

Poster session #1 - Wednesday 01/03

- 1| AN ONLINE 3D DATABASE SYSTEM FOR ENDANGERED ARCHITECTURAL AND ARCHAEOLOGICAL HERITAGE IN THE SOUTH-EASTERN MEDITERRANEAN | D. Abate, A. Avgousti, M. Faka, S. Hermon, N. Bakirtzis, P. Christofi
- 2| MODELLING AND ACCURACY IN A BIM ENVIRONMENT FOR PLANNED CONSERVATION: THE APARTMENT OF TROIA OF GIULIO ROMANO | A. Adami, B. Scala, A. Spezzoni
- 3| 3D MODELLING THE INVISIBLE USING GROUND PENETRATING RADAR | P. Agrafiotis, K. Lampropoulos, A. Georgopoulos, A. Moropoulou
- 4| 3-DIMENSIONAL GEOMETRIC SURVEY AND STRUCTURAL MODELLING OF THE DOME OF PISA CATHEDRAL | D. Aita, R. Barsotti, S. Bennati, G. Caroti, A. Piemonte
- 5| INTEGRATION OF POINT CLOUDS DATASET FROM DIFFERENT SENSORS | C.K.A.F. Che Ku Abdullah, N.Z.S Baharuddin, M.F.M. Ariff, Z. Majid, C.L. Lau, A.R. Yusoff, K.M. Idris, A. Aspuri
- 6| AUGUSTO'S SUNDIAL: IMAGE-BASED MODELING FOR REVERSE ENGINEERING PURPOSES | V. Baiocchi, M. Barbarella, S. Del Pizzo, F. Giannone, S. Troisi, C. Piccaro, D. Marcantonio
- 7| POINT CLOUD ANALYSIS FOR CONSERVATION AND ENHANCEMENT OF MODERNIST ARCHITECTURE | M. Balzani, F. Maietti, B. Mugayar KÜhl
- 8| FISHEYE LENSES FOR 3D MODELING: EVALUATIONS AND CONSIDERATIONS | L. Barazzetti, M. Previtali, F. Roncoroni
- 9| TOWARDS RECONSTRUCTING A DORIC COLUMN IN A VIRTUAL CONSTRUCTION SITE | D. Bartzis
- 10| THE USE OF 3D SCANNING AND PHOTOGRAMMETRY TECHNIQUES IN THE CASE STUDY OF THE ROMAN THEATRE IN NIKOPOLIS | T. Bilis, T. Kouimtzoğlu, M. Magnisali, P. Tokmakidis
- 11| FROM TLS POINT CLOUDS TO 3D MODELS OF TREES: A COMPARISON OF EXISTING ALGORITHMS FOR 3D TREE RECONSTRUCTION | E. Bournez, T. Landes, M. Saudreau, P. Kastendeuch, G. Najjar
- 12| 3D MODELING FOR THE KNOWLEDGE OF ARCHITECTURAL HERITAGE AND VIRTUAL RECONSTRUCTION OF ITS HISTORICAL MEMORY | M. Campi, A. di Luggo, S. Scandurra
- 13| GROUND AND AERIAL DIGITAL DOCUMENTATION OF CULTURAL HERITAGE: PROVIDING TOOLS FOR 3D EXPLOITATION OF ARCHAEOLOGICAL DATA | G. Cantoro
- 14| DIGITAL INVASIONS: FROM POINT CLOUDS TO HISTORICAL BUILDING OBJECT MODELING (H-BOM) OF A UNESCO WHL SITE | F. Chiabrando, M. Lo Turco, C. Santagati
- 15| UNDERGROUND SURVEYING: 16TH CENTURY CELLAR VAULTS IN THE GALERÍA DE CONVALECIENTES, MONASTERY OF SAN LORENZO DEL ESCORIAL | P. Chias, T. Abad, E. Echeverría, M. De Miguel, P. Lorente
- 16| 3D SURVEYING AND GEOMETRIC ASSESSMENT OF A GOTHIC NAVE VAULTING FROM POINT CLOUDS. | A. Costa-Jover, J. Lluis i Ginovart, S. Coll-Pla, M. López Piquer, A. Samper-Soasa, D. Moreno García, A.M. Solís Lorenzo
- 17| POINT CLOUD DERIVED FROM VIDEO FRAMES: ACCURACY ASSESSMENT IN RECONSTRUCTION TO TERRESTRIAL LASER SCANNING AND DIGITAL CAMERA DATA | P. Delis, M. Zacharek, D. Wierzbicki, A. Grochala
- 18| PROCEDURAL 3D MODELLING FOR TRADITIONAL SETTLEMENTS. THE CASE STUDY OF CENTRAL ZAGORI | D. Kitsakis, E. Tsiliakou, T. Labropoulos, E. Dimopoulou
- 19| THREE-DIMENSIONAL MAPPING OF AN ANCIENT CAVE PAINTINGS USING CLOSE-RANGE PHOTOGRAMMETRY AND TERRESTRIAL LASER SCANNING TECHNOLOGIES | Z. Majid, M. F. M. Ariff, K. M. Idris, A. R. Yusoff, K.M. Idris, A. Aspuri, M.A.Abbas, K. Zainuddin, A. R. A. Ghani, Ardi
- 20| 3D RECORDING AND MODELLING OF MINING HERITAGE: THE MONSERRAT MINE, SIERRA MINERA OF CARTAGENA-LA UNIÓN, SOUTHEAST OF SPAIN | J. García-León, A. García Martín, M. Torres Picazo, J. Fernández
- 21| SURVEYING MEDIEVAL ARCHAEOLOGY: A NEW FORM FOR HARRIS PARADIGM LINKING PHOTOGRAMMETRY AND TEMPORAL RELATIONS | P. Drap , O. Papini, E. Pruno, M. Nuccioti, G. Vannini
- 22| AUGMENTED REALITY IN ARCHITECTURE: REBUILDING ARCHEOLOGICAL HERITAGE | J. de la Fuente Prieto, E. Castaño Perea, F. Labrador Arroyo
- 23| MULTIPLE 3D APPROACHES FOR THE ARCHITECTURAL STUDY OF THE MEDIEVAL ABBEY OF CORMERY IN THE LOIRE VALLEY | T. Pouyet
- 24| FEASIBILITY STUDY OF LOW-COST IMAGE-BASED HERITAGE DOCUMENTATION IN NEPAL | H. K. Dhonju, W. Xiao, V. Sarhosis, J. P. Mills, S. Wilkinson, Z. Wang, L. Thapa, U. S. Panday
- 25| DOCUMENTAL STUDIO AND 3D RECREATION OF THE SAN ILDEFONSO'S SCHOOL FACADE, ALCALA DE HENARES. | E. Echeverría, E. Castaño, F. Casa, F. Celis, P. Chias
- 26| 3D MODELLING OF THE LUSATIAN BOROUGH IN BISKUPIN USING ARCHIVAL DATA | D. Zawieska, J. S. Markiewicz, J. Kopiasz, J. Tazbir, A. Tobiasz
- 27| CAMERA CALIBRATION ACCURACY AT DIFFERENT UAV FLYING HEIGHTS | A. Razali Yusoff, M. F. M. Ariff, K. M. Idris, Z. Majid, A. K. Hong

Poster session #2 - Thursday 02/03

- 1| SURVEYING, MODELING AND 3D REPRESENTATION OF A WRECK FOR DIVING PURPOSES: CARGO SHIP "VERA" | A. Ktistis, P. Tokmakidis, K. Papadimitriou
- 2| SURVEYING THE UNDERWATER ARCHAEOLOGICAL SITE OF CAPE GLAROS AT PAGAS-ETIKOS GULF | E. Diamanti, E. Spondylis, F. Vlachaki, E. Kolyva
- 3| THE EFFECT OF UNDERWATER IMAGERY RADIOMETRY ON 3D RECONSTRUCTION AND ORTHOIMAGERY | P. Agrafiotis, G. I. Drakonakis, A. Georgopoulos, D. Skarlatos
- 4| FLAT VERSUS HEMISPHERICAL DOME PORTS IN UNDERWATER PHOTOGRAMMETRY | F. Menna, E. Nocerino, F. Remondino
- 5| THE PRACTICALITY OF AGISOFT PHOTOSCAN™ AND IMAGE-BASED 3D DIGITAL MODELING OF UNDERWATER SHIPWRECK SITES IN WESTERN AUSTRALIA | M. McAllister
- 6| A LOW-COST MARKERLESS TRACKING SYSTEM FOR TRAJECTORY INTERPRETATION | A. Laggis, N. Doulamis, E. Protopapadakis, A. Georgopoulos
- 7| RPAS AND TLS TECHNIQUES FOR ARCHAEOLOGICAL SURVEY: THE CASE STUDY OF THE ARCHAEOLOGICAL SITE OF ERACLEA MINOA (ITALY) | M. Lo Brutto, R. Sciortino, A. Garraffa
- 8| FROM OSS CAD TO BIM FOR CULTURAL HERITAGE DIGITAL REPRESENTATION | S. Logothetis, E. Karachaliou, E. Stylianiadis
- 9| A COMPARISON AMONG DIFFERENT OPTIMIZATION LEVELS IN 3D MULTI-SENSOR MODELS. A TEST CASE IN EMERGENCY CONTEXT: 2016 ITALIAN EARTHQUAKE | F. Chiabrando, G. Sammartano, A. Spanò
- 10| VISUALIZATION OF THE CONSTRUCTION OF ANCIENT ROMAN BUILDINGS IN OSTIA USING POINT CLOUD DATA | Y. Hori, T. Ogawa
- 11| DISCOVERING AND SHARING OF SECRET ARCHITECTURES: THE HIDDEN TOMB OF THE PHARAOH OF EL-KHASNEH, JORDAN | E.M. Malinverni, R. Pierdicca
- 12| COMPARING MULTI-SOURCE PHOTOGRAMMETRIC DATA DURING THE EXAMINATION OF VERTICALITY IN A MONUMENTAL TOWER | J. Markiewicz, D. Zawieska, P. Podlasiak
- 13| FOLK DANCE PATTERN RECOGNITION OVER DEPTH IMAGES ACQUIRED VIA KINECT SENSOR | E. Protopapadakis, A. Grammatikopoulou, A. Doulamis, N. Grammalidis
- 14| A REVIEW OF POINT CLOUDS SEGMENTATION AND CLASSIFICATION ALGORITHMS | E. Grilli, F. Menna, F. Remondino
- 15| INTERDISCIPLINARY DATA FUSION FOR DIACHRONIC 3D RECONSTRUCTION OF HISTORIC SITES | L. L. Micoli, S. Gonizzi Barsanti, G. Guidi
- 16| CULTURAL HERITAGE THROUGH TIME: A CASE STUDY AT HADRIAN'S WALL, UNITED KINGDOM | K. D. Fieber, J. P. Mills, M. V. Peppas, I. Haynes, S. Turner, A. Turner, M. Douglas, P. G. Bryan
- 17| A GEOMETRICAL SIMILARITY PATTERN AS AN EXPERIMENTAL MODEL FOR SHAPES IN ARCHITECTURAL HERITAGE | J. J. Moyano, J. A. Barrera, J. E. Nieto, D. Marín, D. Antón
- 18| ACCURACY ASSESSMENT OF A COMPLEX BUILDING 3D MODEL RECONSTRUCTED FROM IMAGES ACQUIRED WITH A LOW-COST UAS | E. Oniga, C. Chiriță, F. Stătescu
- 19| 3D VISUALIZATION AND PHOTO-REALISTIC RECONSTRUCTION OF THE GREAT TEMPLE OF BEL | A. Denker
- 20| IMAGE-BASED 3D RECONSTRUCTION DATA AS AN ANALYSIS AND DOCUMENTATION TOOL FOR ARCHITECTS: THE CASE OF PLAKA BRIDGE IN GREECE | T. Kouimtzoğlu, E. K. Stathopoulou, P. Agrafiotis, A. Georgopoulos
- 21| RECOVERING OLD STEREOSCOPIC NEGATIVES AND PRODUCING DIGITAL 3D MODELS OF FORMER APPEARANCES OF HISTORIC BUILDINGS | Á. Rodríguez Miranda, J.M. Valle Melón
- 22| LOCALIZATION OF PATHOLOGY ON COMPLEX ARCHITECTURE BUILDING SURFACES | A. A. Sidiropoulos, K. N. Lakakis, V.K. Mouza
- 23| INTEROPERABILITY MATTER: LEVELS OF DATA SHARING, STARTING FROM A 3D INFORMATION MODELLING | C. Tommasi, C. Achille
- 24| FIRST EXPERIENCES WITH THE TRIMBLE SX10 SCANNING TOTAL STATION FOR BUILDING FACADE SURVEY | E. Lachat, T. Landes, P. Grussenmeyer
- 25| AUTOMATIC RECTIFICATION OF BUILDING FAÇADES | V. Tsonis, A. Tranou, A. Vythoulkas, A. Psalta, E. Petsa, G. Karras
- 26| A PROMPT METHODOLOGY TO GEOREFERENCE COMPLEX HYPOGAEA ENVIRONMENTS | S. Troisi, V. Baiocchi, S. Del Pizzo, F. Giannone
- 27| PHOTOGRAMMETRIC ANALYSIS OF HISTORICAL IMAGE REPOSITORIES FOR VIRTUAL RECONSTRUCTION IN THE FIELD OF DIGITAL HUMANITIES | F. Maiwald, T. Vietze, D. Schneider, F. Henze, S. Münster, F. Niebling
- 28| AUTOMATIC TREE DATA REMOVAL METHOD FOR TOPOGRAPHY MEASUREMENT RESULT USING TERRESTRIAL LASER SCANNER | H. Yokoyama, H. Chikatsu
- 29| CRITICAL ANALYSIS AND DIGITAL RECONSTRUCTIONS OF ALBERTI'S ARCHITECTURES BY THE USE OF 3D MORPHOMETRIC INTEGRATED SURVEY DATABASE | F. Ferrari, M. Medici
- 30| EVALUATING THE POTENTIAL OF IMAGING ROVER FOR AUTOMATIC POINT CLOUD GENERATION | V. Cera, M. Campi

3D - ARCH

NAFLPIO, GREECE | 1-3 MARCH 2017

7TH INTERNATIONAL WORKSHOP

3D VIRTUAL RECONSTRUCTION AND VISUALIZATION OF COMPLEX ARCHITECTURES



N.T.U.A.



NTUA PHOTOG
GRAMMETRY



8:30 | REGISTRATION
9:15-11:00 | OPENING
Keynote #1 - Andreas Nüchter: "Efficient 3D Point Cloud Processing with 3DTK - The 3D Toolkit"
Technical session: Fisheye photogrammetry
Chairman: Fabio Remondino
FISHEYE PHOTOGRAMMETRY: TESTS AND METHODOLOGIES FOR THE SURVEY OF NARROW SPACES | L. Perfetti, C. Polari, F. Fassi
3D MODELLING WITH THE SAMSUNG GEAR 360 | L. Barazzetti, M. Previtali, F. Roncoroni

11:00-11:30 | COFFEE BREAK
11:30-13:00 | **Technical session: 3D documentation and modeling**
Chairman: Thomas Kersten
DOCUMENTING BRONZE AGE AKROTIRI ON THERA USING LASER SCANNING, IMAGE-BASED MODELLING AND GEOPHYSICAL PROSPECTION | I. Trinks, M. Wallner, M. Kucera, G. Verhoeven, J. Torrejón Valdelomar, K. Löcker, E. Nau, C. Sevara, L. Aldrian, W. Neubauer, M. Klein
PHOTOGRAMMETRY DRIVEN TOOLS TO SUPPORT THE RESTORATION OF OPEN-AIR BRONZE SURFACES OF SCULPTURES | F.I. Apollonio, M. Gaiani, W. Basilissi, L. Rivaroli
PROBABILISTIC RECONSTRUCTION OF ORTHODOX CHURCHES FROM PRECISION POINT CLOUDS USING BAYESIAN NETWORKS AND CELLULAR AUTOMATA | M. Chizhova, D. Korovin, A. Gurianov, M. Brodovskii, A. Brun, U. Stilla, T. Luhmann
MULTI-SOURCE 3D MODELS SUPPORTING ULTRASONIC TEST TO INVESTIGATE AN EGYPTIAN SCULPTURE OF THE ARCHAEOLOGICAL MUSEUM IN BOLOGNA | V. Di Pietra, E. Donadio, D. Picchi, L. Sambuelli, A. Spanò

13:00-14:00 | LUNCH
14:00-14:45 | **POSTER SESSION #1**
14:45-16:00 | **Technical session: Orientation and Reconstruction**
Chairman: Erica Nocerino
IMPROVING GOOGLE'S CARTOGRAPHER 3D MAPPING BY CONTINUOUS-TIME SLAM | A. Nüchter, M. Bleier, J. Schauer, P. Janotta
INVESTIGATING THE EFFECT OF FOCUS STACKING ON SFM-MVS ALGORITHMS | G. Kontogianni, R. Chliverou, A. Koutsoudis, G. Pavlidis, A. Georgopoulos
SEMI-GLOBAL MATCHING WITH SELF-ADJUSTING PENALTIES | E. Karkalou, C. Stentoumis, G. Karras
MULTISPECTRAL PHOTOGRAMMETRIC DATA ACQUISITION AND PROCESSING FOR WALL PAINTINGS STUDIES | A. Pamart, O. Guillon, S. Faraci, E. Gattet, M. Genevois, J. M. Vallet, L. De Luca

16:00-16:30 | COFFEE BREAK
16:30-18:00 | **DEMO SESSION**
Felix Tschirschwitz, Simon Deggim & Thomas P. Kersten: A Virtual Museum as an Immersive Experience with the HTC Vive VR System
Anthony Pamart: Culture 3D Cloud - a web-based cloud service for photogrammetric processing
Diego Gonzalez-Aguilera: Graphos - an open-source photogrammetric tool
Gianluca Cantoro: Auto-GR toolkit - Raster georeferencing via image matching
Loutridis / Landmark: ZEB - Revo handheld scanner

18:00 | WELCOME DRINK

9:00-10:45 | **Invited talk - Vasiliki Eleftheriou: "The Acropolis of Athens: Damage, Restoration and the importance of the Documentation"**
Technical session: EU projects
Chairman: Andreas Georgopoulos
A SMARTPHONE-BASED 3D PIPELINE FOR THE CREATIVE INDUSTRY –THE REPLICATE EU PROJECT– | E. Nocerino, F. Lago, D. Morabito, F. Remondino, L. Porzi, F. Poesi, S. Rota Bulò, P. Chippendale, A. Locher, M. Havlena, L. Van Gool, M. Eder, A. Fötschl, A. Hilsmann, L. Kausch, P. Eisert
4D RECONSTRUCTION AND VISUALIZATION OF CULTURAL HERITAGE: ANALYZING OUR LEGACY THROUGH TIME | P. Rodríguez-González, A. Luis Muñoz-Nieto, S. del Pozo, L. Javier Sanchez-Aparicio, D. Gonzalez-Aguilera, L. Micoli, S. Gonizzi Barsanti, G. Guidi, J. Mills, K. Fieber, I. Haynes, B. Hejmanowska
INTEGRATED DATA CAPTURING REQUIREMENTS FOR 3D SEMANTIC MODELLING OF CULTURAL HERITAGE: THE INCEPTION PROTOCOL | R. Di Giulio, F. Maietti, E. Piaia, M. Medici, F. Ferrari, B. Turillazzi

10:45-11:15 | COFFEE BREAK
11:15-13:00 | **Technical session: Underwater surveying and mapping**
Chairman: Fabio Menna
LOW-COST 3D LASER SCANNING IN AIR OR WATER USING SELF-CALIBRATING STRUCTURED LIGHT | M. Bleier, A. Nüchter
COMPARISON OF COMMERCIAL STRUCTURE-FROM-MOTION PHOTOGRAMMETRY SOFTWARE USED FOR UNDERWATER THREE-DIMENSIONAL MODELING OF CORAL REEF ENVIRONMENTS | J. H. R. Burns, D. Delparte
UNDERWATER PHOTOGRAMMETRY, CODED TARGET AND PLENOPTIC TECHNOLOGY: A SET OF TOOLS FOR MONITORING RED CORAL IN MEDITERRANEAN SEA | P. Drap, J.P. Royer, M.M. Nawaf, M. Saccone, D. Merad, Á. López-Sanz, J.B. Ledoux, J. Garrabou
3D MODELLING AND MAPPING FOR VIRTUAL EXPLORATION OF UNDERWATER ARCHAEOLOGY ASSETS | F. Liarokapis, P. Kouřil, P. Agraftotis, S. Demesticha, J. Chmelík, D. Skarlatos
TOWARDS GUIDED UNDERWATER SURVEY USING LIGHT VISUAL ODOMETRY | M.M. Nawaf, P. Drap, J.P. Royer, D. Merad, M. Saccone

13:00-14:00 | LUNCH
14:00-15:00 | **POSTER SESSION #2**
15:00-16:00 | **Technical session: UAV**
Chairman: Diego Gonzalez-Aguilera
THE INFLUENCE OF FLIGHT PLANNING AND CAMERA ORIENTATION IN UAVs PHOTOGRAMMETRY. A TEST IN THE AREA OF ROCCA SAN SILVESTRO (LI), TUSCANY | F. Chiabrando, A. Lingua, P. Maschio, L. Teppati Losè
DEPTH CAMERAS ON UAVs: A FIRST APPROACH | A. Deris, I. Trigonis, A. Aravanis, E.K. Stathopoulos
CLOSE RANGE UAV ACCURATE RECORDING AND MODELING OF ST-PIERRE-LE-JEUNE NEO-ROMANESQUE CHURCH IN STRASBOURG (FRANCE) | A. Murtiyoso, P. Grussenmeyer, T. Freville

16:00-16:30 | COFFEE BREAK
16:30-18:00 | **Panel session: "3D Mass Digitization – Future Trends, Challenges and Opportunities"**
Moderator: Constanze Fuhrmann - Fraunhofer IGD, Competence Center Cultural Heritage Digitization, Germany
Panel: Andreas Georgopoulos (NTUA, Athens, Greece), Thomas Kersten (HafenCity University Hamburg, Germany), Diego Gonzalez-Aguilera (University of Salamanca, Spain)

20:30 | SOCIAL DINNER | at Fougaro (Asklipiou St, 98 Nafplio)

9:00-10:45 | **Keynote #2 - Daniel Girardeau-Montaut: "Cloudcompare: origin, developments, successful stories, future"**
Technical session: BIM
Chairman: Jan Boehm
PARAMETRIC MODELLING OF AS-BUILT BEAM FRAMED STRUCTURE IN BIM ENVIRONMENT | X. Yang, M. Koehl, P. Grussenmeyer
HIJAZI ARCHITECTURAL OBJECT LIBRARY (HAOL) | A. Baik, J. Boehm
SURVEY AND MODELLING FOR THE BIM OF BASILICA OF SAN MARCO IN VENICE | L. Fregonese, L. Taffurelli, A. Adami, S. Chiarini, S. Cremonesi, J. Helder, A. Spezzoni

10:45-11:15 | COFFEE BREAK
11:15-13:00 | **Technical session: 3D modeling**
Chairman: Geert Verhoeven
DIGITALIZATION CULTURE VS ARCHAEOLOGICAL VISUALIZATION: INTEGRATION OF PIPELINES AND OPEN ISSUES | L. Cipriani, F. Fantini
THE RETURN OF THE SIEGESBURG – 3D RECONSTRUCTION OF A DISAPPEARED AND FORGOTTEN MONUMENT | S. Deggim, T. P. Kersten, M. Lindstaedt, N. Hinrichsen
A GEOMETRIC PROCESSING WORKFLOW FOR TRANSFORMING REALITY-BASED 3D MODELS IN VOLUMETRIC MESHES SUITABLE FOR FEA | S. Gonizzi-Barsanti, G. Guidi
DYNAMIC 3D MODELING OF A CANAL-TUNNEL USING PHOTOGRAMMETRIC AND BATHYMETRIC DATA | E. Moisan, C. Heinkele, P. Charbonnier, P. Foucher, P. Grussenmeyer, S. Guillemin, M. Koehl
TOWARDS THE ENHANCEMENT OF "MINOR" ARCHAEOLOGICAL HERITAGE | S. Morandi, M. Tremari, A. Mandelli

13:00-14:00 | LUNCH
14:00-15:30 | **Technical session: Point clouds**
Chairman: Francesco Fassi
DETECTION AND PURGING OF SPECULAR REFLECTIVE AND TRANSPARENT OBJECT INFLUENCES IN 3D RANGE MEASUREMENTS | R. Koch, S. May, A. Nüchter
NEW PERSPECTIVES OF POINT CLOUDS COLOR MANAGEMENT THE DEVELOPMENT OF TOOL IN MATLAB FOR APPLICATIONS IN CULTURAL HERITAGE | M. Pepe, S. Ackermann, L. Fregonese, C. Achille
THE EXAMPLE OF USING INTENSITY ORTHOIMAGES IN TLS DATA REGISTRATION - A CASE STUDY | J. S. Markiewicz
TOWARDS RADIOMETRICAL ALIGNMENT OF 3D POINT CLOUDS | H. A. Lauterbach, D. Borrmann, A. Nüchter

15:30-16:00 | COFFEE BREAK
16:00-17:00 | **Technical session: VR/AR**
Chairman: Ellie Stathopoulos
VIRTUAL DIVING IN THE UNDERWATER ARCHAEOLOGICAL SITE OF CALA MINNOLA | F. Bruno, A. Lagudi, L. Barbieri, M. Muzzupappa, M. Mangeruga, F. Pupo, M. Cozza, A. Cozza, G. Ritacco, R. Peluso, S. Tusa
EXTENDING THE LIFE OF VIRTUAL HERITAGE: REUSE OF TLS POINT CLOUDS IN SYNTHETIC STEREOSCOPIC SPHERICAL IMAGES | J. Garcia Fernandez, K. Tammi, A. Joutsiniemi
DEVELOPMENT OF A VIRTUAL MUSEUM INCLUDING A 4D PRESENTATION OF BUILDING HISTORY IN VIRTUAL REALITY | T. P. Kersten, F. Tschirschwitz, S. Deggim

17:00 | CLOSING