



ICCM



Foundation
ICCM
International Committee
for the Conservation of Mosaics

13th Conference for Conservation of Mosaics Barcelona. 15-20th October 2017

Ajuntament de
Barcelona



La idea de celebrar el congrés de conservació de mosaics a Barcelona sorgeix durant l'última edició feta a l'Alguer, l'any 2014. Barcelona hi participà amb la darrera peça de mosaic romà recuperada durant la intervenció arqueològica feta a la Sagrera. El que va semblar un propòsit gestat entre amics, entre col·legues d'ofici, es va convertir en una realitat. I som aquí, a 2017 i a Barcelona. Contents i satisfets d'acollir-vos després de gairebé tres anys d'anar dibuixant, plegats, com voldríem que fos aquest congrés. Us volem donar les gràcies, abans de res, amics de l'ICCM, per haver confiat en nosaltres i en les nostres il·lusions. També per fer possible el congrés i permetre'ns posar la nostra estimada ciutat al vostre abast.

Us saludo, també, en nom del Servei d'Arqueologia de Barcelona, un organisme municipal que, de manera rigorosa i tenaç, ha treballat per conèixer la ciutat i comprendre-la. Fa molts anys que no busquem tresors; fa molts anys que hem entès que el nostre bé més preuat és la pròpia ciutat. La que tenim sota els peus, però també la que configura carrers i places i que el temps, les vicissituds i les necessitats han anat transformant al llarg dels anys. La conservació del nostre patrimoni, el que dóna sentit i singularitat als llocs i identifica les persones, és essencial per a nosaltres; nosaltres que en som els administradors, en som garantia pels ciutadans. Nosaltres tenim molt present que la salvaguarda del patrimoni ha de formar part prioritària de les nostres accions, juntament amb un complex conjunt d'altres organismes municipals.

La ciutat —el nostre objecte d'estudi, el llegat a conservar— volem que es faci manifesta avui en aquest congrés a través dels seus mosaics. Des de les primeres obres d'època romana conservades als museus o in situ, fins a peces murals del segle XXI exposades a l'espai públic, i també aquells que trobem en interiors d'edificis, omplen la ciutat amb materials, formes i tècniques diverses que responen al comú denominador de mosaic.

La nostra proposta, doncs, no podia ser una altra. Ajudeu-nos a identificar els mosaics i els materials que els conformen. Ells són exponents de la història, de les modes, dels avenços tecnològics que les acompanyen, dels nous materials que els han fet possible. Vosaltres, conservadors i restauradors que teniu la responsabilitat de la seva cura i pervivència, estigueu oberts als nous reptes i sapigueu posar, ja des d'ara, la mirada en els mosaics que fa dos dies eren moderns i que ara són història. La ciutat actua com a museu i els mostra orgullosa; però també som conscients que la pròpia ciutat actua com a agent d'alteració i en fa perillar la seva pervivència.

Administració, ciutadans i professionals hem de caminar plegats per a la conservació del patrimoni, per a la preservació de la cultura i dels valors que aquesta conté. Gaudiu del congrés i de l'ocasió meravellosa que aquest ens ofereix per conèixer i viure altres realitats. Tot el que aprendrem i visquem aquests dies no farà mai nosa i ens ajudarà a enriquir-nos professionalment i personalment.

Sigueu benvinguts

Ricard Vinyes Ribas

Comissionat de Programes de Memòria

The idea of holding the conference on the conservation of mosaics in Barcelona came up during the last edition held in Alghero in 2014. Barcelona's participation was the latest piece of Roman mosaic recovered during the archaeological digs in La Sagrera. What seemed like a plan dreamed up between friends, among colleagues, has become a reality today. Here we are, in 2017 and in Barcelona. We are content and gratified to welcome you here after almost three years of gradually modelling, together, what we wanted this conference to be. We would like to give our thanks, first of all, to the friends of the ICCM, for having trusted in us and in our vision. Also for making this conference possible and giving us the opportunity to put our beloved city at your disposal.

I would also like to welcome you on behalf of the Barcelona Archaeology Service, a municipal organisation that has worked, with strict rigour and tenacity, to get to know this city and understand it better. It has been years since we left behind looking for treasures; years ago we realised that our most precious treasure is the city itself. The city under our feet, but also the city made up of streets and squares, which time, and mutability and changing needs have transformed over the years. The conservation of our heritage, which lends meaning and character to places and identifies people, is essential to us; we are its administrators, we are its guarantors for all citizens. We are very aware that safeguarding our heritage must be a priority in our activities, together with a complex ensemble of other municipal bodies.

We want the city – our object of study, the legacy we must preserve – to shine through in this conference through its mosaics. From the earliest works of the Roman period preserved in museums or in situ, to mural pieces from the 21st century on display in public space or the pieces installed inside buildings, the city is replete with a variety of materials, forms and techniques that share the same common denominator: mosaic.

Our proposal could not have been any other. Help us identify the mosaics and the materials that make them up. They are prime examples of the history, the fashions, and the technological advances that accompany them, the new materials that made them possible. All of you, conservators and restorers who are responsible for their care and survival, be open to new challenges and be ready to turn your focus toward the mosaics that were modern until very recently and that are now a part of history. The city acts as their museum and exhibits them proudly; but we also know that the city is an agent of alteration and threatens their survival.

The administration, citizens and professionals must join together in the conservation of our heritage, to preserve the culture and the values it contains. Enjoy the conference and the wonderful opportunity it offers us to discover and interact with other realities. Everything we learn and experience in the following days will have its benefit, and it will enrich us professionally and personally.

A warm welcome to you all,

Ricard Vinyes Ribas

Comissionat de Programes de Memòria

FORWARD FROM THE PRESIDENT

The closing session of the 12th ICCM conference in Alghero, Sardinia, in 2014 was highlighted by the announcement that the city of Barcelona would be hosting the 13th conference in 2017, with the theme: "WHAT COMES TO MIND WHEN YOU HEAR MOSAIC? Conserving mosaics from ancient to modern".

The central idea behind this announcement was to expand the ICCM's focus beyond ancient mosaics, celebrating the various forms of mosaic art, which so far have been considered "unusual" or "non-typical" due to their date, provenance, materials and technology. Such decision provides a unique opportunity to re-calibrate our perception of mosaic art and shed light to other forms of mosaics art, which comprise equally significant expressions of our shared material culture.

The city of Barcelona for the upcoming conference seemed the right place to materialize this conceptual shift. Located at the centre of ICCM's membership base, it also seemed a promising location in terms of numbers of contributors and participants.

A third element of interest in this conference is the introduction of a Video Session, which this year will be officially incorporated in the ICCM conferences. Videos can disseminate messages quickly and simply; they can inform, document, entertain and are more likely to be widely shared. We strongly believe that content-rich videos can be a powerful tool to conservation professionals in communicating their work and connecting more effectively with a wide range of audience, from colleagues to funding bodies, and more importantly with the public.

Today, it is our great pleasure to share with you this selection of abstracts, which confirms that the major programmatic objectives of this meeting have been achieved. Indeed, content contribution and attendance go well beyond our expectations, surpassing all the goals the ICCM has encountered in its 40 years of history. This is surely the best way to celebrate this important anniversary and at the same time to salute the new status of the ICCM Committee as a Foundation.

But let's take a closer look to the numbers: we received over 160 contributions from 35 countries in 4 different world regions. In particular:

- Abstracts for oral presentations: we received 98 proposals, of which 51 contributions were included in the final programme. The number and geographic distribution of contributions is mostly interesting: 35 countries are represented which cover a broad geographic area, from India to Canada and USA, passing through the Balkans and Northern European countries, crossing all the Mediterranean region, with broad coverage of the Southern coast.

- Abstracts for posters: we received 46 poster proposals from 21 countries, which became 64 because some oral presentations were moved to this section. Of these, it is worth mentioning the representation Costa Rica, which is entering the ICCM community for the first time.
- Abstracts for the video session: we received 22 proposals, of which 14 videos are selected for projection. Selected contributions originate from 8 countries, including Brazil –another new entry to the ICCM professional network.

One of the main missions of ICCM is to promote and develop the professional network of mosaic conservation internationally. It is therefore worth listing the countries of origin of all the colleagues who will be contributing to this conference, as proof of the role our Foundation plays in these regions and the wide diffusion of the ICCM network: Albania, Algeria, Austria, Belgium, Brazil, Bulgaria, Canada, Catalonia, Cyprus, Costa Rica, Egypt, France, Germany, Greece, Hungary, India, Israel, Italy, Jordan, Libya, Republic of Macedonia, Montenegro, Morocco, Palestine, Poland, Portugal, Serbia, Spain, Switzerland, Syria, Tunisia, Turkey, UK, USA, and Vatican City.

The numbers are definitely important and impressive, but tell only part of the story. I am proud to say that the quality of the works that will be presented at this conference is also high and the variety of topics addressed is very wide. All the aforementioned components indicate that our 13th meeting in Barcelona will be a seminal event for ICCM and the mosaic conservation profession in general.

Without the intention to review all the papers, we can take a quick look at their content through the titles of the seven working sessions which are addressed in this conference to get a general idea of what awaits us. The meeting opens with the “Management and Policies”, in which four Directors General of Departments of Antiquities and Conservation in countries of the Southern Mediterranean will present their experience and future prospects for the management of mosaic heritage.

Following that, the “Methods of survey and documentation” will attempt to bring us up to date with the current methodologies applied on a multitude of mosaic conservation contexts. The next session’s title, which is also the main theme of this meeting, the “Conservation of mosaics from ancient to modern”, aims to highlight new materials and manufacturing techniques as well as challenging conservation issues.

We will continue with presentations focusing on “Conservation, presentation and display” issues, a key session in ICCM meetings reflecting current practices in dissemination and public engagement. The fifth session is dedicated to “Education and training”, celebrating amongst other initiatives, the achievements of the MOSAIKON programme over the last decade. The last two sessions of the conference address the “Conservation and Management of sites with mosaics” and “case studies”; which place attention on the outcomes of a series of field programmes and conservation interventions, outlining signifi-

cant developments in our field and providing insights for the future of mosaic conservation.

All this is the result of three years of preparation. It mirrors the work of all ICCM board members, alongside with all those who have been instrumental in organizing this meeting and preparing this document. It is imperative, but above all it is a pleasure to thank all those who, with their work, made this possible: first of all, Stefania Chlouveraki, Vice president of ICCM, for her tireless and diligent assistance and coordination as well as Aïcha Ben Abed, ICCM Board Member, for her valuable advice and support. Anabelle Colon and Kusi Colonna-Preti, for the copy-editing of this volume. Foteini Giannoulidis, the conference secretary for her invaluable work in organizing and administering this meeting. Theocharis Katrakazis for presenting to the ICCM Board the idea of the video session and for his hard work to make it a reality. We are grateful to our hosts, the Archaeological Service of Barcelona and especially to Montserrat Pugès i Dorca who took the initiative to propose the City of Barcelona as the next conference venue and undertook all the necessary actions to facilitate this meeting. We would also like to thank ICCROM-ATHAR for providing scholarships for participants from Arab.

Last but not least, I would like to express my gratitude to the Getty Foundation which continues to support the ICCM and to which we owe many of the achievements of our committee and of the mosaic conservation field in general.

As you will notice reading through this document, the conference programme is extremely rich and interesting. I hope that this will be a stimulating and constructive meeting and that it will become another milestone in the history of ICCM, which accompanies and supports our professional life for the last forty years.

Enjoy the meeting and the exceptional examples of mosaic art in the city of Barcelona.

Roberto Nardi

ICCM President

ORGANISING COMMITTEE

The conference is organized by the ICCM in collaboration with and under the auspices of the Servei d'Arqueologia de Barcelona, a municipal body of the Institut de Cultura – Barcelona City Council. The members of the organizing committee are:

Roberto Nardi, President of ICCM, Centro di Conservazione Archeologica, Rome

Carles Vicente, Director of Memòria, Història i Patrimoni - Institut de Cultura de Barcelona (ICUB)

Stefania Chlouveraki, ICCM Vice-President, Athens University of Applied Sciences (TEIA)

Josep Pujades, Head of Archaeological Interventions - Servei d'Arqueologia de Barcelona/ICUB

Montserrat Pugès i Dorca, Head of Heritage Interventions - Servei d'Arqueologia de Barcelona/ICUB.

SCIENTIFIC COMMITTEE

Roberto Nardi, ICCM President, Centro di Conservazione Archeologica, Rome

Stefania Chlouveraki, ICCM Vice-President, Athens University of Applied Sciences (TEIA)

Gaël de Guichen, ICCM Honorary President, ICCROM

Demetrios Michaelides, ICCM President Emeritus, University of Cyprus

Anne-Marie Guimier-Sorbets, Affiliated Member AIEMA Representative, Université de Paris Ouest-Nanterre

Stefano De Caro, Affiliated Member ICCROM Representative, Director-General, ICCROM

Jeanne Marie Teutonico, ICCM Secretary, The Getty Conservation Institute, Los Angeles

John Stewart, ICCM Treasurer, The English Heritage, London

Evelyne Chantriaux, ICCM Board Member, Atelier de restauration de mosaïques et d'enduits peints de Saint-Romain-en-Gal

Aïcha Ben Abed, ICCM Board Member, MOSAIKON Regional Coordinator

Alessandro Lugari, ICCM Board Member, Soprintendenza Speciale per i Beni Archeologici di Roma

Hicham Rguig, ICCM Board Member, Curator of the Archaeological site of Chellah

Komait Abdallah, ICCM Board Member, former director of the Scientific Laboratories at General Directorate of Antiquities and Museums of Syria

Montserrat Pugès i Dorca, Head of Heritage Interventions. Servei d'Arqueologia de Barcelona/ICUB

Kusi Colonna-Preti, External Collaborator of Servei d'Arqueologia de Barcelona

Sílvia Llobet, External Collaborator of Servei d'Arqueologia de Barcelona

EXECUTIVE

Coordinators: Stefania Chlouveraki, Roberto Nardi, Montserrat Pugès i Dorca

Advisers: Mònica Mackay (Manners Congressos SL), Aïcha Ben Abed, Anabelle Colon, Kusi

Colonna-Preti, Theodoros Katrakazis

Conference secretary: Foteini Giannoulidi, secretary@iccm-mosaics.org

www.iccm-mosaic.org/

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In memory of the victims of the terrorist attack in Barcelona, summer 2017.

MOSAICS OF BARCELONA

La Rambla. Mosaic al "Pla de l'Òs" o Paviment Miró

Ciutat Vella Terratzo Segle XX. Foto: Terra conservació i patrimoni

www.barcelona.cat/mosaics

PROGRAMME

Sunday, October 15th

Pedralbes Monastery, Barcelona

- 17:15- 20:00** Conference registration
Welcome reception offered by the Ajuntament de Barcelona
- 18:00** Welcoming session:
Musical ensemble "Mosaic"
Lecture by Dr. Manuel Forcano - Institut Ramon Llull
- 19:00** Reception offered by the Ajuntament de Barcelona

Monday, October 16th

Born Centre de Cultura i Memòria, Barcelona

- 8:00** Conference registration

OPENING SESSION:

Chair: Roberto Nardi

- 9:30** Welcoming remarks by local authorities, organizers and the President of ICCM
- 10:30** M. PUGÈS I DORCA, K. COLONNA-PRETI, "My Neighbourhood's Mosaic": Citizen Participation for Barcelona's Mosaic Heritage Conservation
- 11:00** Coffee break

SESSION 1:

MANAGEMENT AND POLICIES

Chair: Gaël de Guichen

- 11:30** M. ABDULKARIM, Strategies of the Directorate General of Antiquities and Museums in Syria to Preserve the Mosaic Heritage

- 11:45** M. MERTZANI, E. ANAMATEROU, M. DELIPRIMI, F. GETIMOGLU, M. KRINI, K. PANTAZIDOU, I. VITSOU, Strategic Planning for the Protection of Mosaics in Greece
- 12:00** M. SOLOMIDOU-IERONYMIDOU, Conserving and Managing the Mosaic Heritage of Cyprus: Objectives and Concerns
- 12:15** M. JAMHAWI, A. AL-AMAREH, Ancient Mosaics in Jordan: a Tool for the Cross-Cultural Dialogue
- 12.30** Discussion
- 13:30** Lunch Break

SESSION 2:

METHODS OF SURVEY AND DOCUMENTATION

Chair: Aïcha Ben Abed

- 15:00** L. FONT PAGÈS, A. LÁZARO LUCAS, C. PUERTO GIMÉNEZ, Conservation Program of Mosaics on Archaeological Sites Open to the Public in Barcelona
- 15.15** M. P. PÉREZ CHIVITE, Methodology of Documentation and Conservation In Situ: Roman Mosaics of Mérida
- 15.30** X. FABRÉ, L. DILMÉ, "The Barcelona of Vilassar de Dalt": an Extreme Example of Hydraulic Mosaic in the Council Library Can Manyer
- 15:45** A. WEICHBRODT, M. KUHN, Made-to-Measure: Developing and Employing a PostgreSQL/PostGIS Documentation System
- 16:00** S. CHLOUVERAKI, Examination and Documentation of Portable Mosaics: the Case of the Mosaic Icon of Panagia Pammakaristos

SPECIAL SESSION:

The Santa Creu i Sant Pau Hospital's mosaics

- 16:15** K. COLONNA-PRETI, S. LLOBET I FONT, The Santa Creu i Sant Pau Hospital's Mosaics in Barcelona: How New Insights into the Technique Influenced Its Restoration
- 16:30** Discussion
- 17:00** Session closure

GUIDED VISIT:

- 18:00** Recinte Modernista Sant Pau guided tour per groups (participants must sign up for the visit at the conference registration desk)

18:00 – 19:00: Group 1 to 4

19:00 – 20:00: Group 5 to 8

Participants are requested to be on the stop 5 minutes before the visit starts.

Tuesday, October 17th

Born Centre de Cultura i Memòria, Barcelona

SESSION 3a:

CONSERVATION OF MOSAICS FROM ANCIENT TO MODERN

Chair: Montserrat Pugès i Dorca

- 9:00** A. GAMARRA CAMPUZANO, M.J. GARCÍA MULERO, The Ornamental Suns from the Hypostyle Hall of the Park Güell, Barcelona: the Complexity of Mosaic Glass, and Its Conservation Problems
- 9:15** M. KINDT, F. LOMBAERS, Re-Appreciating the Art of Art Nouveau Mosaics in Brussels: Challenges in the Conservation of Mosaics in Use

- 9:30** X. LAUMAIN, A. LÓPEZ SABATER, Key Aspects and Criteria for the Restoration of Nolla Mosaics

- 9:45** T. NAVAS FERRER, Contemporary Mosaics: the Case of Hydraulic Mosaic

- 10:00** I. ANDRADE MARQUES, Mosaics and Modern Lisbon: the Surrealistic Panels of Carlos Calvet (1956)

- 10:15** L. M. TAPINI, Concrete and the Revival of Mosaics and Terrazzo Floors in Athenian Architecture

- 10:30** Discussion

- 11:00** Coffee break, Poster and Video Session 1

SESSION 3b:

CONSERVATION OF MOSAICS FROM ANCIENT TO MODERN

Chair: Miquel Mirambell Abancó

- 12:00** R. CASSIO, Mosaics Conservation Methods in Venetian Style Floorings Restoration

- 12:15** Y. SELÇUK SENER, B. ESKICI, The Removal and Transportation Works of Wall Mosaics of the Year 1956 Made by Two Artists in Ankara

- 12:30** S. VELLA, M. C. GAETANI, U. SANTAMARIA, The "Tarot Garden" by Niki de Saint Phalle

- 12:45** Discussion

- 13:30** Lunch break

SESSION 4a:

CONSERVATION, PRESENTATION AND DISPLAY

Chair: Jeanne Marie Teutonico

- 15:00** J. CHLOROS, A Fresh Look 56

Years Later: a Roman Mosaic Pavement Rebuilt

- 15.15** C. RICCARDELLI, B. EDELSTEIN, D. ABRAMITIS, The Reinstallation of a Roman Mosaic in the Collection of the Metropolitan Museum of Art, New York
- 15.30** B. MAHAMID, H. AL TAHER, Mosaics of Madaba Between Past and Future
- 15.45** I. HAJ DAOUD, A. RJOOB, Protective Shelter for the Mosaic Floor of the Great Bath Hisham's Palace, Jericho
- 16.00** R. NARDI, The Long Road of Mosaic Conservation, a Clear Evolution Toward the Future
- 16.15** C. MARTÍ ROBLEDO, Mosaic and Trencadís at Palau de la Música Catalana
- 16.30** Discussion
- 17.00** Session closure

GUIDED VISIT:

- 18:00** Palau de la Música guided tour per groups (participants must sign up for the visit at the conference registration desk)
- 18:00 – 19:00:** Group 1 and 2
- 19:15 – 20:15:** Group 2 and 4
- (Sunday, October 22:
18:00 – 19:00: Group 5)
- Participants are requested to be on the spot 5 minutes before the visit starts.
- 20:30** Reception offered by the Getty Conservation Institute at Diputació main's hall: Edifici del Relloge

Wednesday, October 18th

FULL DAY EXCURSION:

- 8.00** Buses depart from El Born CCM, Barcelona to Empúries

Special Session: Lectures on Site

- 10.00** Museu d'Arqueologia – Empúries, guided tour in Greco-Roman archaeological site.
- S. LLOBET I FONT, P. ROVIRA I PONS, M. À. CALVO TORRAS, R. BAGAN PÉREZ, Documentation, Material Study, and Biodeterioration Analysis as Part of the Project to Conserve the Mosaics Located in Empúries
- 13:00** Buses depart from Empúries
- 13:30** Lunch break at Girona
- 15:30** Museu d'Arqueologia de Catalunya – Girona: Monestir de Sant Pere de Galligants.

L. LARA RODRÍGUEZ, S. LLOBET I FONT, J. M. LLORENS, M. À. JORBA, The Theseus and Ariadne Mosaic, Bell-lloc del Pla, Girona, 1876-2016: from Obscurity to the Museum

Free time to walk around the city of Girona

- 18:30** Buses depart from Girona
- 20:00** Arrival at El Born CCM, Barcelona

Thursday, October 19th

Born Centre de Cultura i Memòria, Barcelona

SESSION 4b:

CONSERVATION, PRESENTATION AND DISPLAY

Chair: Stefania Chlouveraki

- 9:00** II. MORENO MARTÍNEZ, 100 Years of Conservation and

Restoration of Mosaics in the Archaeology Museum of Catalonia-BCN

9:15 S. BORGHINI, A. LUGARI, R. NARDUCCI, Archaeology in the Box: from Discovery to Explanation in a Roman Yard

9:30 M. TUTOVSKI, What Comes to Visitors' Minds When They Hear Mosaic but They Can't See It? Restoration and Presentation of the Mosaics from the Episcopal Complex in Stobi

9:45 T. PASÍES OVIEDO, Intervention Project of the Roman Pavements of the Villa Cornelius, L'Enova, Valencia, Spain

10:00 A. LUGARI, Incrustations: Conservation, Restoration, and Reconstruction

10:15 C. GIROIRE, M. MARQUE, An Outstanding 19th Century Restoration: the Mosaic of Neptune and Amphitrite from Constantine, Present-Day Algeria (Louvre Museum A)

10:30 Discussion

11:00 Coffee break, Poster and Video Session 2

SESSION 5:

EDUCATION AND TRAINING

Chair: Demetrios Michaelides

12:00 J.M. TEUTONICO, L. FRIEDMAN, MOSAIKON Ten Years Later: Objectives, Outcomes, and Opportunities

12:15 T. ROBY, L. FRIEDMAN, M. CHAOUALI, H. RHOUMA, L. ALBERTI, E. CARBONARA, The Conservation Plan for Mosaics at Bulla Regia, a Component of the MOSAIKON Model Field Project

12:30 A. PENCHEVA, Workshop on Mosaic Conservation: Sustainable Platform for Education and Site Management

12:45 Discussion

13:15 Presentation of candidatures for the new board

13:45 Lunch break

13:45 Vote for the new board

SESSION 6:

CONSERVATION AND MANAGEMENT OF SITES WITH MOSAICS

Chair: Evelyn Chantriaux

15:00 V. KALTAPANIDOU, F. KARAGIANNI, A. PETKOS, E. CHRISTOFORIDOU, M. PAPATHANASIOU, E. ANAMATEROU, D. CHRYSOPOULOS, The St Patapios Archaeological Site in Veria (4th - 5th Century)

15:15 F. SCIORILLI, The Restoration of the Mosaics of the Memorial of Moses on Mount Nebo

15:30 T. SHAABAN, Impact of the War and Crises on the Syrian Mosaics

15:45 E. CHARALAMBOUS, AKROTIRI LEMESOU, the Importance of Preventive Conservation and Reburial During the Excavation of Mosaics

16:00 P. HATICE, The Sundial and Convivium Mosaic from a Late Antique House in Antioch: Documentation and Conservation Works

16:15 Discussion

16:45 Session closure

GUIDED VISIT:

17:30 Museu d'Història de Barcelona, guided tour to the Underground area: Avinyó and Sant Honorat Roman domus (participants must sign up for the visit at the conference registration desk)

17:30 – 18:30: Group 1 (starting at Avinyó)

17:30 – 18:30: Group 2 (starting at Sant Honorat)

18:30 – 19:30: Group 3 (starting at Avinyó)

18:30 – 19:30: Group 4 (starting at Sant Honorat)

19:30 – 20:30: Group 5 (starting at Avinyó)

19:30 – 20:30: Group 6 (starting at Sant Honorat)

Participants are requested to be on the spot 5 minutes before the visit starts.

Friday, October 20th

Born Centre de Cultura i Memòria, Barcelona

SESSION 7a:

CASE STUDIES

Chair: Alessandro Lugari

9:00 E. CHANTRIAUX, M. HAYES, C. LAPORTE, Conservation-Restoration of Mosaics from the Area of Antiquaille in Lyon, Conducted by the Atelier of Saint-Romain-en-Gal

9:15 D. GENNARI, C. CACACE, D. CATALANO, R. CIABATTONI, L. CONTI, V. MASSA, L. MEDEGHINI, F. MORO, A. RUBINO, G. SIDOTI, M. TORRE, The Restoration of Mosaics in the Caetani Chapel in the St. Pudenziana Church (Rome): Initial Observations

9:30 A. GAMARRA CAMPUZANO, E. PORTA, The Mamelouk Fountain (XIVth Century) from the Museum of Islamic Art of Cairo (Egypt): Technique and Building Materials of this Islamic Mosaics Heritage

9:45 K. SCHNEIDER, F. GUIDUCCI, The Pretty, the Ugly, and the Uncommon: Conservation of Three Roman Mosaics from Ostia Antica, Italy

10:00 M. FRANKOVIC, Ž. CELEBIC, B. BRAJOVIC, D. MAKSIMOVIC, D. DAVIDOVIC GNJATOVIC, Regional Collaboration Project: Conservation and Restoration of Ancient Mosaic from Villa Urbana in Budva

10:15 Discussion

11:00 Coffee break and announcement of the elected members of the ICCM new board

SESSION 7b:

CASE STUDIES

Chair: Anne-Marie Guimier-Sorbets

12:00 Y. DOGANIS, A. GALANOS, M. KAPPAS, Restoring the Legibility of a Byzantine Opus Sectile Pavement, Monastery of the Transfiguration, Messene, Greece

12:15 M. PIRANOMONTE, A. BORZOMATI, The Colourful Mosaics of the Gyms of the Baths of Caracalla in Rome: an Example of Restoration and Conservation in a Famous Roman Monument

12:30 B. DANDONA, S. SHAH, Challenges of Terrazzo Conservation in Colonial

Buildings in Delhi, India

12:45 Discussion

13:30 Lunch break

CLOSING SESSION:

Chair: Roberto Nardi

15:00 J.M. TEUTONICO, ICCM XIII
Conference, Barcelona 2017: a
Critical Review

15:30 Announcement of the winning
video and Conference closure
by the ICCM President

17:00 Session Closure

20:00 - 23:00 Closing reception
offered by ICCM at
AGBAR Museu de les
Aigües, Cornellà de
Llobregat

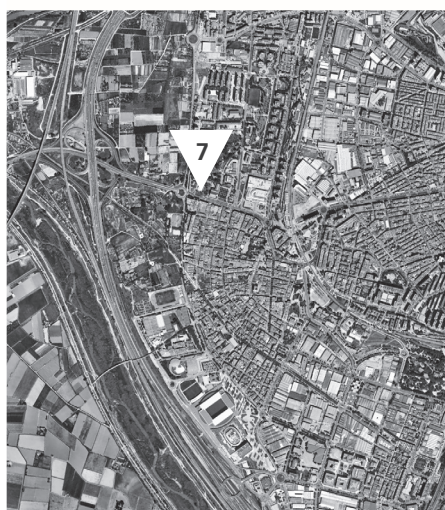
Sunday, October 22d

Palau de la Música Catalana, Barcelona

GUIDED VISIT

18:00 Palau de la Música, Group 5
(participants must sign up
for the visit at the conference
registration desk)

HOW TO GET THERE



1**EL BORN CENTRE DE CULTURA I MEMÒRIA**

Plaça Comercial, 12

08003 Barcelona

Bus: 14, 17, 19, 39, 40, 45, 51, 120**Metro:**

Jaume I or Barceloneta (L4)

Arc de Triomf (L1)

Train stations:

Estació de França

Arc de Triomf

2**REIAL MONESTIR DE SANTA MARIA DE PEDRALBES**

Baixada del Monestir, 9

08034 Barcelona

Metro: Maria Cristina or Palau Reial (L3)**Bus:** H4, 59, 63, 68, 78**Tourist bus:** blue route**FROM BORN:****Bus:** 59 from Plaça de Palau (1 hour)**FGC:** L12 from Plaça Catalunya to Reina Elisenda

and 15 minutes walk (40 minutes)

Taxi: (25 minutes)**3****RECINTE MODERNISTA SANT PAU**

Carrer de Sant Antoni Maria Claret, 167

08025 Barcelona

Bus: H8, 19, 20, 45, 47, 50, 51, 92, 117, 192**Metro:** Sant Pau Dos de Maig (L5)**FROM BORN:****Bus:** 51 from Estació de França (35 minutes)

45 from Via Laietana-Jutjats to Sant Pau (35 minutes)

Metro: L4 from Jaume I to Verdaguier; change to L5 to Sant Pau Dos de Maig (35 minutes)**Taxi:** (15 minutes)**4****DIPUTACIÓ DE BARCELONA – EDIFICI DEL RELLOTGE**

Carrer del Comte d'Urgell, 187

08036 Barcelona

Bus: 59**Metro:** Hospital Clínic (L5)**FROM BORN:****Bus:** 59 from Plaça de Palau (35 minutes)**Metro:** L4 from Jaume I to Verdaguier; change to L5 to Hospital Clínic (30 minutes)**Taxi:** (15 minutes)**5****PALAU DE LA MÚSICA CATALANA**

Carrer Palau de la Música, 4-6

08003 Barcelona

Bus: 45, V15, V17**Metro:** Urquinaona (L1 or L4)**FROM BORN:**

12 minutes walk

Metro: From Jaume I to Urquinaona (L4) 15 minutes**Bus:** 45, V15, V17 from Via Laietana to Via Laietana_comptal (20 minutes)**6****MUSEU D'HISTÒRIA DE BARCELONA (MUHBA)**

Domus de Sant Honorat

Carrer de la Fruita, 2

Domus d'Avinyó

Carrer d'Avinyó, 15

08002 Barcelona

12 minutes walk from Born

7**AGBAR MUSEU DE LES AIGÜES**

Carretera de Sant Boi, 4-6

08940 Cornellà de Llobregat

Bus: 67, 68, L74, L75, L82, L85**Metro:** Cornellà Centre (L5)**FGC:** Cornellà Riera (L8)**Trambaix:** T1 i T2**FROM BORN:****Trambaix:** T1 i T2 Les Aigües (44 minutes from El Born)**Taxi:** (25 minutes)



ORAL COMMUNICATIONS

"My Neighbourhood's Mosaic": Citizen Participation for Barcelona's Mosaic Heritage Conservation

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The 13th Conference for the Conservation of Mosaics that will be held in Barcelona brings forward the issue of its repercussion on the city. Repercussion means the effect that something has on something else. Translated into the scientific conference, what effects could it have on the city? How can the conference have an impact on the building heritage? Will we be able to make the citizens benefit from it?

The project submitted was developed based on the decision held by the Barcelona City Council to hold and manage the 13th Conference for the conservation of mosaics. A city council is the public administrative body responsible, among other things, for the conservation and maintenance of the goods of public domain in the local context. Conscious of Barcelona's rich public and private mosaic heritage, it became essential to obtain the citizens' commitment and complicity in order to ensure its preservation.

By means of the creation of a website and by getting together various institutions and academic organisms, added to an important number of volunteers, it has been possible the implementation of a project named "El mosaic del meu barri" ("My neighbourhood's mosaic") during 2017. This project is about urban conservation of mosaics through a combination of didactics and participation that can be resumed under the slogan "knowing for loving, loving for valuing and valuing for conserving".

MOSAICS OF BARCELONA

*Plaça Comercial, 12. Antic mercat del Born Ciutat Vella.
Mosaic de rajola ceràmica. Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Strategic Planning for the Protection of Mosaics in Greece

Maria MERTZANI, Elisavet ANAMATEROU, Maria DELIPRIMI, Fotini GETIMOGLU, Maria KRINI, Kassiani PANTAZIDOU, Ioanna VITSOU

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The mission of the Directorate of Conservation of Ancient and Modern Monuments is the development of national strategies and policies for the conservation of cultural property. The Directorate also undertakes national and European co-funded large scale conservation projects. This paper focuses on the strategic planning for the protection of mosaics, from ancient to modern. It is illustrated with examples dealt with in the last couple of years.

The priority areas set out in our planning are:

- In situ preservation and conservation of mosaics
- Establishment of close collaboration with jointly responsible institutions for common approach
- National survey on the detached and in situ mosaics
- Addressing and restoring older approaches
- Designing schemes for treating and storing detached mosaics
- Communication of our work to the public

Current approaches in the field have been reformed in the last decades, strongly favouring in situ preservation. The Directorate during this restrained financial environment aims to contribute ethically and creatively to the protection of cultural property and its values.

MOSAICS OF BARCELONA

*Ronda Sant Pere, 40 / Carrer del Bruc, 10. Antiga farmàcia Doctor Palomas,
Exemple, Mosaic de tesselles, Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Conserving and Managing the Mosaic Heritage of Cyprus: Objectives and Concerns

Marina SOLOMIDOU-IERONYMIDOU

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marinasieronymidou@gmail.com

The Department of Antiquities of Cyprus focuses on the management and conservation of archaeological sites, and has adopted new strategies concerning the protection of monuments, and especially those preserving mosaics. These strategies are in fact part of the policy of the Department aiming at the study, management, preservation, and promotion of the archaeological heritage of Cyprus. This policy is best reflected in the development of concrete Conservation Programmes and Management Plans, and the creation, or upgrade, of an appropriate infrastructure, in order to make cultural heritage accessible to the entire society, and raise awareness on the significance of archaeological and cultural values. Furthermore, the Department's recent focus on the multi-disciplinary approach to archaeological heritage, places Cypriot archaeology and conservation in the sphere of current international scientific developments, thus encouraging the collection of new data and the increase of knowledge.

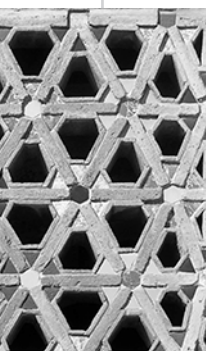
Despite the difficult financial times that Cyprus, and many other countries, are currently facing, the strategies and methodologies relating to the conservation and preservation of the archaeological heritage, are supported by government decision-makers. It is through our collaborative efforts that we will be able to build a solid framework in order to achieve the better management, conservation and promotion of the values of our common heritage for the benefit of future generations.

MOSAICS OF BARCELONA

Avinguda de Pedralbes, 7. Pavellons de la finca Güell Les

Corts Trençadís Segle XIX A. Foto: A. Schulz

www.barcelona.cat/mosaics



Ancient Mosaics in Jordan: a Tool for the Cross-Cultural Dialogue

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Ahmad AL-AMAREH

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The Department of Antiquities of Jordan was established on 1923 and since that time it has taken the responsibility under the law to excavate, restore, and protect Jordan's antiquities and to present part of the antiquities as a cultural tourism product. Mosaics in Jordan are covering the periods between the first centuries BC to the ninth century AD, which are mainly found in churches, palaces, and sometimes in Mosques. The oldest mosaic floor in Jordan is the one discovered at Herod palace in the site of Makawir (1st century BC) and the latest one is the Church of Virgin Mary at Madaba (9th century AD).

Most of the artistic features of mosaics in Jordan are related to churches built during the Islamic era (Umayyad and Abbasid), such as the Virgin Mary Church and St. Stephan Church in Umm Ar Rasas, dating back to the eightieth century AD, and three churches at the Baptism site. This shows that the Christians continued practicing their rituals peacefully even during and after the Islamic expansion.

The classical approach and the existing procedures for taking care of our cultural heritage proved that vandalism, illegal trading, and illicit trafficking of objects and mosaic floors are still active. Therefore, the need for a new perspective to change the procedures in saving our heritage has become crucial. This paper will focus on how ancient mosaics could be a tool for cross cultural dialogue when promoting them as a human innovation. The mosaics are full of messages and stories that should be respected and saved no matter the period or peoples to which they relate. We need to demonstrate this concept as a religious obligation; a commitment where religious people should share with us the responsibility in this mission.

MOSAICS OF BARCELONA

Avinguda Diagonal, panot Eixample Terratzo.

Segle XXI. Foto: anònim

www.barcelona.cat/mosaics



The Long Road of Mosaic Conservation, a Clear Evolution Toward the Future

Roberto NARDI

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The history of the last 40 years of mosaic conservation is directly linked to the life of ICCM. From the times of secret recipes, of individual craftsmen, of no planning, of no documentation, of lifting pavements, of concrete, and gypsum supports, of no communication, today we can affirm that great changes have emerged in the profession.

ICCM played a crucial role in this evolution and is ready to sustain the next generation's challenges. This presentation tries to give a picture of the situation today and to anticipate the direction where the profession is going in the near future.

MOSAICS OF BARCELONA

Carrer de les Monges, 27-33. Església de Sant Pacià.

Sant Andreu Mosaic de tessels Segle XIX. Foto: Anònim

www.barcelona.cat/mosaics





MOSAICS OF BARCELONA

*Passatge del Cementiri, 1 Sants-Montjuïc Mosaic
de rajola ceràmica Segle XX. Foto. A. Schulz
www.barcelona.cat/mosaics*

Conservation Program of Mosaics on Archaeological Sites Open to the Public in Barcelona

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Carla PUERTO GIMÉNEZ**

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The Barcelona History Museum has developed a program aimed at conserving and managing the varied repertoire of mosaics that the museum safeguards: from Roman to modern hydraulic mosaics; preserved in situ or removed; displayed or stored.

In this paper we will focus on mosaics preserved in urban archaeological sites (some of them excavated and opened to the public for nearly 75 years) all of which are located under later constructions that generate particular environmental conditions.

Over the years, some of these mosaics have received various treatments reducing porosity of the surface and, therefore, reducing its moisture permeability. On the other hand, they are built on a terrain where composition and hydrogeological characteristics do not favour conservation. Twenty years ago, works were carried out in: monitoring, control, maintenance, and systematic response, searching effective and efficient channels of action.

The starting point has been the study of the condition, completed with the analysis of the characteristics of the environment as well as the technique and material used in the execution of mosaics. The goal has been to address conservation globally. The systematic work of documentation has generated a detailed clinical history that has been the basis for programming the necessary interventions, prioritizing indirect actions. In this process incorporating orthophotography has enabled a major leap forward.

MOSAICS OF BARCELONA

Carreer del Bisbe Caçador, 4 (MUHBA) Ciutat Vella

Mosaic de tessels Romans. Foto: Mariana Arias Graterol

www.barcelona.cat/mosaics



Methodology of Documentation and Conservation In Situ: Roman Mosaics of Mérida

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Mosaic documentation has always been one of the main challenges for any professional in this field. A graphic quality record is a great job, often expensive in time, in personnel, and also in technological equipment such as the laser scanner.

As we know, not only is the initial state after excavation important, but so are all modifications or alterations that the work may suffer for life. Therefore, the realization of this documentation should be agile and practical for its use, both for conservators and for any specialist. Unfortunately, photography is a tool that does not satisfy these needs completely.

With this objective, and after a long research work in the Mérida site, we present a new methodology to document the mosaics in situ. In accordance with the criteria of preventive conservation and compatible with the more than 1000 m² of mosaic surface that are exposed to the public in this city.

For this, it has been necessary to resort to new technologies, specifically to short-range 3D photogrammetry and to a Geographic Information System (GIS). With these tools we have produced a corpus of georeferenced orthophotographs with a real scale of 1:1, and a series of damage maps that allow us to document these magnificent works, in a precise and objective way, and of course, with agility and low cost.

MOSAICS OF BARCELONA

*Carri de Salvà, 42. Lleteria BP, façana. Santis-Montjuïc
Mosaic de tessell·les. Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



"The Barcelona of Vilassar de Dalt", Extreme Example of Hydraulic Mosaic in the Municipal Library of Can Manyer

Xavier FABRÉ, Lluís DILMÉ

Dilmé Fabrè Torras i Associats, Catalonia,

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When working to transform an old industrial nave into the city library "Can Manyer" in Vilassar de Dalt, we definitely kept intact the crazy flooring made up of rejected hydraulic mosaic tiles from various manufacturers. Facing the long repertoire of such exuberant models we decided to do a full inventory and study the origin of the tiles.

There were all kinds of tiles, including those coming from the best factories of hydraulic mosaic designed by Antoni Rigalt, Josep Pascó, Joan Fabrè Oliver, Josep Font i Gumà, Bonaventura Bassegoda, Lluís Domenech i Montaner, Joan Rubió i Bellver, Enric Sagnier among others artists and architects.

However, there were some tiles scattered among the aforementioned, that did not correspond to any geometric drawing. We gathered those tiles and composed them like a giant puzzle to reconstruct an allegory of the city of Barcelona. We gave it a nickname: "The Barcelona of Vilassar de Dalt". It is an example of extreme complexity in design and production of hydraulic mosaic. At the moment we do not know the manufacturer or designer, we do not know yet why their prototypes ended up mixed in this splendid pavement from rejection.

MOSAICS OF BARCELONA

Plaça del Rei, s/n. (MUHBA), mosaic de la domus del peristylum Ciutat

Vella Mosaic de tesselles Romana. Foto Arias Graterol

www.barcelona.cat/mosaics



Examination and Documentation of Portable Mosaics: the Case of the Mosaic Icon of Panagia Pammakaristos

Stefania CHLOUVERAKI

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The mosaic icon of 'Panagia Pammakaristos' (Virgin Mary Pammakaristos), a major sacred relic of the Ecumenical Patriarchate of Constantinople is an outstanding example of the mosaic art of the 13th century. It measures 92x62 cm and is made of minute glass, gold, and stone tesserae set on a wooden support with a wax-mastic paste, a rather rare technique met in Byzantine art. The icon has suffered severe deterioration caused by biological agents and mechanical stresses related to the microclimate and the continuing worship practices. Moreover, extensive interventions were undertaken in 1993, which provided sufficient support at the time and allowed the safe litany and worship of the icon; yet its aesthetic value and authenticity was compromised.

Image-based diagnostic techniques such as radiography (X-Ray) and computerized tomography (CT-Scan) were employed in examination of the icon, which revealed the inner structure, conservation interventions and reintegration of the losses, while Reflectance Transformation Imaging (RTI) provided a useful tool for the documentation and remote examination of the icon's surface under various lighting angles.

Imaging combined with non-destructive analytical techniques contributed to the understanding of the materials as well as the nature and extent of deterioration. Yet, key factors in the conservation decisions are the religious value and context, as well as the functional needs with respect to the worship practices, which are associated with the icon throughout its history. This presentation discusses the challenges met in the documentation and conservation of the icon with reference to technical and ethical issues.

MOSAICS OF BARCELONA

Ronda Universitat, 20. Antiga Casa Escófet, Example
Mosaic hidràulic Segle XX. Foto: anònim
www.barcelona.cat/mosaics



The Santa Creu i Sant Pau Hospital's Mosaics in Barcelona: How New Insight into the Technique Influenced Its Restoration

Kusi COLONNA-PRETI

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Sílvia LLOBET I FONT

ÀBAC. Conservació-Restauració SL, Catalonia, silvia@abac-sl.cat

Besides the innovative architecture of the Hospital de la Santa Creu i Sant Pau, designed by architect Lluís Domènech i Montaner (1850–1923), the Hospital boasts powerful decoration and its spectacular mosaics are a highly significant form of ornamentation.

Our aim was to assess the Modernist mosaics by focusing on the figurative frieze of the Administrative Pavilion (1902-1911), the result of a joint collaboration between painters Francesc Labarta and Alfonso Vicente, and Genoese mosaic artist Mario Maragliano. The frieze's 16 panels, which portray the history of the institution and decorate the outside of the building, combine ceramic and Venetian mosaics and are based on the method of indirect creation.

The conservation-restoration work carried out between 2009 and 2011 provided further insight into the means of manufacture used by Maragliano and shed light on previously unknown technical characteristics. Additional information was also taken from historical sources and the scientific analysis of the materials and degradation processes.

Knowledge of these technological characteristics, which are related to the boom in art and urban development in Modernist-era Barcelona, was instrumental in selecting materials and procedures during the conservation and restoration intervention.

MOSAICS OF BARCELONA

*Carri del Doctor Ibáñez, 38. Cristalleries Planell
Les Corts Mosaic de tessell·les. Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

Escales de Montjuïc Sants-Montjuïc Mosaic de rajola ceràmica Segle XX.

Foto: María Jesus García Fabregas

www.barcelona.cat/mosaics

The Ornamental Suns from the Hypostyle Hall of the Park Güell, Barcelona: the Complexity of Mosaic Glass and Its Conservation Problems

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María José GARCÍA MULERO

Gamarra & García conservació i restauració SL, Catalonia,

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The works to consolidate the support of the ornamental suns, carried out during the year 2016, have been an opportunity to discover and document the technical complexity of these mosaics, made with a great variety of colours and textures of glass and various objects (glasses, bowls, dishes, bottles, etc.) masterfully used to perform the compositions of these works of art.

These creative geniuses have always had many technical problems fastening. Consolidation which, among other processes, forced us to make the extraction of this glass skin, allowed to deepen the understanding of this special technique of mosaic. The study of the pieces of glass (size, texture, colour, and layout), supplemented with analysis of mortars during the restoration phase, speaks to the execution technique and to the different interventions to the present day.

Aspects such as the election of the union mortar, the valuation of modern interventions, the difficulty of being located on a ceiling or the maintenance and restoration of the relief, are only some of the complexities when conducting restorations of this kind of mosaics.

MOSAICS OF BARCELONA

Carrer de Marie Curie, 20 Nou Barris

Mosaic hidràulic Segle XX. Foto: Joan Escudé

www.barcelona.cat/mosaics



Re-Appreciating the Art of Art Nouveau Mosaics in Brussels: Challenges on the Conservation of Mosaics in Use

Mikal KINDT

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Françoise LOMBAERS

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Late 19th Century mosaics with their whiplash curves and their particular compositions, interacting with the surroundings in defining ways, fitted perfectly in the open architecture of the time. Under the impulse of Eugène Viollet-Le-Duc, mentor of Victor Horta, many architects contributed to that open architecture, making Brussels a bastion of Art Nouveau.

Unfortunately this mosaics heritage has been partially lost due to functional changes of the mosaics and a lack of appreciation of its cultural significance. Putting these Art Nouveau mosaics back in the spotlight of the public, as well as highlighting their value and mapping them out, could prevent further reduction of their numbers.

Safeguarding this legacy of mosaics is quite complicated in terms of compatibility. Not only compatibility in a physical and mechanical sense between the restoration and the original mosaic, but also in terms of technical complexity as materials that were used in their construction were often new to that period and sometimes poorly adapted. The issues of compatibility are also examined in relation to the current and future function and use – sometimes over-use – the aesthetics, and the expectations and requirements of the owners, authorities and architects.

Our aim is to promote technical expertise combined with a survey and mapping of the mosaics in Belgium to ensure their maximum preservation in private and public buildings.

MOSAICS OF BARCELONA

*Carrer de Marina, 197. Jardins Interior d'illa de Clotilde Cerdà Sant Martí Mosaic de tessell·les Segle XXI. Foto: Olga Martínez
www.barcelona.cat/mosaics*



Key Aspects and Criteria for the Restoration of Nolla Mosaics

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Angela LÓPEZ SABATER

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The Nolla mosaic is a revolutionary product of the 19th and early 20th century ceramic industry. Apart from being widespread in Spain it also had a high impact worldwide, especially from a historical, artistic, and even industrial view point.

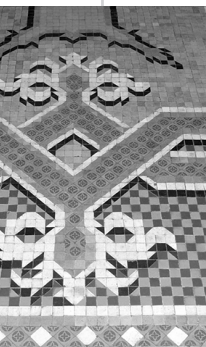
These mosaics are composed of small geometric, colored tiles, laid out on large scale surfaces without using grout lines. The characteristics of the material, as well as its installation, are so specific that they categorically determine the restoration process. Due to such aspects and the recent interest in this material, procedure protocols have not, as yet, been established.

In order to carry out an adequate restoration it is essential to have a thorough knowledge of the mosaics characteristics, pathology, and criteria.

In our paper, we will define each element and process required for the correct restoration of Nolla Mosaics.

MOSAICS OF BARCELONA

*Rambla de Fabra i Puig, 13. Can Guardiola, paviment amb sanefa ocre Sant Andreu. Mosaic de gres ceràmic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Contemporary Mosaics: the Case of Hydraulic Mosaic

Teresa NAVAS FERRER

Universitat Politècnica de Catalunya, teresa.navas@upc.edu

Any discussion of contemporary mosaics must highlight the hydraulic tile. Its contribution to the renovation of cladding materials in architecture was essential at a time of transformation marked by industrialisation of production processes. First, this tile, which was both economical and a contribution to hygiene, was a modern and efficient response to the requirements of surfacing in large-scale constructions after the end of the nineteenth century. Second, in comparison with the variety of existing techniques, it represented a qualitative leap forward in terms of industrial design.

The subject of this study is hydraulic mosaics designed and laid in the last third of the nineteenth century and early years of the twentieth. It will focus on Catalan production and, in particular, the most prominent and long-lived company, the mosaic tile manufacturer Escofet. The aim is to draw attention to recognition of the hydraulic tile as cladding which excelled with its high degree of artistic creativity in adapting, from the outset, to the distinctive elements of industrial design, namely business strategy, autonomous production with regard to the projects of architecture, its niche in the market and the evolution of consumer tastes, as well as its links with cultural and social factors of the time.

MOSAICS OF BARCELONA

*Carrer d'Amílcar, 10 Nou Barris, Mosaic hidràulic
Segle XX. Foto: Charo González
www.barcelona.cat/mosaics*



Mosaics and Modern Lisbon: the Surrealistic Panels of Carlos Calvet (1956)

Inês Maria ANDRADE MARQUES

CICANT/Universidade Lusófona de Humanidades e Tecnologias, Portugal,
inesravi@gmail.com

Lisbon, mid-1950s. New areas of the city were built according with new urban and architectural paradigms, integrating the principles of rationalism and functionalism. Many artists and architects tried to achieve the integration of the arts, an ideal praised in the aftermath of the Second World War. Ancient artistic techniques as tiles, stone pavements and mosaic panels were aesthetically updated and widely used.

However, the abandonment of earlier modes of construction and the dissolution of traditional urban vocabulary led to the disappearance of previous forms of artistic punctuation of space. The mosaics and other artistic languages had to accommodate to new architectural volumes and new urban spaces. This paper deals with this process of adaptation, focusing on the specific case of the surrealistic mosaics of Carlos Calvet (circa 1956) in a modernist urban unit in Lisbon.

MOSAICS OF BARCELONA

Avinguda Diagonal, 684. "Les taules de la Llei" Les Corts

Mosaic de rajola ceràmica. Segle XX. Foto: Terra Conservació i Patrimoni

www.barcelona.cat/mosaics



Concrete and the Revival of Mosaics and Terrazzo Floors in Athenian Architecture

Laura Melpomeni TAPINI

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Greece, for most people brings instant images of Antiquity and Byzantium, even though creation and experimentation in arts and architecture flourished in recent history as well. The present paper explores the use of mosaic and terrazzo floors in buildings of Athens, during its most creative architectural period of the past century, the years between the two World Wars. Four styles prevailed in the Interwar Athenian architecture: neo academic, popular, modernist, and modern movement. New architectural languages were characterized mainly by the use of concrete, the modern material of the era, also for the fabrication of floor finishes.

The main objectives of this paper are to highlight how ancient flooring techniques were also used in a modern architectural context, modified merely due to the use of concrete; and to raise awareness for the safeguarding of these floors as inseparable elements of Greek architectural history.

The research includes examples from each architectural style that were examined in situ, documented and catalogued, enabling the comparison on the choice of floor finishes, their position in the building and the status of their preservation.

Three, are the main flooring categories of those years: Mosaics, Terrazzo with decorative patterns and simple Terrazzo. Although the types of decay in all three categories were similar, questions on conservation issues raise regarding both philosophical and technical aspects.

MOSAICS OF BARCELONA

*Carrer de Vilalba dels Arcs. Parc Central de Nou Barris
Terratzo Segle XX. Foto: Terra Conservació i Patrimoni
www.barcelona.cat/mosaics*



Mosaics Conservation Methods in Venetian Style Floorings Restoration

Roberto CASSIO

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The Venetian Style floorings ("Pavimenti alla Veneziana") have always been considered a form of high craftsmanship that has developed since the fifteenth century from Venice into most of Italy.

Their technical qualities, as well as their high elastic response, made these particular floorings very popular in this area, where the stability of the building is weak, due to the high percentage of marshlands in the soil of the Venice area. In recent times this feature allowed the floors of a building in the historic centre of L'Aquila to withstand, without major damage, the devastating earthquake of 2009.

The design of these floorings can be compared with the finest mosaics with ornamental patterns and in this elaborate restoration they have been treated that way.

To effect this restoration, it was deemed necessary to remove the precious floorings, to be able to buttress and strengthen the building.

Every stage of this restoration will be documented, from the detachment of the thin stone layer (necessary to enable the structural consolidation), to the following "Restauro al dritto" (front side restoration) and the final relocation of these "Pavimenti alla Veneziana" in the building itself, restored with modern criteria and earthquake-resistant materials.

MOSAICS OF BARCELONA

Carrer de Llull, 151 Sant Martí. Mosaic de tessell·les

Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Removal and Transportation Works of Wall Mosaics of the Year 1956 Made by Two Artists in Ankara

Yaşar Selçuk ŞENER, Bekir ESKICI

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In 2012, it was decided to evacuate the general directorate building of Eti Mine Ltd., one of the important state institutions built in the republican period in the capital city of Turkey in Ankara and to remove and transport the two wall mosaics in the building.

The mosaics were made by Bedri Rahmi Eyüpoğlu who has an important place in Turkish art and who was a poet and a painter at the same time; and his wife Eren Eyüpoğlu in the year 1956. The mosaics, one of which is located in the entrance hall and the other in the upper floor in the doorway of the general directorate's entrance, were made of Murano glasses brought from Venice, Italy and composed of Anatolia themed figurations inspired by the "Hittite Civilization", the building's namesake.

Removal and transportation works of the mosaics started with identifications of figuration, material and application techniques for both mosaics; continued with the works of "Facing application", dividing the panels, removing them from the carrier; and were finalized with the restoration applications like thinning the back mortars of the removed panels, levelling them with synthetic mortar and transferring them to the new carrier.

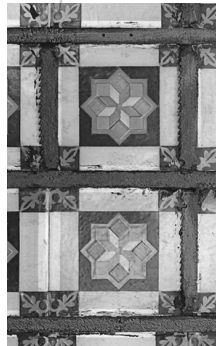
The work that is carried out should be considered among the applications that will constitute an example of transporting and conserving mosaic art works of contemporary artists besides mosaic restorations in archaeological sites.

MOSAICS OF BARCELONA

Carrer de Blasco de Garay, 24. Casa Monserrat Gili Sants-Montjuïc.

Mosaic de rajola ceràmica Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Tarot Garden by Niki de Saint Phalle

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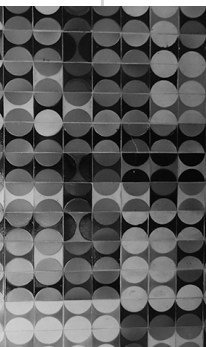
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The Tarot Garden is a well-known sculpture park, realized, between 1979 and 1998, by the French-American artist Niki de Saint Phalle, in Garavichio. Inspired by the first twenty-two Tarot cards, the Garden grows out of two main historical roots: the Sacred Wood and Parc Güell.

The sculptures, completely engulfed in nature, are constructed in concrete with an iron core, and then decorated by tens of thousands of multi-coloured tesserae of broken mirror, glass, and hand-crafted ceramic.

The material complexity of the sculptures and the particular environment in which they are immersed significantly influence the sculpture conditions, causing in time the start of different degradation phenomena involving the supporting structure and its tesserae. Regarding the decorative layer, we observe: losses, cracks, abrasions and devitrification of the tesserae, oxidation of the mirror coating, salification of the ceramic, biological attack and detachment of the tesserae.

Although the artist herself planned and provided for the tesserae substitution, we propose to improve their durability using reversible products, chosen by experimental studies through a comparison of different class of materials, such as nano-silica, siloxanes, and different kind of polymers.





MOSAICS OF BARCELONA

*Plaça de Salvador Riera, 2. Mas Guinardó, paviment
amb cercles Horta-Guinardó Mosaic hidràulic Segle XX.*

Foto. E. Escoda

www.barcelona.cat/mosaics

A Fresh Look 56 Years Later: a Roman Mosaic Pavement Rebuilt

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The 2nd century AD Roman Medusa Mosaic Floor is the central focus of the iconic Courtyard at the Isabella Stewart Gardner Museum (ISGM) in Boston. In 1892, the mosaic pavement was discovered in Montebello, about 8 miles north of Rome near the Villa Livia. Gardner purchased the mosaic in 1897 and by 1902 it was installed in her Venetian palazzo-inspired museum. Gardner's installations are uniquely personal and as part of her will, there cannot be any permanent changes made to the arrangement of artworks from the time of her death. Gardner built her museum in an area of Boston that is reclaimed marshland and while the building structure was supported with wooden piling, the area under the mosaic was not. By 1960 the mosaic had sunk about 1 meter. In 1961, George L. Stout, then director and conservator at ISGM undertook a major project to remove the traditional mosaic backing layers, re-back the mosaic with modern materials and bring the mosaic back up to its original level while supporting the area beneath it with a new steel-reinforced concrete system. 56 years later, the mosaic is re-evaluated to determine its current condition, how Stout's 1961 treatment is aging and if its presentation and display still reflects Gardner's original intent.

MOSAICS OF BARCELONA

Carriar Gran de Sant Andreu, 133. Paviment de tessels les Sant

Andreu Mosaic de tessels Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Reinstallation of a Roman Mosaic in the Collection of the Metropolitan Museum of Art, New York

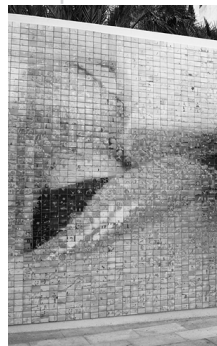
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A mosaic pavement with Egyptianizing scene was found near Prima Porta, just north of Rome, in 1892, one of several mosaics uncovered in a villa complex. After excavation, it remained in private hands until entering The Metropolitan Museum of Art's collection in 1945. In 1963, it was installed as the floor to a gallery displaying unrelated frescos from Boscoreale. Prior to being installed in the galleries, the mosaic was backed with cement using a technique, innovative for its time, which divided the mosaic into approximately 30 sections based on its geometric design. Almost 45 years later, in preparation for the reinstallation of The Met's Greek and Roman collection, the floor was removed with the intention to reinstall it in a more appropriate gallery. The backings of the relatively small panels were found to be in excellent condition, and were utilized to attach a new system of composite panel supports. The new mounting system is versatile and light-weight, and provides the option to install the mosaic on the wall or the floor. This presentation will explore the authors' decision to retain the 1960s cement backing, give details about methods and materials of the mounting system, as well as describe the most recent installation.

MOSAICS OF BARCELONA

Plaça d'Isidre Nonell. "El món neix en cada besada" Ciutat Vella
Mosaic de rajola ceràmica Segle XXI Foto. Museu virtual de l'art públic
www.barcelona.cat/mosaics



Mosaics of Madaba Between Past and Future

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The Byzantine period is the golden age of Madaba when the city was an important urban centre and had its own bishop. Imposing churches were built, including the Cathedral, the Church of the Apostles, the Church of the Virgin, the Church of the Prophet Elias, and the famous "Church of the Map", all decorated with colourful and rich mosaics floors, the finest of which date to the 6th and 7th centuries AD.

Madaba continued to prosper into the early Islamic period and maintained a rich mosaic tradition, which made the city renowned as the "City of Mosaics". The study and analysis of the mosaics floors, points out that the city had its own mosaic school during the Byzantine and Early Islamic periods. There are several designs and stylistic techniques that are characteristic of the Madaba mosaics and indicate that, during this period, a specific group of artists had formed a workshop or school in the city, including Salaman, Staurachios, who are mentioned in the inscriptions of the mosaics.

Today the city of Madaba has revived its ancient character as the "City of Mosaics". There are 150 mosaic workshops in Madaba, which contribute in keeping this traditional profession alive by producing mosaics using ancient production techniques. In 2016 Madaba city was nominated as a World Craft City for Mosaic.

In this paper we will present the revival of Mosaic production preserving this profession and craftsmen.

MOSAICS OF BARCELONA

*Passaig de Gràcia. Panot Gaudí Eixample Terratzo
Segle XX. Foto: Terra Conservació i Patrimoni
www.barcelona.cat/mosaics*



The Protective Shelter for the Mosaic Floor of the Great Bath Hisham's Palace, Jericho

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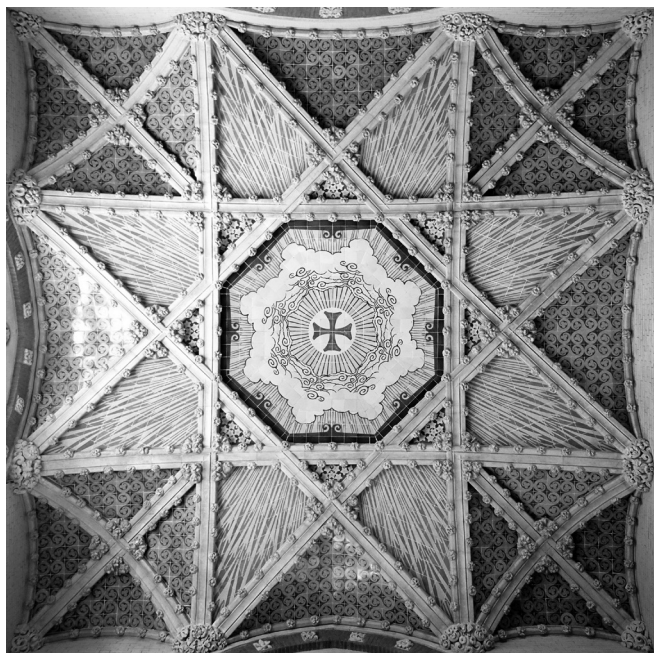
The mosaic of the great bath of Hisham's Palace is one of the largest early Islamic mosaic floors in the world (cir.825m²), decorated with thirty eight different mosaic carpets. Nonetheless, this significant mosaic floor is not presented to visitors and still covered with a layer of soil as a protection measure. Since 2002, various failed attempts have been undertaken to construct a protection shelter above it. Since 2015, a new protection shelter project, funded by the government of Japan, through JICA, is being prepared. It is based on lessons learnt from previous attempts and on multidisciplinary team and community participation. This project aims to achieve both protection and exhibition of the mosaics through constructing a shelter above the mosaics and the surrounding remains covering (cir. 2500m²), and also constructing a visitor trail around the mosaic floor.

The Ministry of Tourism and Antiquities and the Japanese Consultant (Matsuda Consultants International Co.) jointly developed the design of the shelter and its internal walkway. Its shape was chosen among several options and developed in order to be reversible and to minimize its scenery impact. In this stage, the project's detailed design and tender documents are ready for the bidding process, which is scheduled to be accomplished by the beginning of 2019.

MOSAICS OF BARCELONA

*Carrer de Numància, 120-122 Les Corts Mosaic de rajola ceràmica Segle XX. Foto: Carolina
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

Carrer Sant Antoni Maria Claret, 167. Antic hospital de la Santa Creu i Pau, pavelló de l'Administració, sala Pau Gil, sostre. Horta-Guinardó.

Mosaic de rajola ceràmica. Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics

Mosaic and Trencadís at Palau de la Música Catalana

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Modernism has provided Catalonia with buildings of a high artistic value, such as the Palau de la Música Catalana located in the heart of Barcelona. It's architect, Lluís Domènech i Montaner, approached ornamentation as a thorough integration of arts and crafts: ceramic is treated as the "key" element, decorating the entire building while coating and protecting its internal metallic structure at the same time. Mosaic becomes thus the core component both of the exterior and the interior decoration.

During Modernism, the classical mosaic technique, based on the use of little tiles (or tesserae) made of ceramics or glass paste, incorporates a new method called trencadís. Several testimonies of this innovative combination between tiles and "trencadís" can be found at Palau de la Música, as for example on the dresses and the background of the 18 muses, inspired by instruments of different cultures and times. The variety of execution of the mosaic technique can also be perceived on the decoration of the facade, where small sized tiles used for the floral motifs on the columns are combined with the bigger ones used on the arches.

MOSAICS OF BARCELONA

*Passatge de Coello, 19-21 Sant Andreu Mosaic de
tessel·les Segle XX. Foto: Joan Ramon Elias
www.barcelona.cat/mosaics*



Documentation, Material Study, and Biodeterioration Analysis as Part of the Project to Conserve the Mosaics Located in Empúries (Girona, Alt Empordà)

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M. Àngels CALVO TORRAS

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At the 11th ICCM Conference, we presented the initial studies from the new project aimed at conserving the mosaics located in situ at the archaeological site of Empúries, with a view to preserving the integrity of this diverse and complex assemblage.

This project has, up until now, been extended and carried out in different stages, based on thorough documentation and new scientific studies. The first step was to perform a historiographic analysis of the previous interventions and set out the proposed methodology to study and document the mosaics.

With an interdisciplinary team, we conducted a series of examinations prior to conserving the exterior mosaics. These studies focused by and large on micro-organisms and strategies for treating them, the composite materials, a referential analysis of the climatic conditions of the mosaics' immediate surroundings and the monitoring of the mosaics in order to determine variations in relative humidity and temperature, as well as solar incidence and pollution. In addition, we are compiling photogrammetric documentation and carrying out surveys using a high-frequency georadar to assess the condition and internal composition of the mosaics, particularly those which have been lifted.

MOSAICS OF BARCELONA

Carreer de Pujades, 189 Sant Martí Mosaic de rajola

ceràmica Segle XX. Foto- A. Schulz

www.barcelona.cat/mosaics



These studies are making it possible to establish preventative conservation measures and determine the real priorities in the conservation of the mosaics. This maintenance programme is being implemented in a number of logical work stages and is subject to both an annual plan and the Conservation Plan for the entire Empúries site, which ensure the safeguarding of the archaeological site and, more specifically, the mosaics.

MOSAICS OF BARCELONA

*Carretera de Montjuïc, 43. Mirador de l'Alcalde Sants-Montjuïc
Altres tècniques de mosaic Segle XX. Foto: M. Uriola
www.barcelona.cat/mosaics*



The Theseus and Ariadne Mosaic, Bell-lloc del Pla, Girona, 1876-2016: from Obscurity to the Museum

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Between 1876 and 1877, a series of mosaics depicting a chariot race at a circus, Bellerophon and the Chimera and Theseus and Ariadne was discovered at Can Pau Birol (Bell-lloc del Pla, Girona).

From the moment they were discovered, the chief objective of the Girona Monuments Commission was to ensure that all the mosaics were conserved in situ, which they were until 1936. Afterwards, the first two mosaics were extracted in 1933, and the third in 1941. They were sent to three different museums in Girona and Barcelona, where they remain today.

The existing records allow us to discuss the actions taken to ensure the survival of the mosaics and the methodology and work process used during their extraction in 1933 and 1941, as well as the sequence of events that, from 1939 onwards, led them to three museums. Lastly, we present the project undertaken to conserve and restore the Theseus and Ariadne Mosaic, currently housed in the Archaeology Museum of Catalonia-Girona, and the temporary exhibition held by the museum in 2016 to celebrate the 140th anniversary of its discovery and which helped rekindle an interest in studying it.

MOSAICS OF BARCELONA

Carrer de Ballester, 3-5 Sarrià-Sant Gervasi

Trencadís Segle XX. Foto: Anònim

www.barcelona.cat/mosaics



100 Years of Conservation and Restoration of Mosaics in the Archaeology Museum of Catalonia-BCN

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The Archaeology Museum of Catalonia-Barcelona has carried out an extensive work of pulling from its original location a large number of mosaics since the early twentieth century. Afterwards, these mosaics were restored several times in the museum's laboratories. In fact, today we understand them, and the conservation and restoration methods that we apply depend on these previous interventions.

Both the methods, the objectives and the criteria that were applied during the last century to develop such actions correspond to a completely different perspective of what we currently believe as professionals. In addition, in many cases there has been virtually no written record of the various jobs performed. However, compiling this information represents a very important task. Precisely because we know the value of this information, the Laboratory of Conservation and Restoration proceeds gradually to document, collect, and re-write the history of these restorations.

All this is essential from several points of view. On one hand, we can decide much better current and future interventions. On the other hand, these interventions have a decisive influence on the visual perception that viewers have of the mosaics, so this information also helps us to have a clearer comprehension.

MOSAICS OF BARCELONA

*Carrer de Rogent, 51. Antiga Escola municipal d'arts i oficis, rètol Sant Martí Mosaic de tessell·les Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Archaeology in the Box: from Discovery to Explanation in a Roman Yard

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As part of preventive archaeology investigations related to the restructuring project and static consolidation of a large real estate complex located in the centre of Rome, three excavation campaigns took place, starting in December 2014.

The outcome of these investigations - still ongoing - has resurfaced an attendance area from the fourth century BC, in the most diverse sectors of the settlement that lasted until the sixth century AD, with the presence of a rich domus of the late imperial period, in which five levels of mosaic pavements have been identified.

The foundations of the existing building had already greatly damaged the domus and their decorations. The further realization of micropiles for seismic strengthening, as a result of the current building renovation project, led to the choice to relocate almost all the floors to preserve the further loss and propose a new use that sustains the possibility of safeguard the image of the archaeological context in which the structures were found.

The necessary relocation has been grasped as an opportunity to investigate new enhancement paths. This led to the idea of the translation of the floors and walls of the found portions into a kind of "archaeological box" suspended on the area of the excavation. The goal is to maintain as much as possible their original orientation and their reciprocal spatial relations. The box turns in a space specially designed in which, through the use of multimedia and virtual reconstructions, the site is brought back to its original historical and archaeological context. A sort of "relocation contextualized", therefore, able to preserve not only the physical integrity of archaeological materials, but also their historical and architectural dignity.

MOSAICS OF BARCELONA

*Carri de Nou de la Rambla, 166 Ciutat Vella Mosaic
de tessell·les Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics*



What Comes to Visitors' Minds When They Hear Mosaic but They Can't See It? Restoration and Presentation of the Mosaics from the Episcopal Complex in Stobi

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The Episcopal complex from Stobi consists of one big quatrefoil baptistery and two early Christian basilicas placed on different ground levels. These monuments are built in several phases dated from the 4th to the 6th century. Around 500 m² of floor mosaics have been found in different rooms in the basilicas as well as in the baptistery. In addition, around 100 m² of wall paintings have been discovered in situ on the walls of the Old Episcopal basilica. Unfortunately this information does not correspond with the actual situation on field. In 2012 only one decorative element that was still in situ in the Episcopal complex was the mosaic floor in the baptistery, and thus it was the only mosaic that could be seen by the visitors. All other mosaics including the wall paintings were detached and placed in storage, and as a result of that the whole Episcopal complex looked like one huge void monument.

The main purpose of this paper is to present the ideas and results obtained from a long term ongoing project for conservation, restoration, and presentation of the Episcopal complex in Stobi that started back in 2012.

MOSAICS OF BARCELONA

Diagonal, 422. Església de la Mare de Déu del Carme Eixample Mosaic de tessels Segle XX. Foto: Terra Conservació i Patrimoni
www.barcelona.cat/mosaics



Intervention Project of the Roman Pavements of the Villa Cornelius, L'Ènova, València, Spain

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Although the in situ conservation of archaeological structures is the ideal alternative, sometimes, it is necessary to carry out the process of lifting and moving the remains to a new location to ensure their protection. In the Restoration Laboratory of the Prehistory Museum of Valencia we have worked on various mosaics recovered during the excavation of the Villa of Cornelius in L'Ènova (Valencia, Spain).

We emphasize the research and application of some new treatments following the criteria of reversibility and minimal intervention, for example, the mounting system and filling missing areas based on the use of loose gravel on a roman marble pavement, the use of natural mortars with low specific weight (Intopore®), or the manual manufacture of light supports.

To experiment this last methodology a small fragment of opus tessellatum has been evaluated. In this case a research has been carried out for the realization of a new reversible mobile support. It is specifically manufactured for the piece, with a laminate of carbon fibre system, with aluminium honeycomb, created vacuum packing, adapted perfectly to the irregularities of the piece at the back, which allowed us to preserve the remains of the original mortar, also minimizing the overall weight.

MOSAICS OF BARCELONA

Carrer de Jaume Piquet, 23. Casa Orlandai, escala Sarrià-Sant Gervasi Mosaic
de tessellat Segle XX. Foto: Terra Conservació i Patrimoni
www.barcelona.cat/mosaics



Incrustations: Conservation, Restoration, and Reconstruction

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The aim of this publication is to offer an overview on the conservation methodologies applied to wall sectilia through the time. The first part is dedicated to the conservation in situ of marble wall decorations and the surviving preparation, touching upon the process of identifying and interpreting the imprints and hooks holes on the walls. Through the comparison of these elements with the geometric diagrams known, it is indeed possible to speculate on modular reconstructions. The second part is on the restoration of fallen and movable fragments, the research of the "attachments", the composition and the consecutive research of construction modules, starting from the objective data mentioned above.

Through a qualitative and quantitative statistical analysis of the recorded elements, it is lastly defined the methodology for reconstruction, describing an experimental method with the use of magnets. These are applied to the back of the marble sections, allowing to actually try different compositions in a totally reversible manner.

MOSAICS OF BARCELONA

Plaça Concòrdia, 13. Centre cívic Can Déu Les Corts
Mosaic de gres ceràmic Segle XIX. Foto: M. Urbiola
www.barcelona.cat/mosaics



An Outstanding 19th Century Restoration: the Mosaic Pavement of Neptune and Amphitrite from Constantine, Present-Day Algeria (Louvre Museum)

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The Neptune and Amphitrite mosaic is one of the highlights of the Louvre mosaics collection. This is one of the first pavements acquired by the Museum and probably the most significant. It came into the Louvre's possession in 1845 just after its removal, led by Captain Delamare, who was a member of the committee for the exploration of Algeria.

This pavement was first exhibited in the Algiers gallery around 1850, then in the "African museum" in 1895 which was converted into the mosaic gallery in the 1930's.

Only the central part of this vast pavement was on display, fixed to the wall of the gallery until 2007. Its removal from the wall revealed a modern and unusual structural support providing significant insight into the conservation techniques carried out by the Louvre workshops in the 19th century.

Archival research, two prior studies, and an x-ray of the pavement have provided a clearer idea about 19th century restoration work. This in turn has resulted in a change to our approach to restoration work in the 21st century.

MOSAICS OF BARCELONA

Carri Gran de Sant Andreu, 255. Casa Vidal, balcon Sant

Andreu Trencadís. Foto: Anònim

www.barcelona.cat/mosaics





MOSAICS OF BARCELONA

Gran Via de les Corts Catalanes, 373-385.

Les Arenes, carcanyol dels arcs Eixample

Alicatat Segle XX. Foto: P. Colonna-Prieti

www.barcelona.cat/mosaics

MOSAIKON Ten Years Later: Objectives, Outcomes, and Opportunities

Jeanne Marie TEUTONICO, Leslie FRIEDMAN

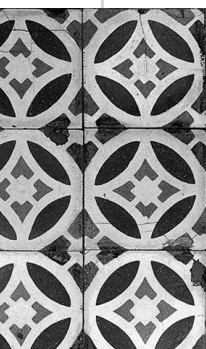
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Building on the expertise of its partner institutions (the Getty Conservation Institute, the Getty Foundation, ICCROM, ICCM), the MOSAIKON initiative was launched in 2008 to improve the conservation and management of archaeological mosaics in the southern and eastern Mediterranean region, both those on site and those in museums and storage.

Now, almost ten years later, MOSAIKON has trained hundreds of people, and has reached many more through network building and dissemination. The initiative's objectives were established at the start of the project in consultation with heritage professionals and decision-makers from each country in the region where MOSAIKON sought to have impact. Based on ongoing evaluation activities and continued consultation with the same advisory group, these objectives have been revisited at key points throughout the life of the project and examined against defined indicators. As MOSAIKON nears completion, this paper will discuss the major achievements of the initiative and what can be done to ensure the sustainability of those outcomes over the long-term. The paper will also consider lessons learned that might be applied to similar endeavours in the future.

MOSAICS OF BARCELONA

*Carrer de l'Ajuntament, 14 Sant Andreu
Mosaic hidráulic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



The Conservation Plan for Mosaics at Bulla Regia, a Component of the MOSAIKON Model Field Project

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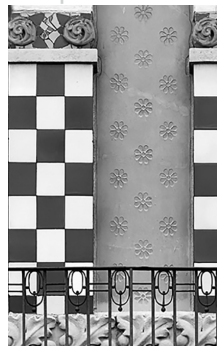
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This paper presents a long-term conservation plan for a site with almost 400 mosaics which is based on the work of four trained conservation technicians and a team of four workers. Given these human resources, a program of prioritized work over 18 years has been planned. After an initial phase of securing the site with the installation of protection measures to prevent mosaics from being walked on, such as fencing and reburial and emergency treatments, a second multi-year phase of initial stabilization of mosaics, wall plasters and walls follows. This phase also includes mosaic reburial and work activities requiring skills beyond that of a conservation technician or worker.

These activities, termed “specialist projects” are planned at the same time and consist of the design and construction of shelters, site drainage, and treatment on particular surfaces of decorative stone and wall paintings. The third phase consists of maintenance activities after all the mosaics have been stabilized. Initially, about half of the mosaics will be reburied following stabilization in order to allow the current available workforce the time to stabilize the site’s mosaics that have been selected to be presented, while reducing the amount of time needed for on-going mosaic maintenance.

MOSAICS OF BARCELONA

*Carrer d’Aragó, 588-592 Sant Martí
Mosaic de rajola ceràmica. Foto: A. Schulz
www.barcelona.cat/mosaics*



Workshop on Mosaic Conservation: Sustainable Platform for Education and Site Management

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The proposed presentation aims to outline the goals and outcomes of the Workshop for Mosaic Documentation and Conservation which has been organized on annual basis (since 2012) at the archaeological site of Stobi (FYROM), the formal capital of the Roman Province Macedonia Secunda. The educational course is part of the Balkan Heritage Field School which is the major program of Balkan Heritage Foundation (Bulgaria) which supports sustainable heritage protection and site management in Southeastern Europe.

Initially started to support the strategy of National Institution Stobi (NI Stobi) for conservation and re-conservation of the site's mosaics (1560 square meters), the Workshop provides a theoretical and hands-on experience in mosaic conservation for both international and local students. Each year the course is included in the frame of an ongoing project of in situ conservation or conservation of detached mosaic fragments, depending on the current needs of NI Stobi.

Between 2012 -2017 the field school was part of the following mosaic conservation projects at Stobi: two of the floor mosaics in the Theodosian Palace (2012-2013), mosaics from the narthex in the Episcopal Basilica (2014-2015), and mosaics from the late antique palace, so called "Casino" (2016). In 2017, the field school will be included in the conservation of the mosaic in the baptistery of the Episcopal Basilica, funded by the US Ambassador's Fund for Cultural Heritage Preservation.

MOSAICS OF BARCELONA

*Carrié d'Elkano, 4 Santis-Montjuïc
Trencadís Segle XX. Foto. A. Schulz
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

Carrer de Rogent, 51. Antiga Escola municipal d'arts i oficis, rètol Sant Martí Mosaic de tessels Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics

The St Patapios Archaeological Site in Veria (4th-5th c.)

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**Elisavet ANAMATEROU,
Demetrios CHRYSOPOULOS**

Directorate of Conservation of Ancient and Modern Monuments, Hellenic Ministry of Culture, Greece, eanamaterou@culture.gr

This presentation focuses on the conservation of floor mosaics, as well as the overall restoration work carried out on the archaeological site of Agios Patapios, at the centre of Veria, a town of Northern Greece and one of the most important cities in the Byzantine Empire.

The architectural remains indicate that St Patapios Archaeological Site has been the centre of Christian Veria for many centuries and confirm an unbroken human presence from the 2nd century BC to the late post-Byzantine period. Excavations in the immediate environs of the post-Byzantine church of St Patapios, brought to light a large three-aisled basilica with double transept, built in the 5th century over an older (4th-century) building complex with beautifully decorated mosaic floors which attest to the skill and artistry of the region's craftsmen. An early Christian baptistery (4th c.), with a tetraconch photisterion, an octagonal kolybethra and a domus, is also preserved at the underground floor of an adjacent contemporary building.

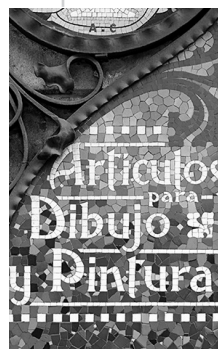


The conservation of the floor mosaics was funded by the 3rd CSF (ROP Central Macedonia 2000-2006). The works carried out included cleaning, consolidation, grouting, re-attachment of loose tesserae, edging repair, and restoration of depressed areas. Two parts of the floor mosaics were removed, conserved in the laboratory of Byzantine Museum of Veria, and re-installed to their original position, on a new foundation.

Additionally, the site was fenced off and visitor pathways were laid. Protective shelters were constructed over the mosaics, and lighting systems and information panels were installed.

MOSAICS OF BARCELONA

Ronda de Sant Pere, 16. Casa Teixidor Ciutat Vella
Trencadís Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



The Restoration of the Mosaic of the Memorial of Moses on Mount Nebo

Franco SCIORILLI

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In the summer 2007, the Franciscan Archaeological Institute Mount Nebo launched the restoration project of the Byzantine Basilica at Mt. Nebo.

Since the beginning of the excavation, in 1933 several interventions of conservation were implemented on the exposed architecture remains and mosaic pavements. In 1963 a metallic shelter was built to protect the mosaics and allow pilgrims' visits.

Up to the eighties most of the interventions on the mosaic pavements were intended to preserve it and many of the mosaic were lifted and accommodate on concrete slab.

This paper aims to present the accomplishment of the large restoration campaign started in 2007 to implement a new sheltering (re-roofing) for the site and to preserve, restore and show the beautiful mosaic floors within the restored walls of the Byzantine basilica.

The entire project was developed as a running workshop with a big local impact on the local community of the nearby village of Faysaliyyah. Several young men from the village were trained over almost a decade in best practices in mosaic restoration, using of new and traditional techniques and materials, as the installation of lifted mosaic on aluminium panels or the production of lime mortar from natural slaked lime.

MOSAICS OF BARCELONA

Avinguda Diagonal, 373. Palau del Baró de Quadras, mosaic de tessels. Exemple Mosaic de tessels Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



The Impact of the War and Crises on the Syrian Mosaics

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The bloody war and the acute crisis experienced now in Syria, the cradle of civilizations, has affected all the wealth buried under its territory from the historical and cultural heritage.

This fact reflected negatively on the mosaics facades, some of the most beautiful in the world, and the most rich and variable.

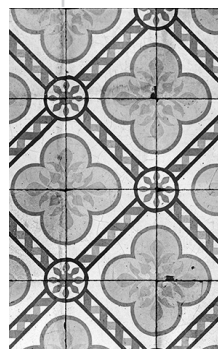
The archaeological sites and museums, holding the Syrian antiquities including mosaics tablets, suffered from publicly described destruction and robbery by terrorists, in addition to the gangs and mafias of antiquities that smuggle these goods into various parts of the world, through the neighbouring countries.

Despite the severe circumstances, the technical and scientific works to protect the antiquities, continued at a good pace, through several works carried by the General Directory of Antiquities and Museums, most importantly:

- Communicating with the local community, for the protection and preservation of antiquities.
- Recovering of many pieces of the mosaics smuggled or intended for smuggling.
- Continuing the restoration operations, of the mosaics tablets.
- Continuing the training courses, in the laboratories of General Directory of Antiquities and Museums, for the students of the archaeological section at the university.

MOSAICS OF BARCELONA

Plaça de la Concòrdia, 14-15. Paviment amb quadrifolis blaus Les Corts Mosaic hidràulic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



Akrotiri Lemesou: the Importance of Preventive Conservation and Reburial During the Excavation of Mosaics

Eleftherios CHARALAMBOUS

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The ecclesiastical complex that is being excavated since 2007 in the locality Katalimata Plakoton in Akrotiri is considered to be one of the major archaeological discoveries in Cyprus in recent years. One of the primary concerns of the excavator was to ensure the presence of conservators at the site, as the survey undertaken on site before excavation had indicated the existence of mosaics. The involvement of conservators in the process of excavation is crucial especially when the discovery of mosaics is expected. The protection and conservation of the mosaics became a major priority in the planning phase prior to excavation.

Once the first mosaics were revealed, the excavation crew was replaced by the conservation team, which took the responsibility to reveal the mosaics. When possible, the excavation stopped at least ten centimetres above the mosaic floor, so that the conservation team could take over. This method offers the conservators the possibility to address, quickly, all possible problems that may be encountered during the exposure of the mosaics. It should be mentioned that the excavation procedure continued without delay, while documentation of all archaeological information and simultaneous identification of the deterioration mechanisms, was undertaken in an attempt to understand and prevent the potential problems.

MOSAICS OF BARCELONA

*Passeig de Fabra i Puig, 296 Nou Barris Mosaic de rajola ceràmica Segle XX. Foto. Terra Conservació i Patrimoni
www.barcelona.cat/mosaics*



The Sundial and Convivium Scene on the Mosaic from a Late Antique House in Antioch: Documentation and Conservation Works

Hatice PAMIR

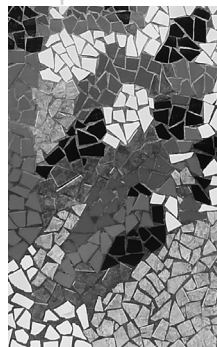
Mustafa Kemal University, Antakya-Hatay, Turkey,
haticepamir@gmail.com

Rescue excavations carried out in Antioch in 2013 revealed an opus tessellatum floor mosaic with figural scenes, dated to 3rd-4th centuries A.D. The pavement is partially preserved, the eastern part of the mosaic floor has survived while the rest was later overbuilt. The rectangular figural panel consists of three different scenes bordered by a common frame. In the centre, a sundial is depicted on a column along with two male figures; the first pointing towards the sundial and the second pulling him back from his mantle. The inscriptions above these two figures read Trechedipnos and Akairos. The panel to the north depicts a slightly reclining skeleton with the inscription Euphrosynos. On the partially preserved panel to the south, the head of an African figure holding a double stick above his head, can be seen. The following year, excavations in the area continued and a new panel depicting an Eros was unearthed in the western part of the same room. Scenes with a sundial are previously known from Antioch mosaics; however, the depiction of a skeleton is seen for the first time. The panel is unique in both its subject and style, and brings novelty to the Antiochene mosaic repertoire.

The area of the rescue excavation is situated in the city center of Antakya, a densely settled district with numerous modern constructions in concrete. The paper aims to present and discuss the excavation and documentation process in the area, the restoration and conservation of the mosaic pavement as well as the perspectives for an on-site exhibition of this Late Antique house and its mosaics.

MOSAICS OF BARCELONA

*Carrer Gran de Sant Andreu Sant Andreu
Trencadís Segle XX. Foto: Anònim
www.barcelona.cat/mosaics*



Conservation-Restoration of Mosaics from the Area of Antiquaille in Lyon, Conducted by the Atelier of Saint-Romain-en-Gal

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Christophe LAPORTE**

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christophe.laporte@rhone.fr

This communication presents different interventions carried out since 2004 by the Atelier of Saint-Romain-en-Gal, in the area of Antiquaille in Lyon. The renovation of this urban sector, which sits on the slopes of the Fourvière Hill, has led to a safeguarding operation conducted during 8 years on a set of mosaics covering some 115 square meters, whether vaults or walls in a crypt dug in the late 19th century in the basement of an ancient convent (17th century). Meanwhile, archaeological excavations on this area which developed from Augustan period have uncovered the remains of about 10 pavements using various techniques as opus tessellatum, signinum, spicatum, etc.

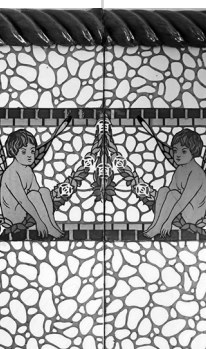
Our presentation provides an overview of the different types of treatments applied to ensure safeguard and display of all these mosaics: in situ conservation, removal and rebacking on new supports before in situ relaying or exhibit in Museum. Thus, the different technical means are implemented on a set of various mosaics, from ancient to modern.

MOSAICS OF BARCELONA

Carrer de Rafael Capdevila, 8 Sant Martí

Mosaic de rajola ceràmica. Foto. A. Schulz

www.barcelona.cat/mosaics



The Restoration of Mosaics in the Caetani Chapel in the St. Pudenziana Church (Rome): Initial Observations

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The architectonic decoration of the Caetani Chapel in the St. Pudenziana Church in Rome is one of the most significant artistic expression in the late sixteenth century in Rome; the wall mosaic, produced by Paolo Rossetti between 1593 -1595 on sketch by Cesare Roncalli, contribute to realization of a unitary and extremely refined ambient, along with other significant element such as the bas-reliefs and sculptures made of white and golden stucco and the wall and floor decorations in polychrome marbles.

The recent conservative intervention concerned only the mosaic surfaces of the lunette and the three panels on the vault of the Chapel entry. The intervention was performed with the collaboration of the IV year students of the SAF ISCR course, as a part of the didactic activity.

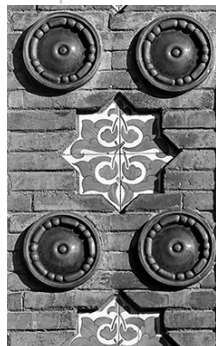
This experience permitted to collect some significant data about the mosaic technique applied in Rome between the XVI e XVII century and about the Rossetti's executive technique, which testify a sapient use different materials of tesserae, inserted in a bedding layer with oil based stucco.

This contribute contains the first observations about the constitutive materials, the executive technique, the conservation problems and the methodologies used during the conservation intervention.

MOSAICS OF BARCELONA

Avinguda de Rius i Taulet, 5. Casa de la premsa Santis-Montjuic Trencadís

*Segle XX Foto: A. Schulz
www.barcelona.cat/mosaics*



The Mamelouk Fountain (XIVth Century) from the Museum of Islamic Art of Cairo (Egypt): Technique and Building Materials of this Islamic Mosaics Heritage

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Eduardo PORTA

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Inside the works of the whole renovation of the Museum of Islamic Art of Cairo (2003-2010), the Aga Khan Foundation received technical help to carry out the movement of the big Mamelouk fountain (around 30 meters square, in different step levels), made of marble, mother of pearl, and glass.

This restoration labour was an opportunity to know the technical aspects of making this kind of mosaics, based on geometrical drawings that used also the shape and the size of mosaic pieces to build the artwork. For the whole conservation-restoration process we worked in collaboration with ten Egyptian restorers in training, cleaning and documentation, removal works, elimination of iron and Portland concrete support, and change of the mosaics to light panel support.

The positive experience with the team of Egyptian restorers, sparked the creation of a temporary laboratory of restoration of the Citadelle in Cairo for four years; working in projects from Egyptian Islamic heritage, and heritage from Ancient Egyptian times, to the Museum of History of Cairo project.

MOSAICS OF BARCELONA

Carri de Tenor Viñas, 10 Sarrià-Sant Gervasi

Mosaic de rajola ceràmica Segle XX. Foto: Anònim

www.barcelona.cat/mosaics



The Pretty, the Ugly, and the Uncommon: Conservation of Three Roman Mosaics from Ostia Antica, Italy

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The subject of this paper is a conservation intervention carried out in 2015-2016 in Ostia Antica (Italy), on an Imperial Roman domus. Conservation has focused on three floors: an opus sectile, an opus tassellatum with inserted marble slabs and an "irregular" mosaic of scattered polychrome tesserae. The floors show clear signs of reuse of materials from previous mosaics or structures and in Late Antiquity two of them were used as lime-slaking pits.

The paper aims to present a case of best practice in conserving archaeological mosaics in an everyday situation: in situ intervention, conservation contemporary with the excavation season, planning in accordance with the archaeologists, and protective reburial at the end of each season.

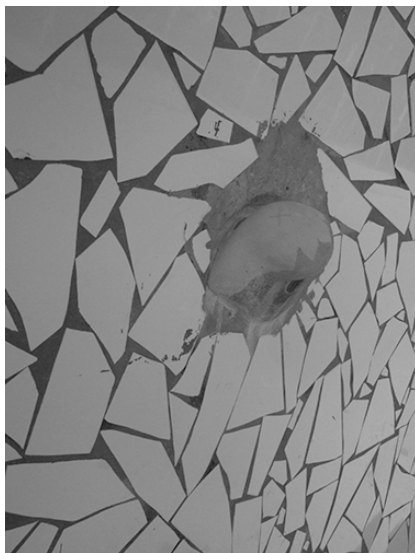
The floors treated may not be "what comes to mind when you hear mosaic", but indicate a happy coexistence with the aesthetic perception and sensitivity of their time.

Finally, the paper will present some reflections on how conservation interventions are a privileged moment of gathering information about an artefact. The material textbook of the floors recounts of the change in perception of the mosaics' values (aesthetic, social, economic). This existing layered history is a strong tool to engage the public.

MOSAICS OF BARCELONA

*Carrer Nou de la Rambla, 5. Palau Güell, xemeieles Ciutat
Vella Trencadís Segle XX-1 A. Schulz
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

*Via Favència, 186. Parc de la Guineueta
Nou Barris Trencadís Segle XX. Foto- Terra
Conservació i Patrimoni
www.barcelona.cat/mosaics*

Regional Collaboration Project: Conservation and Restoration of Ancient Mosaic from Villa Urbana in Budva, Montenegro

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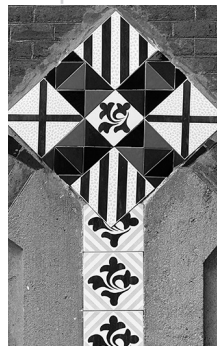
Public Institution Museums and Galleries of Budva, Montenegro,
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This paper presents results of the regional collaboration between institutions in Montenegro and Serbia in the field of mosaic conservation. Collaboration started with the project for conservation and restoration of mosaic from Villa Urbana in Budva, Montenegro. The mosaic, dated in the 2nd century, depicts marine creatures in black and white tesserae with red accents. It was lifted from the villa's *thermae* in 1986, after devastating earthquake that hit Budva. Fragments were stored in different, mostly inadequate, conditions until 2014 when the collaboration conservation project started. The objectives of the project were: conservation-restoration of approximately 40m Sq. m. of mosaic on movable support, design of mosaic panels in order to fit different presentation solutions and professional exchange of experiences between conservators specializing in mural paintings conservation from Montenegro and conservators specializing in mosaic conservation from Serbia.

The institutions involved with the project were: Centre for Conservation and Archaeology Montenegro, Public Institution Museums and galleries of Budva, Central Institute for Conservation in Belgrade and Institute for Protection of Cultural Heritage of Serbia, Belgrade. Good results of this project opened the door for further collaboration that continued in 2015 with the project of conservation mosaic from the Early Christian basilica in Budva.

MOSAICS OF BARCELONA

*Travessera de les Corts, 131 Les Corts Mosaic
de rajola ceràmica Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Restoring the Legibility of a Byzantine Opus Sectile Pavement, Monastery of the Transfiguration, Messene, Greece

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Michalis KAPPAS

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An impressive 13th c. opus sectile pavement was uncovered in the excavations of 2015, in the narthex of the central church of the Andromonastiro fortified monastic complex in the Peloponnese, during the extensive restoration project. Situated near ancient Messene, the complex is comprised of a number of buildings of different functions and historical periods which testify to the historical evolution of the monastic community's needs and fortunes especially in the context of the emergence of the Greek state.

The charred tesserae and ashes on the opus sectile pavement revealed irrefutable evidence of the conflagration and subsequent collapse of the narthex's timber roof, during the late 18th century. It is a tripartite composition with a central quintuple omphalion flanked by framed lozenges, executed with polychrome ornamental stones, many of which seem to originate from the Mani peninsula, such as rosso antico, antico nero tenario, cipollino tenario, and white Pentelic marble.

The aim of conservation work was to restore the legibility of the pavement by preserving it in situ without compromising authenticity, taking into account the continuous use of the church. The authentic extant marble sections found during excavation, were reset in place and complemented by select new marble infills based on the preserved physical evidence. The conservation program was based on detailed documentation of the construction technology and condition of the pavement as well as on the analysis of the original and repair mortars.

MOSAICS OF BARCELONA

Carrié de Coroleu, 65 Sant Andreu Trecadís

Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Colourful Mosaics of the Gyms of the Baths of Caracalla in Rome: an Example of Restoration and Conservation in a Famous Roman Monument

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The colourful mosaics of the Baths of Caracalla in Rome are an example of great craftsmanship applied to a colossal work of imperial property. The Emperor Caracalla used in the construction the finest materials and the greatest artists of the time, for the sculptural decoration, for the mosaic and painting.

In particular, the colourful mosaics of the Baths are a masterpiece of design and technology, which in recent years have been the subject of a project of conservative restoration and reconstruction.

The modernity and the polychromy of the mosaics has been since ancient times an inspiration for other great mosaic cycles such as those of Heliogabalus' and the latest Diocletian's Baths, and actually also inspired a large collection of contemporary jewellery.

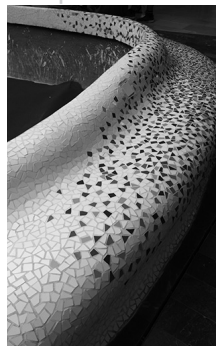
The exemplary restoration work consisted in the rediscovery of the floor, buried under a thick layer of soil and grass, in its clean-up, recovery from the earth, cataloguing and distribution by colour and size, repositioning and consolidation of the entire mosaic tissue. The project began in 2016 and is at final stages. The precious coloured floor of the gym moved back into glory after centuries of oblivion.

MOSAICS OF BARCELONA

Avinguda de la Diagonal 208. Centre comercial Les Glòries Sant

Martí Trencadís Segle XX. Foto. E. Cobo

www.barcelona.cat/mosaics



Challenges of Terrazzo Conservation in Colonial Buildings in Delhi, India

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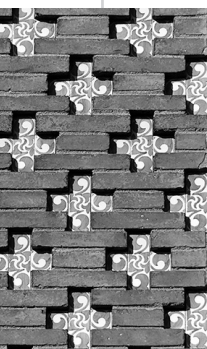
Terrazzo has found various manifestations in Indian built heritage. Of these, particularly interesting examples can be seen during the Colonial period, when architectural styles were undergoing experimentations. These include explorations in terms of materials and technique as well as artistic expression. The quality of the terrazzo work carried out indicates skilled craftsmanship, which is valuable in terms of building knowledge system.

With a substantial number of buildings in this period that require conservation, the study, and its results become very relevant. It is also interesting to note that many such buildings are still in use, and need conservation measures and maintenance.

This paper will outline a brief history of terrazzo during the Colonial period in Delhi, its applications and its types. A thorough study of defects will be performed and analysed to understand the deterioration process and parameters involved, through case studies. This would then highlight the characteristics of the material and construction techniques. The study shall look at a possible way forward to determine conservation approach for repair, restoration, and maintenance of terrazzo in the given context.

MOSAICS OF BARCELONA

*Avinguda de Rius i Taullet, 5. Casa de la premsa Santis-
Montjuïc Trencadís Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



POSTERS

The Mosaic of the Cenatio (C6) of the Domus of Cantaber, Conimbriga: Past, Present, and Prospects in the Future

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Our study presents the condition of conservation of the different fragments of a mosaic, which covered the cenatio of the "Domus of Cantaber". These fragments were discovered, removed and consolidated on a Paris plaster support in 1899 and they were exhibited in different Museums. In 1961, they were transferred to the Monographic Museum of Conimbriga.

The largest piece of mosaic (4,59m x 2,88m) that was part of the cenatio has been, since the last remodelling of the Museum, at the entrance of the ruins of Conimbriga.

From this mosaic was removed a fragment (77x77cm) and was offered in 1899 to Queen D. Amélia by the Archaeology Section of the Institute of Coimbra, as a form of thanks for moral and material support to archaeological exploration in Conimbriga. This fragment is in the reserve of the Museum of Palácio Nacional da Ajuda, in Lisbon.

Nowadays, only a small part of the mosaic of the cenatio continues in situ. So, the mosaic that covered the same floor was fragmented and distributed by different environments and exposed in different contexts. What is the situation of each fragment? If the conditions are created to receive them, how can we regroup them to return to the place of origin?

MOSAICS OF BARCELONA

Carretera de Sarrià a Vallvidrera, 159 Sarrià-Sant Gervasi

Trencadís Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Restoration and Replacement of a Byzantine Mosaic, Sinai, Egypt

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In 2002 during the excavations of the Ministry of Antiquities, a Byzantine floor mosaic was found in the floor of one bath in Beloziom area -Sinai. This mosaic floor contains cubes of stone, marble, pottery, and some pieces of glass. It represents a strip bounded by geometrical repeating units. Confining birds abstractly stand a botanical branches frame. The colours of this mosaic pieces include white, black, red, green, black, blue, and yellow. For the protection of this mosaics it was detached after covering the face with canvas, and then stored.

This work deals with:

1- Study and identification of the mosaics materials from this floor by means of Polarizing microscope (P.M), X-ray diffraction analysis (XRD), and Scanning Electron Microscopy (SEM).

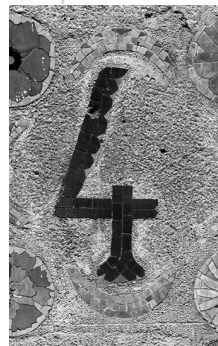
2- Restoration and replacement of this mosaic in a new ground support.

MOSAICS OF BARCELONA

Les Rambles, 84 Ciutat Vella Mosaic de tessels Segle

XIX. Foto: A. Schulz

www.barcelona.cat/mosaics



Mosaikon-Arles: Training for the Conservation and Restoration of Mosaics in Museums

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MOSAICS OF BARCELONA

Carrié d'Aribau 179, Casa Maldonado Eixample Mosaic de

tessel·les Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Presentation of the specificity and the work carried out during the Mosaikon-Arles 2016-2017 training session supported by the Getty Foundation, ICCROM, and the Mosaikon program.

Twelve professionals from museums and sites in Algeria, Egypt, and Lebanon attended this training, which was organized in three sessions in Arles, in cooperation between the Conservation Workshop (ACRM) of the Musée départemental Arles antique and the Centre interrégional de Conservation et Restauration du Patrimoine (CICRP) of Marseille.

The aim of this training course was to develop the autonomy, the decision-making of the restorers, and their practices of documentation, conservation and restoration interventions, and to form them to argue the restorations with the decision-makers and the public of the museums.

Trainees developed observations and practiced conservation interventions by applying specific protocol before and during interventions. They were able to intervene on mosaics preserved in French archaeological museums, and particularly panels of the collection of the Musée du Louvre.

MOSAICS OF BARCELONA

Plaça de la Concòrdia, 13. Centre cívic Can Deu, glorieta Les Corts Trencadis Segle XIX. Foto: Anònim
www.barcelona.cat/mosaics



Towards a Tesserae Colour Chart of Daphni Monastery Byzantine Mosaics

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The aim of this poster is to present the initiative for a systematic documentation of the materials and colours of tesserae of the Daphni Monastery wall mosaics. Major conservation projects carried out by the Directorate of Conservation of Ancient and Modern Monuments (in the framework of two EU co-funded sub-projects) facilitated the study providing accessibility to the mosaics, through an extensive network of scaffoldings, but also restricted it by strict deadlines for work accomplishment.

The research combines macroscopic examination, high resolution photography, further investigation with colour measurements and microscopic examination (via digital portable microscope). Furthermore, the recording of data during mosaics conservation projects would also be employed. The study aims to produce the colour chart of the tesserae used for the mosaics and also if possible to correlate chosen materials with the creation of the particular depictions.

MOSAICS OF BARCELONA

Carrer de Nadal, s/in Sant Andreu Mosaic de rajola ceràmica

Segle XX. Foto: Anònim

www.barcelona.cat/mosaics



Knowledge and Conservation of Ancient Floors Through the Virtual Restoration of the Contexts: the Contribution of TESS Web Portal

Claudia ANGELELLI

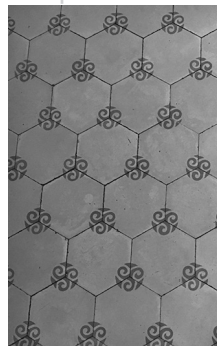
AISCOM (Italian association of study and conservation of ancient mosaics), Italy, claudia.angelelli@gmail.com

The web portal “TESS – Sistema per la Catalogazione Informatizzata dei Pavimenti Antichi” (created and directed by University of Padua –Department of Cultural Heritage) has been available online since June 2016. The main aim of this project is to provide a tool of knowledge, protection and enhancement carried out not only to insiders (cultural heritage institutions, scholars), but also to a wider public. TESS, in fact, offers the opportunity to study ancient floors (4th c. BC – 6th c. AC) of the Italian peninsula with an integrated approach that takes into account a multiplicity of data sources (e.g. Archaeological context, technical and decorative features, etc.).

The web portal gives the possibility to perform simple or complex researches: the results, geo-referenced on Google maps, are extracted from a database that collect about 16,000 forms, one for each floor and each one linked to its geographical and archaeological context (room, building). More generally the database, whose entries are also provided with information about conservation and restoration, offers to the experts in various disciplines a powerful tool for a “virtual restoration of the contexts”, reconsidering together settlements and floors, particularly those brought to light during old excavations and “re-contextualized” in the database.

MOSAICS OF BARCELONA

*Carrer de les Monges, 35-39 Sant Martí Mosaic
hidràulic Segle XX. Foto: X. De la Cruz
www.barcelona.cat/mosaics*



Conservation and Restoration of a Modernist Mosaic from Lluís Bru or Mario Maragliano: a New Type of Chromatic Reintegration?

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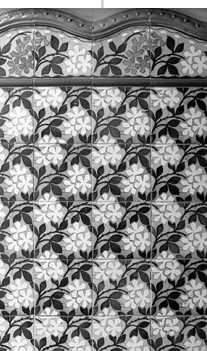
Florencia FLORIDO

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The Oficina de Patrimoni Cultural is an office responsible for the conservation of cultural heritage belonging to the Diputació de Barcelona, a Catalan public institution. In 2015, the OPC included an early-20th-century U-shaped wall mosaic located at the Casa-Museu Lluís Domènech i Montaner, in the seaside town of Canet de Mar, in the Local Museums Network Conservation Program. Applying an ever-expanding minimal intervention criterion was key to restoring the piece. Thus, without adding volume to the imprints of the missing tesserae—which are less than 5 mm thick—, a chromatic reintegration technique was chosen to give an optical illusion of a positive space from afar. In this way, the intervention is both respectful of the original material and provides the public with an opportunity to understand the manufacturing technique of this particular mosaic.

MOSAICS OF BARCELONA

*Carrer de Vilardell, 1 Sants-Montjuïc Mosaic de
rajola ceràmica Segle XX. Foto. A. Schulz
www.barcelona.cat/mosaics*



Risks to Mosaic Flooring (Causes and Solutions) in the Scope of Control Effects Tocra

Badr AL BERIKI, Ashraf SOLIMAN

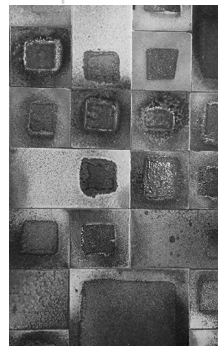
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We cannot limit the talk to one floor or two, but all the discovered floors differ from each other in terms of shapes, phases and time periods. There are 64 magnificent mosaic floors covering almost 6369 square meters including Greek, Roman and Byzantine ones. There are 7 floors in Talmah Museum and 11 reclaimed floors by the Polish mission in 2010. In Tocra there are 3 floors: two of them has been filled and the third is in a warehouse in Tocra where we removed the old roof and worked on a new roof. This work has also been completed on some floors located in the site through cleaning and protecting by the removal of falling stones and herbs and the Reclamation.

Despite the lack of resources and repairing materials, even labs and factories, but through the training courses we have been able to form a working team with the support of the Antiquities Authority. Our work is continuing to maintain and protect until the required resources and more experience in the field of restoration are provided so that these risks can be avoided and we can preserve this cultural heritage for future generations. Currently there is a project underway to build a store and restoration labs in the city Tolmeita.

MOSAICS OF BARCELONA

*Carrer Clos de Sant Francesc, 14 Sarrià-Sant Gervasi
Mosaic de rajola ceràmica Segle XX. Foto: Anònim
www.barcelona.cat/mosaics*



Conservation of 'The Procession of Dionysos' Mosaic from Stara Zagora, Bulgaria

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The 'Procession of Dionysos' mosaic was discovered in 2009 during rescue archaeological excavations in Stara Zagora. The excavations were conducted over three consecutive seasons, before the revealed parts of the terrain were uncovered. In 2011, the uncovered parts were removed from the terrain and were transferred to the Stara Zagora Regional History Museum. Regrettably, this drastic and risky conservation operation is becoming increasingly frequent in recent years in Bulgaria and is related to the flaws in the national legislation relevant to cultural heritage. In addition to the problem of finding funding, another major one relevant to the revealed archaeological excavations of mosaics in private properties is the impossibility to preserve them in situ. In most of the cases, the mosaics revealed in the recent decades have remained inaccessible to the public.

This conservation project was implemented in 2014-2015 by Rest Art Association team. In the process of work, the team was faced with complicated conservation problems related to the severe condition of the fragments and the lack of comprehensive documentation. Thanks to the intervention, today a masterpiece of mosaic art is accessible to the public in a museum environment.

MOSAICS OF BARCELONA

*Les Rambles, 84 Ciutat Vella Mosaic de
tessel·les Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Relocation of a Mosaic Pavement onto a Lime Mortar Foundation Manufactured After Ancient Roman Design

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A mosaic pavement that forms part of the complex of the "Grande Allée" in the archaeological site of Tyre, Lebanon, was excavated in the 1940s-60s and subsequently reconstructed onto concrete bedding. Its unsheltered in situ exposure in close vicinity to the seashore, with climatic conditions supporting the overgrowth of vegetation, has led to its extreme deterioration.

This paper presents the 2014-15 conservation and relocation intervention of a 69 m² area of the mosaic pavement onto a lime mortar foundation after ancient Roman design. The methodology was informed both by research into historical and archaeological evidence for ancient bedding stratifications and by material analyses of selected mortar samples from comparable, preserved original paving substrates. Another focus of material investigations and analyses was the identification of locally available raw materials, suited for the manufacture of hydraulic limes.

In presenting their work, the authors wish to restate the already powerful case for using ancient materials and techniques and to underline their particular suitability in this context. Though their methods are not new, they are seldom used on this scale, and it is to be hoped that future re-evaluation of this restoration will yield further insight into the efficacy of this type of intervention.

MOSAICS OF BARCELONA

Carrer d'Aribau, 96 Eixample Mosaic de rajola ceràmica

Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



In Situ Mosaic Conservation in the Archaeological Area of Pupput Hammamet, Tunisia

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Our job is to identify the word mosaic in a general manner. The historical presentation of the archaeological site Pupput. The conservation of the Mosaics is based on the three phases required: phase of study of the state of conservation, programming phase, and phase of intervention.

On the poster we will present by photos and texts the interventions we have carried out, such as: consolidation of the mosaics, disbanding between the preparatory layers, injection of mortar base fluid to the hydraulic lime and powder of ceramics. Detachment of a part of the mosaics' surface and make it in place because of the vegetation. The dry cleaning and water to remove the micro-organism. Plugging of gaps.

MOSAICS OF BARCELONA

Plaça de la Concòrdia, 13. Centre cívic Can Deu, font Les

Corts Trencadís Segle XIX. Foto: Anònim

www.barcelona.cat/mosaics



The Pavements of the Roman Site of Costa de La Serra (la Secuita, Tarragonès): a Multidisciplinary Study

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In this communication we present the research carried out by specialists in archaeometry, archaeology and conservation-restoration, on a set of samples of opus signinum pavements, recovered from the destruction levels of the Roman site of the Costa de la Serra (La Secuita, Tarragonès) (2nd - 1st centuries BC), in the frame of the project "Formes d'ocupació del territori i evolució del poblament a la Cessetània occidental durant la protohistòria (Ier mil·lenni aC)", of the Catalan Institute of Classical Archaeology (ICAC).

For the realization of this study, we have selected samples of six types of pavements that have been analysed using scanning electron microscopy, X-ray diffraction, and petrographic microscope. We aim to determine the composition and method of preparation of these pavements as well as their function according to their type, in order to make this information useful to address the work of conservation and restoration. We intend to highlight this type of pavement, often underestimated, as well as to emphasize the importance of working together to contribute to the preservation of our heritage.

MOSAICS OF BARCELONA

*Rambla de Fabra i Puig, 13. Can Guardiola, paviment amb sanefa ocre
Sant Andreu Mosaic de gres ceràmic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

Carrer del Clot, 92. Casa Budesca Sant Martí

Mosaic de tessels Segle XX.

Foto: A. Schulz

www.barcelona.cat/mosaics

The Restoration of the In Situ Frigidarium Floor Mosaic of the Gallien Baths, Volubilis Morocco

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Volubilis is the most prestigious archaeological site in Morocco; it was listed by UNESCO, as World Cultural Heritage in 1997. This rich and varied property must be properly valued and preserved for economic and historical reasons. In addition to its beautiful architectural style, it counts with roman floor mosaic pavements that decorate houses and baths. Since their discovery the mosaics in Volubilis have been taken care of, to preserve them from degradation and or vandalism.

The preservation of the mosaics in Volubilis appears assertively from the fifties of the last century; indeed the kind of restoration was "based on the spot after dropping mosaics and rebuilt on solid ground", that is to say, extraction and laying tiles on floors in reinforced concrete. However, these old interventions are now causing problems that we see on the mosaics, as they cause swelling and cracks that appear along the cuts made plans.

In fact, the oxidation of reinforcing steel bars causes an increase of their volume. The presence of soluble salts in the cement, but also the infiltration of water in micro fractures, corrodes metal bars that will exert strong pressure on the concrete around them. Over time, this phenomenon causes the fracturing of reinforced concrete panel which may cause the tessellatum uprising near the steel bar and its detachment from the panel.

This type of degradation is noticeable on several floors of mosaic panels in Volubilis mainly in the mosaics of the house to the young man.

The purpose of this work is to focus on the bad old practices and their impact on the mosaic pavements stability and current restoration techniques through the study of some examples of restoration applied to the mosaics of Volubilis site.

MOSAICS OF BARCELONA

*Carrer de Blasco de Garay, 7. Paviment de rombes
Sants-Montjuïc Mosaic hidráulic Segle XIX. Foto. A: Schulz
www.barcelona.cat/mosaics*



The Role that the Mosaicist Play When Creating an Opera and the Consequences for Future Conservation of Mosaics

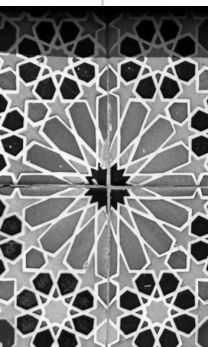
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In the history of mosaic making, the experience shows that each mosaicist can be identified through the materials and the techniques used. As logical consequence, to know the name of the author of a mosaic, can provide direct and precious information about the mosaics manufacturing. At the same time this information can be a useful guide when planning restoration and conservation. This paper describes techniques used by some mosaicists in the last century, identifying names, environment, materials and techniques used. At the same time case studies reporting restorations where this kind of information represented a useful tool when planning and implementing are discussed.

MOSAICS OF BARCELONA

*Carrer de Santa Magdalena Sofia, 4. Mas Bernal, façana
Sarrià-Sant Gervasi Mosaic de rajola ceràmica Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics*



First Thoughts About Tabletops Made of Ancient Mosaics from the 18th to the 20th Century

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Conservation of ancient mosaics follows different methods and ideas during modern age. One of the most interesting conservative practice is the use of part of ancient mosaics and sectilia as tabletops. This poster aims to introduce the ongoing census of tabletops made of ancient mosaics now in Italian museums and collection. From this, it will be possible to propose some preliminary thoughts about this alternative and enduring conservation technique, about motifs, purposes, and taste of committents.

The beginning of this use of ancient mosaics dates back to 1752, when Cardinal Furietti published his "De Musivis", a fundamental book in which many tabletops made of mosaics from his excavations in Villa Adriana are described. This is also the starting point of the use of mosaics tabletops as high quality presents among aristocrats, a practice that became very common in the 18th century and that gave birth to huge and rich tables with complex compositions of many ancient and new mosaics.

Then, the poster will focus on tabletops made of ancient marble sheets and sectilia, very fashionable during the 19th century. At the end, the poster will discuss the role of protection laws on tabletops of ancient mosaics at the beginning of the 20th century. At this time, mosaics tabletops come from the excavations in North Africa, in order to create and offer small tables in perfect art nouveau style.

MOSAICS OF BARCELONA

Rambla de Santa Mònica Ciutat Vella

Terratzo Segle XX. Foto: Terra Conservació i Patrimoni

www.barcelona.cat/mosaics



Mosaics Presented In Situ in Constantine's Villa at Mediana (Serbia, Nis). Case of Three Different Shelters

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Villa at Mediana was built by Emperor Constantine the Great at the beginning of the 4th century. Concept of representing Constantine's dynastic power is presented in monumental architectural plastics, fresco, and mosaic decoration. The mosaic covered the peristyle, reception room, two smaller banquets rooms (stibadia A and B), corridor towards the bath and some surfaces in the bath in total of around 1.000 m². Most of the mosaics were conserved in the period from 1972 to 1977 and then covered with sand.

Mosaic in stibadium A was sheltered after its discovery in 1936. It was enclosed by a structure with adequate roof cover, drainage and water disposal and it was used as the site museum. A project of a new shelter over the villa started in 2013. Its design is composed of a wooden arch-shaped frame consisting of heavy, curved beams topped by membrane sheet that covers an area of around 9.000 m². As it was shown to be ineffective in the north-western part, a temporary shelter made of iron frame with a saddle roof and plastic sheet on sides was built over stibadium B.

Currently there are three shelters, different in design, that were constructed to protect mosaics in the villa but because of their condition and design faults, the mosaics are not exposed and the site at Mediana is closed for the visitors.

MOSAICS OF BARCELONA

Carrièr de Bailèn 36. Casa Francesc de P. Vallet, arrimador Eixample

Mosaic de rajola ceràmica Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Restoring the Trencadís Mosaic on the Inner Face of the Park Güell Bench, Barcelona

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Margarita ALCOBÉ DOMÍNGUEZ

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Our proposal is to spread around our conservation and restoration works on the Park Güell bench and its inner part of trencadís mosaic, A. Gaudí's work built in 1900. Since 2011, actions have been taken on a regular basis, helping to evaluate the progress of works.

We divide these actions into three blocks:

First one: Restoration based on the replacement of very deteriorated or anachronistic pieces from previous interventions. An extensive work is to be carried out in order to retrieve the original aspect of the bench. Anachronistic pieces have been withdrawn and replaced by other original pieces or copies.

Second one: Restoration of original and unique pieces having partially lost glazing elements. The restoration of those pieces enables to present the same aesthetic aspect and avoid or slow down its deterioration. The difficulty of this type of action is increased by the pressure of tourism it has to deal with. In 10 years of regular actions in the Park Güell, we could appreciate the evolution of the materials and try to correct the alterations they are exposed to. Technique and materials.

Third one: The effects of the environmental influences produce discoloration we have examined. This third part aims at explaining the result of analysis and study on the ageing of the materials used until now.

MOSAICS OF BARCELONA

Avinguda de Pedralbes, 7. Pavellons de la finca Güell Les Corts Trencadís Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics



Geophysical Investigations of In Situ Roman Mosaics in Volubilis, Morocco

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Mohammed ALILOU

Conservation du site de Volubilis, Meknes, Morocco

Substantial deterioration has occurred within the mosaics of Volubilis; a UNESCO World Heritage Site in Morocco due to the long-term exposure to weathering. Today, this deterioration is visualized under different forms including; loss of tesserae, exfoliation, fractures, swelling, and subsidence.

For the purpose of this study, a small scale experimental model was constructed where roman standards and techniques were respected. The model was built with local natural stones and encompasses void spaces, rebar, and other items. The objective of this study is to understand the chemical and physical mechanisms of this deterioration. The results from this model will be compared to work that have been completed onsite. A main comparative component of this study will focus on the identification of the deterioration factors and explain the dynamic of their mechanisms. The geophysical method selected in this study will focus predominantly on the ground penetrating Radar.

MOSAICS OF BARCELONA

Carrié de Bascònia, 42-46 Sant Andreu Trencadís

Ségle XIX. Foto: A. Schulz

www.barcelona.cat/mosaics



Transferring Mosaics to Our Computers

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The state of the art in high-resolution photogrammetry, digital cameras, Unmanned Aerial Vehicle (UAV), and computational systems, make it possible today to virtually bring/digitalize/transfer mosaics to our computers at an affordable cost.

The first stage is the capture of the information in-situ of the mosaic; the necessary photographic images and topographic points estimated beforehand, in order to obtain the metric of the mosaic.

The second stage is the data processing and product generation such as the orthomosaics. These are photographic reproductions or maps of the mosaic at real scale without geometric deformations which allow for real scale measurements using the computer as if working directly on the object.

When applied to mosaics, this methodology allows to (i) generate inventories, (ii) reproduce or duplicate tiles or complete pieces in case of destruction or as part of maintenance proposals or (iii) share information between remotely located teams, among others.

We present some of our latest works using the above-mentioned technology in which we show the results over different types mosaics measured in different conditions and environments.

MOSAICS OF BARCELONA

Carrer de Pere IV, 158 Sant Martí Trençadís

Segle XX. Foto: Anònim

www.barcelona.cat/mosaics





MOSAICS OF BARCELONA

*Passeig de Sant Gervasi, 51-53. Hotel
Metropolitan o La Rotonda Sarrià-Sant
Gervasi Trencadís Segle XX.*

Foto: P. Colonna-Preti

www.barcelona.cat/mosaics

The Mosaic of the Fighters in Ostia Antica Historic Data Through the Conservation Work

Claudia FIORANI, Anna BORZOMATI

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This contribution describes the conservation work carried out in 2015-2016 on the 2nd century A.D. floor mosaic named "Lottatori" (fighters), located in the Archaeological Site of Ostia Antica.

The mosaic floor is made of white and black tesserae and has been modified and restored since the late antiquity.

The state of conservation of the mosaic was strongly compromised due to degradation factors characteristic of the artefacts located outdoor and exposed to adverse weather conditions. These factors have caused, during the centuries, the detachment of a large number of tesserae from their setting bed and the alteration of previous conservation interventions.

The study of the previous restoration, the comparison with the documentation and the archive photos allowed to select the methodologies and materials that were more suitable for the conservation of the Roman mosaic. The lifting and repositioning of several areas of the mosaic, the depth consolidations of the remaining parts, the relocation, and re-adhesion of many erratic tesserae, the repeated biocidal treatments and the ultimate protection were performed.

The conservation work-site has attracted considerable interest and has renewed the curiosity of tourists and scholars improving the approach, especially didactic, towards this work, really important for the site of Ostia Antica and for our history.

MOSAICS OF BARCELONA

*Carrer del Doctor Roux, 15 Sarrià-Sant Gervasi
Trencadís Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Protective Shelters for Archaeological Sites with Mosaics: a Project of the MOSAIKON Initiative

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Yael ALEF, Jacques NEGUER

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The Protective Shelters for Archaeological Sites with Mosaics project is a collaboration between the Getty Conservation Institute, Israel Antiquities Authority, and Historic England. This project has grown out of years of experience in the conservation of mosaics and archaeological sites and in the construction and evaluation of archaeological shelters. As a part of the MOSAIKON initiative (a partnership of the GCI, the Getty Foundation, ICCROM, and ICCM), the aim of the project is to improve the conservation and management of archaeological sites with mosaics throughout the southern and eastern Mediterranean region.

The issue of sheltering archaeological sites remains a difficult one and must consider factors such as context and location, the condition of the object to be sheltered, environmental conditions, and available resources. The GCI, IAA, and HE are developing a set of practical guidelines which will guide heritage professionals and decision-makers through the entire process of sheltering archaeological sites, from the initial decisions of whether or not to implement a shelter, through the design and construction phases, to the ongoing and future maintenance and evaluation requirements. Expected to be published in summer 2018, these guidelines will provide a helpful methodology for the problem of sheltering archaeological sites.

MOSAICS OF BARCELONA

Carriar Sant Pere Més Alt, 11. Palau de la Música Catalana, columnata

Ciutat Vella Mosaic de tesselles Segle XX Foto: Terra Conservació i Patrimoni

www.barcelona.cat/mosaics



An Update on Training in the Conservation and Management of Archaeological Sites with Mosaics: a Project of the MOSAIKON Initiative

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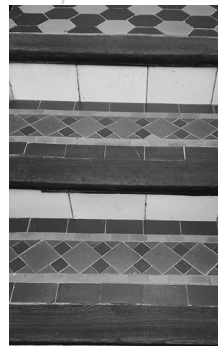
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Based on years of experience in providing training in the conservation of mosaics and archaeological sites, the GCI has led a series of training courses in the conservation and management of archaeological sites with mosaics. This training is part of the MOSAIKON initiative (a partnership of the Getty Conservation Institute, the Getty Foundation, ICCROM, and ICCM). In collaboration with multiple partners, two courses have been completed and the third is currently in progress.

These courses have taken place at different archaeological sites in the southern and eastern Mediterranean region that have large collections of in situ mosaics: Tyre, Lebanon (2010-2011), Paphos, Cyprus (2014-2015), and currently Volubilis, Morocco (2017-2018). After the completion of the third course, we expect to have trained nearly 60 heritage professionals from over 12 countries in the region. These are mid-level professionals, mainly archaeologists, conservators, and architects who are involved in the stewardship of their archaeological sites. This poster will provide an update on the project, both achievements to date and what has been learned after each iteration.

MOSAICS OF BARCELONA

*Carrer de Còrsega, 257 Eixample Mosaic de gres
ceràmic Segle XX. Foto: X. Porta González
www.barcelona.cat/mosaics*



Saving the Mosaic of Lala, Bekaa, Lebanon

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This mosaic was found accidentally in 1999 during foundation works for a new construction in a very small plot (60 m2) surrounded with buildings in the village of Lala at Bekaa. It is considered an extraordinary discovery for the entire region since it depicts beautiful ornaments and dated inscriptions related to a Byzantine basilica.

Located some 1200 meters above the sea and 3 meters under the level of the road, many challenges must be faced to keep the mosaic in situ while with the rest of it is extended under the surrounding buildings. Therefore the process of saving the mosaic of Lala requires an efficient strategy regarding its conservation. Thus it must prioritize collaborative efforts related to its geographic environment and the harsh climatic conditions, while preventing any human violations.

This must come with a special conservation project to keep the mosaic safe in its original place and connected to its extension under the buildings. Thus the ultimate question, and therefore the main challenge is the following: whether to “enshrine” the mosaic in its authentic environment along its artistic extensions under the neighbouring buildings – and in this respect the technical assistance of foreign organizations is highly necessary, or uproot it and throw it like numerous other hidden mosaics in the warehouses of some museums.

MOSAICS OF BARCELONA

Plaça de la Concòrdia, 13. Centre cívic Can Deu, paviment amb fulles d'acant Les

Corts Mosaic de tessell·les Segle XXI. Foto: M. Urbiola

www.barcelona.cat/mosaics



Cement Tiles Origins and Recommendations for Conservation, 1873-1931

Jordi GRISET MORO

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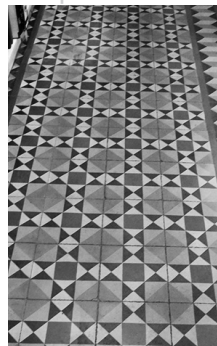
As a result of more than fifteen years of extensive research this study details the origins and use of cement tiles, Barcelona's most important manufacturers and their recommendations for conservation.

For almost 60 years these three factories coincide in recommending the use of a cloth dipped in water with a small amount of neutral soap as the best method for cleaning the tiles and, in order to brighten their colours, a solution of flax or olive oil dissolved in turpentine applied with a polishing rag.

Currently there are products sold on the market, however, as they are relatively new, we have no experience of how they will react with the passage of time.

MOSAICS OF BARCELONA

*Carrer de Serrano, 16 Nou Barris Mosaic hidráulic
Segle XX. Foto. N. Palmiero Martínez
www.barcelona.cat/mosaics*



Byzantine-Style Mosaics in San José, Costa Rica

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Despite the distance, the presence of European immigrants in Central America was a recurrent topic during the eighteenth and nineteenth centuries. Many of these immigrants were great artists and architects, because of that, the Central American countries saw new architectural styles appear in their cities and incorporated original materials.

In Costa Rica, among others, the brothers Durini Vasalli, artists of Italian-Swiss origin, and the Italian architect Francesco Tenca Pedrazzini, worked with religious, funerary and, to a lesser extent, residential works. Wealth was concentrated in the clergy, entrepreneurs engaged in coffee cultivation and professionals trained abroad who developed in the capital their economic activities.

The characteristic element, unique and of exceptional quality incorporated by these artists was Byzantine-style mosaics that were combined with the materials like the marble. These unique pieces were the most important elements of works such as the "Rojas Alvarez's Mausoleum" (important family dedicated to coffee plantations), located in the General Cemetery of San José. This mausoleum incorporates in the tympanum of its main facade, a beautiful mosaic with an angel; each tessera was made in marble and gold. Another Byzantine-style mosaic by architect Tenca Pedrazzini is located in the main facade of the Velázquez residence. This mosaic was made with floral figures and glazed tiles. Finally, the exceptional works of marble and gold are the magnificent altars and the pulpit of the Church of La Dolorosa, were made with sacred figures like "Virgin of the Rosary" and "The Annunciation" (Replica of the Painting by Fra Angelico).

MOSAICS OF BARCELONA

Carreer de Marina, 197. Jardins Interior d'illa de Clotilde Cerdà Sant

Martí Mosaic de tessell-les Segle XXI. Foto: O. Martínez

www.barcelona.cat/mosaics



Interpretation and Presentation of the Mosaic in the Decaploic Cities: Case Study from Gadara

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Jordan contains a lot of evidences of the mosaic panels of ancient civilizations: Hellenistic, Roman, Byzantine, and Islamic periods, which reflect mythological and religious views, as well as daily activities. The importance of the Decapolis Cities mosaic to study the past comes from its availability since it was the most common object in the ancient eras. Mosaic of Decapolis cities (Gadara) is the main source of information for archaeologists and experts who are interested in cultural heritage, it can help to understand the aesthetic, cultural, historical and the technical aspects of mosaic making, and the main tools that were used. It also provides an understanding of ancient societies and their culture.

This paper aims to interpretation and presentation the Decapolois cities in Jordan: focusing on Gadara as case study. It will annotate the story of the mosaic from images, designs, writings and the technique of mosaic building and production. These play a very important role for full understanding of the story of the mosaic and the site itself. The full understanding of the visitors and local public to the story will play a role in protection and conservation of the mosaic and the site.

MOSAICS OF BARCELONA

*Passeig de Santa Madrona, 28 Sants-Montjuïc Mosaic
de rajola ceràmica Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Photogrammetric Documentation of Mosaics from NI Stobi, Republic of Macedonia

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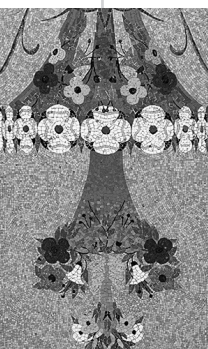
George BEVAN

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The documentation of mosaics presents considerable technical challenges. Manual drawing at 1:1 scale on mylar sheets is time consuming, introduces geometric distortion over large areas and produces a difficult end-product to communicate digitally. Photographic documentation is invaluable but the requirement for scaled orthophotographs demands considerable investment in mechanical systems to elevate the camera above the mosaic for nadir shots. For three years NI Stobi has conducted extensive trials of photogrammetric software for the documentation. The ADAM-Tech 3DM Analyst Research Suite, designed for the mining industry, offers an ideal system for the documentation and analysis of mosaic floors. Results from the Baptistry of the Episcopal Basilica, among the most renowned mosaic floors in the Republic of Macedonia show that in a single day photogrammetric data can be acquired to an absolute accuracy of 3mm in both height and in plane. A high-resolution orthophotograph was generated of the mosaic floor that can be printed on a 1:1 scale, as well as dense 3D data that can be used for measurement. This 3D data can be used for drawing individual tesserae, quantifying the deviations from ground-level in the floor surface, and for monitoring subsequent changes on a yearly basis.

MOSAICS OF BARCELONA

*Carrer d'Homer, 21. Façana Sarrià-Sant Gervasi Mosaic
de tessels Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Conservation of the Mosaic from the Archaeological Site Nebeske Stolice in Serbia

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Mosaic from archaeological site Celestial Chairs was discovered in the Early Christian basilica with a double apse dating between 4th and 5th century. The basilica was destroyed in fire; the only part of the tessellatum preserved was a mosaic border along northeastern wall of the nave mosaic. The mosaic was lifted upon the discovery, in 2000. It was badly damaged – the surface was covered with traces of soot, tessellatum was disturbed with many lacunae and loose tesserae. White limestone tesserae were especially affected by fire and wet burial conditions – only thin shells were preserved while inner parts turned to lime mixed with dirt.

The objectives of conservation were to stabilize mosaic on new movable support while keeping authenticity of preserved material and preserving the remains and imprints of white tesserae that were almost completely disintegrated. This affected the methodology of the conservation both in the application of intermediate layer and cleaning which had to be done with minimum contact. Lime-casein mortar was used for the stabilization of the tessellatum and the mosaic surface was cleaned with the combination of laser and steam-cleaning, followed by consolidation of white tesserae.

MOSAICS OF BARCELONA

*Carrer del Carme, 47. Casa de Convalescència de l'antic hospital de la Santa Creu. Vestíbul Ciutat Vella Mosaic de rajola ceràmica Segle XVII. Foto. Terra conservació i patrimoni
www.barcelona.cat/mosaics*



Episcopal Basilica of Philippopolis (Plovdiv, Bulgaria) Conservation of the Mosaic Floor

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An Early-Christian basilica dating from the 4th-6th centuries A.D. was discovered in 1983-85 in the centre of Plovdiv. The site was preserved in situ to the east of the Forum Complex. According to its location and dimensions it is considered to be an Episcopal basilica. It is a richly decorated three-nave one-apse building with a narthex and an atrium surrounded by porticos. All of the rooms discovered have polychrome mosaic floors; altogether more than 1800 square meters. In the three naves and one of the porticos there are two mosaic floors lying one above the other that are preserved in situ.

Over the years various conservation efforts have been made, temporary shelters have been set up, the last of which collapsed in 1999. In the period after 1990, due to economic changes in Bulgaria and serious cuts in conservation and maintenance budgets, the condition of the mosaics has worsened considerably.

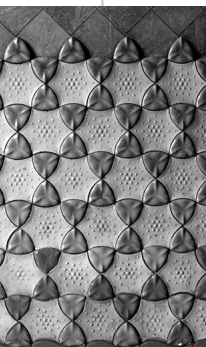
In 2015 a project for the sheltering, conservation and display of the Episcopal Basilica archaeological site started upon the initiative and with the financial support of the America for Bulgaria Foundation and the Municipality of Plovdiv. This poster focuses on the joint efforts of the team of architects, conservators and archaeologists in research, conservation, interpretation, display, and integration of the Episcopal Basilica archaeological site into the modern urban environment.

MOSAICS OF BARCELONA

Passeig de Sant Joan, 6. Casa Enric Laplana o Casa Estapé, arimador vestibul

Exemple Mosaic de rajola ceràmica Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Preservation and Presentation of Mosaics in Tyre –World Heritage Site in Lebanon

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Tyre is an ancient Phoenician city in the South Governorate of Lebanon. The city is rich of ancient sites, including its Roman Hippodrome and a considerable number of mosaics. The Historic site was added to UNESCO's list of World Heritage Sites in 1984 under criteria III and IV. In the framework of the management of the site and under the CHUD project (Cultural heritage and urban Development) in its two phases, selected mosaics panels were or will be restored, preserved, and presented to the public.

The second phase will be focused on two different mosaics located on the site, the mosaics of the latrinae in the City site will be preserved in situ on the original bedding. The second mosaic, considered as a unique piece of representation of Tanit will be lifted and transferred to the site museum.

Under Mosaikon Program, and according to the meeting held in Arles in November 2016, the Directorate General of Antiquities in Lebanon in collaboration with the department of Antiquities in Algeria will organize a "chantier-école" on the site and trainees from Algeria and Lebanon will attend the training for a period of 30 days. This poster for the ICCM conference illustrates the preservation and presentation process of the selected mosaics of Tyre.

MOSAICS OF BARCELONA

*Carrer de Galileu, 314 Les Corts Mosaic de rajola
ceràmica Segle XX. Foto: Anònim
www.barcelona.cat/mosaics*



Seasonal Reburial of Mosaics at Ancient Olympia Archaeological Site: Assessment of the New Strategy

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Seasonal reburial of mosaics in open air archaeological sites is a necessary procedure for their protection from harsh weather conditions. Most of the times though, it turns out to be a challenging task for the site manager due to shortage of personnel, time, and money.

In 2014, a decade after the completion of the mosaics' conservation project at the archaeological site of Ancient Olympia, a new strategy was adopted for the maintenance of 650 square metres of mosaics. Three different sets of reburial materials for covering the mosaics were used and a rotation scheme for uncovering them for presentation to the public and for condition surveying at the same time was proposed. This new approach enabled easier and less time consuming covering of the mosaics, as well as scheduled inspections. Three years later we will compare and assess the effectiveness of each set of protective layering and we will estimate the efficiency of the new maintenance approach.

MOSAICS OF BARCELONA

Carrer de Sócrates, 22 Sant Andreu Trencadís. Foto.

Terra Conservació i Patrimoni

www.barcelona.cat/mosaics



Examination and Conservation of Hungarian Art Nouveau Mosaics: the Róth-Workshop

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Wall mosaics from the early 20th century Budapest - made by the workshop of Miksa Róth – give special examples to study the characteristics of the Hungarian Art Nouveau through the experiences of the conservation works performed. Miksa Róth learned the base of the craftsmanship in his father's glass painter workshop then refined his professional knowledge further in Venice. After his internship he invited two Italian masters to Pest, and opened his own studio in 1885 developing his style (Historicism, Art Nouveau, Art Déco) from the medieval stained glass painting tradition dealing with stained glass windows, and mosaics. He successfully experimented with the renewal of the mosaic technique; he used special mortar layers, experimented with eosin enamelled ceramic elements of the Zsolnay-manufactory and also with the Tiffany's opalescent glass for his representative mosaics. He cooperated with a number of Hungarian artists.

Evoking the art historical context, these artworks are symbolic parts of the culture, alloys of the national and European styles, blended the return to classical antiquity and medieval mysticism with Hungarian mythological and historical themes and motifs.

On the other hand it is worth comparing the different problems of indoor or outdoor located mosaics and the architectural context, to examine the preparation methods and dealing with the matter of the correspondence between artist and craftsman. Beside the investigation of the typical use of material –including glass tesserae, enamelled ceramic inlays, seashells, coloured preparatory mortars–, the technology applied is highly in focus.

MOSAICS OF BARCELONA

Plaça de la Unió, 24 Sant Martí Trencadís Segle

XIX. Foto: A. Schulz

www.barcelona.cat/mosaics



History of the Evolution of the Conservation and Restoration of Ancient Mosaic Supports

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This poster presentation provides a detailed explanation of the different stages in the life of ancient mosaic supports. We explore the evolution of supports on a mosaic art work, focusing on their conservation and restoration. Supports conservation and restoration begins at the archaeological site, passes by the conservator's workshop, and continues up to the showrooms. On this poster, we concentrate on the technical and material levels of support conservation-restoration.

MOSAICS OF BARCELONA

Carrier de Sants, 54. Casa Jaume Estrada Sants-Montjuïc Mosaic
de tessell·les Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



The Importance of Knowing the Mosaic for Its Restoration and Conservation

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In order to carry out a good restoration of mosaics and to follow with an adequate conservation, it is necessary to know a series of things about them, which include their history, the techniques and materials used during the process of making and the so-called "andamento", the grammar of the tesserae.

One must know when the mosaic began, the origin, the way it has evolved throughout the centuries and being able to recognise the subjects which are depicted. Moreover, it is also essential to know the way to make one, using all the different techniques of construction, the different "opus" and the most important materials.

To acquire this theoretical and practical knowledge one can attend the following:

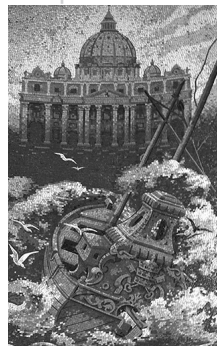
- Official teaching centres.
- Other sources, such as masters, small courses and / or workshops in public or private centres.

Through the theoretical and practical knowledge of the mosaic, it can be restored and preserved much better.

In Mérida, a great work of dissemination and teaching of the mosaic is done.

MOSAICS OF BARCELONA

Carretera de Vallvidrera al Tibidabo, 111-117. Temple Expiatori del Sagrat Cor, capelles Sarrià-Sant Gervasi Mosaic de tessell·les Segle XX. Foto: Colonna-Preti
www.barcelona.cat/mosaics



Gold Tesserae from Roman Times to Modern Era: the Investigation of a Luxury Material

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Gold tesserae comprise a distinctive category of glass tesserae, based on their complicate manufacture technique and their characteristic way of alteration. The use of gold-leaf glass tessera begun in roman times and was established during the byzantine period. The rich wall mosaics with the abundance of gold tesserae are the emblematic work of byzantine art. After a long period of decline, gold tesserae are used again today for the embellishment of walls at private and public spaces, along with the creation of works of art and decorative objects.

Although a large number of monuments decorated with wall mosaics survive today; metal leaf glass tesserae have not been the subject of a systematic research. Moreover, scarce written sources survive from byzantine era for glass production and particular the manufacture technique of metal-leaf glass tesserae. The aim of this work is to present the results of a PhD research devoted to byzantine metal-leaf glass tesserae. Particular notice would be given to the physical characteristics and technological evidence of byzantine tesserae also in comparison with modern ones, along with selected features of their decay.

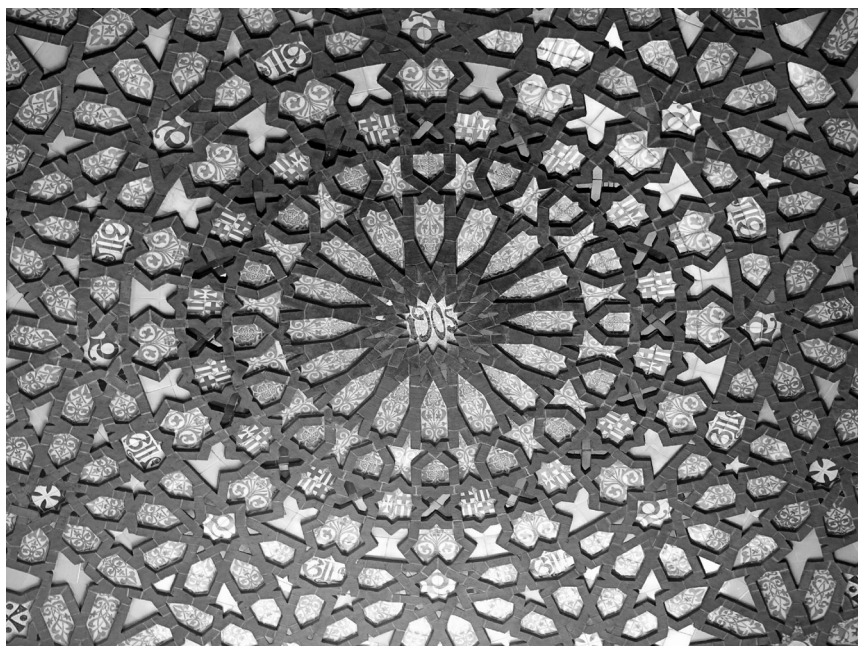
MOSAICS OF BARCELONA

Carri Nou de la Rambla, 5. Palau Güell, xemenies, Ciutat Vella. Trencadís

Segle XX Foto: A. Schulz

www.barcelona.cat/mosaics





MOSAICS OF BARCELONA

Carrer Sant Antoni Maria Claret, 167. Antic hospital de la Santa Creu i Pau, pavelló de l'Administració, sala Francesc Cambó, sostre. Horta-Guinardó. Mosaic de tesselles. Segle XX Foto: A. Schulz
www.barcelona.cat/mosaics

Barcelona (Mural G-333): a Case Study of the First Public Ceramic Wall by Eduardo Chillida

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Eduardo Chillida did the mural Barcelona, Mural G-333 in 1998 on request of MACBA. It was his first public ceramic wall. It is composed of 416 plates of refractory concrete and copper oxide paint 591cm tall and 1555cm width. The wall was produced in collaboration with Hans Spinner, German artist friend and regular partner of Chillida. The plates of refractory concrete were baked at 1300 degrees. Afterwards, Chillida painted them and finally they were baked again at 1120 degrees.

Nowadays, twenty years after the mural was done, it shows a good conservation condition. However, we can appreciate a chromatic change due to several factors. On one hand all the agents of deterioration due to the fact that the work is installed on an outside wall. On the other, the aging of the constituent materials. Barcelona, Mural G-333 is a contemporary work where the artist's hand has suffered some changes due to the aging of the protecting layer applied during the manufacturing of the plates. With this poster we would like to introduce a study in order to assess the viability of a possible future intervention.

MOSAICS OF BARCELONA

*Passeig de Sant Gervasi, 51-53. Hotel Metropolitan o La Rotonda
Sarrià-Sant Gervasi. Trencadís. Segle XX. Foto: P. Colonna- Preti
www.barcelona.cat/mosaics*



Baroque Tarsia in Venice: Two Case Studies of a Particular Making Process

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When we talk about mosaics what generally comes to mind are that archaeological floors made by thousands of squared tesserae. Opus sectile and tarsia are not popularly considered as a kind of mosaic and in this case, what is generally conceived are the classical or late antiquity expressions while tarsia has a long development through the centuries. Moreover, many baroque tarsiae belong to such well known architectures that their floor are often disregarded. The paper describes two XVIIth century marble floors in their building materials and the making process with the aim to shed a light on this late production of tarsia. The two floors belong both to projects by Baldassarre Longhena in Venice: the Santa Maria della Salute Church and Sant' Antonio altar in Santa Maria dei Frari Church. Recent conservation practices involved the detachment of large surfaces of them, allowing us to observe in detail their characteristics. The comparison between them highlights many similarities, defining a technique evolved in close relationship with the peculiar environment of Venice. To ensure their conservation, craftsmen adapted solutions from the past, like the use of raised structures, mixed with Venetian architectural traditions such as a large use of rosin for its waterproof characteristics.

MOSAICS OF BARCELONA

Carrer de Sant Pau, 33, Ciutat Vella, Mosaic de tesses / les

Foto: A. Schulz

www.barcelona.cat/mosaics



The Haralabi Street Mosaic

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The history of Patras goes back some 4,000 years. In Roman times, the city was a very important Mediterranean colony— a cosmopolitan centre of commerce and culture.

This marble floor was discovered in a Roman public building at 65-67 Haralabi Street, Patras in 1985. It was made using the 'opus sectile' technique, and displays geometric motifs. At first glance, the overall impression given by this freestyle and asymmetric design is that the work is simple or naive and not an example of fine art.

However, the marble floor with its multi-coloured background and simple geometric patterns, none of which are exactly the same, is very original. The result is a unique floor and the patron was no doubt satisfied with his commission.

The resulting aesthetic experience comes from the combination of materials used, the quality of the stones, the interplay of the colours. So great is the variety of motifs that they break the rules of symmetry and harmony – dark and light colours in strong contrast, show us the spirit and the power of the artist.

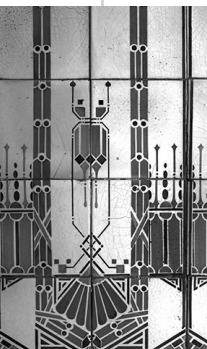
With only a few old photos and drawings from the excavation for guidance, the conservator needs, above all, experience, love of the object, patience and persistence in order to rebuild and restore such a unique work of art.

MOSAICS OF BARCELONA

Carrier del Compte Borrell, 72. Example. Mosaic de rajola ceràmica

Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Ancient Restorations of Floors in Pompeii and Herculaneum

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In the year 62 AD the most important towns of the area South West of Vesuvius, Pompeii and Herculaneum, were struck by a violent earthquake that destroyed large sectors of the cities. Imposing restorations of private and public buildings are documented: everywhere in the wall texture appear inserted parts in opus latericium revealing such restorations.

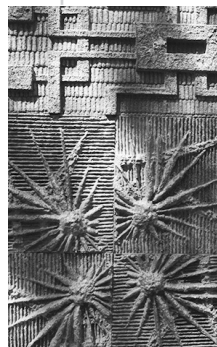
The damaged floors, both in caementicium and mosaic, show also evidence of three different types of intervention. Type A is the result off quick floor restorations, made filling the lacunae with a particular mixture of very fine volcanic material and mortar, that in some major Pompeian domus, such as the House of Menander and the House of Paquius Proculus, covered large areas of floors even belonging to the pars dominica of the dwelling. Type B consists in attempts to the restoration of figured mosaics, like the couple of emblemata from Herculaneum, effectively executed with the insertion of new tesserae in the damaged parts, showing however a rather questionable interpretation of the drawing. Finally, type C is an exclusive aesthetic restoration, as we see in the House of Tuscanic Columnade, where to proceed to a renovation of a geometric mosaic in white and black, they produced a brand new white, black and yellow mosaic, overpainting in yellow colour some white tesserae.

MOSAICS OF BARCELONA

Carrer Gran de Sant Andreu, 291. Sant Andreu. Mosaic de rajola ceràmica

Segle XX. Foto: Terra conservació i patrimoni.

www.barcelona.cat/mosaics



Mosaics on Euboea Island, Greece: from Antiquity to Today

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Some of the oldest mosaics are found on Euboea Island in Greece. This art form continued there through the centuries and is still being practiced today. What is the attraction? Beauty or practicality?

"Mosaics on Euboea Island, Greece. From Antiquity to Today" was the title of an exhibition held at the Town Hall of Chalkis on Euboea Island in Greece during November 2016. The objective of the organisers was to show the general public what mosaics are beyond an ancient art form. After historical, technological, conservation, and modern mosaic were displayed, a computer screen showed a pixelated image. In conclusion, visitors were asked what they thought mosaics were. The results of that survey will be presented in poster.

MOSAICS OF BARCELONA

Carri de Blasco de Garay, 38. Paviment amb motiu en espiral

Sants-Montjuïc. Foto: A. Maurer

www.barcelona.cat/mosaics



Conservation and Restoration of Mosaic with Christ Monogram

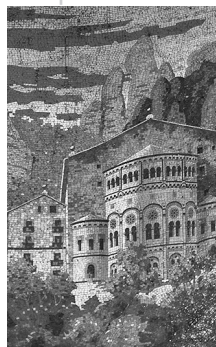
Marijana PROTIĆ

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This lecture will present the conservation and restoration works on mosaic with Christ monogram and the process of problems, and solutions related to its presentation as well as making a copy utilising modern materials for in situ presentation. The mosaic with Christ monogram was found during the archaeological campaign in 2007 on the archaeological site Mediana. After the demolition of the residential complex on Mediana, a completely new type of settlement was formed on its residues; among others they built the two churches that represents sacral complex dated at the end of IV or beginning of V century. South Church is a single building; it consists of a large, elongated narthex and nave. On the east side is a large apse, depth of 2 m at the mortar floor of the nave, at the place of Ambon a Christ monogram was performed in the mosaic technique of secondary used tesserae.

MOSAICS OF BARCELONA

Carretera de Vallvidrera al Tibidabo, 111-117. Temple Expiatori del Sagrat Cor, capelles Sarrà-Sant Gervasi Mosaic de tessels Segle XX. Foto: P. Colonna-Preti
www.barcelona.cat/mosaics



Removal, Transfer, and Restoration of a Contemporary Mosaic on an Asbestos Support

Astrid MARÉCHAUX

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In French public constructions, 1% of the general budget is allocated to art. With this objective, a high school in Creutzwald (East of France) received in 1967 three works of art - two mosaics and one painting - from a local artist, Camille Hilaire. As time went by, classrooms became useless and mosaics suffered from dirt, losses, cracks... In 2017, the building is planned to be destroyed. Therefore, the task was to remove the two mosaics from the old walls, to transfer them to the new buildings of the high school and to "bring them back to light".

However, the previous study of those masterpieces has revealed that the support of mosaics was totally made with asbestos, a big problem for the removal. Moreover, the weight of the tesserae is too high for this kind of support, but also for the walls! Panels of mosaics are completely deformed and the support walls are collapsing.

To find solutions, a team of conservators, specialists of asbestos and metalworking craftsman has been created. How to remove mosaics of 4m long, without touching or breaking the asbestos support? What kind of new hanging system can be created to exhibit panels of mosaics? And how to restore them?

MOSAICS OF BARCELONA

Passeig de Sant Gervasi, 51-53. Hotel Metropolitan o La Rotonda Sarrià-

Sant Gervasi Trençadís Segle XX. Foto: P. Colonna-Preti

www.barcelona.cat/mosaics



Butrint as an Education and Training School for Future Generation of Conservators

Erjona QILLA

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Butrint National Park has made a significant contribution to Albanian archaeology and conservation. For many years excavations have been undertaken inside and outside Butrint with the aim of enriching archaeological evidence and making Butrint into an exemplary model of sustainable tourist development.

One of the most important goals of the Albanian institutions has been the training of Albanian students. Over twelve years more than 500 Albanian students have been involved in the training process in different excavations and conservation projects.

Conservation training has been only one aspect of the Butrint National Park's approach to investment in people as much as in the site. Training of young heritage professionals has also been exceptionally important; it's most visible expression an annual Training School at Butrint. Initially organized by the Butrint Foundation and linked to its own excavation programme, in recent years the School has become the responsibility of Butrint authority and the Albanian Heritage Foundation (AHF), an NGO established to develop modern approaches to heritage management throughout the country.

The purpose of the Butrint Training School was to introduce Albanian students to modern archaeological and conservation techniques while, at the same time, promoting contemporary conservation values. Thanks to their work and contributions as well as the other Albanian and a foreign initiative, Butrint is now the best example of a managed heritage site in Albania.

MOSAICS OF BARCELONA

Carrer del Consell de Cent, 250 Eixample

Mosaic de rajola ceràmica Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Research and Reconstruction of Historic Gold Mosaics

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A research project of reconstructing historical gold mosaics deals with reconstructing weatherproof gold and silver mosaics according to historical models. The gold mosaics examined originate mainly from Germany from 1880 to 1920 and are composed of three parts. They consist of a matching support glass, the gold or silver layer, and a cover glass. By examining the morphology and layer thicknesses with the ESEM, and using chemical analysis with the EDX, the relationship of glass composition and damage patterns was established.

The glass analysis provided quantitative composition data and made it possible to determine its chemical stability. It supplied the basis for calculating glass characteristics and was referred to when casting suitable historical mosaic glass. The analysis of the qualitative composition of the gold and silver layers also served as a model for reconstruction. After testing selected reconstructed gold mosaics in the climate chamber, the ESEM was used for capturing leaching and other process data and the glass composition was optimized accordingly. Over 100 predominantly historical gold mosaics were analysed and the results entered into a database which can now be consulted for comparative investigations to determine both origin and date.

MOSAICS OF BARCELONA

Carrer Panamà, 13. Casa Grané o Vil·la Hèlius Les

Corts Trencadís Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



A Mosaic from Thmuis, Egypt: Continuation of a Restoration Project and Complementary Observations on the Constituent Materials

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This opus tessellatum dated to the 2nd century BC was discovered at the beginning of the 20th century on a site in the Nile Delta. The mosaic is today part of the collections of the Graeco-Roman Museum of Alexandria. The Egyptian Supreme Council for Antiquities commissioned the Centre d'études alexandrines (CEAlex-CN-RS) to undertake its restoration.

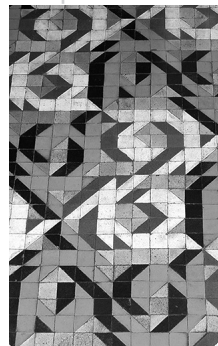
An initial operation was conducted in 2013 to "de-restore" a previous attachment of reinforced cement and to transfer the tessellatum onto a new support. Concurrently, a series of examinations led to the identification of the materials used in the work and revealed the notable presence of strips of lead, traces of ancient painting and of Egyptian blue. This mosaic was clearly of major interest in terms of the materials and procedures employed in a pavement of the Hellenistic era, and at the same time it faced a serious problem of preservation.

In 2015, a second campaign looked at the essential steps required for enhancing the state of this exceptional mosaic. More precise observations were made that revealed evidence of the possible use of faience tesserae. This intervention also led to further consideration of the preserved traces of paint, evidence of a pictorial technique that originally extended across all of the work.

We propose a presentation of the process of selective cleaning and of the information gathered regarding the material history of this pavement, touching on both the ancient procedures and its more recent history, including signs of sometimes surprising modern repairs.

MOSAICS OF BARCELONA

Rambla de Fabra i Puig, 13. Can Guardiola, paviment amb volutes Sant Andreu Mosaic de gres ceràmic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



The Mosaic Floors of the Roman Villa of Patti Marina, Italy: New Considerations and Ancient Restorations of Mosaics Dating 2th – 3th Centuries AD

Francesco Nelson RUSSO

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The mosaic floors dating 2th – 3th centuries AD of the roman villa of Patti Marina was first unearthed in 1984.

The decorations study of the mosaics for my Ph.D. thesis in Archaeology and Ancient History, have revealed several intervention and conservation methods applied to them in antiquity. The paper will discuss the relationship between room decorations, their functions and the different interventions of mosaic restoration through time.

MOSAICS OF BARCELONA

Carrer de Marina, 197. Jardins Interior d'illa de Clotilde Cerdà Sant

Martí Mosaic de tessell·les Segle XXI. Foto: O. Martínez

www.barcelona.cat/mosaics



Report About the Mosaic Floor of the Dressing Room (Apodyterium) of Trajan's Baths in Cyrene

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In the modern entrance to the Sanctuary of Apollo there is a rectangular building (20m by 9m), which is part of the architectural structure of the Baths of Trajan, built in 98 AD. This building was originally a dressing room (apodyterium) which after restoration became a small Museum of Sculpture. It was in use until 1995 when it was closed and then abandoned. The Museum of Sculpture and hall faced problems of negligence and deterioration.

The circumstances of the hall today are that it needs extensive and urgent maintenance and restoration. Furthermore, this hall has a fantastic mosaic floor. In October 2016, the mosaic was examined and turned out to be in a very poor condition.

As a consequence, the works of rescue and protection have begun as follows:

Cleaning works: remove the dirt, the wreckage of widow glass, cut to strengthen and restore the mosaic floor, and prepare preservation tools.

Damage assessments: structural deterioration (tessellatum lacunae, bulges, depressions, detachments between mosaic layers, and detached tesserae). Bio-deterioration (Micro-organisms, and vegetation)

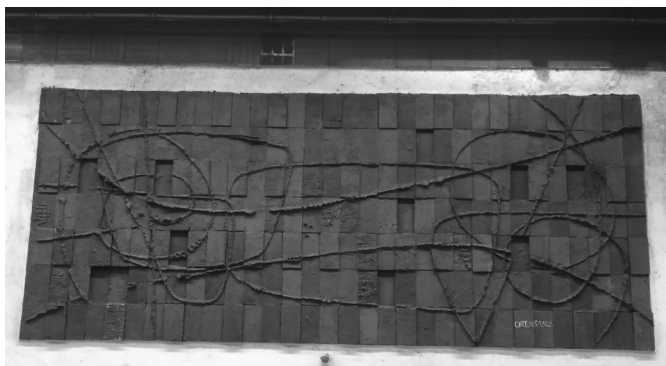
Interventions program:

1. In the mosaic floor: vegetation removal, cleaning, resetting tesserae, stabilization
2. In the hall itself: cleaning of hall's shut, waterproofing slots in the hall's roof.

MOSAICS OF BARCELONA

*Carrer de Blasco de Garay, 38. Paviment amb fulles de color verd, blanc i vermell Sants-Montjuïc. Foto: A. Maurer
www.barcelona.cat/mosaics*





MOSAICS OF BARCELONA

Estació de metro Girona. Eixample. Mosaic de gres ceràmic

Segle XX Foto: Biblioteca Sofia Barat

www.barcelona.cat/mosaics

Mosaics in Egypt: Obstacles and Challenges

Eman Mohsen SHAHAWY

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Egypt's rich civilization and monumental evidences made it an open air museum. Egypt also counts with a big collection of mosaics from different places (Alexandria, Thmuis, and North Sinai) and different periods (mosaic of transfiguration in Saint Catherine monastery, geometrical mosaic in Qaitbay Citadel from the Islamic period).

Mosaics in Egypt are preserved in situ, in museums, or in store rooms. Although mosaics in situ are rare; Villa of the Birds in Kom El-Dikka, Alexandria is kept in its original place and open to the public as a small museum.

Inside museums we find mosaics such as: The dog and Athlete in the Bibliotheca Alexandrina Antiquities Museum; Medusa and Queen Bernice in Alexandria national museum; Geometrical, Phaedra and Hippolytus mosaics in Ismailia museum. Before closing down in 2008, the Greco Roman museum displayed a collection of mosaic floors; all of them now in storage. The Ministry of Antiquities established a museum specialised in displaying mosaics, but the works stopped due to Egypt's economic situation after the revolution.

There are mosaics stored all over Egypt, including figurative and geometrical floors recently discovered in Alexandria. Some are restored, and all of them need further study and conservation. A priority of the Ministry of Antiquities is to care for Egypt's mosaics, to benefit from them and to keep them for next generations. Therefore, for the first time in Egypt, the Ministry of Antiquities established a Centre of Archaeological Information and Mosaics Preservation in Alexandria- Egypt, as a platform to preserve, study, and document all mosaics in Egypt.

MOSAICS OF BARCELONA

*Carrer de Sant Pau, 33 Ciutat Vella Mosaic
de tessell·les. Foto: A. Schulz
www.barcelona.cat/mosaics*



Mosaics from Cement to Aerolam

Hamadi SILLINI

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Nowadays, scientific experiments and research have proved the inadequacy of uprootinng and placing mosaics on a new pillar of reinforced concrete with a chain of iron. In fact those materials that the panels of Mosaic are made of, especially cement, contain a percentage of salts that cause damage on the layers of cubes.

Today, and after various discoveries and experiments that had been done by researches and specialists in the heritage field, we understand the importance of getting back to the original materials and basic components of soles and old mosaic floor that have been used by mosaic makers over centuries, keeping mosaics over time. These materials are lime as an essential material mixing it with others such as sand, gravel, marble, and brick. For heavy props that require many people in their lifting, specialists have encountered an alternative foundation named Aerolam which is industrial lightweight panels, easy to lift, in the form of bee cells. We use lime mixed with other resources over Aerolam.

MOSAICS OF BARCELONA

Carri de Bailén 126. Casa Rossend Capellades, arrimador Eixample

Mosaic de rajola ceràmica Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Conserving the Art of Making as Well as the Art

Christopher SMITH

Art Pavements, Former Director, United Kingdom,
hephaistopia@aol.com

The techniques and work methods for each side of the concerns greatly enhanced and developed the repertoire of the other and the result was a group of craftspeople with considerable skill and artistic understanding, well-versed in conservation principles and advanced technique.

Some conservation: Fishbourne Roman Palace, >10 mosaics; British Museum: Roman mosaic, Mediaeval tiles etc. >50; Roman villas: Bignor, Brading, Littlecote (on cover of Mosaics no 2) et al. Over 500 conservation projects were carried out.

Some modern: Phoenix, RCA; London Underground: Paddington, South Kensington, Waterloo, and Tottenham Court Road (Pao-lozzi); Greek and Westminster Cathedrals; Leicester Southgates; Southampton Station... Over 100 modern projects were carried out.

No grants or government assistance were received throughout.

Mosaic means, not just safeguard and creation, but also a way of working and living in productive harmony whilst engaging in positive social action. I would like to show the benefits and drawbacks of working in this way.

MOSAICS OF BARCELONA

*Avinguda de Pedralbes, 7. Pavellons de la finca Güell Les
Corts Trencadís Segle XIX. Foto: F. Araya
www.barcelona.cat/mosaics*



Novel Geopolymeric Composites for the Restoration of a Roman Mosaic Fragment

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Thanks to a collaboration among the institutions cited above, it was possible to apply geopolymeric composites for restoring a fragment of Roman mosaic.

These composites were designed to create a movable support and to produce coloured tesserae. The support was aimed to protect the fragment when exposed outdoors and the coloured tesserae were used for integration works able to permit a general correct reading of the mosaic.

A detailed study of geopolymeric mixtures selected on the base of their chemical, physical, and mechanical stability as well as the durability was performed through microstructural analysis (SEM, Micro Tomography), release of soluble salts, resistance to freeze-thaw cycles, interaction with electromagnetic sources (UV Fluorescence Imaging).

Before the final restoration intervention, various prototypes were realized in order to operate in the best conditions. Following an adequate procedure focused to ensure the total reversibility of the intervention, the geopolymeric composites were poured into a mould in order to create two-layers structure, reinforced with a steel network, in which the mosaic was dipped. This re-lie technique is an innovation in the mosaic restoration.

After a curing period, the surface of geopolymeric "shell" was used to complete the mosaic integration using the coloured geopolymers to fill the lacunae.

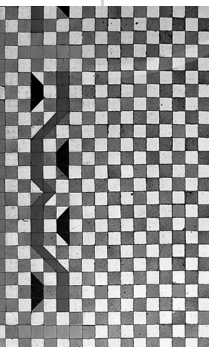
The obtained results showed that these novel geopolymeric formulations may be considered suitable in the Cultural Heritage field thanks to their versatility, their low release of soluble species and an unexpected resistance to the freeze-thaw (> 800 cycles).

MOSAICS OF BARCELONA

Carrièr Gran de Sant Andreu, 133. Paviment de gres

Sant Andreu Mosaic de gres ceràmic Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Jerusalem Islamic Awqaf Conservation and Restoration Project of the Mosaic of Al-Aqsa Mosque and the Dome of the Rock

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The project of the Hashemite Kingdome of Jordan and the Hashemite Fund for the Restoration Process of the Al-Aqsa Mosque comprises the entire area within the compound walls on its four sides, with a total area of 144 dunams (1 dunam = 1000m²), including Al-Aqsa Mosque, the Dome of the Rock, and all buildings, platforms and open courtyards located above or under the grounds. Following the status that existed before the year 1967, the compound continues to be administrated by the organs of the government of Jordan, under the Jordanian law.

This communication focuses on the preservation and restoration actions on the mosaics in Al-Aqsa Mosque, built by the Umayyad Caliph Walid Bin Abdul Malek Bin Marwan between 706-714 AD/90-96 AH; and the Dome of the Rock, also built by the Umayyad Caliph Abdul Malek Bin Marwan between 691-692 AD. / 71-72 AH. We describe the importance of the project at all stages, the methods followed in the restoration of the Islamic mosaic decorative panels inside both mosques, and the Islamic events the mosaic represent.

Restoring all inner decorations of Al-Aqsa Mosque and the Dome of the Rock including stucco, marble, wooden and golden decorations, despite the difficult circumstances that take place in that area, is of religious and historical importance for the preservation of the site of "ISRAA" of prophet Mohammad "PBUH". The mosaic restoration came as a part of a request by His Majesty King Abdullah The Second.

MOSAICS OF BARCELONA

Carrer Almogàvers, 119-123. Pavelló d'entrada de l'antiga fàbrica de la Unió Metal·lúrgica, rètol Sant Martí Mosaic de tessels Segle XX. Foto: Anònim
www.barcelona.cat/mosaics



Methods of Photogrammetric Documentation and High Definition 3D Analysis Applied on Mosaics of a Patrician Residence in Turris Libisonis, Porto Torres, Italy

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**Gabriella GASPERETTI, Alba CANU,
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The “domus of marine mosaics” in Porto Torres (II-III century C.E.) has private thermal baths with rooms decorated with polychrome geometric pattern. The photogrammetric technology is being tested on diagnostic and the documentation realized with both classic and modern method, in order to build an High Definition 3D relief which can be useful to read and analyse the mosaic floors. The reliefs will allow the proper settling and consolidation of the loose tesserae.

We use radiometric and geometric High Definition digital cameras, equipped with wide angle of field optics with low distortion values and calibration in the laboratory, based on topographic methodology with vertices positioned with GNSS technologies and Ground Control Points (GCP) with the help of the topographic Total Station.

The tesserae are readable and measurable with 1-2mm of average error. A surface 3D model, integrated in GIS environment with digital geo-referenced database has been realized.

MOSAICS OF BARCELONA

*Avinguda de Rius i Taulet, 5. Casa de la premsa Santis-Montjuïc Trencadís Segle XX. Foto: A. Schulz.
www.barcelona.cat/mosaics*



Restoring Mosaics in Lebanon: Evaluation of Earlier Decisions and Propositions of Further Actions Based on the Examples of Two Case Studies

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The aim of the poster is to draw attention to the need for constant monitoring and evaluation of the restoration's effects. Given the small territorial size of Lebanon, it seems unique how large is the variety of factors affecting the historic matter. Exposure to the local climate at the site means changes in the level of humidity, temperature, as well as the amount of rainfall during the year. Recognition of those factors has tremendous impact on the strategies and conservation action programs.

For example: the suggested height of reburial of mosaic from early-byzantine basilica in Chhim, first case study presented in this paper. Twenty years after this mosaic's discovery it was possible to establish an interdisciplinary team, whose aim was to re-examine the original matter with the help of modern analytical techniques and to review methods used in the past.

Second case study is the mosaic from basilica in Jiyeh from Beit ed Dine museum. Twenty years of exposure resulted in damages that were a consequence of earlier decisions, materials used and lack of preventive care. The result of this research is an original project to secure the mosaic that has been re-laid on reinforced concrete without moving it to the new support base.

MOSAICS OF BARCELONA

*Passeig de la Bonanova, 64. Torre Pujol, barana de coberta
Sarrià-Sant Gervasi Trençadís Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



SEE Mosaics Meeting III “New Perspectives and Challenges in Mosaic Conservation”

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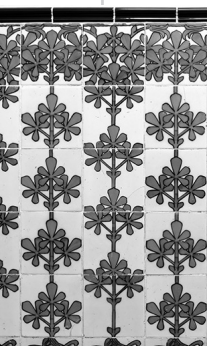
In the frame of the second phase of the SEE Mosaics project dedicated to developing network of mosaic conservation professionals and promoting mosaic heritage in SE Europe, the third meeting entitled “New perspectives and challenges in mosaic conservation” was held from 14th to 17th September 2016 in Ohrid, Macedonia. It was jointly organized by the Central Institute for Conservation in Belgrade and the Local Development Agency in Struga. The meeting was supported by the Central European Initiative – CEI. Thirty colleagues from ten countries participated in the meeting. Besides participants from CEI countries (Albania, Austria, Croatia, Hungary, Italy, Macedonia, Serbia, and Slovenia), colleagues from France and Spain participated as well. The program consisted of individual participant presentations, discussions, and a round table. The presentations showcased problem solving of conservation challenges regarding investigations and research, mosaic documentation, conservation in situ and in museums. This poster provides an overview of the Ohrid meeting and announces the upcoming meeting to be held in Pula, Croatia.

MOSAICS OF BARCELONA

Carrer de Tallers, 3 Ciutat Vella Mosaic de rajola ceràmica Segle

XIX. Foto: A. Schulz

www.barcelona.cat/mosaics



Mosaic Map of the City of Ohrid and Lihnid

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The city of Ohrid is one of 35 cities protected by UNESCO for its natural and cultural heritage. The idea of the mosaic "Map of Ohrid" was conceived in 2006 with the development of the application Google Maps. The design is based on actual geographic coordinates and visuals in Google Maps. The mosaic has a distinctive birds-eye view which represents all of the existing trails and roads of a city mainly situated on a hill surrounded by the lake Ohrid. Details include stairs leading through authentic architectural structures between today's houses under which many remains of archaeological sites are preserved. En face views; foundations, side views and three- dimensional representations of objects from antiquity appear unexpectedly. They include Early Christian basilicas, churches, and groups of ambience landscapes with characteristic architecture of the city. Gold plated smalti is used to geographically and spatially emphasize some natural phenomena, architectural buildings and archaeological sites, and other significant points of interest among the sacred and the secular character of the city. This map is visualizing the interweaving of centuries in a city that still lives.

MOSAICS OF BARCELONA

Carrer de Roger de Flor, 226 Eixample Mosaic hidràulic Segle

XX. Foto: S. Noguera Giménez

www.barcelona.cat/mosaics



Connected Archaeological Sites – Mosaic Climate Survey and the IoT (Internet of Things)

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Climate and condition surveys are crucial tools to understand deterioration phenomena and deterioration trends of architectural surfaces (such as mosaics) and therefore, have been widely employed in conservation practices. At the mosaic site of Orbe, these tools are very important as we encounter significant salt crystallization and frost cycles.

A weak point of climate survey in the past has been the follow-up on installed sensors. Those who have ever been involved in climate surveys have likely encountered inconsistent, faulty or simply forgotten sensors, some of which were out of order for weeks or months, leaving gaping holes in the climate data. Furthermore, locally-stored climate recordings cannot trigger reactions from the conservator.

The Internet of Things, describes the interconnection of everyday objects via the Internet, and does not stop at archaeological sites. Today it is possible and inexpensive to do so as well with climate sensors.

In this paper we will present how data from the climate survey at the mosaic site of Orbe is made accessible to the operator simply via a free open-data platform. Examples will illustrate how data is represented and analysed and how warning emails are sent when thresholds are passed or sensors fail.

MOSAICS OF BARCELONA

Rambla de Fabra i Puig, 13. Can Guardiola, paviment amb estrelles blaves Sant

Andreu Mosaic de gres ceràmic Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Recovery and Dignity of a Lost “Roman Mosaic” Done by Mario Maragliano in the Teatre Principal of Terrassa

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The rehabilitation of the Teatre Principal of Terrassa included restoration works in the lobby and the foyer. In the renovation project the flooring for the lobby was meant to be of big natural stone slabs, same as the ones we put in the foyer. During the excavation works to recover the original level of the lobby we discovered a little marble mosaic done in 1910 by Mario Maragliano (Venice, 1864 - Barcelona, 1944). It was the original pavement of the lobby, that had been buried in a reform of 1970. The mosaic was badly damaged and had many gaps. The restoration and the extraction of the mosaic was made thinking of its transfer to the Municipal Museum, but it ended up in a warehouse without precise destination. We gave it back to its original place on the concrete slab that we have placed as a basis of the restored lobby. The mosaic flooring shows many deficiencies but it was completed with epoxy resins to ensure continuity and protection of the little tiles. We did not expect that this original pavement would be part of our restoration, but it returns real beauty and extreme quality to the theatre.

MOSAICS OF BARCELONA

Carrer de Salvà, 42. Lletèria BP, façana Sants-Montjuïc

Mosaic de tesselles Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Reburial of In Situ Mosaic Pavements: Comparison of Different Methods Based on Experiments

Sehriğül YEŞİL-ERDEK

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The paper will present the preliminary results of the ongoing PhD project "protection of in situ mosaic pavements by reburial". The objective of this project is firstly to understand the problems that are encountered when employing the current techniques, and secondly to devise an efficient technique that will effectively ensure protection.

The reburial techniques which have been applied so far do not provide sufficient protection for mosaic pavements against atmospheric effects and mechanical loads. These techniques are not adequate in providing moisture equilibrium by removing the water that reaches the pavements due to capillary rise, or preventing the plant roots from reaching the mosaic surface.

Studies conducted since 1990 have predominantly focused on evaluating the observations acquired at archaeological sites. It has been frequently emphasized that comparative field testing is required in order to obtain technical and practical improvement in reburial. The number of monitoring devices, methods and research on the subject is utterly limited, consequently very little reliable data exists concerning the mentioned issues.

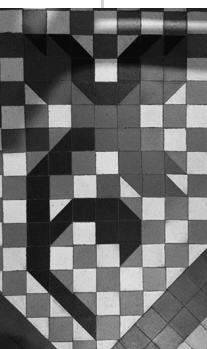
Therefore, in order to better comprehend the conditions that occur in the six different systems that are commonly used for reburial, data will be collected over a period of at least one year through an experiment set up in the Southern Baths of ancient Perge (Turkey). The key parameters in this research are: water/humidity, wetting-drying cycle and temperature. In addition to the mentioned parameters, plant density/diversity, external mechanical loads, and application load of reburial systems will also be examined.

MOSAICS OF BARCELONA

Carrier de Ganduxer 85-105. Col·legi Santa Teresa, Les Teresianes

Sarrià-Sant Gervasi Mosaic de gres ceràmic Segle XIX. Foto: M. Uriola

www.barcelona.cat/mosaics



Mosaics Conservation at the Bardo and Carthage Museums: Assessment and Conservation Plan

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The Bardo National Museum and the Carthage Archaeological Museum have hundreds of pavements and thousands of fragments stored in different spaces, generally not adequate for their conservation. At the Bardo Museum, the panels are inside and outside the building placed in metal structures as temporary storage, nearby the central laboratory of restoration of the INP. At the Archaeological Carthage Museum, pavements are stored in the museum and the area that surrounds it but also outside the Roman villas at the crypto portico.

This scattering of storage space, the absence in these two museums of a real workshop and qualified staff, the variety of ancient techniques (plaster supports and reinforced concrete), and the lack of documentation, make the task of conservation very difficult and quite slow. The main problem in these two museums is mainly an issue of conservation. Given the situation, it is necessary to start with the training of a permanent and qualified staff, then the creation of a conservation-restoration workshop and the construction of new storage facilities with new standards of conservation. In this case, a good international project could help the professionals of the two major museums in Tunisia facing a critical situation.

MOSAICS OF BARCELONA

*La Rambla, 91. Mercat de Sant Josep o La Boqueria,
arc d'entrada Ciutat Vella Trencadís Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Casa Batlló (Antoni Gaudí's Renowned Building): the Conservation-Restoration of Three Skylights Made of Glass Trencadís, and Ceramic Plates, in the Main Courtyard

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Casa Batlló is alive as this building is receiving a large number of visitors every day and is also renting its premises for different events. As this building is used in a different manner than the original one, it is vital to pursue a conservation and restoration policy which will take into account the uniqueness of the building and its needs.

The poster will focus on the action of conservation and restoration that took place between 2010 and 2012 at Casa Batlló (Barcelona). Action was taken after significant damage was detected on decorative elements, part of the three skylights located on the main floor terrace. Through them, rainwater could easily enter in the ancient garages of the building (in the lower floor). The skylights were made of glass trencadís and ceramic discs, presenting actions previously held for the same reason.

The complete information will explain the history of the building, the pathologies identified and the technical tools used to define the structural damage. Finally, we will point out the conservation and restoration process.

MOSAICS OF BARCELONA

Carrer d'Entença, 155. Antiga presó Model, pati Eixample

Trencadís Segle XX. Foto: Carles V.

www.barcelona.cat/mosaics



Byzantine Mosaic in Al-Shabatliyah Area, Latakia, Syria

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This mosaic, discovered in 2009, is the flooring of a hall in a Byzantine monastery on the Mediterranean coast, at Al-Shabatliyah area in the city of Latakia. This geometrical mosaic has a written part at the entrance of the hall, and consists of traditional layers which are: (tessellatum) stone cubes layer, (nucleus) an installation layer of lime, (rudus) a preparatory layer, then (statumen) the base layer that proves the mosaic.

The mosaic has been documented by drawing, first at the site and then completed with a digital map based on the site drawings. It has also been documented with photographs of all the interventions made on the mosaic.

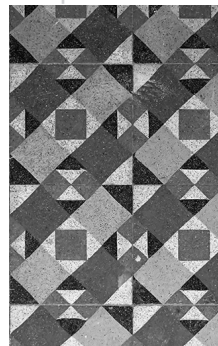
The damage on the mosaic was assessed by a competent restoration team. They encountered biological damage caused by insects and plants, and environmental damage which appeared in cracks between the cubes.

To restore the mosaic, it was transported from the site to the mosaic laboratory in the city of Damascus. Beforehand, it was divided attending to its geometrical shape, and a layer of fabric was pasted on the surface to save the cubes while extracting the mosaic out of grout, and during transportation.

At the laboratory, cubes were cleaned and re-installed with base layers on panels consisting of perforated aluminium, which had been confined between two layers of resin reinforced with fibre glass. At the end the mosaic blanks were filled with mortar.

MOSAICS OF BARCELONA

*Carrer de Tapióles, 29. Paviment amb quadrats vermells i beix Sants-Montjuïc Mosaic hidràulic Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics*



VIDEOS

The Restoration of Prier Hall Mosaics of the Umayyad Mosque in Damascus

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In 2014, restorers from the directorate of Antiquities in Damascus undertook the conservation of the mosaic of the prier hall in Umayyad mosque. This mosaic, which belongs to 12th and 13th century, had never been subject to restoration treatment since the great fire of mosque in 1893.

The condition of the mosaics was delicate, and a separation between the panel and the wall was evident. The split and deformation of the surface of the panel as well as a carbon layer covering the tesserae surface are likely to have been caused by fire. Active conservation interventions were undertaken to protect the mosaic. These include the consolidation of the damaged parts, removal of the carbon layer from the surface, and the recovery of the original colours of the tesserae. Aspects of this work will be presented through a short documentation video.

MOSAICS OF BARCELONA

Carrer de Santaló, 79. Arrimador Sarrià-Sant Gervasi

Mosaic de rajola ceràmica Segle XX. Foto: Anònim

www.barcelona.cat/mosaics



New Mosaic from Philippopolis

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The city of Philippopolis encapsulates a rich collection of mosaics spanning throughout the last centuries. These mosaics have been exhibited in multiple museums in Syria. The mosaic in question was removed from its site in 1970, and since its detachment has been stored at the General Directorate of Antiquities and Museums in Damascus. In 2012-2013 the mosaic was brought out of storage for the study of its iconography and its subsequent restoration. The study revealed new evidence regarding its foundation layers and an unprecedented decorative motive in the city of Philippopolis.

In the video, we highlight the important features of this mosaic, the decorative theme, and the conservation processes undertaken (including documentation and restoration. These efforts met success despite the lack of previous documentation related to the discovery and lifting which were carried out in the previous century.

MOSAICS OF BARCELONA

*Plaça de Sant Josep Oriol, 3 Ciutat Vella Mosaic
hidràulic Segle XIX. Foto: A. Schulz
www.barcelona.cat/mosaics*



Conservation of Mosaics in Eshmun Site, Lebanon

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The Eshmun archaeological site is located in southern Lebanon. It was constructed in the VIIth century B.C., and was continuously occupied till the Byzantine period, VIth century A.D. Eshmun holds a particular archaeological importance since it is the best preserved Phoenician site in Lebanon.

The site is also well known for its mosaics, still conserved in situ for the majority. These remarkable mosaics reflect the talent of skilled craftsmen. The finesse in the execution using different materials from various sizes, in addition to the unique motifs represented, add to the site a major value which should be enhanced and protected.

This project reflects the huge challenge of protecting the exposed mosaics and controlling the current situation of decay. The deterioration of the mosaics on site is active and fast, and urgent interventions are needed immediately. The lack of consolidation works is badly affecting the pavements leading to the loss of the tesserae and eventually the mosaics.

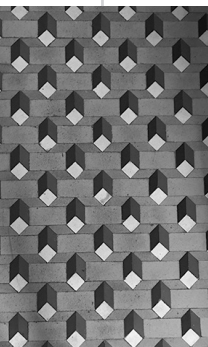
The preservation of these mosaics in their archaeological context will improve the understanding of their historical significance, and consequently will emphasize on the appreciation of the site as a whole.

MOSAICS OF BARCELONA

Carrié de Girona, 84. Passadís Eixample

Mosaic de gres ceràmic Segle XX. Foto: Anònim

www.barcelona.cat/mosaics



"ART FOR ALL"- The Magnificent Art Collection, Including Contemporary Mosaics, of the Socialist Textile Factory in Pirot, Serbia

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During 1970's, the socialist textile factory named "1st May" (Worker's Day), located in Pirot, Serbia, started the establishment of unique art collection within their annual cultural program. Until the end of the 1980's it consisted of more than 170 pieces of different artworks – sculptures, paintings, tapestries, stained glass, graphics, and 11 large mosaic wall-panels positioned in the interiors and exteriors of factory buildings.

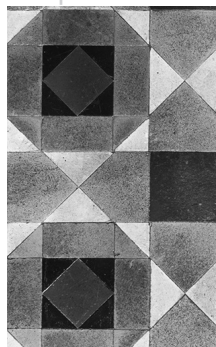
Although some art pieces were sold or destroyed during the collapse of the socialist regime in former Yugoslavia, the majority of the sculptures and building-incorporated mosaic works are still standing in situ.

Recording, publishing, and conservation of the collection, but also finding the ways to legally protect the art-works that need to be saved from potential further destruction are the objectives of our work.

On this occasion we are focusing on the mosaic murals that are the most difficult ones to be preserved, but they also make a solid immovable core of the whole collection, that could hopefully keep it together for the future, by enlisting this part of the factory property as a cultural monument and by its conversion into an unusual museum of contemporary art.

MOSAICS OF BARCELONA

Carrer d'Alfons XII, 79. Arxiu Joan Maragall, despatx Sarrià-Sant Gervasi Mosaic de gres ceràmic Segle XIX. Foto: Biblioteca de Catalunya
www.barcelona.cat/mosaics



The Mosaics in Cyrenaica

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Libya is home to a unique material culture, created by multiple civilizations over the centuries. Unearthed archaeological sites along the Libyan coast that stretches for 1900 kilometres and the southern parts of the country - now are being exposed to nature and man-induced factors causing irreversible damage.

The video displays pictures of some sites that contain mosaic flooring in Cyrenaica, with the aim to continue this work further and include other sites in Libyan territory.

A significant number of Libyan archaeological sites with mosaic floors suffer neglect, and need greater attention and cooperation in order to ensure preservation for current and future generations. This video aims to document the current state of preservation, and in the premise that an image can send a stronger message than words to advocate for change.

MOSAICS OF BARCELONA

Carrer de la Riera Alta, 14-16. Paviment amb margarites ocre

Ciutat Vella Mosaic hidràulic Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



Restoring the Sky – Restoration of Mosaics in Nativity Church in Bethlehem

Tommaso SANTI

Independent Film director, Italy,
tommasosanti@icloud.com

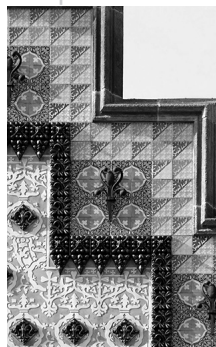
Restoring the Sky is the tale of an historic restoration, which involved over 170 people, including restorers and archaeologists who have worked together to restore the original beauty of the Mosaics in the Nativity Church in Bethlehem. In the Church there are wall mosaics, from XIII century. The video shows key stages of the restoration work: cleaning treatment, consolidation processes, reintegration operations with engraved mortar. Finally, it shows the extraordinary discovery of a hidden mosaic. Restoring the Sky tells the entire history of this restoration work.

MOSAICS OF BARCELONA

Passeig de Gràcia, 41. Casa Amatller, coronament de façana Eixample

Mosaic de rajola ceràmica Segle XIX. Foto: A. Schulz

www.barcelona.cat/mosaics



A Learning and Teaching Adventure in Mosaic Conservation

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This video records the chronicle of a mosaic conservation program through the eyes of two Greek, final year students in archaeological conservation. The adventure of the two emerging professionals starts at Um Al Rasas, where they are undertaking the fieldwork of their dissertation on the documentation and maintenance of early Christian mosaics. There they come to apply all the techniques they have been taught and to share their experiences with the personnel of the site. In doing so, they try to transfer their enthusiasm and love for their work to others and to raise the awareness of the local personnel for the importance of monitoring and constant care of the mosaics. Are they going to persuade them to cover the mosaics and keep them safe until a site management plan is implemented on site? How do they manage to connect with the people, to gain their interest, respect and pass their message in a foreign country? How successful this endeavour might be remains to be seen and shown in Barcelona.

MOSAICS OF BARCELONA

Carrié de Sant Pere Més Alt, 11. Palau de la Música Catalana, trompes de la sala de concerts Ciutat Vella. Foto: P. Colonna-Preti
www.barcelona.cat/mosaics



Making Lifelong Learning a Reality

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In the constantly evolving field of archaeological conservation, professionals are seeking lifelong learning opportunities in order to upgrade their qualifications and to enhance their competencies. This video captures a stimulating adult learning environment, created in a mosaic site at the National Gardens of Athens, offering training opportunities to professionals outside the classrooms and educational institutions. Open lectures, in situ demonstrations, implementation of work tasks on site, public awareness activities created a strong learning climate and brought mosaic conservation to the center of attention for many professionals, professors and students.

MOSAICS OF BARCELONA

*Carrer de Mallorca, 401. Sagrada Família, pinacles façana de la Passió
Exemple Trencadís Segle XXI. Foto: P. Colonna-Preti
www.barcelona.cat/mosaics*



Refugee Community Mosaic

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In February 2015, 50 women who had fled from war zones in Iraq, Afghanistan, and Syria, came together to create a mobile mosaic mural. The workshops, organized by a local women4women project in Ankara, Turkey, also brought together over 30 international volunteers who were living in Ankara at the time.

Together, the women created a large wall installation of many star-shaped mosaics. This motive was based on a pattern from the Great Mosque in Damascus and with this bringing back memories about mosaics in their home lands amongst the participants. Finished mosaics were mounted on ceramic frames and displayed together at the Farabi Sahnesi Theatre in Ankara during the week of international Women's Day celebrations of March 2015. The women proudly gathered at the site to not only show their work, but also their commitment, friendships, and perseverance. When the exhibition closed, each woman could take her own star home, carrying it to her next destination.

The video shows how the mosaics were produced from Marmara marble and Iznik tile fragments in the ice cold premises of a Syrian community center in Ankara and, using quotes, emphasises the special impact of making this very mobile mosaic.

MOSAICS OF BARCELONA

Carri de Montalegre, 7. Pati Manning, antiga Casa Provincial de la Caritat Ciutat

Vella Mosaic de rajola ceràmica Segle XVIII. Foto: Anònim

www.barcelona.cat/mosaics



MCC Mosaic Conservation Course – 2016 Ephesus On-site Project

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During the spring of 2016, MCC Mosaikon Course, the international initiative aiming to improve local capacity for the conservation and management of mosaics in the Mediterranean region, took place in Ephesus, Turkey. The whole program 2011-2016, was funded by a grant from the Getty Foundation and carried out by CCA Roma. After the basic mosaic conservation training courses, and a specialization phase, CCA Roma aimed to put into practice some of the principles and techniques taught during the theoretical lessons. The on-site project was a nine-week fieldwork experience on the mosaics of the archaeological site of Ephesus, Terrace House 2, dating to the 1st century BC – 1st century AD. It was also an occasion for MCC participants from Jordan, Libya and Tunisia to work together, exchanging ideas and experiences. The mosaics presented a range of conservation issues typical of excavated archaeological mosaics, ranging to bulges and depressions, to detachment of tesserae and vegetation growth. Participants undertook all the main phases of a maintenance program for in situ mosaics: cleaning, consolidation, filling of lacunae, edging, and documentation. The whole intervention was carried out in front of the public.

MOSAICS OF BARCELONA

*Passeig de Gràcia, 41. Casa Amatller, paviment del menjador Eixample
Altres tècniques de mosaic Segle XIX. Foto: Anònim
www.barcelona.cat/mosaics*



Restoring the Mosaic Pavement of Marianos Church

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This video provides an insight on the restoration work undertaken by conservators from the Directorate of Antiquities of Jerash, at the church of Marianos (570-749AD). The church -built in 570 under the episcopate of Bishop Marianos, after whom was named- is located within the roman city of Jerash. As a typical example of Byzantine churches, its interiors are decorated with a geometric patterned mosaic floor. The present video aims to guide the audience through the treatments undertaken to improve the condition of the mosaic pavement and enhance their accessibility.

MOSAICS OF BARCELONA

Ronda Sant Antoni, 102. Arrimador Ciutat Vella

Mosaic de rajola ceràmica Segle XIX. Foto: A. Schulz

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Cappella Stucky's

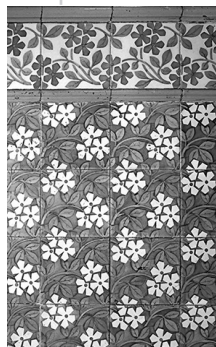
Emiland GUILLERME

Independent Video Journalist, Italy,
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The video is about the restoration of Giovanni Stucky's family vaults in Venice cemetery. Work of Auguste Sezanne and master in mosaics Castaman 1903. Restoration 2015-2016 by arch. Armani and master in mosaics Giovanni Cucco who worked 28 years in St.Marc's basilica, Venice. The project was generously financed by Lavinia Cavalletti, descendant of Stucky.

MOSAICS OF BARCELONA

*Passeig de Gràcia, 26 Eixample Mosaic de rajola
ceràmica Segle XX. Foto. A. Schulz
www.barcelona.cat/mosaics*



Treatment of Floor Mosaic in Roman Bathrooms (Cyrene)

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This video presents a series of conservation interventions, which were conducted on the mosaic of the dressing room (Apodyterium), in Trajan's Baths (The Former Museum of Baths). Stages of work included surface cleaning to remove debris, lower vegetation, and depositions; thorough dry cleaning on whole mosaic floor was carried out without the use of water; and reposition of loose tesserae to their original position.

MOSAICS OF BARCELONA

Carrier Nou de la Rambla, 5. Palau Güell, xemeneries Ciutat

Vella Trencadís Segle XX. Foto: A. Schulz

www.barcelona.cat/mosaics



The Treatment of Mosaics Relayed on Reinforced Concrete: the Experience of the Mosaikon MCC2017 Group

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Pieluigi SIENA

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The removal of mosaics from the original location and the reapplication on reinforced concrete is a practice widely used in the last century in Mediterranean countries and represents a major challenge for today's conservators, particularly due to the salts contained in the cement and iron applied to the structure.

Today, the need to treat this kind of mosaics is not only an issue of aesthetics, it is a pragmatic response to an unsuitable intervention because a mosaic reapplied on reinforced concrete lives in a serious state of instability and is in constant risk of irreversible loss.

This video illustrates the work carried out during the Mosaic Conservation Course (MCC2017) program, an initiative funded by the Getty Foundation in the frame of Mosaikon. It illustrates the intervention implemented on three panels of a Roman mosaic by 11 restorers from Jordan, Tunisia, and Libya, led by the conservators of the Centro di Conservazione Archeologica of Rome (CCA) at the laboratory at the Convento di San Nicola in Belmonte Sabina, Rieti.

Starting from cement removal, the intervention has put into practice all the technical operations necessary to reapply the tesserae on a new support made of aluminium honeycomb (Aerolam) on a bed of lime mortar.

MOSAICS OF BARCELONA

Carrer de la Diputació, 145. Rellojge de sol Eixample Mosaic de tessell·les Segle XX. Foto: A. Schulz
www.barcelona.cat/mosaics



International Committee for the Conservation of Mosaics
Ajuntament de Barcelona – Institut de Cultura - Servei d'Arqueologia

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