



TITANIUM WHITE: FRIEND OR FOE?

By Dr. Ir. Birgit Anne van Driel

During the past four years I carried out my PhD research on the 20th-century white pigment titanium white. In this contribution I will summarize the key topics addressed in my dissertation and I will review the place of this work within the field of conservation science.

THE PROJECT

The dissertation describes the ultraviolet (UV) radiation initiated degradation phenomena, occurring in oil paints which contain titanium white, a mechanism commonly referred to as photocatalytic degradation. The thesis consists of three parts: 1) characterization of the use and properties of titanium white pigments, 2) understanding and monitoring the degradation of titanium white-containing oil paints, and 3) predicting degradation caused by titanium white pigments. Combining the results of these three parts led to a risk management strategy for modern art collections (Figure 1). The first step of this strategy is to identify the 'potential risk' of objects, which is performed by assessing the vulnerability and value of objects (A quick test for the vulnerability of Ti-white-containing objects based on the photocatalytic activity of the pigment is described in chapter 7 of the dissertation; a link to the full dissertation is located at the end of the article). Based on the potential risk, the composition of the collection and the aim of the collection, corrective measures can be applied such as dark storage or UV radiation mitigation for a single object or an entire building.

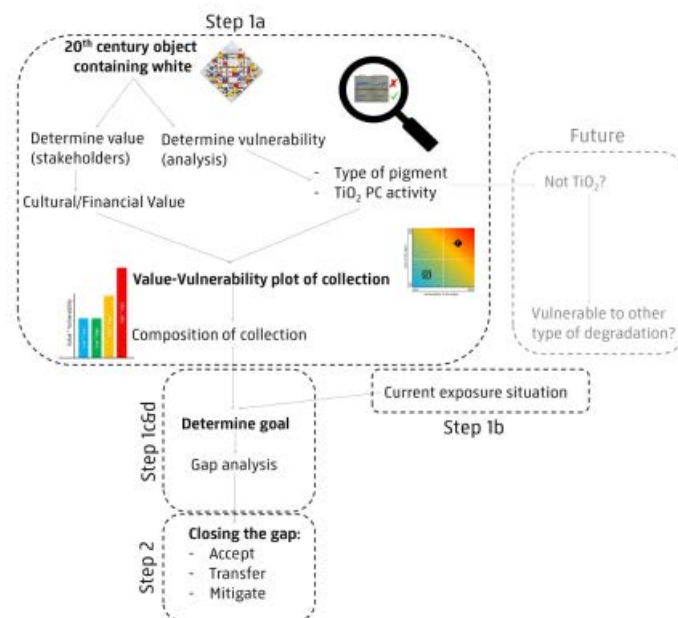


Figure 1: Risk assessment and management strategy. (Image provided by the author)

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FROM THE PRESIDENT'S DESK

I want to start by saying well done and thank you to Sharra Grow for editing her first edition of *News in Conservation* in June. You will have read that Sharra wants to use her Editor's column as a sounding board which I think is a great idea, and I shall look forward to following thoughts and ideas that you send to her. And thank you again to Barbara Borghese for her years of contribution as the previous Editor. I enjoyed reading about her work at the new British Postal Museum and Archive in the last edition of NiC which she co-authored with her colleague Chris Taft. When you are next in London you should add the Postal Museum and Mail Rail to your list of must-sees. The underground railway that was used to transport post around London has been re-purposed to allow public access.

We have been selecting the participants for the [IIC-ITCC 2018](#) course at the [Palace Museum](#), Beijing from 22-31 October. This year the subject is "Scientific Approaches to Paper and Photograph Conservation". We had over 90 applicants from all over the world and it was a really hard task to pick just 12 individuals from this list as so many were at the right stage in their careers to really benefit from the professional development that the course offers. We limited each country to only one participant which inevitably has resulted in many disappointed applicants. The Palace Museum has selected the Chinese participants and they also were overwhelmed with the calibre of applicants. There is an opportunity for anyone interested to attend a two-day symposium on Paper and Photograph Conservation at the Palace Museum that immediately follows the course on 1-2 November.

It was with almost complete disbelief that I heard the news about the devastating fire that gutted the [Charles Rennie Mackintosh Glasgow School of Art building](#) on 16 June 2018. This follows the previous fire in May 2014 - the restoration work following that fire was nearing completion. This makes the subject of the [XXI International NKF Congress \(IIC Nordic Group\)](#): "Cultural heritage facing catastrophe: Prevention and recoveries" particularly relevant for conservators in Scotland. I am planning to attend and am very much looking forward to visiting Reykjavik, Iceland from 26-28 September 2018.

The IIC Membership Committee, Officers and Finance Committee will be meeting in the middle of August to prepare for the Council meeting that will take place in Turin the weekend before the Congress. Members and those already registered for the Congress will have received emails offering additional tours during the week; do look out for these as they offer unprecedented access behind the scenes and at times when the doors are closed to the public. We are already actively planning for the 2020 Congress and hope to be able to announce the date and venue during the Turin Congress. And it is not too soon to think about a venue for 2022. We already have one expression of interest, and if you are interested in hosting then please get in touch, and we can help you frame a proposal for consideration by Council.

I look forward to seeing you in Turin.

Sarah Staniforth
IIC President



Sarah Staniforth, IIC President.
Photograph by Chris Lacey
© National Trust

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Deadline for October Issue submissions is 1 September 2018. Submit to news@iiconservation.org. Submission guidelines can be found [here](#).

Advertising

Deadline for October Issue materials is 15 September 2018. Submit to news@iiconservation.org. Rate card and advertising guidelines are found [here](#).

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NEWS IN BRIEF

ATTRIBUTION OF CINNABAR CARVED LACQUER VASE

The Bohdan and Varvara Khanenko National Museum of Fine Arts, also known as The Museum of Western and Oriental Art in Kiev, was established in 1887 and houses the biggest collection of foreign art in Ukraine. The Eastern collection of the Khanenko Museum contains a number of carved cinnabar lacquer vases, but one of them is more peculiar than the others. This vase (1) has a cobalt blue enameled brass body and carved cinnabar lacquer imagery depicting two flying dragons with lotus ornaments. It was identified as Chinese lacquer from the first quarter of the 20th century, but the vase was given to the Museum from a private collector, and a full provenance was not provided with the object.



"Dragon and lotus" vase (1), "The tree peony" vase (2), label of Forbidden City (3) © Mariia Kuzminykh

Since there is no evidence to suggest whether the vase was made in a private workshop or in a factory, the Museum began an investigation into the roots of this object. Similar vases were found in private collections in Ukraine, and some of them have labels that were preserved. A similar red carved lacquer vase (2), with a cobalt blue enameled brass body and the motif of a peony tree, has a label picturing the Forbidden City; this motif was customarily given as a farewell gift.

The black script within the red circle on the label is translated as: "Zijīnchéng" (Forbidden City). And the gold script on the outer circle of the label is translated as: "Běijīngdiāoqīchāng / Jīngzhī" (Beijing Carved Lacquer Factory / refined or made with extra care) (3).

This same label is found on many objects in private collections in Ukraine. The Beijing Carved Lacquer Factory was created after the formation of the People's Republic of China in 1949. Further scientific analysis will help confirm the date of the object, which is thought to be 1950-60.

Mariia Kuzminykh is a Ph.D. candidate in History of Arts in NAOMA, Kiev (Ukraine) with her focus on Lacquerware Collections of Ukraine (attribution and conservation). She graduated from Repins Academy of Arts as an Art conservation specialist.

42ND SESSION OF UNESCO WORLD HERITAGE COMMITTEE

The 42nd session of the UNESCO World Heritage Committee was held in Manama, Bahrain, June 24 – July 4, 2018. Chaired by Sheikha Haya Rashed Al Khalifa, this session included topics such as UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage. The UNESCO "Revive the Spirit of Mosul" initiative was also highlighted during the session. Launched this past February, this initiative aims to help rebuild and revive Mosul, one of the

EDITOR'S SOUNDING BOARD

As a conservator of modern and contemporary paintings, I work mainly with private collections and galleries. Dr. van Driel's article in this issue of NiC ("Titanium White: Friend or Foe?" front page) caused me to evaluate how I approach collections care with my clients.

As conservation professionals, we are largely responsible for identifying issues, finding solutions, and advocating for art. Because we are not the owners or purse string holders, the final decision to act or invest is usually not ours to make. But, what if shifting the way we discuss preservation decisions with the decision makers could give us greater influence?

It has been my experience that conservators shy away from discussing artworks as monetary investments, but these are the terms in which many private collectors, dealers, and clients think. I am by no means suggesting that we as a profession abandon our code of ethics or disregard the immeasurable value art and cultural objects can have, but I think we would be more effective advocates if we were trained to confidently discuss collection care from the perspective of our clients, including in terms of monetary value (i.e. how investing in long-term preventive care can grow the value of a collection).

Perhaps you already have these discussions with clients. Or maybe you disagree. Let's discuss; this is a sounding board after all.

Please send your thoughtful responses to the Editor at news@iiconservation.org.

Sharra Grow
Editor, News in Conservation



Sansa, Buddhist Mountain Monasteries, Korea. Beopjusa Temple, Hall of Eight Pictures (01/01/2016) Photo provided through UNESCO and taken by CIBM ©CIBM. Copyright/usage policy: <https://whc.unesco.org/en/licenses/13> and <https://whc.unesco.org/en/disclaimer/#image> Permanent URL: <https://whc.unesco.org/en/documents/165811>

largest cities in Iraq, having suffered devastating destruction from 2014 to 2017.

The committee added Lake Turkana National Parks in Kenya to the List of World Heritage in Danger, and a total of 19 sites were added to the World Heritage List including 13 cultural sites, 3 natural sites, and 3 mixed sites. One of these new additions are the Sansa, a group of 7 Buddhist Mountain Monasteries in the southern provinces of the Korean Peninsula. These sacred temples date back to the 7th - 9th centuries.

The World Heritage List currently contains 1,092 sites in 167 countries. The 43rd session will be held in Baku, Azerbaijan in 2019, and Azerbaijan's Minister of Culture, Abulfas Garayev, was elected to chair that meeting.

For more information and access to the 42nd Session documents, follow the link: <http://42whcbahrain2018.bh/the-42nd-session/>

ICONIC CORMAC'S CHAPEL AT THE ROCK OF CASHEL RE-OPENS TO THE PUBLIC

On the 3rd of July, 2018, [The Office of Public Works](#) (OPW) Commissioner, John McMahon, welcomed the official re-opening of Cormac's Chapel, an Irish Romanesque style building which forms part of the Rock of Cashel complex, following an extensive conservation project.

The project involved extensive works over a period of time to replace the failing roof of the Chapel and address the issue of water penetrating into the building and causing damage to the historic interior. The Chapel is now safe from the effects of rain-water which can no longer leak into the building, and the walls have been allowed to progressively dry out, revealing the wonderful remnants of the medieval wall paintings inside.

St. Patrick's Rock or the Rock of Cashel, as it is more commonly known, is a spectacular collection of buildings set on an outcrop of limestone and is one of Ireland's most important early medieval monuments. A fortress is said to have existed on the site from the 4th or 5th century and the name itself, Caiseal in modern Irish, is an early borrowing from the Latin, castellum, meaning fort.

Cormac's Chapel is situated on the southeast side of the main cathedral and is not only one of the most significant early Romanesque styled buildings in Ireland, but contains the fragments of an immensely important scheme of wall paintings. The paintings had suffered deterioration due to the poor environmental conditions in the Chapel; both liquid water and water vapour made the walls extremely wet and led to algal growth obliterating the paintings from view and gradually eroding them completely. The condition of the building, although structurally stable, was also identified to be extremely vulnerable to penetrating rainwater and this led to the decision to



Interior of Cormac's Chapel at The Rock of Cashel. Image taken by Barry Nangle © The Office of Public Works (OPW)

carry out this extremely challenging and complicated conservation project. "In January 2010, to allow the building structure to dry, and to provide access to the roof and protection during the repair work, a roofed and enclosed scaffolding was erected over Cormac's Chapel", the Commissioner said. "This scaffold dominated the skyline over Cashel until early this year and I know it was a source of much comment locally, but thankfully, we can all be happy that it did its job!" The Commissioner also reflected that eliminating a significant amount of water from the structure has ensured that the very precious wall paintings, which have now been professionally conserved, are preserved for future generations and can once again be viewed by visitors to the site.

ELIZABETH TOWER ORIGINAL COLOUR SCHEME TO BE RESTORED

The clock dial frames and the hands of the Elizabeth Tower are to be repainted in a return to the original Victorian colour scheme. Samples of the famous landmark's earliest paintwork have been analysed by a team of experts, in order to establish a true picture of the original design. Completed in 1859, the design of the clock tower was undertaken by Charles Barry, the architect of the Gothic Revival Palace of Westminster. Barry also created the intricate ironwork for each of the dials, including the choice of Prussian blue and gold frames filled with white glass.

Following research into the original drawings and by taking samples of remaining layers of old paint for close examination, the scheme can now be recreated. New white opalescent glass will be installed once the metalwork has been cleaned and repainted. The black paint to the surrounding stonework will be removed and certain features regilded.

Other key details will also return to Barry's original design; the row of six shields above each dial will display the St George's coat of arms, with a red cross on a white background. The floral emblems of all four parts of the United Kingdom are represented elsewhere in the coloured decoration: the rose, thistle, shamrock and leek.



Rendering of Proposed Colour Scheme from paint analysis, by Purcell © UK Parliament.

Adam Watrobski, Parliament's Principal Architect said: "As part of the major repair and conservation of the Elizabeth Tower, we have carried out extensive research into the original decorative scheme for the clock faces and the adjacent areas. Using historic paint analysis and references including Barry's original design watercolour, contemporary illustrations and archival photographs, we have recreated the original colour scheme. The dials and clock hands are Prussian blue and gold, and the adjacent areas make use of the red, white and blue colours of the Union flag, along with the detail colours used for heraldic shields for each part of the United Kingdom. The existing gilded areas closely match those that were gilded and these have not changed significantly during the life of the Tower. This will very much be the crowning glory of this important project and will certainly serve to reinforce the symbolism of the Tower in its international representation of the United Kingdom."

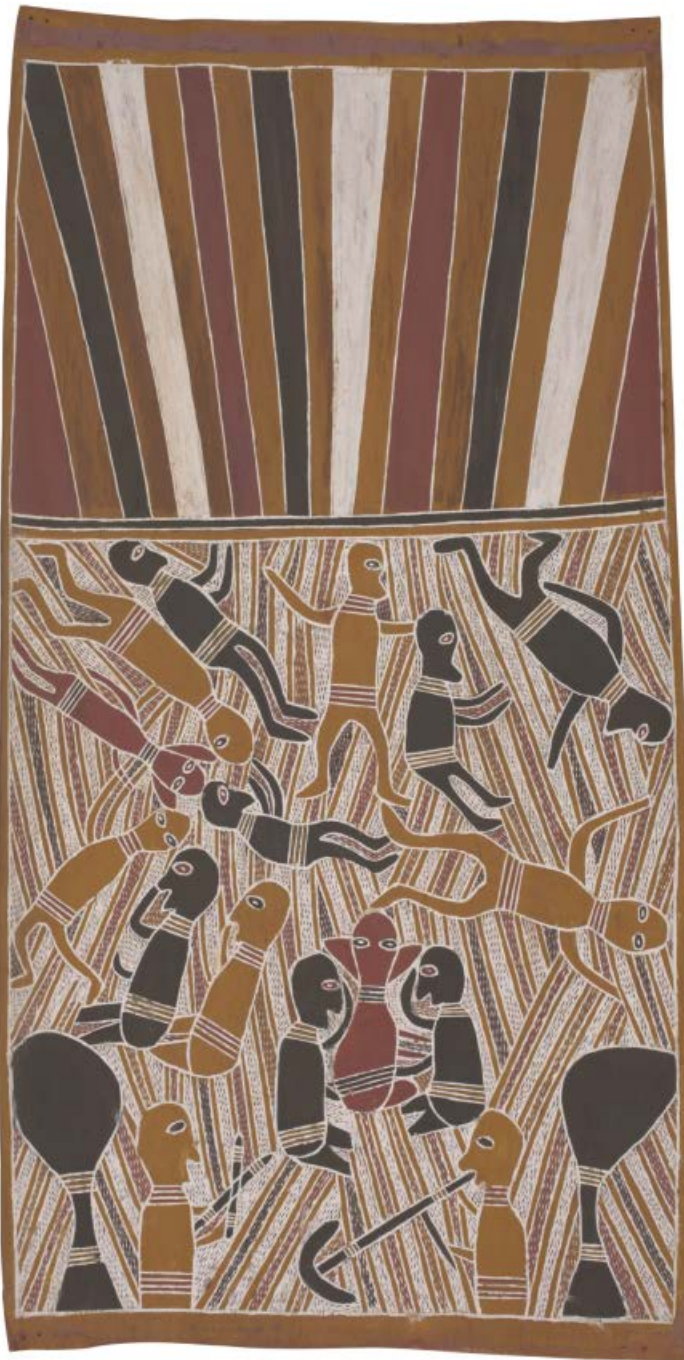
Rt Hon Tom Brake MP, spokesperson for the House of Commons Commission, said "The Elizabeth Tower is a symbol of the UK's democratic heritage, and I'm thrilled to see these vital restoration works return the clock tower to its former glory. It is crucial that these conservation works now continue so we can ensure the long-term sustainability of Big Ben and safeguard it for future generations to enjoy."

The Elizabeth Tower is currently undergoing a complex programme of renovation work that will safeguard it for future generations.

Further details about Big Ben, including historical information and a Q&A about the conservation project, are available at www.parliament.uk/BigBen. For further information regarding this press release, contact: HOCMediaCorporate@parliament.uk

RARE ARNHEM LAND BARK PAINTINGS ON SHOW IN BEIJING

Delicate and rare bark paintings from the National Museum of Australia's signature collection are headlining an unprecedented exhibition tour of Arnhem Land artworks across China in 2018. The *Old Masters: Australia's Great Bark Artists* exhibition



Mathaman Marika, *Riratjingu Mortuary Ceremony*, 1967. National Museum of Australia © the artist's estate, licensed by Aboriginal Artists Agency

featuring over 150 artworks and objects opened at the National Museum of China in Beijing on 3 July 2018 and represents the most significant collection of Aboriginal barks to tour China.

The tour coincides with the announcement that nationally acclaimed performer and advocate for traditional Chinese culture, Guo Degang will serve as a cultural ambassador in China for the National Museum of Australia.

With over 2,000 works of art on bark, the National Museum holds the world's largest and richest collection of bark paintings. *Old Masters* highlights the work of master painters, from western, central and eastern Arnhem Land. The exhibition will tour mainland China for 20 months before heading to Taiwan, reflecting the strong international interest in Australian Indigenous art and culture. Aboriginal and Torres Strait Islander communities have inhabited the Australian continent for at least 65,000 years and their rich and diverse culture is reflected in the barks' intricate designs.

"This delicate and beautiful collection of Arnhem Land bark paintings is one of Australia's great cultural treasures and the National Museum of Australia is delighted to share them with Chinese audiences," said National Museum Director, Dr Mathew Trinca.

National Museum Senior Curator Dr Michael Pickering said Aboriginal Australians boast one of the world's oldest continuing art traditions: "The three different regions represented in this exhibition have very different painting styles and we know overseas audiences will be fascinated by their depictions of Australian plants, animals and Indigenous culture," said Dr Pickering.

Australia Post CEO Christine Holgate said Australia Post is delighted to be the major partner of *Old Masters*: "This partnership illustrates our commitment to share Australia's culture and its stories with our Asian neighbours," said Ms Holgate.

The exhibition will feature master painters including Yirawala and Narritjin Maymuru, Mawalan Marika and David Malangi. The 123 barks were painted between 1948 and 1985, and most featured in the *Old Masters* exhibition at the National Museum in Canberra in late 2013.

Old Masters: Australia's Great Bark Artists tour of China is proudly supported by our major partner Australia Post and supported by De Bortoli and by the Australian Government through the Australia-China Council of the Department of Foreign Affairs and Trade. For further information contact Tracy Sutherland at media@nma.gov.au

AMERICAN EXPRESS AWARDS \$1 MILLION TO THREATENED CULTURAL HERITAGE SITES INCLUDED ON 2018 WORLD MONUMENTS WATCH

On June 12, 2018, American Express and World Monuments Fund (WMF) announced \$1 million in funding to support preservation efforts at eight endangered cultural heritage sites included on the 2018 World Monuments Watch. The funded sites face threats from the effects of natural disaster, climate change, urbanization, and neglect, and date from prehistory to the twentieth century. They were included on the biennial Watch to identify opportunities for collaboration and positive impact. Now, grants from American Express will make projects possible at the following places:

Potager du Roi in Versailles, France; Grand Theater of Prince Kung's Mansion in Beijing, China; the town of Amatrice, Italy; Kagawa Prefectural Gymnasium in Takamatsu, Japan; Tebaida Leonesa in León, Spain; Blackpool Piers in Blackpool, England; Matobo Hills Cultural Landscape in Matobo, Zimbabwe; and Monte Albán Archaeological Site in Oaxaca, Mexico.

“As the founding sponsor of the World Monuments Watch, American Express is committed to advocating for the protection of our most treasured landmarks around the globe,” said Timothy J. McClimon, President of the American Express Foundation. “We recognize these sites as symbols of national and local identity, and value the role that their preservation can play in attracting visitors and revitalizing communities.”

“For more than 20 years, American Express has been an unmatched champion of the world’s most treasured places.” said Joshua David, President and CEO, World Monument Fund. “Their leadership and support of the World Monuments Watch allows us to support international partners in the protection, conservation, and stewardship of sites of cultural heritage, helping to strengthen communities around the world.”

The World Monuments Watch works with local communities to bring their treasured cultural heritage sites to an international stage. Announced in October 2017 with founding sponsor American Express, the 2018 Watch includes a diverse group of 25 sites spanning more than 30 countries and territories that face daunting threats or present unique conservation opportunities.

Over the past 20 years, American Express has given nearly \$18 million to help preserve 166 World Monuments Watch sites in 71 countries. It has also partnered with a number of leading organizations to help preserve sites in need, build awareness, and engage the public in preservation efforts across the world. Through these partnerships and other individual grants, American Express has granted more than \$60 million to support hundreds of preservation projects. To learn more, visit: www.wmf.org/2018watch



Matobo Hills National Park, Zimbabwe; one of the eight sites that will undergo documentation and conservation as part of the American Express and World Monuments Fund initiative. Image by Lars Lundqvist. Original image can be accessed [here](https://creativecommons.org/licenses/by-nc-sa/2.0/). CC BY-NC-SA 2.0 (<https://creativecommons.org/licenses/by-nc-sa/2.0/>)

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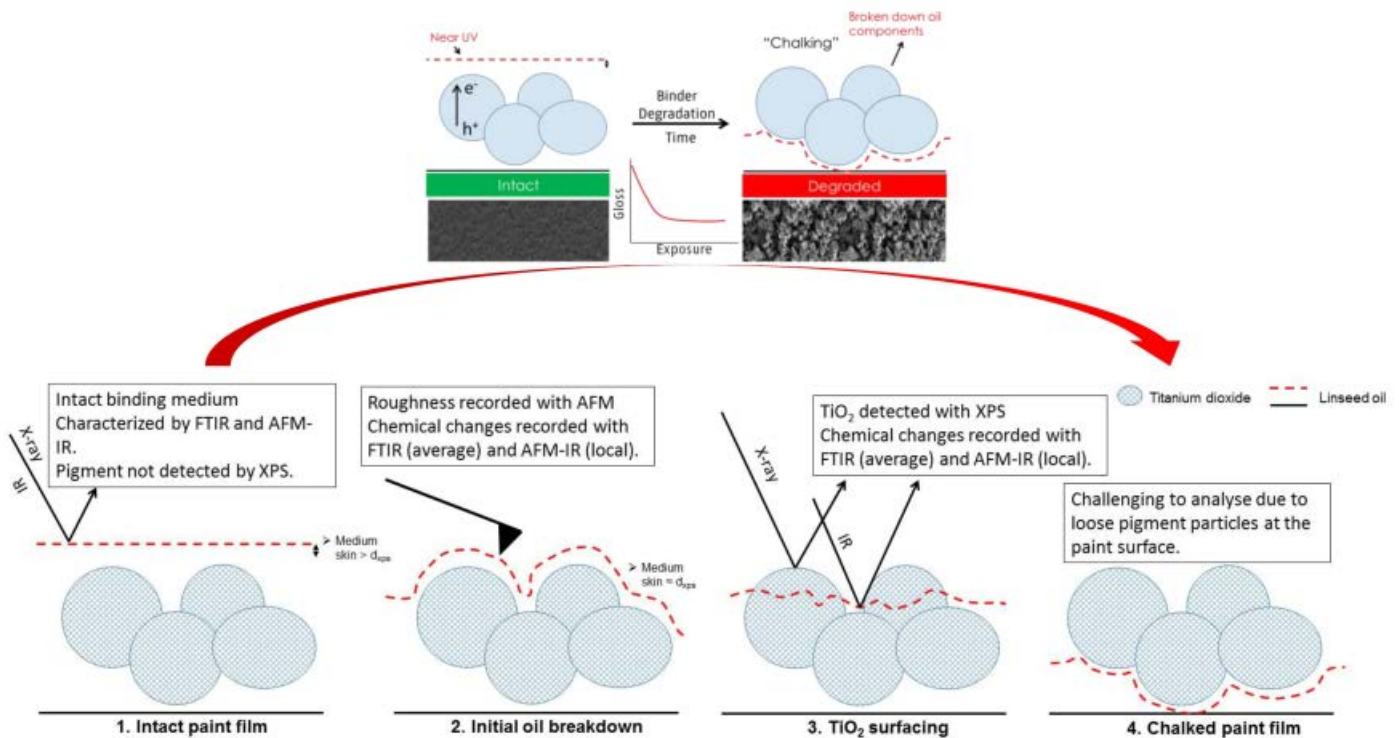


Figure 2: Schematic representation of TiO₂-photocatalyzed degradation and the changes taking place at the paint surface (image provided by the author).

A SHORT INTRO TO TITANIUM WHITE

Titanium white was introduced as a pigment in the 20th century. It underwent a gradual development resulting in a large variance in quality of the pigment available throughout history. This variety ranges from very photocatalytic or 'bad' pigments, which severely speed up certain degradation processes, to photostable or 'good' pigments which can protect their immediate environment from UV radiation. Both 'good' and 'bad' pigments found their way into artist materials and thus into paintings, hence the title question, *Titanium white, Friend or Foe?* When a pigment is photocatalytic, radicals - which form upon UV irradiation - attack the oil binding medium and break it down into volatile components, leading to an effect called chalking; the pigment is unbound on the paint surface (Figure 2).

NO DEGRADATION APPARENT IN COLLECTIONS...

When I started my work, the research proposal assumed that TiO₂ pigments were causing problems, and acute ones at that. My unsuccessful search for pre-existing case studies on which to build, in a traditional conservation science way, was a setback. But I did not let it get me down. Instead, I used this to adjust my research approach toward a preventive one.

AN OUNCE OF PREVENTION IS BETTER THAN A POUND OF CURE

The analogy between health care and conservation science is not uncommon. Many conservation problems are described in medical terms; tin pest, lead disease, glass sickness, and ultramarine sickness. Both fields are based on research into processes of change (illness/degradation), and the results are commonly used for diagnostics and treatment. In health care, a distinction is made between preventive care and diagnostic care. Preventive care can indicate the use of simple tests or screenings at the moment a patient is feeling healthy, or it relates to prescribing a healthy lifestyle to prevent illnesses. Diagnostic care, on the other hand, is performed to treat an existing condition.

How does preventive thinking relate to cultural heritage preservation? In the Netherlands there are [protocols](#) in place to predict calamities that can occur unexpectedly, such as fires, floods, theft, or vandalism. However, continuous problems such as wear or degradation are not yet covered by these guidelines for risk management and preventive measures. Taking the cultural and financial importance of cultural heritage for society under consideration, it seems to me that preventive thinking needs to be incorporated more into cultural heritage science and management.



van Driel preparing titanium white oil paint samples on a glass-plated mill in the lab of the Cultural Heritage Agency of the Netherlands (image provided by the author)

sociation (CAA) Forbes stated that, "Neglecting to take responsibility for the preservation of cultural heritage, was tantamount to a crime against civilization" (Brewer, 2010). Following this statement, all modern art collections must assume responsibility for the inevitable titanium white problem and act accordingly.

VALUE VERSUS RESEARCH ENDEAVOURS

The value of cultural heritage objects is very difficult to determine and is dependent on many parameters such as economic, social, and cultural value. In terms of financial value, no less than seven of the fifteen most expensive paintings were made by painters known to have used titanium white. Remembering Forbes' words in 1920, these private collectors should, similarly to museums, be held responsible for the preservation of these artworks, and hence invest in research.

As an additional complication, modern art objects were produced in a time of technological development, and are thus composed of highly complex materials and formulations. Therefore, the chance of such a painting changing dramatically is significant. Some examples of problems with modern paintings are the dripping paintings by Frank van Hemert and the problem of water sensitivity in modern oil paints. The difficulties in researching modern materials were already noted almost a century ago by Forbes who was aware that "Artists' experiments with materials and methods untested by tradition could result in the deterioration of their work at an unprecedented pace" (Brewer, 2010). Furthermore, with regard to the deterioration of modern art

PLACE IN CONSERVATION SCIENCE

During my research, I started to question the applicability of research performed in conservation science; it seems that a lot of research has been done out of interest, passion, and expertise, but the practical application of most study results is lacking. Following this train of thought, I would like to shed some light on the relevance and impact of my study in the context of the history and the future of conservation science. While it is often regarded as a young field, scientific studies of artworks have been performed for a long time. Research into archaeological objects began in the 18th century. At the end of the 19th century, the first ever chemical laboratory in a museum was founded (1888) in the Kaiser Friedrich Museum of the Königlichen Museen in Berlin with Friedrich Rathgen, the first chemist to work in a museum. The goals of this new founded research were mainly to detect forgeries, to develop durable materials (commonly carried out by industrial chemists) and to address concerns related to physical changes in works of art.

The eventual founding of more museum laboratories led to the first conservation science conference in 1930 in Rome, organized by the International Museum Office (IMO). Attendees of the conference aimed to present the preservation of works of art as a solid scientific field. It is interesting that topics on the agenda in 1930, such as raising standards and gathering more reliable data, are still relevant today. A committee of five art historians, five restorers, two chemists, and one consulting physicist was formed after this meeting, charged with writing a manual on the care of easel paintings. This effort can be regarded as the first professional and interdisciplinary collaboration in the field, laying the groundwork for many to come. Collaborations between museum professionals, academics, and industry have been of high importance since Edward Forbes' time. However, true interdisciplinarity is not always achieved. Some art historians misunderstand how science can contribute to art history or conservation and are therefore hesitant to use it. On the other hand, others may expect science to solve everything. But this will never be the case. In fact, scientific studies usually raise more questions.

There are many potential and future condition issues, like the TiO_2 problem, for which our field has not yet fully accepted and recognized as needing our attention and efforts now, rather than later. In 1920 at a meeting of the College of Art As-

materials, we are currently on the steep part of the kinetic curve (where most processes of change take place prior to demise or stabilization), and thus at this moment in time, there is still a lot to gain.

PREDICTIVE CONSERVATION?

Present and future conservation science in the Netherlands is represented by the Netherlands Institute for Conservation Art and Science (NICAS). I fully agree with the NICAS white paper, *Science for Arts of the Netherlands*, where it states that “we only analyse the present, while it is necessary to understand the past and to predict the future.” Not finding any case studies for titanium white degradation proved to be an opportunity to explore other approaches of conservation science moving into preventive conservation or even, I dare say, predictive conservation.



XRF analysis on a white paint stroke using a Bruker III-SD (Image provided by the author).

This PhD research was conducted as a collaboration between the Rijksmuseum, Delft University, The Cultural Heritage Agency of the Netherlands, and AkzoNobel. A link to the complete dissertation publication can be found here: <https://repository.tudelft.nl/islandora/object/uuid%3Aa64b7f31-a45b-4868-8978-70256e2ecb4f>



Birgit van Driel conducted her PhD in collaboration with the Rijksmuseum, Delft University of Technology, the Cultural Heritage Agency of the Netherlands and AkzoNobel between May 2014 and May 9th 2018, when she graduated her PhD *cum Laude*.

UNLOCKING ST. ANTHONY'S LOCKED MANUSCRIPT

By Rita Udina

*Tony, Tony, come around,
something's lost and can't be found!*

No matter how vehemently I prayed to Saint Anthony, no key to unlock an 18th-century manuscript could be found. It is hard to imagine that in 1766 real estate lobbies were as much of a daily concern for ordinary citizens as they are nowadays, and yet this is a clear example of how little things have changed. Detailed data from the building industry in Catalonia was kept in the utmost secrecy by means of literally locking the manuscript with an iron safety lock inlaid in the back cover of the binding.

Either to access its valuable information, or because the key was lost, the front cover of the book had at some point been broken in order to release the bolt clasp, without Saint Anthony's blessing (or the key). Saint Anthony is the patron saint of bricklayers –at least in Spain– and a holy card with his image was placed on the back pastedown to protect the lock, but not the binding, which was quite damaged after these efforts. It seems quite naïve today to think that a robust iron lock was deemed to be sufficiently effective when it had been inserted into such flimsy cardboard. I wonder why they didn't at least use wooden boards.

Many unknowns arise from this handwritten list of masons: the missing key, missing folios, and a yellow-based pigment in the back pastedown among others (This is not the first time that I have seen a yellow paint like this; previously I have seen it on the binding surface, with the same apparent lack of artistic intentions. The possibility that it is a sulphur-based paint applied as a disinfectant seems quite feasible). But I'd like to share the certainties now, providing some details of the conservation treatment and more specifically of the key issue: how to unlock the locked manuscript.

BOOKBINDING DESCRIPTION

The manuscript was sewn on five tawed leather thongs laced on cardboards (Lacing paths match the described structure by Szirmai in figure 9.33 ([b] and [B]) on page 223: each sewing support is laced through two holes perpendicular to the spine. J.A. Szirmai: *The Archaeology of Medieval Bookbinding*. Ed. Ashgate, 1999.).

Although this is a 1766 bookbinding, the structure corresponds closely to late gothic or renaissance bindings: full binding with raised bands on a tight spine, sewn endbands on leather cores, blind tooling, brass bosses and clasps... and an iron safety lock inside the back cover! The use of cardboard instead of wooden boards is one of the few elements that differs from gothic binding features and is similar to renaissance characteristics.

The lock consisted of two pieces: one inside the back cover, not visible except through the key hole, and the corresponding bolt, nailed onto the front cover as a clasp. However this piece was detached from the front cover, and remained lodged into the back cover lock.

Numerous attempts to open the book might have caused the front cover to come apart. The back cover was quite loose too due to the weight of the iron lock. The metal components were visibly rusted as well as some parts of St. Anthony's holy card (and under layers).



Before (top image) and after conservation (bottom). The bolt clasp locked on the back cover (left) has been unlocked and placed back on the front cover (right). © Rita Udina.

PROPOSED TREATMENT

The main goal was to restore the utility of the lock and solve the structural issues derived from the fact that the covers were loose. Although the structural damage was severe, the leather was in relatively good condition and thus the idea to not dismount the whole binding prevailed rather than taking apart bosses, detaching the leather, etcetera.

Table 1: Structural strength analysis

Joint	Original (unbroken)	Restored	Structural value
Text block gatherings.	Sewn on thongs.	<ul style="list-style-type: none"> - Sewn on thongs, and - Partially sewn onto the spine reinforcement. 	Very strong. The added materials do not lessen the strength or flexibility, and also they provide an extension which takes the place of the broken thongs (and allows the joining to the covers).
Covers – text block	<ul style="list-style-type: none"> - Sewn: Thongs laced into the covers, and - Pasted: Through the spine lining and the pastedowns. 	- Pasted: spine reinforcement pasted onto the covers.	The non-woven tissue all along the cover provides a larger joint than 5 local thongs. It can bear the weight of heavy boards and it is flexible enough to enable handling.

The main unions of the book skeleton were evaluated in this table in order to choose the appropriate reinforcement. © Rita Udina

(<https://goo.gl/SQ24ri>). In movable areas (such as the spine) it is more effective and durable to use sewn or laced solutions versus pasted, but this tenet could only be partially achieved, due to the nature of the boards and the features and condition of the binding. Weighing the pros and cons, however, it became clear that the benefits of detaching the spine to sew in an extension of the thong were overall greater than were the drawbacks.

As for the lock, after fruitless attempts to fix it without disassembling it, I decided that the removal of the pastedown would make the lock visible and hopefully widen the range of possible solutions.

CONSERVATION DETAILS: THE JOINT BETWEEN THE COVERS AND TEXT BLOCK

The leather was removed from the spine with a scalpel, and next six Reemay® strips were sewn into the spine between the thongs. The strips overlapped the covers by about 5 cm, as they were wider than the spine. Then the extended flaps from the strips were pasted onto the boards. When performing such a treatment, I usually insert these strips into the cardboards after splitting the joint edge of the cover (as a sort of manual board slotting: <https://goo.gl/YNd6pg>), but that was rather difficult because the cardboard was handmade from rags, and the entangled structure thwarted any attempt to do the splitting properly.

Therefore I chose to paste four of the strips on the outer surface of the cover (under the leather), and the rest on the inner surface. Recovering the laced structure in the union covers-spine was deemed unfeasible if the leather was to remain largely untouched, and the adhered reinforcement is expected to be sufficiently strong.

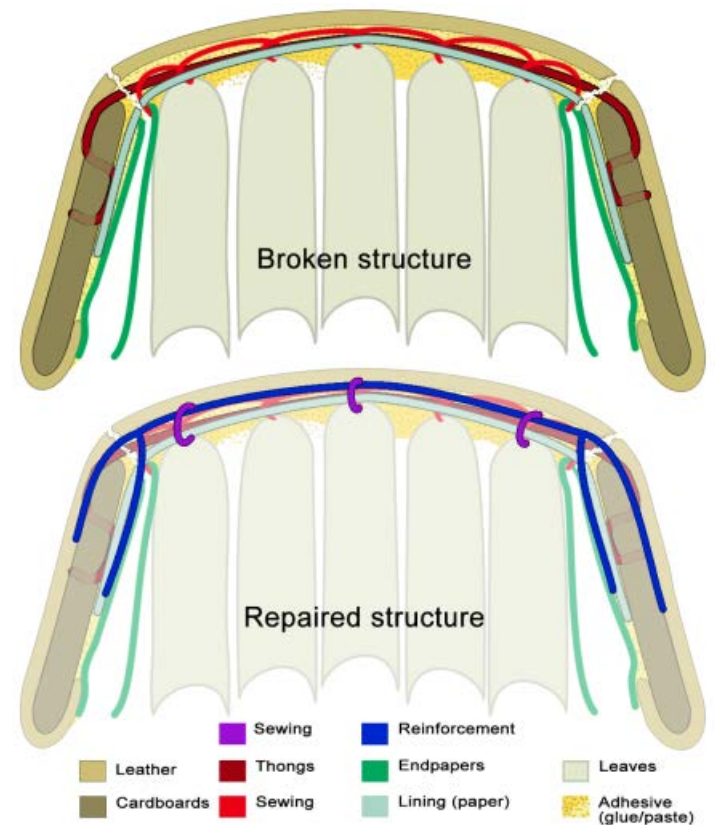
Once the structure was recovered, the leather from the spine was pasted back into place with an acrylic adhesive, and the joints and losses were infilled with Japanese paper and re-touched with acrylic-based paints.

CONSERVATION DETAILS: THE LOCK

Saint Anthony was carefully removed from the back cover but we did not succeed in puzzling out the mechanism of the lock, since it was enclosed in a solid iron cluster with very narrow accesses.

The text block was also quite well preserved, hence dry cleaning was the major treatment suggested for the folios, which would also preclude any major disassembling. Regarding the binding structure a dilemma emerged; whether to keep the tight spine or to add a hollow spine. Apart from the fair condition of the spine itself, the need to somehow extend the broken thongs implied detaching it and making some changes to it. Once the lock was fixed, each cover would bear the weight of an iron piece (plus 7 brass ones) so the lacing of the text block to the covers needed to be resilient enough and still not protrude much. Nevertheless, in this case it was deemed not strictly necessary or particularly beneficial to change the spine structure, even though detaching the leather from the spine to permit consolidation of the structure seemed unavoidable.

After doing so, reinforcements were to be added between the thongs whose extensions would be pasted onto the covers



Bookbinding structure of the manuscript. Before conservation (top) and after adding a reinforcement support (bottom). © Rita Udina

Rust was mechanically removed and some lubricant applied to the inner cell, with the happy result that it was able to move again. Anyhow, the key was still missing, and despite this progress it wasn't clear whether it could function normally again or not. Therefore a tiny piece of Mylar® film was placed inside to block the mechanism, preventing it from locking again.



Inner back cover, after removing the pastedown. Right: The bolt clasp is still stuck into the lock and both pieces are visibly rusted. Left: Unlocked lock and bolt clasp, after removing rust. © Rita Udina

All the iron pieces were protected with Paraloid B-72 in order to prevent further rusting. The bolt clasp was treated with a tannic acid solution (<https://goo.gl/JBD1KV>), and also varnished.

The front cover was significantly damaged where the bolt clasp had been ripped out, so it was consolidated and nailed back into its original position. Finally, the restored pastedowns were pasted onto the covers, hopefully with Saint Anthony's blessing.



Spine after removing the leather and sewing in Reemay® strips between the broken thongs. The extensions of the strips are pasted into the cover. © Rita Udina.

To see more images and further information on this conservation treatment, visit Rita Udina's blog (<http://ritaudina.com/en>): <https://wp.me/p4zghb-1fy>

ACKNOWLEDGEMENTS

Library and Historical archive of the Architects' Association of Catalonia (CoAC), who trusted me with the conservation of such a special book, and many other beautiful artefacts.

Jaume Xarrié, antiquarian, builder and former landlord of my studio. Dedicating him this short conservation report cannot possibly show how grateful I am for feeling always protected and helped. Mr. Xarrié always has the key to solve any problem.

Neil Forrest, for his help in proofreading the text. Thank you!



Rita Udina has been working non-stop in the paper conservation field since 1999, in her private conservation studio where she works as a paper and books conservator and owner. She has published several research papers on her own and with other conservators. She shares conservation issues on her blog (<http://ritaudina.com/en>) and organizes international conservation workshops.

PRESERVING A HIDDEN HISTORY: NEDCC PHOTOGRAPH CONSERVATION TRAINING INITIATIVE FOR CENTRAL AND EASTERN EUROPEAN PROFESSIONALS

By Julie Martin

When the Northeast Document Conservation Center (NEDCC) began the initiative to train Central and Eastern European conservators in photograph conservation, there wasn't a single professional in the region trained in this specialized field.

At the same time, important collections of photographs were being discovered under floorboards and even beneath the roof tiles of homes – hidden away for safety during the Soviet era. Central and Eastern European museums and archives recognized the importance of these photographs and have made great strides in identifying, cataloging, and housing the collections. However, many of the collections have years of conservation treatment work ahead, and there is still a severe shortage of trained photograph conservators to treat these uniquely historic and complex materials.

RECOGNIZING THE NEED

The training initiative began in 2000 when then NEDCC Senior Paper Conservator Walter Newman and other U.S. colleagues visited the Academy of Fine Arts and Design (AFAD) in Bratislava, Slovakia, to meet with faculty of the Academy's conservation program and discuss possible collaboration and training opportunities.

The AFAD's newly appointed Paper Conservator Boris Kvasnica, appreciated the opportunity to exchange ideas and experiences with an American conservator. He felt that they would benefit from exposure to American approaches to conservation. In 2001, Boris Kvasnica was invited to participate in a week-long residency in paper conservation at NEDCC in Andover, Massachusetts, USA. During the visit, he identified training in conservation of photographs as his region's most important professional development need, and suggested that NEDCC's Senior Photograph Conservator Monique Fischer teach a series of seminars at AFAD for graduate students and professionals in the region.

INTERNATIONAL PHOTOGRAPH CONSERVATION WORKSHOPS 2003–2008: ACADEMY OF FINE ARTS AND DESIGN (AFAD), BRATISLAVA, SLOVAKIA

In 2003, the first week-long Photograph Conservation Workshop, led by Monique Fischer, was held in Bratislava for a group of students at the AFAD. Then, each year from 2005 to 2008, week-long International Photograph Conservation Workshops were hosted by the AFAD for a group of about 20 conservators, professors, and students from the surrounding countries.

Collaboration was crucial to this project, and other American conservators and scientists were invited to participate in the workshops. Dusan Stulik, senior scientist, and Art Kaplan, assistant scientist, from The Getty Conservation Institute (GCI) provided an understanding of the role of science in photography. Nora Kennedy, Sherman Fairchild Conservator of Photographs and Mia Fineman, associate curator at the Metropolitan Museum of Art, helped provide an overview of the history of photographic processes, as well as sessions on photograph identification, preservation, and conservation. Participants for the international workshops came from Slovakia, Estonia, Bulgaria, Serbia and Montenegro, Poland, the Czech Republic, Russia, and Hungary.



Students examine a variety of photographs during the 2007 Fundamentals of Photograph Conservation workshop in Bratislava, Slovakia. Photo: Monique Fischer

PHOTOGRAPH CONSERVATION INSTITUTES 2004–2008: NEDCC, ANDOVER, MASSACHUSETTS, USA

Each year from 2004 to 2008, four Institute participants were chosen from the Bratislava workshops to travel to NEDCC in Andover, Massachusetts for a three-week-long Photograph Conservation Institute where they received in-depth training. All-day sessions gave students ample opportunity for hands-on practice of treatment techniques and lectures under the supervision of instructor Gary Albright, a photograph conservator in private practice.



2005 Photograph Conservation Institute students meet in NEDCC's conservation lab with Nora Kennedy, Sherman Fairchild Conservator of Photographs, Metropolitan Museum of Art. Left to right: Theodora Popova, Prague, Czech Republic; Dorottya Szlabey, Budapest, Hungary; Nora Kennedy; Zuzana Madericova, Bratislava, Slovakia; Nina Mrafkova, Bratislava, Slovakia; and Photograph Institute Instructor Gary Albright. Photo: Julie Martin

The students visited conservation labs and museums in New England, and they also traveled to New York City every year for a behind-the-scenes tour of the photograph conservation lab at the Metropolitan Museum of Art, hosted by Nora Kennedy. Many of the students remarked that the trips were among the most valuable activities of the Institute, because they were able to see how different labs were arranged and the variety of equipment used by American conservators. Participants for the Photograph Conservation Institutes came from Bulgaria, Slovakia, Czech Republic, Russia, Hungary, Serbia, Poland, and Estonia.

ADVANCED PHOTOGRAPH CONSERVATION INTERNSHIP TRAINING PROGRAM 2010 TO 2018

The next phase in NEDCC's training initiative for Central

and Eastern European conservators began in 2010 with the Center's first Advanced Photograph Conservation Internship, which was designed to provide intensive hands-on training in photograph conservation for one individual, so that he or she could become a professional resource for consultation and further training in the region. The interns studied at NEDCC for 45 days and then traveled to New York and Washington to visit museums and conservation labs.

Working alongside NEDCC's conservators, the interns refined their bench skills and learned new conservation techniques and observed ongoing treatments on a wide variety of collection materials. They also received instruction on the digitization of photographic materials and conservation of digital prints. Many participants mentioned how valuable it was to experience the collaborative and collegial atmosphere in NEDCC's labs, and they returned home determined to replicate this sharing of expertise in their own lab environments.

PAST PARTICIPANTS COMMENT ON THE VALUE OF THE INTERNSHIP TRAINING AT NEDCC

In their final reports, the interns commented on the value of the program. 2010 Intern Alexander Vatov, conservator at the National History Museum in Sofia, Bulgaria, said that the skills he learned during the internship will have a lasting effect on his professional life and on the collections that he will care for in the future. "The value of museum collections requires a high level of professional care," he explained, "and it is very important to have a conservator with the proper training." The techniques learned and connections made at NEDCC were among the most important takeaways for Anna Seweryn, 2015 intern and paper and photograph conservator at the National Archives, Krakow, Poland. "After my internship I am much more confident in my conservation decisions, and I know that I can always count on the people I met at NEDCC to offer advice. I learned conservation techniques that were new to me, and improved my knowledge about developing storage of photographic collections; preparation of photographic materials for exhibition; and preparing survey reports for photographic collections, which is extremely important in my everyday work."

Martina Bagatin, 2014 intern and experienced paper conservator at the Central Laboratory for Conservation and Restoration at the Croatian State Archives in Zagreb, Croatia, explained the breadth of her work with photograph collections, “The Central Laboratory for Conservation and Restoration not only fulfills the needs of the Croatian State Archives, but it also serves the holders/owners of written and photographic heritage in Croatia, including regional archives, libraries, museums, and other cultural organizations, as well as individuals. All the knowledge and skills I’ve gained during the internship will be immediately included in my practice at work.” Anna Aseeva, 2017 intern and conservator at the ROSPHOTO State Russian Museum and Exhibition Centre in Saint Petersburg, Russia, was energized by the experience and commented, “This internship was very important for me not only in a professional but also in a personal sense. Now I have renewed energy to make new projects in the field of conservation of photographs and I will be happy to share my knowledge and skills with my colleagues from all over the world.”



Advanced Photograph Conservation Internship instructor Monique Fischer discusses identification of photographic processes with 2012 Intern Lidija Pajevik from Macedonia. Photo: Julie Martin

IMPACT

During a twelve-year period, over 40 conservators, teachers, and graduate students from eleven countries have received training in photograph conservation through the NEDCC programs. The initial workshop and Institute programs succeeded in bringing together conservation professionals from the Central and Eastern European countries to study conservation of photographic materials, and to build valuable and lasting connections.

The AFAD’s degree-granting program still remains one of the only advanced training opportunities in the specialized field of photograph conservation in all of Central and Eastern Europe. The only other training initiative in the region was designed by the Education Department at the Getty Conservation Institute (GCI), and created as a result of GCI Senior Scientist Dusan Stulik’s involvement as a visiting faculty member in NEDCC’s initiative. From 2008–2013, the Getty program presented a series of workshops in the region on the fundamentals of photograph conservation.

The workshop gatherings and institutes in Slovakia and Massachusetts led to the further evolution of the program. It helped NEDCC identify qualified individuals for the advanced internships. It is these interns, a talented group of young professionals, that will help set the future course for the preservation of important photograph collections in their respective countries and throughout the region.

SUPPORT

NEDCC is grateful to the Trust for Mutual Understanding, The Samuel H. Kress Foundation, the Getty Foundation, and the Tianaderrah Foundation, who have supported different aspects of the photograph conservation training program over the years. Without their support, these programs would not have been possible.



Julie Martin is the Marketing and Public Relations Manager for NEDCC | Northeast Document Conservation Center, and has been with the Center since 2004. She promotes NEDCC’s conservation, digital imaging, and audio preservation services, as well as preservation training and outreach activities. She has worked closely on the fundraising initiatives that have supported the photograph conservation training programs for Central and Eastern European conservators, submitting grant applications and completing reporting requirements. Julie has also provided guidance and transportation for the visiting conservators, and has made life-long international friends among the group.

RESTORING A TEREANGGANU AL - QURAN

By Alex Teoh

"It is from Terengganu that we find the most brilliant illuminated Quran in the whole of South East Asia" - Annabel Teh Gallop

INTRODUCTION

The spread of Islam to South-east Asia in the 1400's influenced the literary tradition of royal courts and religious centers in early kingdoms of Java, Aceh, Melaka, and Brunei. Traditionally, scripts were written on locally available materials such as palm leaves, textiles, bark paper, bamboo, and wood. However, with trade and colonization, European paper became available and became popular as a writing material.



The Terengganu Quran leather cover, before and after treatment respectively. Image courtesy of the Pahang Museum and Alex Teoh

Because the Quran is the central text of Islam, the hand copying of the texts and teachings was practiced in local religious schools. For the royal patronage, beautifully illuminated copies of the Quran with gold decorated leather covers were commissioned.

With religious books, a new book format was introduced, along with bookbinding. Islamic book binding has its influence from the Middle East. Compared with the western bookbinding structure, Islamic books have some unique characteristics. These include the envelope flap, cover boards squared with the text block, and no raised band at the spine.

Over the centuries, many Quran and religious manuscripts were produced in local script and with localized design in the sultanates of Brunei, Indonesia (Java, Palembang), Philippines (Sulu), Malaysia (Terengganu), and Thailand (Patani). Many of these manuscripts are now in the collections of museums, libraries, and private individuals, both in the region as well as overseas.



Severe insect damage in the paper pages of the text block. Image courtesy of the Pahang Museum and Alex Teoh

As emphasized by specialists of Islamic illumination, the art of illumination of the Terengganu Quran is highly developed. The Terengganu Quran is known for its "brilliant illumination... exuding a jewel-like radiance, with truly virtuosic decorative details, painted in rich hues and adorned with copious amount of gold, executed with precision and finesse." Dr Annabel Gallop further stresses, "The quality of the workmanship is unparalleled throughout the (Indonesian) archipelago, and Terengganu Quran are highly sought after in the other Malay kingdoms. To this day, Quran manuscripts from Terengganu can be found in royal collections in Palembang, Pontianak in West Kalimantan, and as far away as Bima on the island of Sumbawa" (Gallop 84).

CONDITION

The Terengganu Al-Quran featured in this article belongs to the Pahang State Museum Corporation in Pekan, Malaysia (The Pahang State Museum does not currently have on-site



Damage to the paper pages caused by the corrosion of the iron gal ink. Image courtesy of the Pahang Museum and Alex Teoh

the back leather cover and no remains of the envelope flap, a survey of similar Terengganu Quran was done. Visual inspection and comparison of Terengganu Quran in the collections of several other museums and libraries in Malaysia and Singapore confirm that the back covers typically have an envelope flap. This finding was further confirmed by expert Dr. Annabel Gallop of the British Library.

Textile Doublure: Various options were evaluated for the conservation of the existing textile doublure. One possibility was to replace the doublure with a new textile material or strong end papers. Another option was to conserve the existing doublure, despite its condition and weakness. The latter option was preferred, as the textile doublure is a unique feature not usually found in illuminated manuscripts from this style and period. As this is an Islamic holy book, careful consideration was taken in choosing the type of lining support for the textile. Strong, flexible handmade paper with silk backing was selected. The silk material is plain with no images of creatures or humans.

TREATMENT

The Quran was initially cleaned to remove dust, dirt, loose bits of torn paper and insect infestation remains. Extra caution was taken on iron gall ink corroded pages. The text block edges were also cleaned. The front illuminated page was flattened, tears were repaired with Japanese tissue and methyl cellulose, and it was then housed in an archival sleeve.

The textile doublure was removed and cleaned. As previously described, the doublure was then lined with paper and silk to add strength. The leather covers were cleaned, the old paste board was removed, and the leather was consolidated with Klucel-G. The canvas on the spine was removed and adhesive remains were cleaned.

conservation staff; treatment of this manuscript was completed by a private conservator). It has full leather covers and is a hand-written manuscript with beautifully illustrated opening and ending verses. Even though no colophon is present, it can be dated to around the mid to late 19th century.

Unfortunately, the condition of the Quran is very poor and displays many marks of deterioration commonly found in the local warm and humid conditions. The book covers are worn, weakened by surface abrasion and many insect infestation holes. The spine is torn and missing; it is wrapped in white canvas cloth and attached with double-sided tape. There is evidence of an envelope flap which was torn from the leather cover. Some gold medallion decorations on the cover are missing, loose, and detached. The cover is in poor condition, as the cover paste board has disintegrated. The doublure (the covering of the inner book cover) is a textile with a floral design. The textile doublure is badly torn, very weak, and heavily soiled.

The text block consists of western paper with sewn end bands. The watermark and countermark on the paper is PROPATRIA, DZ & Z. Due to age, the spine of the text block has become concave. The paper pages suffer from tears, creases, and folds. The front illuminated page is torn and detached. About two-thirds of the paper pages suffer from various degrees of iron gall ink corrosion, causing the paper to deteriorate. Surface dirt and insect remains are found overall. Insect infestation damage is present in the form of large holes and tears. The binding along the hinge areas is weak.

SOME MAJOR TREATMENT CONSIDERATIONS

Missing Envelope Flap: From the evidence of torn edges on



Alex Teoh dry cleaning the Terengganu Quran. Image courtesy of the Pahang Museum and Alex Teoh

The text block was strengthened, and loose pages were resewn. Because the spine of the text block had become concave, a thick card was shaped to the curve of the spine and secured to the cover spine. A new matching leather cover (chosen to closely match the original colour) with an envelope flap was made. The text block was then reattached to the new leather covers. The original leather covers and the gold medallion were then reattached.



Example of Illuminated page (before treatment and after treatment respectively). Images courtesy of the Pahang Museum and Alex Teoh

CONCLUSION

The aim of this conservation and restoration treatment was to stabilize the condition of the Terengganu Al-Quran. Even though certain condition issues still exist, including insect holes and iron gall ink corrosion, the Quran can now be handled, exhibited, and properly stored in a cool, stable, and clean environment.

REFERENCES FOR FURTHER READING

Gallop, Annabel Teh. "The Art of the Malay Qur'an." *Arts of Asia* 42, no.1 (January-February 2012): 84-95.

Islamic Arts Museum Malaysia. *Islamic Bookbinding*. Kuala Lumpur: Islamic Arts Museum Malaysia, 2017.

Schepper, Karin. *The Technique of Islamic Bookbinding, Methods, Materials and Regional Varieties*. Leiden: Brill, 2015.



Alex Teoh was trained in the UK at Camberwell College of Arts, University of Arts, London as a paper and book conservator. Since returning to Asia in 2007, he has been involved in various conservation and restoration projects in Brunei, Indonesia, Malaysia, and Singapore. His current focus is on the local material culture of the written text in Southeast Asia, including the use and conservation of daluang (bark paper) in Javanese and Malay manuscripts, local book bindings, and the use of local spices and herbs as pest deterrents. Alex can be contacted at aseanheritage@yahoo.com.

IIC NEWS

PUBLISH 3D MODELS IN *STUDIES IN CONSERVATION*

By George Cooper

Routledge, Taylor & Francis, publisher of IIC's peer-reviewed journal Studies in Conservation, have partnered with 3D content platform Sketchfab to develop an exciting new feature for articles published online. 3D models can now be published in the main text of an article.

The pilot program makes Routledge, Taylor & Francis the first major publisher to incorporate 3D models within the HTML version of online journal articles, making *Studies* one of the first publications in conservation to offer this feature.

Publishing 3D models of the objects you're working on allows you to illustrate your research or treatment outcomes in an engaging format, promotes better understanding of results, and contributes to preventive conservation by allowing a digital, non-invasive means of representing and interacting with collection objects.

Authors using this new feature will also benefit from increased discoverability of their research, with models being openly available to view on the Sketchfab website. See a live example of a 3D model [here](#) and view it within the [full article text](#) on Taylor & Francis Online.

HOW TO CREATE A 3D MODEL OF HERITAGE ARTEFACTS

Researchers working at the School of Classics at the University of St Andrews, in collaboration with the Museum of St Andrews, have prepared a brief and accessible guide for [creating 3D models](#) of heritage artefacts using basic equipment (a camera, turntable, tripod, lights, and a neutral backdrop).

Using these resources, the project team have made the vast array of Cypriot archaeological artefacts contained in St Andrews' [Bridges Collection](#) accessible to as wide an audience as possible, via 3D modelling.

They have also been running a number of different experiments on perceptions of archaeological material experienced in a range of ways including touch, sight, 3D, and behind a glass case. Recently they have been working with colleagues in neuroscience on memory experiments to see how well people retain information on the material culture as they experienced it through different senses and media.

Visit the [project site](#) to find out about the collection. Here you can read more about [what they have been doing with the material](#), see [how it's being used](#), and learn what [former St Andrews students](#) have been doing in terms of preservation and 3D modelling.

HOW TO SUBMIT 3D MODELS WITH YOUR MANUSCRIPT

The option to feature 3D models within articles is currently available in *Studies in Conservation*. Visit the journal's [Instructions for Authors](#) for more details about how to submit a model along with your manuscript. If you have already published an article in the journal on a project that involved 3D modelling, you can add 3D content retrospectively to the HTML version of your article.

Contact *Studies in Conservation* Editor-in-Chief, Chandra Reedy (creeedy@udel.edu), or the journal's Managing Editor at Routledge, George Cooper (george.cooper@tandf.co.uk), if you'd like to find out more about options to publish 3D models in *Studies in Conservation*.



Figure 12a. An aerial orthomosaic that shows the establishment of refugee settlements on the east and west flanks of the tell photographed in 2015 by the EHAS;



Figure 12a by Taylor & Francis on Sketchfab

A 3D model of an archaeological site in Iraq © Jason Herrmann, published in *Journal of Field Archaeology* <https://doi.org/10.1080/00934690.2018.1465808>



IIC FELLOWSHIP CERTIFICATES

Longstanding Fellows of IIC may have been surprised recently to receive a Fellowship Certificate through the post.

For some time, Council has been keen to offer all Fellows something that formally acknowledges their position in the profession and recognition by their colleagues. We hope that you find your certificates attractive and useful. Going ahead, all newly elected and registered Fellows will receive Fellowship Certificates automatically in the post. Details of how to nominate colleagues for Fellowship can be found [here](#) on the IIC website, along with further information on eligibility and the application form.

If any IIC Fellows have questions or comments on the new certificates these can be sent to IIC's Membership Secretary, Tina Churcher, at office@iiconservation.org



IIC Fellow, Donald Sale holding his new IIC Fellowship Certificate. Image courtesy of Donald Sale

2018 IIC KECK AWARD NOMINATIONS

Congratulations to all the nominees for the 2018 IIC Keck Award. Every two years the award is offered to the individual or group who, in the opinion of IIC Council, has done the most to further the public appreciation of the work of the conservation profession. The award consists of a certificate and a cash prize of £1000, which will be presented at IIC's 27th Biennial Congress in Turin this September.

ENGLISH HERITAGE, ENGLISH HERITAGE & COLLECTIONS CONSERVATION TEAM AND PUBLIC RELATIONS TEAM
'Operation Clothes Moth'. To increase awareness of the EH Clothes Moth Brand Trap and caring for historic collections.

NIGULISTE MUSEUM, ART MUSEUM OF ESTONIA
The conservation and technical analysis of the Rode altarpiece of St. Nicholas' Church in Tallinn, Estonia (1478-1481).

OLD ROYAL NAVAL COLLEGE
Conservation of the Painted Hall Ceiling at the Old Royal Naval College, painted by Sir James Thornhill between 1707 and 1726.

ROYAL MUSEUMS, GREENWICH
The conservation, display and public sharing of the Armada Portrait of Queen Elizabeth I, in Queen's House, Greenwich.

FRANCESCA SECCHI
Private Paintings Conservator. Self-nomination for the conservation treatment of *Sun Mantra*, by Joe Tilson, 1972.

RASHA AMED SHAHEEN.
Director of the conservation department in Egyptian Textile Museum, Cairo. Self-nominated, with attached *curriculum vitae*.

DAVID THURROWGOOD
Conservator, Queen Victoria Museum and Art Gallery, Tasmania, Australia and Senior Conservator and Director, Applied Conservation Science Pty Ltd. Self-nomination. Discovery and analysis of the microbes in beer. Also the use of a synchrotron and an advanced Australian x-ray fluorescence detection technique to reveal in colour an underpainting of a painting by Degas.

UNIVERSITY OF APPLIED ARTS, VIENNA, INSTITUTE FOR CONSERVATION
Nomination of the staff of the Institute for their long-term conservation and preservation efforts at the Durbar Square and Royal Palace in Patan, Nepal.

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IN MEMORIAM: KAREN FINCH, FIIC

By Frances Lennard

Dr Karen Finch, OBE who died aged 96 on 15 April 2018, was a pioneer in the field of textile conservation.

Karen trained as a master weaver in her native Denmark and came to the UK after marrying Norman Finch, a British soldier she had met during the Second World War. In London she worked at both the Royal School of Needlework and the Victoria and Albert Museum (V&A). She started work in the V&A's Artwork Room in 1954, and pioneered the development of techniques for the conservation treatment of historic textiles as opposed to repair or restoration. In 1959 she set up her own practice at her home and continued to develop her methods, working with students who came from all around the world to learn her techniques and to work with her.

In 1975 Karen founded the Textile Conservation Centre (TCC), in Grace and Favour apartments at Hampton Court Palace. There she established the three-year postgraduate diploma in textile conservation validated by the Courtauld Institute of Art, a huge step forward in the training of textile conservators and a qualification held by many of us still working in the field. From its inception the TCC included a conservation services section where trained conservators worked alongside the students and teaching staff to the great benefit of all, and she set up an apprenticeship scheme for specialist training in tapestry and upholstery conservation. Karen was Principal until her retirement in 1986 and her huge achievements were recognised by the award of an OBE.

The TCC moved to a new building on the Winchester campus of the University of Southampton in 1999 and at that time Karen's achievements as its founder were acknowledged by the award of an honorary doctorate from the University of Southampton. Following the closure of the TCC by the University in 2009, the textile conservation programme was incorporated into the new Centre for Textile Conservation and Technical Art History, established at the University of Glasgow in 2010.

Karen's legacy is tremendous; she made a huge contribution to the establishment of the field of textile conservation in the UK and worldwide. Well over 100 students completed the postgraduate diploma offered by the TCC at Hampton Court, and very many more studied on the subsequent MA programme offered by the University of Southampton and now the MPhil in Glasgow. Students of the programmes have come from around 40 different countries and now hold positions in museums and private practice in countries all over the world. Karen's legacy was visible in the large number of textile conservators gathered at the Icon Textile Group forum this past May - almost 130 people - of whom exactly half were past, present or future students of the Hampton Court, Winchester and Glasgow programmes. But her legacy goes beyond graduate numbers – Karen was a significant part of the pioneering generation of textile conservators who created a new way of looking at textiles as culturally significant documents which needed to be preserved for the future, and she based her work and training in an ethical code of conservation. She believed strongly that conservation should be based in a good understanding of science and there was a scientist on the TCC staff from the beginning.

Teaching was always a key motivator for Karen and, even after retirement, she maintained her passion for textiles and their conservation and kept in touch with her wide network of friends, colleagues and former students around the world.



Karen Finch working with students at the Textile Conservation Centre. © Textile Conservation Foundation

She retained her interest in developments at the TCC and later the programme in Glasgow. Her influence is still felt - we still use the Karen Finch Reference Collection every day - and although the programme has developed over the decades, elements are still recognisable from the early days, including the open exam and our annual open day. In 2015 we celebrated 40 years of textile conservation education and Karen presented the inaugural Karen Finch Prize, a prize which is now offered each year by the Textile Conservation Foundation to an outstanding student.

Clare Meredith, Chairman of the Textile Conservation Foundation, our supporting trust, summed up Karen's achievements: "Karen was a true pioneer and her vision, over 40 years ago, was to establish the first recognised training course in textile conservation. It's hard now to imagine our heritage sector without textile conservators, but that professional community is Karen Finch's exceptional legacy."

This article was originally written for the August 2018 issue of Icon News which can be found [here](#).

Frances Lennard
Professor of Textile Conservation, University of Glasgow

IIC 2018 TURIN CONGRESS: EXHIBITOR LIST

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IIC Fellow Alice Cannon currently manages the collection risk management program at Museums Victoria. Image courtesy of Alice Cannon.

Alice Cannon currently manages [Museums Victoria's](#) collection risk management program. She trained as a paper conservator in the early 1990s and subsequently worked in a number of organisations in the US, Australia, and New Zealand as a paper, photographic materials, and preventive conservator. She has completed a Master of Arts by Research, investigating late 19th-century and early 20th-century adhesives for paper substrates. Her current interests include collection risk assessments, legal and ethical collecting practices, the deterioration and management of plastics in museum collections, metallic memorandum books, and the history of adhesives.

MaryJo Lelyveld is the Coordinating Conservator at the [National Gallery of Victoria \(NGV\)](#) and recently served as President of the [Australian Institute for the Conservation of Cultural Materials \(AICCM\)](#) from 2013-2017. She holds a B.App.Science - Conservation of Cultural Materials specialising in Paintings from the University of Canberra (2002) and a Master of Strategic Foresight from Swinburne University (2012).

She came to the NGV in 2007 as a Frames and Furniture Conservator having worked as a paintings and frames conservator at the [Grimwade Centre for Cultural Materials Conservation](#) and [Art Gallery of New South Wales](#) respectively. Major projects include the conservation treatment of the carved 18th-century French frame on Nicholas Poussin's *The Crossing of the Red Sea* (1634) and the making of a reproduction neoclassical frame for an Australian icon, Frederick McCubbin's *The North Wind* (c.1888).

She has previously presented on the topics of frames conservation and the future of the profession and is current chair of the AICCM Sustainable Collections Committee.



IIC Fellow MaryJo Lelyveld works at the National Gallery of Victoria as the Coordinating Conservator. Image courtesy of Maryjo Lelyveld

BOOK REVIEWS

CONSERVATION ISSUES IN MODERN AND CONTEMPORARY MURALS

Review by Dr. Zsuzsanna Wierdl

Conservation Issues in Modern and Contemporary Murals
 Edited by Mercedes Sánchez Pons, Will Shank, Laura Fuster López,
 New Castle upon Tyne, UK, Cambridge Scholars Publishing 2015
 English and Spanish / \$107.95 / Hardcover
 ISBN-13: 9781443872331

First of all I would like to thank the editors for this precious volume. It is a great pleasure to review *Conservation Issues in Modern and Contemporary Murals*, edited by Mercedes Sanchez Pons, Will Shank and Laura Fuster Lopez. This book is the resulting publication from "Modern and Contemporary Mural Painting: Conservation Treatment and Access" (MCMP2012), a conference held in Valencia, Spain, at the Polytechnic University in May 2012. This specific forum among conservators, conservation scientists, artists and heritage managers was organized, supported, and funded by the Getty Conservation Institute in Los Angeles and the Conservation and Restoration of Cultural Heritage department of the Universidad Politécnica de Valencia.

It is an unusual and special opportunity for the artists and creators themselves to participate in a forum on mural painting conservation. Generally in the field of conservation only conservators, scientists, architects, and art historians are present at such meetings. But in the case of modern and contemporary murals, scientists and restorers are not limited to studying an artist's techniques centuries after the artwork was created or re-discovering the lost mysteries of a masterpiece; rather they can discuss the technical problems with the artists themselves. This is a unique experience not only for conservation professionals, but also for the creators themselves. In cases where the artist can be consulted, the mural painting conservator does not have to make an educated guess, like the traditional conservator of, say, a Botticelli mural: "Oh Sandro, you should not have used cinnabar on the wall; did you know that?" Those who work with contemporary murals can consult with the artists themselves. And vice versa, before creating a mural, the artist can consult with the conservator for the latest thinking on the most appropriate and lasting pigments and materials.

The book includes the voices of the many different stakeholders involved in the complex task of preserving artworks: the vital experiences of artists who create murals and are sometimes asked to treat their creations; theoretical reflections on how to deal methodologically with conservation; scientific studies on the identification of constituent materials and the development of procedures for their preservation; the specific experiences of conservators; and the opinions of cultural managers.

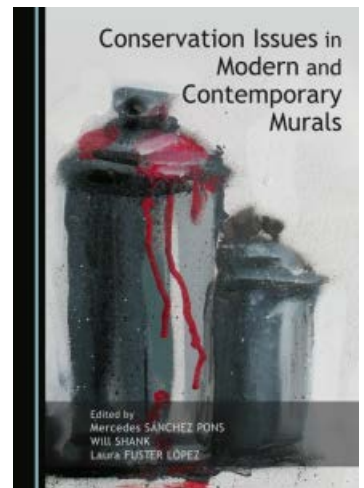
This book mirrors the structure of the conference, consisting of three sections:

SECTION 1: MODERN AND CONTEMPORARY MURAL PAINTINGS: CONCEPT, MATERIALS AND VALUE

This section includes an interesting case study of the Berlin Wall, the preservation and techniques of contemporary outdoors murals, identification and characterization of materials, graffiti murals, and vandalism.

SECTION 2: INNOVATIONS IN THE TREATMENT OF MODERN AND CONTEMPORARY MURALS: DEVELOPMENT OF NEW MATERIALS AND METHODS

Chapters twelve through twenty-four provide information on how to clean and protect acrylic paintings and outdoor murals, the latest research into protective and anti-graffiti coatings, and retouching materials. Also included are unique examples such as the treatment of a Keith Haring mural in Pisa, Italy.



Book cover for *Conservation Issues in Modern and Contemporary Murals*, edited by Mercedes Sánchez Pons, Will Shank, Laura Fuster López. Image courtesy of Cambridge Scholars Publishing

SECTION 3: SUSTAINABLE MANAGEMENT OF MODERN AND CONTEMPORARY MURALISM: SOCIETY'S ROLE AND HERITAGE ACTIVISM

This section addresses questions such as, "Can artists and conservators collaborate to make their works last as long possible?" "Do we know exactly what materials artists use in their production?" "Why do these materials often age so quickly?" "What role do artists play in their preservation?" "Is repainting a valid alternative?" "Who is responsible for the conservation of 'community murals'?"

While we may not yet have satisfactory answers to such questions, we must continue to discuss them, and this volume lends an important and significant voice in the difficult task of preserving murals, helping us to work toward answers. Congratulations to all of the contributors for their important work and again to the editors who gave us this very interesting and special volume.



Dr. Zsuzsanna Wierdl is a specialist in mural painting conservation and architecture sciences. She holds a doctorate in architecture and is the recipient of the Mihály Munkácsy Prize, awarded for recognition of outstanding contributions in fine arts in Hungary. She was the leading conservator of the Royal Chapel in Esztergom. She has also worked as the main restorer of the Santo Stefano Rotondo, the Basilica dedicated as Hungary's national church in Rome. Dr. Wierdl is also the lead researcher and restorer on the Roman Borromini Loggia and is Chair of the ICOMOS Mural Painting International Scientific Committee.



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Turin, Italy | 10-14 September 2018

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Click [HERE](#) to see the available sign-up slots.

Contact Sharra Grow news@iiconservation.org with any questions

EVENT REVIEWS

OPTICAL SOCIETY OF AMERICA: BIG DATA IN CULTURAL HERITAGE IMAGING INCUBATOR MEETING

By Francesca Gabrieli

On the 2nd and 3rd of May 2018, the Optical Society of America (OSA) held the Big Data in Cultural Heritage Imaging incubator meeting in Washington, D.C., hosted by John Delaney, National Gallery of Art (USA), Martin Fischer, Duke University (USA), and David Saunders, British Museum (UK).

The OSA is the world's leading champion for optics and photonics, and the idea of incubator programs is to provide researchers, engineers, and business leaders with the opportunity to meet and discuss the latest advances, challenges, and opportunities in their respective fields.

The *Big Data in Cultural Heritage Imaging* incubator served as a platform for establishing interdisciplinary collaborations that can help identify improved optical instrumentation and analysis methods to overcome the unique challenges posed by the examination of cultural heritage objects. In the past 20 years, advanced imaging techniques have been applied to the study of art objects, revealing previously unseen aspects of historical artworks and helping conservators and art historians to better understand the composition and history of objects.

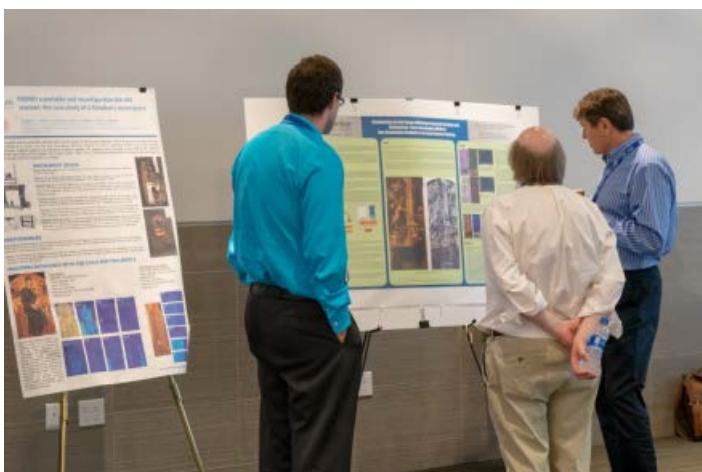
The incubator aimed to give an overview of what is state-of-the-art in imaging as applied to cultural heritage, to explore how the use of new technologies available in other fields can improve the quality of art object analysis, and finally to brainstorm about how both conservators' and scientists' questions can be answered with these emerging tools.



David Saunders, British Museum-London, showing some applications of visible induced luminescence imaging (VIL). Photo by Marcia Lesky © Optical Society of America

The incubator consisted of sessions with talks from experts in different fields, round-table discussions, poster sessions, and a visit to the National Gallery of Art (NGA) Scientific Department laboratories. Participants with a variety of different backgrounds came from the US and Europe to share their unique perspectives as conservation scientists, chemists, physicists, and engineers.

The first day of the incubator was focused on macro-scale imaging techniques; the speakers provided a broad overview of the imaging modalities currently available and extensively used for the study of paintings and manuscripts. Elemental imaging (e.g. based on X-ray fluorescence) and molecular imaging (e.g. visible and near-infrared) are powerful tools for the identification and mapping of materials and also for the visualization of sub-surface underdrawings or paintings. This session highlighted the extremely promising technique of X-ray diffraction scanning. Participants from Surface Optics Corporation and the US Army Night Vision & Electronic Sensors Directorate gave an overview of currently available hardware, including reflectance imaging spectroscopy equipment and highlighted the possibilities for collaboration and adapting instrumentation for conservation purposes. Important discussions during the first day of the incubator focused on the ability to manage and interpret the large data sets derived from macro-scale imaging methods. Participants were involved in the discussion about how to combine and register different kinds of imaging information (visible, elemental, molecular), and how to interpret these data sets (using statistical methods such as PCA and algorithms that exploit the spectral information).



Several participants brought posters to further demonstrate their work. Photo by Marcia Lesky © Optical Society of America

Micro-scale mapping techniques were one of the foci of the second day of the incubator. Micro-imaging can be non-invasive (e.g. using micro-scale Raman/micro XRF mapping of small areas of a manuscript) or invasive (analyzing samples removed from the object). Micro-scale imaging techniques that are used widely on cross sections include SEM-EDS, ATR-FTIR imaging, micro-Raman, and micro-fluorescence mapping, which provide much information about the chemical makeup and stratigraphy. The proposal for the future is to combine the data sets such that each imaging modality is registered to the same reference image. Advanced techniques were discussed, such as femtosecond pump-probe imaging and confocal XRF fluorescence. Lattice light sheet microscopy, which is currently used in biology for tracking DNA dynamics, was highlighted and applications in the study of cultural heritage materials were discussed. The use of OCT and NMR for depth profiling was covered, as was ELISA (tagging fluorophores with antibodies), which has been used for the identification and map-

ping of binders in a material cross-section. The engineers at the incubator indicated their willingness to adapt their systems to better meet cultural heritage field requirements for the study of heterogeneous surfaces.

The final incubator round table discussion was particularly useful in bringing up ideas and comments for future applications and studies:

- i) Modern materials, which have been less explored than ancient art, still require an in-depth examination as hundreds of new chemical compounds have been produced in the last century and are widely used by artists;
- ii) scientists and conservators are now more interested in the “unexpected” – for example, trace elements, minor components, and degradation compounds formed on surfaces, aspects that should be a focus for future imaging techniques;
- iii) the portability of the imaging systems and of the art objects also plays a fundamental role in the choice of technique. It is also important to select the appropriate imaging method carefully, depending on the purpose of the study, and thus a close collaboration with conservators and curators in this field is crucial.

The *Big Data in Cultural Heritage Imaging* Incubator ended with a behind-the-scenes tour of the National Gallery of Art. Incubator participants and a few OSA staff members were taken into the laboratories of the Department of Scientific Research at the Gallery. Barbara Berrie, head of Scientific Research, showed some of the microscale mapping results of her research using SEM-EDS on a cross section of a painting by Giotto. The tour ended in the macro-scale imaging laboratory where John Delaney, Kate Dooley, and Francesca Gabrieli showed how to collect a reflectance dataset with a visible-to-near-infrared hyperspectral camera (400-1000 nm) on the painting *Roulin's Baby* by Van Gogh, painted in 1888.

Thanks to the hosts and the participants, this OSA Incubator was a perfect way to brainstorm about how to improve the quality of the data and instrumentation used in the field of cultural heritage imaging.

For further information visit the website www.osa.org/incubator.



Francesca Gabrieli received her PhD in Chemical Sciences applied to cultural heritage study from the *Università Degli Studi di Perugia*, Italy, in 2015. She focused her study on the understanding of art materials using vibrational spectroscopies (FTIR, Raman, SERS) portable and non-portable. She is now conducting her postdoctoral research at the National Gallery of Art in Washington DC, USA, with an advanced training fellowship in imaging science. She is using XRF and reflectance imaging spectroscopies for the identification and mapping of art materials, working in close collaboration with conservators and curators.

BODY OF WORK: CONTEMPORARY ARTISTS' ESTATES AND CONSERVATION

By Sasha Drosdick

What is legacy? How is it made and maintained, and who controls it? This April, the symposium Body of Work: Contemporary Artists' Estates and Conservation, created a platform for open discussion on all things legacy.

As a follow up to their 2015 conference *The First Crack: Conservation and Value in Contemporary Art*, Contemporary Conservation Ltd. brought together artists, archivists, attorneys, auction representatives, estate managers, curators, conservators, fabricators, gallerists, heirs, historians, and others to address complex topics in contemporary art, primarily those surrounding artists' estates. By approaching this wide and loaded topic from numerous perspectives, the two-day symposium inspired critical and creative discourse on various current practices and fostered thoughts for future inquiry.

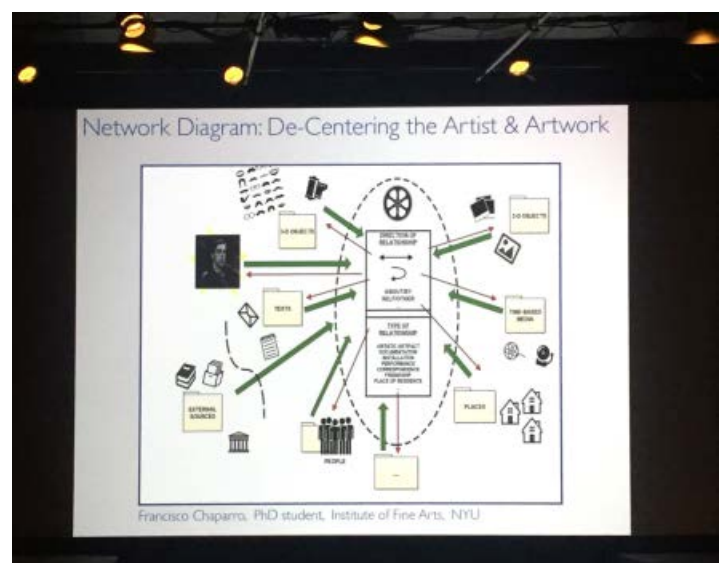
While predominantly presentation driven, Q&A sessions at the end of each talk and larger panel discussions allowed for open, energetic, and stimulating discussion. Christian Scheidemann's opener set the tone for day one with a philosophical discussion of Bueys' *Capri-Batterie*, 1985 and *7000 Oaks*, 1982. From there, Dr. Loretta Würtenberger began by defining artist estates, oeuvres, legacies, and exploring their relationships. Würtenberger, whose book, *The Artist's Estate: A Handbook for Artists, Executors, and Heirs*, was recently published by Hatje Cantz Verlag, is the founder of the Institute for Artists' Estates. A theme she introduced, which would continue to arise over the course of the conference, was the need to refine the common language between parties. For example, the way the term "estate" is commonly used by galleries, historians, and conservators is inaccurate compared to its true, legal definition.

The second section, "Artist estates and the conservator," presented two very different talks. Derek Pullen discussed the Tate's production of three authorized posthumous replicas as a means of conserving Naum Gabo's sculptural legacy, followed by Jeannette Redensek's discussion of the relationship between conservators and the Albers Foundation. Redensek, who is leading the Albers Catalogue Raisonné, broached important questions regarding the roles, priorities, and expectations of a foundation such as: How often should they lend work? And at what point does an organization transition into an institution? She very briefly discussed the topics of forgeries and authentication within the context of the foundation. Such subjects, although rife with controversy and in need of further examination, somehow did not garner as much heated discourse as that surrounding Pullen's replicas.

Francesca Esmay and Jeffrey Weiss, the conservator/art historian duo who researched the Guggenheim's Panza Collection, led the third section titled "What/When/Where is the Authentic?" Their eight-year-long collaboration on the eccentric Italian's collection of works by modern American artists such as Dan Flavin, Donald Judd, Robert Morris, and Bruce Nauman, was a fine example of how interdisciplinary collaborations can overcome dauntingly complex problems. Continuing in the vein of Mini-

malism, Rachel Rivenc closed the section with her presentation on the relationship between artist and fabricator using Robert Irwin and Jack Brogan as examples. In continuing with the research she started for her book, *Made in Los Angeles: Materials, Processes, and the Birth of West Coast Minimalism*, she discussed how Brogan's understanding of materials and their capabilities pushed the boundaries of Irwin's own practice. Rivenc provided a glimpse into a dynamic relationship that expanded the understanding of what relationships between artist and fabricator can look like.

The day concluded with a panel discussion on the themes of "Advocacy and Authority: Estates, Foundations and Conservation" moderated by Ann Temkin, Chief Curator of Painting and Sculpture at MoMA. "Anything is possible, if not resolvable" she quipped as she navigated through controversial topics such as Clement Greenberg stripping David Smith's white sculptures in the 1970s and the David Smith Estate's more recent mishandling of the Lauren Clay controversy. With sculpture conservator Eleonora Nagy, art historian and attorney Virginia Rutledge, and the David Smith Estate manager Peter Stevens, the round table discussion hit on many of the



Slide from Glenn Wharton's presentation "The Artist Archives Initiative - The Case of David Wojnarowicz". Photo taken by Sasha Drosdick



Andrea Rosen, Gallerist, President of Felix Gonzalez-Torres Foundation presenting "Perpetuity Through Change: A Discussion on the Immortality of Felix Gonzalez-Torres". Photo taken by Sasha Drosdick

the most recent addition. Hauser and Wirth actively work in collaboration with the estate to keep the work relevant, active, and part of contemporary discourse which involves reinvigorating the secondary market in order to support the legacy and foster critical attention.

Glenn Wharton started the segment titled "Ephemeral/Ephemera" on his discussion of David Wojnarowicz and The Artist Archives Initiative. Wharton's talk discussed the [NYU initiative](#) and delved into important practical concerns regarding software design and accessibility. In the following presentation on the Felix Gonzalez-Torres Foundation Fellows Forum, president and former gallerist Andrea Rosen examined the fascinating conceptual concerns imbedded within the nature of Torres's work and how the foundation's goal to avoid concretization and stagnation of meaning led to the reevaluation of the confines of the traditional foundation structure. She advocated for strategic and creative planning and collaboration, suggesting that foundations do not have to exist as single entities.

Presenting from the perspective of a large private collection, curator Anne Reeve and conservator Steve O'Banion began the "Reinstallation as a Critical Act" panel by discussing how they navigated a complex posthumous installation - one that was never fully realized during the artist's lifetime - for an upcoming exhibition at Glenstone Museum. From a similar perspective, Allison Brant, director of her family's foundation, the Brant Foundation Study Center, also discussed posthumous installation concerns following which she participated in a panel discussion moderated by Scheidemann, with the previous speakers and artist Julien Bismuth. Again, the benefits of collaboration among different specialties was highlighted.

The final segment of the symposium was from the perspective of the artist. Painter David Reed discussed the imprecision of memory and the reevaluation of his earlier artworks later in life. "Sometimes artworks know more than the artist does," said Reed to which the audience collectively sighed in the rare acknowledgement. Artist Carolee Schneemann began with a "hiss" before beginning an intimate conversation with art historian Anja Foerschner. Between openly discussing her own confictions over her legacy and the complicated

themes of the day and was a perfect example of the benefits of numerous voices and transparency.

Day two began with the theme "Artists' Estates and the Market." Christy Maclear of Art Agency Partners/Sotheby's, drew on examples from her previous experience as the Rauschenberg Foundation CEO and executive director of the Philip Johnson Glass House. Her specific case studies showed that creative problem solving for site management and using a "start-up" perspective could be beneficial for upholding artists' wishes while at the same time creating sustainable business models.

Partner and Vice President of Hauser and Wirth New York, Marc Payot, closed the market driven section with his presentation on the relationship between specific estates and their international, blue chip galleries. Originally, Hauser and Wirth began representing estates, starting with Eva Hesse's in 1999, to contextualize contemporary art. Since then, they have grown to represent 26 estates, the late Jack Whitten's being



Artist Carolee Schneemann speaking with art historian Anja Foerschner during the closing session of the symposium, "Building a Legacy through an Archive". Photo taken by Sasha Drosdick

legalities she’s encountered while setting up her own foundation, she discussed some of her more performative works and a history of receiving harsh criticism. “I’m so happy it survived my criticism” she said of a painting that was re-found and treated by Scheidemann. In the day’s only effort to avoid transparency, Scheidemann responded to a question over how he treated the painting by stating that it was a secret. Grappling between her thoughts on her work and space and what she will leave behind, put the previous discussions in perspective. Hearing a living artist speaking candidly about her own legacy and what she will leave behind after death gave the concept the personal touch that had been missing.

Despite the variety of subjects discussed, numerous themes repeated themselves over the course of two days. Given how many considerations and issues do not fall under the jurisdiction of a single specialty, need for increased transparency and collaboration was clear. Everyone who spoke was a proponent of estates moving from entities that grant or deny permission to active collaborators. Within this vein, Christy Maclear, Virginia Rutledge, and Loretta Wurderberger among others all promoted the benefit of fair use to support legacies.

All parties contributing to the legacy of an artist must be aware that the goal is not simply preservation, but conservation. While preservation contains something in its moment, conservation strives to let it live on and engage in a meaningful way with what’s happening now. As conservators, this conference highlighted the necessity for us to remain engaged, not only within our immediate community, but within the art community as a whole; it served as a reminder that conservators do not exist in a vacuum.

FURTHER RESOURCES

[The Institute for Artists’ Estates](#), [The Aspen Institute](#), [Art Agency Partners](#), and [Art Legacy Planning](#)

“Body of Work: Contemporary Artists’ Estates and Conservation” was held at the School of Visual Arts theater in New York City on April 5-6, 2018. It was organized by Christian Scheidemann and Contemporary Conservation Ltd. and sponsored by Glenside Museum. More information can be found [here](#).



Sasha Drosdick is the Andrew W. Mellon Fellow in Objects Conservation at the Brooklyn Museum. Before earning an MSc from University College London’s Conservation Studies program in Qatar she completed internships at the Museum of Modern Art and Yale University Art Gallery.

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6-7 December 2018
Complex San Michele, Lucca, Italy
Deadline for abstracts: 31 October 2018
For more information visit: <http://www.igiic.org/?p=3963>

Conservation of Barkcloth Material
7 December 2018
Royal Botanic Gardens, Kew, London, UK
Deadline for presentations and posters: 14 September 2018
Submissions should be sent to arts-admin-barkcloth@glasgow.ac.uk and for more information contact Misa Tamura at misa.tamura@glasgow.ac.uk

3rd International Conference on Techniques, Measurements & Materials in Art & Archaeology 2018
9-12 December 2018
Jerusalem, Israel
Deadline for presentation abstracts: 6 September 2018 for posters: 4 October 2018
To submit abstracts and for more information visit: <https://art2018.isas.co.il/>

**Celebrating reproductions in plaster, metal and digitally:
Conference 2019**
17-19 January 2019
Victoria and Albert Museum, London, UK
Proposals for presentations, posters and films due: 3 September 2018
Submissions for day 1-2 should be sent to Holly Trusted m.trusted@vam.ac.uk and/or Angus Patterson a.patterson@vam.ac.uk Submissions for day 3 should be submitted to Charlotte Hubbard and/or Sarah Healey-Dilkes s.healey@vam.ac.uk For more information visit: [here](http://www.vam.ac.uk)

**AICCM Textile Special Interest Group Symposium: Fibre to
Fabric, Fur, Feather and Finishes**
4-6 February 2019
Sydney, Australia
Submissions for papers, lightning talks and posters are due 31 August 2018
Submissions should be sent to: tess@heightsheritage.com.au
For more information visit: <https://aiccm.org.au/national-news/call-papers-posters-textile-special-interest-group-symposium-2019>

**A Part of Everyday Life – Furniture and other wooden objects
of everyday life in conservation/restoration**
Furniture and Wooden Objects Group, VDR (German

Association of Conservator-Restorers)
9-11 May 2019
Nuremberg, Germany
Deadline for submission of abstracts: 31 August 2018
For more information visit: https://www.restauratoren.de/wp-content/uploads/2018/06/CfP_Moebel-Tagung2019_EinStueckAlltag_2018-06-07.pdf

45th Annual CAC Conference and Workshop
28 May – 1 June 2019
Halifax, Nova Scotia, Canada
Abstracts (in French or English) are due: 31 October 2018
Abstracts can be submitted online here: https://www.surveymonkey.com/r/2019_CallForPapers_AppelaCommunications further questions can be directed here: conference@cac-accr.ca

**The Plastics Heritage Congress 2019: History, Limits and
Possibilities**
29-31 May 2019
Lisbon, Portugal
Deadline for session proposals: 30 August 2018
Deadline for paper proposals: 15 November 2018
For more information visit: <http://ciuhct.org/plasticsheritage2019/>

Metal 2019
2-6 September 2019
ICOM-CC Metals Working Group and Haute Ecole Arc Conservation-restoration, Neuchâtel, Switzerland
Deadline for poster submissions: 1 September 2018
For more information visit: <https://metal2019.org/conference/hosting/>

**Recent Advances in Glass and Ceramics Conservation
The Glass and Ceramics Working Group of ICOM-CC, Icon,
and the British Museum**
5-7 September 2019
British Museum, London, UK
Deadline for abstract submissions: 10 September 2018
Submit abstracts to: lfair@winterthur.org for more information visit: [here](http://www.winterthur.org)

**XIV Congress of the International Association of Book and
Paper Conservators (IADA) Warsaw 2019**
23-27 September 2019
Warsaw, Poland
Deadline for paper abstracts: 1 October 2018
For more information visit: <https://www.iada-home.org/en/news/xiv-iada-congress-warsaw-239-279-2019.html> or email: abstracts@iada-home.org

**American Institute for Conservation (AIC) Annual Meeting
New Tools, Techniques, and Tactics in Conservation and
Collection Care**
13-17 May 2019
Mohegan Sun Resort, Uncasville, Connecticut, USA
Abstract submissions due 15 September 2018
For more information visit: <http://www.conservation-us.org/annual-meeting/aic-annual-meeting>

CONFERENCES & SEMINARS

2018 Archives & Records Association Conference

29-31 August

Grand Central Hotel, Glasgow, UK

For more information visit: <http://conference.archives.org.uk/>

Heritage Across Borders: Association of Critical Heritage Studies, 4th Biennial Conference

1-6 September, 2018

Zhejiang University, Hangzhou, China

For more information visit: [http://](http://www.criticalheritagestudies.org/hangzhou-conference/)

www.criticalheritagestudies.org/hangzhou-conference/

SR2A-2018: Synchrotron Radiation & Neutrons in Arts and Archeology

3-7 September 2018

Portsmouth, UK

For more information visit: <http://www.diamond.ac.uk/Conference/SR2A-2018.html>

New Trends in Cultural Heritage Biodeterioration (IBBS2018)

5-7 September, 2018

Coimbra, Portugal

For more information visit: <http://www.ibbs18.com/>

IIC's 27th Biennial Congress

Preventive Conservation: The State of the Art

10-14 September, 2018

Turin, Italy

Registration rates increase 22 July 2018

For more information visit: <http://iicturincongress2018.com/content/registration> and <https://www.iiconservation.org/>

TICCIH 2018 Congress Chile

Industrial Heritage: Understanding the past, making the future sustainable

13-14 September 2018

Santiago, Chile

For more information visit: http://patrimonioindustrial.cl/tich/inicio_en.html

11th International Conference in Structural Analysis of Historical Constructions: An interdisciplinary approach

13-15 September 2018

Cusco, Peru

For more information visit: <http://sahc2018.com/>

Culture in Crisis Conference

17-20 September 2018

South Africa

For more information visit: <https://www.vam.ac.uk/info/culture-in-crisis> or email: L.jones@vam.ac.uk

9th International Symposium on Technologies for Digital Photo Fulfillment (TDPF 2018)

24 September 2018

Dresden, Germany

For more information visit: http://www.imaging.org/site/IST/Conferences/TDPF/IST/Conferences/TDPF/TDPF_Home.aspx

iPRES 2018: The 15th International Conference on Digital Preservation

24-27 September 2018

Boston and Cambridge, Massachusetts, United States

For more information visit: <https://ipres2018.org/>

6th International Mountmakers Forum

25-27 September 2018

Natural History Museum in London, UK

For more information visit: <http://www.nhm.ac.uk/events/mountmakers-forum.html>

Best in Heritage: Projects of Influence

26-28 September 2018

Dubrovnik, Croatia

For more information visit: [https://](https://www.thebestinheritage.com/conference)

www.thebestinheritage.com/conference

XXI International NKF Congress ICC-Nordic Group

Cultural heritage facing catastrophe: Prevention and recoveries

26-28 September 2018

Reykjavik, Iceland

For more information visit: <https://www.nkf2018.is>

WAAC 44th Annual Meeting

27-29 September 2018

Santa Fe, United States

For more information contact Sue Ann Chui at: president@waac-us.org

Icon Book & Paper Group Conference

Unexpected fame: Conservation approaches to the preparatory object

1-3 October 2018

Oxford, UK

For more information visit: <https://icon.org.uk/groups/book-paper/icon-book-paper-group-conference-2018>

The IIC French Group (SFIIC) Artists' Workshops:

Places and Process - Poor Materials/Noble Materials

4-5 October 2018

Marseille, France

Program and registration form can be found here (in French): <https://sfic.com/index.php/rencontres-2018/>

Science of Sacred Art:

Context and Conservation of the Himalayan Thangka

4-6 October, 2018

University of San Francisco, California, USA

For registration and more information, visit: <https://rsvp.usfca.edu/science-of-sacred-art>

Conservation of Plastics Professional Workshop

9-12 October 2018

Pratt Institute, Brooklyn, NY, USA

Deadline for application to attend: 5 September 2018

Send statement of interest and resume to Sarah Nunberg at: snunberg@pratt.edu

8th International Conservation Conference

Problems Connected with Keeping and Conservation of Collections in Museums

10-12 October 2018

National Museum of Agriculture and Food Industry in Szreniawa, Poland

For more information visit: <http://www.muzeum-szreniawa.pl/imuzeum/web/app.php/vortal/>

Indoor Air Quality in Heritage and Historic Environments 2018

10-13 October 2018

Krakow, Poland

For more information visit: <http://uek.krakow.pl/pl/uczelnia/wydzialy/wydzial-towaroznawstwa-i-zarza...>

ICON Painting Group

Wet Paint: interactions between water and paintings

12 October 2018

The National Museum of Scotland, Edinburgh

For more information visit: <https://www.eventbrite.co.uk/e/wet-paintinteractions-between-water-and-paintings-tickets-44057892342>

**Material Science and Technology 2018 Conference
Special Topics Symposium: Art and Cultural Heritage: Reverse Engineering**

14-18 October 2018

Columbus, Ohio, USA

For more information visit: <http://www.matscitech.org/technical-program/special-topics/>

14th Conference of the Association Internationale pour l'Étude de la Mosaïque Antique (AIEMA)

15-19 October 2018

Bank of Cyprus Cultural Foundation, Nicosia, Cyprus

Late registration deadline: 1 September 2018

For more information visit: <http://www.cyprusconferences.org/aiema2018/>

Identification of Prints Seminar

18-19 October 2018

Berlin, Germany, hosted by Hildegard Homburger in cooperation with the Internationale Arbeitsgemeinschaft der Archiv-, Buch- und Grafikrestauratoren, and IADA

For more information visit: <https://www.iada-home.org/en/calendar/detail/browse/1/article/identification-of-prints-1/31.html> Registration requests should be sent to hombu@freenet

NZCCM Conference: Living Heritage: Materials, Methods and Context

24-26 October 2018

Auckland Art Gallery, Auckland, New Zealand

For more information visit: <http://www.nzccm.org.nz/> or email: nzccmconference2018@gmail.com

CESMAR7 VIII International Congress Colore e Conservazione

25-26 October 2018

Ca' Foscari University, Venice, Italy

For further information, please contact Grazia Cavanna +39 348 3212820 or visit: www.cesmar7.org

The Cutting Edge 16 – IGIIIC

25-27 October 2018

Castello del Buonconsiglio, Trento, Italy

For more information visit: <http://www.igiic.org/?p=3882>

Theoretical and Practical Aspects of Conservation of Tangible Ottoman Heritage

28 October, 2018

Jerusalem, Israel

For more information contact Dr. Tsameret Levy-Daphny lev-tsam@gmail.com

Sustainable Infrastructure For The Built Environment 29-31 October 2018

New Delhi, India

For more information visit: <http://australia.icomos.org/wp-content/uploads/RICS-SBE-RMIT-InternationalConference2018-Call-for-Papers.pdf>

Safety and Cultural Heritage Summit: Preserving Our Heritage and Protecting Our Health

The Washington Conservation Guild

7 November 2018

Smithsonian American Art Museum, Washington DC, USA

For more information visit: <http://washingtonconservationguild.org/2018/07/19/accepting-abstracts-2018-safety-cultural-heritage-summit-preserving-heritage-protecting-health/>

Symposium Rembrandt Conservation Histories

8-9 November 2018

Rijksmuseum, The Netherlands

For more information visit: <https://www.rijksmuseum.nl/nl/rembrandt-conservation-histories>

Infrared and Raman Spectroscopy School on Cultural Heritage (VII edition)

12-16 November 2018

Centro Conservazione e Restauro La Venaria Reale, Turin, Italy

The course will be held in Italian. For more information please contact labos_formazione@centrorestaurovenaria.it or visit: [here](#)

SBMK Plastics Day & Summit on International Collaboration: Acting in Contemporary Art Conservation

14-16 November 2018

Amersfoort and Amsterdam, The Netherlands

For more information visit: <http://www.sbmkn.nl/> or <https://www.iiconservation.org/sites/default/files/news/attachments/8980-inviteprogramme.pdf>

Migrants: art, artists, materials and ideas crossing borders

15-16 November 2018

Cambridge, UK

For more information visit: <https://www.hki.fitzmuseum.cam.ac.uk/events/migrantsconf>

2018 AICCM Book, Paper & Photographic Materials Symposium

20-23 November 2018

Melbourne, Australia

For more information visit: <https://aiccm.org.au/about/special-interest-groups/book-and-paper>

**Old and New Approaches to Furniture Conservation
14th International Symposium on Wood and Furniture Conservation**

23-24 November, 2018

Rijksmuseum, Amsterdam
Registration deadline: 1 November 2018
For more information visit: <http://www.ebenist.org/en/>

Infrared and Raman Users Group (IRUG 13) Conference
5-7 December 2018
Art Gallery of New South Wales, Sydney, Australia
For more information visit: <http://www.irug.org>

Preservation of natural history wet collections
5-7 December 2018
Paris, France
For more information visit: <https://pfc2018.sciencesconf.org/>

British Museum Mellon Symposium: Textiles from the Silk Road in Museum Collections
10 December 2018
British Museum, London, UK
For more information visit: <http://www.bm-mellon-symposia.org/>

The IIC French Group (SFIC) French Textile's Group: The Display of Textiles Artworks
25 January 2019
Location TBA
More information can be found on the SFIC's website: <https://sfiic.com>

2019 International Meeting on Iron Gall Ink
13-15 February 2019
Barcelona, Spain
For more information visit: <http://www.ub.edu/IGI2019BCN/> or email: IGI2019BCN@ub.edu

Wear of Materials 2019
22nd International Conference on Wear of Materials
14-18 April, 2019
Hyatt Regency Miami, Florida, United States
For more information visit: <http://www.wearofmaterialsconference.com/>

4th International conference on Integrated Pest Management (IPM)
21-23 May 2019
Stockholm, Sweden
For more information visit: <https://icon.org.uk/events/call-for-papers-4th-international-conference-on-integrated-pest-management>

International Symposium: Works of Art on Parchment and Paper
6-9 June 2019
Ljubljana, Slovenia
For more information visit: https://www.iiconservation.org/sites/default/files/news/attachments/8883-call_for_papers_ang.pdf and contact: Natasa.Golob@ff.uni-lj.si or Jedert.Vodopivec@gov.si

12th North American Textile Conservation Conference
Lessons Learned – Textile Conservation – Then and Now
23-29 September 2019
Ottawa, Canada
For more information visit: <http://natconference.com/>

COURSES & WORKSHOPS

Messors Fresco & Fine Art: Art Restoration and Conservation Workshop
8-21 August, 2018
Matera, Italy
For more information visit: <http://messors.com/art-restoration-and-conservation/>

East Meets West: Traditional Japanese basic techniques and materials for paper conservation
27 -31 August 2018
Bayerische Staatsbibliothek Munich, Germany
For more information contact: rosemary.marin-loebard@bsb-muenchen.de

COARCH18: 2nd Workshop On Computing Techniques For Spatio-Temporal Data in Archaeology And Cultural Heritage
28 August 2018
Melbourne, Australia
For more information visit: <http://coarch18.di.univr.it/>

IAP Chemistry for Conservators: correspondence course
1 September – 31 December, 2018
For more information visit: <http://academicprojects.co.uk/courses/chemistry-for-conservators/>

Group Training Course for Young Professionals on Cultural Heritage Protection in the Asia-Pacific Region 2018
4 September – 4 October 2018
Nara, Japan
For more information visit: [here](#)

Workshop: Basic book conservation techniques for paper conservators
20-21 September 2018
London Metropolitan Archives, London, UK
For further information contact Caroline De Stefani: Caroline.DeStefani@cityoflondon.gov.uk

Demonstration Day Spectral Imaging XPECAM platform by XPECTRALTEK
21 September 2018
SRAL Studios Wiebengahal, Avenue Ceramique 224, Maastricht, The Netherlands
Registration deadline is 1 September 2018
Registration forms are available at www.sral.nl or info@sral.nl

Risk Management for Collections Care
West Dean College conservation Short Courses
1-2 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Publishing in Conservation:
CPD courses from University of Cambridge Museums
2-26 October 2018
The Fitzwilliam Museum, Cambridge, UK
For more information visit: <https://www.museums.cam.ac.uk/conservation/collections-care-conservation-professional-events> or contact: collectionscarecourses@museums.cam.ac.uk

Lighting for Conservation and Access
West Dean College conservation Short Courses
4 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Analysis of Weave Structures in Museum Textiles: Textile Basics and Non-Woven Structures
8-10 October 2018
The George Washington University and The Textile Museum, Ashburn, Virginia, USA
For more information visit: <http://www.conservation-us.org/courses/professional-development-courses/current-courses/textile-basics-and-non-woven-structures#.W1faltJKhEZ>

Art and Object Handling
West Dean College conservation Short Courses
8-12 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Conservation of Photographs on Glass Symposium and Workshop
10-12 October, 2018
Art Gallery of Ontario, Toronto, Canada
For more information contact Maria Sullivan: Maria_Sullivan@ago.net

Masonry Cleaning
West Dean College conservation Short Courses
15-17 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Preservation Assessment Survey Workshop
West Dean College conservation Short Courses
16 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Understanding the Book Structure and Binding of Islamic Manuscripts
16-19 October 2018
Aga Khan Museum, Toronto, Canada
Application deadline: 31 August 2018
For more information visit: <https://www.iiconservation.org/node/7745> Send CV and letter of interest to Ghazaleh Rabieei at ghazaleh.rabieei@akdn.org

IAP Course: Museum and Gallery Lighting: Theory and Practice
22 October 2018
The National Archives, Kew, London, UK
For more information visit: <http://academicprojects.co.uk/courses/museum-and-gallery-lighting-theory-and-practice-2/>

IAP Course: Humidity, Temperature and Pollution: the object, the atmosphere & collections care
23 October 2018
The National Archives, Kew, London, UK
For more information visit: <http://academicprojects.co.uk/courses/humidity-temperature-and-pollution-the-object-the-atmosphere-and-collections-care/>

IAP Course: Integrated Pest Management for Museums, Galleries and Historic Houses
24 October 2018
The National Archives, Kew, London, UK
For more information visit: <http://academicprojects.co.uk/courses/integrated-pest-management-for-museums-galleries-and-historic-houses/>

Project Management in Collections Care:
CPD courses from University of Cambridge Museums
22 October 2018
The British Library, London, UK
For more information visit: <https://www.museums.cam.ac.uk/conservation/collections-care-conservation-professional-events> or contact: collectionscarecourses@museums.cam.ac.uk

Mountmaking for Museum Objects
West Dean College conservation Short Courses
22-25 October 2018
West Dean College, West Sussex, UK
For more information visit: www.westdean.org.uk/OMC

Specification of Display Cases:
CPD courses from University of Cambridge Museums
26 October 2018
Museum of London, London, UK
For more information visit: <https://www.museums.cam.ac.uk/conservation/collections-care-conservation-professional-events> or contact: collectionscarecourses@museums.cam.ac.uk

ICOM International Training Centre for Museum Studies Promoting Your Museum: Make it relevant and attractive
14-22 November 2018
Fuzhou, China
For more information visit: <http://icom.museum/activities/training/icom-international-training-centre-for-museum-studies/>

Analysis of Weave Structures in Museum Textiles: Simple Weaves and Complex Structures
8-10 April 2019
The George Washington University and The Textile Museum, Ashburn, Virginia, USA
For more information visit: <http://www.conservation-us.org/courses/professional-development-courses/current-courses/simple-weaves-and-complex-structures#.W1fZqtJKhEY>