



**Under the Patronage of His Highness Sheikh  
Dr. Sultan Bin Mohammad Al-Qasimi  
Member of the Supreme Council and Ruler of Sharjah**

## **Conference Programme**

**The Tenth Conference on  
Lasers in the Conservation of Artworks**

# **LACONA X**

**Tuesday 10<sup>th</sup> - Thursday 12<sup>th</sup> June 2014**

**The American University of Sharjah  
Hall A - Main Building (1)**

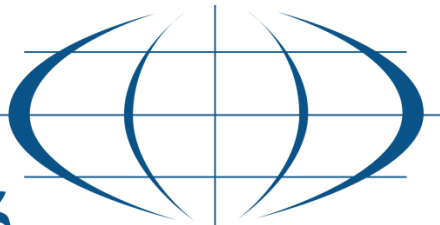
**Sharjah University City,  
Sharjah, United Arab Emirates**



# LACONA X



LASERS IN THE CONSERVATION OF ARTWORKS



ICCOM-ATHAR



FAYOUM  
UNIVERSITY



Arabic Institute for Conservation  
of Historic and Artistic Works



# LACONA X



LASERS IN THE CONSERVATION OF ARTWORKS

## Monday 9 June 2014

17.00 – 18.00	LACONA 10 Registration & Reception (Radisson Blu Hotel - Sharjah)
---------------	---

## Tuesday 10 June 2014

08.30 - 09.30	Registration
---------------	--------------

09.30 - 10.00	Opening remarks
---------------	-----------------

	LACONA 10 Co-Chairs
--	---------------------

### Session A: Laser Cleaning (Chair: )

10.00 - 10.30	<b>Salvatore Siano (Invited speaker):</b> The successful past and the future perspective of Nd:YAG laser treatments in conservation-restoration of artworks
---------------	---

10.30 - 11.20	<b>Adele DeCruz:</b> Er:YAG laser cleaning of works of art: evaluation of the thermal effects
---------------	---

11.20 - 11.40	<b>Farina Bebenek:</b> The effects of different pulse durations on paint layers- Comparative study with picosecond and nanosecond laser pulses
---------------	--

11.40 - 12.00	<b>Mohamed Oujja:</b> Assessment of laser cleaning of artefacts of Spanish historical and artistic heritage
---------------	---

12.00 - 12.20	<b>Andrzej Dajnowski:</b> New trends in conservation, the influence of technology on the public interaction and treatment of an iconic monument: The Alma Mater
---------------	---

12.20 - 13.20	Lunch
---------------	-------

### Session B: Advances in Laser-based Microscopy (Chair: )

13.20 - 13.40	<b>Piotr Targowski:</b> The application of Optical Coherence Tomography (OCT) and X-ray Fluorescence for examination of parchment
---------------	---

13.40 - 14.00	<b>Haida Liang:</b> Ultra-high Resolution Optical Coherence Tomography for Art
---------------	--

14.00 - 14.20	<b>Miriam Simpson:</b> Seeing Red: Using Femtosecond Transient Absorption Spectroscopy to Investigate Photodegradation in Anthraquinone Dyes and Pigments
---------------	---

14.20 - 14.40	<b>Sammy Cheung:</b> Optical Coherence Tomography at 2 microns
---------------	--

14.40 - 15.05	Coffee break (Poster session)
---------------	-------------------------------

15.05 - 15.45	Poster Pitch 1
---------------	----------------

15.45 - 16.00	Coffee break (Poster session)
---------------	-------------------------------

### Session C: Laser Cleaning (Chair:)

16.00 - 16.30	<b>Paraskevi Pouli (Invited speaker):</b> Two wavelength laser cleaning; fine tuning the operative parameters for a various materials and conservation challenges.
---------------	--

16.30 - 16.50	<b>Wolfgang Kautek:</b> Pulse Laser Induced Particle Separation from Polymer Surfaces
---------------	---

16.50 - 17.10	<b>Saira Arif:</b> Laser Cleaning of historical and model papers by 213 nm and 532 nm pulsed laser radiation
---------------	--

17.10 - 17.30	<b>Romina Rezza:</b> Study on laser cleaning of Sculptures-Éponge by Yves Klein
---------------	---

19.00 – 20.00	Reception and Tour of the Museum of Islamic Civilization (Sharjah)
---------------	--



Wednesday 11 June 2014

**Session D: Raman Spectroscopy (Chair:)**

09.00 - 09.30	<b>Marco Leona (Invited Speaker):</b> Surface-enhanced Raman spectroscopy in art and archaeology
09.30 - 09.50	<b>Anna Cesaratto:</b> UV laser ablation SERS: a useful techniques for the identification of organic colorants in cross sections
09.50 - 10.10	<b>Alain Colombini &amp; Philippe Bromblet:</b> Application of Raman imaging spectroscopy in the study of both characterization and degradation of contemporary art objects
10.10 - 10.30	<b>Basem Gehad.</b> Integrated Nondestructive Analysis For The Identification Of The Pigments Used In The Mural Painting From A Third Century C.E. of Roman House, Kharga Oasis-Egypt
10.30 - 11.00	<b>Coffee break (Poster session)</b>
11.00 - 11.45	<b>Poster Pitch 2</b>
11.45 - 12.00	<b>Coffee break (Poster session)</b>

**Session E: Laser Cleaning of Metals (Chair:)**

12.00 - 12.20	<b>Bartosz Andrzej:</b> Creating Laser Patinas on Copper Alloys: Origins of Colors and their Implications.
12.20 - 12.40	<b>John F. Asmus &amp; Vadim Parfenov:</b> Radiation Ablation in the Creation of a Monumental Reliquary to Memorialize the Return of the Hanford Nuclear Facility to the Native Americans
12.40 - 13.00	<b>Thomas Cosnahan:</b> Investigation of Laser Cleaning of PMMA
13.00 - 13.20	<b>Elpida Katopodi-Stamelou:</b> Laser technology for the analysis and conservation of painted metal objects
13.20 - 14.20	<b>Lunch</b>

**Session F : Fluorescence Analysis (Chair:)**

14.20 - 14.40	<b>Valentina Raimondi:</b> A multi-disciplinary study on a late 14th-century Florentine Chapel: integrating information, from laser-based measurements to historical archive data, in a multi-medial tool for cultural heritage conservation
14.40 - 15.00	<b>Valeria Spizzichino:</b> In situ study of contemporary art paintings by Gastone Novelli by scanning LIF
15.00 - 15.20	<b>Austin Nevin:</b> The analysis of 20th Paintings and Painting materials using Fluorescence Lifetime Imaging (FLIM) and Time Resolved Fluorescence Spectroscopy
15.20 - 15.40	<b>Ewelina Miśta:</b> Research on the corrosion character and ornamentation of the metal artifacts from archaeological site Czaszkowo, Poland
15.40 - 16.10	<b>Coffee break (Poster session)</b>

**Session G : Laser Induced Breakdown Spectroscopy and Other Analytical techniques (Chair:)**

16.10 - 16.30	<b>Antonio Sgamellotti:</b> MOLAB® meets Persia A non-invasive study of an Islamic illuminated manuscript.
16.30- 16.50	<b>Vincent Detalle:</b> Pulsed laser: a new way for fresco identification and characterization coupling LIBS and stimulated infrared thermography
16.50 - 17.10	<b>Nehal Aboufotoh:</b> Spectroscopic documentation of historical textile using home made high resolution digital imaging system coupled with spectrometer.
17.10 - 17.30	<b>Jan Marczak &amp; Bartosz Andrzej:</b> Libs and optical microscopy investigations of crowns of pieta from the parish church in Skrzatusz, Poland



Thursday 12<sup>th</sup> June 2014

**Session H: Laser cleaning (Chair:)**

09.00 - 09.20	<b>Véronique Vergès-Belmin:</b> Nd:YAG low Q-switched versus short-free running laser cleaning trials at Chartres cathedral, France
09.20 - 09.40	<b>Susanne Brinkmann:</b> Laser-cleaning of Ancient Egyptian Wall Paintings in the Tomb of Neferhotep TT 49
09.40 - 10.00	<b>Birgit Schmidt:</b> Nanosecond laser cleaning studies on model samples of Central Asian wall paintings
10.00 - 10.20	<b>Sandra Samolik:</b> Investigation on the removal of vandalistic graffiti on mineral supports: comparison of ns laser cleaning compared with traditional chemical and mechanical methods
10.20 - 10.40	<b>Fatmaa El Zahraa Sadat:</b> Comparative Empirical Study for Cleaning Tarnished Metal Threads Using Laser and Ultrasonic Scaler
10.40 - 11.10	<b>Coffee break (Poster session)</b>

**Session I: Spectroscopy and imaging (Chair:)**

11.10 - 11.30	<b>Matija Strlič:</b> Non-destructive assessment of painting canvases using NIR spectrometry
11.30 - 11.50	<b>Cécile De Oliveira:</b> Medium wave ultraviolet light (UVB) as a way to eliminate laser-induced yellowing
11.50 - 12.10	<b>Aurélié Mounier:</b> Hyperspectral imaging and other non-destructive techniques for the study of a collection of mediaeval miniatures
12.10 - 12.30	<b>Tiphaine Bardon:</b> Contrast and readability in terahertz time-domain images of ink inscriptions: A comparative study of model and historical documents
12.30 - 13.30	<b>Lunch</b>

**Session J: Imaging and Beyond (Chair:)**

13.30 - 13.50	<b>Massimiliano Guarneri:</b> ITR technology as general purpose instrument for remote colorimetric and structural diagnosis, cataloguing and fruition
13.50 - 14.10	<b>Ibrahim El-Rifai:</b> The Documentation of Hathor Temple - Serabit El-Khadim
14.10 - 14.30	<b>Gabriel Bilmès &amp; Mercedes Morita:</b> Characterization, restoration and 3D documentation of archaeological metal objects found in Patagonia, Argentina
14.30 - 14.50	<b>Andreas Sarakinos:</b> In-situ recording and displaying full-colour holographic optical clones (OptoClones) of cultural artifacts on loan at the Byzantine and Christian Museum of Athens.
14.50 - 15.10	<b>Mona Hess &amp; Capucine Korenberg:</b> Monitoring the stability of a Byzantine ivory panel using 3D laser scanning
15.10 - 15.30	<b>Closing Remarks : Zaki Aslan &amp; Abdelrazek Elnaggar</b> - <b>Poster Prizes &amp; Announcement of the LACONA 11 Venue</b>
15.30 - 16.00	- <b>Visit to the ICCROM-ATHAR Regional Centre (Sharjah University City)</b>
19.00 - 22.00	<b>Gala Dinner ()</b>

13JUNE 2014

Social Tours (Sharjah, Dubai , Abu Dhabi)

## POSTERS

Poster presentation has always been particularly well suited to material with a visual impact. Posters are displayed prominently throughout the meeting and there are two dedicated poster pitches giving the poster presenters a chance to present their posters to the delegates with a short powerpoint presentation of highlights (**2 mins for up to 3 slides for each author**).

### POSTER PITCH ONE: TUESDAY 10 JUNE 2014 (15.05 pm - 15.45 pm)

Authors	Title
<b>John Asmus &amp; Vadim Parfenov</b>	Radiation ablation for Isis temples at Philae
<b>Maria Geba</b>	Assessment of Gamma irradiation treatment in textiles conservation
<b>Shimaa Saad</b>	Interaction effects of Q- switched fundamental Nd:YAG laser on the black crusts of Nocardia on the surface of historical limestone.
<b>Wolfgang Kautek</b>	Interaction of pulse laser radiation of 532 nm with model coloration layers for medieval stone artefacts
<b>Jessica Chloros</b>	Laser Cleaning at the Isabella Stewart Gardner Museum: 16 Roman Marble Sculptures, 14 Months and 3 Conservators
<b>Antonio Sansonetti</b>	Laser cleaning of bronze sculpture: a field multianalytical techniques evaluation
<b>Simona Gheorghe</b>	Laser cleaning of incised ceramics (1650-1250 B.C.)
<b>Susanne Heimel</b>	Laser cleaning on archaeological metal finds compared to micro sandblasting
<b>Salvatore Siano</b>	Preliminary investigation on combined laser and microwave treatment of stone biodeterioration
<b>Salvatore Siano</b>	Overpaintings removal from easel paintings using LQS Nd:YAG laser: the first validation study
<b>Karoline Halbwachs</b>	The Use of Laser for the Cleaning of two Polychrome Stone Reliefs
<b>Jana Striova</b>	Optical tools evaluating Er:YAG laser cleaning
<b>Cristina Ursescu</b>	The analysis of red pigments from Romanian manuscripts using chemometrics and artificial intelligence on Raman spectra
<b>Mahmoud Anis</b>	The Documentation And Investigation Of Surface Deposits On A Tutankamun's Pottery Jar Using Advanced Imaging Techniques
<b>Alessia Andreotti</b>	The Restoration of a Roman Urn with the Erbium: YAG Laser. Science in the Service of Art.
<b>Corinna Dandolo</b>	Panels inspection behind the gilded finishes through Terahertz Time-Domain Imaging (THz-TDI)
<b>Ashraf Boushra</b>	Study of Cleaning Painted Artworks Surfaces by Laser Comparative with Traditional Methods: Testing and Evaluation



## POSTER PITCH TWO: WEDNESDAY 11 JUNE 2014 (11.00 AM - 11.45 AM)

<b>Hend Mahgoub</b>	Scientific Characterization of Islamic Paper
<b>Nicoleta Vornicu</b>	Raman spectroscopy and X-ray fluorescence in biodegradation study in Cultural
<b>AbdelRahman Medhat</b>	Analysis and deterioration assessment of paint layers: vibrational spectroscopic study
<b>John Asmus &amp; Vadim Parfenov</b>	Seeing Double: Leonardo's Mona Lisa Twin
<b>Mihanovic &amp; Tea Katunaric</b>	Computer Tomography As A Non-Destructive Diagnostic Method In The Field Of Conservation-Restoration
<b>Valentina Raimondi</b>	Fluorescence Lifetime Lidar Imaging Of The Cultural Heritage: Merging High Spectral And Temporal Resolution
<b>Sattar Fazli</b>	The Prospects of Laser Conservation in Pakistan for Art Works- the case study of Ghani Kan's Art works
<b>Wolfgang Kautek</b>	Atomic Emission Stratigraphy by Laser-Induced Plasma Spectroscopy: Quantitative Depth Profiling of Metal Thin Film Systems
<b>Basem Gehad</b>	The Mural Painting Fragments Of Mkt Ra: Multispectral investigation and nondestructive analysis for the authentication of the ancient materials
<b>Ivette Ravelo</b>	Characterization of art pieces of the Egyptian collection of Museo Nacional de Bellas Artes of Cuba by using LIBS.
<b>Zsuzsanna Márton</b>	Holographic evaluation of the structural condition of laser-cleaned model fresco samples
<b>María Morita</b>	Laser Based Methods For Material Characterization, Imaging And 3d Documentation Applied To Heritage Conservation In Argentina
<b>Mohamed Oujja</b>	Late Roman glasses from a graveyard of the Madrid region (Spain): chemical characterization by Laser Induced Breakdown Spectroscopy
<b>Ivette Ravelo</b>	Micro LIBS. Composition of the metallic elements of the standard of the Chorale Society "El Gavilán" of 1893
<b>Salvatore Siano</b>	Optimisation of LIPS elemental depth profiling through 3D examination of the microcrater
<b>Salvatore Siano</b>	Compositional characterizations of Early Renaissance copper alloy masterpieces using portable laser induced plasma spectroscopy and other
<b>Carolina Cardell</b>	Impact of urban atmospheric aerosol on paintings in open-air architectural monuments. Prediction of colour changes and preventive conservation.
<b>Seyed Emami</b>	AFM- and PFM application on the phase transition via partial sintering process in ancient ceramic matrices





# LAONA X



LASERS IN THE CONSERVATION OF ARTWORKS

**AUS** | American University of Sharjah

1	Main Building
2	Engineering Building 1 (EB1)
3	Engineering Building 2 (EB2)
4	Architecture, Art and Design 1 (CAAD1)
5	Architecture, Art and Design 2 (CAAD2)
6	Arts and Sciences: Language Building (LAN)
7	Arts and Sciences: Physics Building
8	Arts and Sciences: Chemistry Building
9	Arts and Sciences: New Academic Building (NAB)
10	Arts and Sciences: Arts Building
11	Business and Management (SBM)
SC	Student Center (SC)
P16	Visitor Parking
P5 - P6	Free Parking
P1 - P4 / P7 - P15 / P17	Pre-paid Parking

AUS Facilities	
📖	Library
🍴	Food Court
🕌	Mosque
🏊	Sports Complex
🏥	Health Center
🏦	Bank
🏠	FSH Faculty/ Staff Housing
👩	WD Women's Dorm
👨	MD Men's Dorm
Men's Dormitory: "a" through "q"	
Women's Dormitory: "a" through "h"	

المرافق العامة بالجامعة	
📖	المكتبة
🍴	قاعة الطعام
🕌	المسجد
🏊	المجمع الرياضي
🏥	المركز الطبي
🏦	البنك
🏠	FSH سكن هيئة التدريس والموظفين
👩	WD سكن الطالبات
👨	MD-W سكن الطلاب
سكن الطالبات: من "أ" إلى "ق"	
سكن الطلاب: من "أ" إلى "هـ"	

المبنى الرئيسي	
1	المبنى الرئيسي
2	مبنى الهندسة 1
3	مبنى الهندسة 2
4	العمارة والفنون والتصميم 1
5	العمارة والفنون والتصميم 2
6	العلوم والآداب: مبنى اللغات
7	العلوم والآداب: مبنى الفيزياء
8	العلوم والآداب: مبنى الكيمياء
9	العلوم والآداب: المبنى الأكاديمي الجديد
10	العلوم والآداب: مبنى الفنون
11	الإدارة والأعمال
SC	المركز الطلابي
مواقف الزوار P16	
مواقف السيارات المجانية P5 - P6	
مواقف السيارات المدفوعة مسبقاً P1 - P4 / P7 - P15 / P17	

**Dubai** ↑

Al Thiqah Club for Handicapped

University City Street **S120**

Al Falah Camp

Al Dhaid Rd **E88**

Sheikh Mohammed Bin Zayed Rd **E311**

Sharjah Airport

**AUS** American University of Sharjah

Inside AUS

- Main Building & Library
- Library
- School of Engineering
- Student Center
- School of Architecture, Art and Design
- School of Arts and Sciences
- School of Business and Management
- Men's Dorm
- Women's Dorm
- Mosque
- Parking Areas

**GPS Coordinates:**  
 latitude: 25.3097° N  
 longitude: 55.4906° E

**Coming from Dubai:**

- 1- Head North on Sheikh Mohammed Bin Zayed Road (E311) towards Ajman/RAK.
- 2- Take University City Road (S120) towards University City.
- 3- Go straight past two roundabouts and through the University City gate.
- 4- Take a left at the clock tower roundabout and proceed straight to AUS.

**Coming from Ajman:**

- 1- Head South on Sheikh Mohammed Bin Zayed Road (E311) towards Dubai.
- 2- Take Al Dhaid Road (E88) east towards Sharjah Airport.
- 3- Take the second right into University City.
- 4- Go through the first gate (University City Gate) and proceed straight to AUS.

**Ajman/RAK** ↓