

# Textiles Working Group Newsletter

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Detail of corset designed by John Galiano for the Kylie Showgirl: Homecoming Tour, 2006 Gift of Kylie Minogue, 2008 Australian Performing Arts Collection, Arts Centre Melbourne

## From the Coordinator

**Sarah Benson**

Dear Textiles Working Group Members,

We are now almost halfway through this triennial and much has happened already and there are still exciting parts of our programme coming up. As you would have received, the Call for Papers was sent out and is now closed for the next triennial conference which will happen from September 18-22 2023 in València, Spain! The event will either be held entirely in person or virtually depending the current world situation. The conference theme is Working Towards a Sustainable Past, and encouraged submissions to think critically about not only environmental impacts but in the broader sense of the term for sustainability of our profession, culture and institutions. ICOM-CC Triennial Conferences always present an overview of the current state of conservation research and practice and all submissions in line with this are greatly encouraged. If you missed the Call for Papers but are still interesting in contributing, stay tuned for the Call for Posters which will come out in the summer. We are looking forward to a dynamic session in Textiles!

More information on the conference is located on the conference website:

<https://icom-cc2023.org>

In this Newsletter I would like to introduce several new initiatives our group has had since the previous Newsletter. Firstly, we will have a review of our new informal Zoom meetings series "International Textile Conservation Discussions". The aim of these meetings is to get a chance for us to get together and hear about textile conservation in different countries in addition to a session on a chosen conservation treatment topic which was chosen within our Textiles triennial programme. We aim to do these sessions once or twice a year and in this Newsletter our Assistant Coordinator Bronwyn Cosgrove will sum up the first session which focused on Australia and afterwards an enlightened discussion on stitching techniques by Dr. Mie Ishii.

Sustainability is a prominent topic now in all areas and our Assistant Coordinator Deepshikha Kalsi is promoting this topic for our group and will give an update within each Newsletter.

We are of course continuing with reviews of recent textile conservation conferences, workshops and activities as well as the opportunity for members and non-members to submit treatment case studies. Emerging professionals are especially encouraged to submit.

Finally, we are introducing a section on recent theses abstracts from textile conservation students. This includes and encourages all graduates from PhD, Masters, and Bachelor programmes.

It is very exciting to read all the wonderful research that is coming out of these talented new graduates and we want to promote the sharing of their research across our international group.

All programmes are encouraged to submit and as this is the first time we are doing this there are likely many programmes that we have missed. Please get in touch with me if you are connected with one of these programmes so we can publish your graduate's abstracts in the next Newsletter!

I would very much like to thank our Assistant Coordinator Bronwyn Cosgrove for editing this Newsletter and creating a wonderful new format for our Newsletters!

Please do get in touch with us with any comments, feedback, or questions you may have and do follow us on our Facebook page!

<https://www.facebook.com/icomcctextiles>

I hope you enjoy reading our Newsletter and look forward to seeing you all at our next informal Zoom meeting and the Triennial Conference in València!

**Sarah Benson**  
**-ICOM-CC Textiles Working Group Coordinator-**

# Zoom Meeting

## Textile conservation in Australia & discussion on stitching techniques

*summary by Bronwyn Cosgrove*

*ICOM-CC Textiles Working Group Assistant Coordinator & Senior Textile Conservator at the Australian Performing Arts Collection, Arts Centre Melbourne*

Australia is a country of dichotomies. The world's smallest continent and largest island; the home of First Nations Australians that have inhabited the land for more than 60,000 years and one of the world's youngest European colonies.

<https://aiatsis.gov.au/explore/australias-first-peoples>

The founding of cultural collecting institutions was an initiative of early English settlers, an endeavour to replicate learned institutions of their homeland far away and document the flora and fauna of their unfamiliar new home. As British settlers spread across the continent, museums were founded in major settlements. The Australian Museum in Sydney, founded in 1827 is the country's oldest collecting institution.

The conservation profession in Australia, is younger still, its beginnings traceable to the 1950s when Bill Boustead, the in-house trained conservator at Art Gallery of NSW, (who is credited with inventing the first hot vacuum table), was sent to Europe in 1953 to train at the Courtauld Institute and the Louvre. From 1959 – 1974, Boustead trained several conservators under his cadet restorer program at the Art Gallery of NSW. Many of Boustead's cadets went on to found conservation departments around the country.



The first tertiary accredited materials conservation training program opened in Canberra in 1975. Directed by Dr. Colin Pearson, over 350 qualified conservators graduated from the program between 1975 and 2002.

In 2004, The University of Melbourne's Grimwade Centre established a 2 year masters program. In 2009, a 3-year undergraduate program was re-established at the University of Canberra under the title of Bachelor of Heritage, Museums and Conservation. Since 2019, UC offers a Bachelor of Arts (Culture and Heritage) and a Graduate certificate in Heritage Materials Conservation.

The professional body for conservators in Australia is the Australian Institute for the Conservation of Cultural Materials (AICCM).

<https://aiccm.org.au/>

AICCM is a volunteer run organisation with a national council and state committees. Members are bound by the AICCM Code of Ethics and can participate in Special Interest Groups for preventive, emerging conservators, objects, gilded objects, variable media and digital heritage, photographs, paintings, exhibitions, conservation science, conservation framers, book and paper, and textile specialties.

Accreditation is gained through AICCM professional membership. To be eligible for professional membership, applicants must have 5 years of employment and two years training in materials conservation. Evidence of appropriate training, adherence to the code of ethics and involvement in AICCM activities are required, supported by a CV and reports from three referees. In order to maintain professional membership, evidence of ongoing professional development is required on a 5-year cycle.

The AICCM Bulletin, the organisation's peer-reviewed publication was first published in 1975. It is currently published by Taylor & Francis twice a year and welcomes submissions that disseminate new information gathered about the materiality, nature, condition, deterioration and treatment of cultural collections within Australia and the Asia-Pacific region; promote interdisciplinary research activity in cultural materials conservation; as well as those relating to conservation management, conservation ethics, cultural engagement, sustainability and wider professional concerns in the region.

<https://aiccm.org.au/publications/aiccm-bulletin/>

The number of textile conservators in Australia is small. As of November 2021, 119 AICCM members registered an interest in textile conservation, however dedicated positions in the specialty are limited to seven collecting institutions in state capital cities along the east coast. The numbers of textile conservators working in private practice continues to grow.

In the second half of the meeting Dr. Mie Ishii, textile conservator and Associate Professor at the Saga University of Art and Regional Design was invited to lead a discussion on textile conservation stitching techniques. Following on from her thought-provoking presentation, *The wabi-sabi of boro rags and the art of textile conservation* at the 2021 ICOM-CC Beijing Conference.

[https://www.icom-cc-publications-online.org/dlfile.aspx?file=docs/content/pdfs/2021/ICOM-CC\\_2021\\_Beijing\\_103.pdf](https://www.icom-cc-publications-online.org/dlfile.aspx?file=docs/content/pdfs/2021/ICOM-CC_2021_Beijing_103.pdf)

Dr. Ishii expanded on this paper by showing rare footage of stitching techniques used to repair embroidered textiles at the Tokyo National Institute of Cultural Property. A discussion around these techniques, that in this case did not include laid couching, considered by conservators to be the 'conservation stitch', was engaging and provided attendees with an opportunity to consider their practice in a new light.

In the next Textile Working Group Zoom meeting Assistant Coordinator Sarah Scaturro will discuss textile Conservation in the United States. This will be followed by an open discussion on wet-cleaning.

For those of you unable to attend the meeting, the a recording is available for 3 months from the meeting date to all who register.

# Committee News

## *Suzan Meijer*

THANK YOU/MERCI/GRACIAS/DANK U to Suzan Meijer for her ten years of service to ICOM-CC's Textiles Working Group! Suzan became Assistant Coordinator for the group in 2011 or 2012, while Elsje Janssen was Coordinator and continued to serve during Deborah Trupin's two triennia as Coordinator and into this current triennium. She has recently stepped down, due to the workload she has as Head of Textile Conservation at the Rijksmuseum in Amsterdam, NL, a position she has held since 1997.

Suzan's cheerful and steady support to our Working Group has been invaluable. She reviewed the abstracts and papers for three Triennial Conferences, always offering insightful comments. She was particularly instrumental in bringing the 2019 Interim meeting held at the Abegg-Stiftung in Switzerland to fruition. For that meeting she helped draft the call for papers, review the submissions, and organize the order of the program. Suzan also took on responsibility for tracking the registrations and answering the myriad questions from participants.

Suzan has continued to be a positive support to our Textiles Working Group through the start of this triennial and we look forward to all our continued collaborations with her within the Working Group.

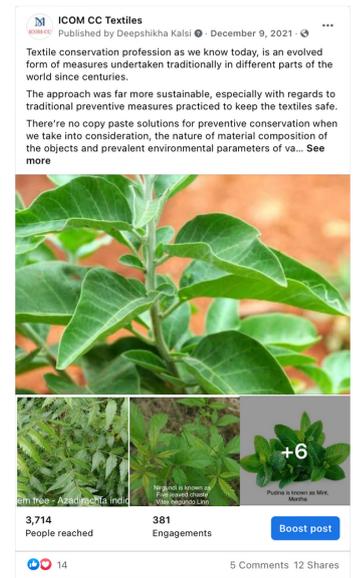
**Deborah Trupin & Sarah Benson**

## *Sustainability*

As indigenous knowledge keepers may not be practising conservators, an attempt was made to reach out to a broader audience and communities by creating engaging posts on the Facebook platform to encourage active participation and

sharing of indigenous practices. The posts reached more than a thousand people, and we received responses from people across the globe. Their responses were further shared with all in subsequent posts. We learned about various spices and storage practices that give an insight into traditional wisdom. These sustainable practices are derived from locally available materials, making preventive conservation more adaptive and efficient. We plan to keep engaging with indigenous knowledge keepers and look forward to your suggestions that will assist in furthering this initiative.

**Deepshikha Kalsi**  
**ICOM-CC Textiles Working Group**  
**Assistant Coordinator**



## Social Media

The Official Facebook page for the ICOM-CC Textiles Working Group was created in March 2021 to provide a platform for like-minded international professionals to exchange information. The Working Group aims to advertise ICOM-CC activities, including interim meetings, Triennial Conferences, newsletters, and other Working Group events. We also encourage users to promote current research, symposiums, workshops, job opportunities, and other relevant updates related to textiles and textile conservation from across the globe.

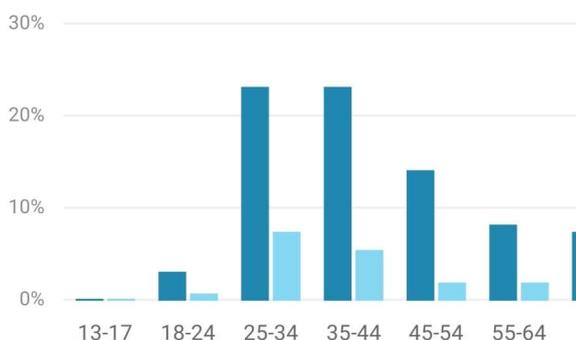
Since the inception of the Textiles Working Group Facebook page, 257 users have liked it, and over 300 users are following the page and interest is growing! Our posts and updates are reaching more than 500 users.

This Facebook page is managed by the ICOM-CC Textiles Working Group Coordinator and Assistant Coordinators. All followers can post to the Facebook page, with new content visible to the public after review by the Coordinator and Assistant Coordinators.

### Age and gender

People who like your Page are in these age and gender groups. These numbers are estimates.

**202** (80%) **Women**    **48** (19%) **Men**



**Ali Nasir**  
ICOM-CC Textiles Working Group  
Assistant Coordinator

## Save the Date!

### Semi-synthetic and Synthetic Textile Materials in Fashion, Design and Art

As you may have read in both our Working Group Programmes for 2020-2023, we are planning a joint interim meeting between our ICOM-CC Textiles and Modern Material and Contemporary Art Working Groups focusing on semi-synthetic and synthetic textile materials! The meeting will be virtual, open to both members and non-members, and will include an online post-print publication.

This meeting aims to bring together our two groups to merge our knowledge and help increase awareness on the technology, degradation and conservation of semi-synthetic and synthetic textile materials.

We are sending this Save The Date to encourage all of you to start thinking of contributions for this meeting. We hope this event provides you the opportunity to present and publish your research, practical experiences and knowledge on this topic. Please share with colleagues and spread the word!

-Stay tuned for more details coming out soon in the Call For Papers-

**Sarah Benson & Anna Laganà**  
ICOM-CC Textiles & Modern Materials  
and Contemporary Art Working Group  
Coordinators

# Reviews

## *ICOM Costume Solidarity Project 2021*

This year-long project during 2021 which was organised by ICOM Costume, had several parts and partners (ICME, ICOM-CC and ICOM Canada). The overall aim of the project was to connect people and institutions (international curators and conservators, historians, museums, and the global public) at a time when we are all physically distant from one another. The project had three main outcomes: two workshops, Part 1 “Collecting, Researching, Documenting, Displaying” and Part 2 “Conservation, Preservation (of which ICOM-CC was a partner), a virtual exhibition of facemasks collected by institutions around the world, an online conference which presented the work and results of the project, and finally an online published Handbook to come out early 2022. All the workshops were recorded and are available on the ICOM Costume YouTube channel:

<https://www.youtube.com/channel/UCQEF0L4rBdpQz0bsEGNiTiA>

and all other virtual content is connected through the ICOM Costume website:

<https://costume.mini.icom.museum/#>

The Textiles and Modern Materials and Contemporary Art Working Group Coordinators worked together to develop a virtual workshop (Workshop 2) which focused on the preservation of Covid-19 facemasks collected by museums titled “Conserving a symbol: Preservation of the facemasks from the Covid-19 Pandemic”.

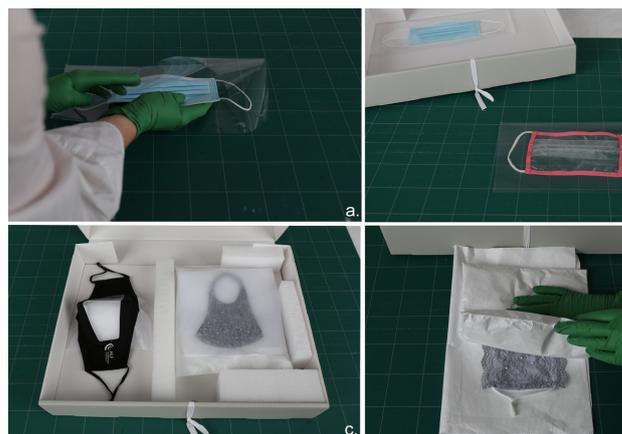


Fig. 10 from Handbook: a: Melinex folder for flat facemasks, b: Silicon release Melinex used for PVC facemasks, c: Folded facemask covered in Bondina, d: Embellished facemask protected with soft Tyvek pillow.

This workshop has also been written up as a Guideline that will be published within the project’s Handbook in 2022. The workshop and guideline aim to assist museum professionals providing useful information on materials and manufacture processes used to make facemasks, material identification methods, proper handling, examination for contaminants, material condition, and preservation strategies including exhibition and storage solutions. The main materials used to make facemasks are covered in the workshop and Handbook. These included: cotton, silk, natural rubber, polyester, viscose, polyamide, polyurethane (TPU) and foams, polyvinyl chloride, polycarbonate and blends.

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**Sarah Benson**

**ICOM-CC Textiles Working Group Coordinator**

**Anna Laganà**

**ICOM-CC Modern Materials and Contemporary Art Working Group Coordinator**

# NATCC 2021 : *Outside Influences*

North American Textile  
Conservation Conference

*Summary by Heather Hodge*

*Post Graduate Fellow - Textile Conservation at  
Winterthur Museum, Garden and Library*

Initially planned as an in-person event in Nashville, Tennessee, the NATCC board shifted the 13th Biennial conference, 'Outside Influences' early during the COVID-19 pandemic to a virtual conference for 2021 and made it available in early October. This shift allowed the board the advantage of time in requesting attendee preferences and organizing an online format. The conference was sponsored by Willard Conservation Equipment Engineers, SmallCorp, and Tru Vue, Inc., and consisted of five sessions, totaling seventeen pre-recorded presentations and one lab tour. Additionally, there were five corresponding Q&A sessions and five panel discussions held live from October 25th to the 29th.

## *Conference Sessions*

### *Session 1: Politics and Conservation*

All four talks in Session One: Politics and Conservation, considered the present and future care of objects with complicated histories. Both keynote lectures, by Cybele Tom and Restauradoras con Glitter, addressed the pitfalls of a single narrative approach to thinking about and working with cultural heritage objects. In Cybele's talk, *A Conservation Paradox: Preservation as Patriarchy?*, Confederate monuments were used as examples to illustrate how objects exist within multiple paradigms. Because our own sense of identity and views of the world define our values, she asked, "Will conservators always be able to judge whether the opinions or attitudes towards a work of art are right or wrong?"

While aware of this, she affirmed conservators are well trained to take stock of all meanings of an object, to use our expertise to speak with stakeholders, and to facilitate decision making.

In *Text-ile: The Personal is Political*, Restauradoras con Glitter spoke to the hegemonic dismissal of particular peoples, ways of living, and artworks. Women were the focus of this talk, where the increase in violence against women in Mexico exemplifies the continuation of historic patriarchal rhetoric. They compared current protest graffiti and the reclamation of textile craft as advocacy methods to combat this violence. Though conservators are dedicated to materials and objects care, the restauradoras felt it was important to unite to also support women, stating "Primero las mujeres, luego las paredes". Emma Schmitt of the United States Holocaust Memorial Museum addressed the complexity of treating the objects of oppressors, which requires balancing conservators' institutional, curatorial, and material needs with their own ethics. To provide consistent and transparent care, she emphasized the importance of documentation to record how and why the objects are treated. She also discussed the necessity of supporting the mental and emotional health of those caring for these objects.

Julia Brennan and Jacquelyn Peterson-Grace shared their work on teaching preventive conservation at the Tuol Sleng Genocide Museum, including agents of deterioration, terminology, documentation, and environmental concerns. Their work was a collaboration with the Cambodian staff of the museum, who provided context about the collection and the reasons for its conservation: to honor the memory of those lost, serve as evidence, provide healing, and allow for future research.

## *Session 2: Geography*

This session included three talks, with two highlighting the success and importance of traditional care practices. Kristal Hale, Saiful Bakhari, and Sandra Sardjono described several types of historical textiles found throughout Indonesian villages and what could be learned from their care as performed by these communities. They illustrated the implementation of both traditional practices and current conservation methodologies in the country's museums to provide effective and affordable care to collections.

Léa Voisin and Hector Meneses discussed the definition, fabrication, and cultural use of the huipil grande, a garment worn by the Zapotec women of México. They detailed the treatment of one of the oldest known huipiles, which incorporated the methodologies of care learned in consultation with the contemporary creators and users of these garments.

The third speaker, Alison McCloskey, spoke about the complexity of conserving and interpreting the Tillett tapiz. The tapiz is a large textile panel originally conceived by a British-born designer in the 1960s to give a more holistic history of the Spanish conquest of México, with vignettes and text from historical documents worked by embroiderers in México, Haiti, and New York.

## *Session 3: Government systems & training*

In session three, the effects of Government Systems and Training, from individual projects to conservation training, were highlighted. A collaborative project between the Directorate of Conservation of Ancient and Modern Monuments and the National Technical University in Athens and the Municipality of Lesvos entailed the treatment of over 80 paintings by Greek artist Theopilos Hadjimichail. This work required open communication between the involved authorities for transportation, cleaning, mold remediation, paint analysis and consolidation, and reframing.

On behalf of the Naval History and Heritage Command team, Yoonjo Lee presented a case study of the treatment and mounting of the USS Taylor ensign, done under a tight deadline with a new, not yet fully operational conservation lab, and within the constraints of government purchasing regulations, to allow for a reunion of the flag with veterans.

María Ysabel Medina Castro described conservation education at La Escuela Académica Profesional de Conservación y Restauración de la Universidad Nacional Mayor de San Marcos. She provided context about the restoration-focused conservation history in Peru, explaining why preventive work is emphasized in their program, where practical exercises encourage creative problem-solving and flexibility to prepare students for institutional challenges.

Verónica García Blanco gave a history of the Real Fábrica de Tapices, outlining the factory's various departments, the evolution of their textile fabrication and conservation practices, the current institutional goals, and their commitment to educating the public as well as conservation students.

## *Session 4: Pressure From/On the workplace*

In Session Four: Pressure From/On the Workplace, Erin Murphy, Nicole Passerotti, and Stephanie Hornbeck described the collaborative process for the renovation, reinterpretation, and reinstallation of the Field Museum's Native North American Hall. This included challenges of navigating within museum bureaucratic structures, addressing and rectifying cultural inaccuracies, the importance of outreach and transparency during the process, and overall lessons learned. Climate control at El Museo Casa Rui Barbosa, a historic home where structural adjustments are limited, was discussed by Gabriela Lúcio de Souza and Márcia Pinheiro Ferreira. They presented methods of ventilation management and plans for a purpose-built collection building, both of which resulted from previous environmental monitoring of the house. Maria Fusco gave a detailed tour of all sections of the Textile Museum's off-site conservation lab, including equipment bought for IPM, photography, workstations, storage, and analysis. The lab was designed by herself and Esther Methé and was greatly informed by consultation with numerous colleagues about their own labs.

### *Pre-recorded Presentations: Influences on Treatment*

There were four presentations in the final prerecorded session, Influences on Treatment, with two focused on conservation approaches and two on materials.

Laura Garcia Vedrenne discussed the decision-making and creative process involved with replacing the shattered silk linings of two Callot Souers dresses. Her treatment was informed by the structural demands made on the dresses by displaying them and understanding the designers' construction techniques.

In preparation for a multi-venue traveling exhibition focused on showcasing Native women's art, Kathleen Martin talked about a needle felting technique that provided structural support and visual compensation for loose and detached sections of wool fringe on a Dakhóta tablecloth, which previous conservation interventions had proved unsuccessful over time.

To provide a full ensemble look to historic garments on exhibition, Nhat Quyen Nguyen shared a process for creating a period-appropriate hair comb using acrylic toned Vivak® as an alternative to historic hair accessories already in one's collection or expensive reproductions.

Heather Hodge spoke about conductive textiles, exploring examples of their use in industry and by artists, characterizing three conductive textile materials used for do-it-yourself electronic textiles, and considering the conservation and preservation of these materials.

## *Panel Sessions*

The five panel discussions were varied and thought-provoking.

### *Equity and Inclusion in Museums*

A conversation on equity and inclusion in museums, with Leslie Guy and moderated by Caterina Florio and Hector Meneses, included the importance of having conservators in institutional decision-making positions, advocating for people and communities as well as objects, and focusing on inclusive stories that may be difficult to talk about. Leslie emphasized there is no one-size-fits-all solution to creating equity and inclusion in museums, but noted that the skills we possess as conservators, such as patience, creative thinking, and a capacity for working in parameters, mean we are well-equipped to make positive changes.

## *Sustainability in Textile Conservation*

Roxy Sperber provided an overview for the Sustainability in Textile Conservation panel moderated by Denise Migdail, and described various types of sustainability, encouraged conservators to contribute to sustainability initiatives by using our unique skills and finding joy in the work, and offered a list of achievable actions. Suzanne Hargrove spoke about the evolution of sustainable practices at the Toledo Museum of Art, describing their initiatives and attaining institutional buy-in by showing cost benefits, positive optics, and goodwill. Sarah Nunberg described the Sustainable Tools in Cultural Heritage (STiCH) platform, which includes case studies based off the Life Cycle Assessment (LCA) and a carbon calculator, and detailed the current research and ongoing goals of STiCH.

## *Wired Textiles and Future Technologies*

The panel on Wired Textiles and Future Technologies was moderated by Sarah Scaturro and featured two artists, Barbara Layne and Despina Papadopoulou, who work with electronic textiles, and two conservators, Lauren Osmond and Heather Hodge, who have worked with and/or studied these objects. They spoke about defining electronic textiles and conductive materials, the goals of the artists, the challenges and considerations for conserving and exhibiting these objects, and what their network of care might look like.

## *Pathways to Publication*

In the panel Pathways to Publication: Three Different Approaches with moderator Gretchen Guidess, textile conservators Yadin Larochette, Ksynia Marko, and Gwen Spicer discussed aspects involved with publishing their recent books including finding external funding, what comprises a book proposal, the people involved with traditional and self-publishing, organization while writing, the design process, and advice for future authors.

## *Asking the Right Questions*

Joel Thompson moderated Asking the Right Questions: How to Successfully Liaise with Conservation Scientists, where Jocelyn Alcantara-Garcia and Jennifer Poulin described when to reach out to conservation scientists, what to do before reaching out, how to find common language when working with a scientist, and types of instrumental analysis and what information they may provide. Each topic was illustrated by a case study.

Following the reflection and examination of the history of textile conservation addressed in the 2019 conference, 'Lessons Learned: Textile Conservation - Then and Now', the 'Outside Influences' conference was a fitting sequel. The work presented was emblematic of our current state as a field as we look existentially at our role as conservators and cultural heritage experts. This is demonstrated by initiatives to re-evaluate the AIC Code of Ethics, analyzing how we continue our education and evolve as professionals for the AIC member designation proposal, reassessing the United States art conservation graduate programs admissions requirements, to name just a few examples. The work shared during this conference reflects this and continues to move the necessary conversation forward around what it means to be a conservator, and determining what our obligations are to objects, their stakeholders, ourselves, and society.

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# ICME, INTERCOM & ICOM Joint Conference

*by Christine Mueller-Radloff*

*Textile Conservator at the Museum für Völkerkunde  
zu Leipzig, Museum für Völkerkunde & Staatliche  
Kunstsammlungen Dresden and Textiles Working  
Group member*

ICME (International Committee for Museums and Collections of Ethnography), INTERCOM & ICOM Azerbaijan National committee held a hybrid joint conference, Transforming Collecting Policies in Museums: The Need for Leadership and Societal Responsibility at the Azerbaijan National Carpet Museum in Baku from October 13-15, 2021.

Originally, this event was planned for the fall of 2020, but due to the Covid 19 pandemic, it was postponed for one year and held as a hybrid conference in 2021.



Onsite participants

The conference was attended by 10 experts from Azerbaijan, Russia, Slovenia, Croatia, Germany, Romania, and the Netherlands in person, and others were connected online.

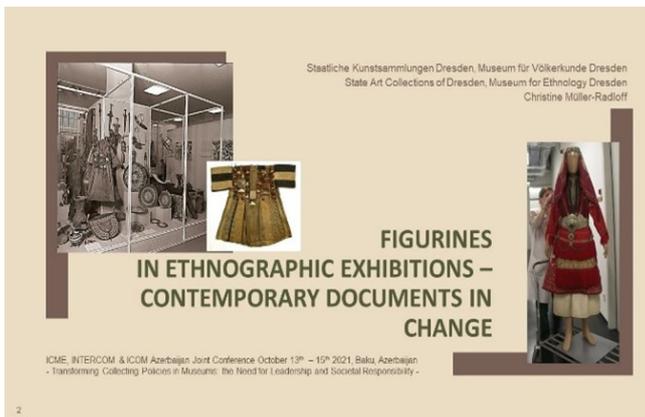
The three-day conference included presentations by 20 speakers on the topics: Decolonizing Museums: Restitution, Repatriation & Healing, Museums and Ethnotourism, Leadership, and Museum Management for Our Time.

As part of the cultural program, conference guests visited the Azerbaijan National Carpet Museum, YARAT Contemporary Art Space, Old City Museum Center, Heydar Aliyev Center, Azerbaijan National Art Museum, National Museum of History of Azerbaijan, Museum of Modern Art, and Gobustan Rock Art Cultural Landscapes.



Director Shirin Melikova gives a tour of the Azerbaijan National Carpet Museum

In the context of the topic Museums and Ethnotourism I reported on the 2nd day of lectures on Figurines in Ethnographic Exhibitions - Contemporary Documents in Change. The presentation based on my many years of work in the three ethnographic museums in Leipzig, Dresden and Herrnhut.



*Contacts for more information:*

Email: [christine.mueller-radloff@skd.museum](mailto:christine.mueller-radloff@skd.museum)

<http://icomaz.az/en>

<https://azcarpetmuseum.az/front/en>

In the three ethnological collections of Saxony, very different aesthetic presentation methods have been used for this purpose in recent decades. They not only reflect the increasing conservation requirements, but also repeatedly raise the question of an "authentic" presentation. In my contribution I present the different "figurine fashions", which led from the "lifelike copy" to artistic interpretation and abstract solutions.

From a conservation perspective, figurines are substructures made for historical garments that provide a support surface and hold for the object. Figurines, however, also represent the body of the person who once wore them. In summary, the following conclusion was drawn.

- How can the life of cultures be presented by means of clothing?
- What stories can be told with their staging?
- What do people of the depicted ethnic groups feel when they see a depiction on figures?
- How do our contemporary European audiences react to them?
- Do these representations serve more for communication or for demarcation?
- And how would you depict them now!

Following the presentation, a lively discussion arose from different perspectives of the participants.

# Treatment Highlight

## Conservation of a Paracas Textile Fragment National Museum, New Delhi, India

Imrana Wasi<sup>^\*</sup>, Dr. Ambika<sup>^</sup>, Dr. KKS Deori<sup>^</sup>

<sup>^</sup>National Museum, Janpath Road, New Delhi 110011, India. \*Corresponding Author: wasiimrana@gmail.com

The National Museum has a vast collection of historical artefacts consisting of objects of varied materials and mediums. The embroidered textile fragment with abstract design of animals which probably comes from the Paracas culture, central coast, Peru, is one of the objects from the prestigious collection of Pre-Columbian and Western Art department of National Museum, New Delhi.



Figure 1. Textile Fragment, Front (A) Before Conservation, (B) After Conservation. © National Museum, New Delhi



Figure 2. Textile Fragment, Back (A) Before Conservation, (B) After Conservation. © National Museum, New Delhi

The silk threads and twill weave have been used for the base of the fragment which is red in colour and a chain stitch is used for outlining the abstract designs of the animals. It comprises of different colours such as red, yellow, green, and black with similar coloured fringe on the bottom edge. The object has a back support of purple satin lining, probably added later to protect and give strength. The size of the object is approximately 111 x 13.5 cm. The condition of embroidered textile fragment was fragile due to several factors. Prior to any conservation, all the exposed surfaces of the object were examined under a digital microscope to understand quantum and factors of deteriorations. During the examination previous restoration was observed in the form of a back lining and darning. After evaluating the condition of textile fragment, the following treatments were given.



Figure 3. Textile Fragment: (A) Frayed edges and loose weaves, (B) After Cleaning, stabilizing and Netting, (C) Loose and broken threads of lining, (D) Consolidation of lining and loose threads © National Museum, New Delhi.

Detailed documentation and a condition report were prepared to carry out conservation work. Mechanical cleaning was done by using soft brushes and a low suction vacuum with a screen on top to remove the loose dust and dirt from the weaves. Then, solvent cleaning by taking care of the colour bleeding. The previous lining on the object was stabilized and consolidated by using conservation stitches. There was a loss within the weave structure was noticed at certain areas. To stabilize weakening of threads due to ageing all loose and weak threads in the weaving has been consolidated with the help of fine needle and threads with conservation stitches. Lastly, and very important, the object was covered with nylon net to protect from further damage.

# Recent Publications

## 2022

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# Recent Theses

## PhD Theses

### *Fibres in Heritage Objects Identification and Characterisation by Imaging Techniques*

**Hana Lukesova | The University of  
Bergen, Norway**

The work presented in this thesis focuses on the identification and characterisation of plant fibres from cultural heritage objects. The main emphasis is on method development (Archaeometry) in the field of optical microscopy. This has been done in three ways: i) Investigating the validity of established plant fibre identification techniques applied to historical and archaeological samples; ii) The development of an identification method for a hitherto little-regarded textile plant fibre species and iii) Application of the identification methods on cultural heritage objects.

The thesis consists of five articles that are divided into the three categories listed above. The first category covers the overall methodology of how to adapt methods, that were developed for investigation on modern fibres, on archaeological materials. This is discussed in one separate article concerning questions regarding sampling, correct performing of tests as well as result evaluation of degraded sample materials that are in many ways different from the modern ones. The second article focuses on two features that have been used for the identification of fibres: the cross-section shape and the lumen shape. The application of these two features, in the investigation of cultural heritage materials, was re-evaluated. It was concluded that they cannot be used on their own as distinguishing features for plant fibres.

The material resources of ancient societies differ from the modern ones. Not only the species used for commercial fibres in modern times were used for textile production in past. The identification diagrams, derived mainly from industry and forensic science, are depending on relevant species. If species that were used in the past are not included, the diagrams cannot be correct. The research area for future studies is therefore huge. The second category aims to diminish this discrepancy and focus on the development of an identification method for the (in a textile context) little-regarded species hops *Humulus lupulus*. This work is presented in a method article, where a new identification diagram, including hops, can be found. According to various written sources, hop fibres were used for textiles in Scandinavia. This was confirmed in an experimental study which is a part of the third category, concerning the application of identification methods on cultural heritage objects. Here, in one article, the recently developed identification diagram for plant fibres, which includes the hops species was applied on historical textile samples, with results confirming that hops were used for textiles in past. The second article was about the modified Herzog test applied on degraded Viking Age and Merovingian Period objects from the Late Iron Age Collection of the University Museum of Bergen. The results showed that flax (*Linum usitatissimum*) was used for undergarments as well as small textile accessories at this time in western Norway.

Lukesova (2021) *Fibres in Heritage Objects: Identification and Characterisation by Imaging Techniques* The University of Bergen, Department of Physics and Technology

<https://hdl.handle.net/11250/2770227>

## *The Glass Dress. A Conservation Story in the Deutsches Museum*

**Charlotte Holzer | Technical University of Munich, Germany**

Handmade glass fibres in textiles are a rarity among artificial fibres and also in museum collections. The material has a fascinating shine, but is brittle, sharp-edged and sensitive to moisture. It is all the more significant that parts of a glass fibre dress from 1893 are preserved in the Deutsches Museum in Munich. Its rarity and precarious condition prompted the conservation of the fragile piece to be undertaken. The practical work was preceded by interdisciplinary investigations into the object history, the context in which it was made, material properties, damage and conservation methods, as well as a comparison with 34 glass fibre textiles from other museums. This contextual information, as well as the illustrated damage glossary, the treatment plan, the catalog of the examined textiles, and the transcription and reproduction of original French patents contribute to the fact that the present volume represents a comprehensive basis for future research and conservation projects on glass fibre textiles. Also of interest is the story of the dress itself, which was exhibited with two similar pieces at the Chicago World's Fair before it came into the possession of the Spanish Infanta Eulalia and finally into the Deutsches Museum.

### RESEARCH

<https://www.deutsches-museum.de/en/forschung/projekte/translate-to-english-detailseite/desscode-glasfaser>

### PUBLICATION

<https://www.deutsches-museum.de/museum/verlag/publikation/das-kleid-aus-glas>

### SPECIAL EXHIBITION

<https://www.deutsches-museum.de/museumsinsel/ausstellung/dresscode-glasfaser>

## *Masters Theses 2022*

*An Exploration in the conservation of Elastic and Elastane Materials: Ageing, treatments, and storage*

**Vanessa Bray | University of Melbourne, Australia**

Costumes by Akira Isogawa, created for four productions with the Sydney Dance Company; Salome (1998), Air & Other Invisible Forces (1999), Ellipse (2002), and Grand (2005), are held in the Arts Centre Melbourne Collection. An ATR-FTIR and condition survey were planned to assess condition and materials contained in the Akira collection. Upon initial observation it was evident that the collection contained many types of degraded elastic. Some costumes were formed almost entirely of elastic, others formed over elastic support fabrics, or incorporating elastic threads within the manufacture. Over time the elastic has become brittle, distorted and is unable to be stretched or worn, or placed on a mannequin for photographs or display. The thesis adapted to explore degradation in elastic, ideal storage and possible treatments to re-soften degraded elastic.

UV photo oxidation and thermal ageing tests (High RH, Low RH and Low Oxygen) were undertaken on 9 types of elastic samples. The elastics chosen represented the main forms of elastic; knitted, braided, woven, ribbed non-roll, clear mobilon tape, silicon non-slip, threads and rubber. Despite conservation literature consistently mentioning that contemporary elastane's are made of polyurethanes in reaction with either esters or ethers, only two of the 9 types of elastic tested were found to be clearly polyurethanes. The other elastics were some of the other 24 main types of synthetic rubbers.

ATR-FTIR, XRF and Colour Spectrometry, as well as pH, visual and mechanical assessments were undertaken on the samples.

Results partially link the transition metals used in the formation of the elastic with the short lifespan and rapid deterioration of elastic materials in certain environments. Low Oxygen environments were also found to be unpredictable and often had a surprisingly negative effect on the samples.

A literature review on elastane materials in conservation, along with results and observations from the experiments undertaken, provide an outline for the ideal storage of elastic and elastane materials to prevent rapid deterioration.

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### *Examining Orvus WA Paste Rinsability and Residues on Wool and Cotton*

**Annabelle Camp | Winterthur / University of Delaware, U.S.A.**

Orvus WA Paste, composed primarily of the anionic surfactant sodium lauryl sulfate, is one of the most common surfactants utilized by North American textile conservators in wet cleaning. Its affordability, effectiveness, and biodegradability have contributed to it being relied upon by conservators for decades. Despite its widespread acceptance, minimal research on Orvus has been conducted. No prior research on the effects of Orvus residues on cotton or wool, commonly wet-cleaned fiber types in North American conservation labs, exists within conservation literature.

When bathing a textile with Orvus, the rinsing process is typically the most time-consuming step. Common practice is to rinse the textile in a series of baths and running rinses until the bathing water passes a “shake test” to suggest no surfactant remains. Typically, rinsing is continued even after a shake test is successfully completed to ensure that no surfactant residues remain. This is both time consuming and requires significant amounts of water.

This study was designed in part to determine whether the emphasis on rinsing and associated water consumption is founded. Despite the widely-accepted emphasis on rinsing, there is currently no comprehensive understanding of how fiber type affects Orvus rinsability or how

any remaining surfactant residues will affect the textile’s long-term preservation, if at all. This study examined the comparative rinsabilities of Orvus on undyed cotton and wool, as well as the long-term effects of Orvus residues on these two materials, using accelerated aging, colorimetry, tensile strength testing, vertical wicking tests, and scanning electron microscopy before and after aging. The findings suggest that Orvus residues from bathing with a 1% (w/v) solution are innocuous on cotton and wool. If confirmed by further research, this could impact the environmental and financial sustainability of textile wet cleaning.

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### *The Efficacy of Anoxic Storage for Automobile Tire Rubber*

**Kris Cnossen | Winterthur / University of Delaware, U.S.A.**

**CO-AUTHOR: Dr. Rosie Grayburn | Associate Conservation Scientist at the Winterthur Museum Garden & Library, and Affiliated Associate Professor at Winterthur/University of Delaware Program in Art Conservation**

Anoxic, or oxygen-free, environments can help in the long-term preservation of rubber. However, the implementation of anoxia is sometimes forgone due to concerns of sustainability and feasibility, especially if the rubber object is large. The question of whether anoxic storage is an effective preservation storage solution for tire rubber is explored through comparing the condition of artificially aged automobile tire rubber stored with AGELESS® oxygen scavenger and without. Condition is assessed through visual examination, two methods of headspace SPME-GC-MS, and liquid extracted GC-MS. Some of the data demonstrates that anoxia did have an effect on the tire rubber. This study helps establish an experiment that can be repeated to create a greater wealth of data on the efficacy of anoxic storage for rubber.

## *The Costume Collection of the Tasmanian Museum and Art Gallery, 1780s –1920s: A collection assessment*

**Freya Harrington | University of Melbourne, Australia**

The past two decades have seen museum costume/fashion exhibitions become some of the most visited around the world, their popularity coinciding with rising public and professional interest in fashion/dress history. However, this trend has yet to be taken up by many Australian museums, to the potential detriment of their fashion collections. This thesis provides a timely window into the contents, significance and preservation needs of the early half of the Costume Collection at the Tasmanian Museum and Art Gallery (TMAG), Hobart, which includes items dating between the 1780s and 1920s. To do so, it uses a participatory action research methodology to conduct a collection survey, significance assessment and preservation needs assessment. Similar to its sister collection at Narryna Heritage Museum, Battery Point, the Collection was found to be a little-known stronghold of historic and aesthetic significance. It's rare features, including local garment labels, pre-1850 European-Australian clothing, links to historically significant people and places, and menswear, give it national value. However, a lack of investment in staff with the specialised knowledge to preserve and manage the Collection and its preservation places it at risk.

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## *Plastic Fantastic: Conserving Polymer-based Materials in Textile and Accessories Collections*

**Phoebe Ignatia | University of Melbourne, Australia**

Polymer-based materials are used extensively in the production of modern textiles and accessories. These materials present a significant problem to museum collections because: they are increasing within collections;

each polymer type has its own preservation needs; they are hard to identify via visual assessment alone; can deteriorate rapidly with little or no warning; and a standardised approach for their conservation is not yet developed. This minor thesis explores what is known about polymer-based materials in textile collections, their degradation and conservation through a literature review.

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## *Polyvinyl chloride and rubber in fashion – Conservation of 20th century raincoats made of soft polyvinyl chloride and rubberized fabric*

**Deborah Heinrich | Technical University of Cologne, Germany**

Soft PVC films and rubberized fabrics are now a common component in textile collections and raise new challenges for textile conservators. These modern materials are among the most fragile plastics in museum collections due to their low material thickness and the chemical instability characteristic of polyvinyl chloride (PVC) in particular.

In order to approach the treatment of textile objects made of modern materials, five raincoats made of soft PVC and rubberized fabric are examined regarding their manufacturing methods and materiality, and concepts for museum storage are developed. These were provided by the LVR Industrie Museum and the Deutsches Kunststoffmuseum e.V.. This thesis focuses on cleaning two soft PVC coats soiled with extinguishing water. To develop a cleaning concept, a series of tests based on various measurement methods (among others FTIR spectroscopy and gloss measurement) was carried out.

# Masters Theses 2021

## *Digital Visualisers and Their Uses in Textile Conservation*

**Asgrimur Einarsson** | University of Glasgow, UK

This dissertation reports on the practical and possible uses of digital visualisers in textile conservation. Digital visualisers are a new tool in textile conservation that may come into widespread use within the heritage sector. Three individual digital visualisers were used in a practical trial where instructional dye manuals were used as objects. A documentation and condition assessment of fabric samples within the instructional dye manuals was performed using the digital visualisers and the results compared to conventional documentation. The results suggest that digital visualisers can be used in this way in textile conservation, but that more comprehensive research is needed to verify in what ways the two practices differ. Additionally, colour measurements were taken with photo editing software from digital photographs extracted from the digital visualiser recordings and compared to colour measurements taken with a spectrophotometer. This was done to establish how colour recording of digital visualisers compares to human colour perception. The results revealed a considerable difference in colour measurements, primarily due to differences in  $\Delta L^*$ , which emphasises the importance of appropriate illuminants and lighting setup for digital visualisers. It was concluded that digital visualisers are a promising tool, but need to be researched further.

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## *Conditional Confusion: Determining the Impact of Format and Bias on Variations in Condition Reporting*

**Beth Gillions** | University of Glasgow, UK

Condition reporting is an activity commonly carried out across the heritage field, enabling the ongoing monitoring of objects, sites, or collections to facilitate preservation, inform conservation treatments, and evidence ethical collections care. Condition reporting is a multi-stage process whereby observations are made and information conveyed so that it can be used at a later date. This paper investigates how consistently words are used and comprehended across the wide range of heritage practitioners who carry out condition reporting. Variations in communication and comprehension of words used are shown to potentially limit how accessible and usable condition reporting documentation can be, thereby weakening its efficacy as a preservation tool. Patterns, causes, and extent of inconsistencies in word use within condition reporting are identified through reviews of previous literature and a survey investigating existing practice across the heritage field. The relationship between words and meaning was explored, and factors identified which influence the way words are used within condition reporting in practice. Format of report and practitioner bias was shown to have a significant and complex interrelated impact on how consistently condition information is communicated and comprehended as a result of differences in practitioner role and material specialism.

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*In what ways are the tangible and intangible aspects of Colours preserved?*

*A comparative study exploring the approaches of the National Army Museum, the Royal Scots Museum and St Paul's Cathedral in the care and preservation of Regimental Colours.*

**Catherine Harris | University of Glasgow, UK**

This dissertation aims to explore the ways that the tangible and intangible aspects of Regimental Colours are cared for and preserved by comparing the approaches of the National Army Museum, The Royal Scots Regimental Museum and St Paul's Cathedral. Despite the Queen's Regulations that govern the care of Regimental Colours, the ways Regimental Colours are cared for and preserved often depends on context. If owned and displayed in a Church or Cathedral, their care is often guided by the regulations of 'laying up', whereas museums are predominantly governed by museum standards and conservation practices with a greater focus on preserving both the tangible and intangible aspects of cultural heritage. Regimental museums, on the other hand, usually maintain a close relationship to the infantry regiment whose Colours are 'laid up' in the museum and who decide on care and preservation. Subsequently, letting Regimental Colours fall to dust is open to interpretation and context, as well as perspectives and meanings of preservation. Furthermore, the research aims to provide historical context to Regimental Colours and the protocol of 'laying up' in perpetuity. As an outcome of the project, a decision framework for conservation and heritage professions is proposed to facilitate decision making when working with Regimental Colours.

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*The Conservation and Technical Study of an Early 20th Century Opera Coat*

**Heather Hodge | SUNY Buffalo State, U.S.A**

A ca. 1925 opera coat, made by Tegler, Inc. in Buffalo, New York, was the focus of a three-pronged study: a structural conservation treatment, a technical study, and research into turn of the 20th century dressmaking shops. The opera coat is composed of green velvet with extensive embroidery along the hem and sleeve cuffs in various yarns, sequins, and beads, a lining of silk and metallic fabrics, and a fur trimmed collar. The characterization of these many materials was performed using Fourier-transform infrared spectroscopy, high performance liquid chromatography, multi-modal imaging, and X-ray fluorescence spectroscopy. Understanding the chemical and physical properties of the various components on the coat aided in determining the treatment methodology as well as providing valuable historical context. The treatment allowed for future mounting and exhibition of the coat and consisted of stabilizing weak and vulnerable areas, particularly tears and holes in the lining fabrics, detached areas of the fur trim, and loose sections of beadwork. Background research examined the dressmaking shop, Tegler, Inc., and its owner Esther Tegler. The history of dressmaking shops during this time is summarized and provided context for the Tegler shop, which produced high end ready to wear garments for the wealthy, while also offering custom millinery services to clients. Conservation and analysis of the opera coat allowed for a deep exploration into historic materials and garment making and the opportunity to provide a richer understanding of the lives, training, and circumstances of the original makers.

In the present work a part of the textile find was examined and documented -the 15 tablet woven bands and 2 samit wovenbands. Based on the results from the examination an educational video was created, which was designed for the future exhibition of the bands in the LVR-Landesmuseum Bonn.

One focus of the work is the reconstruction of the original appearance of the bands in the documentation and in the video for the exhibition in the form of pattern drawings and the reweaving of a tablet woven band.

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### *All that glitters is not gold: the conservation and morphology of paperbased metal threads*

**Callista Jerman | University of Glasgow, UK**

Metallic embellishments have been added to textiles for thousands of years, in the shape of gilded leather, precious metal wires, spangles, sequins, and beads. The presence of metallic elements, particularly composite materials such as gilded paper and gilded leather make conserving these objects challenging, as the different elements will not have consistent responses to conservation treatment. In order to further understand the reaction of East Asian paper-based metal threads to water-based conservation treatments, practical testing was paired with chemical analysis to determine how 19th Century Chinese threads were made and if that influences their sensitivity to water. While there seems to be a correlation between the appearance of these threads and their composition, that has little impact on their behaviour when exposed to water, suggesting that further practical research and testing will be more productive than analytical instrumentation.

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### *The borders from the grave of Siegfried von Westerburg († 1297) in the Bonn Minster.*

### *Investigation, documentation and development of a mediation contribution*

**Mirjam Kaufmann | Abegg-Stiftung, Switzerland**

The subject of this work are the textile finds from the grave of Siegfried von Westerburg (Archbishop of Cologne from 1274-1297). 650years after his burial in the Bonner Münsterhis grave was opened during excavations in 1947 and several textile fragments were found.

In the present work a part of the textile find was examined and documented -the 15 tablet woven bands and 2 samit wovenbands. Based on the results from the examination an educational videowas created, which was designed forthe future exhibition of the bands in the LVR-Landesmuseum Bonn. One focus of the workis the reconstruction of theoriginal appearance of the bands in the documentation and in the video for the exhibition in the form of pattern drawings and the reweaving of a tablet woven band.

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### *A 1950s cocktail dress with petticoat from the Museum für Angewandte Kunst Köln: comparison of sewing and adhesive technologies for restoration*

**Leonie Korte | Technical University of Cologne, Germany**

The master's thesis discusses the results of the examination of a cocktail dress and the matching petticoat from the Museum für Angewandte Kunst Köln (Museum of Applied Arts, Cologne, Germany). Both items are placed into the proper context of origin, and their material properties, production techniques and state of preservation are documented.

Since there is evidence of contamination with chlorine-containing biocides, its possible causes and dangers are explained. This is followed by a description of the measures taken for the conservation of the dress and of the process of concept development for the treatment of the petticoat. For this purpose, two sewing methods and two adhesive techniques using BEVA® 371 are juxtaposed evaluated and interpreted within the framework of a material test in the form of uniaxial tensile testing.

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### *A Sartorial Puzzle: Conserving a Worth & Bobergh Ensemble for Displays*

**Kristin Purtich | Fashion Institute of Technology, NY, U.S.A**

In 2018 a rare surviving example of the early work of Charles Frederick Worth was donated to Los Angeles' FIDM Museum, in more pieces than the ensemble's original five garments. This changeable silk ensemble's upcoming display has prompted a conservation campaign to restore the garments to a state mountable on a mannequin and legible to museum visitors, and this paper offers a discursive expansion on a condition report and treatment proposal for the project.

A thorough description of the ensemble's components at the time of their examination in January 2020 includes both microscopic analysis of the garments' materials and a detailed examination of the ensemble's construction. The ensemble is then triangulated among extant fashion media and related garments, in order to confirm the designer attribution, the date of manufacture, and the articulation of the garments on a body. The condition of each component is assessed, informed in part by direct comparison with Worth & Bobergh ensembles in several other American collections. The resulting treatment proposal weighs options not chosen for practical and ethical reasons, seeking to balance the short and long term goals of exhibition and preservation.

The paper's appendices include a timeline of extant Worth & Bobergh garments and a set of scale drawings of all components of the FIDM Museum ensemble. The latter represents one of several investigative techniques motivated by the interruption of the COVID-19 pandemic. Lockdown-related delays proved both frustrating to this project—as physical access to the garments was limited—and fruitful—as restrictions inspired more creative and more experimental approaches to analysis that will be incorporated into the ensemble's exhibition in 2022. Drawing upon precedents established by the FIDM Museum and by other institutions, this paper concludes with projections for the exhibition, including possible ways for the Museum to interpret the conservation process for its visitors

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### *Felt - textile material of contemporary art. Change of material and conservation concept*

**Vanessa Schmitt | Technical University of Cologne, Germany**

The present master thesis is dedicated to the material felt in contemporary art. Based on two case studies “Atheismus” (2007) by Rosemarie Trockel in the Kunstmuseum in Bonn and “Untitled” (1967) by Robert Morris in the Kunstsammlung NRW in Düsseldorf changes of the material caused by pest infestation and continuous tensile loading are described and discussed.

After examining the materials, techniques and biographies of both objects the condition is documented and evaluated. Possibilities for the conservation of felt with holes as well as stretched felt are developed and assessed. The conservation methods include sewing and adhesive techniques which are tested with uniaxial tension tests and a creep rupture test. As a result, conservation concepts are presented for both objects considering the artists intentions. The most successful technique was executed in case of “Atheismus” (2007) as a test field.

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*Textile evidence from Egyptian tombs TT95A and TT95B. A statistical analysis of the assemblage of funerary objects*

**Nadine Schönhütte | Technical University of Cologne, Germany**

Textiles are an essential element of the pharaonic funerary tradition and provide a wealth of information on dating, social status and mummification practice. To investigate complex research issues, it is important to study the entire corpus of textiles from a tomb. The thesis presented here aims to develop a systematic and efficient method for recording large quantities of textiles based on a case study: some chambers in Tomb TT95 (Thebes, Luxor), the contents of which have been dated to the 18th Dynasty and the Third Intermediate Period. These recorded textiles were examined with descriptive statistics and subsequently compared with other sites.

*Elastane-based Swimwear of the 1960s, 70s, and 80s from the LVR Industrial Museum in Oberhausen - Investigation of the Aging Properties and Characteristic Damage Patterns*

**Susanne Schumann | Technical University of Cologne, Germany**

The present study aims to examine the ageing properties and characteristic damages of polyurethane elastomeric fibers from a conservational perspective. The research focuses on the systematic condition assessment of a collection of swimwear containing polyurethane elastomeric fibers at the LVR industrial museum. Visible damages were documented and classified using an incident light microscope. The fiber subtypes were determined through IR spectroscopic analysis and identified as the cause for the diversity of the damage. In addition, naturally aged and recent fiber samples without relation to the collection were examined microscopically and subjected to chemical detection reactions.

The objective was to evaluate methods for detecting fiber damages and to differentiate between fiber subtypes. The study presents storing recommendations for the collection and describes and discusses the difficulties of exhibiting objects containing elastane.

*Assessing the potential of analytical techniques for archaeological textiles*

**Signe Marie Thøgersen | University of Glasgow, UK**

This dissertation examines the degree to which the non-invasive, low cost, handheld Dino-Lite USB microscopes are useful for imitating multispectral imaging (MSI) for the documentation and investigation of archaeological textiles at the Kelvin Centre but Conservation and Cultural Heritage Research (KC). The investigation is carried out by means of a literature review with specific focus on MSI of archaeological textiles followed by documentation of selected archaeological textiles in order to identify specific features of interest for MSI.

Images of the identified features are captured using the Dino-Lite microscopes with ultraviolet (400nm) and infrared (940nm) reflected light as well as ultraviolet-absorbance light (290-400nm) and a protocol is developed.

It is concluded that the Dino-Lites have the potential to reveal specific features of and identified areas relevant for targeted sampling strategies, on par with what can be seen with more sophisticated equipment. This is confirmed via a comparative evaluation between the Dino-Lites and multiband imaging (MBI) using an infrared reflectography (IRR) Apollo Camera (900-1700nm). The significantly lower prices and their easy set-up and use, make the Dino-Lites accessible to a wide range of museum professionals. It is hoped that this dissertation will empower textile conservators to explore the equipment, thus further adding to the research needed an MSI of textiles

## *A preliminary investigation of the use of wet cleaning to reduce starch finishes in historic textiles*

**Anna Frances Robinson | University of Glasgow, UK**

Despite their consistent use throughout the past 500 years of European/ Western laundering and textile manufacturing practices, there has been very little discussion around starch finishes for textiles in conservation. While a few recent articles have touched on the subject of starch-finished textiles, there remains limited options for reducing starch finishes in textiles aside from the use of the enzyme  $\alpha$ -amylase. This paper reports on research conducted into the potential for pre-soaking followed by conservation wet cleaning to reduce starch finishes in historic textiles. It includes a brief history of starch use in textiles; a review of conservation literature relevant to starch finishes; a survey of current conservation practices for treating starched textiles; and a description of the preparation, execution, and findings of an experiment testing the effectiveness of pre-soaking and wet cleaning starch-finished textiles. Overall, this research has found that wet cleaning, with or without the use of pre-soaking can be effective in reducing but not fully removing starch finishes from textiles. In addition to this, it can be concluded that further research into starch finishes and methods for treating textiles with starch finishes is needed in the conservation field.

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## *Colour and dyes: a preliminary attempt of adopting computer aided colour matching (CCM) system in conservation dyeing*

**Yufei Xiang | University of Glasgow, UK**

Colour and dyes are essential features that closely associated with textile objects and their conservation practices. This dissertation conducts a brief review regarding the colour measurement, colour matching, and colour reproduction methods in both textile conservation field and textile industry,

with the aim to improve the working efficiency and the quality of dyeing by adopting computer aided colour matching (CCM) system for recipe prediction.

A simplified experiment was designed with three basic colour, to form a set of single dye database with samples dyed at different concentrations. Colour data measured by portable spectrophotometer then analyzed to examine the quality of dyeing and investigating in other significant factors in the measurement process.

Although limited time and resources prohibited the process of recipe prediction and colour reproduction, the results suggest the database is worth further investigation as the quality of manually dyed samples is acceptable while the concentration of dyes and measured colour data forms a linear relationship as expected. More research needs to be done and collaboration with scientists from other research discipline like computer science and professional dyers work in textile industry could be beneficial.

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## *Piecing It Together: Analysis and Treatment of a Painted Silk Flag*

**Katya Zinsli | SUNY Buffalo State, U.S.A**

Painted flags and banners lie at the intersection of painting and textile conservation. The 37th New York Volunteer Infantry Regiment's battle flag from the Civil War presented challenges and advantages of bridging the two disciplines by providing an opportunity for study and experimentation for a graduate student from the Patricia H. and Richard E. Garman Art Conservation Department at SUNY Buffalo State College. This study was conducted to better understand the materials and degradation products present in a painted Civil War flag, which then informed the subsequent treatment of said flag. By characterizing the materials, the severe damage in the painted areas on the silk was explained. Overall, areas of the flag were documented with multi-modal imaging (MMI) and observed using microscopy on cross sections.

The elements present in the silk and the paint were identified using a combination of x-ray fluorescence spectroscopy (XRF) and scanning electron microscopy (SEM). Fourier-transform infrared (FTIR) spectroscopy identified components of the paint and silk. Raman was used to further identify pigments where FTIR was inconclusive. Pyrolysis gas chromatography mass spectrometry (py-GC-MS) was used to confirm the identity of organic materials within the painted regions. The conservation treatment of the flag was dominated by experimentation of techniques to establish a workflow, so future students may be able to complete the treatment. The milestones achieved as of the date of this thesis include successfully unfurling and flattening the flag with the aid of humidification, providing recommendations for future humidification, and establishing treatment protocols for stain reduction, efflorescence reduction, and consolidation.

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## *Masters Theses 2020*

### *The Material Study and Conservation of a Twentieth Century Jacket Worn for LA NEGRERÍA Fiesta in Peru*

**Jane Baraz | Fashion Institute of Technology, NY, U.S.A**

This paper consists of a historic overview, material assessment, and conservation treatment of a jacket component of a La Negreria fiesta costume from the central highlands of Peru. La Negreria, which continues to be organized by communities throughout Peru in present day, serves a dual purpose of Christian devotion and commemoration of the abolition of slavery in Peru in the mid-nineteenth century. Likely created in mid-twentieth century, this heavily embellished jacket was created in an enduring craft tradition which has not been extensively written about in art historical or conservation literature. The jacket, owned by a New York-based textile collector, contains a variety of embroidery techniques, including the high-relief alto relieve technique, which brings a bolder, more dimensional appearance for the vividly colored motifs. The treatment of this jacket provided stabilization of extant embroidery, decorative trim, and other embellishments. A combination of conservation stitching, and adhesive application were used to allow the jacket to be handled safely. Combining historical research and conservation, this paper contributes to the growing amount of information about the history, creation, and preservation of La Negreria costume.

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*Le Tele di Anna. Documentation, cataloging and analysis of the remains of the funeral vestments of Anna Catharina Bischoff (Strasbourg 1719 - Basel 1787)*

**Natalia Boncioli | Abegg-Stiftung, Switzerland**

The aim of this experimental thesis is to understand what Anna Catharina Bischoff (Strasbourg 1719 – Basel 1787) was wearing in her coffin at the moment of her burial, through the study and analysis of the textile remains. The title of this work refers to the textiles analysed during this thesis which led to their identification as tabby weave (Italian: tela). In addition to the technical analysis of the textiles and their fibres, it was also possible to acquire significant information through diagnostic exams such as SEM, FTIR, dye analysis, toxicological studies and microbiological analysis, which have proved to be useful tools to better understand the remains.

Moreover, through the research and the conservation works that have been carried out, such as controlled vacuum cleaning, and the cataloguing of the remains, it was possible to ascertain the vestments contained in the coffin: a skirt, a shirt, an upper garment, a shroud, a pair of stockings and a bonnet.

Due to the complexity of the textile remains, priority was given to the understanding of the skirt worn by Anna Catharina Bischoff.

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*Light on the conservation-restoration of a small children's chair for the Imperial Prince. Comparison of the effectiveness of different semi-transparent textile protections (interior blinds) against various light radiation*

**Lydiane Farnault | Institut de Patrimoine, Paris, France**

This thesis is dedicated to the study and conservation of a child's chair, created between 1856 and 1863 for the Prince impérial. Through the ages, the chair belonged to four different owners. Among them, doctor Ferrand first displayed it in the Empress Museum at Pierrefonds castle, then donated it to Compiègne city council, which kept it at the Empress Museum in Compiègne. The chair has been kept on display since 1951 and has suffered from irreversible light damage. This is why we decided to dedicate our scientific study to a comparison between various see-through textile blinds, used as a protection against light rays. The main conservation treatments consisted in consolidating the silk velvet, applied satin embroideries and trimmings. This intervention assured the alterations were stabilized and appeared more discreet, blending in with the original fabric, in order to provide a better understanding of the chair's décor.

## *Conservation of a Debutante Gown Designed by Howard Greer*

**Kaelyn Garcia | Fashion Institute of Technology, NY, U.S.A**

This qualifying paper presents the history and conservation treatment of a debutante gown, designed in 1955-56 by Howard Greer, from the collection of the Philadelphia Museum of Art (PMA, Gift of Susan Ravenscroft, 2015-161-1).

Howard Greer (1896-1974) was an American costume and fashion designer who had a prolific career where he found success designing for film, private clients, and the fashion industry. Greer began his career as an apprentice with Lady Duff Gordon (Lucile) where he drew inspiration from her techniques, aesthetics, and her business model. Compared to his contemporaries (Adrian, Travis Banton, and Edith Head) there is limited scholarship on his career and work. This paper will explore Greer's career and illustrate his contributions to the fashion industry, specifically the ready-to-wear market. This dress is an excellent example of the "New Look" Dior introduced to the fashion industry in 1947, that ushered in the 1950s silhouette. The construction shows both readymade and hand applied techniques, that were instrumental in setting Greer apart from other designers who were adventuring into the ready-to-wear market.

The conservation treatment of this debutante gown included multiple conservation methods including agarose gels for stain reduction, and the use of custom dyed underlays and conservation stitching. Hand and machine-made lace techniques were explored to understand lace structures and source the appropriate material for visual compensation of the lace overlay. Through research and conservation analysis this paper explores the complexities of treating a composite object with lace elements.

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## *"The Arlesian revealed." Study and conservation-restoration of an 18th century printed falbalas droulet and a matching skirt*

**Bathilde Grenier | Institut de Patrimoine, Paris, France**

This thesis is dedicated to the study and conservation of a late eighteenth century printed cotton dress, belonging to the Musée des arts décoratifs. The dress is made of two pieces: a petticoat and an open gown, whose cut is highly unusual. It was identified as a "droulet", from Arles.

The cotton fabric is scattered with many areas of degradation, all located in areas where a brown colour was printed. There, the fabric is brittle and displays many holes. These result from the ageing of the iron mordant used to fix the colours on the cotton fibres. As the dress was kept in an uncontrolled atmosphere, the mordant corroded. The scientific study was based on treatment options available for papers degraded by iron gall inks. The aim is to provide a treatment inhibiting both corrosion and acidification of cellulose based fabrics, in order to slow down the progress of degradation. Conservation treatments were intended to enhance the dress' mechanical properties, as well as provide a better understanding of its décor. They included a double consolidation: first an adhesive crepeline was added to the back of the fabric, then a cotton plain weave was stitched as a secondary support to the back of each damaged area. Both fabrics were printed with a custom-made silkscreen according to the size and shape of every hole. The dress is to be displayed in three-dimensions, on a fitted mannequin, to recreate its original historical appearance.

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*Of fiber and hair: Study and conservation-restoration of the dress "Toledo" by Paul Poiret 1921.*

**Lisa-Charlotte Lardeau | Institut de Patrimoine, Paris, France**

This master thesis is dedicated to the study and conservation treatment of the 1921 dress named *Tolède*, designed by Paul Poiret and preserved at the Palais Galliera's museum. The dress is made of varied materials : silk, fur, metal, viscose and cotton. The fur is a rabbit skin, alum tanned, with skin and hairs black dyed, probably with oxidation colorants. The dress lining and the furskin are in poor condition. The furskin has been analyzed in order to identify the tannin and qualify the degradation state of the skin. Research has been conducted in order to find a consolidation treatment with adhesives, without any water. The adhesive must fulfill two goals : consolidate, at the same time, the collagen fibers and the delaminated parts of the skin. The conservation treatments used on the textile are numerous. They intend to stabilize the degradation, especially of the lining, in order to allow again the artwork's exhibition.

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*Conservation of the textile sample book Broderies Universelles No. 1082*

**Janet Lee | Fashion Institute of Technology, NY, U.S.A**

Broderies Universelles No. 1082 is a circa 1926 textile sample book filled with embroidery-decorated textile samples in silk and cellulose acetate. Its feminine side-laced binding indicates the delicate textiles contained, many of which are now frayed, detached, and torn due to handling. An efficient marketing tool, Broderies Universelles No. 1082 was used by its Swiss-based manufacturer Sonderegger & Co. to sell its products directly to international clientele.

Currently owned by Special Collections and College Archives (SPARC) of the Gladys Marcus Library at the Fashion Institute of Technology (FIT) in New York City, it is a primary resource that allows researchers to view firsthand the colors, patterns, and materials of circa 1926 afternoon tea and occasion dresses. Conservation was needed in order to stabilize the compromised textile samples and ensure continued access to the sample book without risking further damage to its contents. Similar textile sample books and past conservation treatments on textile sample books were researched to inform the treatment of Broderies Universelles No. 1082. Treatment of the samples were done in situ, necessitating the use of a custom book support and relying on acrylic, cellulosic, and starch adhesives applied as dried films and solutions. The adhesive treatments were successful in stabilizing the compromised samples, and a custom book cradle and enclosure assist SPARC in the safe storage of and continued access to Broderies Universelles No. 1082.

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*Late 19th Century Chinese Ceremonial Armor: Context, Conservation, and Mounting for Display*

**Sara Ludueña | Fashion Institute of Technology, NY, U.S.A**

This paper focuses on the research, conservation, mount-making and long-term storage for a set of late 19th or early 20th century Chinese ceremonial armor held by the Cleveland Museum of Art (CMA). Different from what one typically thinks of as armor, Chinese Qing dynasty (1644-1911) ceremonial armor was designed to have a strong visual impact and was worn for official events like troop inspections and parades. This type of armor, comprised of multiple component parts, is constructed largely of textiles. And although not intended for use on the battlefield, it combines elements of battle armor with those of official court costume to create a new form of dress.

The paper begins by placing Qing dynasty ceremonial armor in context. The historical context for this object type revolves around the establishment of the Qing dynasty when the Manchus breached the Great Wall and invaded China in 1644. This brought about major changes in many areas of life including the implementation of new dress regulations. In addition to the historical context, the paper discusses the functional context for ceremonial armor, from its relation to battle armor to its existence in public and private collections today.

The next few chapters focus on the physical condition and treatment of the CMA's ceremonial armor set. The construction of each component and their primary condition issues are discussed, followed by a detailed description of the scientific analysis and treatment undertaken to ready the armor for display.

The final chapters of the paper describe the design and creation of a custom display mount as well as the long-term preservation considerations for this complex and heavy object. While this armor was slated for display at the CMA in early 2021, that timeline has been pushed back due to the global COVID-19 pandemic.

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*Facing East. The Study and Conservation Treatment of a Child's Garment from the Textile Finds of the Archaeological Site of Assi El-Hadath in Lebanon*

**Jelena Miloradic | Abegg-Stiftung, Switzerland**

The artefact selected for this research and thesis is property of the Direction Générale des Antiquités du Liban (DGA), and is part of the textiles found in Assi El-Hadath.

It was discovered in the course of excavations led by a team of speleologists from the Groupe d'Études et de Recherches Souterraines du Liban (GERSL), conducted between 1988 and 1993 in the Qadisha Valley. The object is a Child's garment, and from the position in which it was found in the burial site, it was attributed to a female body named "Salome". At the time of discovery, the vest was resting positioned between the legs of this mummified body.

The primary focus of this thesis is on the conservation of this object and the research behind conservation decisions. Particular attention is paid to condition assessment and technical analysis of the garment, distinguishing pattern construction and the sewing order, as well as the meaning and function of the object within the context of its discovery. Treatment decisions, notably investigating and choosing the proper colouring matter of supporting fabric are focussed on. A significant segment of conservation research work is devising the appropriate mount, as an important part of both the aesthetic and preventive aspect of conservation. The aim of this work is to select the most appropriate treatment from both an ethical and aesthetic point of view. Keeping in mind the constraints and limitations of conservation actions, which aim to stabilise the object though with an emphasis on reversibility of the procedures, it strives to emphasize how conservation has retained the important information about the object, that would allow for a better understanding of its function and meaning within the historical context.

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*The Challenges of Conserving  
Garments on a Permanently  
Dressed Sculpture: Duane  
Hanson's Baton Twirler (1971)*

**Lauren Posada | Fashion Institute of  
Technology, NY, U.S.A**

The hyper realist works of sculptor Duane Hanson (1925-1996) present a unique set of challenges to the conservator. These life-size composite figures not only have complex material issues, but they present a multitude of ethical and interpretive challenges as well. This paper is an account of the conservation of the costume worn by Hanson's Baton Twirler (1971), owned by Van de Weghe Gallery, NYC. Assessment of the costume revealed that the sequined leotard and armbands, faux fur hat, and white leather boots worn by the figure were soiled, faded, and exhausted from many years of travel and exhibition, marring both the physical and artistic integrity of the work. Research was conducted on Hanson's artistic practice and use of materials, as well as on past treatments of his works in museum collections, focusing specifically on the handling of the garments and accessories worn by the figures.

Papers published in scholarly journals, museum blogs, and direct communication with conservators all helped to inform the development of an appropriate treatment protocol for the Baton Twirler costume.

The final section of this paper discusses the resulting conservation of the Baton Twirler costume. Treatment involved surface cleaning and stabilization and concluded with the design and construction of custom covers and storage mounts to protect the figure and its costume elements from future damage and deterioration.

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*Jacques Doucet and the Libbey  
Dolls: The History and  
Conservation Treatment of the  
Libbey Doll Collection at the  
Toledo Museum of Art*

**Marissa Stevenson | Fashion Institute  
of Technology, NY, U.S.A**

Lovingly revered and often inquired about, the Libbey Dolls have been a part of the Toledo Museum of Art (TMA) collection for over 100 years. Created in 1915, the Libbey Dolls, as the visitors nicknamed them, were purchased by the museum founder and glass pioneer, Edward Drummond Libbey and were donated to the museum to teach about historic characters and dress. Led by prominent Parisian couturier, Jacques Doucet (1853-1929), the House of Doucet created the elaborate garments derived from French works of art and fashion publications by famous French artists like Gustave Moreau, Nicolas Lancret, and Philibert-Louis Debucourt depicting French fashion from 1763 to 1915. Since their acquisition, the Libbey Dolls have been an immediate visitor favorite and a nostalgic touchstone in the history of the Toledo Museum of Art, though there was little information about the collection. As beloved objects, the 78-figure collection remained on permanent view from acquisition 1917 to 1974 when they were removed due to their inherently fragile nature and placed into storage. The Libbey Dolls are three-dimensional objects of dissimilar materials that present conservation challenges demanding a multi-faceted approach to treatment and long-term care. Since the collection is vast, one doll with the most severe condition issues, Parisienne of 1763 (1917.636), was selected to serve as a conservation treatment case study for the remaining collection. Due to fluctuating environmental conditions prevalent in early to mid-20th-century museums and inherent vice, Parisienne of 1763 (1917.636) has significant signs of degradation. Therefore, the goal of treatment was to stabilize the garments as well as question and address the complexities of conservation treatment on complex, three-dimensional objects that have been subjected to long-term display.

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## *Context and Conservation: The Study and Treatment of a Tapestry-woven Medieval Aumônière from the Cathedral of Como, Italy*

**Kristal J. Hale | Abegg-Stiftung, Switzerland**

A 13th – 14th century aumônière preserved in the treasury of the Cathedral of Como was presented to the Abegg Stiftung for conservation. Because the object had been stored folded in a silver chest since 1586, creases had formed throughout its surface. The linen lining that helped form the shape of the aumônière also held the creases with tenacity, causing distortion of the object, endangerment of the fragile silk threads and obfuscation of the unique tapestry-woven figurative depictions. Due to the multifaceted nature of materials used in this object, including membrane metal threads, vibrantly dyed silks, starched linen cloth, an iron opening-ring and brass and/or bronze chain links attached to a pendant of the same material, an adaptive conservation strategy was devised. Research into the various components of the object, scientific analyses and surrogate tests aided in the formation of a conservation approach. To establish an appropriate treatment, various humidification procedures were considered and surrogate tests performed on a reconstruction of the object. A minimally invasive humidification treatment was tailored to meet the preservation requirements for silk, while mitigating risks of oxidation and corrosion of the membrane metal threads and iron ring. Finally, the damaged areas were protected with silk crepe-line and a support form was made to prevent future distortions of the aumônière's surface in case of fluctuations in relative humidity.

Due to the cooperation of the Ministero per i Beni e le Attività Culturali (Direzione Generale Archeologia, Belle Arti e Paesaggio), the Diocesi di Como, the Chiesa Cattedrale di Como and the Abegg-Stiftung in Riggisberg, Switzerland, this medieval aumônière could be studied and preserved.

The investigation and conservation of this precious aumônière has brought fascinating details of its medieval past to light, while preparing it for exhibition in a future museum that will house treasures from the Cathedral of Como.

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## *Masters Theses 2019*

*Cleaning, an irreversible measure. Investigations and reflections on the purification of a Tibetan silk kaftan from the 7th–9th century*

**Yu-Ping Lin | Abegg-Stiftung, Switzerland**

This master's thesis concerns an in-depth examination of a Tibetan warp-face compound twill (samite weave) silk caftan with a taffeta silk lining from the 7th - 9th century, with the goal of developing and carrying out a suitable cleaning and conservation strategy. Technological investigations were undertaken, and the condition of the object was assessed. Additionally, two hypotheses regarding the caftan's original use were posited. Advantages and disadvantages of dry and aqueous cleaning methods were discussed with the help of material specific information from the caftan. In order to determine possible changes in the surface structure of the samite during cleaning procedures, various experiments were performed. These tests included the elimination of existing creases as well as the potential to form new creases during aqueous treatments. In addition, assessments were made of the removal of gypsum from the lining of the caftan via partial aqueous cleaning. As a final step, tests were conducted to determine the best method for drying a three-dimensional caftan, whose lining and outer fabric are of different woven structures and dimensions. The considerations of these theoretical approaches together with contemplations of ethics and aesthetics allowed for an appropriate conservation decision to be made.

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## *Manufacturing techniques of Peruvian veils from German museum collections*

**Christine Reinecke | Technical University of Cologne, Germany**

This master thesis deals with the manufacturing techniques of Peruvian veils, usually attributed to the Chancay culture. The basis for the study is a serial examination in which 61 objects from ten German museums are analyzed. The subject of the examination are square-mesh-openwork, gauzes and fabrics in combination of plain and gauze weave as well as, if present, the embroidery on these fabrics. The results of the survey are presented both in written form and in the form of technical drawings. Due to the fact that there is still no clear and uniform naming of manufacturing characteristics of these objects, another focus of the master thesis is the development of an exact German terminology.

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## *Animal preparations as cultural heritage? Investigations on Manufacturing, Assembly, Material and History of dermoplastics as well as Conservation options*

**Fanny Röttgen | Technical University of Cologne, Germany**

Dealing with natural history specimens is still a neglected field in the German-speaking region. The specialist division of preparation of natural history specimen and conservation of hide and fur are not exchanging their competences and many questions of treatment are not discussed sufficiently.

The exposition on hand introduces to the complex field of mammalian taxidermy. It shows the differences and similarities of both professions in treatment of animal preparations as well as the benefits of an increased co-operation. Therefore, some examples are given. A historical overview of manufacturing techniques, material usage and skin preservation are given. In addition, various methods of investigation such as light microscopy, X-ray fluoroscopy, X-ray fluorescence spectroscopy, thin-layer chromatography, X-ray spectroscopy, infrared spectroscopy, assignment of shrinkage temperature and detection reactions are exemplarily applied to the head-shoulder-mounting of a common eland from the 'Museum für Weltkulturen' of 'Reiss-Engelhorn-Museen' in Mannheim. The results provide information on the structure, used material, skin treatment processes, biocide contamination and ageing behavior of the dermoplastic. Along with the historical context, first indices to place and time of manufacturing of the object on hand were collected. The conservation treatments represent a first approach and shows possible measures for handling the object in terms of contamination, surface cleaning and filling in tears. Further preliminary tests for the selection of suitable backing materials such as Japanese paper and adhesives such as Klucel, Methocel and sturgeon glue as well as their application methods are included and discussed. These must be adapted to the properties of the object to be restored in order to ensure enough flexibility, adhesion and vapor permeability.

*Approaches for preventive conservation of archaeological textiles in Mongolia based on an example of a textile collection of the National University in Ulaanbaatar*

**Edda Säuberlich | Technical University of Cologne, Germany**

In relation to a Mongolian-German cooperation project an examination with archaeological textile findings took place in Mongolia. On the basis of the local situation and the present findings a concept was developed to preserve archaeological textiles inside the country. Textiles are one of the most fragile components in an archaeological excavation but also an important information medium for archaeological research. Therefore, their careful extrication is highly desirable. With focus on the handling of textile findings during the excavation, further approaches for the first detailed registration in the inherent institutes were introduced. With a collection of textiles from the National University of Mongolia, the developed registration forms were tested, evaluated and adjusted to the local situation. The reconditioning of the collection led to pursuing research in a historic and cultural context.

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All master's theses since 2010 are listed under the website of the Abegg-Stiftung. Please consult:

[www.abegg-stiftung.ch/en/masters-theses-conservation-restoration](http://www.abegg-stiftung.ch/en/masters-theses-conservation-restoration)

## *Bachelor Theses 2021*

*Conservation of Lace - To Conserve and Support Guipure Lace.*

**Amanda Fredriksson | University of Gothenburg, Sweden**

The purpose of this dissertation is to increase knowledge about how to best conserve and support broken bridges in guipure lace, a type of lace that has no net ground. The focus is to investigate what conservation methods and what conservation materials conservators use to support and conserve lace in general. Beyond this, some conservation methods and materials are tested and compared. A personal as well as a professional evaluation are made of the conservation treatments completed, based on aesthetics. A personal evaluation is also made based on the strength and workability of the materials and methods during the conservation treatments. A literature study and a questionnaire establish what methods and materials are commonly used for conservation and support of lace today and in the past. The dissertation does not, however, focus on the most common methods mentioned in the questionnaire and literature, but on the less common ones. The methods tested, focused on the bridges of the lace, to explore if it is possible to support guipure lace without a support fabric in an easy and more aesthetically pleasing way. Two stitching methods, both based in lacemaking, were chosen, and tested with three different threads (cotton and linen thread as well as Mouline embroidery floss). A total of six treatments were undertaken with varying results. However, the results show that it is possible to support guipure lace without using traditional conservation techniques.

<http://hdl.handle.net/2077/69190>

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## **Future contributions**

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