

LACONA XII

Oral present program

Monday 10th September

Workshop (university Cergy Pontoise)

18:00-21:00 Conference Desk Opening: Welcome Cocktail at C2RMF

Tuesday 11th September

9:00 Registration

9:30 OPENING CEREMONY

10:00 - 11:00

John Asmus, Vadim Parfenov

SPECIAL RELATIVITY: ALBERT EINSTEIN TO LEONARDO DA VINCI

Salvatore Siano

LACONA AND THE LASER CONSERVATION-RESTORATION PRACTICE

11:00-11:30 / Coffee break

11:30-12:50 /Session: Laser removal of unwanted layers A1: Er:YAG

Holly Salmon, Jessica Chloros

**USE OF ND:YAG AND ER:YAG LASER SYSTEMS TO TARGET CLEANING
CHALLENGES ON THE FARNESE SARCOFAGUS**

Tess Graafland, Daniele Ciofini, Salvatore Siano, Hubert Baija

**INVESTIGATING THE POTENTIAL OF LASER TREATMENTS FOR THE REMOVAL OF
BRONZE OVERPAINT ON GILDED PICTURE FRAMES**

Pawita Boonrat

**A LASER CLEANING PROTOCOL FOR THE SAFE REMOVAL OF OXIDIZED BRASS-
BASED OVERPAINT ON OIL-GILDED OBJECTS**

Jeanne Callanan, Sarah Fearn, David Peggie, Marina Sokhan

LASERS AND IVORY: AN ANALYSIS AND CASE STUDY

12:50-14:00 / Lunch

14:00-16:00 / Session Laser removal of unwanted layers A2: Er:YAG

Isabelle Pallot-Frossard, Aline Magnien

HISTORY AND PART OF THE LABORATORIES OF MINISTRY OF CULTURE IN THE DEVELOPMENT OF LASER TECHNIQUES FOR CULTURAL HERITAGE CONSERVATION

Capucine Korenberg, Lucia Pereira Pardo, Duygu Camurcuoglu, Miriam Orsini, Stephanie Vasiliou, Kasia Weglowska, Thomas Kiely

ERBIUM YAG LASER TREATMENT OF BIOLOGICAL GROWTH ON POLYCHROME TERRACOTTA AND LIMESTONE STATUETTES FROM ARCHAIC CYPRUS

Alessia Andreotti, Alessio Ceccarini, Adele DeCruz, Mark Norell , Maria Perla Colombini

IR SENSORS MEASUREMENTS OF TEMPERATURE INCREASE IN THE MID-INFRARED LASER CLEANING

Daniele Ciofini, Mohamed Oujja, Maria Vega Cañamares, Salvatore Siano, Marta Castillejo

213 NM LASER ABLATION AS STANDALONE APPROACH FOR DAMAGE-FREE REMOVAL OF AGED VARNISHES: A SPECTROANALYTICAL EVALUATION ON SOLVENT AND OIL TERPENOID COATINGS

Chiara Chille, Qiang Wu, Charis Theodorakopoulos

TEMPERATURE CHANGES ON PICTURE VARNISHES UPON ER:YAG LASER IRRADIATION

16:00-16:30 / Coffee break

16:30-18:10 / Session Laser removal of unwanted layers B: Nd:YAG

Alexandra Gérard, Jennifer Vatelot

THE CONSERVATION TREATMENT OF THE TEMPTATION OF EVE: THE REDISCOVERY OF A MASTERPIECE

Jamie Morris, Rachel Will, Bartosz Dajnowski, Andrzej Dajnowski

LASER CLEANING TERRA COTTA, A STUDY OF THE EFFICACY OF VARIOUS LASER PARAMETERS ON HISTORIC ARCHITECTURAL SAMPLES

Peter Kopp

LASER CLEANING IN TWO BAROQUE SACRISTIES IN THE SAINT CHARLES CHURCH OF VIENNA

Bartosz Dajnowski, Andrzej Dajnowski

PRACTICAL ASPECTS OF LASER CLEANING ART AND ARCHITECTURE: NEW POSSIBILITIES WITH NEW TECHNOLOGY

Saira Arif

A CASE STUDY OF PULSED ND: YAG LASER INDUCED PHASE SEPARATION FROM METALLIC SURFACES: COMPARISON BETWEEN FUNDAMENTAL AND SECOND HARMONIC WAVELENGTHS

Wednesday 12th September

9:00 - 11:00 / Session: O.C.T.

Haida Liang

RECENT ADVANCES AND FUTURE PROSPECTS OF OPTICAL COHERENCE TOMOGRAPHY FOR HERITAGE SCIENCE

Piotr Targowski, Magdalena Iwanicka, Marcin Sylwestrzak

PRACTICAL CONSERVATION ISSUES TO BE RESOLVED WITH OPTICAL COHERENCE TOMOGRAPHY

Margaret Read, Chi Shing Cheung, Haida Liang, Andrew Meek

MULTI-SPECTRAL OPTICAL COHERENCE TOMOGRAPHY (OCT): A STUDY OF THE MICROSTRUCTURE OF EGYPTIAN FAIENCE

Magdalena Iwanicka, Constantina Vlachou-Mogire, Lucia Pereira-Pardo, Marcin Sylwestrzak, Piotr Targowski

NON-INVASIVE SURVEY OF PRE-RESTORATION CONDITION OF THE CEILING PAINTINGS BY PETER PAUL RUBENS AT THE BANQUETING HOUSE WHITEHALL, LONDON, BY MEANS OF OPTICAL COHERENCE TOMOGRAPHY

Corinna Ludovica Koch Dandolo, Vincent Detalle, Jean-Baptiste Bodiguel, Maxim Lopez, Xueshi Bai, Dominique Martos-Levif, Cinzia Pasquali, Michel Menu

INSIGHTS ON THE OPTICAL MECHANISMS OF VARNISH ALTERATION BY MEANS OF SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY

11:00-11:30 / Coffee break

11:30-12:50 / Session Laser Material Interaction A

Pouli Paraskevi, Evdoxia Dimitroulaki, Olga Kokkinaki, Kristalia Melessanaki, Melissa Daugherty, Jan Van Den Berg Klaas

MONITORING LASER ASSISTED REMOVAL OF AGED VARNISH FROM PAINTINGS WITH LASER-INDUCED FLUORESCENCE SPECTROSCOPY A CRITICAL DISCUSSION ON ITS POTENTIAL

Cristiano Riminesi, Alberto Felici, Jana Striova, Laura Bartoli, Alessandro Zanini

MONITORING OF LASER-INDUCED HEATING DURING CLEANING OF WALL PAINTING SURFACES BY THERMAL INFRARED IMAGING

Abdelrazek Elnaggar, Mohamed A.H Gepreel, Mohab Hossam, Juri Agresti, Daniele Ciofini, Iacopo Osticioli, Hasnaa Ahmed, Atef Mansour, Salvatore Siano

3D MODELLING AND LASER CLEANING OF ISLAMIC COINS: CONSERVATION AND COMMUNITY ENGAGEMENT APPROACHES

Maria Cristina Improta, Stefano Landi, Paola Franca Lorenzi, Anne-Katrin Potthoff, Franca Sorella

THE RESTORATION OF THE PORTALS OF SAN PETRONIO IN BOLOGNA

12:50 - 14:00 / Lunch

14:00-16:00 / Session: Non Linear Optics

Marta Castillejo, Mohamed Oujja, Mikel Sanz

HERE TO HELP: LINEAR AND NONLINEAR OPTICS IN HERITAGE SCIENCE

Alice Dal Fovo, Mohamed Oujja, Mikel Sanz, Alejandro Hernandez Martinez, Maria Vega Cañamares, Marta Castillejo, Raffaella Fontana

MULTI-ANALYTICAL CHARACTERIZATION OF PHTHALOCYANINE ACRYLIC PAINTS THROUGH SPECTROSCOPIC, NON-LINEAR OPTICAL MICROSCOPY AND INTERFEROMETRIC TECHNIQUES

Gaël Latour, Margaux Schmeltz, Laurianne Robinet, Sylvie Thao, Jocelyne Deschaux, Michèle Neveu, Catherine Merlin, Marie-Claire Schanne-Klein

THE POTENTIAL OF NONLINEAR OPTICAL MICROSCOPY TO QUANTIFY NON-INVASIVELY THE DEGRADATION STATE OF HISTORIC PARCHMENTS

Francesco Colao, Martina Romani, Roberta Fantoni,

MULTIVARIATE ANALYSIS OF TIME RESOLVED LIF SPECTRAL DATA

Victor Gonzalez, Thomas Calligaro, Daniela Comelli, Myriam Eveno, Austin Nevin, Laurent Pichon, Gianluca Valentini, Didier Gourier

FROM THE MICRO TO THE MACRO-SCALE: LASER-INDUCED PHOTOLUMINESCENCE FOR THE STUDY OF HISTORICAL PIGMENTS

16:00-16:30 / Coffee break

16:30-18:10 / Session Diagnostic A

Fanny Balbaud-Célérier, Alexandre Semerok, Daniel L'hermite, Hicham Maskrot, Thomas Vercouter

LASER METHODS FOR SURFACE CLEANING, MICRO PROCESSING AND CHARACTERISATION

Xueshi Bai, Apolline Pin, Pascale Richardin, Maxime Lopez, Corinna Koch Dandolo,
Vincent Detalle

**EVALUATION OF COLLAGEN CONTENT IN ANCIENT BONES BY LASER-INDUCED
BREAKDOWN SPECTROSCOPY (LIBS)**

Martina Romani, Salvatore Almaviva, Mariangela Cestelli-Guidi, Francesco Colao, Roberta
Fantoni, Marco Marinelli, Adriana Puiu, Alessandra Pasqualucci, Gianluca Verona-Rinati
**A REFERENCE DATABASE FOR CONTEMPORARY ARTWORKS MATERIALS BY
COMPLEMENTARY SPECTROSCOPIC TECHNIQUES: RAMAN, TG-LIF, FT-IR.**

George Tserevelakis, Alice Dal Fovo, Margarita Tsagkaraki, Ilianna Vrouvaki, Panagiotis
Siozos, Kristalia Melessanaki, Raffaella Fontana, Paraskevi Pouli, Giannis Zacharakis
**LISTENING TO LASER LIGHT INTERACTIONS WITH OBJECTS OF ART: A NOVEL
PHOTOACOUSTIC DIAGNOSIS APPROACH**

Thursday 13th September

9:00 – 11:00 / Session :Diagnosis B

Vivi Tornari, Michalis Andrianakis, Vincent Detalle, Didier Brissaud, Stephanie Duchêne,
Witold Nowik, David Giovannacci, Antonina Ghaban

**PORTABLE DIGITAL HOLOGRAPHIC SPECKLE PATTERN INTERFEROMETRY
SYSTEM AND INFRARED THERMOGRAPHY: A DATA COMBINATION STRATEGY
FOR CULTURAL HERITAGE RESEARCH AND APPLICATIONS**

Kaori Fukunaga, Hilkka Hiilop, Elvira Liiver Holmström, Tarmo Saaret, Andres Uueni
**INTERNAL LAYER EXTRACTION OF A PANEL PAINTING BY USING THZ TIME
DOMAIN IMAGING**

David Giovannacci, Vivi Tornari, Michaelis Andrianakis, Didier Brissaud, Clemantyne
Aubry, John W Bowen

**THE COMBINATION OF NON-INVASIVE TOOLS TO INSPECT THE INTERNAL
STRUCTURE OF PLASTERBOARDS AND WALL PAINTINGS**

Andrés Arciniegas, Loic Martinez, Stéphane Serfaty, Nicolas Wilkie-Chancellor
**LASER VIBROMETRY FOR MECHANICAL CHARACTERIZATION OF COMPOSITE
MATERIALS USED IN ARTWORK REPRODUCTIONS**

Antonina Chaban, Vivi Tornari, Rita Deiana, Michalis Andrianakis, Vincent Detalle, David
Giovannacci

A NON-INVASIVE APPROACH TO THE STUDY OF A MOSAIC MODEL THROUGH COMBINATION OF EXPERIMENTAL STRUCTURAL DIAGNOSTIC TOOLS

11:00-11:30 / Coffee break

11:30-12:50 / Session :Diagnosis C

Roger M. Groves, Andrei G. Anisimov, Vassilis M. Papadakis, Anna Tummers, Arie Wallert, Babette Hartweg, Katja Kleinert

HYPERSPECTRAL IMAGING TO GUIDE TECHNICAL ART ANALYSIS OF FRANS HALS PAINTINGS

Kamel Mouhoubi, Jean-Marc Vallet, Jean-Luc Bodnar, Vincent Detalle

LOCAL ESTIMATION OF THERMAL EFFUSIVITY USING STIMULATED INFRARED THERMOGRAPHY

Fabrice Surma, Luc Rosenbaum, Marion Lecanu, Rebecca Rivry, Richard Duplat

IN SITU LIBS CASE OF STUDY ON POLYCHROME SCULPTURES IN THE SAINT THIEBAULT CHURCH (THANN, FRANCE)

12:50 – 14:00 / Lunch

14:00-16:00 / Session: Posters & sponsors

20:00 GALA DINNER

Friday 14th September

9:00 - 11:00 / Session: Laser Material Interaction B

Alexandre Semerok

LASER CLEANING OF PAINTS AND METALS: PROBLEMS AND POSSIBLE SOLUTIONS

Philippe Bromblet, Alain Colombini, Olivier Grauby, Daniel Ferry, Philippe Parent, Carine Laffon

NEW INSIGHTS ON THE ORIGIN OF YELLOWING PRODUCED BY LASER CLEANING: CHARACTERIZATION OF THE INDUCED PHENOMENON DUE TO THE REMOVAL OF CARBON BLACK (LAMPBLACK) FROM A GYPSUM PLATE

Marie Godet, Véronique Vergès-Belmin, Aurélie Azéma, David Giovannacci, Lise Leroux, Aurélie Tournié, Christine Andraud

**INVESTIGATION OF THE COLOR CONTRASTS OBSERVED ON THE VALOIS PORTAL
OF THE SAINT-DENIS BASILICA (FRANCE)**

Olivier Rolland

LASER CLEANING OF HISTORICAL MONUMENTS IN FRANCE: A DIFFICULT PERIOD

Claudia Daffara, Nicola Gaburro, Vittorio Barra, Giulio Nicola Bono, Anna Brunetto
**3D METROLOGY BASED ON MICRO-SURFACE DATA IN SUPPORT OF CHEMICAL
AND LASER CLEANING OF A CANVAS PAINTING BY TINTORETTO**

11:00-11:30 / Coffee break

11:30-12:50 / Session : Innovative tools A

Maxime Lopez, Laetitia Manucuso, Xueshi Bai, Corinna Ludovica Koch-Dandolo,
Dominique Martos-Levif, Loïc Martinez, Stéphane Serfaty, Michel Menu, Oliver Gobert,
Daniel Farcage, Alexandre Semerok, Vincent Detalle

OCT CONTROL FOR REMOVAL OF UNWANTED MATERIAL ON EASEL PAINTING

Kostas Hatzigiannakis, Silvia Pereira, Eleni Polychronaki, Eirini Bernikola, Kristalia
Melessanaki, Paraskevi Pouli, Joao Mimoso

**RESTORATION OF HISTORIC GLAZED CERAMICS BY MEANS OF LASER
IRRADIATION**

Ioana Cortea, Lucian Ratoiu, Laurentiu Angheluță, Alexandru Chelmuș, Theo Mureșan
**SPECTROSCOPIC AND IMAGING BASED APPROACH FOR THE STUDY OF 18TH
CENTURY REPAINTED TRANSYLVANIAN ICONS**

Dmitrii Pankin, Anastasia Povolotckaia, Nikolai Kurganov, Alexey Kurochkin
**SHIFTED EXCITATION RAMAN DIFFERENCE SPECTROSCOPY FOR THE STUDY
PIGMENTS IN THE BINDING MEDIA MATRIX. STUDY OF ORTHODOX ICON OF ST.
MARK**

12:50 – 14:00 / Lunch

14:00-16:00 / Session: Innovative tools B

GENEVIEVE PINSON

Jean-Marc Vallet, Anthony Pamart, Odile Guillon, Jean-Luc Bodnar, Vincent Detalle, Adeline Manuel, Dominique Martos-Levif, Tommy Messaoudi, Kamel Mouhoubi, Livio De Luca

IMPROVEMENT OF THE CONSERVATION DIAGNOSIS BASED ON THE MERGE OF HETEROGENEOUS DATA AND THE USE OF AN “IN-SITU TOOLBOX”: APPLICATION TO A WALL PAINTING CASE STUDY

Vadim Parfenov

3D LASER SCANNING AND REPLICATION OF SCULPTURAL MONUMENTS IN ST. PETERSBURG

Mathieu Baud, Jonathan Waag, Samuel Guillemin, Barbara Zenou, Jeremy Litolff

THE SINGULAR USE OF THE LASER FOR THE CREATION OF NEW TOOLS ADAPTED TO A TECHNIQUE OF STONE CONSERVATION

POSTERS

A 3 minutes Oral poster session is organized the 13th September for each poster (2 slides max.)

Diagnosis

DIAGNOSTICS OF HISTORICAL PAPER USING LASER ABLATION

Irina Balakhnin, Nikolay Brandt, Andrey Chikishev, Natalia Rebrikova

FLUORESCENCE LIFETIME IMAGING (FLIM) OF GILDED AND POLYCHROME MARBLE OF MOHAMMED ALI'S FAMILY (1805-1952) IN EGYPT

Eman Ahmed, Austin Nevin, Daniela Comelli, Abdel Razek El Naggar

ARCHAEOLOGICAL AND CLIMATIC DATA FROM ELEMENTAL RATIOS USING RAPID ANALYSIS OF SHELL CARBONATE WITH LIBS

Niklas Hausmann, Panos Siozos

THE ROLE OF PULSE DURATION ON THE LASER-INDUCED DISCOLORATION MECHANISMS OF LEAD WHITE PAINT LAYERS

Daniele Ciofini, Juri Agresti, Salvatore Siano

STUDY OF THE ER:YAG LASER CLEANING OF WATER-GILDED "ESTOFADO" DECORATED SURFACES TYPICAL OF FIFTEENTH AND SIXTEENTH CENTURY SPANISH PANEL PAINTINGS

Sofia Pascual, Charis Theodorakopoulos

A REMOTE RAMAN SYSTEM AT STANDOFF DISTANCES FOR WALL PAINTINGS

Yu Li, Shing Cheung Chi, Haida Liang

THE SOUND OF LASER ABLATION PHOTOACOUSTIC MONITORING FOR THE UNDERSTANDING OF IR AND UV LASER CLEANING MECHANISMS

Athanasia Papanikolaou, George Tserevelakis, Kristalia Melessanaki, Giannis Zacharakis, Paraskevi Pouli

PORTABLE LASER ANALYSIS FOR THE IN-SITU CHARACTERIZATION AND MONITORING OF ENVIRONMENTAL DETERIORATION ON STONE MONUMENTS
A CHALLENGE WITHIN HERACLES PROJECT

Paraskevi Pouli, Aggelos Filippidis, Kristalia Melessanaki, Olga Kokkinaki, Panagiotis Siozos, Eleni Kalokairinou, Elissavet Kavoulaki, Elpida Politaki, Aggeliki Psaroudaki , Kostas Hatzigiannakis

POSSIBILITY OF LASER APPLICATION FOR BRONZE DISEASE TREATMENT

Nikolai Kurganov

ON THE COMPARISON BETWEEN HANDHELD AND BENCH-TOP LIBS APPARATUS FOR CULTURAL HERITAGE INVESTIGATIONS

Olga De Pascale, Giorgio S. Senesi

13TH CENTURY FRENCH LEGENDARIUM: OPTICAL AND LASER STUDY

Anastasia Povolotckaia, Dmitrii Pankin, Nikolai Kurganov, Alexey Kurochkin, Vera Podkovyrova, Maria Korogodina

THE FIRST NON-INVASIVE STUDY OF THE RARE POLYCHROMIC BELT BUCKLES OF ANCIENT NOMADS BY VIBRATIONAL SPECTROSCOPY

Nikolai Kurganov, Anastasia Povolotckaia, Dmitrii Pankin, Marina Kilunovskaya, Alexey Kurochkin

ASPECTS RELATED TO THE RESEARCH OF SOME 19TH CENTURY ECCLESIASTICAL TEXTILES

Lacramioara Stratulat, Mariana Gugeanu, Daniela Salajan, Doina Anastasoaei, Nicolae Buzgar, Maria Geba

ULTRASONIC IMAGING OF ANTIQUE STATUE COMBINING LASER VIBROMETRY AND PHOTOGRAMMETRY

Quang Vu, Cédric Payan, Eric Debieu, Marine Bagneris, Anthony Pamart, Fabien Cherblanc, Philippe Bromblet

USING LIBS TO STUDY LITHIUM SILICATE PENETRATION FOR STONE
CONSOLIDATION

Fabrice Surma, Perrine Schloegel, Luc Rosenbaum, Martin Laboure

PROGRESS AND CHALLENGES IN THE ANALYSIS OF MODERN PAINT LAYERS:
NON-INVASIVE CHARACTERIZATION OF COMPLEX MIXTURES BY COMBINED
SPECTROSCOPY TECHNIQUES AND CHEMOMETRICS

Ioana Cortea, Lucian Ratoiu, Monica Dinu, Roxana Radvan

Conservation

USE OF COMBINED LASER PROTOTYPES FOR THE REMOVAL OF SUPERFICIAL
LAYERS SUCH AS CONCRETIONS AND GRAFFITI ON THE CAMPANILE OF THE
WALDENSIAN CHURCH IN FLORENCE

Sarah Fortunée Tabbakh, Stefano Landi

LQS ND:YAG (1064 NM) LASER SHEDS LIGHT ON A DEEPLY SOILED BRAZIL
TUPINAMBÀ FEATHERED CLOAK

Daniele Ciofini, Guia Rossignoli, Isetta Tosini , Giancarlo Lanterna , Salvatore Siano

REMOVAL OF NATURAL RESIN COATINGS FROM MOUNTED SKELETAL
SPECIMENS

Christopher Weeks , Lucie Mascord

RESEARCH AND DEVELOPMENT OF ADVANCED TECHNIQUES OF CLEANING OF
BOOKS AND MANUSCRIPTS

Petra Vávrová, Jitka Neoralová, Magda Součková, Jiří Smolík, Ludmila Mašková,
Radek Fajgar, Věra Jandová, Lucie Mračková, Dana Hřebecká

COMBINED CLEANING TECHNIQUES, LASER AND MICRO SANDBLASTING: THE
ROMANESQUE CAPITALS OF NOTRE DAME DE LA DAURADE

Anne Liégey

CLEANING THE COLUMN-STATUES REMOVED FROM THE ROYAL PORTAL OF
THE CHARTRES CATHEDRAL, FRANCE: AN EXAMPLE OF THE REALITY OF
DECISION-MAKING PROCESS ON SITE FOR CONSERVATORS

Amélie Méthivier, Véronique Vergès-Belmin, Jérémy Hénin

EVALUATION OF LASER AND TRADITIONAL UNCOVERING METHODS ON WALL PAINTINGS: A STUDY OF SURFACE VARIATION OF THE SMALT PIGMENT WITH MICRO-PROFILOMETRY

Francesco M. Wiesner, Giacomo Marchioro, Maria Rosa Lanfranchi, Anna Brunetto, Claudia Daffara

POULTICE, MICRO SANDBLASTING AND LASER CLEANING TESTS AT REIMS CATHEDRAL

Justine Sacleux, Marie-Emmanuelle Meyohas, Véronique Vergès-Belmin, Jérémy Hénin, Stéphanie Duchêne

PRESERVATION OF THE AGE-VALUE OF NATURAL-STONE SURFACES AS AN AESTHETIC AND CONSERVATIONAL “AUSTRIAN HERITAGE MISSION” – CURRENT EXAMPLES OF LASER CLEANING OF MARBLE AND CONGLOMERATE IN SALZBURG AND UPPER AUSTRIA

Johann Lindtner, Josef Weninger

Innovative

CONSERVATION EMERGENCY

Ostrowski Roman

INDIVIDUAL DESTRUCTION OF IRON CORROSION COMPONENTS BY THE LASER. NEW APPROACH TO LASER CLEANING OF METALLIC HERITAGE OBJECTS

Denis Prokuratov , Arsen Davtian , Nikolai Kurganov , Oleg Vereshchagin , Dmitrii Pankin , Anastasia Povolotckaia