



AIPnD

art'23

14th International Conference on non-destructive investigations and microanalysis for the diagnostics and conservation of cultural and environmental heritage



Brescia (Italy)

November 28th/30th, 2023



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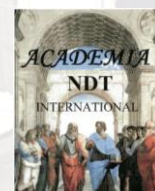
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EF European Federation for
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International Council for
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Asociación Argentina de Ensayos
No Destructivos y Estructurales

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Italian National Agency for New Technologies,
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Presentation

Non-destructive Analysis has turned out to be crucial methods to achieve more successful and long-lasting preservation of works of art and environmental heritage.

With the aim to promote education and competence in this field, the “*art*” logo was created almost forty years ago and it still represents, in national and international sphere, one of the most successful initiatives in this area. The desired synergy among experts will lead to continuous development of new scientific methods in the fields of preservation, reconstruction and diagnostics of cultural and environmental artworks.

The last edition of the “*art* conference” was held in Buenos Aires (Argentina) in November 2021 and despite the pandemic period it promoted cooperation among different specialists coming from all over the world and strengthened the relationship especially between Italian and Latin-American world of NDT.

The “*art'23 Conference*” will strive to achieve the funding goals by bringing together delegates, conservation scientists and curators, art historians, analytical scientists and architectural researchers. These experts will meet in Brescia: placed in the North of Italy, AIPnD hometown has been nominated “*2023 Italian Capital of Culture*” together with Bergamo.

The technical and scientific program will include both invited and short presentations and poster sessions that will highlight the application of NDT in many important sectors related to cultural heritage.

Conference Topics

Non-destructive Testing in Cultural Heritage

Microanalysis and Conservation of Cultural Heritage

Monitoring of Cultural Heritage

Environmental Control and Protection

Tuesday November 28th

- 09.00 am Registration
- 09.30 am Opening Ceremony
Welcome Address
AIPnD, local and institutional Authorities
- 10.00 am **40 YEARS OF ART'**
G. Nardoni
AIPnD Honorary President - ACADEMIA NDT International
- 10.15 am **THE INNOVATION SOLUTIONS FOR NON-INVASIVE EVALUATION OF THE FINE ART AND THE CULTURE AND HISTORICAL HERITAGE OBJECTS FOR FORGERY DETECTION VIA UNIQUE PATTERNS MATCHING**
R. Maev
University Distinguished Physics Professor, University of Windsor - Canada
- 10.45 am **FACING THE EVIDENCE. CONTROVERSIES AND DEBATES BETWEEN SCIENCE AND ART**
C. Frosinini
Opificio delle Pietre Dure, Advisory Board of the Uffizi Galleries, Florence - Italy
- 11.15 am **IAEA "ACCELERATORS FOR HERITAGE"**
L. Bassel
IAEA, International Atomic Energy Agency - Physics Section/Division of Physical and Chemical Sciences | Department of Nuclear Sciences and Applications
DEVELOPMENT OF A SYLLABUS ON RADIOGRAPHY FOR CULTURAL HERITAGE APPLICATIONS
G. Maghella Seminario
IAEA, International Atomic Energy Agency - Radiochemistry and Radiation Technology Section / Division of Physical and Chemical Sciences | Department of Nuclear Sciences and Applications
- 11.45 am *technical sponsor lecture*
RECENT DEVELOPMENTS IN X-RAY IMAGING APPLIED TO CULTURAL HERITAGE
E. Elia
Gilardoni SPA
- 12.15 pm *lunch*
- I SESSION "NON DESTRUCTIVE TESTING IN CULTURAL HERITAGE - PART 1"**
chairmen: M. Volinia - P. Bison
- 01.15 pm **IDN 1 INFRARED IMAGING ANALYSIS FOR INSITU INSPECTION OF A WORK OF ART: COMBINED SWIR-MWIR METHODS FOR A PAINTING ON WOOD INVESTIGATION**
M. Rippa¹, M. Casciello², P. Mormile¹, B. Balbi³, S. Vitulli⁴, M.R. Vigorito²
¹ Institute of Applied Sciences and Intelligent Systems "E. Caianiello" of CNR, Pozzuoli (Na), Italy
² Department of Humanities, University Suor Orsola Benincasa, Naples, Italy
³ Superintendency Archaeology, Fine Arts and Landscape for the city of Naples, Naples, Italy
⁴ Department of Restoration of the Museum and Real Bosco di Capodimonte, Naples, Italy

- 01.35 pm **IDN 2 GPR INVESTIGATION ON THE SAINT JOHN BAPTISTERY AT FLORENCE, ITALY**
M. Coli¹, A.L. Ciuffreda¹, E. Marchetti¹, A. Napoli¹, B. Agostini², P. Papeschi³, D. Morandi³
1 DST, Department of Earth Sciences, Florence University, Italy
2 OPA, Opera del Duomo di Firenze, Italy
3 IDS GeoRadar, part of Hexagon, Pisa, Italy
- 01.55 pm **IDN 4 THERMAL TEXTURING FOR THE 4D EXPLORATION OF ANCIENT BOOKS**
N. Orazi¹, F. Mercuri¹, S. Paoloni¹, U. Zammit¹, E. D'Annibale², D. Ronchi², G. Caruso², D. Ferdani², E. Pietroni²
1 Università degli Studi di Roma Tor Vergata, Dip. di Ingegneria Industriale
2 CNR – ISPC
- 02.15 pm **IDN 5 DENSITY ESTIMATION OF HISTORICAL WOODEN ELEMENTS THROUGH MEANS OF THERMOGRAPHIC CORRELATION APPROACH**
L. Santoro¹, V. Borghese², S. Santini², R. Sesana¹, F.M. Curà¹, L. Corsaro¹
1 Politecnico di Torino, Dipartimento di Ingegneria Meccanica e Aerospaziale
2 Università degli Studi di Roma Tre, Architecture Department
- 02.35 pm **IDN 11 OBSERVATION OF THE INTERNAL STRUCTURE OF GILDED AND MULTILAYERED PAINTINGS BY USING THZ PULSED TIME DOMAIN IMAGING AND PULSED PHASE THERMOGRAPHY**
K. Fukunaga¹, Y. Ueno²
1 National Institute of Information and Communications Technology
2 C. R. S. Corporation
- 02.55 pm **IDN 45 A METHODOLOGY FOR STRUCTURAL HEALTH MONITORING OF CULTURAL HERITAGE BUILDINGS BY ACOUSTIC EMISSION**
G. Lacidogna
Politecnico di Torino, Department of Structural, Geotechnical and Building Engineering
- 03.15 pm *quick coffee*
- II SESSION “ENVIRONMENTAL CONTROL AND PROTECTION”**
chairmen: S. Ridolfi - K. Fukunaga
- 03.35 pm **IDN 7 MICROCLIMATE MONITORING FOR PRESERVATION CULTURAL HERITAGE AND VISITORS WELL BEING**
P. Aversa¹, C. Innella², G. Marghella³, A. Marzo³, C. Tripepi³
1 ENEA Sustainability - Brindisi
2 ENEA Sustainability - La Trisaia (MT)
3 ENEA Sustainability - Bologna
- 03.55 pm **IDN 8 THE MOISTURE ISSUE AFFECTING THE HISTORICAL BUILDINGS IN THE ALPS REGION**
E. Rosina¹, M. Zala¹, A. Ammendola²
1 Politecnico di Milano, Dipartimento di Architettura, Ingegneria delle Costruzioni e Ambiente Costruito
2 Università degli Studi di Trieste
- 04.15 pm **IDN 36 SOME DATA ABOUT RISING DAMP FROM 30 YEARS OF ANALYSIS IN VENETIAN BUILDINGS**
E. Guolo¹, P. Bison², F. Peron¹
1 Università IUAV di Venezia, Department of Architecture and Arts
2 CNR-ITC

- 04.35 pm **IDN 14 ANALYSING OBJECTS TO PRODUCE MORE SUSTAINABLE CONSERVATION ENVIRONMENTS**
D. Thickett¹, A. Melinis¹, C.S. Cheung², H. Lang²
1 English Heritage Trust
2 Nottingham Trent University
- 04.55 pm **IDN 15 SCIENTIFIC ANALYSES FOR PRESERVATION AND RESTORATION OF XIII – XV CENTURY STAINED GLASSES**
G.A. Maino¹, D. Biagi Maino²
1 The New York Academy of Sciences, USA - Physics
2 University of Bologna – Arts
- 05.15 pm **IDN 26 EVALUATION OF THE POROSITY OF NATURAL AND ARTIFICIAL STONES BY INFRARED THERMOGRAPHY**
P. Bison¹, M. Volinia², G. Ferrarini¹, G. Cadelano³, M. Gomez Serito⁴, M. Giroto², F. Peron⁵, E. Guolo⁵
1 CNR-ITC
2 Politecnico di Torino, Department of Architecture and Design
3 CNR-ISAC
4 Politecnico di Torino, Interuniversity Department of Regional and Urban Studies and Planning
5 Università IUAV di Venezia, Department of Architecture and Arts
- 05.35 am **IDN 46 WHAT MEDICAL IMAGING HAS TO OFFER IN ART CONSERVATION**
C. Hopper
UCL Eastman, London
- 05.55 pm *closing of the day*

Wednesday November 29th

III SESSION "MONITORING OF CULTURAL HERITAGE"

chairmen: D. Foppoli - Z. Koren

- 08.30 am **IDN 9 THE MICROCLIMATES UNBALANCE OF SUBTERRAIN HISTORIC SPACES IN ITALY**
E. Rosina, M. Zala
Department of Architecture, Built environment and Construction engineering, Polytechnic University of Milan, Italy
- 08.50 am **IDN 23 AERIAL THERMOGRAPHY APPLICATIONS FOR ENERGY CONSERVATION AND RETROFIT OF URBAN HERITAGE**
S. Anselmo¹, M. Ferrara², P. Boccardo¹, S.P. Corgnati²
¹ Politecnico di Torino, DIST
² Politecnico di Torino, DENERG
- 09.10 am **IDN 41 NON-DESTRUCTIVE MONITORING AS A METHODOLOGICAL APPROACH FOR THE CONSERVATION OF CULTURAL HERITAGE: 10 YEARS OF STUDIES ON THE CHAPEL OF SANT'ELDRADO**
M. Volinia, M. Girotto
Politecnico di Torino, Department of Architecture and Design, Italy
- 09.30 am **IDN 35 SOME DATA ABOUT TRADITIONAL VENETIAN BUILDING MATERIALS CHARACTERISTICS**
E. Guolo¹, L. Scappin¹, P. Bison², F. Peron¹
¹ University IUAV of Venezia
² CNR-ITC
- 09.50 am **IDN 42 DIGITAL TWIN ENVIRONMENT FOR DATA INTEGRATION OF ICT TECHNOLOGICAL SERVICES IN CULTURAL HERITAGE FIELD**
M. Mongelli¹, S. Pierattini²
¹ ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development
² ENEA National Agency for New Technologies Energy and Economic Sustainable Development, Department of Energy Technologies and Renewable Energy Sources, ICT Division, Florence, Italy
- 10.10 am **IDN 30 PRECETTORIA OF SANT'ANTONIO DI RANVERSO, AN INTEGRATED APPROACH FOR THE STUDY AND MONITORING OF THE JAQUERIAN PAINTING CYCLES. THE PROCESS FOR THE DEFINITION, IMPLEMENTATION AND VERIFICATION OF CONSERVATION STRATEGIES**
A. Bovero¹, MC. Canepa¹, M. Cardinali¹, S. De Blasi¹, M. Girotto², M. Nervo¹, A. Piccirillo¹, M. Volinia²
¹ Fondazione Centro Conservazione e Restauro "La Venaria Reale", Italy
² Politecnico di Torino, Department of Architecture and Design

10.30 am *coffee break*

IV SESSION “NON DESTRUCTIVE TESTING IN CULTURAL HERITAGE - PART 2”

chairmen: M. Coli - E. Rosina

- 11.00 am **IDN 22 ADVANCED SYSTEM FOR FREQUENCY RESOLVED ACOUSTIC IMAGING FOR ONSITE INVESTIGATIONS OF CULTURAL HERITAGE: AN EXAMPLE OF PUBLIC PRIVATE PARTNERSHIP (PPP) OF CENTERS OF EXCELLENCE**
P. Calicchia¹, F. Colao², P. Tassin³, S. Mingarelli³
1 National Research Council Institute of Marine Engineering
2 Italian National Agency for New Technologies, Energy and Sustainable Economic Development FSN-TECFIS-DIM - Diagnostics and Metrology Laboratory
3 METAPROJECTS ETS - Laboratorio Automazione e Controllo
- 11.20 am **IDN3 INFRARED INSPECTION OF WW2 CAMOUFLAGE GERMAN HELMETS**
A. Salerno¹, C. Colombo²
1. University Politecnico di Milano, Energy Dept.
2. University Politecnico di Milano, Mechanical Engineering Dept.
- 11.40 am **IDN 33 ITALY-SWITZERLAND INTERREG PROJECT SHARES METHODOLOGIES FOR KNOWLEDGE OF CULTURAL HERITAGE**
P. Clementi¹, M.C. Giangregorio², V. Caspani³, E. Zanolari⁴, D. Foppoli³
1 Municipality of Tirano, Italy
2 Consultant Architect, PhD Structural Engineering specialized in Cultural Heritage, Milano, Italy
3 Architect, Foppoli Moretta e Associati consulting engineers, Tirano, Italy
4 Consultant Architect, ZARCH sa , Poschiavo, Switzerland
5 Technical Director, Foppoli Moretta e Associati consulting engineers, Tirano, Italy
- 12.00 am **IDN 53 DETECTING MASONRY TYPES IN HISTORICAL BUILDINGS BY INFRARED THERMOGRAPHY AND THE CASE OF MARIA LUGIA’S THEATER IN PIACENZA**
C. Colla
ALMA MATER STUDIORUM - Università di Bologna
- 12.20 pm **IDN 20 NON-INVASIVE AND MICRO-INVASIVE INVESTIGATIONS ON CULTURAL HERITAGE TO SUPPORT THE MODERN TRAINING OF RESTORERS. THE CASE OF THE SCIENTIFIC LABORATORIES OF THE ISTITUTO RESTAURO ROMA**
S. Ridolfi¹, S. Insogna¹, T. Rinaldi², R. Luciani³
1 Istituto Restauro Roma - Scientific Laboratories
2 Sapienza University "Charles Darwin" department of Biology and Biotechnology
3 Istituto Restauro Roma
- 12.40 pm **IDN 21 FROM ANCIENT WIND INSTRUMENTS TO MODERN COPIES TO REDISCOVER ANCIENT SOUNDS**
F. Tansella¹⁻², L. Vigorelli¹⁻²⁻³, G. Ricchiardi⁴, A. Re¹⁻², L. Bonizzoni⁵, S. Grassini⁶, M. Staropoli⁷, A. Lo Giudice¹⁻²
1 Dip. Fisica, Università di Torino, Italy
2 INFN, Sezione di Torino, Italy
3 Dip. Elettronica e Telecomunicazioni, Politecnico di Torino, Italy
4 Dip. Chimica, Università di Torino, Italy
5 Dip. Fisica “Aldo Pontremoli”, Università di Milano, Italy
6 Dip. Scienza Applicata e Tecnologia, Politecnico di Torino, Italy
7 Conservatorio di Musica “Giuseppe Tartini” Trieste, Italy
- 01.00 pm **IDN 38 X-RAY ANALYSIS OF WINGED VICTORY**
M. Lauriola¹, T. Radelet²
1 NDT CUSTOM srl
2 Laboratorio Radelet

01.20 pm *lunch*

02.30 pm *moving to SANTA GIULIA MUSEUM
(on foot, about 15 minutes)*

plenary session at SANTA GIULIA MUSEUM (auditorium)

03.00 pm **welcome address**

AIPnD, local and institutional Authorities

03.15 pm **THE WINGED VICTORY OF BRESCIA. HISTORY, RESEARCH AND ENHANCEMENT OF A GREAT ROMAN BRONZE**

F. Morandini

Brescia Musei Foundation, Brescia - Italy

03.45 pm **THE ROLE OF SCIENTIFIC INVESTIGATION IN THE CONSERVATION PROJECT OF THE WINGED VICTORY OF BRESCIA**

M. Galeotti

Ministero della Cultura, Opificio delle Pietre Dure, Firenze - Italy

04.15 pm **NUCLEAR ANALYSIS OF THE SHROUD OF TURIN**

R.A. Rucker

Shroud Research Network, www.shroudresearch.net

04.45 pm **"DIFFICULT" ARCHIVES FOR "DIFFICULT" HERITAGE CONSERVATION: APPLIED VALUE OF 20TH C. PROJECT DOCUMENTATION. ON THE MATERIALS OF THE WOLFSONIANA GENOA COLLECTION**

A. Vyazemtseva

Assistant Curator, Wolfsoniana - Palazzo Ducale Fondazione per la Cultura, Genoa - Italy

05.15 pm **NOTRE-DAME DE PARIS ET SA RESTAURATION AU XIXE SIÈCLE**

O. Poisson

Architecte, Historien de l'art, Ancien Inspecteur général des Monuments historiques - France

05.45 pm **discussion and closing remarks**

06.00 pm **visit the Brixia Roman Archeological Area**

08.30 pm **social dinner
at Ristorante LA SOSTA**

Thursday November 30th

V SESSION "NON DESTRUCTIVE TESTING IN CULTURAL HERITAGE - PART 3"

chairmen: P. Calicchia - C. Cappabianca

- 08.30 am **IDN 13 DIAGNOSTIC CAMPAIGN TO ASSESS THE SEISMIC VULNERABILITY OF THE CASTELLO SCALIGERO OF SIRMIONE IN ITALY**
D. Foppoli¹, M. Bellanova², S. Zanzani³
1 Foppoli Moretta e Associati srl Strengthening, Restoration and NDT
2 Consultant Architect, Specialized in Cultural Heritage
3 Direzione regionale Musei Lombardia - Former Director, Castello Scaligero di Sirmione
- 08.50 am **IDN 19 GLASS-GEMS EXPLORATION BY MULTIDISCIPLINARY METHODS, ANALYSES AND EXPERIMENTS: THE GEMMAE PROJECT**
D. Di Martino¹, E. Gagetti², G. Marcucci¹, M.P. Riccardi³
1 Università degli Studi di Milano Bicocca - INFN Dipartimento di Fisica «G. Occhialini»
2 Università degli Studi di Milano «La Statale» - Dipartimento di Beni Culturali e Ambientali
3 Università degli Studi di Pavia, Dipartimento di Scienze della Terra e dell'Ambiente - Arvedi Laboratorio sede di Pavia
- 09.10 am **IDN 51 A FAST PROCEDURE FOR THE ASSESSMENT OF HISTORICAL FLOOR TIMBER BEAMS IN PRESENCE OF PICTORIAL DECORATION**
G. Cardani¹, M. Cucchi², C. Tiraboschi²
1 Department of Civil and Environmental Engineering, Politecnico di Milano, Italy
2 Laboratorio Prove Materiali, Politecnico di Milano, Italy
- 09.30 am **IDN 54 THERMAL EVALUATION OF ENVELOPE MATERIALS IN HISTORICAL BUILDINGS THROUGH NON-DESTRUCTIVE THERMOGRAFIC MOISTURE ANALYSIS**
G. Cadelano¹, N. Stecchetti³, P. Bison², A. Bortolin¹, G. Ferrarini², S. Rossi²
1 Institute of Atmospheric Sciences and Climate, National Research Council of Italy
2 Construction Technologies Institute, National Research Council of Italy
3 Department of Physics and Astronomy "Galileo Galilei", University of Padua, Italy
- 09.50 am **IDN 29 THE "HEALTH RECORD" OF THE CHURCH OF SANTA MARIA ASSUNTA IN PONTECURONE: CONTAMINATION BETWEEN HISTORICAL KNOWLEDGE AND NON-DESTRUCTIVE TESTING RESULTS**
G. Beltramo, M. Naretto, M. Volinia
Politecnico di Torino, Department of Architecture and Design
- 10.10 am **IDN 10 STUDY OF THE DYNAMIC BEHAVIOR OF A TIMBER ALTARPIECE USING LASER VIBROMETERS**
E. Saeed¹, M. Simonetta², M. Benedetti², O. Niglio¹, F. Graziotti¹⁻³, G. Giuliani¹⁻²
1 Università di Pavia, DICAr - Department of Civil Engineering and Architecture, Pavia, Italy
2 Julight Srl, Pavia, Italy
3 EUCENTRE - European Centre for Training and Research in Earthquake Engineering, Pavia, Italy
- 10.30 am **IDN 44 GAMMA RADIATION FOR CULTURAL HERITAGE PRESERVATION AT CALLIOPE FACILITY (ENEA CASACCIA R.C., ROME, ITALY)**
I. Di Sarcina¹, A. Cemmi¹, B. D'Orsi², A. Verna¹, J. Scifo¹
1 ENEA, FSN - Fusion and Technology for Nuclear Safety and Security Department
2 Sapienza Università di Roma
- 10.50 am *coffee break*

VI SESSION "MICROANALYSIS AND CONSERVATION OF CULTURAL HERITAGE"

chairmen: D. Di Martino - D. Foppoli

- 11.20 am **IDN 6 A NEW SEMI-QUANTITATIVE XRF METHOD FOR THE FAST NON-DESTRUCTIVE DETERMINATION OF MOLLUSKAN PURPLE COMPONENTS IN WOOLEN DYEINGS**
Z. Koren
Shenkar College - The Edelstein Center, Dept. of Chemical Engineering
- 11.40 am **IDN 24 3D PRINTING OF ARCHITECTURAL ELEMENTS OF CULTURAL HERITAGE USING FIBER-REINFORCED MORTAR: A NOVEL APPROACH FOR REHABILITATION AND CONSERVATION**
D. Ungureanu¹⁻², C. Onuțu¹, N. Țăranu¹⁻², D.A. Ghiga¹
¹ Faculty of Civil Engineering and Building Services, "Gheorghe Asachi" Technical University of Iași, Romania
² The Academy of Romanian Scientists, Bucuresti, Romania
- 12.00 pm **IDN 16 THE FRESCOES OF THE NOVALESA ABBEY COMPLEX, FROM RESTORATION TO PREVENTIVE CONSERVATION THROUGH NON-DESTRUCTIVE DIAGNOSTICS**
M.C. Capua¹, G. Rollo¹, M. Volinia², M. Girotto², M. Di Salvo³, L. Garavoglia³, F. Perossini⁴
¹ Koinè Conservazione Beni Culturali s.c.r.l., Roma-Torino
² Politecnico di Torino, Department of Architecture and Design
³ Città Metropolitana di Torino, Coordinamento Edilizia
⁴ Kpeople Research Foundation, Malta
- 12.20 pm **IDN 25 CONVERTING AN INDUSTRIAL HALL INTO A MUSEUM OF INDUSTRIAL ARCHEOLOGY: APPROACHES AND PLANS FOR THE TRANSFORMATION OF 'THE TOBACCO STOREHOUSE' IN IASI, ROMANIA**
D.A. Ghiga¹⁻², D. Ungureanu Dragoș²⁻³, C. Onuțu², E. Antohie², I.A. Spiridon², N. Iftime³, N. Țăranu²⁻³
¹ State Inspectorate in Constructions
² Faculty of Civil Engineering and Building Services, Gheorghe Asachi Technical University of Iași
³ The Romanian Academy of Scientists
⁴ National Institute of Research and Development for Technical Physics
- 12.40 pm **IDN 18 NON-INVASIVE AND MICRO-INVASIVE INVESTIGATIONS APPLIED TO LARGE PAINTINGS. THE CASE OF THE FRESCOED CEILING BY ANTON RAPHAEL MENGES IN SANT'EUSEBIO IN ROME**
S. Ridolfi¹, R. Porfiri², I. Carocci¹
¹ Ars Mensurae
² Soprintendenza Speciale di Roma, Archeologia, Belle Arti, Paesaggio
- 01.00 pm **IDN 28 CONTACT ANGLE AS NON-DESTRUCTIVE METHOD TO DETERMINATE WETTABILITY CHANGES INDUCED BY SUB-AERIAL BIOFILMS ON BUILT HERITAGE POROUS SUBSTRATES**
L. Berti¹, F. Villa², F. Cappitelli², S. Napoli³, A. Barbieri⁴, L. Toniolo⁴, D. Gulotta⁵, S. Goidanich⁴
¹ University of Rome "La Sapienza", Department of Sciences of Antiquity
² University of Milan, Department of Food, Environmental and Nutritional Sciences
³ CORES4N srl
⁴ Politecnico of Milan, Department of Chemistry, Material and Chemical Engineering "Giulio Natta"
⁵ Getty Conservation Institute - Science Department

01.20 pm *lunch*

VII SESSION “NON DESTRUCTIVE TESTING IN CULTURAL HERITAGE - PART 4”

chairmen: M. Giachino - M. Volinia

- 02.20 pm **IDN 39 COMPARISON OF RADIOGRAPHIC TECHNIQUES FOR CULTURAL HERITAGE**
M. Lauriola
NDT CUSTOM srl
- 02.40 pm **IDN 49 INSPECTION AND DOCUMENTATION OF THE CONDITION OF HISTORIC
TIMBER STRUCTURES**
F. Rinn
Court registered Expert for Tree and Timber Inspection, Heidelberg, Germany
- 03.00 pm **IDN 27 NDT OF FINE RENAISSANCE MANUFACTURES VIA ON SITE X-RAY
DIFFRACTION**
G. Berti
University of Pisa
XRD-Tools s.r.l. born as Academic spinoff
- 03.20 pm **IDN 52 MASONRY DOME SPANDRELS IN AN EARLY 16TH CENTURY CHURCH IN
PIACENZA: NON-DESTRUCTIVE APPROACH BY INSPECTION AND INFRARED
THERMOGRAPHY**
C. Colla
ALMA MATER STUDIORUM - Università di Bologna
- 03.40 pm **IDN 12 ENGINEERING ARCHAEOLOGICAL RESEARCH: SUBMILLIMETRIC X-RAY CT
SCAN OF METAL AND HARD STONE OBJECTS IN ANCIENT EGYPTIAN MUMMIES**
S. Galli¹, L. Limena², C. Rossi¹, M. Carboni³
¹ Politecnico di Milano, Department of Architecture, Built environment and Construction engineering
² Vetorex Engineering Srl
³ Politecnico di Milano, Department of Mechanical engineering
- 04.20 pm **IDN 43 APPLICATION OF VIRTUAL WAVE THERMOGRAPHY FOR THE INSPECTION OF
PAINTINGS**
R. Zito, S. Laureti, M. Ricci
UNICAL, Dip. DIMES
- 04.00 pm **IDN 50 THE POTENTIAL OF THERMAL QUASI-REFLECTOGRAPHY TO ADVANCE THE
NON-DESTRUCTIVE TESTING IMAGE-BASED PROTOCOL IN CULTURAL HERITAGE**
C. Daffara
Università di Verona, Dipartimento di Informatica
- 04.40 pm **IDN 34 HBIM, KNOWLEDGE COORDINATION TOOL FOR THE CONSERVATION OF
THE CHURCH OF SAINT AGATHA**
A. Paneroni², D. Foppoli³, B. Scala¹, M. Andreoli¹
¹ University of Brescia
² Engineer Specialized in Cultural Heritage
³ Foppoli Moretta e Associati srl Strengthening, Restoration and NDT
- 05.00 pm *closing remarks and farewell*

Tuesday November 28th

LOGGIA of BRESCIA

The first day of the conference will end with a visit to the LOGGIA OF BRESCIA, the most outstanding civil monument in town. The visit will allow the participants to take the general knowledge of the beautiful halls of the palace and to reach the attic with an amazing vision of the historical huge wooden structure.



*Visit with limited number of participants,
more information will follow.*

Wednesday November 29th

SANTA GIULIA museum

The second day of the conference will end with a special session at the auditorium of SANTA GIULIA MUSEUM, the most important museum in town. After a couple of very remarkable lectures, all participants will be allowed to visit the BRIXIA ROMAN ARCHEOLOGICAL AREA and to see the famous VITTORIA ALATA, the statue that has become the symbol of Brescia.

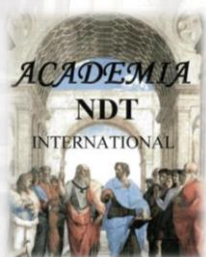


*Session and visit will be open to all registered
participants: more information will follow.*

Thursday November 30th

"THE SHROUD OF TURIN" workshop

This special workshop, planned in the afternoon of the last day of the conference, will be focused on the studies connected to the Shroud of Turin. The workshop is organized by ACADEMIA NDT INTERNATIONAL and will be chaired by Giuseppe Nardoni and Robert A. Rucker.



More information will follow.

CONFERENCE VENUE

CENTRO PASTORALE PAOLO VI

Via Gezio Calini, 30 - 25121 Brescia (Italy)

Phone +39 030.3773511

<https://paolovi.it/en/>

REGISTRATION

Registrations have to be made by e.mail (completed Registration Form + copy of the Identity Card/Passport). Incomplete forms will not be taken into account.

LATE FEES (from August 1st)

AIPnD member	€ 550,00 VAT free
Author	€ 550,00 + VAT (if applicable)
Participant	€ 650,00 + VAT (if applicable)
Under 25	€ 200,00 + VAT (if applicable)
Accompanying person	€ 100,00 + VAT 22%

NB: due to organizational reason and as requested by the Venue, be aware that copy of the Identity Card/Passport must be sent together with the Registration Form

Participants/Delegates Fees include:

- Entrance to sessions
- Congress documents
- Certificate of attendance
- Coffee breaks & Lunches (when scheduled)
- Social Dinner: Wednesday (except for participants registered with the fee "Under 25")

Accompanying people will be allowed to:

- Attend the Social Dinner (Wednesday)

Payment methods

Full payment of fees, accepted in EURO only, is required in order to attend the Conference: payments must be net of all bank charges and must be made by bank-to-bank transfer (wire transfer) to AIPnD. Description of payment: "(Surname) - Registration ART2023". The Secretariat will send details about the amount to be paid to each participant together with bank details to proceed with the payment, together with an invoice that can be considered as a confirmation of the registration. The Registration Form must be sent by e-mail to the Organizing Secretariat AIPnD (art@aipnd.it). Please, be aware that payment by credit card is possible, too: kindly send a request to the Organizational Secretariat (art@aipnd.it) to proceed with the payment.

art'23

14th International Conference on non-destructive investigations and microanalysis for the diagnostics
and conservation of cultural and environmental heritage
Brescia (Italy) - November 28th/30th, 2023

REGISTRATION FORM

Surname Name/s

TAX code (Codice Fiscale)

Place and Date of Birth

AIPnD Member AIPnD non-Member

Company/Institution

Professional Address.....

ZIP code Town Country

Personal Address

ZIP code Town Country

Phone Mobile

E-mail

Please invoice to: company invoice personal invoice

Invoice's heading

VAT number (P.IVA)

Address

ZIP code Town Country

Only for Italian Participants: Codice SDI PEC

I require the following registration (please tick the required item/s):

LATE FEES (from August 1st)

AIPnD member € 550,00 VAT free

Author € 550,00 + VAT (if applicable)

Participant € 650,00 + VAT (if applicable)

Under 25 € 200,00 + VAT (if applicable)

Accompanying person € 100,00 + VAT 22%

NB: due to organizational reason and as requested by the Venue, be aware that copy of the Identity Card/Passport must be sent together with the Registration Form

ONLY FOR ITALIAN PARTICIPANTS

INFORMATIVA PRIVACY - Regolamento UE 2016/679 (GDPR) Con la sottoscrizione della presente scheda di iscrizione si dichiara di aver preso visione e di aver accettato l'informativa privacy presente sul sito www.aipnd.it. La scheda firmata conferisce quindi ad AIPnD l'autorizzazione al trattamento dei dati personali in essa contenuti ai sensi del Regolamento UE 2016/679 (si segnala che durante l'evento in questione verranno scattate fotografie che AIPnD si riserva di poter pubblicare per usi editoriali e divulgativi). Nello specifico, si chiede di esprimere il consenso in merito all'inserimento del proprio nominativo nella lista dei partecipanti all'evento da inviare a soggetti terzi legati allo svolgimento dell'evento (in caso di mancata compilazione, vige il silenzio-assenso): acconsento non acconsento

Date Signature

Please, return to:

AIPnD ETS - Italian Society for Non-Destructive Testing Monitoring Diagnostics
Via Corfù, 48 - 25124 Brescia (I) - Phone +39.030.3739173 - E.mail art@aipnd.it