

- Art Conservation
- Newsletter







Message from the Program Director

I am very pleased to introduce this online version of the Program newsletter. Many of you have asked for more online content. Now that the new Departmental website is up and running, we are finally able to provide this service. In addition to news items about the Program, we will be featuring updates from graduates and faculty. Please consider sending us a brief contribution.

Our current students are now returning from their summer internships. This year, Canadian host institutions included the Canadian Conservation Institute, Canadian Museum of Civilization, Library and Archives Canada, Parks Canada, National Gallery of Canada, the Art Gallery of Ontario and the Montreal Museum of Fine Arts. International venues included the American School of Classical Studies in Athens, Greece, the University of Pennsylvania Museum, the National Archives (UK), Victoria & Albert Museum (UK), the Art Gallery of New South Wales (Australia) and the National Gallery of Ireland. We offer a sincere "thank you" to all of the institutions and conservators in private practice who have provided internships for our students.

We salute the graduating class of 2010:
Marilyne Beauregarde, Alison Cude, Stephane
Doyon, Emily Leonoff, Meaghan Monaghan,
Tania Mottus, Ida Pohoriljakova, Amélie Roy,
Bo Kyung Brandy Shin, Hadas Seri and Rebecca
Vodehnal and we welcome the following new
students to the Program: Jeanne Beaudry
Tardif, Fiona Beckett, Elizabeth Boyce, Moya
Dumville, Jennifer Morton, Kelly O'Neill, Mi
Jean Park, Ghazaleh Rabiei, Jessica Regimbald,
Brittany Webster and Anna Weiss.

Dr. Alison Murray and John O'Neill are currently on sabbatical until the end of December 2010. All aspects of the program continue to benefit from the expertise and enthusiasm of Dr. H.F. (Gus) Shurvell.

Gary Albright, who is replacing John O'Neill for the fall term, has taught conservation at the State University of Buffalo, the University of Delaware, the Northeast Document Conservation Center and at Queen's University (winter of 2010). He is well known for his expertise in photographic conservation and runs a private conservation practice in upper New York State. We are very pleased to welcome Gary back to Queen's University.

Dr. Reza Vatankhah will replace Alison Murray during the fall term. Reza is a professor of conservation science who divides his time between Iran and New York City. In Iran, he teaches conservation science courses to MA and PhD students at the Art University of Isfahan. Reza has an MSc in analytical chemistry and a PhD in electrochemistry from the Université de Sherbrooke, Quebec. He publishes in the areas of conservation science as well as electrochemistry. We look forward to welcoming him to campus.

We hope that you enjoy our first electronic newsletter. We look forward to hearing from you. Keep in touch!

Krysia SpirydowiczDirector, Art Conservation Program

Photography Credit: P. Schiedel

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Faculty News

Barbara Klempan, Associate Professor of Painting Conservation, continues to conduct research into artists' materials with a specific focus on artists' paintboxes. She recently co-authored a paper on the technical and scientific study of two paintboxes belonging to A.Y. Jackson. This paper appeared in the Journal of the Canadian Association for Conservation in 2009. This year she was awarded a Queen's University Senate Advisory Research Committee Grant for a project she is currently working on entitled: "Lyman Pharmaceuticals and the Artists' Trade in Canada (1800-1900)". With the support of this grant, she was able to return to Montreal during the summer of 2010 to continue her primary research into this interesting topic. Additional research work this year included preparing a catalogue essay on the technical examination and conservation treatment of View of Gibraltar (1784) by British artist Joseph Wright of Derby. The painting is part of the permanent collection at the Agnes Etherington Art Centre and was conserved in the painting conservation laboratory at Queen's University over a period of four years. Scientific analysis of painting components conducted at the Art Conservation Program, Queen's University and at the Canadian Conservation Institute in Ottawa, revealed technical information on the general structure and condition of the painting, painting technique, and history of previous conservation treatments. The catalogue will be published by the Agnes Etherington Art Centre. In 2008 Barbara was invited to give the presentation, "Teaching Art Conservation in a World of Emerging Technologies", at the conference *Library, Archives* and Museum Collections: Research and Conservation in Torun, Poland.

While on sabbatical Alison Murray, Associate Professor of Conservation Science, has been working with a number of students and recent graduates, finishing projects and starting new ones. She has been looking at the conservation issues of varnishing acrylic paints. In May, at the Cleaning 2010 conference held in Valencia, Spain, Marie Catherine Cyr (MAC 2007), Emily Min (MAC 2008), and Alison had a poster on this topic. Alison has also been working with Hai-Yen Nguyen, a conservation science research student who has been collaborating with Dr. George Bevan, Assistant Professor from the Department of Classics, Alexander Gabov (MAC 2000), private conservator at Conservation of Sculptures, Monuments, and Objects), and Krysia Spirydowicz; the topic of Yen's research is the application of X-ray and neutron computed tomography in art conservation and archaeology. Both Yen and Shokoufeh Ahmadi (MAC conservation science, 2008) will be presenting papers with Alison at the Materials Research Society meeting in Boston this fall. Shokoufeh's project looked at the consolidation of adobe. Alison is also starting a project with Dr. Laura Fuster-López and other colleagues at the Polytechnic University of Valencia, Spain, on infills in contemporary paintings. Golya Mirderikvand, a secondyear painting student, and Michael Doutre, a fourth-year undergraduate from the Chemistry Cepartment, will also be working on this project. From the summer of 2008 to the fall of 2009, Alison was away on leave with her son Alastair who is now two.



Alison Murray and Alastair

Header Image Credit: BFA Graduate Justin Steinburg, Memories Live, 2010

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Faculty News Continued

John O'Neill, Associate Professor of Paper Conservation, is on sabbatical leave in 2010. He is spending his time catching up on long-overdue reading as well as carrying out research in several subject areas. John's primary research interest is the early history of machine-coated papers, and a research trip to New Brunswick, New Jersey in July was useful in uncovering information on this littleknown segment of paper history. John is planning to attend the 30th congress of the International Paper Historians in Angoulême, France, an area with a very long history of papermaking. The congress will include visits to several museums and paper mills in the area, including the Moulin du Verger, where paper has been made continuously since 1635. While in France, John will also visit the paper mill at Brousses et Villaret, near Carcassonne.

Krysia Spirydowicz, Director of the Art Conservation Program and Associate Professor of Artifacts Conservation, has been awarded a professional placement in the UK next summer at the Birmingham Museums and Art Gallery. Krysia will work with other museum professionals on the conservation treatment of the Staffordshire Hoard. The Staffordshire Hoard is the most valuable treasure hoard ever discovered in the UK, worth £3.3 million. The Hoard consists of more than 1,500 beautifully crafted gold and silver objects from the 7th century Anglo-Saxon kingdom of Mercia. The Hoard was discovered in July 2009 by a local metal detector enthusiast. The find is likely to spark decades of debate among archaeologists, historians and the public. As Leslie Webster, Former Keeper of the Department of Prehistory and Europe, British Museum, comments: "This is going to alter our perceptions of Anglo-Saxon England... as radically, if not more so, than the Sutton Hoo discoveries. Absolutely the equivalent of finding a new Lindisfarne Gospels or Book of Kells."

Krysia also has two major publications in press. The Wooden Furniture from Tumulus MM at Gordion, Turkey will appear later this year and will be published by Brill of Leiden. Her contribution details the lengthy conservation treatment of the ancient wooden furniture from the tomb of King Midas at Gordion. Krysia has also contributed an invited chapter entitled "Rescuing Europe's Cultural Heritage: The Role of the Allied Monuments Officers in World War II" to an edited volume on the military protection of cultural property. This book, Planning for the Protection of Cultural Heritage in Times of Conflict, edited by Dr. Laurie Rush, will be published shortly in the UK by Boydell & Brewer, in their Heritage Matters series.

Changes in the Program Curriculum

A new course was introduced to the Art Conservation Program in 2004 entitled *History, Technology and Conservation of Contemporary Art*. This course was designed by Barbara Klempan and was the first of its kind to be included in the core curriculum of a Master's level conservation program in North America. Students from all treatment streams may take this course. It has become increasingly apparent that a multidisciplinary approach to teaching that considers emerging technologies must be included in the curriculum.

Involvement with outside projects such as DOCAM (Documentation and Conservation of the Media Arts Heritage) facilitated unique opportunities for faculty and students of the Art Conservation Program and complimented the new course. DOCAM was created in Montreal in 2005 under the auspices of The Daniel Langlois Foundation for Art, Science, and Technology with support from the Social Sciences and Humanities Research Council of Canada. The main aim of the project was to develop new methodologies and tools to address the issues of preserving and

Header Image: Staffordshire Hoard, Birmingham Museum and Art Gallery

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Changes in the Program Curriculum Continued

documenting digital, technological and electronic works of art. An annual summit was held each fall in Montreal and many students and faculty from the Art Conservation Program were generously provided with travel funds by DOCAM in order to attend these summits. DOCAM maintains a website with the results of the project and it is a useful tool in addressing preservation issues associated with multi-media work.

The Art Conservation Program at Queen's University is currently responding to the needs of diverse collections by providing a flexible and multidisciplinary teaching environment for its students. Although it offers its own course in the conservation of contemporary art, it is imperative that it continues to establish networks and partnerships with outside institutions and programs that specialize in preservation issues of new and emerging technologies. In this way, the Art Conservation Program can continue to respond to the increasing demands on conservators to take on new treatment and preservation challenges.

Two Analytical Techniques in the MAC Program

Two useful analytical techniques, Fourier transform infrared spectroscopy (FTIR) and X-ray fluorescence analysis (XRF), have been added to the MAC program in recent years. Infrared spectroscopy gives information on



chemical compounds present in materials. X-ray fluorescence reveals the identity and amount of metals and other "heavy" elements in an object or sample.

For standard FTIR analysis, a beam of infrared radiation is passed through a sample which absorbs infrared light at wavelengths characteristic of the molecules in it. An infrared spectrum is obtained in the form of a graph of wavelength versus percent transmission or absorption. Comparison of the spectrum of a material of unknown composition with spectra from a data base of known materials is used to identify the compounds present in the sample. The instrument is equipped with an attenuated total (internal) reflectance (ATR) sampling accessory. Infrared spectra are obtained by reflection at the interface between a sample material and a material with a higher refractive index such as diamond. This device uses very small amounts of sample and requires no sample preparation. It gives infrared spectra similar to transmission spectra.

The X-ray fluorescence analyser is a portable hand-held instrument containing a small x-ray tube that produces ionizing radiation. The x-ray beam is directed through a window at the front of the device on to a sample where it excites electrons from the inner core K (or L shells) of atoms of elements heavier than silicon. Replacement of the ejected electrons by those from higher L (or M shells) gives rise to x-ray emission (fluorescence). The emitted x-rays pass through the same window and are detected and analysed in the instrument. The results are displayed on the screen of an iPAQ pocket PC mounted on the instrument. The energies (keV) of the fluorescent x-rays are characteristic of the elements present. The intensity (counts per second) of a characteristic fluorescent x-ray is proportional to the amount of the element present in the sample. Thus both qualitative and quantitative analysis is possible. The XRF spectrum is a graph of energy versus intensity.

The two techniques are widely used by MAC students in conservation treatments and by both faculty and students in their research projects.

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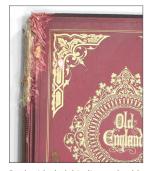




Some Recent Uses of Infrared and XRF Analysis in the MAC Program

According to Gus's notebook, both instruments were used extensively during the éest year. Examples of the utility of the portable handheld XRF instrument include determination of the composition of a large number of antique coins, detection of lead and arsenic in glazes on ceramic vases, detection of gold on the edge of a page from an old book, and analysis of pigments containing heavy metals on paintings and painted objects. XRF revealed the presence of chromium in a sealskin mat, thereby indicating the tanning method that had been used. Infrared spectroscopy (FTIR) has been useful in analyses of paints, grounds and varnishes on paintings. This technique also has been useful for the identification of a variety of adhesives such as animal glue, cellulose nitrate, shellac, cyanoacrylate etc. used for earlier repairs of ceramic objects. Various materials as well as coatings, varnishes and lacquers have been identified on numerous items treated by students in both the paper and objects streams.

In some cases a combination of XRF and FTIR has proved effective. An example of this was the detection of lead by XRF and organic material by FTIR on pieces of fresco from a building located in an area with heavy motor traffic. It was assumed that the lead came from unleaded gasoline and the organic matter from engine oil vapours. FTIR also showed that the fresco was made from gypsum.





Book with cloth binding and gold tooling: (left) book under normal light and (right) book under specular reflection

Reflectance Transformation Imaging at Queen's



Alexander Gabov and George Bevan have been working with MAC students to bring a new threedimensional photography technique, reflectance transformation imaging (RTI), into the toolbox of working conservators and archaeologists. Developed first at Hewlett-Packard Labs in 2001 by Tom Malzbender and Dan Gelb, the technique has now been developed by the University of Minho, Portugal, to a point where only a camera, a remote flash and a black reflective sphere are needed to record detailed surface texture of planar surfaces. This is a fantastic new method for conservators to record objects before and after treatment, and for archaeologists to reveal features, such as writing, on faded or weathered surfaces. Alex and George led workshops both in the Art Conservation photo studio, where object and paper conservation students brought objects such as distressed books, and in the field at the Cataragui Cemetery, where MAC students, alongside Classics undergraduates, helped to clean and document weathered tombstones. Thanks to the tremendous student interest, more workshops, as well as poster presentations, are planned for 2011/12. Alex and George would like to thank the team at Cultural Heritage Imaging, San Francisco, for all of their help in bringing this technique to Canada.

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Queen's Art Conservation Student Blog

The current Queen's students would like to keep you up to date on our adventures! This fall, the student body will be starting an online blog in which we hope to publish updates on departmental activities such as our research projects, guest lecturers, summer internships, and of course our annual ANAGPIC conference. We would love to receive feedback from you as well - ideas, suggestions or just plain old encouragement will be welcomed on the blog. We hope you will take a look when we launch in a month or so and check back for monthly updates throughout the year. The address will be http://queensartcon.blogspot.com Thank you!

Please Note

In the following sections of the Newsletter, we are using only information that was provided to us by students.

A Few of the Graduating Students

Marilyne Beauregard interned in the painting conservation studio at the Victoria and Albert Museum in London, England, this past summer. She studied, treated and conducted technical examinations of European paintings from the 16th to the 19th century. This valuable experience expanded her knowledge of the techniques and materials of British and European artists and allowed her to work with new conservation methods and materials. She is eager to gain further experience in the conservation of traditional paintings in Europe.

Stéphane Doyon is interested in conserving furniture and musical instruments. His first internship was spent at the National Music Museum in South Dakota, where he conserved a French harmonium. His second internship was spent in Quebec City, at the furniture laboratory of Parks Canada. He had the chance to conserve several pieces of Victorian furniture, as well as different decorative art objects. Recently employed by Parks Canada, he is now conserving the furniture and the reed organ from the Catholic chapel at the Grosse Île Historic Site.

Hadas Seri interned this summer in the ethnographic laboratory at the Canadian Museum of Civilization, Ottawa. Her work mainly included treatments of objects constructed from organic materials such as a painted tapa cloth, Canadian First Nations baskets, and decorated semi-tanned hide clothing items. During the MAC Program and other internships, Hadas focused on the conservation of archaeological artifacts, her main interest in the field. She is intending to return to her homeland, Israel, and specialize in this domain.

Ida Pohoriljakova's interest in archaeological and ethnographic objects took her to Philadelphia this past summer to intern at the University of Pennsylvania Museum of Archaeology and Anthropology. She had the opportunity to work on an array of projects, including the treatment of excavated and ethnographic objects. She was also involved in the Museum's preventive conservation program, and evaluation of different accessioning methods. Ida will be undertaking a one-year post-graduate fellowship at the Arizona State Museum in Tucson, Arizona.

Header Image Credit: P. Schiedel

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Research Project Titles from 2010

Marilyne Beauregard

A Study of the Material and Techniques of Maurice Galbraith Cullen

Alison Cude

TPEN: A Treatment for Iron Gall Ink

Stephane Doyon

The High Altar of Saint-Grégoire-le-Grand in Bécancour: A Case Study of an Early 18th Century Quebecois Tabernacle

Emily Leonoff

Ultraviolet Images: A Study of UV Printed Images on Textiles.

Meaghan Monaghan

Effects of Concentration and Artificial Ageing on the Strength and Reversibility of Dynamic® 208 Wallcover Adhesive

Tania Mottus

Determining the Suitability of Japanese Washi Paper for Lichen Packet Use in Herbaria Collections Storage

Ida Pohoriljakova

The Facts on Flugger Acrylspartel: A Study on the Properties of a Commercial Filler

Amélie Roy

Permanence and Durability of Bagasse Pulp Paper

Hadas Seri

Cyclododecane Aerosol Spray: An Examination into Its Application and Suitability for the Conservation of Glass.

Bo Kyung Brandy Shin

Analysis and Comparison of Artists' Water Miscible Oil Paint to Traditional Oil Paint

Rebecca Vodenhnal

Cleaning Acrylic Emulsion Paintings: An Analysis of Abrasive Cleaning Methods

Header Image: Hadas Seri working in the lab

Students Going into Second Year

Tasia Bulger travelled to Vancouver this summer to study contemporary paintings and sculpture conservation at the Vancouver Art Gallery. Tasia performed various treatments on contemporary acrylic paintings, including Guido Molinari's 1993 work *Quantificateur Bleu* which was on public display at the gallery. In conjunction with the Agnes Etherington Art Centre, Tasia will be continuing her interest in contemporary materials as her research project will be on the deterioration of fibreglass sculptures. Tasia wishes to study abroad for her next internship, she hopes in the Netherlands.

Catrina Caira worked in Kingston this summer with Alexander Gabov at his private conservation studio, Conservation of Objects, Sculptures and Monuments. Activities included work on outdoor monuments and sculptures, studio treatments, policy writing and pest monitoring. Catrina intends to work on a silver polishing project next year using a non-contact profilometer to measure scratch depths and surface deformations. She is most interested in archaeological conservation and metals. She is looking forward to gaining experience in textile conservation this coming year.

Maki Ikushima spent her summer internship at the McMichael Gallery in Kleinburg, Ontario, where she worked on paintings by the Group of Seven and other Canadian artists, under the instruction of Alison Douglas. The paintings were mainly oil on canvas, oil on wood panel, and oil on paperboard support. Prior to her internship at the McMichael, Maki spent a month in New York City, working at the Rustin Levenson Private Conservation Studio in Chelsea. At this studio, she worked on conserving various Venezuelan oil paintings on canvas, from the 18th century, as well as a reverse painting on glass, which required much consolidation. Maki is hoping that these diverse experiences will help her second-year research project on collage paintings.

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Students Going into Second Year Continued

Golya Mirderikvand has just completed a three-month summer internship at the National Gallery of Canada in Ottawa. Some of the experience she gained during this internship included the documentation and treatment of an early 20th century canvas painting and a 16th century Flemish panel painting. She then travelled to Maastricht, the Netherlands, to complete an additional five-week summer internship at the Stichting Restauratie Atelier Limburg (SRAL), where she worked on the treatment of a series of marouflage paintings adhered to panel supports, from the early 19th century. For her research project, she would like to explore a topic about the conservation of contemporary and modern art.

Hai-Yen Nguyen spent the last year working on her conservation science master's thesis on the application of computed tomography for corroded metal artifacts. For this project she collaborated with scientists at the Royal Military College in Kingston, the ANTARES facility at FRM-II in Munich, Germany, and the Departments of Classics and Mechanical and Materials Engineering at Queen's University. Objects under investigation include coins from the Diniacopolous Collection which belongs to the Department of Classics and the Art Conservation Program at Queen's.

Jennifer Robertson completed her summer internship in the Book Conservation Lab at Library and Archives Canada in Ottawa. She enjoyed conserving cloth bindings, investigating leather deterioration, and testing light bleaching methods, among other projects. She has a strong interest in the conservation of books and archival documents, but hopes to take an internship in a fine art setting next summer, to broaden her experience. She is considering a research project examining the use of ozone generators to treat paper objects.

Kate Sullivan completed two internships this summer. The first was at the Archaeological and Historic Conservation Laboratory at the Parks Canada, Ottawa Service Agency. Kate worked on

Header Image Credit: P. Schiedel

a variety of archaeological iron and copper alloy objects from all over Canada. For her second internship Kate travelled to Athens, Greece, to work in the conservation laboratory of the Agora excavations. Kate completed conservation treatments on a wide variety of freshly excavated material. She is hoping to travel abroad again next summer for her second-year internship.

Tessa Thomas completed her summer internship at the Art Gallery of New South Wales in Sydney, Australia. Tessa completed conservation treatments of works of art on paper from the gallery's permanent collection, including Australian, European and Asian prints, drawings and watercolours. Tessa hopes to further her interest in the conservation of fine art on paper during her second year in the MAC program and is interested in researching the effects of mounting contemporary photographs to rigid supports.

Incoming Students

Jeanne Beaudry Tardif comes from a visual art and art history background. This past year she studied in a museum studies master's program. She discovered art conservation while searching for a career that would encompass her love of art in both a manual and historical manner. She chose the paper conservation stream because of the versatility of the medium. This summer she had the chance to visit a new photography exhibit at the Guggenheim Museum in New York City, where she had a private guided tour with the museum's paper conservator.

Fiona Beckett is entering the painting stream and is interested in learning more about all kinds of conservation. One of her conservation experiences includes spending a few weeks in southern France restoring the small castle of Saint Victor La Coste and employing traditional methods to rebuild parts of the wall and stone steps. Her group was also responsible for engineering a drainage ditch to prevent future water erosion. Fiona also interned for several months at the Glenbow Museum in Calgary, where she helped write condition reports,

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Incoming Students Continued

photographed and labelled artifacts, and assisted in preventive conservation by freezing African wood sculptures. She is looking forward to beginning the program and to meeting more people in the art conservation community.

Beth Boyce spent her summer working as a contractor at the Royal British Columbia Museum where she has removed mould from a collection of documents for the archives. Her conservation interests are in ethnographic and traditional textiles, and objects recovered from wet sites and frozen conditions. She was able to pursue her interests in textiles last January when she participated in a textile conservation workshop in Lima, Peru.

Jennifer Morton, originally from Burlington, Ontario, obtained her bachelor's degree in art history with a minor in chemistry at Nazareth College in Rochester, New York. She discovered her passion for Art Conservation while touring the Palace de Versailles during a family wedding in France. Paintings are her primary interest of study and she hopes to gain a working knowledge of painting conservation during this academic year as well as her upcoming summer internship.

Kelly O'Neill received her B.A. in art history and M.A. in museum studies, both from the University of Florida. Her master's focused on preventive conservation and led to her passion for art conservation. Since 2008 she has been completing her pre-program conservation experience with Rustin Levenson Art Conservation Associates in Miami, where she has worked on paintings for private clients and museums throughout the state of Florida. She is excited to be a part of this year's incoming MAC class.

Ghazaleh Rabiei has a bachelor's degree in jewellery design from the Ontario College of Art and Design. After graduating from OCAD, she began working at the Art Gallery of Ontario. First she was an assistant mount-maker in the conservation department. She then became

Header Image: Hadas Seri working in the lab

involved in some major conservation projects. Ghazaleh will be specializing in the treatment of artifacts.

Jessica Régimbald completed a bachelor's degree in art history at the University of Montreal. Last winter, she completed an internship at the McCord Museum, part of McGill University in Montreal, working specifically on the conservation of the rare and old book collection. Jessica always had an interest in conservation but this internship oriented her toward the paper stream. Next summer, she would like to do an internship abroad to widen her knowledge and meet other professionals.

Brittany Webster has a background in interior design from the University of Manitoba. She divided her summer between design work, interning at the Winnipeg Art Gallery, and studying chemistry in preparation for her year at Queen's. She is entering her first year of the Art Conservation Program with a focus on paintings and hopes to spend one of her internships living and working in a French-speaking environment.

Anna Weiss graduated from Bradley University, Peoria, Illinois, with a degree in art history and studio art. The most applicable of her preprogram experiences were her internships at the Field Museum in Chicago, treating archaeological and ethnographic objects. She hopes to work with these materials by interning at an archaeological field site or in a natural history museum. Her additional interests include the ethical conservation of sacred objects, painted objects, and cultural preservation during wartime.

Alumni News

We would love to hear from you, so please send us your news, personal or professional!

Congratulations to **Martin Juergens** for the HP Image Permanence Award for outstanding contributions that advance the longevity of photographic and fine art images created via modern digital methods.

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