

Dr PANAGIOTA MANTI

Assistant Professor (Senior Lecturer) in Conservation of Inorganic
Museum objects & Archaeology | Ionian University.

contact

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ABOUT ME



I am active in the sector of cultural heritage conservation since 1997, when I received the National Certificate for vocational education on the conservation of antiquities. Thereafter, I studied the BSc in Conservation of Museum Objects and Archaeology at Cardiff University. The Edward Hall Scholarship assisted financially my studies at the MSc in Archaeometry at the RLHA at the University of Oxford; in 2005 I started a PhD in Conservation at Cardiff University. My PhD research was conducted with financial support from Cardiff University Scholarships. I was the Principal Investigator for beamtime gained at Synchrotron and Neutron Facilities at ISIS, Rutherford Appleton Laboratory, Science and Technology Facilities Council's (STFC), UK. (RB7205531 and RB610547, at GEM and ROTAX diffractometers respectively).

In 2009, I was elected to a tenured position of Lecturer in Conservation & Conservation Science at Cardiff University, where I became permanent in 2012. During my time at Cardiff my research focused on the technology, corrosion and protection of metals and I gained funding twice from SHARE, Research Quality Committee to employ Research Assistants to aid my research. All PhD students that I supervised successfully completed their PhD research. A prerequisite for the 3-year probation period was to complete the MSc Diploma in University Teaching and Learning (PCUTL). Hence, I became a Fellow of the Higher Education Academy in UK.

I returned to Greece as an Assistant Professor in Conservation of archaeological and historical inorganic objects elected at the Technological Institute (TEI) of Ionian Islands, which is now part of the Ionian University (Government Gazette of Appointment C'714/22.06.2018).

I have experience in the development of educational material in all university levels, including BSc, MSc and PhD, on subjects including conservation in field archaeology, on the conservation of museum objects, conservation methodology, scientific analysis techniques and documentation.

Supervision of UG, PG and PhD dissertations has given me the opportunity to guide students to research. I have published primary research in the field of conservation; the effectiveness of scientific analysis methods on ancient materials; on manufacturing technologies of ancient metals; and teaching in conservation.



EDUCATION



Archaeology
and
Conservation



Research
Laboratory for
Archaeology
and the History
of Art

Oct. 2005 - 2012

PhD in Conservation, Cardiff University, UK.

Postgraduate Studentship, Cardiff University,

Thesis Title: Shiny helmets: investigation of tinning, manufacture and corrosion of Greek helmets (7th-5th c. BC). Supervisors: D. Watkinson, Professor I. Freestone.

Examiners: Prof. Mark Pollard, University of Oxford & Dr John Merkel, UCL.

URI: <https://orca.cardiff.ac.uk/id/eprint/33749>

Sept. 2009 - 2012

Postgraduate Certificate in University Teaching and Learning

Module 1, Cardiff University, Fellowship at the Higher Education Academy (FHEA)

Sept. 2003 - 2004

MSc in Archaeological Science, Research Laboratory for Archaeology and the History of Art (RLAHA), **University of Oxford**, UK

Dissertation: Chemical analysis of Egyptian faience and reconstruction of faience production methods. Supervisor: Prof. Mike Tite.

Sept. 2000 - July 2003

BSc (First Class Honours) in Museum Objects & Archaeology, Cardiff University of Wales, UK.

Atkinson Prize for **best degree** in 2003. Dissertation: Technological study of two 6th c. BC copper alloy Greek helmets. Supervisors D. Watkinson, Dr K. Anheuser.

Sept. 1995 - 1997

Diploma in Conservation of Artefacts & Archaeology

'XINI' Institute for Vocational Education, Thessaloniki, Greece.

National Certification OEEK 29.01.1998, 97029798GR.

RESEARCH INTERESTS

- Conservation in Field Archaeology / First Aid for Finds.
- Teaching & learning in conservation.
- Methodology & history of conservation.
- New technologies used to understand and to record ancient technologies
- Understanding the condition of objects of cultural heritage.
- Conservation profession, practice and materials
- Discovering ancient technologies
- Understanding decay of heritage objects
- Preservation of cultural materials in the burial and the environment.
- Scientific methods

Being a member of the Department of Environment has channelled further my interest on the deterioration and corrosion of heritage materials and on the impact that the changing climate has on their preservation in the museum and in the field.



WORK EXPERIENCE

ACADEMIC

Oct. 2018 - to date

Senior Lecturer (Assistant Professor) (permanent post with 3 year probation)

Conservation of Archaeological & Historical Museum Objects.

Ionian University, School of Environment,
Zakynthos Campus, Panagoula, Greece.

July 2018 - Oct.2018

Senior Lecturer in Conservation of Archaeological & Historical Museum Objects

Conservation of Antiquities & Works of Art Programme,

Department of Environment, Technological Institute of the Ionian Islands.

Aug. 2012 - June 2018

Lecturer (permanent post) in Conservation and Heritage Science.

Department of Archaeology & Conservation, School of History, Archaeology and Religion (SHARE), Cardiff University, UK.

July 2009 – Aug. 2012

Lecturer (3 year probation) in Conservation and Heritage Science.

Department of Archaeology & Conservation, School of History, Archaeology and Religion (SHARE), Cardiff University, UK.

Oct. 2006 - May 2007

Associate Lecturer, Department of Archaeology & Conservation, Cardiff University, UK.

2005 - 2009

Tutor in Conservation, Department of Archaeology & Conservation, Cardiff University.



CONSERVATION IN FIELD ARCHAEOLOGY & MUSEUM OBJECTS

2023 (field season)

Pilot Survey Study at Antikyra-Steno. **Yale University Peabody Museum of Natural History, Ephorate of Boiotia, European Academy of Science & Arts.** Conservation Consultant of finds.

2019, 2022 (field seasons)

University Excavation at Kastrouli Fokidos. - Prof. I. Liritzis, director of research, University of the Aegean. <https://kastrouli.org/>

- Director of conservation of inorganics
- Managing conservation students

Oct. 1997 – 2004 (contracts)

IZ' Ephorate of Prehistoric and Classical Antiquities, Pella. Dr. M. Akamati

- Field conservation and first aid for finds
- In situ conservation of wall paintings in Macedonian tombs (Tombs III and D,T. Georgiou) <http://www.pella-museum.gr/explore/archaeological-site/dead-city-of-pelle/ellinistiko-nekrotafeio/macedonikoi-tafoi>
- Conservation of a series of bronze helmets and other metal objects (Archontiko, Pella, excavations by Dr. Pavlos Chrysostomou)
- Conservation of Neolithic pottery (settlement of Giannitsa and Apsallos, excavations by Dr. Panikos Chrysostomou)
- Conservation of inorganic objects (Western Cemetery of Pella, excavations by Dr. Pavlos Chrysostomou)

Apr. 2004, 2005, 2006 (field seasons)

Egypt Exploration Society

Conservation of archaeological objects from the Sacred Cemetery of Animals, Sahara, Egypt, Project by Dr Paul T. Nicholson, Cardiff University

Gosling J., **Manti, P.** & Nicholson P.T. (2004).

Discovery and conservation of a hoard of votive

bronzes from the Sacred Animal Necropolis at North Saqqara. *Archaeology of Egypt/Egyptology*, 2, 1.

Nov. - Dec. 2003

The Ashmolean Museum, Cast Gallery
Department, Oxford, UK

<https://www.ashmolean.org/cast-gallery>

Conservation Volunteer, Daniel Bone- senior objects' conservator

June - July 2002

The Conservation Centre, National Museums Liverpool

<https://www.liverpoolmuseums.org.uk/CollectionsCare#action--conservation-centre>

Conservation Placement, Dr Sam Sportun, John Larson - sculptures' conservator.

Aug. - Sept. 2001

St. Fagans National Museum of History, National Museum & Galleries of Wales, Amgueddfa Cymru

<https://museum.wales/stfagans/>

Conservation Placement, Sue Renault- senior conservator

Aug. 2001

Praisos (Praesos), East Crete Excavations, Greece, Cardiff University & The British School at Athens - Archaeological Placement, Dr James Whitley-project director.

<https://orca.cardiff.ac.uk/id/eprint/28551>

Jan. - Apr. 1998

'Leonardo da Vinci' Transnational European work placements in enterprises on "Conservation of Wall Paintings". VEB

Accademia Europea, Florence, Italy.

Conservation & Restoration of wall & ceiling paintings, conservation of cotto-fiorentino floor in the neo-classical palazzo

TEACHING

I have experience in independent teaching (design, teaching and examination) of courses at all levels (undergraduate, postgraduate, doctoral) and in different types of courses e.g. lectures, seminars, laboratory exercises, teaching professional practices and technical skills.

I have contributed teaching to the following university programs:

Aristotle University of Thessaloniki, Chemistry Department

MSc Management of Ecclesiastical and Christian Cultural Heritage (2022-2023) (I was on Sabbatical in spring 2023)

MSc Archaeological Materials Science (ARCHMAT) - Erasmus Mundus Joint Master between University of Evora & Sapienza Università di Roma & Aristotle University of Thessaloniki (Chemistry) (2021-2022)

<https://www.erasmusmundus-archmat.uevora.pt/>



Ionian University, Department of Environment

MSc Preservation & Management of Cultural Heritage (from 2021-todate) <https://envi.ionio.gr/preserv-ch/>



University of the Peloponnese, Department of History, Archaeology and Management of Cultural Studies

MSc Cultural Heritage Materials and Technologies - CultTech (in 2020), invited lecture in module B1

<http://culttech.uop.gr/>



Cardiff University, Department of Archaeology & Conservation

MSc Professional Conservation (2008-10, 2011-18)

<https://www.cardiff.ac.uk/study/postgraduate/taught/courses/course/professional-conservation-msc>

MSc Conservation (2010-14, 2015-17)

MSc Care of Collections (2006-7, 2013-14, 2015-16)

MA Archaeology (2013-14, 2015-16)



Ionian University Department of Environment

BSc Conservation of Antiquities & Works of Art (from 2018- todate)

BSc Environmental Science

Cardiff University, Department of Archaeology & Conservation

BSc in Conservation of Museum Objects and Antiquities (2005-2018)

BSc and BA Archaeology (2005, 2007-8, 2012-13)





UNDERGRADUATE TEACHING

Ionian University, Department of the Environment

BSC CONSERVATION OF ANTIQUITIES & WORKS OF ART

Since 2018-19 / *some modules were merged after 2020 due to closure of the programme.

Autumn Semester

Stone Conservation II [Theory + Lab]
Conservation of Metal Objects II [Theory + Lab]
Conservation of Wall Paintings I [Theory + Lab]
Conservation in Field Archaeology [Theory + Lab]
Conservation of Contemporary & Folklore Materials [Theory + Lab]
General Principles & Conservation Methodology
Drawing & Documentation of Objects [Lab] [2018-19 only]
Photography Techniques [Lab] [2018-19 only]
Foreign Language – English Terminology

Spring Semester

Conservation of ceramics I [Theory + Lab]
Stone Conservation I [Theory + Lab]
Conservation of Metal Objects II [Theory + Lab]
Methodology of Physicochemical Analyses [Lab only, 2019-21]
Conservation of Glass & Porcelain I [Theory + Lab]
*Dissertations [2018- todate]

BSC ENVIRONMENT

Since 2022-23

Autumn Semester

Environment & Cultural Monuments.

Spring Semester (I was on Sabbatical in spring 2023)

Management of natural and cultural heritage
English Language

Cardiff University, Department of Archaeology & Conservation

During my employment at Cardiff University, I developed a range of Erasmus+ mobility agreements, from which I benefited Erasmus+ Teaching staff mobility (5 days) to:

The Conservation Department, TEI of Athens, Host Prof. B. Argyropoulos [2016-17, 13-14, 12-13]

The Ecclesiastical University Academy of Thessaloniki, Host Dr Y. Karapanagiotis [2016-17, 13-14]



BSC CONSERVATION OF MUSEUM OBJECTS AND ARCHAEOLOGY

Autumn & Spring Semesters

HS2118 Introduction to Conservation Practice [2004-5, 2006-14, *2014-15, 2015-16]

*HS2331 Practical Conservation Projects 2 [2004-14, 2015-16]

*HS2330 Practical Conservation Projects 1 [2004-14]

HS2001 Investigative techniques for conservation [2016-17]

HS2369 Evidence - based Preservation (Wet wood) [2017-18]

HS2110 Polymers in Conservation [2006-7, 2017-18]

HS2336 Conservation Dissertation [2006-7, 2008-11]

Autumn Semester

HS2360 Structure & Decay of Inorganic Materials [2006-7, 08-9, 10-11, 12-13, *14-15, 16-17]

HS2359 Structure & Corrosion of metal [2006-7]

HS2319 Structure and Decay of Organic Objects [2009-10, 2013-14]

*HS2320 Analysis of Artefacts [2009-10, 2011-12, 2013-14, 2015-16]

*HS2400 Technology and Materials [2007-8]

Spring Semester

HS2372 Inorganic Objects: Decay and Conservation [2006-7, 10-11, 12-13,* 14-15, 16-17]

HS2371 Metals: Corrosion and Conservation [2006-7]

HS2335 Organic Objects: Decay and Conservation [2009-10, 2013-14]

HS2322 Museum Environment [2007-8]

*HS2338 Independent Conservation Study [2006-7, 2009-11]

BA IN ARCHAEOLOGY

Spring Semester

*HS2116 Archaeological Skills [2004-5, 2007-8]

BSC ARCHAEOLOGY

Autumn & Spring Semesters

*HS2404 Archaeological Science Dissertation [2012-13]

HS2321/HS2329 Conservation in Field Archaeology [2007-8]

Spring Semester

*HS2116 Archaeological Skills [2004-5, 2007-8]



POSTGRADUATE TEACHING

Aristotle University of Thessaloniki

MSC MANAGEMENT OF ECCLESIASTICAL & CHRISTIAN CULTURAL HERITAGE – IN GREEK

Department of Chemistry (Host) & Department of Social Theology and Christian Culture

Autumn Semester

*Principles of conservation & Preventive conservation [2022-2023]

Spring Semester

*Conservation of Inorganic and Organic Materials [2022-2023]

MSc Archaeological Materials Science (ARCHMAT) - in English

Erasmus Mundus Joint European Master - University of Evora & Sapienza Università di Roma & Aristotle University of Thessaloniki (Chemistry) <https://www.erasmusmundus-archmat.uevora.pt/>

Spring Semester

ARCH03 Preventive Conservation of Archaeological sites (Unit 3-inorganics) [2021-22]

Ionian University

MSC PRESERVATION & MANAGEMENT OF CULTURAL HERITAGE - IN GREEK

Department of Environment, <https://envi.ionio.gr/preserv-ch/>

Autumn Semester

PCH104 Advanced topics in the conservation of inorganics [2021-todate]

*PCH108 Effect of climate change on artefacts and monuments [2021-todate]

*MSc Dissertation [2021-todate]

University of the Peloponnese

Department of History, Archaeology and Management of Cultural Studies

MSC CULTURAL HERITAGE MATERIALS AND TECHNOLOGIES (CULTTECH) – IN ENGLISH

<http://culttech.uop.gr/>

Spring Semester

Invited lecture in module B1. Title: An overview of the role of Information Technologies in the Conservation of Cultural Heritage Objects. [2019-20]

Cardiff University, Department of Archaeology & Conservation

MSC PROFESSIONAL CONSERVATION

Winter & Spring Semester

HST342 Analysis in Heritage Science [2014-18]

HST340 Instrumental Analysis in Conservation [2011-13]

*MSc Dissertation

MSC CONSERVATION

Winter Semester

*HST461 Method in Conservation [2011-14, 2015-16]

Winter & Spring Semester

HS2339 Essentials of Conservation [2010-14, 2015-17]

*HST460 Advanced practical projects [2011-14, 2015-16]

*MSc Dissertation [2008-16]

MSC CARE OF COLLECTIONS

Spring Semester

HST310 Museum Objects and Environment [2006-07]

*MSc Dissertation [2008-16]

MA ARCHAEOLOGY & TO THE SCHOOL OF HISTORY, ARCHAEOLOGY AND RELIGION

Winter Semester

*HST900 Postgraduate core skills - SHARE [2013-14, 2015-16]

Spring Semester

*HST500 Postgraduate skills in Archaeology & Conservation [2013-14, 2015-16]

*MSc Dissertation [2008-16]



SELECTED DISSERTATION TOPICS

- **Submitted**

Supervision of Doctoral Thesis & Research (PhD)

Vasilliki Kontogianni 1st supervisor 90%, 2nd Dr Ruth Westgate (10%). Oct. 2014 – June 2018. Kontogianni, Vasiliki 2022. *Hydrophobic coatings and organic additives in Hellenistic-Roman mortars: the case study of Crete*. PhD Thesis, Cardiff University.

<https://orca.cardiff.ac.uk/id/eprint/149401>

Chris Wilkins 1st supervisor 80%, 2nd Dr Paul Nicholson (20%). Oct. 2013 – June 2018. Wilkins, James 2019. *An evaluation of portable X - Ray fluorescence on applied blue faience glazes: A study using replicate glazes of the Late, Ptolemaic and Roman period in Egypt*. PhD Thesis, Cardiff University. <http://orca.cf.ac.uk/id/eprint/118081>

Matt Nicholas 2nd supervisor 50% responsible for the scientific methodology, 1st supervisor Prof. J. Hines (50%). Nicholas, Matthew 2016. *Metallurgy in the gloaming: non - ferrous metalwork from three early Anglo - Saxon cemeteries at RAF Lakenheath, Suffolk*. PhD Thesis, Cardiff University. <http://orca.cf.ac.uk/id/eprint/91120>

James Peake 2nd supervisor 10%, 1st Prof. J. Hines (90%). Peake, James Robert Nicholas 2013. *Early Anglo - Saxon glass beads: Composition and origins based on the finds from RAF Lakenheath, Suffolk*. PhD Thesis, Cardiff University. <http://orca.cf.ac.uk/id/eprint/47677>

Examination of Doctoral thesis and research progress

Nasanen, Liisa Maria Elina 2018. *Stabilisation of archaeological copper alloy artefacts using subcritical fluid technology*. PhD Thesis, Cardiff University.

<https://orca.cardiff.ac.uk/id/eprint/114466> Examination of doctoral research progress 1st year, main examiner, Feb. 2014, PhD Supervisor: Prof. D. Watkinson.

Nordgren, Eric 2016. *The effect of metallurgical structure on the chloride - induced corrosion of archaeological wrought iron*. PhD Thesis, Cardiff University.

<https://orca.cardiff.ac.uk/id/eprint/97535> Examination of doctoral research progress 1st year, main examiner, June 2013, PhD Supervisor: Prof. D. Watkinson.

Lawson, Amber 2016. *Assessment of the performance of three clear coatings for use in heritage conservation by an oxygen consumption technique*. PhD Thesis, Cardiff University.

<https://orca.cardiff.ac.uk/id/eprint/97644> Examination of doctoral research progress 1st and 2nd year, main examiner, PhD Supervisor: Prof. D. Watkinson.

Smyrnaio, Ioannis 2015. *The correlation of technological and stylistic changes, and society, in the production of attic geometric and orientalising finewares*. PhD Thesis, Cardiff University.

<https://orca.cardiff.ac.uk/id/eprint/91116> Examination of doctoral research progress 3rd year, main examiner, PhD Supervisor Prof. J. Wittley.

Doherty, Sarah 2013. *The origins and the use of the potters wheel in Ancient Egypt*. PhD Thesis, Cardiff University. <https://orca.cardiff.ac.uk/id/eprint/45612> Internal viva examiner, PhD Supervisor: Dr P.T. Nicholson.

Supervision of MSc dissertations

Cardiff University, 2012-2016

- Evaluation of museum open stores and conservation for the public.
- Presentation of conservation to the public: a case study of the Cardiff Story Museum.
- Evaluation of Reflectance μ FTIR for the characterisation of copper corrosion products on archaeological bronzes.
- Evaluation of superhydroscopicity of selected polymeric coatings for outdoor bronzes.
- Identification of salts from wall - plaster constructions from Çatalhöyük.
- UV Imaging in conservation practice: a lab guide.
- Pontypool ware: A review and comment on composition of coatings using FTIR.
- The use of bone glue to detach paint layer from painted glass.
- Impact of RH on adhesive strength of Paraloid B72 with ceramics using tensile strength testing.
- Testing poulticing methods on glazed ceramics. Stain removal and measurement by Photoshop.
- μ XRF non - destructive composition analysis of miniature axes from Whitchurch.
- Scientific investigation, analysis and conservation of a 19th Century Ethiopian Emperor's Shield for the Judge's Lodging Museum. – Received the Student Conservator of the Year Icon Award 2015
- The effectiveness of Bookkeeper on artist's paper.

Supervision of undergraduate dissertations (in Greek)

Ionian University, Department of Environment, 2018-2022

- Συγκριτική μελέτη κατάστασης διατήρησης λίθινων επιγραφών. Κατανόηση των επιπτώσεων χρήσης στεγάστρου (και μη) για την αποθήκευση στον προαύλιο χώρο του μουσείου. – μελέτη περίπτωσης
- Εκπαιδευτικό πρόγραμμα για τη συντήρηση μέσα από τα έργα διάσημου ζωγράφου.
- Συντήρηση και επιμέλεια γεωλογικών συλλογών.
- Μελέτη Κατάστασης Διατήρησης και Προτάσεις Αποθήκευσης Λίθινου Υλικού – μελέτη περίπτωσης
- Τεχνολογία, Φθορές και Επεμβάσεις Συντήρησης Ιστορικών Και Ανασκαφικών Κεραμικών Αντικειμένων.
- Ορυκτοποιημένα οργανικά κατάλοιπα: σωστικές επεμβάσεις στην ανασκαφή για νέους αρχαιολόγους και συντηρητές.
- Τα ψηφιδωτά της Ρωμαϊκής Παλαίστρας της Χαλκίδας: ιστορική αναδρομή και προτάσεις προστασίας και διατήρησης.
- Το Ταφικό Μνημείο της οικογένειας Καραμπίνη : Ιστορική αναδρομή και προτάσεις ανάδειξης και διατήρησης.
- Τεχνικά και μορφολογικά χαρακτηριστικά επιτύμβιων στηλών του 5ου αι. στον ελλαδικό χώρο. – μελέτη περίπτωσης

The topics above translated in English

- A study of the state of preservation of stone inscriptions: Understanding the impact of using a shelter (and not) for storage in the museum's courtyard. – case study
- Educational Programme on conservation through the works of a famous painter.
- Maintenance and editing of geological collections.
- Conservation Status Study and Stone Material Storage Proposals – case study
- Technology, damage and conservation interventions of historical and excavated ceramic objects.
- Mineralized organic remains: rescue interventions in excavation for young archaeologists and conservators.
- The mosaics of the Roman Palaestra of Chalkida: historical review and proposals for protection and conservation.
- The Funerary Monument of the Karabinis family: Historical review and proposals for promotion and preservation.
- Technical and morphological characteristics of tombstones of the 5th century. in Greece. – case study

Supervision of undergraduate dissertations

Cardiff University, 2006-2013

- To what extent have chemical changes in ancient Greens and Blues affected how we view the objects they adorn? An Investigation into the deterioration of Egyptian Blue and Green pigments and Egyptian Faience.
- Chemical sponge – a safe conservation material for historical metal?
- Tannic acid for the protection of corroded archaeological iron.
- Identification of archaeological materials during excavation: a handbook for archaeologists.
- FTIR database of waxes ancient and modern.
- Age testing of oil paints using FTIR.
- Investigation of the effect of fire on the alteration of paints using FTIR.
- Scientific examination of archaic period archaeological textiles.
- Adhesive properties and strength of isinglass (fish glue).

RESEARCH

Summary of technical experience

- X - Radiography & Printing of x-ray film in a darkroom
- Printing of black and white photographic film in a darkroom
- Ultraviolet Light Recording / Imaging
- Microscopy for material characterisation & Metallography
- Sample preparation for analysis (mounting and polishing)
- Perkin Elmer Spectrum One Fourier Transform infrared spectrometer with microscope and ATR attachments
- Panalytical X-ray diffractometer (XRD)
- Scanning Electron Microscope (SEM) with Energy Dispersive and Wavelength Dispersive X - Ray Analysis
- Bruker Tracer Handheld XRF spectrometer
- Laser cleaning of objects / Nd:YAG laser cleaning systems

Editor for

Scientific Culture <https://sci - cult.com/>

I have reviewed papers for

<https://www.webofscience.com/wos/author/record/1856458>

- Studies in Conservation (IIC) <https://www.tandfonline.com/toc/ysic20/current>
- Journal of the Institute of Conservation (ICON)
<https://www.tandfonline.com/toc/rcon20/current>
- Mediterranean Archaeology and Archaeometry <http://www.maajournal.com/>
- Archaeometry <https://onlinelibrary.wiley.com/journal/14754754>
- Heritage <https://www.mdpi.com/journal/heritage>
- Buildings <https://www.mdpi.com/journal/buildings>
- Sustainability <https://www.mdpi.com/journal/sustainability>
- Physica Scripta (IOP) <https://iopscience.iop.org/journal/1402 - 4896>

SELECTED PUBLICATIONS

CONSERVATION PRACTICE, SCIENCE & MATERIALS

Climate Change & Cultural Heritage

Manti, P. and Anagnostou, M. (2022). A Contribution to Understanding the Impact of Climate Change on Europe's Tangible Cultural Heritage. **Paper** delivered at the **Climate.Culture.Peace** Conference. Building a Map of Climate Impacts on Culture and Heritage Panel. ICCROM, British Council's Cultural Protection Fund (CPF) and the Department for Digital, Culture, Media and Sport (DCMS) 24-28 January 2022. <https://www.youtube.com/watch?v=0f0ZbdgGZD4> (presentation at 43:00 minute)

Manti, P. and Anagnostou, M. (2021). The preservation of cultural heritage in a changing environment. **Paper** delivered at the 2nd SHIC on Environment & Culture, The European Cultural Centre of Delphi, 18-19 September 2021

Corrosion of archaeological bronze

Manti, P. and Watkinson, D. (2022). Corrosion phenomena and patina on archaeological low-tin wrought bronzes: new data. *Journal of Cultural Heritage* 55, 158–170. Download for free from <https://doi.org/10.1016/j.culher.2022.03.004>

Conservation Techniques

Manti, P. and Watkinson D. (2008). "A hundred ways to repair a helmet." Ancient and modern repairs on bronze helmets. **Poster** presented at *Holding it all together: ancient and modern approaches to joining, repair and consolidation*. The British Museum, London, 21 and 22 February 2008. *With financial support by the Postgraduate Quality Committee Fund, School of History and Archaeology, Cardiff University.*

Manti, P. and Gosling J. (2007). Challenges on the conservation of decorated bronzes from the Sacred Animal Necropolis at North Saqqara, Egypt. **Poster** presented at *Decorated Surfaces on Ancient Egyptian Objects: Technology, Deterioration And Conservation*. ICON Archaeology Group and the Fitzwilliam Museum, University of Cambridge, Cambridge, 7 – 8 September 2007

Gosling J., **Manti, P.** & Nicholson P.T. (2004). Discovery and conservation of a hoard of votive bronzes from the Sacred Animal Necropolis at North Saqqara. *Archaeology of Egypt/Egyptology*, 2, 1. www.PalArch.nl

Sampling Collections for Research

Henderson, J. & **Manti, P.** (2008). Improving access to collections for sampling, **Studies in Conservation**, 53:sup1, 115 - 119. [Download from https://doi.org/10.1179/sic.2008.53.Supplement-1.115](https://doi.org/10.1179/sic.2008.53.Supplement-1.115) or for free from <https://orca.cardiff.ac.uk/id/eprint/17617>

Manti, P. and Watkinson D. (2007). Examination of Greek bronze helmets: sampling and project design. Metal 07. Proceedings of the ICOM - CC Metal Working Group International Triennial Meeting. Amsterdam, 17 - 21 September 2007, C. Degriigny, R. van langh, I. Joosten and B. Ankersmit (eds), Rijksmuseum Amsterdam, pp: 78 - 82.

Teaching and Learning

Manti, P. Henderson, J. and Watkinson, D. (2011). Reflective practice in conservation education. Preprints of the ICOM - CC 16th Triennial Conference, Lisbon, Portugal, September 19 - 23, 2011. The International Council of Museums – Committee for Conservation (ISBN 9789899752207) **URI:** <https://orca.cardiff.ac.uk/id/eprint/17604>

TESTING METHODS & MATERIALS

Ayre WN, Scully N, Elford C, Evans BA, Rowe W, Rowlands J, Mitha R, Malpas P, **Manti P**, Holt C, Morgan - Jones R, Birchall JC, Denyer SP, Evans SL. (2021). Alternative radiopacifiers for polymethyl methacrylate bone cements: Silane - treated anatase titanium dioxide and yttria - stabilised zirconium dioxide. *Journal of Biomaterials Applications* 35(10):1235 - 1252. <https://doi.org/10.1177/0885328220983797> .

Nicholas, M. and **Manti, P.** (2014). Testing the applicability of handheld portable XRF to the characterisation of archaeological copper alloys. In ICOM - CC 17th Triennial Conference Preprints, Melbourne, 15–19 September 2014, ed. J. Bridgland, article 0904, 13 pp. Paris: International Council of Museums. (ISBN 978 - 92 - 9012 - 410 - 8). *Part of this work was funded by SHARE, Research Quality Committee* **URI:** <http://orca.cf.ac.uk/id/eprint/65469>

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Metals

PhD supervisor 50% - responsible for the scientific methodology, 1st supervisor Prof. J. Hines (50%) for the archaeological part – Examined successfully Jan. 2016. **Nicholas, Matthew 2016. *Metallurgy in the gloaming: non - ferrous metalwork from three early Anglo - Saxon cemeteries at RAF Lakenheath, Suffolk*. PhD Thesis, Cardiff University.**

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Vitreous materials & ceramics

PhD supervisor 80%, 2nd Dr Paul Nicholson with 20%. Examined successfully July 2018. **Wilkins, Chris James 2019. *An evaluation of portable X - Ray fluorescence on applied blue faience glazes: A study using replicate glazes of the Late, Ptolemaic and Roman period in Egypt*. PhD Thesis, Cardiff University.** <http://orca.cf.ac.uk/id/eprint/118081>

PhD viva internal examiner. Doherty, Sarah 2013. The origins and the use of the potter's wheel in Ancient Egypt. PhD Thesis, Cardiff University. PhD Supervisor: Dr P.T. Nicholson. <https://orca.cardiff.ac.uk/id/eprint/45612>

PhD supervisor 10%, with Prof. J. Hines at 90% supervision – Examined successfully Apr. 2013. **Peake, James Robert Nicholas 2013. *Early Anglo - Saxon glass beads: Composition and origins based on the finds from RAF Lakenheath, Suffolk*. PhD Thesis, Cardiff University.** <http://orca.cf.ac.uk/id/eprint/47677>

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Stone & mortars

PhD supervisor 90%, with 2nd Dr Ruth Westgate at 10%. Oct. 2014 – June 2018 (part-time).
Successfully examined 2022. **Kontogianni, Vasiliki 2022. Hydrophobic coatings and organic additives in Hellenistic-Roman mortars: the case study of Crete. PhD Thesis, Cardiff University.** <https://orca.cardiff.ac.uk/id/eprint/149401>

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