History and Policies

PRESERVATION STUDIES DOCTORAL PROGRAM, UNIVERSITY OF DELAWARE

http://www.artcons.udel.edu/doctorate
Director, Dr. Joyce Hill Stoner, jhstoner@udel.edu

Admission Requirements/Criteria

All applications must be made online at http://www.udel.edu/gradoffice/apply/ and all relevant materials must be received by February 1. Applicants should write to the Director in advance and submit a c.v. and brief proposal for a dissertation topic. A pre-admissions advisory committee will be assembled to discuss and suggest changes so that a revised proposal can be submitted by February 1. Applications must include:

- All minimum University requirements.
- A Master's Degree in a discipline relevant to one of the program concentrations. All college and university transcripts should be submitted to the Office of Graduate Studies; these must come directly from the institution.
- A summary of intended dissertation research and the relation of this topic to existing UD expertise and resources should be incorporated into your personal essay in addition to a suggested list of courses taken from the online UD course listings. The research proposal should follow this outline:

  Proposed project title
  Project significance and goals -- how will this topic make a unique contribution?
  How is this research needed to address global, national, or local preservation issues?
  Background, preliminary survey of existing literature
  Methodology, examples to be studied
  Your ability to complete this project successfully, speak or read the necessary languages, etc.
  Faculty and coursework at the University of Delaware that you feel would be relevant to your study.

- Your personal essay should also discuss areas of interest, intellectual goals, and how this program would be seen to meet these goals. Applicants must demonstrate prior background work, especially in their Master's-level study, that will enable them to successfully complete graduate-level courses and conduct graduate-level research on the proposed dissertation topic.
- A professional and academic résumé is required.
- A writing sample to help the admissions committee assess the applicant's ability to design and conduct a research project and to communicate findings to the scholarly community. Published papers on a relevant topic would also be helpful.
- Graduate Record Examination scores are required and must have been taken in the last five years to be considered valid. Applicants for whom English is not a native language should submit TOEFL scores in order to demonstrate satisfactory proficiency in the English language. A score of 79-100 or higher is required for internet-based TOEFL exams (IBT) and a minimum score of 550-600 for paper-based TOEFL exams. TOEFL exam scores are valid for two years. Please see http://www.udel.edu/gradoffice/apply/foreign.html and click on "English Proficiency" for additional information on this topic.
- Three letters of recommendation that speak to the applicant's ability to conduct research in the chosen area of concentration addressed to the PSP Director by the recommender and signed across the back of the sealed envelope or submitted online.
- Online submission of the https://grad-admissions.udel.edu/apply/ from the UD website to the Office of Graduate Studies by February 1.
- The committee may request additional materials. For additional information or arrangements to visit the UD campus and meet with faculty please contact Dr. Joyce Hill Stoner at jhstoner@udel.edu.

NOTE: Applicants are to contact the PSP Director (currently Dr. Joyce Hill Stoner, jhstoner@udel.edu) well in advance of the annual February 1 deadline, and preliminary discussions will be arranged by electronic mail in order

to determine if there are potential faculty members available in the chosen concentration and what travel or analytical equipment funding may be necessary.

After receiving a c.v. and description of the proposed dissertation topic, the PSP Director will attempt to assemble a pre-admissions advisory committee (possibly via Zoom) of at least three interdisciplinary faculty members who can address the suggested topic to determine its suitability for available UD expertise. This committee will present its findings to a larger five-person interdisciplinary admissions/PSP advisory committee after all admissions materials listed above have been received.

Admission to the program is selective and competitive based on the number of well-qualified applicants and the limits of available faculty and facilities for each concentration and dissertation topic area. Applicants who meet stated minimum requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer other appropriate strengths. An on-campus interview with members of the pre-admissions advisory committee is strongly encouraged while the application is in progress.

Background: The PSP accepted its first doctoral students in 2005 and was originally founded under the administration of the Center for Material Culture Studies in the College of Arts and Sciences. It is now administered by the Art Conservation Department. This doctoral program followed an Art Conservation Research Ph.D. which began in 1990 and had graduated six students by 2003. In the preservation disciplines such as historic preservation, art and architectural conservation, and museum studies, there are few opportunities to earn a doctoral degree. Several related though more narrowly defined Ph.D. programs are currently active, such as a Ph.D. program in art conservation at the Royal College of Art/Victoria and Albert Museum; a Ph.D. program in conservation science at the Institute of Archaeology, University College London; Ph.D. programs in Historic Preservation at Tulane University and at the University of Texas, Austin; and a Ph.D. Program in Historic Preservation Planning at Cornell University. Most conservation programs provide practical training at the master's degree level for practitioners.

The Preservation Studies Program (PSP) is an interdisciplinary doctoral course of study that teaches the philosophies, research methodologies, and policies informing preservation efforts focused on art, architecture, landscapes, and material culture. It is distinct from other discipline-based courses of graduate study in that it provides a mechanism to combine cross-field expertise toward doctoral study in preservation. Informed preservation efforts, for Angkor Wat, for example, should embrace stone deterioration and the cultural history of the monument in addition to history of the region, including politics and religion. The PSP prepares students to address questions regarding individual objects and works of art, collections, buildings and structures, and sites and landscapes. This program provides training in the conduct of research, allows students to pursue in-depth research on a topic of significance to their area of concentration, and at the same time gives them a greater theoretical grounding and will help them place their specialization into context within the broader field of preservation studies.

Admissions history: In the first six years the PSP received more than 100 inquiries and 28 formal applications. Prerequisites include a Master's Degree in a discipline relevant to the proposed dissertation topic which must be announced before acceptance to insure that the UD has the appropriate expertise available within the onsite faculty. Graduate Record Examination scores are required and must have been taken in the last five years to be considered valid. Applicants for whom English is not a native language should submit TOEFL scores in order to demonstrate satisfactory proficiency in the English language. A score of 550 or higher is required for paper-based TOEFL exams; 213 or higher is required for computer-based TOEFL exams. Maximum enrollment will initially be limited to approximately eight matriculated students, one to three accepted a year, dependent upon the amount of additional funding available to support students in this program, and by the availability of faculty members to serve as advisors within the demands of their individual workloads.

Curriculum: Eighteen credits of coursework are required. A non-credit seminar for presentation of research in progress is required for three semesters (PRES 801); faculty, undergraduates, and graduate students in related departments are encouraged to attend. Three three-credit courses should be taken in each of two contiguous semesters in order to satisfy the University residency requirement. Once advanced to candidacy, students must register for at least 9 credits of Ph.D. dissertation credit (969). (A total of 27 course credits.)

Funding: The Coremans Endowment is in place and available for support for Ph.D. students in preservation studies especially in fields related to Art and Architectural Conservation. The Coremans Endowment funds are applied for competitively as part of the admissions process. Some Teaching and Research Assistantships may also be available through collaborating units. Some students may be supported on external research grants as was the case with some of the Art Conservation Research doctoral Fellows. Assistance will be awarded on a competitive basis to applicants

best fitting the needs of the internal endowment, external granting agencies, and sponsoring faculty. Students receiving full stipends will be expected to maintain full-time status and may be expected to work up to 20 hours a week assisting faculty with research or teaching.

Some of the past graduates and students in the Preservation Studies Doctoral Program

Christina Cole (began September 2006, graduated May 2010) "The Contextual Analysis of Pre-1856 Eastern Woodlands Quillwork Dyes through Identification by Liquid Chromatography-Mass Spectrometry." Following graduation, Cole held one of two inaugural Andrew W. Mellon Fellowships in Conservation Education and collaborated with the National Gallery of Art on historical dye analysis projects; she is currently a Reference Standards Scientist at the United States Pharmacopeia.

Chris's background has focused mainly on applied R&D towards the development of biosensors for trace clinical/environmental monitoring, and culminated in the development of patent-pending surface coating technology for metal oxide/nitride surfaces. In 2004, she joined the Smithsonian Institution and the field of conservation science. While at the Freer Gallery of Art and the Arthur M. Sackler Gallery, her focus was on the identification of natural red dyes on Chinese ancestor portraits from the Qing dynasty, with particular attention towards enhancement of sensitivity for samples on the order of a nanogram or less. With the National Air and Space Museum, she provided technical and administrative support to the museum's conservation unit in the preparation of reports, collection of data, and care of the collection; she was also the lead chemist for the museum's chemical treatment lab in support of restoration and preservation activities. Chris graduated Phi Beta Kappa summa cum laude from N.C. State University in 1996 (B.S., Chemistry), and from the University of Michigan in 1998 (M.S., Analytical Chemistry). Over a two-year period in Florence, she was trained in varnish removal, inpainting, and general restoration theory for c. 15th-16th century Western European canvases.

Before beads, Native Americans used brightly colored porcupine quills to create floral and abstract designs on clothing, bags, wall hangings, bark boxes, and other such objects. Quillwork is still made today, and though methods for folding, wrapping, or otherwise manipulating quills as "thread" are well documented, studies of the materials used to color the quills are conspicuously absent. This gap in the literature was first brought to my attention in 2005 by a Lakota Traditional Arts instructor and is particularly true for the pre-aniline dyes used by communities east of the Mississippi. Research to determine formulations for quill dye baths from raw materials has been and continues to be pursued, but no large-scale instrumental analysis of museum quillwork has been undertaken until now.

As a graduate student in the Preservation Studies doctoral program, my research to identify pre-1856 Eastern Woodlands quillwork dyes took place in an environment unique to interdisciplinary programs. Beyond development of a liquid chromatography-mass spectrometry-based method, I was privileged to spend time with quillworkers, conservators, curators, ethnographers, and anthropologists across the United States, Canada, and Europe, learning technique and connoisseurship. I was exposed to the ethics of collecting, curating, and repatriating Native American material culture, including an opportunity to witness one community's religious celebrations, where theoretical ideas of cultural patrimony are reduced to practice. All doctorate research represents an expansion of knowledge; my research presented a first-ever objective evaluation of the body of Eastern Woodlands quillwork dye literature, leading to the challenge of some persistent and negative stereotypes of Native North American dye technology.

More importantly, the Preservation Studies program provided an opportunity to demonstrate my ability to successfully conceive of, fundraise for, and successfully execute a multi-year research study. The primary terminal degree for art conservation is a Master's degree: although independent study courses are possible, even the best Master's-level art conservation programs cannot adequately support intensive PhD-caliber research within an already-packed 3-year curriculum. While some aspects of cultural heritage preservation could, potentially, be partially addressed under the many umbrellas of doctorate programs in allied fields, I firmly believe that only a Preservation Studies-oriented program can provide the necessary context required for the successful defining and execution of such research.

Committee: Vicki Cassman, chair (ARTC), Jay Custer (ANTH), Bruno Pouliot (ARTC), Joseph Weber (ARTC), Suzanne Lomax (External member, Scientist, National Gallery of Art).

Chris passed her qualifying exams on February 28, 2008, and her dissertation proposal presentation was approved on May 10, 2008. Passed her dissertation defense, March 15, 2010, graduated in May 2010. She was the first Mellon teaching fellow at the UD Art Conservation Dept.

Amanda Norbutus (began September 2008) "New approaches for the preservation of outdoor public murals: The assessment of removable protective coatings for mural paintings and painted architectural surfaces." Amanda received a dissertation fellowship from the Office of Graduate and Professional Education and the Biggs-Davis Award for 2011-2012. Following graduation, Amanda Norbutus has been awarded a three-year post-doctoral fellowship at the Chemistry Department of Villanova to work especially on Chemistry and Art Education and outreach.

Amanda's background has focused mainly on the surface analysis of art, as well as method development for the non-destructive detection and quantification of biological pheromones by liquid-chromatography/mass spectrometry. Amanda was majoring in history with a chemistry minor at the College of the Holy Cross when she studied abroad at the University of Sussex in 2003. While in Brighton, she was introduced to art conservation as well as the sciences that contribute to authentication and preservation. After graduation from Holy Cross (B.A, 2005), she spent the year at the College of William and Mary to finish the remaining courses for a Bachelor's degree in Chemistry. While in Williamsburg, she interned at the Muscarelle Museum of Art, where she learned to arrange artwork and contributed pertinent data on the Art reDiscovery network. Recently, Amanda performed a technical investigation of the materials and methods used in a Dutch genre painting as part of her master's thesis in analytical chemistry (M.S., Villanova University, 2008).

My interest in understanding artists' materials led me to the University of Delaware's Preservation Studies Program where I am studying advanced analytical techniques and chemical engineering, along with more traditional art conservation and historic preservation coursework. Although I had used analytical instrumentation to investigate artistic materials in the course of my Master's-level graduate research in chemistry, I lacked a clear understanding of how and why certain materials were chosen by artists for their projects. The interdisciplinary nature of the Preservation Studies doctoral program allows me to straddle the divide between art and science and encourages cross-disciplinary collaboration within the university and with the public art community as I promote the preservation of modern public murals.

Public murals today are in danger of being irreversibly damaged or lost if they are not properly protected from chemical, mechanical, and physical stresses of everyday exposure. Protecting existing murals from further loss and future murals from unnecessary damages is at the heart of my theoretical and experimental research. A key element of my work is to alert mural artists, civic leaders, arts advocates, mural arts commissions, community leaders, conservators, and scientists about "best practices" for both the creation and the preservation of these important murals as they are determined through this research. My blog for Rescue Public Murals (http://www.heritagepreservation.org/RPM/NorbutusBlog.html) relates the quality and performance of several coatings systems; samples were covered with five types of coatings and continually exposed to weather and light for four years. The data collected helps establish performance standards as I continue to investigate a new waterborne coating that has features beneficial to murals and architectural surfaces. The development of this waterborne coating will also involve selecting the appropriate solvent- or water-based system that can safely and completely remove the coating after it has cured. Future analysis of the coatings' efficiency and usefulness will be performed using Scanning Electron Microscopy, Fourier Transform-Infrared Spectroscopy, Raman Spectroscopy, Secondary Ion Mass Spectrometry, and Liquid Chromatography-Mass Spectrometry. The results of this research, focused on the murals in Philadelphia, will provide a new product that will enhance the appearance and increase the lifetime of the painted wall murals and other architectural surfaces.

Committee members: Joyce Hill Stoner (ARTC), Richard Wolbers (ARTC), Joe Weber (ARTC), Andrew Teplyakov (CHEM), Tom Learner (External member, Scientist, Getty Conservation Institute)

Amanda passed her exams (Jan. 2010), passed to candidacy August 23, 2010, and defended her dissertation April 5, 2012. She graduated in August 2012**.** Amanda carried out a three-year post-doc at Villanova in the Chemistry Dept with special focus on Art Materials. Beginning in September 2015 she is an Assistant Professor of Chemistry at Rollins College in Florida.

Marina Dobronovskaya (began September 2006) "The Material Cultures of Stalinism: Reconstruction of the Historic Towns of Novgorod and Istra in the Soviet Union after World War Two (1943-1955)." Marina recently received a Dissertation Completion Fellowship from the Mellon Foundation and American Council of Learned Societies and the Robert R. Davis Graduate Fellowship in Art History, Preservation Studies and Art Conservation to support her final year of writing (2012-13).

Marina's background is in professional archival work and research in historic preservation. She graduated from the Moscow State Historical-Archival Institute (now the Russian State University for Humanities) in 1980 with the

equivalent of a Masters degree in archive management and history. During that training she completed studies in archive and library management and in Ancient History, Middle Ages, and Modern History; also in the history of Russia from ancient times through the Soviet period. She also took courses in orthographic study, especially of Old Russian language, as well as training in practical skills of reading of archival documents from the 17th-19th centuries. After graduating from the institute, she worked from 1980 to 1987 as an archivist in one of the then Soviet central state archives. There, she was in charge of creating a cataloging and organizations system for historical materials deposited with the archive by state scientific and technical design institutions. In 1988, she took a position of Specialist of Art and Architectural History in the Soviet State Research and Design Institute for Historical Preservation of the USSR Ministry of Culture. This Institute dealt with the documentation and preservation of historic sites and monuments of architecture. She worked in this Institute and its post-Soviet successors until 1998 as an archive researcher and a historian of architectural sites.

Post-war reconstruction of destroyed cities in the USSR was, perhaps, the largest state-planned reconstruction project of the twentieth century. More than 250 cities, including large urban areas and historic towns and districts, were reconstructed. Surprisingly, little has been done to try to understand this massive effort, and its legacy in policies of urban planning and historic preservation. My dissertation examines the process and politics of this process: how decisions were made, what was actually done, and the impact of reconstruction on contemporary society, especially on the professional development and philosophy of historic preservation.

I was trained and worked professionally in historic preservation in the Soviet Union and Russia, but I find that being in an American university PhD program has several advantages. The interdisciplinary training that I have received in the PSP, in comparative history, history of architecture, preservation studies and material culture, has added to my more narrow Soviet and post-soviet Russian training and work experience. My graduate training here has shown me different approaches to Soviet history, and allows me to place Soviet reconstruction and preservation in the broader European context. Secondly, my experience here, and especially the support that I have received in the PSP, has allowed me to participate in an international community of historians and preservation professionals. Financial support from the Coremans Endowment has allowed me to go abroad for research trips and to attend events such as annual AAASS conferences (American Association for Advancement of Slavic Studies) and an international conference on material culture in Dublin, Ireland, where I gave a paper in May 2009.

My dissertation focuses on a historical topic, but it is not just about the past. I wish to contribute to fledgling efforts to protect historical heritage in Russia, and in other areas of the world particularly threatened by the rapid influx of global capital and modernization. By focusing on the Soviet experience, both the negative and positive aspects, I hope that my dissertation will also be relevant to ongoing international efforts to reconstruct historic sites destroyed by wars and natural disasters.

Committee: David Ames (CHAD), Ritchie Garrison (WPAMC and HIST), Bernard Herman (CHAD and ARTH, retired), Karl Qualls (External member, Dickinson College, HIST), Robert Warren (head of committee, UAPP) Marina passed her qualifying exams in May and October of 2008 and her proposal presentation in February 2009; she defended her dissertation in February 2013 and graduated in May 2013. Marina's book on historic preservation in Moscow—entitled Ob'ekt okhrany: Moskva. K 95-letiu obrazovania sistemy organov okhrany pamiatnikov. Documenty i svidetelstva [Object of Preservation: Moscow. Ninety-five years of historic preservation. The Moscow Historical Preservation Agency]—has thus far won two awards: The Moscow Mayor's Award for the best book on historic preservation of the year (2012) and second prize, category Best publication on architecture and architects, Annual Moscow International Festival "Architecture" (2013).

Melissa Blair (began September 2009) "Landscapes of Work: The Domestic Outbuildings of Central Maryland, 1750-1850"

Melissa is an architectural historian with expertise in documenting and evaluating cultural landscapes and historic sites throughout the Eastern Seaboard, having held positions at the Bostonian Society (Boston's Historical Society and Museum), the South Carolina State Historic Preservation Office, and a Mid-Atlantic cultural resources management firm. Her research interests include traditional cultural properties, New Deal era public housing, and mid twentieth-century suburban resources. For seven years, she worked for the Maryland State Highway Administration, where she led a team of architectural historians and archeologists responsible for conducting all aspects of the Section 106 process for transportation projects. Melissa graduated from Grinnell College in 1997 (B.A., American Studies), and from the University of South Carolina in 2002 (M.A., Public History/Historic Preservation). Currently, she is co-authoring a book on Art Deco architecture in Washington D.C. and Baltimore, accepted for publication by the Johns Hopkins University Press.

I joined the Preservation Studies Program at the University of Delaware hoping to expand my leadership and academic capabilities in the field of historic preservation and was drawn to the program's uniqueness and flexibility. I have the opportunity to create my own program of study and to plug into numerous departments at the University and at Winterthur Museum. Finishing my first two years in the program has confirmed my belief that the most exciting and creative scholarship is interdisciplinary in nature. There are few places in the world where one can pursue doctoral level work in preservation or complete an interdisciplinary Ph.D. As the field of preservation continues to grow, similar programs will proliferate, but the University of Delaware is leading the way. I find the interaction of conservators, conservation scientists, and historic preservationists within the PSP program to be particularly enriching. Though our methods vary, preserving cultural heritage is our common endeavor. Understanding each other's work gives us a broader perspective on the many facets of preservation studies.

In the ten years that I've been in the field of preservation, I have had the opportunity to influence policies and decisions that impact the historic built environment. I see the next ten years as a time for me to be an innovator, someone who will change the field. My time at Delaware will be a springboard to that goal, connecting me with a supportive community of world-class scholars and pushing me to my very best work. I used to think my vocation was to convince people that the past mattered, but I now know that appreciation for the past is just as much a part of being human as the love of music. Just as it takes musicians to transmit sound and reach that part of us that responds to music, we need people who can interpret the past and connect us to its many meanings. That is my calling and I am grateful to the PSP for providing a place where I can grow and be challenged along the way. My research explores the domestic outbuildings of the Mid-Atlantic region, including springhouses, summer kitchens, bake ovens, smoke houses, root cellars, ice houses, and others, in the hopes of broadening our knowledge of everyday rural life and to help those who are working to preserve these rapidly vanishing historic resources.

Melissa passed her exams March 16, 2011, and presented and passed her dissertation proposal on August 3, 2011. Her committee members are: Dr. Ritchie Garrison (WPAMC and HIST, committee chair), Dr. Lu Ann De Cunzo (ANTH), Dr. Kasey Grier (HIST), and Dr. Sally McMurry (External member, Penn State University). She graduated in 2014 and is now is now a lecturer in public history at the University of Maryland Baltimore.

Dawn Rogala (began September 2009) "Hans Hofmann's Last Lesson: A Study of the Artist's Materials in the Last Decade of his Career." Dawn was recently awarded a Global Research grant for the summer of 2012, and a University Fellowship for 2012-13.

Dawn is a 2006 graduate of the art conservation program at Buffalo State College/State University of New York, where she specialized in paintings conservation and received a Master of Arts degree and a Certificate of Advanced Studies in Art Conservation. During Dawn's second year of conservation training she completed a brief study of Abstract Expressionist painter and teacher Hans Hofmann's late-career ground layers, which led to a postgraduate Conservation of Museum Collections Fellowship at the Smithsonian Institution studying mid-twentieth century ground layers, and her subsequent enrollment in the Preservation Studies Doctoral Program at the University of Delaware, where she will complete her examination of Hofmann's late-career materials. Dawn has presented papers on different aspects of her Smithsonian research at national and international conferences, and has co-authored related papers on materials-induced condition, paint analysis, and research methodology for the Journal of the American Institute for Conservation, the American Institute for Conservation Paintings Specialty Group postprints, and the postprints of the Materials Research Society. Dawn remains a postgraduate research fellow at the Smithsonian's Museum Conservation Institute.

My dissertation research focuses on the painting materials of Abstract Expressionist artist and teacher Hans Hofmann (1880-1966). Hofmann directly influenced thousands of students and indirectly affected countless others through his writings and through the teachings of former students at the forefront of art movements and institutions throughout the United States. While recent conservation research has revealed far-reaching media incompatibility problems resulting from the adoption of industrial materials by Hofmann and his Abstract Expressionist colleagues, there is limited primary documentation or published analyses of Hofmann's materials. In my dissertation I will identify the late-career painting materials used by Hofmann, and look for any relationship between Hofmann's materials, technique, and the impact of his choices on the long-term stability of his work. The target period for this analysis is a roughly ten-year span that includes the years just prior to and after the 1958 closing of Hofmann's schools in New York City and Provincetown, Massachusetts. This representative catalogue of Hofmann's late-career materials will be compared with existing conservation survey and treatment documentation of Hofmann's work, and with both published and anecdotal assessments of Hofmann's rapid stylistic changes during this period. I anticipate that the results of my research will define the role played by industrial materials in the emergence of Hofmann's late-career signature style, clarify the impact of the teaching environment on Hofmann's exposure to new materials,

assess Hofmann's relationship to the critical view of Abstract Expressionism as a material-driven style and reveal similarities in materials amongst the New York School artists, and directly impact the future conservation treatment of Abstract Expressionist and later works that incorporate industrial materials into an otherwise traditional artist's palette.

After 15 years as a designer and art director for museums and nonprofit arts organizations, I returned to school to pursue a career in cultural heritage preservation. Following my graduate studies and subsequent conservation fellowships, in 2009 I enrolled in the interdisciplinary Preservation Studies Doctoral Program at the University of Delaware. As public interest in the preservation of modern art increases, so too does the need for knowledgeable collections advocates. As the only U.S. doctoral program for practicing conservators, UD's program offers a unique terminal degree that provides the bearer with a more powerful voice in collections advocacy. One of the strengths of the UD program is its emphasis on exploring the role of conservation within the interdisciplinary matrix of humanities studies. While technical studies scholars have long drawn upon the relationship between art history, science and practical studio skills in studying the work of the Old Masters, technical scholarship of modern art is a comparatively young field with scant source materials, particularly in the area of published scientific analysis. As modern materials research has advanced, so too has the call to promote
integrated scholarship that acknowledges the interrelated nature of art history, studio art, and conservation studies: "Providing the data is one thing but explaining it in context is quite another…. It is only through intense collaboration among the distinct but related disciplines that consider works of art that we can attempt to frame and pose the relevant technical questions.... Only in collaboration can we begin to offer the indeterminate work of art the rigorous yet insightful review it deserves." (Carol Mancusi-Ungaro, Associate Director of Conservation and Research at the Whitney Museum of American Art, and Director of the Center for the Technical Study of Modern Art, from "Material and Method in Modern Art: A Collaborative Challenge," Scientific Examination of Art: Modern Techniques in Conservation and Analysis, Washington, D.C.: The National Academies Press, 2005) The time is right to pursue modern art studies utilizing this inclusive, responsible scholarship model. My doctoral research integrates recent scholarship in art history, conservation, and scientific analysis in a balanced and comprehensive investigation of the relationship between a modern artist's materials, his work, and the preservation of his artistic legacy. It is my hope that my research will serve as a model for future studies in the field of modern art conservation. I am grateful to the Preservation Studies Doctoral Program and the Coremans Endowment for providing me with this opportunity to obtain a level of training and study that would not have been possible in another venue.

Dawn passed her exams in May 2011, and her proposal presentation in September 2011.. Her committee members are Dr. Murray Johnston (CHEM), Dr. Christopher Maines (Scientist, National Gallery of Art), Jill Sterrett (Conservator, San Francisco Museum of Modern Art), Dr. Joyce Hill Stoner (ARTC and PSP, committee chair) and Dr. Roberta Tarbell (ARTC and ARTH). She graduated in 2014 and is now paintings conservator at the Museum Conservation Institute, Smithsonian Institution.

Kristin de Ghetaldi (began September 2011, finished 2016) "The use of mixed egg-and-oil media in Quattrocento Italian paintings and the efficacy of the many Gas Chromatography-Mass Spectrometry (GC-MS) protocols currently being used to analyze these binders."

Kristin de Ghetaldi is a painting conservator who graduated in 2008 with a Master of Science degree from the Winterthur/University of Delaware program in Conservation. She recently completed a three-year Andrew W. Mellon Fellowship in Painting Conservation at the National Gallery of Art working on the treatment of Old Master easel paintings. Under the guidance of scientists and conservators at the NGA, Kristin was given the opportunity to use a variety of analytical techniques focusing on questions specifically relating to media analysis. She has also participated in internships and conservation positions at the J. Paul Getty Museum, the Rijksmuseum in Amsterdam, and the RISD Museum. Kristin earned a post-baccalaureate certificate in conservation (2004) at the Studio Art Centers International in Florence, Italy and a BA (2003) in Chemistry from Grinnell College.

After obtaining my Master's degree in Art Conservation from the Winterthur/University of Delaware Program in 2008, I had the opportunity to participate in a three-year Fellowship program at the National Gallery of Art in Washington supported by the Andrew W. Mellon Foundation. I was encouraged to pursue my personal research interests, focusing mainly ancient binding media used in Quattrocento Italy. Recent technical studies have revealed that we are only beginning to understand how Quattrocento Italian paintings were created. While pigment identification, the presence of preliminary sketches/underdrawings, and the nature of a painting's support are all important aspects of a painting, the identification of binding media is of equal importance when considering the historical context of an artwork. Analysis of pigments, for example, has often been the primary focus of technical

studies, as information on the origin and preparation of colorants can be easily located in fifteenth-century treatises and manuscripts. Writers and painters from this period wrote little about painting media. A better understanding of the vehicle used to apply the pigments to the canvas or panel can help us assign attributions to paintings and reveal information relating to studio practices.

The Preservation Studies Program at the University of Delaware offers the perfect environment to continue my investigation of these questions surrounding Quattrocento painting media and the limitation of our current analytical systems. I hope to take advantage of courses offered by the art history department as well as the chemistry department as part of the rigorous, interdisciplinary curriculum that I am proposing. Seminar courses focusing on Italian art would complement my study. Furthermore, I hope to have access to the ample analytical equipment that the University has available. The University of Delaware is closely connected to one of the few Conservation programs and one of only a handful of conservation science laboratories in the United States. Consultation with conservators, conservation scientists, and visiting professionals will be an invaluable asset to my PhD experience.

Participation in interdisciplinary projects has become increasingly important to me throughout my studies and experiences working at various museums. Such projects help to strengthen the relationship between art historians, art conservators, and scientists. At the National Gallery of Art I have witnessed first hand the positive results of collaborative research projects. While a number of colleges and universities have recently started to adopt a more interdisciplinary approach to educating their students, the University of Delaware has been at the forefront of this trend, and it is my understanding that more classes focusing on technical art history will become available to both conservation and art history students. The University of Delaware offers an exceptional setting for my own research interests and provides ample opportunities for me to explore my interest in teaching and collaborating with future art enthusiasts.

Kristin passed her exams in December 2012 and her proposal presentation in May 2013. Her dissertation committee members are: Perry Chapman (ARTH) and Joyce Hill Stoner (ARTC) [co-chairs]; Murray Johnston (CHEM), Chris Petersen (ARTC), and Meredith Gill (ARTH, University of Maryland). She recently headed a two-year treatment project of a Pietro da Cortona 12 x 20' painting at Villanova. Defended and passed "with flying colors" 2016.

Maria João Petisca (began January 2014; completed in 2019) has been a furniture conservator since 1998 and has specialized in lacquered furniture since 2002. In 1997, she completed her BA in Conservation and Restoration at the Instituto Politécnico de Tomar (Polytechnic Institute of Tomar), and in 2001, earned her degree (Licenciatura) in Conservation and Restoration from the same institution. From 2002 to 2004 she collaborated on the project "Studies and Investigations in Movable and Integrated Heritage" at the former Instituto Português de Conservação e Restauro (Portuguese Institute of Conservation and Restoration), Lisboa. The project involved the study, treatment, and exhibition of a Chinese lacquer screen, and was published in *Biombo Lacado*. In 2009 she finished her MA in Decorative Art at the Universidade Católica Portuguesa (Portuguese Catholic University); her thesis was on *Canton lacquer: a study of export Chinese lacquer screens from the 18th and 19th centuries*. Also in 2009 she participated in the *Urushi 2009-International Course on Conservation of Japanese Lacquer,* held in Japan and co-organized by ICCROM and the National Research Institute for Cultural Properties. From 2009 to 2011 she held a Lacquer Investigation Fellowship from the Fundação para a Ciência e Tecnologia (Foundation for Science and Technology) to develop a project for the study and conservation of Chinese export lacquerware at the Conservation Department of the Instituto dos Museus e da Conservação (Institute of Museums and Conservation), Lisboa. From 2011 to 2013 she worked for the Preservation Society of Newport County as an Assistant Conservator, treating Chinese lacquer panels from the Elms mansion, Newport, RI.

TOPIC: **Sino-Portugal connections as represented in lacquerware and other examples of material culture (16th to 19th centuries)** João's doctoral research will study Chinese lacquer and its production for the export market. In the 18th and first half of the 19th centuries, Portugal, France, Holland, Sweden, England, and the United States traded with China and purchased items designed to please foreign taste; in the case of lacquered furniture this translated into combinations of western shapes and eastern decoration. These pieces are widely represented in Western museums and collections. Overall their conservation state is often poor. This study will focus especially on export pieces in black lacquer painted with gold, their trade routes, production centers and workshops, and their comparison with pieces created for the internal market using the same techniques. An understanding of the materials used in the manufacture of both export and domestic Chinese lacquerware will contribute to analysis of the degradation processes and help determine more effective conservation treatments and steps for long-term preservation.

Advisors: Vimalin Rujivacharakul (ARTH), Stephanie Auffret (ARTC), Catherine Matsen (ARTC), Karina Corrigan (Peabody Essex Museum), Dr. Christiaan J. A. Jörg of The Netherlands

Mariana Di Giacomo, began September 2014; completed in 2019 TOPIC: **The Conservation of Fossil Bones.** Mariana is a paleontologist with special interest in fossil preservation. She graduated in 2012 with a Master in Zoology from the PEDECIBA at Universidad de la República, Montevideo, Uruguay. In 2006 and 2007 she received tutoring from fossil preparators at the Museo de la Plata, La Plata, Argentina and so began her interest in conservation of fossil bone. She has worked both as a paleontologist and as a teacher since the early beginnings of her career. After two fruitful excavations at Arroyo del Vizcaíno, Sauce, Uruguay, in 2011 and 2012 she became the curator and manager of the collection which now has over 1000 specimens.

For many years, fossils were believed to be exceptionally resistant. The common belief was that if they had been preserved for millions of years, then nothing would happen to them. The result was a severe destruction over time of important pieces that were unique or that had important information regarding the anatomy of the animals or even about the taphonomy of the site in which they were found. Only after many pieces were lost, museum curators realized fossils were not as resistant as once thought. Mariana's doctoral research will focus on the agents of deterioration, and the chemical properties of fossil bones.

Mariana is carrying out research at the Smithsonian National Museum of Natural History. Some of her study has focused on surface modifications in the color of vertebrate fossils exposed to museum lighting for prolonged periods of time. She is also interested in relative humidity and temperature fluctuations and how these affect the long-term conservation of fossilized bone. In addition, Mariana will also study the different adhesives and consolidants that have been applied to fossilized specimens. Mariana was selected as a DelPHI Summer Fellow (2015) through the Center for Material Culture Studies. She was also awarded the 2015 Emily Schuetz Striker annual award in preventive conservation which allowed her to travel to four natural history institutions to learn about their collections and preventive conservation efforts.

Advisors: Vicki Cassman (ARTC), Joelle Wickens (ARTC), Bruno Pouliot (ARTC), Jocelyn Alcántara-García (ARTC), Jennifer M. Buckley (Mechanical Engineering), Catharine Hawks (National Museum of Natural History). Mariana has completed her required coursework.

CURRENT PSP STUDENTS see our website https://www.artcons.udel.edu/doctorate/current-students

Students from the previous Art Conservation Research doctoral program:

Carol Aiken (1998) on "A Context for the Advanced Studies of Portrait Miniatures Painted in Oil on Metal Supports"

Carol Aiken's 1998 Ph.D. dissertation was significant both for contributions to scholarship on the history of oil portrait miniatures and for contributions to methodology in technical art history. Aiken, a conservator, provided a model for how a conservator-scholar can take advantage of training and expertise in object examination to make unique, interdisciplinary contributions to art history and material culture studies. She combined in-depth archival research on primary sources with a systematic examination of objects under a binocular microscope to analyze 320 objects in Philadelphia's Rosenbach Collection of 16th-18th century oil miniatures; her conclusions advance understanding of the history of miniature oil portraits and associated artistic practices, and provide practical information to guide conservators treating such objects. Aiken is now consultant for the conservation of miniature paintings including for the Royal Collection, London

B. D. Nandadeva (1998) on "Materials and Techniques of Kandyan and Southern Schools of Mural Paintings of Sri Lanka: mid-eighteenth to late-nineteenth centuries."

Sri Lanka's Buddhist temple wall paintings of the late-historical period that represent three stylistically different schools are considered to be one of the most important constituents of the cultural heritage of that country. Nandadeva's 1998 dissertation on the characterization of materials and techniques of those paintings looked into whether the three schools also show technological differences between them, related the different degrees of deterioration to technological variations, and emphasized on the need for developing treatments that are specific to the material cum technological characteristics. He examined over 400 samples using optical microscopy, SEM, XRD, FTIR, EDX, TLC, and UV-visible spectroscopy. While confirming some of the information contained in a previous study, he reported for the first time the use of huntite, lead white, Prussian blue, lithopone, barium sulfate, gypsum, manganese blue, and the resinous character of a native binding medium, and distinguished flame carbon from soot. His dissertation is of immense value as a treatise on technical art history of Sri Lanka and is of utmost value to the conservator to understand the material cum technology-specific deterioration and determine appropriate

treatment methodologies. Nanda is now Senior Lecturer *(since 1986)* and Head, Visual Arts & Design, and Performing Arts Unit, Department of Fine Arts, University of Kelaniya, SRI LANKA

E. Carl Grimm (1999) on "A Study of Authenticity in Paintings Attributed to Albert Pinkham Ryder"
Albert Pinkham Ryder is one of the most forged American artists of all times. Carl Grimm's dissertation constructed a systematic interdisciplinary approach combining procedures used in both art history and scientific analysis to discriminate between authentic and inauthentic works by Ryder. For each painting to be considered he demonstrated what should be the more expected characteristics with regard to provenance and history, subject matter, design, technique, color harmonies, physical structure, facture and patina, x-radiographic image, interlayer structure through cross-sectional analysis of paint samples, media diversity, and pigment analysis. The results confirmed and expanded discoveries in earlier published studies, and also highlighted three new discriminating features: a high incidence of Naples yellow in authentic works, a relative abundance of zinc white in the fakes, and a tendency of the authentic Ryders to test positive for the presence of saturated lipids in the media. Grimm is now Head of Conservation at the deYoung Museum in San Francisco.

Susan Franz Cooperrider Lake (1999) on "The Relationship between Style and Technical Procedure: Willem de Kooning's painting of the late 1940s and 1960s"
Susan Lake's dissertation on Willem de Kooning's techniques is extremely important for both the understanding of the artist's techniques that could readily be misinterpreted and changed by typical conservation procedures and for the care of some of these unique paint surfaces. De Kooning applied actual New York street dirt to his "Women" series of paintings in the 1940s to add to the gritty urban billboard-like impression of these works; conservators should be warned not to remove this grime thinking it is unwanted later accretion. For his nudes by the seashore of the Hamptons in the 1960s, he incorporated water and other unexpected substances into his paint media, perhaps in an attempt to capture the spumy appearance of the watery environment. Some of this pastoral but puckered paint continues to have drying problems four decades later; special Plexiglas boxes must be constructed if the paintings are sent to exhibitions, otherwise, the paint may stick to the protective glassine wrapping paper. Lake is now Head of Conservation, Hirshhorn Museum, Smithsonian Institution, Washington, DC.

ElizaBeth Bede Guin (2001) on "The Surface Morphology of Limestone and its Effects on Sulfur Dioxide Deposition"
ElizaBeth Bede's 2001 dissertation advances knowledge in architectural conservation science, both in the information presented in its conclusions and in significant methodological contributions. She studied the effects of pollutants on carbonate stone, especially on limestone types used in many historic structures in the United States, with the goal of being able to provide treatment guidelines. She conducted numerous laboratory experiments, and developed and tested new approaches to such experimental work. By using a wide variety of laboratory techniques and careful approach to experimental design and data analysis, she was able to draw many conclusions about how the effects of pollutants are controlled by issues such as surface roughness and pore networks of the stone, related to cleaning regimes. Due to the high quality of her research, her work was fully funded for her entire graduate career by the National Center for Preservation Technology and Training. Bede was DuPont Materials Research Fellow at the National Center for Preservation Technology & Training, US Dept of the Interior and is now Chair of the Heritage Resources program at Northwestern State University.

Susan Louise Buck (2003) on "The Aiken-Rhett House: A comparative architectural paint study" [Susan Buck's dissertation won the Sypherd prize for best dissertation in the humanities in 2003.]
Susan Buck's architectural paint analysis work at the 1818 Aiken-Rhett House proved to be a powerful archaeological tool for dating original elements, as well as later alterations, using photographs of the reflected visible and ultraviolet light cross-sections for comparisons of the paint stratigraphies on all the representative elements. This analysis also established important relationships between the paints in the main house and the paints in the slave quarters of the kitchen/laundry building. It also developed a methodology for architectural paint analysis that could be applied to almost any type of architectural paint investigation, which is particularly relevant in a field that has no set standards for analysis work. Buck is now paint analysis consultant for Colonial Williamsburg, World Monuments Fund, China's Forbidden City, etc.

Additional notes on policies and procedures:
Student Expenses and Financial Aid
This will vary according to topic. The PSP students may be required to pay a fee to use Analytical Equipment at the Winterthur Museum Scientific Research and Analysis Laboratory, etc. There may also be equipment use costs at

some UD labs. All such costs will be anticipated, researched, and compiled by the student and advisor/committee chair, and potential funding sources identified or alternative research avenues developed prior to the approval of a dissertation proposal. The PSP has a small fund to which students may apply for these funding needs and will work with students to identify external funding sources whenever possible; however, the responsibility to raise funding for travel, analytical equipment fees, and other research-related support rests with the student.

The Coremans Endowment is in place and available for support for Ph.D. students in preservation studies especially in fields related to Art and Architectural Conservation and Technical Art History; these funds are applied for competitively as part of the admissions process. Some Teaching and Research Assistantships may also be available through collaborating units. Some students may be supported on external research grants depending on the chosen topic. Assistance will be awarded on a competitive basis to applicants best fitting the needs of the internal endowment, external granting agencies, and sponsoring faculty. Students receiving full stipends will be expected to maintain full-time status and may be expected to work up to 20 hours a week assisting faculty with research or teaching.

Degree Awarded: The degree awarded is a Ph.D. in Preservation Studies.

Curriculum Upon acceptance into the Program, students will meet with their advisors to formalize their curricula. They will choose approved courses relevant to their area of concentration and projected course of study. Areas of concentration include: Historic Preservation Planning (including Structures, Landscape, and Preservation of Social and Cultural Context), Preservation Technologies (not available currently due to loss of three senior faculty members), Conservation Research and Technical Studies, and Heritage Management.

Each student's curriculum must include a balance of courses that provide an introduction to the wide range of theoretical and methodological issues as well as courses supporting individual preservation research endeavors. Theoretical and methodological breadth ensures that all students in Preservation Studies are familiar with basic procedures of research design and data handling and analysis needed to conduct dissertation research.

Eighteen credits of coursework are required. A non-credit seminar for presentation of research in progress will also be required for three semesters (PRES 801); faculty, undergraduates, and graduate students in related departments will be encouraged to attend. Three three-credit courses should be taken in each of two contiguous semesters in order to satisfy the University residency requirement. Three courses will be required as approved by the advisor, selected in consultation with the student. There will be three electives. Once advanced to candidacy, students must register for at least 9 credits of Ph.D. dissertation credit (969). (A total of 27 course credits.)

Normally only graduate level courses (600-699, 800-898, or 900-998) are applicable towards the course requirements. Selection of appropriate electives will be done in consultation with the chair of the dissertation committee.

Proficiency in one or more foreign languages may be required for certain areas of concentration and/or dissertation topics and will be determined by the chair of the dissertation committee. Likewise, proficiency in certain practical laboratory techniques may be necessary for certain concentrations as noted in Appendix of curricula by concentration.

Students may develop a need to alter previously approved programs of study once they have entered the program due to reasons that can include scheduling conflicts or the creation of new courses directly related to the student's goals. Students who wish to make changes to their program of study should first obtain permission from their advisor. The advisor must then make a written request to the PSP Director.

Written Qualifying Examination

After 18 credits of course work have been graded, the student must pass a written qualifying examination in the areas of concentration, supervised by senior faculty from the appropriate departments. The scope and content of the examination will be determined by the presumptive dissertation committee chair and the PSP Director in consultation with members of the committee and/or professors of courses the student has completed for the concentration requirement. The qualifying examination must be passed before the student proceeds to candidacy.

The qualifying exam is to be scheduled no sooner than the end of the semester following the completion of required coursework. Each section of the exam must be passed in order for the examination to be considered a "pass." (E.g. if there is a section on Anthropology and a section on Chemistry, each section must receive a grade of 80% or above.)

Should the student fail the qualifying examination, the student will be given an opportunity to retake the exam. Even if only one section is failed, all sections will need to be re-tested. The second attempt to pass the examination must normally be made not earlier than the end of the following semester after the first attempt to pass the examination, and not later than a year after the first attempt to pass the examination. If the student wishes to retake the examination sooner or later than the specified intervals, the PSP Director can be petitioned accordingly. Failure to pass the examination on the second attempt will normally result in termination from the program effective at the end of that term. However, the student can petition for one final retake. The student may also elect to withdraw from the program. Since this is an interdisciplinary program, it is possible that some coursework credits could be transferred to another department if the student is accepted into a doctoral program in that department.

Dissertation Committee

During the first year of the program each student in cooperation with his or her advisor will nominate, for approval by the program director, a dissertation committee consisting of at least four but not more than six members. The committee chairperson must have an established record of publication and/or scholarship in the area of concentration selected by the student, and must be a full-time University of Delaware faculty member. The majority of committee members must be full-time University of Delaware faculty; the majority of committee members must hold doctoral degrees. Students are required to select at least one external member, from outside the University, in order to broaden the perspectives of the committee. The external member(s) should have an established record of publication and/or scholarship in the area of concentration of the dissertation. A student can request a change in the committee in writing with justification to the Director of the PSP. Once the student has advanced to candidacy and the dissertation committee is approved by the Director for the PSP, it is forwarded to the Office of Graduate Studies for review and approval.

Dissertation Proposal

One semester after passing the qualifying examination, the student must submit a formal dissertation proposal (of about 10-15 pages with substantive bibliography) to his or her dissertation committee. The proposal should define the research question, demonstrate its significance to preservation studies and within the chosen area of concentration, provide a context for the project within the relevant published literature, outline the proposed research methods, and provide a timetable for conduct of the research and writing phases. After the proposal has been circulated to the dissertation committee, the committee will meet as a group with the student to discuss and refine the proposal. The student will normally make a formal illustrated presentation of the topic at this time. Students and faculties from related departments are invited to attend.

Any dissertation proposals that involve human or animal subjects must follow the guidelines for approval of such proposals that exist in all Colleges and external institutions represented by the student's doctoral committee.

Dissertation committee members should sign the final copy of the approved proposal. A signed copy of the approved dissertation proposal should be forwarded to the PSP Director. Students who fail the dissertation proposal presentation will receive one additional opportunity to repeat the process and defend a new or modified dissertation proposal

Residency: A student must be in full-time residence for the first year of study: two contiguous semesters. The purpose of this requirement is to enable a student to participate fully in the scholarly community of the University for a sustained period of time. In addition to benefiting the student, such participation also benefits other preservation studies students, and students and faculty of collaborating departments who have the opportunity to interact more closely with a student in residence. A non-credit seminar for presentation of research in progress will also be required for three semesters; faculty, undergraduates, and graduate students in related departments will be encouraged to attend.

Advancement to Candidacy: A student can be admitted to candidacy for the Ph.D. degree after completing all required course work, passing the written examination, fulfilling the residency requirement, and having had a dissertation proposal accepted by the committee. Once advanced to candidacy, students must register for at least 9 credits of Ph.D. dissertation credit (969) usually while conducting dissertation research full time. Subsequently, candidates are required to register for Ph.D. sustaining credit (U999) each semester. This is not a full-time registration but only a registration to ensure that the student is active until degree requirements are met.

Dissertation: The dissertation is expected to reflect the results of original and high quality research of significance to preservation studies, written in a scholarly and literary manner worthy of publication. The dissertation is the focal point of this research-oriented degree, and thus the majority of a student's time will be spent on this component of the degree requirements. Three of the five or more chapters could be considered publishable separately, if appropriate.

Dissertation Defense

The student will conduct an oral defense of the work to all members of the committee at once at least two weeks after delivery of the completed dissertation. After all questions have been fielded, the dissertation committee will meet to decide whether the dissertation is accepted, rejected, or accepted pending revisions. The success of the defense will be determined by a committee vote.

In the case of dissenting votes, the majority opinion will rule, and a majority vote in favor is needed for a successful dissertation and defense (in the case of a tie, the vote will be in the favor of the student).

Time Limit: There is a ceiling of five years for the completion of all requirements of the Ph.D. degree, including the dissertation and defense. Extensions may be granted on a year-to-year basis if the student can demonstrate continuing progress. The PSP Faculty meets annually to review the student’s class performance, progress toward degree, commitment to the field of study, and appropriate contribution to the university community. Failure to demonstrate progress may result in termination from the program; such terminations will be done in consultation between the dissertation committee chair, the PSP Director, and the Office of Graduate Studies. If, in the professional judgment of the program faculty, a student has failed to make satisfactory progress toward meeting the academic standards of the program, the faculty may vote to dismiss that student from the program. In the case of dismissal, the PSP Director is required to send a report to the Office of Graduate Studies that states the faculty vote on the decision causing dismissal and the justification for this action. The Office of Graduate Studies will notify the student in writing when the student is being dismissed for failure to make satisfactory progress in the program. In the case of academic dismissal, the student may appeal the termination in writing to the Office of Graduate Studies.