, F. da Porto, C. Modena</i> ASSESSMENT OF THE EFFECTIVENESS OF GROUT INJECTION ON THE CONSOLIDATION OF 3-LEAF STONE MASONRY WALLS THROUGH THE USE OF NDT AND DT	1931

<i>F. Silveri, G. Profeta, P. Riva, C. Algeri, E. Bolognini, E. Poverello, P. Panzeri</i> PRE STRESSED VERTICAL INJECTED ANCHORS ON HISTORICAL MASONRY: A CASE STUDY, THE BELL TOWER OF BOTTA DI SOTTO IL MONTE PAPA GIOVANNI XXIII	1940
<i>A. Varatharajan, S. Vignesh, C.S. Prashanth, A. Menon</i> STRUCTURAL ASSESSMENT AND STRENGTHENING OF MULTI-TIERED MASONRY TOWERS.....	1949
<i>M. Wünsche, S. Urushadze, S. Pospíšil, S. Hračov</i> CYCLIC BEHAVIOUR OF THE ADOBE BRICK WALLS BEFORE AND AFTER THE REINFORCEMENT	1958
AUTHOR INDEX	XXXIII

Volume 3

REHABILITATION OF TIMBER STRUCTURES

<i>J. Appleton, V. Appleton, A. Aquino, M. F. da Rocha</i> LIBRARY ROOF – SANTA MARIA DE ALCobaÇA ABBEY, ALCobaÇA, PORTUGAL	1969
<i>D. Bajno</i> THE DURABILITY AND SAFE USE OF SELECTED WOODEN STRUCTURES BASED ON THE EXAMPLE OF THE SEVENTEENTH CENTURY CASTLE TOWER IN BIERUTÓW, LOWER SILESIA PROVINCE, POLAND	1978
<i>D. T. Biggs, J. A. Null</i> STRENGTHENING AN ADIRONDACK HIPPED ROOF	1984
<i>I. Burawska, A. Rozanska, A. Jankowska, P. Beer</i> TECHNICAL STATE ANALYSIS AND REINFORCEMENT PROJECT OF ANTIQUE WOODEN FLOORING WITH JOIST STRUCTURE.....	1992
<i>I. Burawska, A. Tomusiak, M. Zbieć, P. Beer</i> REDUCING THE IMPACT OF KNOTS ON THE STATIC WORK OF BENT WOODEN BEAMS BY LOCAL REINFORCEMENT WITH CFRP STRIP	1998
<i>C. Ceraldi, M. Lippiello, E. Russo Ermolli</i> TIMBER PINS CONNECTIONS: RELIABILITY OF BOLTED JOINTS DESIGN RULES	2004
<i>L. Debailleux</i> INDEXING SYSTEM FOR TRADITIONAL WOODEN FRAME STRUCTURE RECOGNITION	2013
<i>E. Decher, C. Lanivski</i> TIMBER STRUCTURES REPAIR WITH WFRP (WOOD FIBRES REINFORCED POLYESTER).....	2020
<i>I. Giongo, M. Piazza, R. Tomasi</i> CAMBERING OF TIMBER COMPOSITE BEAMS BY MEANS OF SCREW FASTENERS.....	2029
<i>M. Kloiber, J. Tippner, V. Heřmáňková, J. Štainbruch</i> COMPARISON OF RESULTS OF MEASURING BY CURRENT NDT METHODS WITH RESULTS OBTAINED THROUGH A NEW DEVICE FOR WOOD MECHANICAL RESISTANCE MEASURING	2035

<i>C. Miedziałowski, M. Malesza</i> ANALYSIS OF FORMATION AND STATIC BEHAVIOR OF TIMBER ROOF STRUCTURES IN RELIGION HISTORICAL BUILDING	2044
<i>E. Poletti, G. Vasconcelos</i> SEISMIC BEHAVIOUR OF TRADITIONAL HALF-TIMBERED WALLS: CYCLIC TESTS AND STRENGTHENING SOLUTIONS	2051
<i>S. Sánchez-Beitia, L. Torres, J. Barrallo, B. Iraola</i> THE HOLE DRILLING TECHNIQUE ON TIMBER STRUCTURES: PREVIOUS TESTS.....	2060
<i>E. Sierov, A. Sierov, R. Orłowicz</i> PROBLEMS INVOLVED IN REPAIRING TIMBER CHURCH BUILDINGS IN NORTHERN RUSSIA.....	2065
<i>H. S. Sousa, J. M. Branco, P. B. Lourenço</i> CHARACTERIZATION OF OLD CHESTNUT BEAMS SECTIONS WEAKENED BY DECAY	2070
<i>H. S. Sousa, J. M. Branco, P. B. Lourenço</i> ASSESSMENT OF STRENGTH AND STIFFNESS VARIATION WITHIN OLD TIMBER BEAMS.....	2079
<i>F. Vegas, C. Mileto, A. Alonso, A. Martínez</i> AUTOBIOGRAPHY OF A BEAM	2088
<i>E. Zamperini</i> AXIOLOGICAL APPROACH TO STRENGTHENING OF TIMBER LOAD BEARING FLOOR STRUCTURES	2097
<i>Chun Qing, Zhan Yang, Pan Jianwu</i> EXPERIMENTAL STUDY ON FLEXURAL BEHAVIOR OF TIMBER BEAMS REINFORCED WITH NEARSURFACE MOUNTED CFRP PLATES.....	2106
<i>Weiping Zhang, Xiaobin Song, Qinghua Huang, Xianglin Gu, Yunchao Zhang</i> ON-SITE TESTING AND EVALUATION OF A RELOCATED AND RECONSTRUCTED HISTORICAL TIMBER BUILDING.....	2112

REHABILITATION OF BRIDGES

<i>Ł. Bednarz, A. Kasiedczak, R. Stachańczyk, A. Roscher</i> CONSERVATION RENOVATIONS OF THE BRIDGES IN THE MUSKAU PARK.....	2121
<i>A. Čaušević, L. Kudumović, N. Rustempašić, N. Kuljuh</i> SUSTAINABLE REHABILITATION, PRESERVATION AND PROTECTION OF ACCESS ARCH STONE BRIDGE AT THE ENTRANCE TO THE MEDIEVAL OLD TOWN KORČULA	2132
<i>B. T. de Oliveira</i> RESTORATION OF THE BRIDGES OF OURO PRETO, MG, BRAZIL.....	2139
<i>S. De Santis, G. de Felice, D. Peluso</i> AN OVERVIEW ON ITALIAN RAILWAY MASONRY BRIDGES WITH LOAD-CARRYING CAPABILITY ESTIMATE	2145
<i>J. M. Dulińska</i> EVALUATION OF DYNAMIC RESPONSE OF STONE BRIDGE TO ASYNCHRONOUS SEISMIC EXCITATION	2154

<i>N. Domède, T. Stablon, A. Sellier</i> MECHANICAL ANALYSIS OF AN OLD MASONRY BRIDGE IN PARIS	2162
<i>R. Ferrari, G. Cocchetti, E. Rizzi</i> ELASTOPLASTIC STRUCTURAL ANALYSIS OF THE PADERNO D'ADDA BRIDGE (ITALY, 1889) BASED ON LIMIT ANALYSIS	2171
<i>M. Mehdianpour, T. Eisenkolb</i> EXPERIMENTAL INVESTIGATIONS ON SLIDING FRICTION OF HISTORIC BRIDGE BEARINGS.....	2181
<i>M.J.C Morais, G.A.F. Rouxinol, P. J. R. Pimenta</i> ASSESSMENT OF THE CAPACITY OF MONDIM DA BEIRA BRIDGE USING TWO DISTINCT MESH GENERATIONS.....	2189
<i>M. Paradiso, G. Tempesta, S. Galassi, D. Zerboni</i> THE ANCIENT BRIDGE ROMAJOLO IN BAGNO A RIPOLI (FI): FROM THE RECENT DISCOVERY TO THE REHABILITATION PROJECT	2196
<i>A. Saisi, C. Gentile</i> MONITORING AND FE MODELING OF A HISTORIC IRON BRIDGE.....	2205
<i>J. Sena-Cruz, J. C. Araújo, F. Castro, M. Jorge</i> ASSESSMENT OF THE BOCO HISTORICAL RC BRIDGE	2214
<i>J. Sena-Cruz, R. M. Ferreira, L. Ramos, F. Fernandes, T. Miranda, F. Castro</i> ASSESSMENT OF THE LUIZ BANDEIRA HISTORICAL BRIDGE	2222
<i>S. Sire, L. Gallegos Mayorga, J-L. Martin, C. Doudard, S. Calloch</i> FAST CHARACTERIZATION OF FATIGUE PROPERTIES OF A FRENCH HISTORICAL RAILWAY BRIDGE PUDDLE IRON	2231
<i>C. Tardini, C. Chesi</i> A NEW CONCEPT IN BRIDGE DESIGN IN THE 19TH CENTURY: ITHIEL TOWN'S TIMBER BRIDGES	2238
<i>K. Veihelmann, S. Holzer</i> EARLY CONCRETE BRIDGES WITHOUT REINFORCEMENT.....	2245
<i>V. Wetz</i> HISTORIC BRIDGE BEARINGS – IDENTIFYING MATERIAL CHARACTERISTICS: COMPRESSION TEST	2251
<i>Wang Enyong, Cui Jianbo, Wu Di, Zhang Zhibin, Hu Yuxia, Wei Suping, Tian Yunxia</i> DIGITIZATION OF ANCIENT BRIDGES IN GANSU	2258
<i>Geun Chang Cha, Jong Ku Lee, Young Sin Park, Ho Soo Kim</i> STRUCTURAL BEHAVIOR CHARACTERISTICS OF ARCHED STONE BRIDGE ACCORDING TO FOUNDATION AND FILLER TYPE.....	2264
 <i>MONITORING, DIAGNOSIS AND LASER SCANNING</i>	
<i>N. Alcantara, L. F. Ramos, P. Mendes, J. Ferreira, F. Fernandes, P. B. Lourenço</i> FINITE ELEMENT SIMULATIONS FOR THE COMPREHENSION OF PHYSICAL PHENOMENA INVOLVED IN ELECTRIC IMPEDANCE TOMOGRAPHY OF MASONRY STRUCTURES	2271

<i>C. Bertolini-Cestari, S. Invernizzi, A. Spanò, L. Mallamaci</i> LASER MODELING AND STRUCTURAL ASSESSMENT OF A XVIII CENTURY WOODEN DOME	2280
<i>G. Bitelli, C. Colla, E. Gabrielli, F. Girardi, F. Ubertini</i> QUANTITATIVE MONITORING OF SUPERFICIAL DECAY EVOLUTION IN PLASTERED AND UNPLASTERED OUTDOORS MASONRY	2288
<i>G. Boscato, S. Russo, F. Sciarretta</i> THE DOUBLE-LAYERED FAÇADES OF PALAZZO DUCALE IN VENICE: RESULTS FROM TESTING AND LONG-TERM MONITORING	2297
<i>A. Bossio, M. Montuori, F. Bellucci, G.P. Lignola, A. Prota, E. Cosenza, G. Manfredi</i> INDIRECT MEASURE OF CORROSION LEVEL BASED ON CRACK OPENING	2305
<i>G. Buda, M. Galizia, A. Lo Presti, F. Privitera, G. Randazzo, C. Santagati, M. Santagati</i> INTERDISCIPLINARY INVESTIGATIONS AIMED AT THE PRESERVATION OF A FUNERARY ROMAN MONUMENT NAMED “TORRE ROSSA” IN FIUMEFREDDO DI SICILIA.....	2314
<i>P. Călin Răcățianu, A. Mihăilă</i> NEW DATABASE MAPPING SYSTEM (NDMS) – A NON-DESTRUCTIVE METHOD OF BUILDING STONES’ ANALYSIS.....	2323
<i>G. Cardani, L. Binda, F. da Porto, F. Casarin, M. Dalla Benetta, A. Donadio, S. Tonna</i> THE ROLE OF THE MASONRY QUALITY EVALUATION IN HISTORIC CONSTRUCTIONS: THE CASE OF ST. PAUL HOSPITAL OF SAVONA, ITALY.....	2331
<i>A. Carpinteri, S. Invernizzi, G. Lacidogna, F. Accornero</i> ACOUSTIC EMISSION MONITORING OF FRESCOS DEGRADATION IN A XVIIth CENTURY CHAPEL OF THE “SACRED MOUNTAIN OF VARALLO” (ITALY).....	2340
<i>F. Casarin, M. Humo, F. Lorenzoni, F. da Porto, P. Girardello, C. Modena, L. Cantini, S. Kulukcija</i> EXPERIMENTAL INVESTIGATIONS ON TWO TRADITIONAL STONE MASONRY MINARETS IN BOSNIA AND HERZEGOVINA.....	2349
<i>F. Casarin, C. Modena, E. Bello, F. da Porto, F. Lorenzoni, P. Girardello, S. Menon</i> STRUCTURAL HEALTH MONITORING OF THE ROMAN ARENA OF VERONA, ITALY	2358
<i>C. Colla, V. Rajcic, E. Gabrielli, A. Juez Fernandes, F. Bastianini, A. Largo, F. Gruener, M. Krueger, F. Lehmann, E. Esposito, H. Maraqa, S. Al-Janazreh, G. Castellazzi, C. Gentilini, G. Pascale, F. Ubertini</i> INTEGRATED APPROACH FOR ON-SITE ASSESSMENT OF CONSERVATION STATE OF A HISTORICAL MASONRY BUILDING: MALVEZZI PALACE, ITALY	2367
<i>A. Elyamani, J.O. Caselles, J. Clapes, P. Roca</i> ASSESSMENT OF DYNAMIC BEHAVIOR OF MALLORCA CATHEDRAL.....	2376
<i>H. Fereshteh</i> DIGITAL TECHNOLOGIES IN DOCUMENTING THE CULTURAL HERITAGE REVIEW OF LASER SCANNERS	2385
<i>C. Gentile, A. Saisi, A. Cabboi</i> DYNAMIC MONITORING OF A MASONRY TOWER	2390
<i>J. Grosel, W. Sawicki, Z. Wójcicki</i> VIBRATION MEASUREMENTS IN ANALYSIS OF HISTORICAL STRUCTURES.....	2398

<i>S. Gunay</i> STRUCTURAL AND MATERIAL ANALYSIS OF HISTORIC BUILDINGS IN A GIS BASED URBAN CONSERVATION PROJECT.....	2412
<i>S. Hanazato, T. Hanazato, Y. Uekita, K. Sato, K. Nitto, K. Ono, S. Yoyok, P. Diananta, E. Pradipto, A. Nakatani</i> STRUCTURAL CHARACTERISTIC OF TRADITIONAL WOODEN HOUSES IN SOUTH NIAS, INDONESIA.....	2418
<i>D. Jayanthi , R. Vedamuthu</i> INVESTIGATION OF THE STATUS OF THE DETERIORATION OF A SANDSTONE MONUMENT AT KANCHIPURAM, TAMILNADU, INDIA BY DECAY MAPPING	2425
<i>T. Kruglowa, R. Kliger</i> NON-DESTRUCTIVE INVESTIGATION OF MATERIAL PROPERTIES OF THE VASA WARSHIP: A PILOT STUDY	2432
<i>A. Kwiecień, J. Chelmecki, P. Matysek</i> NON-DESTRUCTIVE TEST OF BRICK COLUMNS USING CHANGE IN FREQUENCY AND INERTANCY RESPONSE	2437
<i>E. C. Manning, L. F. Ramos, F. Fernandes, C. Sousa, M. Azenha</i> TUBE-JACK TESTING FOR IRREGULAR MASONRY: PRELIMINARY TESTING	2445
<i>N. Masini, D. Liberatore, F. Gizzi, G. Leucci, G. Quarta, R. Persico</i> ANALYSIS OF DAMAGE AND DIAGNOSTIC INVESTIGATIONS ON TRICARICO CATHEDRAL (ITALY).....	2454
<i>L. Mateus, N. Brito, V. Ferreira, M. Barbosa, J. Aguiar</i> NEW TOOLS FOR VISUAL ASSESSMENT OF BUILDING DEFORMATIONS	2463
<i>P. Matysek, D. Łatka</i> COMMENTS ON THE APPLICATION OF THE SCALEROMETRIC METHOD IN THE DIAGNOSTIC OF BRICK MASONRY	2471
<i>J. McInerney, I. Trzcinski, M. J. DeJong</i> DISCRETE ELEMENT MODELLING OF MASONRY USING LASER SCANNING DATA.....	2480
<i>A. M. Metheniti, A. Kalinyktakis, A. Georgopoulos</i> TERRESTRIAL LASER SCANNING FOR MONITORING A HISTORIC BYZANTINE CHURCH.....	2488
<i>L. Mollo, R. Agliata, C. Giudicianni</i> SMAS FOR STRUCTURAL RESPONSE CONTROL, A SHORT REVIEW	2497
<i>M. Riggio, A. Sandak, J. Sandak</i> IN-SITU ASSESSMENT OF STRUCTURAL TIMBER USING SELECTED WAVE-BASED NDT METHODS.....	2504
<i>K. Stala</i> NON-DESTRUCTIVE TECHNOLOGIES AS A TOOL FOR ARCHAEOLOGIST AND HISTORIAN OF ARCHITECTURE IN THE STUDIES AND RESEARCH OF THE INSTITUTE OF HISTORY OF ARCHITECTURE AND MONUMENT PRESERVATION OF CRACOW UNIVERSITY OF TECHNOLOGY	2513
<i>C. Thelin, F. Höst, C. Rosenberg</i> ANALYSIS OF HISTORIC MASONRY STRUCTURES SUPPORTED BY 3D LASER SCANNING	2519

<i>C. Tiraboschi, M. Cucchi, M. Antico, L. Binda</i> OPTICAL SYSTEM FOR REAL-TIME MEASUREMENT OF THE ABSOLUTE DISPLACEMENTS APPLIED TO FLAT JACK TEST.....	2528
<i>E.-E. Toumbakari, D. Egglezos</i> IN-SITU TESTS ON THE INTERNAL WESTERN COLUMNS OF THE PARTHENON AND MODELING OF THE JOINTS' MECHANICAL PROPERTIES	2536
<i>M. Uranjek, R. Žarnić, V. Bokan-Bosiljkov, V. Bosiljkov</i> PERFORMANCE OF NDT, MDT AND DT TECHNIQUES IN ASSESSING THE EFFECTIVENESS OF GROUTING	2544
<i>T. Van Mele, J. McInerney, M. J. DeJong, P. Block</i> PHYSICAL AND COMPUTATIONAL DISCRETE MODELLING OF MASONRY VAULT COLLAPSE	2552
<i>M. Vatan, K. Kaptan</i> RISK MAP OF HISTORICAL HERITAGE IN TURKEY	2561
<i>A. Verdonck, M. Deceuninck</i> UNRAVELING AN UNIQUE CONSTRUCTION HISTORY AS A RESULT OF MONITORING: THE MEDIEVAL GATEWAY OF THE HUYSMANS FARM (EEKLO, BELGIUM).....	2567
<i>E. Verstrynge, S. Konings, M. Wevers</i> THE INFLUENCE OF MOISTURE ON CREEPBHAVIOUR OF SANDSTONE ASSESSED BY MEANS OF ACOUSTIC EMISSION.....	2573
<i>M. Wilińska, M. Kędzierski, R. Zapłata, A. Fryškowska, P. Deliś</i> NONINVASIVE METHODS OF DETERMINING HISTORICAL OBJECTS DEFORMATION USING TLS.....	2582

MODERNIZATION AND RE-USE OF CULTURAL HERITAGE BUILDINGS

<i>M. Altin</i> A CRITICAL REVIEW OF PV PANEL USAGE IN THE RETROFIT OF HISTORICAL BUILDINGS	2591
<i>I. Andreescu, M. Mosoarca</i> URBAN COMPLEX RENEWAL OF THE HISTORIC CITY OF CIACOVA, ROMANIA.....	2597
<i>N. Balcerzak, A. Taraszkiewicz</i> REVITALIZATION OF THE HISTORIC EX BREWERY AREAS IN POLAND	2605
<i>M. Beckh</i> TAA DZONG OF TRONGSA – REFLECTION ON THE RE-USE OF A BHUTANESE WATCHTOWER.....	2613
<i>C. Bocan</i> A POSSIBLE LARGE-SCALE REHABILITATION SOLUTION FOR PREFABRICATED CONCRETE PANEL BLOCKS.....	2619
<i>T. Canitez, I. Salih Canitez</i> AN EXAMPLE FOR THE RE-USE OF THE HISTORIC BUILDINGS FOR CONTINUITY OF CULTURAL INHERITANCE : EDIRNE BAYEZID II COMPLEX	2627

<i>A. Čaušević, L. Kudumović, N. Rustempašić, N. Kuljuh</i> ARCHITECTURAL RESTORATION IN SLOW TERMS, EMERGENCY AND RECOVERY SLOW: THE CASE OF POST-WAR IN SARAJEVO	2635
<i>G. Dmochowski, P. Berkowski, J. Dudkiewicz</i> ADAPTATION OF EARLY HERITAGE MASONRY BUILDINGS TO NEW SOCIAL ASSISTANCE FUNCTIONS	2642
<i>M. C. Forlani, D. Radogna, A. Viskovic</i> WOODEN FRAMED STRUCTURES FOR MASONRY BUILDINGS RETROFITTING. A PILOT PROJECT IN CAPORCIANO.....	2650
<i>P. Gerber</i> PROBLEMS OF MODERNISATION OF HISTORIC HOSPITALS IN LOWER SILESIA	2658
<i>M. Golež, T. Pazlar</i> RECYCLING HISTORIC PLASTERS FOR MORE EFFICIENT RENOVATION OF CULTURAL HERITAGE STRUCTURES	2664
<i>N. Güzel</i> STRUCTURAL SOLUTIONS FOR THE HISTORICAL BUILDINGS	2671
<i>K. Kuśnierz, D. Kuśnierz-Krupa</i> REVALORIZATION OF THE TOWN HALL IN SIENIAWA.....	2680
<i>D. Lazarus</i> ENABLING A FUTURE FOR CULTURAL HERITAGE BUILDINGS	2687
<i>M. Morandotti, D. Besana, V. Cinieri</i> ENERGY IMPROVEMENT IN CULTURAL HERITAGE	2695
<i>S. Niederhagemann</i> MODIFICATION OF A LISTED PIT HEAD INTO A VIEWING PLATFORM.....	2702
<i>N. Olgun</i> SÜLEYMANIYE MOSQUE 2007-2010 RESTORATION WORKS INTERVENTION DECISIONS AND THE RESTORATION AND STRUCTURAL STRENGTHENING OF THE MAIN DOME	2708
<i>F. L. Oliveira, C. Paim</i> PROPOSAL OF RESTORATION AND MAINTENANCE FOR THE COPAN BUILDING FAÇADES	2717
<i>A. Osman</i> REVITALIZATION OF HISTORICAL EARTHEN STRUCTURES FOR MODERN USE.....	2726
<i>R. Özakin, A. Erdem</i> A PALACE HAMMAM IN TURKEY: THE KUM KASRI HAMMAM.....	2735
<i>M. Panahi, N. Shiasi</i> THE MANNER OF REHABILITATION OF HISTORICAL VERNACULAR GARDENS (CASE STUDY IS ALI ABAD GARDEN IN BOJNOURD-IRAN)	2744
<i>A. Radivojević, M. Roter-Blagojević, A. Rajčić</i> PRESERVATION OF VERNACULAR ARCHITECTURE IN SERBIA – AUTHENTICITY VERSUS THERMAL COMFORT ISSUES.....	2750

<i>R. Radoslav, M. Mosoarca, A.-M. Branea, M. Stelian Gaman</i> CONSERVATION AND RE-USE OF HISTORICAL INDUSTRIAL BUILDINGS, CASE STUDY FABRIC NEIGHBORHOOD, TIMISOARA, ROMANIA.....	2760
<i>L. Roşiu, S. Bica</i> THE REUSE OF INDUSTRIAL BUILDINGS, AN EMERGENCY FOR THE PATRIMONY PROTECTION IN THE BANAT REGION OF ROMANIA.....	2769
<i>S. Sanyal</i> CHANGING PARADIGMS IN STRUCTURAL CONSERVATION: A CENTURY OF INTERVENTIONS IN THE SUN TEMPLE, KONARAK	2776
<i>N. Shiasi, M. Panahi</i> STUDY THE EFFECT OF CHANGE THE FUNCTION AFTER RESTORATION OF QAJARIE NAVAB BATH IN TEHRAN.....	2785
<i>J. Silva Pavan, R. T. M. Ribeiro</i> THE REUSE AS A FACTOR FOR THE HERITAGE BUILDINGS CONSERVATION IN RIO DE JANEIRO DOWNTOWN	2792
<i>M. Tanaç Zeren</i> UNDERSTANDING AND RE-USING THE CULTURAL HERITAGE BUILDINGS.....	2800
<i>J. Urbanik</i> RENOVATION OF MODERN MOVEMENT BUILDINGS, ORIGINAL FORM VERSUS BUILDING TECHNOLOGY, FROM LE CORBUSIER TO HANS SCHAROUN.....	2809
<i>A. Vefa Orhon</i> COMBINING AUTHENTICITY WITH MODERN: RENOVATION OF AN ART NOUVEAU BUILDING IN ISTANBUL.....	2818
<i>M. E. Yakartepe, A. B. Gokarslan</i> ISPARTA ARCHITECT SINAN MOSQUE'S ANALYSIS WITHIN THE CONSERVATION	2825
<i>H. Gokhan Kutlu, Ö. Coşkun Öner, Ö. Başagaç</i> REUSE AND RESTORATION OF A HOUSE IN BUCA KASAPLAR SQUARE, IZMIR, TURKEY	2835
<i>E. Omay Polat</i> RE-USING THE LAVUAR: ROUTE OF CULTURE	2844

NIKER AND PERPETUATE

*NEW INTEGRATED KNOWLEDGE BASED APPROACHES TO THE PROTECTION
OF CULTURAL HERITAGE FROM EARTHQUAKE-INDUCED RISK
and
PERFORMANCE-BASED APPROACH TO EARTHQUAKE PROTECTION
OF CULTURAL HERITAGE IN EUROPEAN AND MEDITERRANEAN COUNTRIES*

<i>C. Modena , S. Lagomarsino , F. da Porto , S. Cattari</i> EARTHQUAKE PROTECTION OF MASONRY HISTORICAL CONSTRUCTIONS: OVERVIEW OF RESULTS FROM NIKER AND PERPETUATE EUROPEAN PROJECTS	2851
<i>L. Cantini , F. da Porto , G. Giacometti , F. Lorenzoni , A. Saisi , M. R. Valluzzi</i> CREATION OF A STRUCTURED CATALOGUE	2861

<i>L. Miccoli, U. Müller, B. Silva, F. Da Porto, S. Hračov, S. Pospíšil, C.-E. Adami, E. Vintzileou, G. Vasconcelos, E. Poletti</i>	
OVERVIEW OF DIFFERENT STRENGTHENING TECHNIQUES APPLIED ON WALLS USED IN HISTORICAL STRUCTURES.....	2870
<i>M.R. Valluzzi, P. Girardello, D. Francescato, S. Pospíšil, R. Král, D. D'Ayala, S. Paganoni, L. Pelà, P. Roca, J. Branco, K. El Harrouni, B. Kucukdogan , M.A. Parisi</i>	
OPTIMIZATION OF DESIGN FOR FLOORS, ROOFS AND VAULTS	2879
<i>S. Paganoni, D. D'Ayala, L. Miccoli, S. Hračov, S. Urushadze, M. Wünsche, C.-E. Adami, E. Vintzileou, S. Moreira, D.V. Oliveira, P. James, V. Córias e Silva</i>	
CONNECTIONS AND DISSIPATIVE SYSTEMS WITH EARLY WARNING	2888
<i>E. Vintzileou , M.R. Valluzzi, N. Mazzon, S. Posipšil, L. Miccoli</i>	
SYSTEMIC IMPROVEMENT OF OVERALL SEISMIC RESPONSE	2897
<i>P. Roca</i>	
KNOWLEDGE-BASED SEISMIC ASSESSMENT OF ARCHITECTURAL HERITAGE.....	2906
<i>S. Cattari, S. Lagomarsino</i>	
PERFORMANCE-BASED APPROACH TO EARTHQUAKE PROTECTION OF MASONRY CULTURAL HERITAGE	2914
<i>C. Calderini , S. Abbati , S. Lagomarsino, R. Ginanni Corradini , V. Piovanello</i>	
INTERACTION BETWEEN STRUCTURAL CRACKS AND PLASTER DAMAGE: AN EXPERIMENTAL CAMPAIGN ON MASONRY PANELS”	2923
<i>G. De Canio, P. Clemente, M. Mongelli, I. Roselli, D. Rinaldis, F. Saitta, S. Lagomarsino, M. Rossi</i>	
PERFORMANCE BASED ASSESSMENT OF THE OBELISCO LATERANENSE IN ROME.....	2930
<i>V. I. Novelli, D. D'Ayala</i>	
SEISMIC VULNERABILITY ASSESSMENT OF THE CASBAH OF ALGIERS.....	2939
<i>S. Podestà, C. Romano</i>	
STRUCTURAL PRE-ANALYSIS FOR CULTURAL HERITAGE KNOWLEDGE PLANNING.....	2948
AUTHOR INDEX	XXXIII