

Happily ever after? Yes, thanks to conservation



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GLANDALE - The Disney Animation Research Library (ARL), located within the Walt Disney Studio headquarters in California, USA, is the world's largest archive of animation art. Entrusted with the responsibility conserving and protecting the artistic heritage of Walt Disney Animation Studios, the library houses a collection of approximately sixty-five million objects dating back to the foundation of the studios. Together with drawings, models, audio and video tapes, the collection includes very many animation cels, thin sheets of cellulose nitrate where drawings were executed for animated movies.

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A fruitful international co-operation
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Walt Disney introduces each of the Seven Dwarfs in a scene from the original 1937 *Snow White* cinematic trailer

Earlier cels were made of cellulose nitrate whereas later ones used cellulose acetate, both vulnerable to deterioration.

Yellowing, warping, cracking and delamination are all typical signs of deterioration of these types of plastics; understanding the mechanisms of deterioration will be the focus of a joint project between ARL and the Getty Conservation

Institute (GCI).

The ultimate aim of the collaboration will be improving ways of preserving not only Disney's animation cels, but also any object made from the same types of plastic.

The initial phase of research which started in 2009 involved GCI scientists assessing in situ identification methods and condition monitoring of cels, and included the examination and recording of physical and thermal characteristics of their components. Scientists examined cels from a collection of 200,000 items dating from the 1920s to 1989 made of cellulose nitrate, cellulose acetate, and Mylar (polyester).

The second phase of the collaborative research will stretch over a period of four years during which scientists and conservators will investigate optimal storage conditions, as well as strategies for the consolidation treatment of flaking paints.

Tim Whalen, director of the Getty Conservation Institute said: "The findings of this ongoing collaboration will create a path toward significantly extending the life of this hugely important collection of animation cels; this project also offers the Walt Disney Animation Research Library a more complete understanding of their collection and simultaneously expands our knowledge of a complex material that is a challenge to conservators worldwide."

One of the fundamental steps will be the determination of optimal storage condition for these types of plastic, also considering the interaction with the paint used in production. Although much research has already covered storage needs of plastic materials, the team will need to combine that knowledge with the specifics of the media used for animation cels.

Tom Learner, Head of Science at the Getty Conservation Institute said: "Not only are we determining ways to preserve these cels for future generations, but the research has broad and relevant applications to all kinds of works of art made with plastic".

To learn more about this project visit:

<http://www.getty.edu/conservation>

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Editorial

Welcome to the June edition of *News in Conservation*.

At the time of going to press you may have already seen the announcement for the IIC Student & Emerging Professional Conference, nevertheless I'm very excited to break the news to the ones among you that had not yet learned the news. The third offering will be held in Warsaw, Poland hosted by the Academy of Fine Arts and will focus on making the transition. More details including booking information will come soon, watch this space.

In this issue we look at international co-operations with a report from the first Indo-Austrian Summer School in Vienna, a project designed to provide Indian students with hands-on experience in conservation methods and museology in Austria.

An interesting case study is presented by Vivian Yip – Vivian talks about the conservation of prints with sensitive media using an adapted Chinese method to employ gellan gum. She presented a poster about this project at the IIC Honk Kong Congress in 2014.

Sagita Sunara's article takes us to Croatia where we learn about the history of an artist's colony/sculpture park located in an area that previously hosted the biggest ironworks company in the region. Her article describes a conservation project to save this important piece of heritage and introduces to a forthcoming conference that will discuss the project in details.

Last thing from me – the membership renewal date is fast approaching, don't forget to renew [here](#)

Barbara Borghese
Editor

Venetian early renaissance masterpiece returns to shine

VENICE - The altarpiece of Santa Sabina by Antonio Vivarini and Giovanni d'Alemagna, has been the subject of a delicate restoration intervention carried out by the Italian Central Institute for Restoration (ISCR).

The completed masterpiece, which had been on exhibition in February 2015 at ISCR's headquarters in San Michele, is now being returned to Venice where it will be back in its original location in the Church of San Zaccaria.

The work was carried out in collaboration with the Italian Superintendence and the Patriarchate of Venice and has also involved students from the ISCR's School (SAF).

The projects involved the treatment of six panels painted by the early Renaissance artists Antonio Vivarini and Giovanni d'Alemagna in 1443 for the chapel of San Tarasio, in the church of San Zaccaria in Venice. The paintings had been transferred from Venice to the ISCR's laboratory in December 2013. Once the conservation intervention was concluded, the six panels depicting saints Jerome, Sabina, Lizerio, Margherita and Agata and an angel with a scroll, were exhibited to the public in a climate controlled environment where small groups of visitors were guided through the conservation process by experts from ISCR.

The exhibition was accompanied by explanatory panels focusing on the methodology of restoration, new discoveries made during the work, the complexity of the techniques employed, the problems faced by the extreme climatic conditions of the Venetian church where the panels reside and the solutions put in place by the ISCR team to mitigate damage.

Work on the panels was unavoidable once it became clear that the paint layer was in extremely bad condition. The paintings had undergone several other interventions in the past, all focussing on stabilising conditions and mitigating the damaging effects of the environmental – the relative humidity in the church averages at 90% and the chapel sits on top of another smaller chapel that is submerged underwater most of the time.

The altarpieces of the chapel of San Tarasio, including one dedicated to Saint Sabina, are among the most important complex of painting and sculpture made in Venice in the mid-fifteenth century, in a significant moment of transition from the art of the Gothic period to that of the Renaissance.



© ISCR 2014

News in Brief...

Selinunte's temples to be restored

PALERMO – Conservation work is underway at the archaeological park of Selinunte, an area located near Trapani in the south-west of the island of Sicily in Italy. Work started in May 2014 and is expected to be completed in July 2015.

Funds for the project, totalling over 2 Million Euros, were provided by a government-sponsored programme for the promotion and safeguarding of cultural activities *Po Fesr 2007/2013*.

The archaeological site contains five temples centred on an acropolis. Of the five temples, only the Temple of Hera, also known as "Temple E", has been re-erected.

Originally a Greek settlement, at its peak in 409 BC the population reached 30,000 excluding slaves. Thanks to maritime trade Selinunte achieved an economic prosperity unrivalled in the Greek world or in that of Sicily/Magna Grecia in just over two centuries.

The archaeological area of Selinunte came into the spotlight early in 2015 when a deposit was discovered in Switzerland containing thousands of illegally excavated objects, many coming from the area of Selinunte. According to a report drawn up by the Italian police, Sicily has the highest rate of illegal excavations in Italy with an increase of illicit activities of 32% in 2013 compared to the previous year. The area's most at risk are the central and western parts of the island.

Source: ANSA



Greek Temple of Hera (Temple E) in Selinunte

©Adilapan CC BY 2.5

China starts new terracotta army dig

XI'AN – A fresh campaign of excavation work at the site where the famous *Terracotta Warriors* were found was launched early this month. China announced that a burial pit known as 'Pit 2' near the mausoleum of China's first emperor in the ancient capital of Xi'an will be the focus of a new excavation project.

Archaeologists plan to excavate about 200 square meters of Pit 2, located near the tomb of Emperor Qinshihuang, founder of the Qin Dynasty (221-206 BC).

Talking to local media, archaeologist Yuan Zhongyi estimated that the burial pit has 1,400 clay figures and horses and 89 chariots waiting to be unearthed. Pit 2 was previously excavated and several coloured warriors, including a rare specimen with a green face, were unearthed indicating that the statues were originally painted and that traces of colours faded over time.

Located in Xi'an in northwest China's Shaanxi Province, the Mausoleum of Qinshihuang is the world's largest underground mausoleum. An army of more than 7,000 life-sized terracotta warriors and horses was discovered at the site in 1974. First excavation began on Pit No.2 in 1994 and was halted in 2008 due to a lack of personnel and advanced protective technologies.

Source: Xinhua



Terracotta Warrior

©Tomv Hiseatt (CC BY 2.0)



Blenheim Palace's Indian Room undergoes renovation

WOODSTOCK - Blenheim Palace, one of England's largest houses, and a UNESCO [World Heritage Site](#), was built between 1705 and 1722. The palace's iconic Indian Room has now begun a twelve-month restoration project beginning with the removal of the 189 year old wallpaper for conservation.

The decoration of the Indian Room was commissioned by the 5th Duke in 1826 and the restoration, estimated to cost in excess of £50,000 will bring back the unique room to its former glory.

Some preliminary conservation work had already been performed in-situ prior to Blenheim Palace's opening for the new season. However the work was estimated to take longer than previously expected. Due to the detailed work involved, the wallpaper has been carefully removed for further restoration.

Upon removal, the wallpaper revealed an inscription carved into the stone in the form of a note written in 1826 by Joseph Donbury Moran from Bladon.

Restoration of the wallpaper will include re-lining, a treatment that is necessary to help strengthen the delicate support and ensure its stability in the future. Damaged areas will be infilled and toned to blend in with the original by a team of conservators.

The Indian Room wallpaper is a hand painted French scenic wallpaper by Dufour, first created in the early 1800's. There are 19 complete panels depicting a tiger hunt in India. It is rare to find a complete set of panels still in-situ, as the majority of sets have been broken up over the years and sold as individual pieces.

The Indian Room overlooks the Water Terraces of the Formal Gardens which were designed by celebrated landscape gardener Achille Duchene in 1925. They are reminiscent, on a smaller scale, of the Parterre d'Eau at Versailles.

The Indian Room is currently open to visitors and will be returned to its former glory by February 2016.

Culture in crisis – videos now available on Yale YouTube Channel



A view of Palmyra. ©Longbow4u "PalmyraPanoramaZoom", licensed under CC BY-SA 3.0 via Wikimedia Commons

YALE - In response to the recent destruction of ancient treasures and historical sites in Syria and Iraq, Yale's Institute for the Preservation of Cultural Heritage (IPCH) and the Victoria and Albert Museum, London (V&A) organised a one-day conference titled "Culture in Crisis" under UNESCO patronage.

The conference brought together conservation and preservation experts, museum directors and curators, scholars, and representatives from ministries, national conservation authorities, foundations, and cultural consortiums from across Europe, the Middle East, Africa, and the United States.

Following the event, lectures and panel discussions from "Culture in Crisis" are now available for viewing on Yale's YouTube channel at:

<https://www.youtube.com/playlist?list=PLqHnHG5X2PXAICnf0UruXefowC1r4tdF>

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Plan announced to recover Kathmandu's heritage

KATHMANDU –The government of Nepal recently unveiled its action plan to protect and reconstruct heritage sites damaged by the earthquakes that devastated the country in April 2015. The plan, to be carried out in phases and coordinated by the Ministry of Culture, Tourism and Civil Aviation will include short-term, middle-term and long-term actions.

A meeting was held at the Singha Durbar, the official seat of government of Nepal, where the earthquake-caused damages to heritages were discussed and future plans laid out.

Deepak Chandra Amatya, the Minister for Culture, Tourism and Civil Aviation, said that the ministry had prepared a three-phase action

plan for the protection of damaged heritages, underlined the need of collecting complete details of damages intensifying a search operation for the missing objects. Experts' feedback will be necessary in carrying out reconstruction works, he added.

An approximate evaluation carried out by the Department of Archaeology estimated that of a total of 581 heritage sites in the country, 137 were completely destroyed and 444 suffered partial and minor damages. Many buildings had been already re-built following an equally devastating earthquake in 1934, including the Dharahara tower, a nine-storey, and 61.88-metre-tall tower at the centre of Sundhara in Kathmandu.



Durbar square after the earthquake

© Nirjal Sha - Own work CC BY-SA 4.0

Beirut House, a Lebanese heritage symbol opens after restoration



Barakat House, Beirut, before restoration

BEIRUT - The Barakat House, also known as the 'Yellow House' is a residential structure first constructed in the 1920s, and that is now being restored as *Beit Beirut*, a cultural centre that will honour the city's heritage.

Located in the Lebanon's Ashrafieh area, the building will be restored after nearly 40 years after the start of the Lebanese civil war, and will be a place of memory and heritage dedicated to the city and its evolution.

The house is a testimony to different building styles with Ottoman, French and Art Deco influences visible in its architecture. During the civil war it was used strategically by snipers controlling the area when sectarian tensions dominated in Lebanon in 1975.

The restoration project began in 2008 with reconstruction starting in 2010 and taking five years to complete. Youssef Haidar, the architect in charge of the project, said: "The building is like a living being, just like any Lebanese person, with many stories, full of hidden or visible injuries; our attention is not to realise a face-lift, but treat it, which is a fairly new approach to memory in Lebanon. We filled the missing parts as you would with dentures, different from the rest, a new flesh to give it back its humanity." It is, therefore, not purely reconstruction, but a project to "complete this work, with all its layers of history, and to write our part of it".

Source <http://www.al-monitor.com>



First Indo-Austrian Summer School in Vienna

J. Wilk + G. Krist + S. Pandey + M. V. Nair

In the summer of 2014 the Institute of Conservation of the University of Applied Arts Vienna welcomed a group of students and teaching staff from the National Museum Institute, New Delhi. Twelve conservation students and two museology students from India had the opportunity to live and study in Vienna from July 14 to August 2, 2014. The Summer School was designed to provide hands-on experience in conservation and to enable the participants to gain deeper understanding about up-to-date methods in conservation and museology in Austria.



Participants to the Summer School

Both institutions, the University of Applied Arts Vienna and the National Museum Institute New Delhi, are members of the Eurasia-Pacific Uninet (EPU) and have signed a Memorandum of Understanding to facilitate academic collaboration, which is now also considered on governmental level.

The Institute of Conservation, University of Applied Arts Vienna, offers four specialisation areas in the diploma degree programme: conservation of paintings, objects, textiles and stone. Additionally there is the possibility to focus on archaeological objects or contemporary art. Learning about methods for preventive conservation and collection care is an important feature in all the areas of specialisation, as well as the development of long-term preservation strategies for historic collections.



Training

The training schedule of the Summer School 2014 comprised lectures, discussions and practical demonstrations by the conservators. Each week of the workshop, including the weekends, was dedicated to a different field of conservation and organised by staff members of the Institute of Conservation Vienna.

The participants were able to work on original objects under professional supervision. Apart from this, excursions to renowned museums, institutions and monuments were organised to show Vienna in all its facets and to deliver an impression how conservation is carried out in Austria.

The exchange of knowledge in the course of the Summer School was set on a high level due to the great interest and theoretical knowledge of the Indian participants.

In the object department the tasks that formed the training comprised traditional cleaning methods for silver and gold as well as the bonding of ceramics and glass. Gilding techniques were investigated by the Indian students.

An excursion to the Museum of Applied Arts Vienna enabled to get to know conservation in this museum as well as the storage arrangements for different kinds of objects.

In the field of paintings, participants were introduced to surface cleaning as well as to consolidation procedures of paint layers with natural and synthetic materials. The students learned how to handle panel and canvas paintings and how to carry out re-lining. They visited the painting conservation and scientific laboratory of the Kunsthistorisches Museum.

The scientific analysis of paint layers was then taught in the hands-on chemistry workshop delivered by the chemist of the Institute of Conservation. Taking samples, preparing cross-sections for investigation as well as techniques of microscopic and chemical spot tests for material identification were covered.

In the third week, the participants learnt about textiles, their proper handling and mounting, deterioration problems, nature, structure and identification of fibres and conservation measures. Practical training covered dry and wet cleaning and the packing of textiles as well as sewing techniques and labelling.

To strengthen their knowledge of storage methods, the students visited the central art storage facility of the Kunsthistorisches Museum Vienna at Himberg. This is a purpose-built, secure and state-of-the-art facility outside the city with a central climate control system, integrated pest management system and innovative storage techniques. It was an excellent opportunity to see and understand one of the best possible storage and management systems for a variety of different objects.

The conservation of stone was covered at the weekends via excursions to monuments and architectural sites in Vienna. These tours in the centre of Vienna and the palace gardens of Schönbrunn gave an insight into the care of monuments. As a pleasant consequence the participants could enjoy the beauty of Viennese architecture and also got to know the history of the city.

Two Museology students participating to the course had a specific work schedule. They did an intensive survey on Viennese museums, for example the Albertina, the Kunsthistorisches Museum, the Museum of Applied Arts Vienna, the Wien Museum, the Belvedere or Stift Klosterneuburg. They interacted with the experts of various museums and the teaching staff of the training programme of the University of Applied Arts Vienna. They were introduced to the concepts of assessing museums on the basis of their infrastructure, exhibitions and visitor facilities and studied various programmes that museums offer particularly for children and young people to make



Workshop in the object conservation lab: joining of ceramics



©National Museum Institute

Workshop in the painting conservation lab: cleaning

conservation and storage.

Following its great success, the Summer School in Vienna is due to be repeated in summer 2015, again with the support of Eurasia-Pacific Uninet.

The National Museum Institute New Delhi also invited their Austrian colleagues to India. The starting of a joint PhD programme in conservation and onsite conservation projects in India will be further explored.

In the future the Departments of Art History of both Institutions will join the collaboration to further broaden the field of the academic exchange between India and Austria. Continuation of such training programmes in future will certainly boost the academic excellence on both sides, in Austria and India, through professional exchange and cooperation.

The Indo-Austrian Summer School strengthen not only the collaboration within the conservation profession and in museology but also enriches participants on a personal level. Students and the team of both Institutes will be happy to meet each other again and to participate in projects in the future.

museum visits a positive learning experience.

Through these exercises, the understanding of the processes involved in the conception and design of museum exhibitions was deepened.

A social highlight for both University staff and students was a warm welcome reception at the Indian Embassy in Vienna, accompanied by a typical Indian buffet.

Outcome and future plans

The Summer School has not only given the Indian students a chance to receive hands-on training on original works of art but also delivered an overview of methodologies, materials and approaches to conservation in Austria.

As academic training in India has not yet established laboratories and studios for practical conservation, the Summer School in Austria provided an important opportunity to gain practical experience.

The training enabled students to propose, discuss and carry out conservation interventions independently and communicate their decisions.

They were able to visit many Austrian museums to get to know their systems of investigation,



The conservation of two contemporary Chinese woodblock prints using Gellan gum (以結冷膠修復兩幅近代中國木刻版畫)

By Vivian Yip

Printed by artist Chen Qi just under twenty-five years ago, the two contemporary Chinese woodblock prints 'Qin No. 2' and 'Bridge' showed heavy foxing-like discolouration ranging from light yellow-ochre to dark red-brown. A hybrid treatment combining traditional Chinese washing technique with the use of gellan gum was developed as a possible alternative for dealing with the particular challenges presented by water-soluble ink on Xuan paper.



Print before treatment

Chemical analysis

X-ray fluorescence (XRF) analysis indicated low levels of iron in both foxed and non-foxed areas of *Qin No. 2*. Organic origin of foxing could not be confirmed from Fourier Transform Infrared (FT-IR) spectra. Foxed areas tested to be slightly more acidic than non-foxed areas for both woodblock prints.

Foxing is a descriptive term based on a range of visual phenomena rather than on chemical information. Current hypotheses point to multiple causes but one common mechanism – localised cellulose oxidation.

Oxidation is a degradation reaction that occurs slowly in pure cellulose but the rate and severity of the chemical process can increase significantly in the presence of a catalyst, such as impurities in paper and contaminants in the environment, as well as stress in the paper caused by local moisture condensation. Oxidation chemistry in cellulose also sets off other oxidation reaction cycles and catalyses acid hydrolysis.



Treatment approach

To stabilise the prints, washing would help remove catalysts and reactants of oxidation whereas an alkaline wash would reduce both the acidity of the paper and the intensity of the foxing simultaneously. A reducing agent would have to be considered if washing alone did not give satisfactory results.

Aqueous treatment should be sympathetic to the low wet strength and fragile state of the Xuan paper, which was showing creases and splits at different stages of development. Water-soluble Chinese ink was mostly stable with the exception of a few isolated areas. Tests on life-size aged samples indicated that the prints should not be washed for a prolonged period of time.

Humidification

A challenge encountered during testing on life-sized samples was humidification. Xuan paper is thin and absorbent and has a tendency to adhere to the support as soon as it begins to absorb moisture. This prevents the lateral movement of the paper as its cellulosic fibres expand and as a result, creates and retains creases. (See Fig. 2). Xuan paper has low wet strength, which made it difficult to handle and manipulate after humidification, especially for practitioners untrained in conservation of Chinese art on paper.



Wetting print on Perspex using adapted Chinese washing method

Instead of humidification, the traditional Chinese washing method was adapted to wet the print briefly but thoroughly before further aqueous treatment.

Chinese paintings are often washed recto side up while stilled lined. This helps to swell the adhesive layer and release the lining. The water reservoir gathered on top of the painting is removed by rolling a clean white towel over the surface. Washing is usually done within minutes as Chinese papers are absorbent and the water-soluble ink cannot be wetted for an extensive period of time. The process may be repeated several times depending on the work. To prepare for washing, the woodblock prints were placed onto *Bondina* resting on a Perspex sheet then wetted quickly with a broad goats hair brush called “paibi”, dipped into a bowl of water then sprinkled and dripped onto the recto.

This process was repeated until a pool of water had gathered on top. Xuan paper was able to relax and existing creases were released. The paper could be manipulated at this point using a rolled up white towel or a soft brush but contact was kept to minimum. The perspex was then tilted slightly to drain. The prints were now ready to be transferred onto *gellan gel* for washing.

Gellan gum

The use of rigid gels in conservation had been introduced by Richard Wolbers in the early 2000s. Rigid gels such as gellan can deliver moisture and draw out water-soluble degradation products from the paper substrate without leaving any significant amount of residue after treatment, according to FTIR analysis on the use of gellan gum (Mazucca, C. et al. 2013).

Research on the use of gellan gum on paper artworks has been published by Iannuccelli et al. (2010), Berzioli et al. (2011) and Mazucca et al. (2013) and the results have been encouraging.

Gellan gum is a high molecular-weight polysaccharide produced by the bacteria *Sphingomonas elodea*. In its deacylated form and in the presence of cations, gellan forms a hard and brittle aqueous gel, a network of long

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polymeric chains dispersed in water. Effectively, gellan gel holds water and releases and absorbs it in a uniform way. The level of water transferred to the paper is modulated by the concentration of the gel.

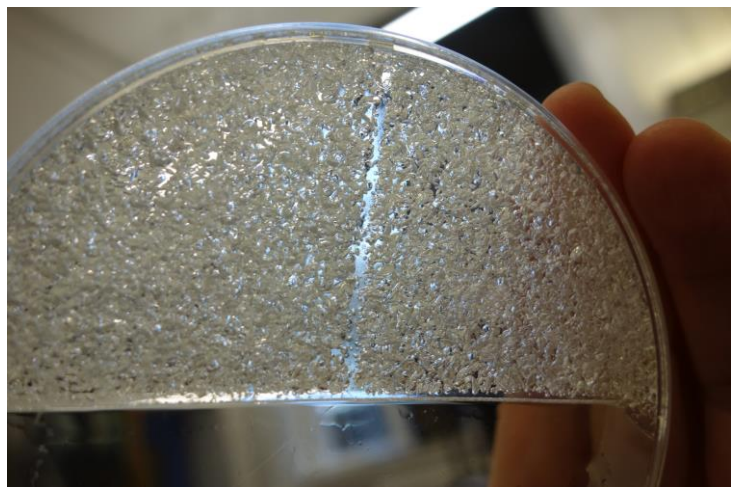
The advantage of using gellan gum for the treatment of the prints was that it provided a stable support to the large fragile Xuan paper during washing. Its efficiency is comparable to immersion (Mazzuca et al. 2013) yet the paper absorbs less water overall and less swelling occurs within the paper structure and the media. The rate of washing is even with a visibly observable process that can be halted easily. Gellan gel is also a stable carrier for other additives, such as certain enzymes, deacidification agents, reducing agents and water miscible solvents.

The disadvantage of washing on gellan gum during this project lay mainly in the logistics of making the large sheet of gel due to limited equipment in the university studio. However, once made, the gel was reused after being washed thoroughly by soaking in several changes of clean water.

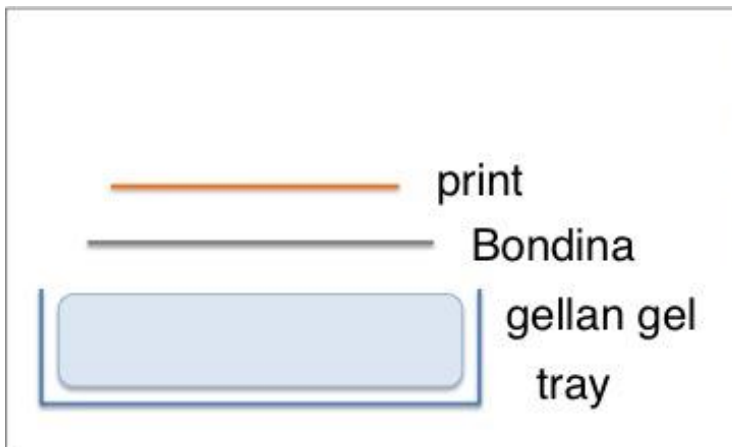
Making the gels

Qin No. 2 was washed on 1% (w/v) alkaline gellan gel. To make the gel, calcium hydroxide was added to 5L of distilled water to raise pH to 8.5. Calcium acetate was then added at 0.04% (w/v) to provide the cations needed for a more stable gel. Due to the large quantity of gel needed, concentrated gellan gum dispersion was microwaved in two 1L beakers before being diluted with hot alkaline water to give 5L of gel solution, which was poured quickly but steadily into a large tray for gelation.

Reducing gellan gel was obtained the same way as the alkaline gellan gel, with the exception that a 0.7% (w/v) borane tert-butylamine complex was added after gellan gum powder had fully hydrated, indicated by the clear gel after heating. The mixture was stirred in a fume cabinet until the reducing agent had dissolved. Reducing gel should only be used in a well-ventilated area and a fume extraction hood should be used. Borane tert-butylamine was chosen in place of the more commonly used sodium borohydride for its slower and milder action, which did not disrupt gelling of the gellan gel.

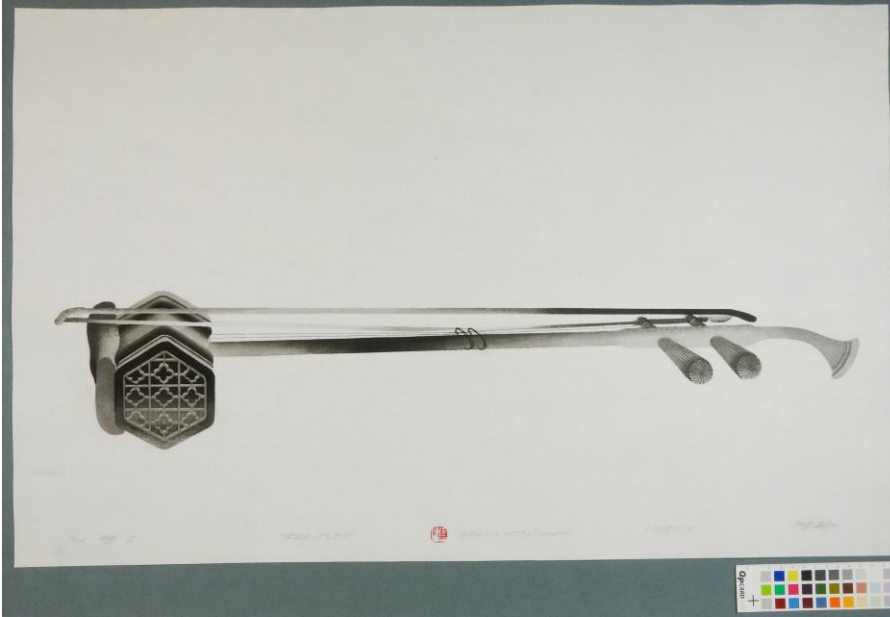


Top: Sodium borohydride added to hydrated gum dispersion foamed up; bottom: Gellan gel soaked in sodium borohydride created bubbles in gel structure



Set-up for washing print on Gellan gel.

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After treatment

Washing and reducing

After wetting, *Qin No. 2* was moved onto a layer of alkaline gellan gel that was left to set in a large shallow tray. The use of *Bondina* as a support for the print also acted as a barrier and slowed the washing rate to that similar to a 2% (w/v) gellan gel. The print was left to wash on gel, covered with Perspex, for 25 minutes. A small amount of water was then added to the gel, just enough to release adhesion of the print and *Bondina* and any small creases that might have formed. The print was lifted to drain on Perspex before being placed onto a reducing gel for 20 minutes while covered with Perspex. Again water was added to the gel to release print

before being drained on Perspex. *Qin No. 2* was put back onto a cleaned alkaline gellan gel for 15 minutes, while ink fugitivity was monitored throughout the treatment. The print was then released from the gel and drained on Perspex before being pressed between *Bondina* and felt overnight.

The larger print, *Bridge* was also washed on 1% (w/v) alkaline gellan gel but was reduced with 0.5% (w/v) sodium borohydride in industrial methylated spirit (IMS), delivered locally with a small hand spray, then blotted. Concentration was later raised to 0.7% (w/v). The reducing agent was cleared with IMS then 50% (v/v) IMS in water. The print was then wetted on Perspex and drained, the procedure repeated then pressed between felt and *Bondina* overnight.

Results

Both treatments produced good results. While some discolouration is still visible, it is much less distracting and the prints show a natural brightness. Localised reducing treatment with sodium borohydride was effective but took longer than reduction on gellan gel with borane tert-butylamine.



Vivian Yip is a London-based emerging paper conservator specialising in art on paper and archival paper objects. Having completed her MA in Conservation from Camberwell College of Arts in 2014, she has been working as a freelance paper conservator in private studios while completing an internship at John Jones, a private practice in London. She is currently working as a project conservator at UCL Special Collections. Vivian can be contacted at vivianyipconservation@gmail.com

All images in this article are ©Vivian Yip



Saving the Sculpture Park in Sisak, Croatia

by Sagita Sunara



The city of Sisak, located southeast of Croatia's capital Zagreb, boasts a unique sculpture park, comprising thirty-eight outdoor sculptures created between 1971 and 1990. The park was created by the prominent sculptors of what was then Yugoslavia who participated in the Sisak Ironworks Colony of Fine Artists [Kolonija likovnih umjetnika "Željezara Sisak"]. The artists' colony was open to sculptors, painters, graphic artists and photographers. During its twenty-year period more than 700 artworks were created.



A period image of one of the sculptures

The idea behind the Sisak Ironworks Colony of Fine Artists was to bring culture closer to industrial workers. The artists were working inside the industrial complex. The sculptures were made of the materials that the Ironworks produced and executed in collaboration with Ironworks' technicians, machinists, and welders. Larger sculptures were later installed in parks, squares and between residential buildings in Caprag, the residential estate that Sisak built for its workers and their families. Caprag is located next to the industrial complex, and is itself very interesting. The Ironworks company constructed not only housing, but other facilities necessary for securing a normal everyday life, too, such as a post office, a bank, a kindergarten, a medical facility, a supermarket, tennis courts, bowling alleys, even an Olympic-sized open-air public pool!

From the end of WW2 to the early nineties, Sisak Ironworks was the biggest industrial employer in Sisak. At the peak of its power, the company employed over thirteen thousand people.

The Croatian War of Independence (1991-1995) and the political and economic reforms that followed brought many changes and eventually led to the collapse of the Sisak Ironworks.

Only small sections of the plant are operating today, and the labour force has dropped to one hundred. The Sisak Ironworks' vast collection of artworks has been dispersed. A number of all the sculptures that once adorned public spaces in Caprag have vanished. Only thirty-eight of these have been preserved, all in desperate need of conservation due to years of neglect.

In 2012, three institutions from Sisak – the Conservation Department of the Ministry of Culture in Sisak, the City Museum Sisak and the City Gallery in Striegl – initiated a project that aims at affirming social, cultural and artistic values tied to the heritage of the Sisak Ironworks, "Sisak Ironworks – Heritage Factory" ["Tvornica baštine – Željezara Sisak"]. The project recognises industrial patrimony as a driver of the development of Sisak, a city that has one of the highest unemployment rates in the country due to the collapse of manufacturing.



Both images on this page: The team at work on the sculptures

Within the framework of the aforementioned project, legal protection of the thirty-eight outdoor sculptures in Caprag was ensured. In 2012 the collection as a whole was listed on the Croatia State Register of Cultural Properties as a “Sculpture Park created in the context of the Sisak Ironworks Colony of Fine Artists”.

Soon afterward collaboration was established with the Conservation-Restoration Department of the Arts Academy in Split, which proposed a four-year project, comprising a two-

year documentation and research phase and a two-year period of conservation-restoration phase. The plan was to treat three sculptures, each representing a different set of problems (for example: unpainted steel sculpture, painted steel sculpture, galvanized steel sculpture). More importantly, the project was aimed at developing a methodology for conservation that can be used on other sculpture parks in Croatia. The project was to be realised through a series of workshops, each lasting one or two weeks, in which conservation-restoration students would participate.

The first Sisak Sculpture Park Conservation-Restoration Workshop was organised in September 2012. The second workshop took place in autumn 2013. Workshop participants reported on various project activities (documentation, maintenance, interviews with artists and their assistants – former workers of the Sisak Ironworks) on the conservation-restoration blog [Staziranje među umjetnicima - Internship among Artwoks](#)

The online workshop diary boosted project visibility, and helped raise awareness and appreciation for Sisak’s rich industrial heritage.

The first sculpture to receive professional conservation-restoration treatment was Josip Diminić’s *Object II* (1979, painted steel). Treatment was completed last September during a ten-day workshop.

Due to the sculpture’s poor condition, the treatment included stripping and repainting. The project was headed by the author of this article, with two senior conservators-restorers acting as advisors (a metal conservator and a contemporary art conservator). Four conservation-restoration students volunteered to participate in the workshop.

Participation in the field project was not a part of their university courses, and students were not rewarded with a grade or a fee. However, the workshop gave them something much more important: valuable hands-on experience and exposure to all sorts of problems related to fieldwork, from setting up a workspace to supervising the work that the subcontractors perform. One recent conservation-restoration graduate also participated in the workshop. He was later offered a paid internship at the City Museum Sisak. Thanks to the Sisak Sculpture Park project, the City Museum Sisak now has a professional conservator-restorer among its staff.



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It is interesting to note that the works on Diminić's sculpture were executed on the premises of Metaling Ltd., a company that once belonged to Sisak Ironworks industrial complex. It was precisely in that part of the Sisak steel plant that Diminić created his sculpture 36 years ago!

Thanks to the generosity of Metaling's CEO, the conservation-restoration team was provided with a working space free of charge. The works on the sculpture attracted lots of attention from Metaling's workers, who gained understanding of the Sisak Ironworks Colony of Fine Artists and started to develop an appreciation for other public sculptures in Caprag, which is where most of them live.

All the sculptures from the Sisak Sculpture Park will eventually receive conservation-restoration treatment. In order to provide an opportunity to discuss treatment options for specific objects, as well as to share ideas on the presentation and maintenance of the Park as a whole, an international conference on conservation of sculpture parks will be held in Sisak from September 14th to September 16th 2015.

"SPark: Conservation of Sculpture Parks" will address all aspects connected to conservation of outdoor sculpture collections, from technical questions on how to carry out the treatments to collection management.

The conference will also mark the 2015 European Industrial and Technical Heritage Year.

The conference is jointly organized by the Arts Academy of the University of Split (Croatia), the Museum of Contemporary Art in Zagreb (Croatia) and the Cologne Institute of Conservation Sciences (Germany). The programme includes 15 oral presentations, a poster session, roundtable discussions, and a workshop on synthetic materials outdoors.

The conference tour includes a visit to the former Institute of Metallurgy of the Sisak Ironworks, a walking tour of the Sisak Sculpture Park, a visit to the Museum of Contemporary Art in Zagreb, and a tour of the Vjenceslav Richter and Nada Kareš-Richter Collection, also in Zagreb.

All details are available on the Conference website: <https://spark2015sisak.wordpress.com/>



Sagita (second from left) and her team



Sagita Mirjam Sunara is an assistant professor at the Conservation-Restoration Department of the Arts Academy, University of Split (Croatia). She obtained a diploma in conservation-restoration of easel paintings and polychrome wood in 2005 and is currently pursuing a Ph.D. in Art History at the Faculty of Philosophy in Zagreb. She teaches easel painting conservation, preventive conservation and documentation techniques in conservation. Sagita worked for five years at the Croatian Conservation Institute in Split, Section for Stone Sculpture. She curated three exhibitions on the conservation of the Peristyle of Diocletian's Palace in Split. Public outreach for conservation is one of her greatest passions.

All Images in this article are @Sagita Sunara



Reviews

“Digging deeper: making manuscripts” review of a free online course

by Laura Dellapiana



In January 2015, a post on the Facebook page of the Cambridge University Library caught my attention. The post read: “Our Library's Medieval Manuscripts Specialist, Dr Suzanne Paul, is one of the experts featured in 'Digging Deeper: Making Manuscripts' - a 6-week free online course which commences today through Stanford OpenEdX”. As the course was free and it involved my favourite subjects – manuscripts and

conservation – I decided to enrol and this article is a review of my experience.

Between January and June 2015, the University of Stanford (US) and the University of Cambridge (UK) organised two online courses, called *Digging Deeper1: Making Manuscripts* and *Digging Deeper2: The Form and Function of Manuscripts*. Both the two courses were about different aspects of the fascinating world of Medieval manuscripts, and the expert tutors leading the course were Prof. Elaine Treharne (Professor of Humanities at Stanford University), Dr Benjamin Albritton (Digital Manuscripts Programme Manager at Stanford University Libraries), Dr Suzanne Paul (Medieval Manuscripts Specialist at Cambridge University Library), Dr Orietta Da Rold (Lecturer at Cambridge University), Jonathan Quick (PhD student in the English Department at Stanford University) with the addition of other guest lecturers.

The principal aim of the course *Digging Deeper1: Making Manuscripts* was to introduce participants to the study of early text technologies, focusing primarily on the European medieval book, but covering other textual objects, such as scrolls and diplomata.

The first module of the course provided basic information about materials, techniques, ancient binding styles, scribes, owners of Medieval manuscripts. Digitisation, access and use of online manuscripts collections, repository information, codicology and palaeography were also important topics raised by the tutors. Although manuscripts

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degradation mechanisms and preservation techniques were not the major subjects of the course, important information were scattered throughout the lessons to prepare the participants for the second module.

In *Digging Deeper2: The Form and Function of Manuscripts*, the arguments of the first module were examined in depth, and new topics were debated. The description of the physical characteristics of the books was completed, and we also learned about scribing practices and Medieval music (particularly for liturgical rites).

As expected in this second part of the practical exercises became more challenging. Prof. Egan and Prof. Key gave very interesting lectures about Chinese and Arabic manuscripts traditions, adding also very important information about the Eastern world (this was one of my favourite lessons, due to my own work experiences). With regard to conservation, James Bloxam (Head of Conservation) and Shaun Thompson (Deputy Head of Conservation) of the conservation team of [Cambridge University Library](#) talked about current practices and the ethical ethics of manuscripts conservation. The final week of the second module explored in-depth the word of digitisation, with the excellent support of the Cambridge Digital Library website.

The lessons were provided by short on-line videos, followed by self-testing quizzes and exercises. After an easy online subscription procedure at the Stanford Online website, every week each student was given access to various videos and online resources about different aspects concerning ancient manuscripts.

Featured in both the videos and the practical exercises (e.g. palaeographical transcription of ancient texts) of the course were the marvellous manuscripts belonging to the collections of the Stanford University Library and the Cambridge University Library. The study of these manuscripts was a pleasure of its own!

One of the most important aspects of *Digging Deeper* was the possibility to communicate, discuss, and share ideas and information about manuscripts with a wide community of international scholars, conservators, bookbinders, and enthusiastic researchers. In fact, a section of the weekly modules was “Wrap Up and Discussion”: here a question for discussion (e.g. “What are the major benefits and limitations of paper vs parchment as writing support?”) was posed to the attention of the class, and we had the opportunity to answer the query and debate.

This was an experimental but successful way in which international scholars shared their knowledge and worked through medieval books together. Everyone added a particular point of view to the topic, more information and resources linked to personal experiences. Moreover, the Online Resources page was full of fantastic links to explore independently, especially to develop palaeographical skills and find digital collections of manuscripts.

As an extremely passionate book/paper conservator, I understood at the very first glance that this course would have captured my attention. The course offered me the opportunity to learn specialist vocabulary used by manuscript historians, and gave me the occasion to acquire some knowledge about Palaeography, a subject I overlooked in the past. Moreover, I discussed with experienced conservators and scholars about different topics, such as the use of gloves to handle manuscripts in public libraries, or the motivations that lead to the use of wood pulp in papermaking between XVII-XIX centuries.

The heritage world is increasingly connected through the web, and this course tested in a very positive way this potential. Thanks to this course I was able to brush up on the knowledge I gained while studying for my degree in Italy while learning a lot of new English terms. Finally, I was proudly rewarded with two Stanford Statements of Accomplishment!

In conclusion, my experience with this programme has been very positive in every aspect, and I really encourage passionate conservators to keep an eye on online learning initiatives such as this one.

(<http://online.stanford.edu/courses>)



Laura Dellapiana has an MA in Conservation and Restoration from the Academy of Fine Arts of Turin, Italy. She is specialised in conservation of books and paper-based materials and worked on European and Asian artefacts. In 2013 she completed a four-month internship at the Laboratorio di Restauro Polimaterico at the Vatican Museums, Vatican City, for her MA Thesis.

IIC News

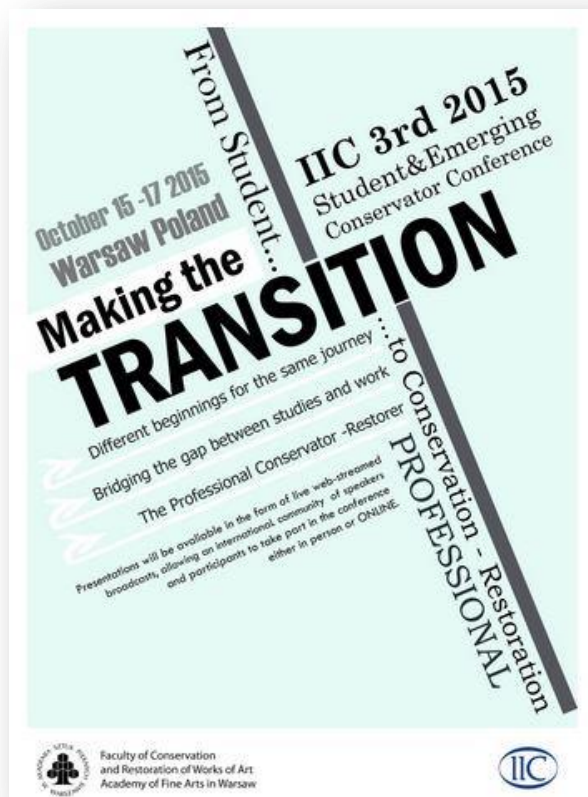
Making the transition – 3rd IIC 2015 Student & Emerging Conservator Conference

The third IIC Student & Emerging Conservator Conference will be held in Warsaw on 15th & 16th October 2015, in partnership with the Academy of Fine Arts in Warsaw - make sure you keep the date! We will be posting more details about this exciting event very soon.

Building on the success of the 2013 Copenhagen and 2011 London Student & Emerging Conservator Conferences, the conference's aim will be to offer an international perspective - and to facilitate communication - between student/emerging conservators and professionals active in the field of conservation, in national institutions and museums as well as in the private sector. One of our main objectives is to create a platform where the discussion of current needs in conservation and the relationship between expectations and reality can be addressed.

The discussions will be supported by organised visits to some of Warsaw's conservation studios, in both cultural institutions and conservation businesses.

As with the previous Student & Emerging Conservator Conferences, the presentations will be held at the Academy of Fine Arts in Warsaw and will also be available in the form of live web-streamed broadcasts, allowing an international community of speakers and participants to take part in the conference either in person or online.



Call for Papers – *News in Conservation* thematic issue

After the success of NiC's first thematic issue in February 2015 ([issue 46 February 2015](#)), we have decided to continue with an yearly offering of a special edition of our e-magazine concentrating on issues that we feel deserves an in-depth approach.

The next thematic issue, coming out in April 2016, will focus on the illicit trafficking of cultural heritage, a theme that unfortunately we are all very familiar with. The choice came almost as a natural continuation of the previous thematic issue as the correlation between the two topics are all too obvious.

NiC is now accepting proposals for articles related to the illicit trafficking of cultural heritage. If you have experience in this field or think you may contribute with an opinion article, a case study or you simply have a story you want to share please write to the editor at news@iiconservation.org. Deadline for abstract submission is **1 January 2016**





IIC International Training Centre for Conservation (IIC-ITCC) - 2015 Training Programme



Now Open for Application!

IIC and the Palace Museum in Beijing, which holds the largest collection of cultural relics in China, will join hands to offer training opportunities for conservators from China, the Asia-Pacific region and beyond under the newly established **IIC International Training Centre for Conservation (IIC-ITCC)** at the Palace Museum.

IIC-ITCC is now inviting applications for its first training programme, a 6-day course to be held from 20-25 September 2015. With the theme of **Scientific Approaches to Preventive Conservation** - a topic that is of profound interest in the field of heritage preservation and collection management - the course has been devised to review the current methodologies and applications, and will inform participants about current approaches to the formulation of priorities and strategies for preventive conservation in their own institutions. Future trends in the context of climatic changes and risk management will also be explored. Besides lectures and presentations given by renowned scholars and specialists in the field, the course will emphasise interaction among participants, to encourage learning from their fellow participants, peers with varied cultural backgrounds and professional practice. Coinciding with the 90th anniversary of the Palace Museum, participants will also be able to enjoy the privilege of visiting the Museum's recently refurbished conservation laboratories, the newly revealed areas of the magnificent palatial architecture, as well as a selection of thematic exhibitions in celebration of the anniversary. Together, the course will provide the perfect setting for conservation professionals to acquire the necessary expertise as well as to broaden their international perspectives and networks.

Applications & Enquiries

Application details are outlined as follows. We would appreciate if you could disseminate this information to your colleagues. For inquiries about applying and about the programme, please feel free to contact the IIC-ITCC Secretariat at conservation@lcsd.gov.hk

Course Theme: Scientific Approaches to Preventive Conservation

Dates: 20-25 September 2015

Venue: The Gugong Institute of the Palace Museum, Beijing, China

Methodology: Pre-class reading assignments, thematic lectures, site visits, group discussions and course evaluation

Curriculum

1. History and theory of preventive conservation
2. Physical, chemical and biological agents of deterioration
3. Risk management and emergency procedures
4. IIC/ICOM-CC guidelines on environmental control
5. Preventive conservation practice in different climates
6. Energy saving in museum and heritage organisations
7. Management and Future trends

**Lecturers**

The teaching faculty is composed of conservation experts from both IIC and the Palace Museum, including:

Ji-xiang Shan, Director of the Palace Museum

Ji-rong Song, Deputy Director of the Palace Museum

Sarah Staniforth, President of IIC

Julian Bickersteth, Vice President of IIC

David Saunders, Vice President of IIC

Mikkel Scharff, Vice President of IIC

Jo Kirby Atkinson, Secretary-General of IIC

Medium of Instruction

English

Participants

The course is open to a maximum of 20 participants who :

1. Are holders of middle or senior management positions in the museum conservation profession or practising conservators with 5 years or more of work experience in the field;
2. Have a good command of English (documentation indicating English proficiency (if available) would be useful).

Cost

There is no tuition fee for this course.

Accommodation and meals during the course period are covered by the IIC-ITCC. For participants residing outside Mainland China (including Taiwan, Hong Kong and Macao), round-trip air tickets to and from Beijing will also be covered. Expenses for visa application shall be borne by the participants.

How to apply

Please complete the application form at the foot of this page and send this, together with an official endorsement (of your current role) from your institution by email or post to the address specified on the first page of the application form.

Deadline

19 June 2015 (Friday)

Applicants will receive notification of the results of their application by late June.

To download an application form go to: <https://www.iiconservation.org/node/5729>

A message from Bijan Rouhani, ICOMOS- Blue Shield -**Earthquake in Nepal: Please help gather information to save cultural heritage**

The 25th April Earthquake in Nepal has caused the loss of more than 5000 lives and also has caused destruction and severe damage to the historic centre of Kathmandu and other heritage sites throughout the Kathmandu Valley. Earthquake-related damage has been reported throughout the region.

Our colleagues in ICOMOS-ICORP and ICCROM have started the Kathmandu Cultural Emergency Crowd map, which aims to collect information on the damage caused to cultural heritage sites and institutions in Nepal.

This initiative is co-ordinated by Ms Aparna Tandon, ICCROM project specialist, and Mr Rohit Jigyasu, President of the ICOMOS International Scientific Committee on Risk Preparedness-ICORP and other partners.

Please would you help by and circulating the links below among your networks in IIC, ICOM, IFLA, and ICA and help to collect information about damaged cultural heritage sites and institutions in Nepal.

Please follow these links for more details:

<https://kathmanduculturalemergency.crowdmap.com/main><http://icorp.icomos>

<http://www.iccrom.org/help-us-collect-information-on-the-nepal-earthquake>

Thank you very much

Bijan Rouhani - ICOMOS- Blue Shield




Why wait? Become part of the IIC's community now!

Will you join us? In joining IIC you will become a member of the oldest and most established conservation organisations in the world.

Our support of you depends upon your support of us.

Become a member, be part of the international community that is IIC - and start enjoying the benefits of membership today!

To learn about benefits, rates and types of memberships available visit:

<https://www.iiconservation.org/about/membership>

IIC Membership renewal 2015/2016 – a reminder

It's that time of the year again! IIC membership is open to everyone with an interest in conserving the world's heritage: to conservators and restorers, to conservation scientists, architects, educators and students, and to collection managers, curators, art historians and other cultural heritage professionals.

Membership enables you to keep abreast of technical advances and to remain in contact with colleagues worldwide through IIC's publications (Studies in Conservation and News in Conservation), IIC's website with its news-feed and social networking links, the biennial conferences and the national and regional groups.

Membership fees for this year are as follows:

Individual members: £70

Fellows: £100

Student members: £25

Institutional: £360

To purchase membership of IIC via the IIC web-site, you will first need to register with IIC to create an account - you can do this from the 'Register' link: <https://www.iiconservation.org/user/register?destination=promoted>

Share is the word!

Did you know that IIC's LinkedIn group has become an active community where you can share your projects, ideas, dilemmas and contribute with your wisdom and knowledge to enrich a community that has grown to 502 members in a few months? You can advertise your job postings or your events, or you can just stop by to participate in a discussion you find interesting (you'll find many!).

If you want to visit us go to <https://www.linkedin.com/grp/home?gid=4974966> and subscribe.



IIC Honorary Fellow honoured at 2015 IIC AGM

At the 2015 IIC AGM held in London in January, the IIC Council presented an Honorary Fellowship to John Stuart Mills.

John Mills is probably best known for *The Organic Chemistry of Museum Objects*, which he wrote with Raymond White: the indispensable 'Mills and White', which first appeared in 1987, has a place on most museum laboratory bookshelves. However, this is only the culmination of a very long career and a great many publications, most, but not all, in the field of natural product chemistry, in particular steroids, resins and drying oils and their analysis.

John Mills was born in 1928 and studied chemistry at the Royal College of Science, Imperial College, London. Following his university studies, John first came to the National Gallery in London in 1951 as a Nuffield Research Fellow to work on the chemistry of dammar resin, used as a varnish on paintings after their restoration, and its analysis by the recently devised technique of paper chromatography. From 1956–7, he carried out postgraduate work at Wayne State University, Detroit, working with the late Carl Djerassi, well known for his work on steroids and the development of the oral contraceptive pill. This was followed by periods at Syntex SA, Mexico City, working on progesterones and other steroids and their synthesis and, as a sabbatical in the late 1960s, at Syntex's research centre in Palo Alto, California. By this time he had returned to the National Gallery Scientific Department, being employed there as Research Chemist from 1961 until his retirement in 1990, by which time he was Scientific Adviser to the Trustees.

Throughout his career, John has produced major research papers on the characteristics and analysis of natural resins – dammar, amber, *Cupressus* species, larch and their constituents – some co-authored with Raymond White, also of the National Gallery Scientific Department, or with the late Laurie Gough, of the Polytechnic of the South Bank (now London South Bank University), Department of Applied Biology and Food Science. When, two or three years ago, chemists at the National Gallery were able to identify the use of an amber varnish on the wall of a chamber in the Byward Tower in London, applied during the 1390s, John's earlier research and the publications it produced made this identification possible. Perhaps of particular significance for the examination of the binding media of easel paintings is his work on the composition and analysis of drying oils. 'The gas chromatographic analysis of paint media. Part I, Fatty acid composition and identification of dried oil films', which appeared in *Studies in Conservation* in 1966, is of fundamental importance for the analysis of paint binding media and underlies the subsequent development of this field. It was later followed by a string of papers in the *National Gallery Technical Bulletin* and also IIC congress papers, many co-authored with Raymond White, identifying the binding media used in paintings in the National Gallery collection, almost all of which were painted in Europe and the vast majority before 1900. Through this body of work, which has, of course, become much larger as the analysis has been continued at the gallery and in museums and galleries across the world, a pattern of how different paint binding media are used across Europe at different periods has become apparent.

Perhaps less well known is John's interest in carpets, which, as well as a number of articles in specialist journals, resulted in a delightful small book on carpets in pictures in 1975 and another edition, *Carpets in Paintings*, accompanying a small exhibition at the National Gallery around 1983. This coincided with a larger exhibition, *The Eastern Carpet in the Western World*, at the Hayward Gallery, London, for which John contributed an essay to the catalogue. After his retirement from the National Gallery, this expertise was put to good use as he was asked to carry out a survey of all the carpets in the English National Trust collections, a considerable number, a project in which he still has some interest.

It could be said that IIC, its publications and its congresses, has formed a constant thread throughout John's career. In addition to contributions to *Studies in Conservation* and congress preprints, John was the editor of *Studies* from 1976–80 (vols 21–25) and co-editor of several volumes of congress preprints: Kyoto 1988 (*The Conservation of Far Eastern Art*), Brussels 1990 (*Cleaning, Retouching and Coatings*) and Madrid 1992 (*Conservation of the Iberian and Latin American Cultural Heritage*). John delivered the Forbes Prize lecture during the Paris Congress on *Adhesives and Consolidants* in 1984. Last, but by no means least, John has been an IIC Vice-President, serving on IIC Council from 1994 to 2004. We are delighted to award Honorary Fellowship of IIC to John Mills as the culmination of a very distinguished career.



More News

Conservation work reveals hidden Titian

LONDON - English Heritage, the UK charity that looks after the National Heritage Collection recently announced the re-attribution of three paintings to Titian. Following recent cleaning and conservation, the three paintings - previously attributed to later followers of Titian - have been revealed to be by the 16th century Venetian artist himself and his studio.

Once part of the Spanish Royal Collection and later given to the first Duke of Wellington, the paintings will go on display in public together for the first time as part of the exhibition 'Titian at Apsley House' opening in July at Apsley House, the London home of the Duke and his descendants.

The paintings are: *Titian's Mistress* (c.1560), *A Young Woman Holding Rose Garlands* (c.1550), and the *Danaë* (c.1553), the latter considered the most important of the three.

It is assumed that the wrong attribution was a result of the painting's poor condition with evidence of interventions including the reconversion of two of the paintings from rectangles to ovals in the 18th century, with consequent damage which was later covered by black overpaint. The *Danaë* had been reduced in height and layers of varnish that had darkened with time also made an attribution to the Italian master impossible.

The conservation project was carried out by conservators from English Heritage, the Museo del Prado in Madrid, and the Hamilton Kerr Institute. The turning point was the discovery of Titian's original signature in Roman capital letters on *Titian's Mistress* and *A Young Woman Holding Rose Garlands*.

English Heritage's Josephine Oxley, Keeper of The Wellington Collection at Apsley House, said: "Recent detective work has discovered a lot about these three paintings and our exhibition will reveal their stories and secrets. For art-lovers, it will be an opportunity to see - for the first time ever - several works by one of Italy's greatest artists."

During English Heritage's conservation of *Titian's Mistress*, an X-ray revealed underneath it another intriguing composition including a seated semi-clothed woman - however it was then painted over and Titian started on the painting we now see. The figure in the X-ray is almost identical to that in three paintings of *Venus* by later followers of Titian, suggesting that the artist returned to the subject, completing it in a now lost painting upon which the copies were based.

'Titian at Apsley House' opens to the public on Wednesday 1 July 2015 and runs until the end of October.



The painting known as *Titian's Mistress*



What's on + NiC's List

Call for papers

IIC 2016 Congress - Saving the Now: Crossing Boundaries to Conserve Contemporary Works

12-16 September 2016

Los Angeles, USA

Call for Papers and Posters

Deadline for abstracts submission: 15 June 2015

For more info go to:

<https://www.iiconservation.org/node/5586>

Symposium - Collecting and conserving performance art

Kunstmuseum Wolfsburg, Germany

June 2016

Deadline for abstract submission: July 15, 2015

Abstracts to be sent to:

performance_art@restauratoren.de

For further info click [here](#)

Hidden Heritage Conference 2016

9th April, 2016

Dorchester Town Hall, Dorset, UK

Deadline for poster submission: 20 September 2015

For further info click [here](#)

2nd International Conference of Aerial Archaeology: from aerostats to drones: aerial imagery in archaeology

3-6 February 2016

Rome, Italy

Deadline for paper and poster submission: 30

September 2015

For further information about this event please [click here](#)

A comprehensive list of events taking place around the world, in and around the field of conservation.

Write to news@iiconservation.org if you wish to add your event

Conferences/Seminars

Refugee Restorers, Sir Kenneth Clark and the National Gallery

18 June, 2015

London, UK

To book this event click [here](#)

Ligatus and CERL Bookbinding Expert Seminars, Plenary Session & Reception

23 June, 2015

London, UK

For bookbinding seminars please book [click here](#)

To reserve a place at plenary session and

reception, please email: e.warner@arts.ac.uk

or secretariat@cerl.org

31st International Congress of Metals in Architecture

30 June to 3 July, 2015

Bressanone, Italy

For information on the conference visit:

<http://www.scienzaebeniculturali.it>

SRAL Conference and Workshop: Portable X-ray Fluorescence Spectroscopy

9-10 July, 2015

Maastricht, Netherlands

For more information visit:

<https://www.iiconservation.org/node/5632>

IIC 2016 Congress - Saving the Now: Crossing Boundaries to Conserve Contemporary Works

12-16 September 2016

Los Angeles, USA

For more info [click here](#)

**Trans-Atlantic Dialogues on Cultural Heritage:
Heritage, Tourism and Traditions**

13-16 July, 2015

Liverpool, UK

For more information visit:

<https://transatlanticdialogues.wordpress.com/>**2015 Convention for Continuing Education in
Book and Paper Conservation-Restoration**

20-25 July, 2015

Krems, Austria

For further information visit:

<https://www.iiconservation.org/node/5448>**SPark: Conservation of Sculpture Parks**

14-16 September, 2015

Sisak, Croatia

For further information see:

<https://spark2015sisak.wordpress.com/program>**RE-ORG China – International workshop**

14 – 25 September 2015

Chengdu, China

For more information [click here](#)**Metal 2016**

26-30 September, 2016

New Delhi, India

For further information [click here](#)**Digital Heritage 2015**

28 September 02 October, 2015

Granada, Spain

For more information [click here](#)**The Best in Heritage**

24-26 September 2015

Dubrovnik, Croatia

For more information [click here](#)**Icon Stone and Wall Paintings Group : Fired
Earth – The Conservation of Terracotta and
Brick**

8 October 2015

Oxford, UK

For further information email swp@gmail.com**“Making the transition” 3rd IIC Student and
Emerging Conservator Conference**

15-16 October 2015

Warsaw, Poland

For further information about this event please
click [here](#)**Monumental Treasures Preservation and
Conservation - XX NKF Congress**

21-23 October 2015

Helsinki, Finland

For further information about this event please
click [here](#)**IGIIC Conference : Lo Stato dell’Arte 13**

25 October, 2015

Turin, Italy

For more information visit:

<http://www.igiic.org/lo-stato-dellarte-13-2/>**Courses/Workshops****Out of the Ordinary: Preserving Paper-Based
Ephemera**

08 July 2015

Portland, OR, USA

For more information visit:

[http://www.ccaha.org/education/program-
calendar](http://www.ccaha.org/education/program-calendar)**Paper Conservation in Latin America: Meeting
East**

4 to 20 November, 2015

Mexico City, Mexico

Application deadline: 30 June 2015

For more information [click here](#)**Conservation of Built Heritage**

4 March – 29 April 2016

Rome, Italy

Application deadline: 28 August 2015

For more information [click here](#)

**For more information about
conferences and courses see the
IIC website:**

www.iiconservation.org