

Poster session 1 : From Monday 8th to Wednesday 10th of September

- 18 SPECTROSCOPIC CHARACTERIZATION OF MUD BRICK, PIGMENT AND BINDING MEDIA OF BIR AL-SHAGHLA CEMETERY IN THE NEW VALLEY (DAKHLA OASIS), EGYPT
Esraa M. Abdel Moneim, Mona F. Ali ,Maisa M. A. Mansour
- 22 INVESTIGATION OF THE THERMAL BEHAVIOR AND DETERMINATION OF THE PROGRESSIVE RESIDUAL EXPANSION AT LOW HUMIDITY OF UNTREATED AND HYDROPHOBIZED BAUMBERGER LIME SANDSTONE
Peter Kozub
- 32 MOISTURE DEPENDENCE OF ULTRASONIC MEASUREMENTS. OPPORTUNITIES AND LIMITATIONS OF RELIABLE MONITORING
Sarah-Theresa Becker, Jeannine Meinhardt, Roland Will
- 35 INNOVATIVE APPROACHES TO MEASURING SORPTIVITY IN MONUMENT PRESERVATION: DEVIATIONS FROM THE SQUARE ROOT LAW AND FURTHER METHODOLOGICAL DEVELOPMENTS
Benjamin Hübner
- 126 CHARACTERISATION OF BUILDING MATERIALS FROM BLENHEIM PALACE
Kutsi Akcicek , Sinan Acikgoz , Heather Viles
- 36 NON-INVASIVE DIAGNOSTICS APPLIED TO ARCHAEOLOGICAL HERITAGE. THE CASE OF THE “MERCURY TEMPLE” OF THE ROMAN BATHS OF BAIA
Anna Trupia , Laura De Riso, Francesca Naldi
- 129 2D ELECTRICAL RESISTIVITY TOMOGRAPHY OF A SHALLOW AQUIFER AT THE ARCHEOLOGICAL SITE AT GENAINVILLE, FRENCH VEXIN, FRANCE
Elijah Edet Nkitnam , Jérôme Wassermann, Alexis Maineult, Roger Guérin
- 38 PRELIMINARY DIAGNOSTIC ANALYSES IN THE HEGRA CONSERVATION PROJECT
Mauro Matteini , Fabio Fratini, Graziella Roselli , Paolo Pecorelli, Ylenia Rubino, Rut Ballesteros Carrion
- 33 INVESTIGATIONS OF THE MODERN FINISHES AT “PRINCIPI DI PIEMONTE” MARINE COLONY IN VENICE-LIDO TOWARDS THEIR CONSERVATION
Marco Comunian, Silvia Degan, Laura E. Depero, Irene Giustina
- 137 NON-INVASIVE STUDY OF PLASTER APPLICATION MARKS IN THE 16TH CENTURY GREAT SIEGE WALL PAINTING CYCLE, VALLETTA, MALTA
Mariia Gorodetska, Jennifer Herrick Porter
- 57 EUVILLE LIMESTONE IN THE NETHERLANDS: A COMPREHENSIVE INVESTIGATION
Beatrice Cerrai , Katrin Schollbach , Jos Brouwers
- 68 OPTIONS FOR MULTIPLE RADIO-WAVE TECHNOLOGY APPLICATIONS IN STONE CONSERVATION
Christoph Franzen , Christian Hoyer , Ulf Trommler , Ulf Roland
- 75 WEATHERING PROFILES IN BUILDING SANDSTONE AT ARBROATH ABBEY, SCOTLAND
M. de Jongh , C. Graham , M. Young , J. Rushton , A. Menzies , S. Parry S.J. Kemp

- 81 THERMOGRAPHIE POUR CARACTERIZATION DE COUCHE EN SURFACE
Kamel Mouhoubi, Jean-marc Vallet
- 87 STONE CULTURAL RELICS, EVALUATION METHODS, PRESERVATION STATUS
GAO Yu ZHANG Qiong, HU Gang
- 109 NON-DESTRUCTIVE INVESTIGATION OF TWO ROMAN SARCOPHAGI IN POTSDAM, GERMANY - EVALUATION AND DETERMINATION OF THE KEY APPROACH
Iwona Michniewicz-Laakmann, Wanja Wedekind
- 113 MAKING STONE FACES SPEAK: CHARACTERISING AND SOURCING PICTORIAL MATERIALS FROM NEOLITHIC PROVENÇAL STELES (FRANCE)
Marianne Le-turnier, Lucile Beck, Emilie Chalmin-al-janabi, Claudia Defrasne, Fanny Lefaucher
- 121 PRACTICES, PITFALLS, AND PROTOCOLS: UNLOCKING THE POTENTIAL OF LOW-IMPACT SURFACE HARDNESS TESTING FOR HISTORIC BUILDING MATERIALS
Wilhelm, K., Desarnaud, J., Gulotta, D., Bicer-Simsir, B., Viles, H., Corkum, A.G
- 154 DIRECT OBSERVATION OF CONSERVATION TREATMENTS BY SINGLE-SIDED NMR RELAXOMETRY
Carlo Golini, Leonardo Brizi, Bernhard Blümich, Jens Anders, Sabina Haber-Pohlmeier, Jürgen Frick
- 155 ASSESSING THE BIORECEPTIVITY OF SANDSTONE: A STANDARDIZED APPROACH TO EVALUATING PRIMARY AND SECONDARY BIORECEPTIVITY OF SANDSTONE SURFACES
A. Celal Dabanoğlu
- 169 BUILDING STONES PROPERTIES AND THEIR EFFECTS ON THE CONSERVATION OF THE SICILIAN BAROQUE ARCHITECTURE (ITALY)
Rovella N., Cirone M., Belfiore M.C., Ruffolo S.A., Ricca M., Figoli A., Török Á., La Russa M.F
- 171 PETROGRAPHIC ANALYSIS OF CLAY-BEARING SANDSTONE FROM AZTEC RUINS NATIONAL MONUMENT, NEW MEXICO, USA
Asel Maria Aguilar Sanchez , Timothy Wangler
- 186 THERMO-CHEMO-MECHANICAL CHARACTERISATION OF INORGANIC MINERAL PANELS DESQUAMATION SUBMITTED TO STANDARD FIRE
E. Huby, D. Rangeard, D. Giovannacci , S. Logel, Y. Mélinge
- 199 CHARACTERIZATION OF MORTARS ON THE ARCHAEOLOGICAL SITES OF CARTHAGE
A Tnazefti, K Zoghلامي, P Vazquez, T Junique, A Zaddem
- 202 ASSESSMENT OF RESTORATION MORTARS FOR THE ARCHAEOLOGICAL SITE OF THUBURBO MAJUS BY ARTIFICIAL WEATHERING TESTS
Aida Zaddem, Karima Zoghلامي, Rafael Fort Gonzalez, Ahmed Tanazefti
- 206 SPECTRAL IMPEDANCE OF LIMESTONE OF BUILT HERITAGE
H. Gomart,, A. Bouvet , D. Giovannacci, Y. Mélinge
- 210 THE PROBLEMS OF DAMAGE IN GYPSUM AND DOLOMITIC LIME STUCCO: DIFFERENT MECHANISMS ILLUSTRATED BY BAROQUE EXAMPLES FROM AUSTRIA
Andreas Schretthauser, Sabrina Jungmann, Federico Tomasini, Anja Diekamp

- 217 RESEARCHING POLYCHROMY/MONOCHROMY ON SANDSTONE OUTDOOR
SCULPTURES
Rutger Morelissen, Luc Megens
- 218 THE METHYLENE BLUE TEST: A SIMPLE BUT ROBUST WAY TO ESTIMATE THE SWELLING
CLAY CONTENT OF STONES
J. Berthonneau, P. Bromblet
- 13 CHARACTRIZATION OF BUILDING TECHNIQUES, DEGRADATION STATE, AND
RESTORATION APPROACH OF THE HISTORIC STONE MASONRIES AT RAK OLD TOWEN
(RAS AL-KHAIMAH- UNITED ARAB EMIRATES)
Sayed M. Ahmed
- 178 BROADBAND RADAR REFLECTOMETRY FOR THE ANALYSIS OF MOISTURE AND SALT
CONTENT IN MASONRY
Christoph Franzen, Daniel Frenzel, Oliver Blaschke, Felix Brand, Franziska Haas, Alexandra Troi,
Klaus Stefan Drese
- 195 INVESTIGATING THE MORPHOLOGICAL EVOLUTION AND PERFORMANCE OF CORAL
LIMESTONE IN RESTORATION: CASE STUDY HISTORIC JEDDAH
Alaa Alsayed, Mostafa Sabbagh , Alaa Alkhatib , Razan Masri
- 224 CHARACTERIZING DRYING BEHAVIOR IN RAW EARTH PLASTERS:A NON-DESTRUCTIVE
STUDY USING MAGNETIC RESONANCE IMAGING
Ghida Karbala, Benjamin Maillet , Patrick Belin , Rahima Sidi-Boulenouar,Matthieu Vandamme ,
Emmanuel Keita
- 1 STRUCTURAL STABILITY INTERPRETATION BY PRECISION MEASUREMENT MONITORING
OF HONGJUEUPSEONG TOWN WALL, REPUBLIC OF KOREA
Min Gyeong Kim , Jun Ho Song , Chan Hee Lee
- 3 NON-DESTRUCTIVE DIAGNOSIS AND MAINTENANCE GRADE EVALUATION OF STONE
STRUCTURES AT HEUNGINJIMUN GATE IN SEOUL CITY WALL
Ye Bin Kong and Chan Hee Lee
- 246 THE DEGRADATION OF STONES IN THE FORBIDDEN CITY: CLASSIFICATION AND
PRELIMINARY ANALYSIS
Shijia Zhang and Cristina Tedeschi
- 248 A STUDY EVALUATING THE DETERIORATION AND FIRE EFFECTS OF AN 18TH-CENTURY
POLYCHROME DOLOSTONE CARVING IN RIGA, LATVIA
M. Rasiņa, R. Prikryl , J. Prikrylová and M. Racek
- 247 PREVENTIVE CONSERVATION METHOD OF GROTTOS BASED ON ENVIRONMENTAL
MONITORING: A CASE STUDY OF QIANFO GROTTOE IN GUANGYUAN CITY, SICHUAN
PROVINCE, CHINA
Ning LYU, Zhiyun LI
- 82 STUDY ON THE DETERIORATION MECHANISM OF THE HELANKOU ROCK ART
SANDSTONE
ZhiYan DU , XiaoTong HUO , Erna MA, JinHua WANG , Xingzhou LIANG ,Weichang CHEN ,
MingShen SHAO , Li LI

- 222 INVESTIGATION OF ÁS DE PAUS GRANITE, AN IMPORTANT STONE FOR THE BUILT HERITAGE IN RIO DE JANEIRO, BRAZIL
Felix, Carla Corrêa; Del Lama, Eliane Aparecida
- 12 TRANSLATING RESEARCH TO PRACTICE: A HYGROTHERMAL RISK ASSESSMENT TOOL TO PREDICT DEGRADATION IN MASONRY FACADES
Kaat Janssens, Bruno Vanderschelden, Valentina Marincioni, Nathan Van Den Bossche
- 98 POROUS LIMESTONES UNDER DIFFERENT ENVIRONMENTS – CONDITION ASSESSMENT OF MONUMENTS IN RABAT, MALTA AND CAEN, FRANCE
Marija Milchin , Katharina Fuchs , Abdelrhman Fahmy , Siniša Bizjak , Krešimir Bosnić , Vincent Thiery and Farkas Pintér
- 94 NEW APPROACH TO CLIMATE RISKS ANALYSIS FOR ROCK ART IN AFRICA
Blen Taye , Tim De Kock , Scott Allan Orr
- 237 THE WIND EFFECTS AND QUANTITATIVE ASSESSMENT ON SURFACE DETERIORATION OF LARGE OUTDOOR ANCIENT CITY WALLS
Hangyao Zhu(1), Yonghui Li, Ting Zhang, Zhipeng Lin, Shuichi HOKOI
- 34 CONSERVATION OF STONE MASONRY: A CASE STUDY FROM GUNDA GUNDO MONASTERY IN TIGRAY, ETHIOPIA
Alula Tesfay Asfha , Atsebeha Gebreegzabher , Nobuhiro Shimizu , Mehari Bedu , Teklay Gereziher , Tsige Berhe , Gebremeskel Teweldemedhin
- 47 POTENTIAL IMPACT OF CLIMATE CHANGE ON BUILDING ENVIRONMENT: ASSESSMENT OF THE LONG-TERM CLIMATE-BASED INDICES
Xiaolin Chen , Piet Termonia, Rafiq Hamdi, Nathan Van Den Bossch
- 5 CLIMATE CHANGE AND CHALLENGES IN THE CONSERVATION AND RESTORATION OF HISTORIC OVENS
Beate Kozub
- 139 HEAT, MOISTURE AND SALT TRANSFER SIMULATION FOR PREDICTING SALT WEATHERING RISKS IN IMMOVABLE CULTURAL PROPERTIES: NECESSITY OF SALT TRANSFER SIMULATION
Takamasa Isomura , Nobumitsu Takatori, Daisuke Ogura , Soichiro Wakiya
- 164 DIGITALIZATION OF THE HERITAGE STONES FROM MONUMENTS AND BUILDINGS SITES HELD IN THE COLLECTION OF THE NATIONAL MUSEUM OF NATURAL HISTORY – PARIS
Grégoire Egoroff, Pierre Sans-Jofre , Damien Bonte , Antoine Bouziat, Elisabeth Nicot, Isabelle Rouget
- 9 PROVENANCE INTERPRETATION AND PETROLOGICAL CHARACTERISTICS OF STONE HERITAGES IN CHAMPASAK REGION, LAO PDR
Hye Ji Choi, Hye Ri Yang, Jun Hyoung Park, Yu Gun Chun, Chan Hee Lee
- 136 THE DYNAMIC CRYSTALLIZATION OF A NaCl-NaNO₃ MIXTURE IN BENTHEIMER SANDSTONE DURING DRYING
LEO PEL , SEBASTIAAN GODTS , AMELIE STAHLBUHK , NOUSHINE SHAHIDZADEH , MICHAEL STEIGER

- 6 SULPHATE SALTS AND SANDSTONE DAMAGE ON DRESDEN ZWINGER, DE – A NEVER ENDING STORY?
HEINER SIEDEL
- 66 ASSESSMENT OF THE EFFECTS OF LONG-TERM OUTDOOR EXPOSURE OF STONES AS EXTERIOR MATERIALS IN TOKYO, JAPAN
RISAKO FUKAMI , YOSHIAKI TAKEMOTO , SHIZUKA KOJIMA TOSHIYA MATSUI
- 230 MANAGING CONTEMPORARY OUTDOOR SCULPTURES: A RISK- AND VALUE-BASED APPROACH FOR SUSTAINABLE PREVENTIVE CONSERVATION
Marta Gómez Ubierna
- 232 THE CALLOS PROJECT: INTEGRATING HOLISTIC APPROACHES IN THE CONSERVATION OF ATHENS ANTIQUITIES THROUGH LASER AND LIDAR
Theodora Antonopoulou, Eirini Ampatzioglou, Martha Athanasiadou, Serafeim Korosis, Maria Pavlou, Sophia Papida, Kristalia Melessanaki, Chryssoula Bekiari, Anagnos Theodoros, Spilios Dellis, Georgios Georgousis, Paraskevi Pouli
- 37 CONSERVATION STRATEGY OF THE KUELAP ARCHAEOLOGICAL COMPLEX: CONSERVATION OF STONE STRUCTURES IN THE ECOSYSTEM OF THE PERUVIAN JUNGLE EYEBROW
Boris Márquez
- 72 IUGS HERITAGE STONES, AN INITIATIVE TO POPULARIZE IMPORTANT BUILDING AND DECORATIVE STONES WORLDWIDE
Angela Ehling , Gurmeet Kaur , Tim de Kock , Heiner Siedel
- 85 MONTREAL NOTRE-DAME BASILICA - REFURBISHMENT OF THE BELL TOWERS - FROM THE DRAWING BOARD TO THE CONSTRUCTION SITE
Daniel Durand
- 133 BYZANTINE FAÇADE (PARIS) – WEATHERING OF STONES CONTAINING CLAY AND INTERACTION WITH THE METAL STRUCTURE – CASE STUDY
Charlotte Trigance , Clémence Cauvin-Hardy

Poster session 2 : From Wednesday 10th to Friday 12th of September

- 27 LABORATORY TESTING OF HYDROXILATING CONVERSION TREATMENT ON MARBLE
Courtney Murdock
- 51 BIODETERIORATION OF THE HISTORICAL BUILDINGS IN LAKE TANA AND THE RESPONSE
OF THE STAKEHOLDERS: THE CASE OF NARGA SELASSIE MONASTERY
Ayenew Sileshi Demssie , Tim De Kock , Natalia Ortega Saez, Blen Taye Gemed, Abebe Dires
Dinberu
- 52 LIME REPAIR MORTARS FOR THE VILLARLOD STONE CONSERVATION: ANALYSIS,
AESTHETIC CONSIDERATIONS AND SWELLING PERFORMANCE
Marcos Lanzón , Camilla Tennenini , Asel María Aguilar , Tim Wangler , Robert Flatt
- 53 RELIEFS IN SENNACHERIB'S PALACE AFTER ISIS DESTRUCTION. TRIAL
RECONSTRUCTION PROJECT IN MOSUL, IRAQ
Justyna Hrabka, Natalia Skrzypek, Wanja Wedekind
- 88 NON-DESTRUCTIVE DIAGNOSIS AND CONSERVATION TREATMENT OF THE MOSAIC
ALTARPIECE IN THE SEOUL ANGELICAN CATHEDRAL, KOREA
Ju Eun Lee, Yeong Taek Kim, Chan Hee Lee
- 99 CLEANING MULTICOLORED STONE ALTARS - TWO STONE CONSERVATION STUDY
PROGRAMMES COOPERATE ON BRAC
Marija Milchin , Siniša Bizjak , Gabriela Krist , Katharina Fuchs
- 100 BIOCALCIS, BIOCALCIFICATION TREATMENT FOR HERITAGE CONSERVATION: REAL
APPLICATION CASES AND STUDY METHODOLOGY
Leslie Sapin, Annette Esnault Filet , Sabine Castanier, Luc Ellerman
- 101 RESTORATION OF WALL PAINTINGS: LABORATORY ASSAYS ON DEFORMED PLASTER
Mathilde Tiennot, Béatrice Villemin, Laurent Cormier, Witold Nowik
- 102 CONSERVATION OF AN ARCHAEOLOGICAL SCULPTURE FROM THE BLANCHE-
COURONNE ABBEY (LA CHAPELLE-LAUNAY, FRANCE)
Juliette Badiali
- 103 IMPACT OF QUATERNARY AMMONIUM BIOCIDES ON LIMESTONE
Karim Abdelrehim, Jérémy Hénin, Faïsl Boust
- 107 APPLICATION OF NON-DESTRUCTIVE TESTING METHODS IN ASSESSING THE
WEATHERING CONDITION OF THE YUNGANG GROTTOES
HUANG Jizhong , HONG Jie , ZHANG Yue , HAO Rongrong , CHENG Yuan , YAN Hongbin
- 111 LEAD MOBILITY IN BLACK CRUSTS: AN ANALYSIS OF PHASE INTERACTIONS
Sofia Deboli , Jean-Marc Baele , Alessandra Bonazza , Thibaut Van Acker , Frank Vanhaecke ,
Katrin Wilhelm , Tim De Kock
- 115 COMPLEX PREPARATION AND CONSERVATION OF THE BAROQUE PLAGUE COLUMN,
KUTNÁ HORA, CZECH REPUBLIC
Petra Zítková, Jakub Ďoubal

- 119 DEGRADATION AND CONSERVATION OF A UNIQUE MODERN FACADE MADE OF GLASS FRACTIONS IN POLYMERS ON CONCRETE PANELS IN COTTBUS
Steffen Laue , Mechthild Noll-Minor , Sonia Cárdenas , Anja Romanowski, Anna Micheluz , Marisa Pamplona
- 122 INVESTIGATING THE IMPACT OF PHOSPHATE-BASED SOLUTIONS ON CARBONATE STONE
Inês Cardoso , Dória Costa, José Mirão
- 123 HIDDEN IN THE TOMBS: CHALLENGES OF CONSERVATION AND CONSOLIDATION FOR HIGHLY POROUS LIMESTONES
Inês Sardinha, José Delgado Rodrigues, António Candeias, Isabel Cardoso,Paulina Faria
- 125 DIVERSITY OF MICROBIAL COMMUNITIES ON NATURE STONES USED IN THE ARCHITECTURAL HERITAGE OF TIANCIZHUANG CAMPUS, SUZHOU, CHINA
Xin Gao,Yufan Ding, Nick Schiavon, Ana Teresa Caldeira, Shiruo Wang
- 140 BASIC STUDY ON THE EFFECTS OF WETTING-DRYING CYCLES ON THE SURFACE DETERIORATION OF STONE-VISUALIZATION OF STRAIN DISTRIBUTION USING DVC
Wangchang CHUANG, Daijiro Nagao, Soichiro WAKIYA, Takayuki FUMOTO
- 143 OPTIMISING STONE CONSERVATION: A REALISTIC APPROACH TO ARTIFICIAL AGEING OF MOLASSE AND CONSOLIDATION EFFICACY
Camilla Tennenini , Robert J.Flatt
- 146 ACRYLIC RESIN DISPERSION AS BINDER OF STONE REPAIR MORTARS
Markus Boos , Jens Engel, Stefan Haustein , Hendrik Romstedt
- 157 LA CONSERVATION DES PEINTURES MURALES DE LA CHAPELLE D'AXE DE LA CATHÉDRALE NOTRE-DAME DE L'ASSOMPTION À RODEZ (FRANCE)
Hugo Quelart Gavalda , Benoit Merckx
- 160 VULNERABILITY OF COASTAL BUILT HERITAGE:
EXPLORING SEA SALT WEATHERING AT MYKONOS CASTLE (GREECE)
Luigi Germinario , Claudio Mazzoli
- 167 THE HISTORICAL ARCHIVE OF THE JOSÉ DE FIGUEIREDO LABORATORY IN LISBON: THE EVOLUTION OF STONE AND MURAL INTERVENTION METHODOLOGY
Inês Cardoso, Cláudia Pereira, Michèle Portela, Inês Sardinha
- 177 CONSERVATION STRATEGIES FOR 19 TH CENTURY PLASTER REPLICAS: INSIGHT INTO GYPSUM MIXTURES AND PROTECTIVE COATINGS
Federica Bubola, Chiara Coletti , Eleonora Balliana , Tim De Kock , Claudio Mazzoli
- 180 A SILICA-BASED PROTECTIVE SYSTEM MODIFIED WITH ROCK POWDER FOR THE PRESERVATION OF TUFF STONE
Katrin Rübner , Maria Stuff , Bianca Dreisow , Nicole Pniok , André Kamptner
- 182 EFFECTS OF CONSOLIDATION OF POROUS LIMESTONE WITH WATER-BASED SOLUTION OF CALCIUM ACETOACETATE
Maja Franković, Andreja Pondelak, Nevenka Novaković, Vesna Matović

- 190 PRELIMINARY STUDY OF THE ALTARPIECE OF REINHOUD III VAN BREDERODE IN 'DE GROTE KERK' OF VIANEN (NETHERLANDS)
Sam Huysmans, Judy De Roy, Sebastiaan Godts, Laurent Fontaine
- 196 NON-DESTRUCTIVE TESTING AND SUCCESSFUL REMEDIATION OF FERRIC OXIDE STAINING OF GRANITE MASONRY DUE TO ACIDIC SURFACE CLEANING
David Artigas
- 205 DRMS CHALLENGES ON STONE CONSOLIDATION TREATMENTS EVALUATION
Dória Costa
- 208 CONSERVATION OF THE LITHOSCUPTURES OF THE ARCHAEOLOGICAL SITE OF CERRO SECHÍN- CASMA-PERU
Ingrid Garcia Miranda
- 226 KINETICS AND SURFACE ALTERATION OF LIMESTONE: IMPACT OF ACID SOLUTIONS ON THE SURFACE FINISHES OF MONUMENTAL STONES
Morgane FANFONE, Fanny DESCAMPS , Laurent DEBAILLEUX
- 228 ASSESSING DETERIORATION AND DEVELOPMENT OF PREVENTIVE TREATMENT FOR THE SERPENTINE STONE OF PRATO
francesca.pique@supsi.ch
- 234 PREVENTIVE TREATMENTS FOR FROST DAMAGE IN LINCEN TUFFSTONE: INSIGHTS FROM THE WALSBETS CHURCH (BELGIUM)
Tanaquil Berto, Laurent Fontaine, Julie Desarnaud and Roald Hayen
- 220 SPALLING OF TUFFEAU LIMESTONE: STATISTICAL ANALYSIS OF SAMPLES FROM THE CASTLE OF CHAUMONT-SUR-LOIRE, France
Valentin CHEGANI, Wolfram KLOPPMANN , Xavier BRUNETAUD , Maria DEZES , Guillaume WILLE , Kévin BECK
- 249 INTRODUCTION TO INNOVATIVE NANO ELECTRO APPLICATION TECHNIQUE (I) TO IMPROVE THE PERFORMANCE OF ALCOHOLIC NANOLIME
Maucourant, O'Flaherty
- 231 ASSESSING LASER-ASSISTED REMOVAL OF EPILITHIC BIOLOGICAL ATTACK FROM STONE BY MEANS OF LED-IF
Maria Pavlou , Martha Athanasiadou , Serafeim Korosis, Kristalia Melessanaki , Victor Piñon , Argyro Tsigri , Paraskevi Pouli
- 46 BUILDING A DIGITAL RECORD OF SCOTLAND'S STONE-BUILT HERITAGE: DEVELOPING DATABASE SYSTEMS FOR FACILITATING STONE SURVEYS AND THEIR INTEGRATION WITH UNDERPINNING GEOLOGICAL DATA
Paul Everett , Kenneth Lawrie , Sarah Hamilton and Aurélie Turmel
- 20 VIRTUAL RESTORATION OF COLLAPSED ROCK-CARVED BUDDHA STATUE USING NON-DESTRUCTIVE DIAGNOSIS AND 3D DIGITAL IMAGE INFORMATION
Jun Hyoung Park and Chan Hee Lee

- 23 THE SIGNIFICANCE OF TRACEOLOGICAL RESEARCH IN THE CONSERVATION AND RESTORATION OF STONE SCULPTURES THE USE OF DIGITAL METHODS IN THE DOCUMENTATION AND ANALYSIS OF TRACE EVIDENCE
Peter Kozub
- 60 3D-PRINTING IN STONE CONSERVATION
Christoph Franzen , Kristin Hiemann , Falko Böttger-Hiller , Diana Klemm ,Henning Zeidler
- 73 MOTIVES FOR NATURAL STONE USE IN 19TH-CENTURY PUBLIC BUILDINGS IN BELGIUM, VIA DIGITISED MUNICIPAL GAZETTES AND ARCHIVES
Jana Van Bouwel and Tim De Kock
- 78 FROM FRAGMENT TO MONUMENT; RESTORING AN ANCIENT SARCOPHAGUS THROUGH 3D TECHNOLOGY AND AI
Duje Ordulj , Jelena Jovanović , Krešimir Bosnić , Siniša Bizjak , Mladen Čulić
- 95 THE USE OF PHOTOGRAMMETRY AND 3D PRINTING IN THE RESTORATION OF A BAROQUE SCULPTURE
Jakub Ďoubal , Samuel Schreiber , Anna Maria Rockenschaub , Barbora Viková
- 96 DIGITALIZATION FOR QIANFO CLIFF ROCK CARVINGS WITH A FOCUS OF ELEVEN-HEADED AVALOKITĚSHVARA RELIEFS
Chen Wu-Wei
- 106 A DEEP-LEARNING METHOD USING AUTO-ENCODER AND GENERATIVE ADVERSARIAL NETWORK FOR ANOMALY DETECTION ON ANCIENT STONE STELE SURFACES
Yikun Liu, Yuning Wang , Cheng Liu
- 131 A MULTIMODAL TOOLKIT TO ASSESS SCULPTURES CONSERVATION STATE
M.-L. Chavazas , J. Berthonneau , C. Payan, L. De Luca , and P. Bromblet
- 159 MACHINE LEARNING-BASED FEATURE EXTRACTION AND CLASSIFICATION OF ACOUSTIC EMISSION SIGNALS FROM STONE HERITAGE DETERIORATION: IN THE CASE OF FREEZE-THAW DETERIORATION OF TUFFS
ZHOU Yishan, LI Li, WANG Jun,LIU Yikun, LIU Jianhui, MARTSUI Toshiya, XU Dong, WANG Ziyi, LIANG Xingzhou
- 233 ENHANCING CULTURAL HERITAGE CONSERVATION WITH DIGITAL TOOLS: THE CALLOS DOCUMENTATION SYSTEM AND A CASE STUDY OF A MARBLE PART FROM ATHENS ACROPOLIS
Martha Athanasiadou, Maria Pavlou, Eirini Ampatzoglou, Sophia Papida, Kristalia Melessanaki, Dimitris Angelakis, Lida Charami , Chryssoula Bekiari, Paraskevi Pouli
- 49 BROADBAND RADAR REFLECTOMETRY FOR THE ANALYSIS OF MOISTURE AND SALT CONTENT IN MASONRY
Christoph Franzen, Daniel Frenzel, Oliver Blaschke, Felix Brand, Franziska Haas, Alexandra Troi, Klaus Stefan Drese
- 194 SYSTEMATIC LITERATURE REVIEWS AND META-ANALYSIS IN STONE CONSERVATION
C.M. Grossi, B. Menéndez

- 7 INTERPRETATION OF MAKING TECHNIQUES AND MATERIAL CHARACTERIZATION FOR BRICKS FROM THE JOTAPRI FIVE STORY BRICK PAGODA IN ANDONG, REPUBLIC OF KOREA
Jeongeun Yi , Hye Won Shin , Seok Tae Park, Chan Hee Lee
- 118 GREENER SOLUTIONS TO GREENING: TESTING ENVIRONMENTALLY FRIENDLY BIOCIDES FOR HISTORIC STONE
Philip J.A. Skipper , Lynda K. Skipper
- 135 EVALUATION OF MARINE BACTERIA FOR THE CONSOLIDATION OF BUILT HERITAGE
Justine Tavernier , Patricia Vazquez(, Thomas Junique , Marc Jeannin, Béatrice Colin, Sophie Sablé
- 187 SUSTAINABLE MORTARS FOR FACADES RESTORATION
Beatriz Menéndez , Jose Diaz Basteris, Victor Yameogo, Marion Lecanu
- 188 RESULTS OF THE SCORE (SUSTAINABLE CONSERVATION AND RESTORATION OF BUILT CULTURAL HERITAGE) PROJECT
Beatriz Menéndez , Monica Alvarez de Buergo, Alessandra Bonazza, Inge Rörig-Dalgaard, Anna Maria Ferrari, Claudia Garcia-Solis, Sergio Gomez-Cornelio, Johanna O'Byrne, Patricia Quintana, Benjamin Quesada, Susana de la Rosa, Javier Reyes, Maria Pia Riccardi, Luis Valdeon
- 212 BUILDING A MODERN KNOWLEDGE OF TRADITIONAL CHINESE CONCRETE. A HIDDEN HISTORY, 1840-1949
Changxue Shu
- 19 FROM NO-HERITAGE TO HERITAGE INVENTION——RE-READING BRICK RIVERSIDE PASSAGE IN SHANGHAI
PAN Yue
- 108 RE-ESTABLISHING SUPPLIES OF SCOTTISH STONE FOR BUILDING CONSERVATION: A GLOBAL PROBLEM WITH LOCAL SOLUTIONS
Imogen Shaw, Graham Briggs, Paul Everett
- 219 FORMULATION OF A COATING BASED ON LIME AND TUFFEAU POWDER FOR THE RESTORATION OF VERNACULAR HOUSES IN THE LOIRE VALLEY
Malek BALAWI, Kévin BECK Naima BELAYACHI, Xavier BRUNETAUD
- 211 LICHEN-INDUCED DETERIORATION IN BUILT CULTURAL HERITAGE: EXPERIMENTAL APPROACHES AND BIOCIDAL SOLUTIONS
Manlio Montuori

