

# Paraskevi POULI

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**Senior Application Scientist** at Foundation for Research and Technology Hellas, Institute of Electronic Structure and Laser (IESL-FORTH) since 2024/02

<https://www.iesl.forth.gr/en/people/pouli-paraskevi> and <https://phohs.iesl.forth.gr/>

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## Academic Positions

2024/02 – TO DATE

**Senior Application Scientist / IESL-FORTH**

2016/12 – 2024/01

**Principal Application Scientist / IESL-FORTH**

2000/08 – 2016/11

**Research Associate / IESL-FORTH**

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## Research Interests and expertise

- Optimising laser cleaning strategies for diverse materials and conservation challenges
- Understanding & preventing side effects of laser cleaning, such as discoloration (yellowing) associated with IR irradiation of sensitive substrates, and blackening of pigments
- Improving the cleaning process by introducing novel and prototype laser cleaning systems & methodologies
- Adapting & using appropriate monitoring & assessment techniques (e.g. spectral imaging, laser spectroscopy, acoustics etc.) to ensure proper, efficient and safe laser conservation interventions
- Documentation and semantics for data recording, reuse, and integration
- Investigation of machine-learning algorithms to facilitate decision-making in laser cleaning

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## Education

1995/10- 1999/12

**Physics Department / Loughborough University, UK**

PhD thesis: “**Laser cleaning studies on stonework and polychromed surfaces**”, Supervisor: Prof. D.C. Emmony.

The main focus of the research was to investigate laser-matter interactions and implement on-site laser cleaning. The study examined the effects of laser irradiation on polluted limestone and alabaster, as well as the laser-induced discoloration of medieval pigments. Techniques such as OM (Optical Microscopy), XRD (X-Ray Diffraction), XPS (X-Ray Photoelectron Spectroscopy), and reflectance spectroscopy were utilized to compare laser cleaning with established methods and to identify alterations in the color, surface, and chemistry of the pigments. The findings from these studies led to the large-scale application of laser cleaning on the famous Lincoln Medieval Frieze.

1989/10-1995/10

**Physics Department / Aristotle Univ. of Thessaloniki, Greece**

BSc. In Physics. Classification mark "Very Good" &amp; grade point average 7.63/10.

1995/02-06

**Erasmus Exchange Program / Università di Firenze, Italy**

I attended courses on Optics & Applications of Coherent Optics at the Postgraduate School of the National Institute of Optics (CNR-INO) & the multidisciplinary course "La Scienza per la Conservazione dei Beni Culturali" (Science for the conservation of Cultural Heritage) by the Univ. of Florence.

## Academic prizes/awards/distinctions

- Chinese Embassy in Greece "**Outstanding Contribution Award**" for the collaboration of the IESL-FORTH with the Palace Museum, to develop a joint laboratory in Beijing, in celebration of the 50<sup>th</sup> anniversary of the establishment of diplomatic relations between China and Greece (22/9/2022)
- The IIC 2012 Keck Award, Acropolis Museum and IESL-FORTH "[Laser rejuvenation of Caryatids opens to the public at the Acropolis Museum: A link between ancient and modern Greece](#)"
- Scholarship sponsored by Lincoln Cathedral Fabric Fund to support the "Lincoln-Loughborough Romanesque Frieze Laser Research Project" (1998-99)
- A.G. Leventis, Foundation Educational Grant, Academic year 1997/98
- Awards to Women for Graduate Research 1997/98. British Federation of Women Graduates, Kathleen Hall Memorial Fellowship Fund. 1st prize (£ 1000)

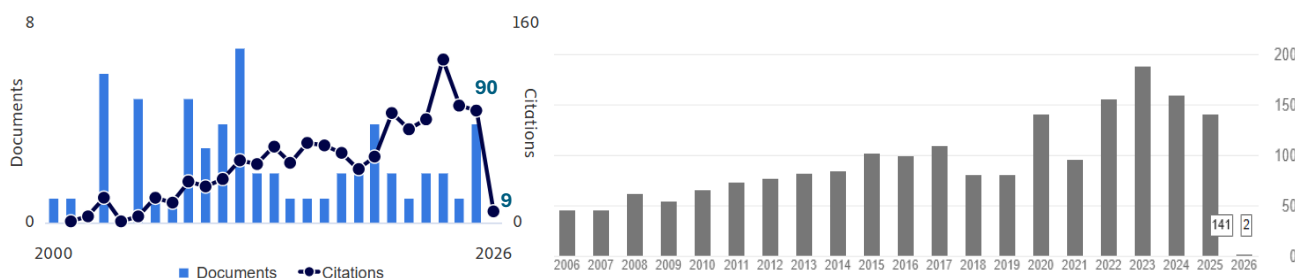
## Academic record and citations metrics

- 45** articles in peer-reviewed scientific journals (4 invited), 2 patents
- 40** articles on international conference proceedings
- Contributor of invited chapters in **8** books
- Scientist-in-charge for **2 EC & 1 national** funded research projects & 12 bilateral collaborations (Total budget: >1,6 M€)
- 15** invited talks at international conferences, workshops and national colloquiums, **2** poster awards

### Citations metrics (as of February 02, 2026)

|  | Publications                          | Citations                  | h-index                              |
|--|---------------------------------------|----------------------------|--------------------------------------|
| <a href="#">Web of Science; H-3448-2011</a>  | <b>63</b> (77 not in Core collection) | <b>1130</b> (956 non-self) | <b>22</b>                            |
| SCOPUS <a href="#">Author ID: 6602717375</a> | <b>61</b>                             | <b>1219</b>                | <b>23</b>                            |
| <a href="#">Google scholar</a>               | <b>129</b>                            | <b>2011</b>                | <b>28</b> and h-10 factor: <b>48</b> |

### Yearly Publication & Citation Records over the past 20 Years (Scopus & Google Scholar)



## Academic Service

- Member of the International scientific committee of the [LACONA](#) (Lasers in the Conservation of Artworks) Conference Series (since 2009)
- Member of the organizing/scientific committee of the following conferences:
  - [COLA 2024- The 17th International Conference on Laser Ablation, Hersonissos, Crete, GR](#)
  - [CIDOC-ICOM 2018 Heraklion, “Provenance of Knowledge”](#).
  - [YOCOCU 2016 Madrid, ES](#)
  - SCinTE Athens 2015, GR
- Co-Editor at the Proceedings of “[Lasers in the Conservation of artworks VIII](#)”, CRC Press, Taylor and Francis Group, London (2011)
- Co-Editor at the Proceedings of “[Lasers in the Conservation of artworks XI](#)”, Wydawnictwo Naukowe Uniwersytetu Mikotaja Kopernika, Torun, Poland (2017), ISBN: 978-83-231-3875-4
- Reviewer in:
  - J. of Cultural Heritage (Elsevier)
  - Optics & Laser Tech (Elsevier)
  - Appl. Sciences (MDPI)
  - Heritage Science (npj & Springer)
  - J. Institute of Conservation
  - J. of Imaging (MDPI)
  - Applied Physics A (Springer)
  - European Physical Journal Plus
  - Heritage (MDPI)
  - Applied Surface Sci. (Elsevier)
  - Studies in Conservation (Taylor & Francis)

## Educational activities

- Thesis Supervision:
  - 11** Undergraduate and
  - 6** Postgraduate
- Coordinator of the [OPTO-CH](#) series of summer courses organized at IESL-FORTH since 2014
- Teaching Assistant, Physics Department, Loughborough University. Responsible for conducting and organising undergraduate laboratory experiments, 1997-1999
- Visiting Lecturer at
  - Interdepartmental Program of Post Graduate Studies “[Protection, Conservation and Restoration of Cultural Monuments](#)”, Course B1 B3.1 “Introduction to diagnostic methods and Lasers”, Faculty of Engineering, Aristotle University of Thessaloniki (AUTH), GR
  - MSc: “[Conservation of Cultural Heritage](#)”, Course mscons09 “Advanced materials & conservation technologies” Dept. of Conservation of Antiquities & Works of Art, Univ. of West Attica, GR

## Undergraduate thesis supervision

|   |           |  |
|---|-----------|--|
| 1 | 2024-2025 | “ <b>Laser ablation studies of materials used to support the paintings’ canvases; wax-resin, rabbit skin glue, and zinc oxide in oil</b> ”, Theofania Xanthouli, Univ. of Crete, Department of Physics, GR, Supervisor: P. Pouli           |
| 2 | 2024      | “ <b>AI-driven acoustic monitoring of laser cleaning interventions</b> ”, Nikolas Raikidis, Univ. of Crete, Department of Physics, GR, Supervisors: P. Pouli, G. Tserevelakis.   |
| 3 | 2022-2024 | “ <b>Laser removal of stone biodeterioration and evaluation of its effectiveness by means of fluorescence spectroscopy (LED-induced fluorescence)</b> ”, Nefeli Stamouli, Univ. of Crete, Department of Physics, GR, Supervisor: P. Pouli. |
| 4 | 2022-2023 | “ <b>Studies to determine the etching depth upon laser cleaning of varnishes using light coherence techniques</b> ”, Anastasia Konstantinou, Univ. of Crete, Department of Materials Science, GR, Supervisors: D. Papazoglou, P. Pouli.    |
| 5 | 2019-2021 | “ <b>Laser-assisted restoration of cracks on glazed ceramics</b> ”, Nefeli Avgerou, Univ. of Crete, Department of Chemistry, GR, Supervisors: D. Anglos, P. Pouli.   |

|    |           |  |
|----|-----------|--|
| 6  | 2018-2020 | <b>“Laser-Induced Fluorescence Spectroscopy to monitor the controlled laser ablation of aged varnish layers from paintings”</b> , Evdoxia Dimitroulaki, Univ. of Crete, Physics department, GR, Supervisor: P. Pouli, D. Anglos  |
| 7  | 2015-2016 | <b>"POLYGNOSIS": Educational Knowledge Web Platform &amp; semantically linked Thesaurus on optical &amp; laser-based techniques for CH analysis &amp; diagnosis</b> , Nik.Platia, Technical Education Institute (TEI) of Athens, Conservation Dept, GR, Supervisors: M. Hatzidaki (TEI), P. Pouli (IESL-FORTH), C. Bekiari (ICS-FORTH) |
| 8  | 2014-2015 | <b>Towards the understanding of the double wavelength laser cleaning in avoiding laser yellowing on stonework</b> , Athanasia Papanikolaou, Univ. of Crete, Physics department, GR, Supervisors: P. Pouli, C. Fotakis  |
| 9  | 2014-2015 | <b>Laser technology for the analysis and conservation of painted metal objects</b> , Elpida Katopodi-Stamelou, Technical Education Institute (TEI) of Athens, Conservation Department, GR, Supervisors: V. Argyropoulos (TEI), P. Pouli (IESL-FORTH)   |
| 10 | 2009-2011 | <b>The role of substrate upon the laser cleaning of artworks; a study on the laser-assisted removal of conservation polymeric materials from different substrates</b> , Sotiria Kogou, Univ. of Crete, Physics department, GR, Supervisors: P. Pouli, C. Fotakis   |
| 11 | 2004      | <b>Laser Cleaning Studies on Wall Paintings</b> , Elpida Dragasi, Technical Education Institute (TEI) of Athens, Conservation Dept, GR, Supervisors: P. Pouli, C. Fotakis, N. Minos  |

### MSc thesis supervision

|   |           |  |
|---|-----------|--|
| 1 | 2023-2025 | <b>Underwater archaeological research in Chania, Crete: photogrammetric recording of 2 under-water sites (shipwrecks) &amp; spectroscopic analysis of underwater metal samples</b><br>Fanis Karambasoglou, Interdepartmental Program of Post Graduate Studies “Protection, Conservation and Restoration of Cultural Monuments”, Faculty of Engineering, Aristotle University of Thessaloniki, GR |
| 2 | 2021-2023 | <b>Laser assisted thinning of aged varnish coatings on painted artworks; real-time monitoring of the laser ablation process &amp; assessment of the treated surfaces</b> , Evdoxia Dimitroulaki, Materials Science & Technology, Univ. of Crete, GR  |
| 3 | 2021-2022 | <b>Parametric study for the development of a methodology regarding the laser assisted removal of biological deposits from stone sculptures</b> , Eleni Kourti, Interdepartmental Program of Post Graduate Studies “Protection, Conservation and Restoration of Cultural Monuments”, Faculty of Engineering, AUTH, GR   |
| 4 | 2017-2018 | <b>A Methodology for on-Site Study and Monitoring of Environmental Deposits in Cultural Heritage Monuments Using Laser-Based Techniques</b> , Eleni Kalokairinou, Interdepartmental Program of Post Graduate Studies “Protection, Conservation and Restoration of Cultural Monuments”, Faculty of Engineering, Aristotle University of Thessaloniki, GR  |
| 5 | 2017-2018 | <b>Development of a Photoacoustic Monitoring system for the study of laser ablation processes upon the removal of encrustation from stonework</b> , Athanasia Papanikolaou, MSc Photonics & Nanoelectronics, Univ. of Crete, Physics department, GR, Supervisors: P. Pouli, G. Tserevelakis  |
| 6 | 2011-2012 | <b>Laser assisted removal of industrial paints from wooden artefacts</b> , Vaya Piteli, Interdepartmental Program of Post Graduate Studies “Protection, Conservation & Restoration of Cultural Monuments”, Faculty of Engineering, AUTH, GR, Supervisors: P. Pouli, C. Fotakis   |

## International MSc and PhD training Internships supervision

|                     |   |
|---------------------|---|
| 11 2025-<br>04 2026 | <b>Ms Marina Polizzi</b> , «Active fibre laser to remove multiple over-layers from polychrome artefacts, with an emphasis on Roman frescoes», doctoral student in the 39th cycle of the PhD course «Technologies for Cultural Heritage (Tech4culture)», University of Torino, Italy |
| 10 2024-<br>03 2025 | <b>Ms Ilaria Pecoreli</b> , «Laser technology applications for the cleaning of paintings», doctoral student in the 39th cycle of the PhD course «Cultural Heritage Science», University of Rome Tor Vergata, Italy  |
| 11-12<br>2024       | <b>Ms Zhang Xueyan</b> , Taihe scholar within the bilateral Greece-China collaboration and the joint laboratory established between FORTH and Palace Museum, Palace Museum, Beijing, China  |
| 07 2018             | <b>Mr Qu Liang</b> , Cica scholar within the bilateral Greece-China collaboration and the joint laboratory established between FORTH and Palace Museum, Palace Museum, Beijing, China   |

## Doctoral Thesis Examination Boards

|         |  |
|---------|--|
| 2023/10 | <b>Conservation of the Granite Cladding of the Sydney Harbour Bridge: A Comparison of Femtosecond and Nanosecond Laser Cleaning Approaches</b> , Julia Brand, Doctoral thesis, Supervisor: Prof. Alison Wain, University of Canberra, Australia                            |
| 2023/01 | <b>Degradation studies on different pigments and binders: new approaches to diagnostics in cultural heritage</b> , Francesca A. Pisu, Doctoral thesis, Supervisor: Prof. Daniele Chiriu, Università di Cagliari, Physics dept. Italy                                       |
| 2012    | <b>Enhanced UV laser cleaning of glass surfaces and dehydroxylation of fused silica – mechanisms and techniques</b> , Alanna Julia FERNANDES, Doctoral thesis, Supervisor: Prof. Deborah Kane, Macquarie University, Australia   |
| 2009    | <b>Laser Modification of Biopolymers/ Procesos de Modificación Láser de Biopolímeros</b> , Solenne Gaspard, Doctoral thesis, Supervisor: prof. Marta Castillejo, Universidad Complutense De Madrid, Departamento de Química Física I, Facultad de Ciencias Químicas, Spain |

## Organisation of summer schools

|                  |  |
|------------------|--|
| 2012 to<br>date  | <b><u>OPTO-CH courses</u> organized at IESL-FORTH, Scientific Coordinator</b><br>Series of summer courses with scope to introduce participants to the applications of advanced laser-based technologies in Heritage Science. Lectures from experts on modern <b>laser diagnostic/ analytical</b> techniques and <b>laser cleaning</b> methodologies are combined with practical demonstrations and laboratory hands-on sessions. Field experiments on-site at Cretan monuments to demonstrate the applicability of the techniques in practice. |
| 2014-2015        | <b>OPTO-CH, Hermitage 2014 &amp; 2015</b> , Scientist-in-charge, 4-week training-by-research program on laser ablation applications on historic metal, ceramic and glass customised for 10 in total conservators from State Hermitage Museum, St Petersburg, RU  |
| June 2012        | <b>“Advanced laser-based techniques in art conservation, diagnostics and analysis”</b><br>A “Charisma” project training course and workshop  |
| February<br>2005 | <b>«Lasers for the Preservation of Cultural Heritage»</b> An educational training course organized by IESL-FORTH in the framework of the EU Marie Curie Early-Stage Training (EST) ATHENA (GA: MEST-CT 2004-504067)  |

## Invited Talks/ Seminars/ Workshops

|    |                  |  |
|----|------------------|--|
| 1  | 2025, Febr 27    | E-RIHS, <a href="#">HS Academy</a> invited lecture “Laser cleaning of Heritage objects and Monuments; tailored solutions for demanding restoration challenges” - <a href="#">Hybrid</a>  |
| 2  | 2024, Oct 31     | “Homer’s Beaches: The Hospitality of the Sea in Culture & social evolution & the Challenges of Today” Event organised by the <a href="#">European Information Centre of the Region of Crete</a> to celebrate European Maritime Days, invited “HERACLES - Actions for the Protection & Resilience of CH against Climate Change: Results & Progress after the Project”   |
| 3  | 2024, Oct14      | European Day of Conservation 2024, Invited “The contribution of laser technology to the study & restoration of monuments and CH objects: examples, practices & challenges” public event organized by the Piraeus Bank Group Cultural Foundation  |
| 4  | 2024, June 27    | PhotonHUB Europe, Invited “Laser cleaning of heritage objects & monuments - <a href="#">Hybrid</a>   |
| 5  | 2024, Feb 02-03  | Protection and promotion of the Greek CH through the implementation of research products resulting from the research funding by the General Secretariat for Research and Innovation, presentation of the CALLOS project (Synergy for the creation of an Open Conservation Laboratory equipped with innovative laser devices & information systems specially designed for the Ephorate of Antiquities of the City of Athens). |
| 6  | 2023, Sept 20    | AILU (Association of Industrial Laser Users) workshop- Laser Cleaning, invited lecture “Laser cleaning of Heritage Objects and Monuments”- <a href="#">Hybrid</a>  |
| 7  | 2023, Sept 27    | Invited lecture in the public event titled "Heritage science: A global driver for sustainability", Beijing   |
| 8  | 2023, Sept 25-27 | Invited lecturer in the Workshop “Laser Technology for Analysis and Conservation of Heritage Objects”, Palace Museum, Beijing, China within the framework of the joint “China-Greece Belt & Road Joint Laboratory on CH Conservation Technology”   |
| 9  | 2022, May 19     | Restoration of decorated surfaces of architecture and easel paintings, Academia di Belle Arti, Aquila, Italy, “Laser-assisted removal of unwanted over-layers from paintings; Principles, Cleaning Methodologies and Monitoring of the Process”, <a href="#">Hybrid</a>  |
| 10 | 2020, May 20     | MSc course “KKV224 Conservation of Organic Materials II”, Institutionen För Kulturvård, Göteborgs Universitet, Sweden, invited lecture “Laser-assisted removal of unwanted over-layers from paintings; Principles, Cleaning Methodologies and Monitoring of the Process”, <a href="#">Hybrid</a>   |
| 11 | 2019, March 18   | HERACLES Winter School 2019, organized in Perugia, Italy “Monitoring and Mapping of Deterioration Products on Cultural Heritage Monuments Using Portable Imaging and Laser Spectroscopy instrumentation”, <a href="#">Hybrid</a>   |
| 12 | 2017, Oct        | Palace Museum, series of invited lectures  |
| 13 | 2017, Feb        | ART – SCIENCE- MUSEUM, series of training seminars organized by the State Hermitage Museum and ITMO, St Petersburg, Ru, invited lecture  |
| 14 | 2016, Oct 6-7    | Laser Cleaning Workshop for Art & Architecture, organized by the University of Pennsylvania Graduate Program in Historic Preservation, USA, invited lecture  |
| 15 | 2016, July       | 1st IPERION-CH Summer Doctoral School, Madrid, Spain, by CSIC (CENIM - CSIC and Instituto de Química Física "Rocasolano"), in collaboration with IPCE (Inst. del Patrimonio Cultural de España), Museo Nacional del Prado & Geomateriales, invited   |



## Projects and Funding

Income from Grants (Euro): approximately 1.684.000 as PI

### EU Projects - Coordination/ Scientist in Charge

|         |  |
|---------|--|
| 2016-19 | Scientist-in-charge for IESL-FORTH in “ <a href="#">HERACLES: HEritage Resilience Against CLimate Events on Site</a> ” (H2020-DRS-11-2015-700395), IESL-FORTH budget: 333.250,00 €   |
| 2004-08 | Scientist-in-charge for IESL-FORTH in “PROMET: Developing new analytical techniques and materials for monitoring and protecting metal artefacts from the Mediterranean region” (FP6-2002-INCO-MPC-1- 509126), IESL-FORTH budget: <b>665.298,00 €</b> |

### National Projects - Coordination/ Scientist in Charge

|              |  |
|--------------|--|
| 2022-2024    | ADELAIS-Agile and precise paintings conservation: A robotic-guiDEd scheme for handling and monitoring Laser-assisted removal of Aged varnishes- Theodore Papazoglou FORTH Synergy Grants 2022, IESL-FORTH budget: 40.000,00 €  |
| 2020-2023    | <a href="#">CALLOS</a> - Conservation of Athens Antiquities with Laser and Lidar Technologies open to Science and Public (MIS- 5056208, NSFR 2013-2020, Open Innovation in Culture), IESL-FORTH budget: 290.489,00 €   |
| 2009-to date | <a href="#">The Acropolis Museum</a> , Greece. « <b>Laser rejuvenation of Caryatids opens to the public at the Acropolis Museum: A link between ancient and modern Greece</b> »  |
| 2015         | Bilateral collaboration with the German Archaeological Institute & the Ephorate of Antiquities in Athens for “ <b>Laser cleaning of Agathon Naiskos at archaeological Museum of Kerameikos</b> ”   |
| 2013-2014    | Bilateral collaboration 25 <sup>th</sup> Ephorate of Prehistoric & Classical Antiquities “ <b>Preliminary tests on the use of lasers for the cleaning of gypsum surfaces from the Knossos Archaeological site</b> ” (Ministry of Culture/NSRF 2007-13)   |
| 2008-2011    | Collaboration with the Committee for the Preservation of the Acropolis Monuments: « <b>Laser cleaning project of the Caryatids’ porch</b> » Acropolis of Athens, Greece, Erechtheion   |
| 2008-2010    | Bilateral collaboration with the Archaeological Museum of Aiani and 30 <sup>th</sup> Ephorate of Prehistoric & Classical Antiquities “ <b>Laser cleaning at the Aiani archaeological Museum</b> ”  |
| 2006-2010    | Collaboration with the Greek Ministry of Culture (A’ EPKA, Organization for the building of the Acropolis Museum, Committee for the Preservation of the Acropolis Monuments-YSMA, etc.) “ <i>Laser cleaning project of the Parthenon, Athena Nike and Erechtheion sculptures currently kept in the Museum of the Athens’ Acropolis</i> ” |
| 2005-07      | Scientist-in-charge for the Greece-Romania Joint Research and Technology Program « <b>The influence of laser irradiation on the organic components of Historic manuscripts</b> » in collaboration with Technical University “Gh. Asachi” Iasi, Romania   |
| 2002-2004    | Scientist-in-charge for the Greek-Italian cooperation in the framework of joint research and technology programs 2001-2003 entitled « <b>Development of optimized laser methodologies for stone cleaning</b> » in collaboration with IFAC-CNR, Florence  |

### Other International Projects and Collaborations

|              |   |
|--------------|---|
| 2016-to date | Bilateral collaboration between IESL-FORTH and the Conservation dept of the PALACE MUSEUM in CHINA in the framework of the Chinese Key R&D Program [国资发科[2020]249号] “Strategic Scientific and Technological Innovation Cooperation” |
|--------------|---|

Key Special Project for 2020 "One Belt One Road" Joint Laboratory Orientation Project: China-Greek Cultural Relics Protection Technology Joint Research, with the aim to organize a common Laser Technology Joint Laboratory on Cultural Heritage

2008-09 Scientist-in-charge for the bilateral collaboration with "Integrated Conservation Resources, Inc" (A. Trienens & G. Bournazian) for the project "St Trophime Cloister, Arles, France; on-site laser cleaning Campaign" funded by the World's Monument Fund

## EU Projects - Participation

2020-24 Participation in the research team of "**IPERION-HS: Integrating Platforms for the European Research Infrastructure ON Heritage Science**" (H2020-INFRAIA-2019-1, under GA No. 871034)

2015- 18 Participation in the research team of "**IPERION-CH: Integrated Platform for the European Research Infrastructure ON Cultural Heritage**" (H2020-INFRAIA-2014-2015-654028)

2009- 14 Participation in the research team of "**CHARISMA: Cultural Heritage Advanced Research Infrastructures: Synergy for a Multidisciplinary Approach to Conservation/ Restoration**" (INFRA-2008-1.1.1 Bottom-up approach-228330)

2004-08 Participation in the scientific team of "**ATHENA- A Scientific Training for High Education Initiatives in Art Conservation**" Marie Curie Host Fellowships – EST (FP6-MEST-CT-2004-504067)

## National Projects - Participation

2017-19 **HELLAS-CH**, "Synergy ELI - LASERLAB Europe, HiPER & **E-RIHS.gr**", (MIS 5002735) Major project on the National Research Infrastructures Roadmap. Co-ordinator: Prof. I Charalambidis (FORTH), Team involvement: P. Pouli, D. Anglos

2017-2019 "**POLITEIA II- Advanced analytical, diagnostic, surveying and documentation technologies in Cultural Heritage II**", "Action for the Strategic Development on the Research and Technological Sector", (NSRF 2014-2020), MIS-5002478

2013-2015 "**POLITEIA- Advanced analytical, diagnostic, surveying and documentation technologies in Cultural Heritage**" "Action for the Strategic Development on the Research and Technological Sector", (NSRF 2007-2013), MIS-448300

2012-14 «**LACUNH- Development of a standard laser technology for cleaning evidence of Cultural and Natural Heritage**», "Archimedes III" funded by the European Social Fund and Greek National Strategic Reference Framework (NSRF), coordinator Prof. G. Panagiaris TEI of Athens Dept. of conservation of antiquities and works of arts

2012-14 «**COMASUCH, Sustainability and Compatibility of Advanced Materials and Technologies for The Protection of Cultural Heritage Monuments: Development of Investigation Criteria & Methodologies**», THALES, funded by the European Social Fund and Greek National Strategic Reference Framework (NSRF), coordinator Prof. A. Moropoulou, NTUA

2005-07 "**MOBILART: Mobile Laser Art Conservation Laboratory**" (GSRT), Community support framework III, Operational Program Competitiveness, Axis 4– Measure 4.5, Support Infrastructures for long-term viability of research, technological growth and demonstration actions, ΟΠΣ99884



2004-07 "**The application of new technologies for the cleaning of archaeological and historical metal objects; investigation of the possibility of applying laser technology and electrolytic methods**" ARCHIMEDES II, European Social Fund and National Resources-



|          |   |
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|          | (EPEAEK II), coordinator Prof. V. Argyropoulos, TEI of Athens Dept. of conservation of antiquities and works of arts  |
| 2003- 06 | Deputy coordinator in “ <b>LASTOR- Lasers for Stonework restoration</b> ” (GSRT), Community support framework III, Operational Program Competitiveness, Axis 4 – Measure 4.5, Culture – Knowledge Intensive Tourism, Code Π14 |
| 2002     | Development of a laser and a methodology for the cleaning of West Parthenon Frieze  |

## TNA Activities

|                           |                           |  |
|---------------------------|---------------------------|--|
| 2024<br>April             | <b>ULF-FORTH-27277</b>    | <b>Diagnose- laser cleaning of daguerreotypes</b> , Diego Quintero, Jana Striova, CNR, Italy<br><a href="https://doi.org/10.1016/j.culher.2025.06.021">📖: https://doi.org/10.1016/j.culher.2025.06.021</a>   |
| 2024<br>March             | <b>IPERION-HS FIX_203</b> | <b>LaCOxPaS</b> “Laser Cleaning of Oxalate patinas on Painting Surfaces (LaCOxPaS)”, Ilaria Pecorelli, Chiara Cardinalli, Grazia de Cesare, Italy  |
| 2024<br>Feb.              | <b>IPERION-HS FIX_150</b> | <b>EgGilWood</b> “Removing dirt from Egyptian gilded wooden artefacts using Laser radiation” Mohamed Moustafa, Egypt   |
| 2023<br>Nov.              | <b>IPERION-HS FIX_146</b> | <b>ByzWall</b> “Laser assisted removal of candles’ soot & biodeterioration from Byzantine wall paintings; investigation of the optimal parameters and assessment of the cleaning result”, Ivi Hadjigeorgiou, Cyprus  |
| 2023<br>Oct.              | <b>IPERION-HS FIX_120</b> | <b>ReGlaze</b> “Restoration of historic ceramic tiles via glaze lacunae re-glazing using lasers”, Lurdes Esteves Brito, Silvia Pereira, Portugal   |
| 2023<br>July              | <b>IPERION-HS FIX_108</b> | <b>LASART</b> “Laser cleaning of gilded and varnished artefacts”, Magda Iwanika, Anna Faron, Poland  |
| 2022<br>June              | <b>IPERION-HS FIX_26</b>  | <b>LaMPaPlas</b> “Laser on Modern Paints and Plastics”, Grazia deCesare, Academia di Belle Arti, Aquila, Italy   |
| 2022<br>May               | <b>IPERION-HS FIX_53</b>  | <b>LASI</b> “Laser-assisted removal of lacquer from silver alloy objects; investigation for optimum parameters and assessment of the result”, Charlotta Bylund-Melin and Stavroula Golfomitsou, Göteborgs Universitet, Sweden  |
| 2017<br>2 weeks           | <b>ULF-FORTH-002342</b>   | “Study of the interactions of laser radiation with vitreous and ceramic surfaces. Potentials on using lasers as restoration tools of historic ceramics (Azulejos)”, Silvia R. Morais Pereira, LNEC, Portugal   |
| 2016<br>3 weeks           | <b>ULF-FORTH-002211</b>   | “Non-linear microscopy for assessing photochemical modifications upon laser removal of varnishes used in paintings”, Mohamed Oujja, SCIC, Spain  |
| Nov.<br>2012,<br>4 weeks  | <b>ULF-FORTH-001880</b>   | “DHSPi testing of laser-cleaned model fresco fragments for differentiating the possible photomechanical effects induced by the laser cleaning”, Ivett Kisapati, Dr. Zs. Márton, University of Pécs, Institute of Physics, Hungary<br><a href="https://doi.org/10.1016/j.ndteint.2014.01.007">📖: https://doi.org/10.1016/j.ndteint.2014.01.007</a>                    |
| March<br>2010,<br>2 weeks | <b>ULF-FORTH-001594</b>   | “Evaluation of structural modifications in laser-cleaned fresco fragments by means of holographic interferometry”, Dr. Zs. Márton, I. Kisapati, University of Pécs, Institute of Physics, Hungary<br><a href="#">📖: Laser cleaning of excavated fresco fragments; testing &amp; optimization of laser parameters &amp; structural monitoring by means of Digital</a> |

|                  |                         |  |
|------------------|-------------------------|--|
|                  |                         | Holographic Speckle Pattern Interferometry, Zs. Márton, I. Kisapáti, P. Pouli, E. Bernikola, V. Tornari, Lasers in the Conservation of Artworks - <a href="#">LACONA IX proceedings</a> , eds D. Saunders, M. Strlic, C. Korenberg, N. Luxford and K. Birkholzer, Archetype publications Ltd, London, 59-66 (2013)   |
| 2008,<br>2 weeks | <b>ULF-FORTH-001360</b> | “Cleaning of tarnishing on silver and silver gilded threads on silk textiles using laser in the UV and VIS range”, Bodil Taarnskov, The National Museum of Denmark   |
| 2006,<br>2 weeks | <b>ULF-FORTH-001296</b> | <p>“Investigating and optimising the laser cleaning of archaeological metal finds” C. Korenberg, British Museum, UK</p> <p>: • “Investigating and optimizing the laser cleaning of corroded iron”, C. Korenberg, A.M. Baldwin, P. Pouli, 285-290 (2008).<br/>• “Investigating the laser cleaning of archaeological copper-alloys using different laser systems”, C. Korenberg, A. Baldwin, P. Pouli, 291-296 (2008)</p> <p>In the Proceedings of LACONA VII, Eds. Castillejo et al., Taylor and Francis group, London</p> |
| 2006<br>2 weeks  | <b>ULF-FORTH-001120</b> | <p>“Laser technology for cleaning and restoring frescoes of the Monumental Cemetery of Pisa (Italy)”, M. P. Colombini, A. Fedi, A. Andreotti, I. Bonaduce, University of Pisa</p> <p>: • <a href="http://dx.doi.org/10.1016/j.apsusc.2008.12.049">http://dx.doi.org/10.1016/j.apsusc.2008.12.049</a><br/>• <a href="http://dx.doi.org/10.1155/2006/39046">http://dx.doi.org/10.1155/2006/39046</a></p>  |

## Laser Cleaning projects

|           |  |
|-----------|--|
| 2010-2021 | <p><b><i>Laser rejuvenation of Caryatids opens to the public at the Acropolis Museum: A link between ancient and modern Greece, Greece</i></b></p> <p>Scientific lead for the pioneering open laser conservation laboratory that operated for over a decade at the Acropolis Museum. This initiative involved the laser-assisted removal of unwanted material from the delicate surfaces of the Acropolis sculptures in Athens. A key highlight was the treatment of Caryatids <b>in their exhibition space</b>. This allowed visitors to see the conservation work, which had previously only happened in restricted labs. The open to the public concept created a symbolic connection between ancient &amp; modern Greece. In recognition of this effort, the Acropolis Museum and IESL-FORTH were awarded the <a href="#">2012 Keck Award by the International Institute for Conservation of Historic &amp; Artistic Works (IIC)</a> for their collaboration</p> |
| 02/ 2015  | <p><b><i>Archaeological Museum of Kerameikos, Athens, Greece</i></b></p> <p>“Laser-assisted removal of surface deposits from Agathon burial monument &amp; other sculptures exhibited at the Archaeological Museum of Kerameikos, the Deutsches Archäologisches Institut and the Ephorate of Antiquities of Athens</p>   |
| 03/ 2009  | <p><b><i>St Trophime Cloister, Arles, France</i></b>, on-site laser cleaning campaign in collaboration with Amanda Thomas Trienens &amp; Glenn Bournazian (Integrated Conservation Resources, Inc)</p>   |
| 2006- 10  | <p><b><i>Acropolis of Athens, Greece, A’ Ephorate of prehistoric and classical antiquities, Greece</i></b> Laser cleaning of the Parthenon, Athena Nike and Erechtheion sculptures</p>   |
| 2008- 11  | <p><b><i>Laser cleaning the ceiling of the Caryatids’ porch at Erechtheion in Acropolis of Athens, Greece</i></b>, Committee for the Preservation of the Acropolis Monuments, Greece</p>   |
| 2008-10   | <p><b><i>Archaeological Museum of Aiani</i></b>. Laser cleaning of surface deposits from the sculptures of Aiani Archaeological Museum, 30th Ephorate of Prehistoric and Classical Antiquities</p>   |
| 2000- 05  | <p><b><i>Acropolis of Athens, Greece, Parthenon</i></b>, Committee for the Preservation of the Acropolis Monuments, «<i>Application of laser technologies for the cleaning of the West Parthenon Frieze surface</i>». The project aimed to:</p> <ul style="list-style-type: none"> <li>• Study and establish the optimal laser parameters for developing a laser cleaning methodology tailored to the needs of the West Parthenon Frieze (2000-2002).</li> <li>• Develop a prototype Nd:YAG laser system to conduct on-site experiments (2002-2003) and train conservators (2003).</li> <li>• Provide scientific &amp; technical support for the entire laser cleaning project (2000 - 2005).</li> </ul>   |
| 2-3/ 2001 | <p><b><i>Ancient Messene Excavation, Peloponnese, Greece</i></b></p> <p>Scientific and technical consultancy of the first in-situ laser cleaning project in Greece, the marble statue of Hermes. In Collaboration with “Lithou Sintirissis”</p>  |
| 2-7/ 1997 | <p><b><i>Lincoln-Loughborough Romanesque Frieze Laser Research, Lincoln Cathedral, UK</i></b></p> <p>The project involved researching in collaboration with the Works Dept. of Lincoln Cathedral, focusing on the application of laser cleaning on the Romanesque frieze. The main objectives were to enhance knowledge in the field, including analyzing laser-cleaned surfaces, comparing lasers with conventional methods, investigating the feasibility of on-site application, preserving polychromy, and implementing health and safety measures.</p>  |
| 11/96     | <p><b><i>St. Mary’s Parish Church, Nottingham, UK</i></b></p> <p>Laser cleaning trials on the internal decorative alabaster sculptures. Collaboration with a private conservation company aiming at practical investigation of the laser cleaning technique and comparison with conventional cleaning methods.</p>   |

## Participation in Conferences

8-12 Sept. 2025

**Stone 2025, 15th International Congress on the Deterioration & Conservation of Stone/ Paris, France**

ORAL: AI-Driven Acoustic Monitoring of Laser Cleaning Interventions on Stonework, P. Pouli

Posters:

1. The CALLOS Project: Integrating Holistic Approaches in the Conservation of Athens Antiquities through LASER and LIDAR, Th. Antonopoulou, E. Ampatzoglou, M. Athanasiadou, S. Korosis, M. Pavlou, S. Papida, K. Melessanaki, Ch. Bekiari, Th. Anagnos, S. Dellis, G. Georgousis, P. Pouli
2. Assessing Laser-Assisted Removal of Epilithic Biological Attack from Stone by Means of LED-IF, M. Pavlou, M. Athanasiadou, S. Korosis, K. Melessanaki, V. Piñon, A. Tsigri, P. Pouli
3. Enhancing Cultural Heritage Conservation with Digital Tools: The CALLOS Documentation System and a Case Study of a Marble Part from Athens Acropolis, M. Athanasiadou, M. Pavlou, E. Ampatzoglou, S. Papida, K. Melessanaki, D. Angelakis, L. Charami, Ch. Bekiari, P. Pouli

29 SEPT.- 4 OCT. 2024

**COLA 2024, 17th International Conference on Laser Ablation/ Hersonissos, Crete, GR**

ORAL: AI-driven acoustic monitoring of laser cleaning interventions, A.N. Raikidis, G. D. Barmparis, K. Melessanaki, G. Tserevelakis, G.P. Tsironis and P. Pouli

18-19 NOV. 2022

**China-Europe Forum on Conservation Science and Technology for Cultural Heritage- 2022 Seminar: Conservation for Museum Collections / Beijing, China- Hybrid**

ORAL: Enlightening heritage objects and monuments with laser light; analysis, diagnosis and conservation, P. Pouli

12-16 Sept. 2022

**LACONA 13- 13th International Conference on Lasers in the Conservation of Artworks / Florence, Italy**

Posters:

1. "Methodology development for the successful removal of coexisting biofilms and black crusts on archaeological stonework using the 2wavelength laser cleaning approach", E. Kourti, A. Giakoumaki, K. Melessanaki, P. Pouli (**3rd BEST POSTER AWARD**)
2. "Laser-assisted removal of lacquer from silver alloy objects; investigation for optimum parameters and assessment of the result", Ch. Bylund-Melin, S. Golfomitsou, E. Dimitroulaki, K. Melessanaki, P. Pouli
3. "Heritage Annotator: A Tool for Documenting, Browsing and Exploring Culture Heritage Data", Petrakis K., Paterakis M., Angelakis D., Melessanaki K., Hatzigiannakis K., Giakoumaki A., Philippidis A., Siozos P., Sotiropoulou S. Pouli P., Bekiari C.
4. "Laser irradiation of modern paints and plastics: Research of the threshold limits of F with different lasers" G. De Cesare, E. Dimitroulaki, E. Kourti, K. Melessanaki, P. Pouli

Other presentations:

1. "Photoacoustic monitoring of UV laser ablation of aged varnish coatings on Heritage objects", G. J. Tserevelakis, K. Melessanaki, G. Zacharakis, P. Pouli

2. “Development of a hybrid portable instrument performing LED-Induced Fluorescence, LIBS and Diffuse Reflectance for an integrated study of varied surface layers/deposits on monuments”, A. Giakoumaki, V. Piñon, K. Hatzigiannakis, M. Andrianakis, K. Melessanaki, P. Pouli and D. Anglos.

7 July 2022

**SmartEye, Colloquium on the use of new technologies in the dissemination of archaeological information/ Aristotle Univ. Of Thessaloniki-Hybrid**

Other presentations: “**CALLOS PROJECT**: Ψηφιακή τεκμηρίωση και διάχυση στο ευρύ κοινό δεδομένων συντήρησης αρχαιοτήτων και έργων τέχνης”, Αμπατζιόγλου Ε., Αυλωνίτου Λ., Κυροπούλου Δ., Ξηραδάκη Π., Τότου Γ., Ανάγνος Θ., Δελλής Σ., Παπαδόπουλος Ο., Πετράκης Κ., Αγγελάκης Δ., Χαραμή Λ., Γιακουμάκη Α., Μελεσανάκη Κ., Πουλή Π.

21-22 Dec. 2021

**Launching Ceremony of Joint Laboratory Construction & Opening Ceremony of China-Greece Belt and Road Joint Laboratory on Cultural Heritage Conservation Technology / China-Hybrid**

ORAL: “Laser cleaning principles and challenges”, P. Pouli

20-21 Dec. 2021

**Digital Unsealing of the Holy Islands / Cyprus- hybrid**

Ecclesiastical cultural wealth, digital mapping methodologies and optimizations (Dissemination of innovative achievements of the INTERREG V-A project, Greece-Cyprus 2014-2020)

ORAL: “Non-invasive optical and spectroscopic laser methods for chemical analysis and stratified study of paintings and murals”, P. Pouli

13-15 Dec. 2021

**TMM-CH 2021, 2nd Int. Conference on transdisciplinary multispectral modelling and cooperation for the preservation of cultural heritage / Athens, Greece- hybrid**

ORAL: “Opening laser laboratories physically and digitally to the public; challenges and prospects”, P. Pouli, D. Anglos, Ch. Bekiari, C. Vasiliadis

ORAL: “OPTO-CH summer courses on laser analysis, diagnosis and conservation of Heritage objects and Monuments; content, experiences and future prospects”, P. Pouli, K. Melessanaki, D. Anglos, A. de Tagle

Other presentations: “A multi- and interdisciplinary methodological approach for monitoring Cultural Heritage Built Assets: the HERACLES experience”, A. Siatou, G. Alexandrakis, P. Pouli, A. Curulli, E. Kavoulaki, Sn. Knezic, G. Padeletti

20-23 Sept 2021

**12th International Conference on Instrumental Analysis Modern Trends and Applications/ Thessaloniki, Greece- Hybrid**

Poster: Development of a portable LED-IF instrument for the characterisation of biodeterioration on monuments, A. Giakoumaki, V. Piñon, K. Melessanaki, K. Hatzigiannakis, P. Pouli, and D. Anglos

14-15 May 2021

**Conservators in a Digital Environment, Colloquium organized by the Greek Association of Professional Conservators of Antiquities and Works of art / Athens, Greece- Hybrid**

Other presentations: “DIAGNOSIS - POLYGNOSIS: Standards for documentation of analytical procedures and tools for digital management of research data with laser techniques in monuments and cultural heritage projects”, D. Aggelakis, E. Paterakis, K. Petrakis, Ch Bekiari, S. Sotiropoulou, P. Pouli, K. Melessanaki, K. Hatzigiannakis, P. Siozos

9-12 Oct. 2019

**7th Symposium of Archaeometry of the Hellenic Archaeometry Society, Archaeology – Archaeometry 30 Years Later / Athens, Greece**

Other presentations: IPERION-CH.gr: Innovative methods, techniques and tools with applications in the analysis, diagnosis, documentation, study, protection and promotion of archaeological objects, works of art, historical monuments and archaeological sites. D. Anglos, P. Pouli, S. Sotiropoulou

Oct. 2018

**TMM-CH 2018, Athens, Greece, 1st Int. Conference on Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage / Athens, Greece**

ORAL: “Monitoring and mapping of deterioration products on CULTURAL Heritage monuments using imaging and laser spectroscopy”, P. Pouli, K. Hatzigiannakis, K. Melessanaki, A. Philippidis, O. Kokkinaki, E. Kalokairinou, P. Siozos, E. Politaki, A. Psaroudaki, A. Dokoumetzidis, E. Katsaveli, E. Kavoulaki, V. Sithiakaki.

Sept. 2018

**LACONA 12- 12th International Conference on Lasers in the Conservation of Artworks / Paris, France**

ORAL: “Restoration of Historic Glazed Ceramics by Means of Laser Irradiation”, P. Pouli, K. Hatzigiannakis, S. Pereira, E. Polychronaki, E. Bernikola, K. Melessanaki, J. Mimoso.

Other presentations:

1. “Monitoring laser-assisted removal of aged varnish from paintings with laser-induced fluorescence spectroscopy a critical discussion on its potential” E. Dimitroulaki, P. Pouli, O. Kokkinaki, K. Melessanaki, M. Daugherty, K.J. vanden Berg
2. “Listening to Laser Light Interactions with Objects of Art: a Novel Photoacoustic Diagnosis Approach”, G. Tserevelakis, A. Dal Fovo, M. Tsagkaraki, I. Vrouvaki, P. Siozos, K. Melessanaki, R. Fontana, P. Pouli, G. Zacharakis

Posters:

1. “The Sound of Laser Ablation Photoacoustic Monitoring for the Understanding of IR and UV Laser Cleaning Mechanisms” A. Papanikolaou, G. Tserevelakis, K. Melessanaki, G. Zacharakis, P. Pouli
2. “Portable Laser Analysis for the in-Situ Characterization and Monitoring of Environmental Deterioration on Stone Monuments; a Challenge Within Heracles Project”, P. Pouli, A. Filippidis, K. Melessanaki, O. Kokkinaki, P. Siozos, E. Kalokairinou, E. Kavoulaki, E. Politaki, A. Psaroudaki, K. Hatzigiannakis.

FEBR. 2017

**ART – SCIENCE- MUSEUM / series of seminars organized by the State Hermitage Museum and ITMO, St Petersburg, Russia**

INVITED TALK: *Enlightening the glory of Cultural Heritage objects and monuments; laser analysis, diagnosis and conservation*

Sept. 2016

**LACONA 11, 11th International Conference on Lasers in the Conservation of Artworks/ Cracow, Poland**

ORAL: “Building comprehensive management systems for handling and disseminating information recorded upon laser analysis, diagnosis and conservation, P. Pouli, D. Anglos, M. Doerr, Ch. Bekiari.

Other presentations:

1. “Non-linear microscopies for the assessment of photochemical modifications upon laser removal of varnishes used in paintings”, M. Castillejo, M. Oujja, S. Psilodimitrakopoulos, E. Carrasco, G. Filippidis, A. Selimis, A. Philippidis, M. Sanz, P. Pouli.
2. “Towards the understanding of the two-wavelength laser cleaning in avoiding yellowing on stonework”, A. Papanikolaou, K. Melessanaki, A. Philippidis, P. Siozos, K. Hatzigiannakis, P. Pouli



3. “Analytical studies to investigate the safeguarding of the original surfaces upon laser cleaning interventions at the Athens Acropolis monuments” G. Frantzi, K. Frantzikinaki, A. Panou, E. Papakonstantinou, A. Maridaki, P. Pouli, C. Fotakis

June 2016

**Polymer and Organic Chemistry Conference 2016, Int. Conference organized by the Chemistry dept., Univ. of Crete / Crete, Greece**

ORAL: Laser-assisted removal of aged and/or deteriorated polymeric over-layers from paintings; recent research, practical issues and prospects, P. Pouli, K. Melessanaki, A. Selimis

Poster: Laser conservation of contemporary art; removal of retouching layers and stains from modern paintings and plastic supports, K. Melessanaki, P. Pouli, G. de Cesare

Nov 2015

**SCinTE - Science in Technology 2015, Int. Conference organized by the TEI of Athens / Athens –Greece**

ORAL: Development of a standard laser technology for cleaning evidence of proteinaceous Cultural and Natural Heritage, A. Papanikolaou, K. Melessanaki, A. Alexandropoulou, K. Giannaras, A. Karambotsos, E. Karantoni, E. Malea, S. Rapti, N.A. Stefanis, Y. Facorellis, S. Boyatzis, P. Pouli and G. Panagiaris

May 2015

**Conservation of cultural Heritage, challenges and Reviews, Int. Conference organized by the TEI of Athens (Conservation dept.) and the Ministry of Culture (Directorate of Conservation)/ Athens, Greece**

ORAL INVITED: Laser cleaning pollution crusts from the Athens Acropolis sculptures and monuments; principles of operation and development of methodology.

Dec 2014

**Conservators at Risk, Athens, Colloquium organized by the Greek Association of Professional Conservators of Antiquities and Works of art / Athens, Greece**

ORAL INVITED: “Laser radiation for the analysis and conservation of artworks and Cultural Heritage Monuments; Safety and good practice guide/ Η ακτινοβολία λέιζερ στη μελέτη & συντήρηση έργων τέχνης & μνημείων πολιτισμικής κληρονομιάς Ασφάλεια και ορθή χρήση”, P. Pouli

June 2014

**LACONA X, 10th International Conference on Lasers in the Conservation of Artworks / Sharjah, UAE**

ORAL INVITED: “Two wavelength laser cleaning; fine tuning the operative parameters for various materials and conservation challenges”, P. Pouli

Posters:

1. Non-linear imaging microscopy modalities as innovative diagnostic tools for Cultural Heritage studies, G. Filippidis, M. Mari, L. Kelegkouri, K. Melessanaki, P. Pouli, C. Fotakis
2. “Laser assisted removal of dark cement crusts from the mineral gypsum (selenite) architectural elements from the peripheral monuments of the archaeological site of Knossos”, G. Grammatikakis, K. Demadis, K. Melessanaki, P. Pouli.
3. “Laser technology for the analysis and conservation of painted metal objects”, E. Katopodi, V. Argyropoulos, M. Florou, K. Melessanaki, A. Filippidis, V. Papadakis, P. Siozos, P. Pouli.
4. “Holographic evaluation of the structural condition of laser-cleaned model fresco samples”, Zs. Márton, I. Kisapáti, V. Tornari, E. Bernikola, K. Melessanaki, E. Tsiranidou, K. Hatzigiannakis, P. Pouli.

June 2013, 25-26

**Workshop “New techniques for the non-invasive investigation of the surface and sub-surface structure of heritage objects”, Nicolaus Copernicus University / Toruń, Poland**

**ORAL INVITED:** *Laser tools in cultural heritage science and conservation; non-invasive analysis and management of cleaning interventions.*

June 2013, 27-28

**Charisma Training on application of Optical Coherence Tomography (OCT) to structural analysis, Nicolaus Copernicus University / Toruń, Poland**

**ORAL INVITED:** Laser ablation monitoring with OCT, P. Pouli, K. Melessanaki, M. Iwanicka, Ł. Ćwikliński, P. Targowski

May 2013

**6th Symposium of the Hellenic Society for Archaeometry / Athens, Greece**

**ORAL:** Laser technology for diagnosis, analysis and conservation of Cultural Heritage objects and monuments: Recent advances and forthcoming challenges P. Pouli, K. Melessanaki, V. Tornari, D. Anglos, C. Fotakis.

Sept. 2011

**LACONA IX, 9th International Conference on Lasers in the Conservation of Artworks / London, UK**

**ORAL:**

1. “Studies of the affected region in the laser cleaning of polymeric coatings”, P. Pouli, A. Selimis, S. Kogou, G. J. Tserevelakis, G. Filippidis and C. Fotakis
2. “Real-time monitoring of laser cleaning using Digital Holographic Speckle Pattern Interferometry” E. Bernikola, K. Melessanaki, P. Pouli, K. Hatzigiannakis and V. Tornari

**Other presentations:**

1. “Wavelength and pulse duration effects on laser induced changes on raw pigments used in painting practices”, M. Oujja, P. Moreno, M. Sanz, E. Rebollar, S. Kogou, P. Pouli and M. Castillejo
2. “Laser cleaning of excavated fresco fragments; testing and optimization of laser parameters and structural monitoring by means of Digital Holographic Speckle Pattern Interferometry”, Zs. Márton, I. Kisapáti, P. Pouli, E. Bernikola, V. Tornari

**Posters:**

1. “Laser Removal of hard burial encrustation from ceramic shreds using Er:YAG and Nd:YAG laser irradiation”, S. Kogou, S. Chlouveraki, P. Pouli and C. Fotakis
2. “A high spatial and spectral resolution imaging system for the analysis of Cultural Heritage objects”, V. Papadakis, I. Orphanos, S. Kogou, K. Melessanaki, P. Pouli

Nov 26-28, 2010

**Works of Art and Conservation Today 2010/ Thessaloniki, Greece**

**ORAL INVITED:** Laser cleaning of Cultural Heritage objects and Monuments; from laboratory investigations to real case applications

Sept. 2009

**LACONA VIII, 8th International Conference on Lasers in the Conservation of Artworks / Sibiu, Romania**

**ORAL:** “The Role of the Substrate in the Laser Cleaning Process; A Study on the Laser Assisted Removal of Polymeric Consolidation Materials from Various Substrates”, P. Pouli, S. Kogou, A. Selimis, S. Georgiou, C. Fotakis

**Other presentations:**

1. “Analysis of wavelength and pulse duration laser effects on tempera paints”, M. Oujja, S. Perez, P. Pouli, C. Fotakis, M. Castillejo
2. “Laser cleaning studies for the removal of sulphide from tarnished silver and gilt silver threads in silk textiles”, B. Taarnskov, P. Pouli, J. Bredal-Jørgensen
3. “Laser assisted removal of lining glues from easel paintings”, A. Chavalier-Menu, K. Melessanaki, E. Bernikola, V. Tornari, P. Pouli, C. Fotakis
4. “Laser cleaning of burial encrustation and aged protective coating on Egyptian leather; optimization of working conditions”, A.A. aaggar, P. Pouli, M.A. Fouad, A. Nevin, G.A. Mahgoub

Posters:

1. “Laser cleaning of modern paintings; using model probes for the in depth assessment of laser induced modifications”, P. Vounisiou, A. Selimis, K. Melessanaki, P. Pouli, G. Filippidis, C. Beltsios, S. Georgiou & C. Fotakis
2. “The Laser cleaning project of the architectural sculptures of the Acropolis Monuments”, C. Vasiliadis, M. Gavrinotis, E. Maniadaki, G. Totou, P. Pouli, C. Fotakis
3. “A spectral imaging methodology for determining in-situ the optimum cleaning level of stonework”, V. Papadakis, A. Loukaiti, P. Pouli
4. “The application of laser cleaning to the contemporary paintings”, G.de Cesare, P. Vounisiou, K. Melessanaki, P. Pouli, C. Fotakis

June 2009

**EMRS 2009 / Strasbourg, France**

Posters:

1. “The use of model probes for assessing in depth modifications induced during the laser cleaning of modern paintings”, P. Vounisiou, A. Selimis, K. Melessanaki, P. Pouli, G. Filippidis, C. Beltsios, S. Georgiou and C. Fotakis
2. “Wavelength and pulse duration effects on laser induced changes on unvarnished aged tempera paints”, M. Oujja, S. Perez, P. Pouli, C. Fotakis, M. Castillejo

June 2009

**SPIE 2009/ Munich, Germany**

Poster:

- “In-depth assessment of modifications induced during the laser cleaning of modern paintings”, A. Selimis, P. Vounisiou, George J. Tserevelakis, K. Melessanaki, P. Pouli, G. Filippidis, C. Beltsios, S. Georgiou, C. Fotakis

April 2009

**TechnArt 2009 / Athens, Greece**

Posters:

1. A new spectral imaging approach for the in-situ assessment of the cleaning intervention on stonework, A. Loukaiti, V. Papadakis, P. Pouli
2. «Model probes for assessing in depth modifications induced during laser cleaning of modern paintings», P. Vounisiou, A. Selimis, K. Melessanaki, P. Pouli, G. Filippidis, C. Beltsios, S. Georgiou, C. Fotakis

Nov. 2008

**“IRON”, Conservation colloquium organized by the archaeological Museum of Thessaloniki / Thessaloniki, Greece**

**ORAL INVITED:** Laser technology in the conservation of iron objects

Sept. 2007

**LACONA VII, 7th International Conference on Lasers in the Conservation of Artworks / Madrid, Spain**

**ORAL INVITED:** “Wavelength and pulse duration effects in the laser cleaning of Cultural Heritage Objects”, P. Pouli

Posters:

1. “Laser Cleaning Of Stonework: Effect Of Laser Irradiation And Analysis Of Crusts”, M. Oujja, P. Pouli, C. Fotakis, B. Hermosín, C. Sáiz-Jiménez, C. Domingo, M. Castillejo
2. “Laser cleaning of corrosion layers from the surface of engraved historic iron objects; preliminary studies and application on real objects”, P. Pouli, C. Fotakis, A. Siatou, V. Argyropoulos
3. “UV laser assisted removal of intractable synthetic polymers from the surface of wall paintings”, A., MP Colombini, A Nevin, P.Pouli, C. Fotakis
4. “Investigating and optimising the laser cleaning of corroded iron”, C. Korenberg, A. Baldwin and P. Pouli
5. “Laser cleaning studies to remove dust from a taxidermy Paradisaeidae black bird”, E. Karantoni, E. Malea, K. Melessanaki, P. Pouli
6. “Preliminary study on laser assisted removal of past conservation polymeric materials from archaeological bone”, H. Delaunay, C. Korenberg, C. Ward, K. Melessanaki, A. Nevin and P. Pouli
7. “Investigating the laser cleaning of archaeological copper-alloys using different laser systems”, C.Korenberg, A. Baldwin, P. Pouli

June 2007

**EMRS 2007/ Strasbourg, France**

ORAL:

“Mechanistic studies of the laser assisted removal of synthetic conservation materials from wall paintings”, P. Pouli, A. Nevin, A. Andreotti, P. Colombini, C. Fotakis

Poster:

“Wavelength and pulse duration effects in the laser assisted removal of corrosion layers from historic iron alloys”, P. Pouli, C. Fotakis, A. Siatou, V. Argyropoulos

June 2006

**Laser Optics 2006, Workshop "Lasers in the Preservation of Cultural Heritage"/ St.-Petersburg, Russia**

Posters:

1. “Multi-analytical study of the Laser Pulse Duration Effect in the IR laser-cleaning of the Monumental Cemetery Wall paintings of Pisa”, A. Andreotti, M. P. Colombini, A.Nevin, K. Melessanaki, P. Pouli, C. Fotakis
2. “Ultrafast pulse lasers in cleaning applications of artefacts”, L. Bartoli, P. Pouli, G. Bounos, S. Georgiou, C. Fotakis
3. “A comprehensive study for the laser cleaning of corrosion layers on metallic objects of cultural value”, A. Siatou, V. Argyropoulos, P. Pouli

June 2006

**HWC – 2006, Conference on Heritage, Weathering and Conservation Conference / Madrid, Spain**

Poster: “The coloration effect associated with laser cleaning of stonework; a comprehensive study on its origins and evaluation of the suggested preventing methodologies”, P. Pouli, G. Totou, C. Fotakis, S. Gaspard, M. Oujja, M. Castillejo, C. Domingo

Sept. 2005

**LACONA VI, 6th International conference on Lasers in the Conservation of Artworks / Vienna, Austria**

ORAL:

1. “femtosecond laser cleaning of painted artefacts; is this the way forward?”, P. Pouli et al
2. “A comprehensive study of the coloration effect associated with laser cleaning of pollution encrustations from stonework”, P. Pouli et al.

Other presentations

1. “Laser cleaning studies on wall paintings;a preliminary study of various laser cleaning regimes”, E.Dragasi et al.
2. “The Cleaning of the Parthenon West Frieze by Means of Combined Infrared and Ultraviolet Radiation”, K. Frantzikinaki, G. Marakis, A. Panou, C. Vasiliadis, E. Papakonstantinou, P. Pouli, Th. Ditsa, V. Zafiropulos, C. Fotakis

Posters:

1. “the coloration effect due to infrared laser cleaning of pollution encrustations from monuments; model study and quantitative definition on simulated samples” G. Totou, P. Pouli, C. Fotakis
2. “**Laser pulse duration effects for the cleaning of wall paintings**”, **A. Andreotti, M.P. Colombini, A. Nevin, K. Melessanaki, P. Pouli, C. Fotakis (BEST POSTER AWARD)**
3. “Removal of Simulated Dust from Water-Based Acrylic Emulsion Paints by Laser Irradiation at IR, VIS and UV Wavelengths”, M. Westergaard, P. Pouli, C. Theodorakopoulos, V. Zafiropulos, J. Bredal-Jørgensen, U. Staal Dinesen
4. “Laser cleaning of stone stucco and plaster ornamental reliefs, the Benaki Islamic Art Collection”, Y. Doganis, A. Galanos, P. Pouli

12-17/06/2005

**17th International Conference on Photonics in Europe / Munich, Germany**

Posters:

1. “The potential of femtosecond lasers for the cleaning of painted artefacts”
2. «A comprehensive study of the coloration effect associated with laser cleaning of pollution encrustations from stonework»

27/06/2004- 02/07/2004

**10th International Congress on Deterioration and Conservation of Stone, ICOMOS / Stockholm Sweden**

ORAL: “The combination of ultraviolet and infrared laser radiation for the removal of unwanted encrustation from stonework; a novel laser cleaning methodology

Sept 2003, 15 – 18

**LACONA V, 5th International Conference on Lasers in the Conservation of Artworks / Osnabrueck, Germany**

ORAL: “Pollution encrustation removal by means of combined ultraviolet and infrared laser radiation: The application of this innovative methodology on the surface of the Parthenon West Frieze”,

Poster: “Laser cleaning studies of hard insoluble aluminosilicate crusts on Minoan (LM IIIC) pottery shreds”

OCT 2002, 4-6

**5th International meeting for the Restoration of the Acropolis Monuments / Athens, Greece**

ORAL: «the combined use of IR and UV laser pulses for sculpture cleaning; the application of this innovative methodology on the surface of the Acropolis monuments and sculptures»

SEPT 01, 11-14

**LACONA IV, 4th International Conference on Lasers in the Conservation of Artworks / Paris, France**

ORAL: “Studies towards a thorough understanding of the laser induced discoloration mechanisms of medieval pigments”

Poster: “Laser cleaning of inorganic encrustation on excavated objects: evaluation of the cleaning result by means of multi-spectral imaging”

April 99, 26-29

**LACONA III, 3rd International Conference on Lasers in the Conservation of Artworks / Florence, Italy**

ORAL: “The effect of Nd:YAG laser radiation on medieval pigments”.

April 97, 23-25

**LACONA II, 2nd International Conference on Lasers in the Conservation of Artworks / National Museums & Galleries on Merseyside, Liverpool, UK**

ORAL: “Laser Cleaning of Internal and External Ecclesiastical Stonework

July 96, 9-13

**OWLS IV, 4th International Conference on Optics Within Life Science / Munster, Germany**

Poster: “Laser cleaning with Nd:YAG”.

4-6/10/95

**LACONA I, 1st International Workshop on Lasers in the conservation of artworks / Heraklion, Greece**

Participant,

Organised by the physics department, University of Crete in collaboration with the Foundation of Research and Technology, Institute of Electronic Structure and Lasers (FORTH-IESL).