The Grimwade Centre for Cultural Materials Conservation, SHAPS, ARTS

2016 Research Presentations

Thursday 20 to Friday 21 October 2016

Presenting research by Master of Cultural Material Conservation (Minor Thesis) Students and PhD Candidates

Program

The Grimwade Centre for Cultural Materials Conservation gratefully acknowledges the support of The Copeland Foundation in awarding The Alexander Copland Award for the best minor thesis. The prize of $1000 was first awarded in 2013 and will continue for 5 years.
This event is supported by The University of Melbourne, The Grimwade Centre for Cultural Materials Conservation and Student Conservators @ Melbourne.
## PROGRAM OVERVIEW

**DAY 1: Thursday 20 October: Theatre 1, 207 Bouverie Street, Carlton**

### SESSION | TIME | PRESENTER & THESIS TITLE
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**WELCOME ADDRESS**
9.00 AM | **Professor Trevor Burnard**, Head of School, School of Historical and Philosophical Studies, University of Melbourne and **Dr Katherine Kovacic**, Trustee, The Copland Foundation

**THEME: MATERIALS CHARACTERISATION, TECHNICAL DEVELOPMENTS AND TREATMENT STUDIES, CHAIR: PETRONELLA NEL**

1. **9.20** Catherine COLLYER, George Baldessin Three Pears: an investigation into the materiality, history and preservation of a rigid polyurethane ether foam and shellac artwork
2. **9.40** Ruby AWBURN, Working with contemporary artists: An investigation into the degradation properties of popular artist epoxy and acrylic resin coatings on paintings
3. **10.00** Kim A. J. GOLDSMITH, Conserving shoes: A study of synthetic polymer-based materials in modern and contemporary shoe collections at the Powerhouse Museum, Museum of Applied Arts and Sciences (MAAS), Sydney, Australia
4. **10.20** Shannon KLAASSEN, Interrogating the conservation documentation potentials of 3D photogrammetry: A case study of William Ricketts Sanctuary, Dandenong Ranges

**MORNING TEA 10.40-11.00**

**THEME: MATERIALS CHARACTERISATION, TECHNICAL DEVELOPMENTS AND TREATMENT STUDIES (cont), CHAIR: CLAIRE TINDAL(tbc)**

5. **11.00** Julianne BELL, Tea: An alternative adsorbent for the preservation of cellulose triacetate film
6. **11.20** Grace MCKENZIE-MCHARG, Bag it and tag it! Plastic degradation in archaeological storage
7. **11.40** Gabriella Louise YOUNG, An investigation of the effects of current commercial copper polishes have on a metal substrate
8. **12.00** Helen MERRIT, Digital reconstruction of a Late Bronze Age Cypriot Poppy Flask
9. **12.20** Emily CONSTANTINE, Supermarine Spitfire MJ789 – The conservation of a World War II aircraft wreckage at the RAAF Museum

**LUNCH 12.40 – 13.40**

**THEME: CONSERVATION IN THE ASIA PACIFIC, CHAIR: NICOLE TSE**

10. **13.40** Lexi MALLER, Characterising binding media used in Tang Dynasty wall-art
11. **14.00** Bridget HALE, The story of Semar: Exploring the social, cultural, and material significance of the Javanese Wayang Kulit
12. **14.20** Rosie COOK, This is not a kowangan: A case study in community collaboration as conservation of a world culture instrument
13. **14.40** Adele BARBARA, Investigating the efficacy of using microwave treatments to sterilise mould-affected paper
14. **15.00** Amy HEFERNAN, Evaluating earthquake mitigation strategies in Australian and New Zealand museums - are we prepared?
15. **15.20** Suzy LOGAN-MORRIS, Indonesian wind instrument from Aceh Indonesia: Investigation and reproduction
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| 15.40 – 16.00 | **AFTERNOON TEA**  
**GUEST SPEAKER DR Catherine Smith, Visiting fellow, Centre for Materials Science and Technology, University of Otago, NZ**  
16.20 – 17.00 | **Grasping the ephemeral: Methods for extracting cultural data from archaeological textiles**  
**FINISH** | **17.00**  
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## PROGRAM OVERVIEW
**DAY 2: Friday 21 October: Theatre 1, 207 Bouverie Street, Carlton**

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<td>Susie COLLIS: Conservation Action Research: methodological approaches and their value in an Australian context</td>
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ONLINE PRESENTATIONS

Rhonda EMERY, William Williams House in Paihia, New Zealand: Establishing a conservation management plan using best practice for an archaeological ruin

Dominic KING, Indigenous representation and materiality: The condition of indigenous photographic material at The University of Melbourne

Yasmin KOPIJ, A technical investigation of The Ascending Christ (c.1960) by Arthur Boyd

Celeste KUYPERS, Preliminary deterioration study of synthetic papers

Louise Carol SMITH, A stitch in time the discovery, analysis and conservation of an 1870s frock coat

Eva Kristina TAYLOR, Circulating confidence: Why the blockchain is flawed and why we should introduce to combat art fraud anyway

Jessica TAYLOR, Case study: Eastern World, John Olsen and Tom Sanders

Karen WILCOX, Clarifying glass ‘Fogging’ in museum showcases An investigation at the Australian War Memorial, Canberra
**ABSTRACTS AND PRESENTER BIOGRAPHIES (in alphabetical order)**

**Guest Speaker**

**Dr Catherine SMITH**
(Senior Lecturer in the Centre for Materials Science and Technology, University of Otago, Dunedin, New Zealand)

**Grasping the ephemeral: methods for extracting cultural data from archaeological textiles**

**Abstract:** The textile industry is older than pottery, older than agriculture and domestication of animals, and probably consumed more labour in European prehistory than pottery and food production combined (Barber, 1994). The ability to make cordage, or string, from plant fibres is considered a fundamental, cross-cultural aspect of human technology, impacting on human capabilities to adapt to specific environments exponentially (Barber, 1994; Good, 2001; Hardy, 2008). Because of the centrality of textiles to all cultures, archaeological textiles are seen as important sources of cultural information, and their scientific analysis can provide important cultural information relating social boundary, trade relationships, and technological complexity. This presentation will illustrate how the analysis of Māori textiles from New Zealand provides insight into pre-contact lifeways, and the value of using textile artefacts as a source of cultural data.

**Biography:** Dr Catherine Smith is a Senior Lecturer in the Centre for Materials Science and Technology, University of Otago, Dunedin, New Zealand where she teaches cultural aspects of textiles. Catherine is an objects conservator (specialising in objects from indigenous and world cultures) who has worked in cultural institutions and private practice in Australia and New Zealand. She leads a research team who work on conservation science and materials identification projects, and is a member of the Indigenous Science Research Theme at the University of Otago. Catherine is also Principal Investigator of a Royal Society of New Zealand Marsden Fund research project entitled, ‘Dressing for survival and success: what pre-European Māori wore for adaptive realisation’ involving the analysis and examination of the earliest pre-contact Māori textiles, and the development of innovative techniques in provenancing and materials investigation.
ABSTRACTS AND PRESENTER BIOGRAPHIES (in alphabetical order)

PhD Candidates

Name: Leila ALHAGH

Thesis Title: Artistic and literary aspects of “Sad kalamih Shah Vilayat (One hundred sayings by Ali)”: An analytical study of MUL17 (a manuscript from the Melbourne University Islamic manuscript Collection)

Abstract: The Persian manuscript MUL17 that belongs to the Middle Eastern collection of the University of Melbourne library consists of two separate parts bound together as one unit. The first part contains one hundred sayings of a religious authority in Arabic and their translation to Farsi in the form of poetry while the second part has pieces of poetry on the poet’s spiritual experience during the Muslims’ famous pilgrimage “Hajj”. The lavish illumination, illustrated maps, layout and intricate calligraphy are valuable sources of an artistic research. Pigments, paper and binding need careful scientific analyses. This manuscript contains outstanding historical, social, literary and religious information as well. In my research I am going to investigate all these aspects and make a brief comparison between some other copies of similar content manuscripts around the world.

Biography: I have a Bachelor degree in Computer Engineering from Shahid Beheshti University in Tehran and more than two years relevant work experience. I have always got deep interest in art especially various forms of traditional art of Iran, which encouraged me to practice traditional calligraphy and illumination as an amateur. That was the reason that made me continue my studies in conservation in Azad University of Tehran for the master’s degree. During that period, I used to work as a paper conservator in the Library, Museum and Document Centre of Iranian Parliament in Tehran. Moving to Malaysia, I started studying master’s degree in International Islamic University Malaysia in the field of Islamic art during which I managed to study and research on different Islamic manuscripts, such as different ottoman calendars and Persian marriage certificates.

Name: Claire GRECH

Thesis Title: Modern paints: characterising the long-term behaviour of acrylic paintings aged in diverse climatic conditions and the conservation implications for their care

Abstract: This thesis aims to investigate the long-term ageing behaviours of acrylic paintings on canvas, exposed to a variety of different climatic conditions, with a specific focus on the effect of a hot and humid climate. This study is conducted from within an interdisciplinary context, and is aimed at elucidating any vulnerabilities that exposure to these climates have for preventive care and interventive treatments. The acute water sensitivity of these paints is well established in current literature, however, what is less defined is the effect of exposure to conditions of sustained, elevated temperature and relative humidity on the film formation process, and on longer timescale ageing behaviours. This project will investigate these questions through the integration of data from scientific, conservation and art historical sources.

Biography: Claire Grech holds a Bachelor of Science (Applied Chemistry) and a Master of Cultural Material Conservation, specialising in paintings, both from the University of Melbourne. In 2015 she was the Australian Conservation Science Fellow at the Straus Center for Conservation and Technical Studies, Harvard University. Her main research interest is the behaviour of modern paints in tropical climates.
Name: Isa LOO
Thesis Title: Assessment and evaluation of inorganic, calcite-based treatments in the conservation of earthen cultural materials

Abstract: Archaeological sites face a range of threats, which include natural causes to those related to development, including pollution and mass tourism. While major archaeological sites have the resources available to support some form of management, which is determined in part by the local social and political environment, as well as, the development of cultural tourism and its economic significance, some of the smaller and less significant sites have less resources available to assist with their conservation. This project investigates, evaluates and assesses the use of inorganic calcite-based treatments in the conservation of earthen materials within a larger framework of cultural resource management, particular of archaeological sites. The site of two Chinese miners cottages at Butcher Gully, Mt Alexander Goldfields, Castlemaine where a calcite-based treatment called Calcite In situ Precipitation System (CIPS) was used in the stabilisation of earthen cultural materials has been selected as a case study where analysis and evaluation will be undertaken on the suitability of the treatment and its potential for use in the area.

Biography: Isa Loo is a PhD candidate in the School of Historical and Philosophical Studies at the University of Melbourne and completed a Masters of Cultural Materials Conservation in 2007 (The University of Melbourne). Immediately prior to her PhD candidature, she worked as an object conservators at the Western Australian Museum where she has worked on a range of materials, from archaeological to large technology.

Name: Gina LEVENSPEIL
Thesis Title: The poverty of conservation: Architecture, materiality and the Burra Charter

Abstract: This thesis responds to the customization of valuable works of architecture through a close reading of the Australia ICOMOS Burra Charter (2013). It shows that it is impossible to preserve architecture under the Burra Charter’s doctrine of creative adaptation, arguing that physical change is constitutive of, rather than antithetical to conservation. In doing so it demonstrates that the Burra Charter negates architecture as a medium of knowledge and knowledge extension, while its own epistemological basis in imitation remained unexamined.

Biography: Gina is a durability research architect. Since 2006, she has written detailed (unpublished) building histories of the Melbourne Cricket Ground, Federation Square and Preshil—the Margaret Lyttle Memorial School. Her recent written work, Miracle Swamp, is an eighty-page illustrated history of the Queen Victoria Gardens, the home of MPavilion, published by the Naomi Milgrom Foundation with support from the Gordon Darling Foundation.
Name: Yue QIU

Thesis Title: Development of new non-destructive diagnostic method based on fine structural chemical shift for the characterisation and identification of cultural materials by ED-XRF

Abstract: Energy dispersive x-ray fluorescence (ED-XRF) is a powerful elemental analysis technique for investigating cultural materials. However, it’s unlikely to distinguish differences in materials of similar chemical and mineralogical composition due to the non-statistical factors from environmental and electric perturbation and energy resolution of the detectors. Theoretically the characteristic emission of the same atom in different chemical environments will be slightly shifted to a different energy resulting in unique x-ray emission fingerprints. However, the limitations of ED-XRF prevent the precise measurement of such X-ray energies. This investigation aims to test a methodology for obtaining more precise energy chemical shifts for K lines emitted from a single central element between the target compounds and a reference sample using ED-XRF (handheld Bruker Tracer III-SD) and time slicing measurements. After establishing the K line position using a mass density algorithm and sufficient photon counts, a discrete-time signal sequence can be created. Digital Signal Processing (DSP) and Wavelet Packet techniques help to reduce intensively non-statistical errors by finding the common perturbations either in samples or in the reference. This approach has the potential to stabilize the robust data of energy chemical shifts down to 0.01 eV. The methodology is excitation source independent and it is possible to extend the application to PIXE, PIGE, Synchrotron light source or other atomic spectroscopic techniques based on photon counting. This innovative approach will be particularly useful for the in-situ non-destructive investigation of cultural materials.

Biography: Yue trained as a conservation scientist at the University of Bologna. The research work is focused on the development of new analytical methods and procedures for the characterisation and spatial location of organic and inorganic compounds, the setting up of advanced spectroscopic techniques, and chemometric methods, studying processes and causes of alteration of materials with the environment.
Name: Madeleine ROBERTS

Thesis Title: The authentication of art in Australia: A sector-wide strategic analysis

Abstract: The process by which artworks in Australia are deemed to be ‘authentic’ in Australia remains unregulated and unstandardised. Academic commentary and institutional processes remain segregated and have had little influence upon market attempts to introduce a system of authentication. The result is that currently, no provision exists to ensure that: (a) authentication follows an acceptable industry-wide process that withstands the rigour of litigation; and (b) the market is correctly informed regarding the authenticity of artworks, a situation which has significant flow-on effects for Australian art. Building upon the expertise developed at the Grimwade Centre for Cultural Materials Conservation (GCCMC), a cohesive analysis of the practices and needs of each sector involved in authenticating Australian art (art market, institutional and legal) will be undertaken in order to: (a) identify and collate essential parameters for the authentication process in Australia; and (b) explore the creation of an interdisciplinary framework within which a transparent, defensible and industry-acceptable authentication process can sit.

Biography: Madeleine completed her Masters in Cultural Materials Conservation in 2015. Prior to this, she practiced as a corporate litigation solicitor at Ashurst LLP, completing her undergraduate studies in Law and Economics.

Name: Nur SHKEMBI

Thesis Title: Destiny disrupted; reclaiming the Muslim narrative through the development of a contemporary manuscript

Abstract: The traditional manuscript as a cultural object and transmitter of knowledge, culture and narrative is often lauded as a historical treasure. By reimagining the traditional manuscript as contemporary object and metaphor, the basis from which the contemporary narrative of Muslims sets to be located beyond the current geo-political stratosphere of the “Muslim world”. Furthermore, in view of the current socio-political climate, the contemporary manuscript imbues the means to act as a subversive object that moves beyond the East-West binary, harbouring with it, the potential to disrupt the history that is currently being made and recorded in the present.

Biography: Nur Shkembi is a Melbourne based contemporary Muslim artist, curator and writer. Nur has been part of the team establishing the Islamic Museum of Australia since 2010, and until recently served as the museum’s Art Director, Exhibitions Manager and foundation Curator. She is a member of the Vic Arts Fund and the Museums, Cultural Heritage and Cultural Development Advisory Panel at Creative Victoria and holds a Masters from the VCA.
Master of Cultural Material Conservation - Minor Thesis Projects (in alphabetical order)

* Online presentation

Name: Ruby AWBURN

Thesis Title: Working with contemporary artists: An investigation into the degradation properties of popular artist epoxy and acrylic resin coatings for paintings

Abstract: A relatively new practice is emerging in contemporary art where epoxy resins are applied coatings on paintings to obtain a glassy, high gloss surface. However, as the material ages it causes aesthetic and structural issues for the works of art, such as yellowing and delamination. As epoxies have limited reversibility, remediation treatment is problematic. In response to the popularity of epoxy coatings as a finish for paintings, various commercial brands have released epoxy-based products, advertised to be resistant to yellowing. In addition, other proprietary brands of artists’ materials are releasing acrylic based products formulated create a similar glossy appearance like epoxy coatings.

The primary aim of this research is to characterise and compare the ageing and deterioration characteristics of popular epoxy and acrylic resins utilised as coatings on contemporary paintings. A contemporary artist who uses these materials will be consulted. This research project intends to provide lifespan data to conservators and artists, thus informing the selection of compatible proprietary acrylic or epoxy resin coatings for contemporary paintings. As a consequence, it is hoped this researched will fill a gap in the growing information available regarding the conservation of new coatings used in contemporary art.

Biography: Ruby Awburn graduated from the University of Melbourne, with a double major in Art History and Anthropology, before undertaking a Masters in Cultural Material Conservation. During her Masters degree, Ruby specialized in the conservation of paintings, where she has further developed her interest in modern materials research and contemporary art. Ruby will be presenting her research findings at the AICCM SIG Paintings Symposium Revivify, held in Canberra later this year.
Name: Adele BARBARA

Thesis Title: Investigating the efficacy of using microwave treatments to sterilise mould-affected paper

Abstract: Conservators have trialled an array of physical, chemical and mechanical-based methods in an attempt to sterilise mould growth on paper. One such sterilisation method which has been suggested, but not thoroughly tested, is that of microwave radiation. This research paper seeks to assess the efficacy of using a commercially available microwave to sterilise the growth of Aspergillus niger on three contemporary papers. Calculations of the cell forming units present on each sample before and after exposure to microwaves will be compared to ascertain whether microwaves can be used to sterilise mould, and what parameters are required for exposure to be an effective treatment. Additional experiments also seek to determine if microwave treatments catalyse the degradation of paper samples by measuring any visual, chemical or dimensional changes after microwave exposure. Through this research, an easily accessible, financially prudent alternative to the typically employed mould sterilisation treatments is explored.

Biography: Adele Barbara graduated from the University of Melbourne with a Bachelor of Arts, majoring in Art History and Media and Communication, before continuing on to the Masters of Cultural Materials Conservation program in 2014. A co-recipient of the AICCM Outstanding Conservation Volunteer Award in 2015, Adele's formal conservation training and diverse experiences in collecting institutions will enable her to pursue her interests in the research and conservation of works on paper.
Name: Julianne BELL

Thesis Title: Tea: An alternative adsorbent for the preservation of cellulose triacetate film

Abstract: Cellulose triacetate based film, the main cinematic film produced between the 1940s and the 1990s, is an inherently unstable material, affected by autocatalytic deterioration through hydrolysis. The release of, and subsequent exposure to acetic acid, known as ‘vinegar syndrome’ accelerates the deterioration process, placing all cellulose acetate based materials at risk, or already in the process of deterioration. Currently, preservation strategies rely on costly low temperature macro-environment storage to slow deterioration, or microenvironments with the addition of adsorbent materials to trap moisture and off-gassed acetic acid. Commonly used, commercially available adsorbent materials can be expensive and difficult to access.

This research investigated the potential for tea and tea waste to act as an alternative, low cost, accessible adsorbent material for the preservation of cellulose triacetate film. Adsorption capabilities of a range of tea varieties and treatments were compared with those of the commercially available adsorbent materials activated charcoal, silica gel and molecular sieves. Adsorption testing of a range of relevant solvents established tea as an effective adsorbent of water and acetic acid vapour, with an aversion to adsorption of the common plasticiser dibutyl-phthalate. In addition, accelerated corrosion testing indicated used tea, or tea waste exhibited no detrimental effect on silver, the image forming material in cinematic film. The potential use of tea waste as an adsorbent material involves added cost, sustainability and accessibility benefits. These findings support tea as a viable alternative adsorbent for the preservation of cellulose triacetate based film materials, requiring further research into optimum application systems.

Biography: Julianne has a background in archaeology, history, languages and graphic design. During her masters degree she specialised in objects conservation, with a penchant for ceramic materials and audiovisual preservation. Julianne is currently freelancing as a sculpture and monument conservator.

Name: Catherine COLLYER

Thesis Title: George Baldessin Three Pears: an investigation into the materiality, history and preservation of a rigid polyurethane ether foam and shellac artwork

Abstract: George Baldessin was an Australian artist who generated a significant and critically acclaimed body of work. This thesis aims to provide an historical and material analysis of Three Pears (1975), which informs treatment decisions and an extended treatment proposal. The investigation into the context, materials and manufacture of this artwork necessitates an interdisciplinary methodology, which is primarily informed by the object itself. It is further informed by interviews, scientific analysis and historical documents as well as treatment case studies on other artworks by Baldessin and other objects of comparable materials.

Biography: Catherine is an Associate Conservator at QAGOMA. She is looking forward to completing her Masters Degree after four years of entertaining tiny children on the commuter flight from Brisbane to Melbourne. Previous roles have involved carrying rugs for Yoko Ono and bomb-screening Mikhail Gorbachev’s floral arrangements. After enjoying a career as a Festival Producer and Art Manager, she is delighted to join the conservation profession. Her first day as a conservator required her to clean vomit off a sculpture.
Name: Emily CONSTANTINE

Thesis Title: Supermarine Spitfire MJ789 – The conservation of a World War II aircraft wreckage at the RAAF Museum

Abstract: There are three common approaches to the conservation of large technology artefacts - electrolytic stabilisation, chemical treatment and simple immersion desalination. Using the recovered wreckage of a WWII Supermarine Spitfire MJ789 as a case study, these treatment methods are evaluated and the ideal proposal identified in relation to the requirements of the artefact and the custodian, the RAAF Museum. Identifying the most efficient, effective and stakeholder appropriate preservation technique to produce a chemically sound artefact, will allow the RAAF Museum to manage and interpret this significant artefact in perpetuity.

Name: Rosie COOK

Thesis Title: This is not a kowangan: A case study in community collaboration as conservation of a world culture instrument

Abstract: A prerequisite for the meaningful conservation of a world culture object is an understanding of what it is — a deceptively simple premise. Following the loan of the Kowangan, a rare Javanese musical instrument from the Music Archive at Monash University (MAMU) to the Grimwade Centre for Cultural Materials Conservation for assessment and treatment, this case study documents the process of understanding what the Kowangan is, not only through its material properties and functions, but through its significance to its custodians and its stakeholders in the music community from which it originates. The early revelation that the object in MAMU’s collection simultaneously is, and is not, a kowangan, highlights cross-cultural complexities and the crucial role of consultation. A web of knowledge is pieced together through fieldwork and collaboration with the source community, contributing to the ontology of the Kowangan. By documenting its material and intangible properties, the archive and the repertoire of the Kowangan become conservation resources in sustaining continued musical practice in the source community, whilst providing an answer to the question: What is the Kowangan?

Biography: Rosie Cook graduated from the University of London’s School of Oriental and African Studies, with an Honours degree in Asian Art and Archaeology, complementing a French Baccalaureate in History of the Arts. She travelled to the Asia-Pacific region in 2006 to pursue her Mandarin studies. After living and working in Taiwan, China and Sri Lanka, she moved to Melbourne where her training as a conservator over the past four years has raised new perspectives on the interdependencies between people and cultural materials.
Name: Bronwyn DUNN

Thesis Title: The conservation skills gap: Addressing the disconnect between traditional trade skills and the conservation of cultural material

Abstract: In June of 2000 a Skills Gap Audit was conducted by the Australian Institute for the Conservation of Cultural Materials (AICCM) on behalf of the Heritage Collections Council (HCC) to investigate the skill gaps which exist for conservators in Australia. Several skill gaps were identified by conservators. One was the recognition that many traditional trade skills (TTS) required for the conservation of cultural material were being lost. The knowledge and expertise, no longer being required as a trade, was not being passed on or few people were still practising. In 2003, the General Conference of UNESCO adopted the Convention for the Safeguarding of Intangible Cultural Heritage (UNESCO 2003, n.p). This convention recognised that ‘...traditional craftsmanship is perhaps the most tangible manifestation of intangible heritage...’ (UNESCO 2003n,p) and ‘... the importance of intangible cultural heritage is not necessarily the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next...’ (UNESCO 2003, n.p). Conservation involves the care of a variety of objects, many of which were constructed when traditional skills were an accepted part of society. Access to these TTS is essential for ongoing effective and professional conservation practise. To address the issue of the survival of TTS and to acquire an understanding of the current needs of conservation professionals in Australia, a new survey was submitted to conservators, conservation students and people involved in allied and supportive conservation roles. Data collected presents an overview of which TTS are applicable to conservation. Is there still a perceived skills gap relating to traditional trades? What difficulties do conservators have in accessing these trades? How can the skills gap be addressed?

This thesis examines the results of this survey and explores ideas that can be generated to solve the conservation skills gap. It brings into focus the importance of traditional trades and the knowledge and expertise they can supply to conservators, beginning a new dialogue regarding possible training models for TTS and a proposed framework for their conservation and sustainability.

Biography: Bronwyn Dunn graduated from the University of Sydney majoring in Fine Arts and languages. After pursuing a career in the jewellery industry she has returned to the arts by enrolling in the Master of Cultural Material Conservation course at the University of Melbourne and will graduate in 2016. Bronwyn has a Diploma of Gemmology, a Diploma of Diamond Technology and is a qualified, registered jewellery valuer. Bronwyn hopes to continue her research into traditional trade skills and how they impact cultural material conservation. Currently, Bronwyn is working as a conservator at the Museum of Applied Arts and Sciences in Sydney, NSW.
Name: Rhonda EMERY *

Thesis Title: William Williams House in Paihia, New Zealand: Establishing a conservation management plan using best practice for an archaeological ruin

Abstract: The William Williams House Ruins in Paihia, New Zealand are a site of national significance for its association with both the first missionaries in New Zealand, and the Treaty of Waitangi. Since its destruction by fire in 1856, the ruins have been left to deteriorate to their present state. This thesis reviews the history of the site and its importance, the materials available for conservation, and the implementation of best practice conservation recommendations for the management of an historic ruin.

Name: Ashley GILMOUR

Thesis Title: Forget Me Not: An Investigation into the materiality and history of the Sweetheart Badge Collection held at RSL LifeCare Narrabeen

Abstract: The Returned and Services League (RSL) LifeCare Village at Narrabeen houses a War Museum that has been collecting Military memorabilia since 1986. Using a case study from within the collection, this thesis aims to investigate the history of Sweetheart Badges and provide a social and cultural context utilising an interdisciplinary methodology driven by interviews and the objects themselves. Furthermore, non-invasive examination techniques will be used to investigate the materiality of the works. This historical and material analysis will help to inform an understanding of their production, as well as providing display and preservation recommendations.

Biography: Ashley Gilmour graduated from the University of Melbourne in 2014 with a Bachelor of Arts, majoring in Art History and European Studies. She is currently undertaking a Masters of Cultural Materials Conservation, specialising in object conservation. During her Masters, Ashley has developed an interest in contemporary materials documentation and preservation.
Name: Kim A. J. GOLDSMITH

Thesis Title: Conserving shoes: a study of synthetic polymer-based materials in modern and contemporary shoe collections at the Powerhouse Museum, Museum of Applied Arts and Sciences (MAAS), Sydney, Australia

Abstract: The minor thesis research project focused on a sample group of thirteen pairs of modern and contemporary shoes from the collections at the Powerhouse Museum, MAAS, Sydney, Australia. After recent deinstallation of the exhibition Recollect: Shoes (November 2014 - May 2015), it was observed that some shoes comprised of plastic materials presented signs of degradation. A methodology adapted from the Preservation of Plastic Artefacts (POPART) in Museum Collections research project was tested on the sample group. Methods used for the research included Fourier Transform Infrared - Attenuated Total Reflectance (FTIR-ATR) spectroscopy, condition reports, and a comparative analysis of the results against the records for the shoes in the MAAS EMU database. Based on the results of the study, recommendations for the future conservation care and storage of the shoe collections were outlined in the report. The broader scope of the research was to highlight the challenges and limitations of identification and conservation of composite plastic artefacts within the context of a museum collection.

Biography: Kim A. J. Goldsmith graduated from the University of Sydney with a Master of Visual Arts (Research), specialisation ceramics art and design. She has exhibited artwork in Australia and internationally for the past 16 years, and lectured in a range of art, design and architecture programs at the University of Sydney and the University of Nottingham, Ningbo China campus. Kim was the 2015 International Museums and Collections (IMAC) Award recipient, and travelled to The University of Birmingham, UK where she interned in a variety of campus collections. She presented a paper based on this experience and object based learning at the CAUMAC-UAMA conference in 2016. After graduation, Kim intends to work as an objects conservator within a museum or university collections setting.

Name: Bridget HALE

Thesis Title: The story of Semar: Exploring the social, cultural, and material significance of the Javanese wayang kulit

Abstract: The wayang kulit has existed for several millennia, and is a bastion of Javanese culture. This study will focus upon two shadow puppets derived from the Jeune Scott-Kemball collection at the Music Archive of Monash University (MAMU). Through an object biography, the puppets’ evolving significance from design to collection will be explored, culminating in recommendations for their continued preservation. An interdisciplinary framework will place the puppets within their many contexts, surveying materials, manufacture, use, and importance. Archival research, interviews, social theory, and instrumental analysis will inform this contemporary perspective, painting a picture of Semar that embraces both material and intangible value.

Biography: Bridget Hale graduated from the University of Melbourne in 2014, with a BA in Ancient World Studies. She enrolled in the Masters of Cultural Materials Conservation in 2015, and possesses a keen interest in archaeological preservation. Bridget specialises in objects, and hopes to pursue research in conservation theory, community engagement, and ancient history.
Name: Amy HEFERNAN

Thesis Title: Evaluating earthquake mitigation strategies in Australian and New Zealand museums: are we prepared

Abstract: Australia experiences relatively low levels of seismic activity compared to countries located on tectonic plate boundaries. However, even moderate earthquakes can produce catastrophic levels of damage when no preventive measures have been put in place. Research into seismic mitigation strategies for museum collections has lagged far behind that for buildings and contents in other industries. This is despite the potential for earthquakes to cause huge cultural and economic losses for collecting institutions. Nonetheless, there is still a number of precautionary actions museums can implement to significantly decrease their vulnerability.

This research paper examines whether seismic mitigation for museum collections is an area of preventive conservation that should receive more attention in Australia. Conservators, registrars, and collection managers from major institutions were asked to participate in a questionnaire to ascertain whether seismic events are being identified as a risk to objects in museums and what preventive measures, if any, are currently employed. Australian procedures are compared to those of New Zealand, a culturally and geographically close country with a much higher occurrence of earthquakes, to identify if measures adopted there may be beneficial to implement in Australia.

Biography: Amy completed a Bachelor of Design in Architecture at the University of Technology, Sydney in 2014, which sparked her interest in the history and conservation of architecture, art and design. Amy is currently completing her final year of the Master of Cultural Materials Conservation at the University of Melbourne. Specialising in objects conservation, her main areas of interest include historical and archaeological artefacts as well as built heritage.

Name: Keira HUDSON

Thesis Title: Preservation strategies for scrapbooks: A case study of an album of 19th Century greeting cards

Abstract: This thesis is an investigation of preservation strategies for scrapbooks. The preservation of these complex structures has not been investigated to a major extent within materials conservation, and this project generates unique data through literature research and interviews with Melbourne-based paper and book specialists. This information is also supplemented with a case study treatment of an album constructed by author Joan Lindsay containing 19th century greeting cards exhibiting signs of mechanical damage.

Biography: Keira Hudson began her academic training at RMIT University, undertaking a Bachelor of Fine Arts (Honours) which fostered her interest in cultural materials conservation. Stemming from her background as a practicing print-based artist and costume designer, Hudson is now in her final year of a Masters of Cultural Materials Conservation at the University of Melbourne, specialising in paper and textiles conservation.
Name: Shannon KLAASSEN
Thesis Title: Interrogating the conservation documentation potentials of 3D Photogrammetry: A case study of William Ricketts Sanctuary, Dandenong Ranges

Abstract: The William Ricketts Sanctuary, located in The Dandenong Ranges and maintained by Parks Victoria, is a sculpture park created by Ricketts over the course of his lifetime. Set amongst the pathways and forest are 92 clay sculptures of Central Australian Aboriginal people in different states of deterioration. No current conservation or collection management plan exists, however Parks Victoria have expressed interest in undertaking 3D imaging of the sculptures. This case study aims to explore the conservation potentials of 3D photogrammetry to help document and maintain these sculptures. Through the use of Agisoft PhotoScan™ software, the photogrammetric data collected was synthesized and 3D models were created. This thesis interrogates the results of 3D photogrammetry as a documentation process, arguing that although the ability to capture a 3D image of a sculpture is good, the lack of current digital documentation frameworks, standards and integrated databases means that the ability to interact with, and create meaningful 3D models, is still lacking. The overall limitations of this technique for the Sanctuary itself will also be discussed.

Biography: Shannon Klaassen graduated from the University of Melbourne in 2014 with a Bachelor of Arts, majoring in Media and Communications, Film and Cultural Studies and Italian (language) before undertaking Masters of Cultural Materials Conservation in 2015. Shannon has an avid interest in the digital futures of cultural heritage, including contemporary digital and installation works. Furthermore, Shannon was chosen to participate in a Copland Foundation Grant digitisation project at the Warlayirti Artists Aboriginal Corporation in Balgo, WA, solidifying her interest in community based digitisation practices.
Abstract: Despite guidelines available for communities to care for works of art housed in museum environments or to address architectural conservation, there are few guiding principles aimed at the non-expert heritage professional for wall painting conservation in situ (Rainer 2003, p. 8). There are several reasons for this: the technical aspects of murals are intertwined with inherent problems related to the structure of the building and environmental factors that affect the composite painting materials, and; conservation standards are highly dependant on institutional priorities, values and capabilities; for small communities research and maintenance can be costly and systems concerned with management are subject to change over time.

The Ascending Christ (c.1960), housed within St Mary’s Anglican Church, Morwell, is a rare example of Arthur Boyd’s experimentations with abstraction and resonates both social and historical significance for the Morwell Church community. Whilst the aesthetic and spiritual value of the mural is formally recognised by the Latrobe City Heritage Overlay, currently there are few conservation measures in place to protect the physical and chemical condition of the mural from a conservation perspective. The large size of the mural renders conservation a complex activity and furthermore, the need to integrate the physical and contextual situation of The Ascending Christ within a model for conservation management highlights the need for a localised approach to conservation research and analysis.

Limited documentation arising from a lack of understanding regarding the issues associated with murals was found to be one of the key conservation issues and so it was felt that more technical information was required to better understand the materiality of The Ascending Christ and its susceptibility to deterioration.

An analytical examination of the mural was conducted utilising preliminary physical and scientific instrumental analysis and a review of primary and secondary literature provided connoisseur knowledge to supplement identification of material risk factors. Given that mural paintings are inherently related to the building environment they inhabit, it was necessary to consider The Ascending Christ in relation to its current place of housing, St Mary’s Anglican Church, Morwell. An extensive literature survey of the Diocese internal records as well as the scholarship of Arthur Boyd that encompassed his experience with the materials and techniques of mural painting was also deemed necessary to begin to address this knowledge gap.

As an outcome, this minor thesis seeks to address and eliminate some of the ambiguity surrounding The Ascending Christ. From this the aim is to develop a viable conservation approach that might be more readily implemented by the Diocese. Additionally, insights gained from this research and analysis assist in developing a knowledgebase relating to safe housing murals outside institutional museum environments and provide greater foundation for the practice of conservation within a religious heritage context.
Name: Celeste KUYPERS *

Thesis Title: Preliminary deterioration study of synthetic papers

Abstract: Papers made from synthetic polymers are relatively new materials, and limited studies have been done in the conservation literature into understanding the ways in which synthetic papers deteriorate. Instead, most literature is concentrated in polymer sciences and industrial research. This is of concern to paper conservators, who may find themselves as custodians of synthetic paper objects but may lack familiarity with plastic objects, and have no accessible literature base from which to draw. This paper seeks to investigate the deterioration of a number of synthetic papers, and to compare their deterioration to cellulose papers. In doing so, it aims to begin addressing this research gap in detail.

Accelerated ageing using elevated temperature (100°C), humidity, visible spectrum light and ultraviolet light was performed on samples. Colourimetric analysis was used to obtain information about colour changes, FTIR-ATR employed to examine elemental changes, and tensile strength testing performed in order to evaluate the strength of samples during extended exposure to ultraviolet light. Ageing was performed over 6 weeks for UV light aged samples, and 10 weeks for others.

Colourimetric results (CIE L*a*b*) indicated that the tested synthetic paper samples are prone to discoloration via yellowing, and that the type of ageing that causes the most change depends on the sample. Cellulose papers were clearly most affected by elevated humidity, while synthetic samples were variously most highly discoloured by heat, humidity and UV light exposure, and in some cases experienced major integrity failure. Spectroscopic results were able to identify the composition of Teslin® as polyethylene, and were able to track the chemical process of deterioration in some samples. Tensile strength testing (ultimate tensile strength) ascertained that UV light exposure lowers the strength of synthetic papers, but combining this with colourimetric data suggests that the two are not necessarily closely linked.
Name: Suzy LOGAN-MORRIS

Thesis Title: Indonesian wind instrument from Aceh Indonesia: Investigation and reproduction

Abstract: This minor thesis centres around a musical instrument from Aceh Indonesia. The first section looks at the initial view that there was a missing reed element, and used research and experiential evidence to produce another theory - that there was already a reed element present on the object of a completely different design. Some tests were then carried out on the reed design to determine whether or not the instrument would theoretically work. The second section of this thesis looks at the resonator bell on the instrument which was created with a wound leaf. The curator wished for this bell to be re-created to look like it did when it was first created - green, to place on display. Two materials were tested and used to create replica bells in order to find the most aesthetically accurate material for the display.

Biography: Suzy Logan-Morris graduated from La Trobe university in Bendigo with bachelor of Fine Arts/ Visual arts majoring in ceramics in 2003. She has since been teaching instrumental music in brass, woodwind and piano in several primary and secondary schools. Suzy has a major interest in objects and musical instruments in particular, and she would like to further her studies in musical instrument conservation after graduation.

Name: Lexi MALLER

Thesis Title: Characterising binding media used in Tang Dynasty wall-art

Abstract: FTIR, p-XRF and GC-MS analysis was used to achieve a visual analytical characterization of various binding media traditionally used in Tang Dynasty wall art. The experiment was guided by historical information concerning the process and materials used the creation of wall art. These materials were then processed to obtain spectra of their signatures when aged in Heat and Heat & Moisture conditions. Peach gum, gum tragacanth, rabbit skin glue, isinglass, an unknown 'Black Box' Glue and 'Black Box' Gum were painted onto a calcium carbonate support unmixed, when combined with an iron pigment, and when combined with a copper pigment. Analysis was then conducted and the painted out samples were compared with the controls visually and in FTIR spectra. The spectra obtained from FTIR analysis revealed a complete lack of binder in the samples, even though UV analysis and chemical testing indicated some binder remained on half the samples. p-XRF readings show stronger peaks are obtained from pigments exposed to moisture, demonstrating the possibility of using p-XRF to establish the environments wall-art has been exposed to. FTIR findings suggest a rapid absorption of the binders into the substrate of the calcium carbonate support, necessitating deeper sampling to obtain evidence of binding materials. This is not generally possible with wall art, however it provides insight into the working properties of these binders and directs the process of analysis of wall art.

Biography: Lexi Maller graduated from La Trobe University with a Bachelor and Masters of Archaeology, focusing Mayan archaeology and art-work. Experience with conservation while working in archaeology in Jordan, Mexico and Egypt encouraged a side-step into furthering her diverse skill set in the Masters of Cultural Materials Conservation course. Lexi enjoys the privilege and challenges of working with communities and cultural materials and looks forward to a career in conservation.
Name: Jessica McELHINNEY

Thesis Title: Repairing tears in post-1950s impregnated translucent papers: Testing methods of paper identification and repair using the Grounds, Romberg and Boyd records housed at the State Library Victoria as a case study

Abstract: Impregnated papers (IPs) produced post-1950 represent an important shift in translucent paper manufacturing techniques from the application of earlier natural oil and resin impregnants to the popular adoption of synthetic acrylic resins. Tears to IPs are difficult to mend, due to their hydroscopicity and translucency. More conventional tear repair techniques involving aqueous adhesives often cause moisture-induced distortion and cockling, and are visually distracting. The Grounds, Romberg and Boyd Records (GRBR), housed in the Australian Manuscripts Collection at the State Library Victoria, was chosen as a case study to examine post-1950 IPs – their identification and methods of repair. Spaning the period of 1927-1979, the records are essentially the business archives of the architectural practice Grounds, Romberg and Boyd (1953-1962) and encompass a wide range of translucent papers, including many examples of post-1950 IPs.

This Minor Thesis aimed to provide a detailed characterisation of IPs produced post-1950, drawing upon those used as primary supports for architectural drawings in the GRBR. By combining data gathered by FTIR, SEM imaging, and SEM-EDS, with general observations of appearance, planar and dimensional stability, and UV examination, it was possible to confirm the correlation between interpretations of data with the manufacturing methods and material properties of IPs given in the literature. Then, through testing a range of tear repair materials and techniques, it aimed to provide recommendations for repairing tears to IPs in the GRBR. Lascaux®498 HV and RK-0 (Paper Nao) prepared as a heat-activated repair tissue, in combination with Lascaux®498 HV applied directly to the tear before repairing, was found to be the most successful repair tested.

Biography: After graduating from the Master of Cultural Materials Conservation program earlier this year, Jessica McElhinney participated in a Post-Graduate internship at the Canadian Conservation Institute (CCI) in Ottawa, Canada. Whilst at the CCI she worked on a range of paper and photographic materials. Since returning to Australia Jessica has been working as Assistant Conservator at the State Library Victoria.

Name: Grace McKENZIE-McHARG

Thesis Title: Bag it and tag it! Plastic degradation in archaeological storage

Abstract: The deterioration of polyethylene bags used to store bulk finds from archaeological excavations is a well-known occurrence in archaeological collections. This thesis aims to examine the use and deterioration of these bags in the storage of bulk material. This will involve an online survey completed by archaeologists from around the world to understand what materials are used for bulk storage, and experimental data gained from the artificial aging of four commonly used brands of zip-lock polyethylene bags.

Biography: Grace McKenzie-McHarg completed her undergraduate degree and honours in archaeology at La Trobe University and is now completing her masters of cultural material conservation.
**Name:** Helen MERRIT

**Thesis Title** Investigating the efficacy of using microwave treatments to sterilise mould-affected paper

**Abstract:** Interest in the digital preservation of cultural heritage has increased during the last couple of decades along with better techniques and software packages. This thesis aims to establish a workflow for the digital reconstruction of a poppy flask with a missing handle from the Ian Potter collection. The method involves creating two models of the poppy flask, one scanned and the other photogrammetric, and then digitally connecting the handle from another complete poppy flask from the Australian Institute of Archaeology. The study outlines and assesses scanning and photogrammetry techniques through the experiences of a non-expert, including a brief evaluation of the main online resources that may be used to guide the process. The commercial Artec 3D Spider scanner was used for scanning and Agisoft Photoscan was employed for photogrammetry. The research also reviews the suitability of open source tools Instant Meshes for auto-retopology and Blender for the handle reconstruction.

**Biography:** Helen Merritt graduated from the University of Melbourne in 2012 with a doctorate in history and a postgraduate diploma in secondary teaching. She returned to study in 2015 to undertake the Masters of Cultural Materials Conservation. Helen specialises in objects, and has developed a strong interest in digital preservation and conservation science.

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**Name:** Louise MURRAY

**Thesis Title** Facilitating local indigenous community access to Aboriginal and Torres Strait Islander cultural heritage material in the cultural collections of the University of Melbourne

**Abstract:** The following collections and museums owned by the University of Melbourne contain Aboriginal and Torres Strait Islander cultural heritage material: Harry Brookes Allen Museum of Anatomy and Pathology, Ian Potter Museum of Art, Henry Forman Atkinson Dental Museum, The Grainger Museum, University of Melbourne Archives, Louise Hanson-Dyer Music Library and the Donald Thomson collection currently on loan to, and managed by Museum Victoria. Together these collections contain Indigenous cultural material from all over Australia, including stone implements, bark paintings, ceremonial material, carvings, weavings, documents and photographs. Recent developments in university policy around the management of Aboriginal and Torres Strait Islander cultural heritage material supports greater engagement and involvement of Indigenous communities, however, to date, there are few practical measures in place to facilitate community access to this material. This research project aims to investigate what needs to be done to improve access for Indigenous communities to Aboriginal and Torres Strait Islander cultural heritage material held in the cultural collections of the University of Melbourne.

**Biography:** Louise has worked in a diverse range of curatorial, collection and archival management roles in the cultural, university and public sector. She is particularly interested in the important role conservation has to play in the preservation of Indigenous culture in all its facets.
Name: Hanna SANDGREN

Thesis Title: The presentation of Australian Indigenous bark paintings: A critical review of current practices

Abstract: Bark painting is a rich and diverse cultural practice and a vibrant part of the contemporary art market. This project critically reviews the current practices in the mounting of Australian Indigenous bark paintings for display in order to update knowledge in the field and lay the groundwork for further innovation. Practitioners from public and commercial, metropolitan and regional institutions were asked to respond to a questionnaire regarding their current approaches to bark presentation. Their responses are presented in detailed diagrams illustrating the materials and methods used. Key criteria for the success of bark presentation methods – namely: physical compatibility with the bark support; practicality; and the ‘unframed’ aesthetic – are derived from a consolidated reading of the literature and participant motivations. These criteria are then applied to the presentation systems described. It is concluded that while most practitioners effectively engage with one or more of the key criteria, contextual factors such as the display environment, institutional workflow and curatorial influences, skew the relevance of each criterion. Thus, diversification of bark presentation practices and the augmentation of the role of conservation in developing these practices is recommended.

Biography: Hanna Sandgren graduated from the National Institute of Dramatic Art, Sydney with a BDA (Design) in 2010. She returned to study to pursue her interest in the preservation of Australian Indigenous cultural heritage. Hanna has written on the topic for the 2015 AICCM National Conference, Demos Journal and the AICCM National Newsletter. Last year, she led a small group of students awarded a Copland Foundation Grant, undertaking in-situ treatment on two significant paintings belonging to the community of Kintore, Northern Territory. Hanna currently works in the commercial art sector at Niagara Galleries and NKN Gallery, Melbourne.

Name: Louise Carol SMITH *

Thesis Title: A stitch in time: The discovery, analysis and conservation of an 1870s frock coat

Abstract: In an Australian context, historical archaeological textiles are rare, and potentially significant finds. This paper will discuss the discovery, conservation treatment and subsequent analysis of an archaeological textile. Initially conservation examination methods allowed for visual interpretation of the textile whilst later scientific analysis provided a rare opportunity for analysis. The analysis of the textile has yielded information about its preservation, its past use and its reason for being discarded in the 19th century by its owner. This information is a significant contribution to the fields of Australian urban archaeology and textile conservation. Scientific analysis revealed that the textile is wool and has high levels of actively corroding iron causing detriment to the long term preservation of the textile fibres. The latter part of the thesis focuses on the effects of a high iron content in the protein fibres and a discussion of potential treatments to remove iron that has not been well documented previously.
Name: Eva Kristina TAYLOR *

Thesis Title: Circulating confidence: Why the blockchain is flawed and why we should introduce it to combat art-fraud anyway

Abstract: This thesis assesses whether blockchain technology might assist in the prevention of art-fraud. It explores the genesis of blockchain from a nascent foundation on which the digital cryptocurrency bitcoin was based to its use within commercial sectors as a predominantly governed, permissioned system. The 4 chapters focus primarily on the suitability of an art-market blockchain - taking both permissionless, bitcoin-esque, and more governed permissioned models into account and overlaying the unique concerns and requirements of the cultural framework within which the technology is being posited.

My central tenet is that the value of an art-market blockchain extends to the broad concerns which the technology was originally designed to solve - trust, censorship, fraud and security, among others. I analyse these themes within a blockchain / art-trade framework and argue that cultural conservation and the prevention of art-fraud will benefit from the introduction of blockchain, notwithstanding that the technology may be more limited than commonly understood. This dissertation therefore disrupts the current inconsistent orthodoxy that blockchain is either a technological marvel - or that it offers little in the way of iterative, novel, features - by arguing for a broader definition of value which incorporates blockchain as a sophisticated marketing term, capable of reducing often impenetrable concepts to something easily communicated and understood. I accordingly examine the epistemological role and moral implications of a potential blockchain deployment within the trade of art.

Biography: Growing up in Tuebingen, Germany, Kristina became fascinated by the work of a conservator from an early age. Commencing her practical training in 2001, she studied for her Magister at the University of Tuebingen before relocating to Sydney and working as an object conservator for several years. Wishing to expand her work and knowledge, she was accepted into the National Institute of Dramatic Art (NIDA), where she obtained a Bachelor of Dramatic Art with Distinction and made everything from animatronic creatures through to musical instruments. She continues to work as an object conservator for International Conservation Services, occasionally punctuating this with the odd commission from the film and theatre world.
Abstract: This thesis is based on a case study of Eastern World, an architectural ceramic tile mural located on the exterior wall of The Physics Buildings at The University of Melbourne. The mural was designed and created by two well-known Australian artists, the painter John Olsen and ceramicist Tom Sanders. This case study offers a brief history on the manufacture of tiles that leads into the specific materials and techniques utilised in the creation of Eastern World. This thesis draws on dual methodologies; social research and scientific research, with the aim to understand Eastern World in regards to the artists’ intent and the materials and techniques of manufacture.

Social research was gathered through semi-structured conversation interviews with the artists, John Olsen and the son of Tom Sanders, Christopher Sanders. Social research was also gathered through networking with personnel previously involved with the mural to discover information not found in literature.

Scientific research provided comparative raw data that has confirmed and refuted the gathered information. Scientific research was achieved through in situ examination of Eastern World with the portable handheld Bruker Tracer III-V+ X-Ray Fluorescence (XRF) machine.

Eastern World was constructed with a hazardous material and as a result conservation treatment has been limited. The cement sheeting that adhered the tiles to The Physics Building contains fibrous silicate, otherwise known as asbestos. The murals installation was completed in 1971 during a time in Australia where asbestos containing materials were at their height in popularity. This thesis addresses the risks posed by a hazardous material and the risks of hazardous working conditions that are problematic to conservation.

This thesis offers two hypothetical conservation treatment proposals, minimal to highly interventive, both with the intent to restore Eastern World to its original condition. The resources gathered will assist in conservation treatment of the mural and the commissioning of new tiles to fill voids within the mural. The newly sourced information is a contribution to The University of Melbourne, the custodian of the mural; The Ian Potter Museum of Art, and the artists; John Olsen and Tom Sanders.
Name: Amy WALSH

Thesis Title: An investigation of conservation treatment methodologies for the reduction of iron-based staining on ceramic components of composite artefacts

Abstract: The reduction or removal of iron (III) oxide staining from ceramic objects is generally acknowledged to be a difficult conservation treatment. The process is further complicated if the ceramic is part of a composite material artefact that contains metal. There is little published in the conservation literature about treatment protocols that address the issue of selectively treating iron staining on the ceramic components of multi-material objects. In order to address this research gap, this thesis considered the issues associated with removing iron staining from ceramic-metal composite artefacts, explored appropriate treatment options and provided in-depth observations and results drawn from testing on a case study object, a 19th century hopper closet toilet with a decorative ceramic bowl.

Biography: Amy specialised in objects conservation during the Masters course, focusing on ceramic materials. She was lucky enough to intern in the ceramics conservation department of the British Museum during her studies, during which she treated a variety of ancient and modern ceramics. Amy's internship helped to reinforce her love for ceramic conservation and she hopes to continue her learning in this area in the future. She is currently working as an Assistant Conservator at the State Library of New South Wales on their Digital Excellence Program.

Name: Karen WILCOX *

Thesis Title: Clarifying glass ‘Fogging’ in museum showcases An investigation at the Australian War Memorial, Canberra

Abstract: Showcases provide microclimates, controlling environmental fluctuations, dust, and pollutants, and protect objects from inadvertent or intentional damage by the visiting public. Extensive use of glass is intended to provide visitors with unimpeded (visual) engagement with objects on display. However, internationally, for the last two decades, the formation of a visually disruptive film on the glass has been reported – called ‘fogging’ or ‘hazing’. This research investigates this light scattering film as formed in the showcases of the Australian War Memorial (the case study). Its composition, source, and remedy are unknown, and the aim was to identify methods which could contribute to understanding these. The work uses triangulation, combining literature research, semi-structured interviews, instrumental, and experimental methods. The main causes identified in the literature are described and Fourier Transform Infra-Red (FTIR) microspectroscopy and Scanning Electron Microscopy (SEM-EDS) are used to look at the film’s composition. A method is adapted from the glazing and automotive industries to interrogate the role of emissions from showcase materials, and it is proposed as a cheap, in-house means to make relative assessments of a material’s potential to cause ‘fogging’.
Name: Gabrielle Louise YOUNG

Thesis Title: An investigation of the effects current commercial copper polishes have on metal substrate

Abstract: When a copper metal surface needs to be polished, non-conservators tend to go to their local hardware store for a cheap and easy to access product instead of to a professional. With factors such as chemical composition and abrasiveness varying from product to product, these polishes could be causing unseen damage to the metal. This paper investigates how such polishes impact a copper-based substrate through the testing of a small selection of commercial polishes available at hardware stores and comparing the results with a lab-made control substance and a conservation grade polish. The polish which showed the most promising results was then applied to a case study object to examine the effect the polish would have on a more intricate surface. What effects do commercial copper polishes have on the metal and how do they compare to conservation standard methods?

Biography: Gabrielle Louise Young graduated from La Trobe University, Melbourne with a Bachelor of Archaeology before enrolling in the Masters of Cultural Material Conservation course at the University of Melbourne. Gabrielle hopes to contribute her knowledge of object-based conservation to the preservation of museum artefacts once she has completed her studies.