



The ninth conference on Lasers in the Conservation of Artworks (LACONA IX)
Wednesday 7th to Saturday 10th September 2011
The British Museum and University College London

Provisional Programme (correct 01 September 2011)

Wednesday 7th September

- Location:** University College London, Darwin Lecture Theatre
- 10.00-13.30** Registration
- 13.30-13.45** Opening remarks
- 13.45-14.10** **Nuclear druids and their “Stonehenge” on the Columbia**
John F. Asmus*
- Session 1** **Laser cleaning of organic surfaces**
Chair: Wolfgang Kautek
- 14.10-14.35** **Analysis of varnish removal on tempera paints by nanosecond and femtosecond UV lasers**
Mohamed Oujja*, Pablo Moreno, Ana García, Carolina Romero, Javier R. Vázquez de Aldana and Marta Castillejo
- 14.35-15.00** **Laser Cleaning of Papyrus – a Comprehensive Conservatorial and Scientific Optimization**
Abdelrazek Elnaggar*, Matija Strlic, Ken Watkins, Austin Nevin, Lorraine Cornish, Chris Collins and Paul Fitzsimons
- 15.00-15.25** **Laser Removal of Consolidants and Protective Coatings from Australian Aboriginal Bark Paintings**
Deb Kane*, Guido Palmer, Alanna Fernandes, Alex Fuerbach and Ben Johnson
- 15.25-15.55** Coffee break, Roberts Building Foyer
- Session 2** **Monitoring of organic surfaces during cleaning or drying**
Chair: Marta Castillejo
- 15.55-16.20** **Application of Optical coherence tomography (OCT) for monitoring of conservation treatment**
Magdalena Iwanicka*, Piotr Targowski, Ewa A. Kwiatkowska and Marcin Sylwestrzak
- 16.20-16.45** **Optical coherence tomography for high-resolution real time varnish ablation monitoring**
Piotr Targowski*, Jan Marczak, Ewa A. Kwiatkowska, Marcin Sylwestrzak and Antoni Sarzyński
- 16.45-17.10** **Film Formation of Artists Acrylic Paints in Tropical Climates**
Nicole Tse*, Elaine Miles and Ann Roberts
- 19.00-21.00** Reception at University College London, Roberts Building Foyer

Thursday 8th September

Location: The British Museum, BP Lecture Theatre

09.00-09.10 Opening remarks

Session 3 Laser cleaning of inorganic or multiple media surfaces

Chair: John F. Asmus

09.10-09.35 Removal of paint and corrosion from cast iron using Nd:YAG laser

Andrzej Dajnowski* and Joseph R. Swider

09.35-10.00 Ultrafast laser cleaning for complex heritage artefacts

Mitsu Kono, Kenneth G. H. Baldwin and Andrei V. Rode*

10.00-10.25 Laser cleaning with high-power ps-laser – first fundamental studies

Jens Hildenhagen* and Klaus Dickmann

10.25-11.15 Poster Session A and Coffee Break

Session 4 Monitoring of laser cleaning of inorganic or multiple media surfaces

Chair: Giorgio Bonsanti

11.15-11.40 Ultrastructural study of the effect of laser cleaning on biological crust and endolithic microbiota

Mariela Speranza*, Mikel Sanz, Mohamed Oujja, María Asunción de los Ríos, Jacek Wierzchos, Pérez-Ortega Sergio, Gomez-Heras Miguel, Mónica Alvarez de Buergo, Rafael Fort, Marta Castillejo and Carmen Ascaso

11.40-12.05 Laser cleaning of excavated fresco fragments; testing and optimization of laser parameters and structural monitoring by means of Digital Holographic Speckle Pattern Interferometry

Zsuzsanna Márton*, Ivett Kisapáti, Paraskevi Pouli, Eirini Bernikola and Vivi Tornari

12.05-12.30 Real-time monitoring of laser cleaning using Digital Holographic Speckle Pattern Interferometry

Irene Bernikola, Kristalia Melessanaki, Paraskevi Pouli*, Kostas Hatzigiannakis and Vivi Tornari

12.30-13.30 Poster Session A and Lunch

Session 5 Laser analysis of inorganic and multiple media surfaces

Chair: Klaus Dickmann

13.30-13.55 Analysis of characteristic features of an artist's technique with the use of high-resolution 3D scan data

Eryk Bunsch and Robert Sitnik*

13.55-14.20 Microstructure of ancient Egyptian faience – a new investigation with optical coherence tomography

Haida Liang*, David Saunders and Margaret Sax

14.20-14.45 Use of laser technology for the conservation project of a 18th century terracotta sculpture by Gaspare Sibilla

Pietro Baraldi, Maria Giulia Barberini, Davide Fodaro, Lorenzo Pio Massimo Martino, Claudia Pelosi* and Livia Sforzini

14.45-15.10 Development of a portable LIBS analyzer for in-situ chemical analysis of archaeological materials underwater

S. Guirado, F.J. Fortes, V. Lazic and J.J. Laserna*

15.10-15.40 Coffee Break

- Session 6** **Lasers for imaging of buildings and sites**
Chair: Véronique Vergès-Belmin
- 15.40-16.05** **3D Documentation of the Structure of Historical Building Material and Long-Term Observation of Environmental Influences and Restorative Measures**
Rainer Drewello and Nils Wetter*
- 16.05-16.30** **The Scottish Ten Project: Scotland's global contribution to 3D digital documentation as a conservation resource**
James Hepher*
- 16.30-16.55** **Combining terrestrial laser scanner and SAR Interferometry for structural monitoring of the archaeological monuments of Palatino Hill and Roman Forum (Rome, Italy)**
Deodato Tapete*, Nicola Casagli, Riccardo Fanti, Chiara Del Ventisette and Roberto Cecchi and Pia Petrangeli
- 18.30-20.30** **Reception at The British Museum, Enlightenment Gallery (Room 1)**

Friday 9th September

- Location:** **The British Museum, BP Lecture Theatre**
- 08.30-10.00** **Private Exhibition View:**
Treasures of Heaven. Saints, relics and devotion in Medieval Europe
The British Museum, Round Reading Room
- 10.00-10.10** **Announcements**
- Session 7** **Laser cleaning of polymers**
Chair: Paraskevi Pouli
- 10.10-10.35** **Laser Cleaning of Polymeric Materials**
S. Arif, V. Ljubic, and W. Kautek*
- 10.35-11.00** **Studies of the affected region in the laser cleaning of polymeric coatings**
Alexandros Selimis, Sotiria Kogou, George J. Tserevelakis, Paraskevi Pouli*, George Filippidis and Costas Fotakis
- 11.00-12.00** **Poster Session A and Coffee Break**
- Session 8** **Lasers for imaging of objects**
Chair: Margaret Abraham
- 12.00-12.25** **The Application of 3D ESPI for the Structural Analysis of Paintings on Canvas**
Christina Young*
- 12.25-12.50** **Advances in the imaging of works of art: the integration of novel instrumentation for Scanning Raman spectroscopy, Fluorescence Lifetime and Hyperspectral Imaging**
Austin Nevin*, Daniela Comelli, Alex Brambilla, Iacopo Osticioli, Gianluca Valentini, Lucia Toniolo and Rinaldo Cubeddu
- 12.50-13.15** **3D THZ Imaging of Heritage Objects**
Gianluca Pastorelli*, Philip Taday and Matija Strlic
- 13.15-14.20** **Poster Session B and Lunch**
- 14.20-17.00** **Workshops at the Natural History Museum, University College London and The British Museum**

Saturday 10th September

Location: The British Museum, BP Lecture Theatre

Session 9 Laser-based analysis of organic materials and paintings

Chair: Johann Nimmrichter

09.15-09.40 Characterisation of historic paper using THz spectroscopy

Tanja Trafela*, Maya Mizuno, Kaori Fukunaga and Matija Strlič

09.40-10.05 Comparison of 16th and 17th century portrait miniatures by Raman microscopy and other techniques

Lucia Burgio*, Anna Cesaratto and Alan Derbyshire

10.05-10.30 Ultrafast Laser Studies of the Characteristics and Timescales of Photodegradation in Red Lake Dyes

Sarah Thompson*, Charles Rohde, Erin Griffey and Cather Simpson

10.30-10.55 LIBS (Laser Induced Breakdown Spectroscopy) for the identification of organic materials in mural paintings

S. Grégoire, M. Boudinet, F. Surma, F. Pelascini, Y. Holl, V. Motto-Ross, S. Duchêne and V. Detalle*

10.55-11.45 Poster Session B and Coffee Break

Session 10 Lasers for imaging of wall paintings

Chair: Kenneth Watkins

11.45-12.10 A study to investigate the potential of hyperspectral fluorescence lidar imaging of biodeteriogens on mural paintings

Alessia Andreotti, Antonio Cecchi, Giovanna Cecchi, Maria Perla Colombini, Costanza Cucci, Oana Cuzman, Cristina Fornacelli, Monica Galeotti, Francesca Gambineri, Ioana Gomoiu, David Lognoli, Dan Mohanu, Lorenzo Palombi, Sara Penoni, Marcello Picollo, Daniela Pinna, Valentina Raimondi* and Piero Tiano

12.10-12.35 A spectroscopic study of ancient Roman *a fresco* fragments from the archaeological site *Casa di Augusto* at Palatino: towards an on-site multidisciplinary project

Chiara Alisi, Kerstin Barup, Maria Paola Bracciale, Alessandra Broggi, Francesco Castagnoli, Giovanna Cecchi, Cinzia Conti, Jenny Hällström, David Lognoli, Lorenzo Palombi, Valentina Raimondi*, Maria Laura Santarelli, Anna Rosa Sprocati and Sune Svanberg

12.35-13.35 Poster Session B and Lunch

Session 11 Lasers for 3D modelling

Chair: Vincent Detalle

13.35-14.00 Quantitative analysis of 3D printing technology as a future tool supporting art conservators

Robert Sitnik*, Jakub Krzesłowski, Grzegorz Mączkowski and Tomasz Gadziński

14.00-14.25 An innovative treatment of a severely damaged bronze, the Thinker by Rodin

Tonny P.C. Beentjes and Rozemarijn Van der Molen*

14.25-14.50 3D colour laser scans in museum artefact documentation: User Acceptance and Best Practice Recommendations

Mona Hess* and Stuart Robson

14.50-15.15 Laser scanning and the restoration of Tullio Lombardo's marble sculpture of *Adam*

Ronald Street*, Patrick Cunningham, Michael Bak and Daniel Fridline

15.15-15.30 Closing Remarks and Poster Prize Announcement

15.30-17.00 Closing Refreshments