



NATIONAL  
ENDOWMENT  
FOR THE  
HUMANITIES

DIVISION OF PRESERVATION AND ACCESS

### **Narrative Section of a Successful Application**

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the NEH Division of Preservation and Access application guidelines at <https://www.neh.gov/grants/preservation/preservation-and-access-education-and-training> for instructions. Applicants are also strongly encouraged to consult with the NEH Division of Preservation and Access staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

**Project Title:** Training Sustainable Environmental Management Teams for Cultural Institutions

**Institution:** Rochester Institute of Technology

**Project Directors:** Christopher M. Cameron, Jennifer Jae Gutierrez, and Kelly Krish

**Grant Program:** Preservation and Access Education and Training

## **Training Sustainable Environmental Management Teams for Cultural Institutions**

*Image Permanence Institute, Rochester Institute of Technology*

The Image Permanence Institute (IPI), a preservation research laboratory in the College of Imaging Arts and Sciences at Rochester Institute of Technology in Rochester, NY is applying for an Education and Training Grant to support a two-year project focused on improving and increasing the capacity of humanities collections professionals to independently establish and maintain sustainable environmental management programs. Education and training activities will include webinars and workshops that enhance common knowledge about preservation environmental monitoring and management for both collections and facilities staff in humanities collections nationally. The project includes the delivery of professional-level training opportunities essential to small, mid-size, and large humanities collections in libraries, archives, museums, and other cultural institutions. Webinars will be recorded to allow access beyond the project period, and workshops will be offered throughout the country to ensure accessibility in every region.

### **Significance and Impact**

Founded in 1985, IPI has been devoted to conducting preservation research that informs sustainable practices for the preservation of images and cultural heritage collections in libraries, archives, and museums since its inception (see Appendix A, *Organizational Profile*). Critical to its mission IPI has always emphasized the importance of disseminating research findings through practical and easily accessible resources such as workshops, webinars, publications, consulting services, and online tools. This proposed education and training initiative is a continuation of IPI's environmental research activities which aim to provide practical solutions for libraries, archives, and museums to achieve sustainable long-term preservation environments.

Balancing the preservation quality of collections environments with responsible building management and lower energy costs is a priority for all 21<sup>st</sup> century cultural institutions looking to achieve sustainable preservation practices. Sustainable methods of preservation ensure efficient allocation of current resources for collections care and make preservation more affordable long-term. Successful implementation and maintenance of sustainable environmental management programs requires a sincere long-term commitment from a team of stakeholders to achieve the necessary balance of shared effort and expertise. A team-based approach to environmental management that involves collections and facilities staff, and includes environmental monitoring in spaces as well as data collection from mechanical systems, is a novel approach in many cultural institutions. This project will develop and offer practical webinars and workshops that provide participants with the fundamental skills needed to establish and maintain sustainable environmental management programs using a team approach.

### *Sustainable Preservation Environments*

For decades, the preservation community has recognized that controlling temperature and relative humidity (RH) in collections environments is one of the most important ways to preserve humanities collections. Recommendations for storage temperature and RH levels are periodically re-examined following the latest advancements in preservation science, and in recent years have been further informed by improved data-gathering methods, and greater interest in sustainability. In the 21<sup>st</sup> century there has been a shift in thinking from static environmental management in cultural institutions – one in which institutions aim to achieve the same temperature and RH levels in collections spaces year-round – to dynamic environmental management in which conditions are allowed to vary within safe ranges,

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particularly seasonally (see Appendix B, Executive Summary of NEH Grant #PR-50087-10, *Methodologies for Sustainable HVAC Operation in Collection Environments*).

With laboratory research that supported the potential to vary environmental conditions while maintaining collection preservation needs, IPI began to focus on exploring opportunities to reduce energy use while maintaining quality preservation conditions for humanities collections. Environmental studies at IPI explored the feasibility and effectiveness of intentional HVAC shutdowns, temperature and RH setbacks, seasonal set points, and the implementation of HVAC-controlled RH profiles in collections environments. The results of these projects, along with fieldwork in cultural institutions, informed the development of a methodology specific to cultural institutions for assessing the quality of environmental conditions in collections spaces and the performance of mechanical systems providing those environmental conditions. The ultimate goal of the methodology is to identify the optimal preservation environment for a collection space. That is, an environment that provides the best possible preservation of collection materials at the least possible consumption of energy.

### *Environmental Monitoring and Management*

Routine monitoring of temperature and RH levels in collections spaces is standard practice to inform preventive conservation of humanities collections, but many cultural institutions lack professional staff with environmental monitoring or management training. Monitoring alone will not improve preservation environments or the longevity of our humanities collections. Environmental monitoring is not environmental management. Environmental management includes analysis and interpretation of the preservation quality of the environmental conditions recorded and implementation of improvements as necessary. Environmental data for collections spaces provides the opportunity to evaluate and assess the preservation impact of a storage environment. While environmental data from a collection space records the conditions experienced by collection materials, it does not provide an understanding of how the environmental conditions were created. To gain that information, data must also be collected from inside the mechanical systems that create the temperature and RH conditions. Maintaining an optimal balance of the slowest rate of collection decay, lowest energy cost, and best practice operation of HVAC systems requires an ongoing commitment to monitoring, analysis, and management. The education and training opportunities proposed will address the needs of small, mid-size, and large institutions either starting monitoring programs, or looking to advance their monitoring programs to include proactive environmental management and explore energy-saving strategies.

### *Elements of an Environmental Management Team*

In cultural institutions, an environmental management team that includes both collections and facilities staff creates a structure in which the insights gained from environmental monitoring are actively used to inform environmental management. Institutions that have been most successful at the team approach to environmental management are able to implement regular meetings of collections and facilities staff to review data, discuss strategy, plan for changes, and generally inform each other about their work involving preservation environments. Environmental data drives these discussions, and therefore starting with a well-established monitoring program is essential.

For many institutions, the idea of an environmental management team is novel because there has been a strong compartmentalization of roles in libraries, archives, and museums and an absence of team-

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based, proactive management of preservation environments. The facilities functions of an organization have traditionally been separate from collections care responsibilities. Facilities staff have not had preservation training and do not know how to define preservation conditions for collections. Likewise, collections staff have not had mechanical systems training and do not know how to adjust operations to improve desired performance. Rick Kerschner, long-term preservation consultant and president of Kerschner Museum Conservation Services, LLC was contacted during this proposal's development and noted:

*"This is a program that is sorely needed as there is not a good understanding especially within small and mid-sized museums of how conservators, or collection managers, should interact with facilities departments to achieve the best climates for collections on a day to day basis."*

This project will foster the development of environmental management teams by jointly educating collections and facilities staff. Training sessions will simultaneously educate on the fundamentals of sustainable environmental management while nurturing teamwork and a mutually respectful approach. Common environmental monitoring and management training for colleagues in multiple departments will strengthen institutions' abilities to maintain successful, and sustainable, environmental management programs.

### *Unique and Easily Accessible Education and Training Opportunities*

This proposed project aims to enhance common knowledge about preservation environmental monitoring and management for both collections and facilities staff in humanities collections nationally, and empower these professionals to establish sustainable environmental management programs independently.

For almost a decade IPI has worked with cultural institutions throughout the US providing environmental consulting services and practical resources to assist institutions in establishing sustainable environmental management programs. Projects typically range in length from one to three years and involve multiple phases usually including environmental monitoring, analysis and interpretation of environmental data, and identifying and testing appropriate energy-saving strategies that are carefully selected based on collection needs, building characteristics, and environmental data (see Appendix C, *Preservation Consulting Services*).

In 2017, IPI completed an online guidebook, *IPI's Methodology for Implementing Sustainable Energy-Saving Strategies for Collections Environments*, that outlines the IPI methodology for establishing sustainable environmental management programs in cultural institutions:

<https://www.imagepermanenceinstitute.org/resources/publications/ipi-methodology-guidebook> (see Appendix D, *Energy-Saving Strategy: Shutdowns* excerpt). The goal for the guidebook, a project funded by the Institute of Museum and Library Services, was to produce a resource specific to cultural institutions that professionals can use to identify, test, and assess implementing energy-saving strategies in collections spaces without the assistance of external consultants. This guidebook will serve as a resource for participants during and beyond the life of the proposed project. The proposed education and training initiative is an extension of IPI's efforts to provide additional practical resources and training opportunities that will allow cultural institutions to establish team-based, sustainable environmental management programs independently; thus making them less reliant on outside resources for implementation.

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IPI has a long history of education and training through providing reference resources, workshops, and webinars. Previously funded NEH Education and Training initiatives include a series of three *Sustainable Preservation Practices* projects completed from 2010-2015. Presentations in this series were attended by institutions from every state in the US and 52 foreign countries. Though IPI has offered both webinars and workshops about environmental management in years past, the new content proposed for this project, including the information in the guidebook described above, has never been synthesized into educational programs. This project will dramatically increase the dissemination of IPI's recent environmental research findings and its methodology for establishing sustainable environmental management programs through practical training opportunities. In doing so, this project has the potential to improve the long-term preservation of our nation's humanities collections by training self-sufficient sustainable environmental management teams in our libraries, archives, museums, and other cultural institutions.

Webinars have increased in popularity with busy cultural heritage professionals, especially when time and funding for travel is limited. IPI has a state-of-the-art webinar classroom equipped with a specially designed computer for web-conferencing, a whole-room microphone, smartboard, and external soundproofing. This facility makes it easy to organize and present both live and recorded webinars. The proposed webinars will be advertised in IPI's quarterly e-newsletter, and on professional listservs for library, archive, and museum professionals. Webinar descriptions will emphasize the importance of a "team approach" to environmental management and encourage collections and facilities staff to participate together. The webinar curriculum is anticipated to reach thousands of cultural heritage professionals, both nationally and internationally. During this project, IPI will initiate communication with colleagues at the National Technical Institute for the Deaf (NTID), one of nine colleges at the Rochester Institute of Technology, to also identify opportunities to expand IPI webinar content access for deaf and hard-of-hearing professionals.

The hands-on workshop curriculum will train between 145 and 190 allied professionals in up to 48 cultural institutions, **four times** more institutions than IPI typically reaches through onsite consulting projects annually. Workshops will be held in eight different locations across the United States. Locations and host institution selections are based on the following criteria: 1) to address variations in outdoor environmental conditions that exist in each region; 2) to make training opportunities affordably accessible to as many professionals as possible; 3) to partner with a wide range of institutional types including federal, public, private, and academic institutions with a wide range of collections; and 4) to ensure participation from diverse as well as traditionally underrepresented communities. The following institutions have been contacted and are interested in hosting a workshop:

Institution	Location
<ul style="list-style-type: none"><li>• University of Colorado</li><li>• Harpers Ferry National Historical Park</li><li>• Robert W. Woodruff Library, Atlanta University Center</li><li>• Motion Picture Association of America</li><li>• Henry Ford Museum</li><li>• Peabody Essex Museum</li></ul>	<ul style="list-style-type: none"><li>• Boulder, Colorado</li><li>• Harpers Ferry, West Virginia</li><li>• Atlanta, Georgia</li><li>• Los Angeles, California</li><li>• Detroit, Michigan</li><li>• Salem, Massachusetts</li></ul>

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IPI also intends to work with institutions in Boston and Seattle to present additional workshops in those cities.

A current NEH-funded education and training project at IPI, focused on photographic print identification, included a total of six webinars offered in the fall of 2017 and winter of 2018 that had 2,870 live participants overall. The five webinars proposed in this project are expected to reach at least 2,500 live participants, with many more viewing the recorded webinars online. In combination with at least 150 workshop participants, a minimum of 2,650 professionals would receive training through this initiative. The cost per participant of NEH funding is only \$75 when calculating for live participants, but is even further reduced when additional professionals access the recorded webinar content.

### **Education Activities**

This proposal seeks funding to support the development and delivery of two types of educational programs, webinars and workshops, that will improve environmental monitoring and sustainable environmental management in humanities collections nationally. A series of webinars will be developed for institutions just formalizing an environmental management program, or introducing a team approach to environmental management for the first time. Webinar content will focus on the fundamentals of environmental monitoring, and analysis and interpretation of environmental data. A workshop curriculum will be developed for institutions that have well-established environmental monitoring programs, and staff familiar with the fundamentals of sustainable environmental management looking to learn how to implement risk-managed studies of energy-saving strategies in collections environments. Both the webinars and workshops will emphasize team participation to encourage common education for allied professionals responsible for preservation environmental management and to ensure the success of implementing and maintaining a team approach to long-term environmental management initiatives.

### *Webinar Goals*

A series of five 60-minute webinars, developed with a structured curriculum so that each can stand alone as a reference on particular topics, will encourage and strengthen the formation of environmental management teams at cultural institutions in various stages of foundational environmental management. A balance between research-based theory and practical guidance will provide assistance to institutions at every stage of the environmental management process. This preservation content is relevant to cultural institutions of all sizes and collection types and offering it online ensures access to as many interested professionals as possible.

It will be recommended that participants watch the webinars as a team, either live or recorded, so team members can begin with the same foundational understanding and discuss the topics raised together. These are important steps in creating a culture of collaboration that will serve institutions well throughout the sustainable environmental management process. Topics are designed to include a combination of collections and facilities information to demonstrate how they are integrated.

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### *Webinar Content and Delivery*

<b>Webinar Series I: Environmental Management</b> <i>(designed for institutions beginning a program)</i>	<b>Webinar Series II: Environmental Data Analysis</b> <i>(designed for institutions with a year or more of environmental data)</i>
Webinar Titles: <ul style="list-style-type: none"><li>• Preventive Conservation and the Role of Environment</li><li>• Evaluating Collection Spaces</li></ul>	Webinar Titles: <ul style="list-style-type: none"><li>• Understanding Fluctuations and Equilibrations</li><li>• Setting Appropriate Parameters</li><li>• Responding to Issues</li></ul>

The webinar curriculum is divided into two series. **Series I** includes two webinars that will introduce participants to the basics of environmental management. The first webinar will focus on the role of the environment and how it fits into the larger frameworks of preventive conservation and risk analysis. Content will address how environmental conditions influence the preservation of collections including damage that can be caused by incorrect temperature and relative humidity, and how to identify what materials within a collection are most vulnerable to these factors. The second webinar will address how to implement an environmental management program. Topics will include how to identify the key features of a mechanical system that create indoor environmental conditions, where problematic microclimates may exist in a collection space, and how to begin an environmental monitoring program. At the end of Series I, participants will be prepared to begin looking at their collection spaces more holistically and to implement an environmental monitoring program of their own.

**Series II** will include three webinars that teach participants with at least one year of environmental data how to progress from the monitoring stage to the management stage. In the first webinar of Series II, IPI will expand upon the foundational research and theory by reviewing objects' responses to environmental fluctuations and factors affecting the rate of object equilibration. From here, the webinar will present potential guidelines for identifying when fluctuations pose risks to collections. The second webinar will summarize the broader field of research and standards, and discuss factors to consider when setting environmental parameters. The role of climate zone, building envelope, and mechanical system limitations will be discussed, as will the use of tools such as the Dew Point Calculator ([www.dpcalc.org](http://www.dpcalc.org)), to aid in making well-informed decisions. The third and final webinar will discuss how to respond to environmental issues and provide guidelines for avoiding responses that may have negative consequences. At the end of Series II, participants will be able to analyze and interpret meaning from environmental data, and respond to data interpretation by creating appropriate action plans to make basic environmental changes or adjustments that improve their preservation environments.

### *Workshop Goals*

Workshop participants will be taught to facilitate sustainable environmental management projects using a methodology developed by IPI. This includes learning how to establish a project, collect environmental data from collection spaces and mechanical systems, and assess facilities and collections spaces as well as how to make informed decisions that will improve the quality of collections environments while at the same time reducing energy consumption. Instruction will include evaluating the building documentation of a simulated institution using mock documentation created specifically for these workshops. Documents will include images and building plans to allow participants to collaboratively

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practice interpreting and understanding facilities documentation. Documentation will be customized for each regional location to ensure data is relevant to regional participants (for instance, southwest cooling systems will vary from northeast equivalents given differences in outdoor air conditions).

### *Workshop Content and Delivery*

	<b>Workshop Session</b>	<b>Topics Covered</b>
<b>Day 1</b>	Getting Started	HVAC Safety Precautions The Importance of Data Analysis Forming a Team
	Filling Out Documentation	HVAC System Documentation Worksheet Creating Zone Maps
	Project Tools and How to Use Them	Using Dew Point Calculator Understanding Preservation Metrics Available Types of Dataloggers
<b>Day 2</b>	HVAC Systems	Understanding HVAC Components Types of HVAC Systems Layout of an HVAC Installing Dataloggers
	Facility Assessment	How to Assess a Facility's Capabilities
	Collections Assessment	Defining Safe Set Points
<b>Day 3</b>	Data Analysis	Analyzing HVAC Data Analyzing Collections Space Data Assessing Combined HVAC and Collections Data
	Introduction to Energy Saving Strategies	Strategy Selection
	Testing and Implementing a Strategy	Evaluating Results Next Steps

This project proposes eight, three-day workshops to train participants in the methodology and techniques IPI uses to complete sustainable environmental management projects and will empower participants to implement the methodology and techniques at their own institutions. Workshop content will include a combination of slide presentations and breakout sessions. An outline of workshop sessions and topics covered in each session is provided in the table above. Additional information about content and delivery can be found in Appendix E, *Workshop Content*.

Each workshop will include participants from four to six cultural institutions. It is intended that each institution send several participants (two to four) that represent multiple departments and the basis of an environmental management team. Each team should consist of no less than a collections representative and a facilities representative. Participants will work within their institutional teams



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during breakout sessions to build trust, comradery, and common knowledge. The purpose of breakout sessions is to model the teamwork required to facilitate effective environmental management projects, a hallmark of which is routine meetings of team members. IPI instructors will oversee the sessions and assist teams throughout the process. These sessions will also help solidify the roles of team members and begin to open paths of communication inside each team.

Workshop applications will be solicited through emails, listservs, and newsletters. Successful applicants must have at least one year of collections environmental data obtained through active environmental monitoring.

**Plan of Work**

The project work plan can be broken into three phases as shown below.

*Phase I: Planning and Promotion (Six Months – January 2019 to June 2019)*

- Finalize arrangements at eight host institutions, develop presentation schedule, and address anticipated expenditures
- Develop workshop and webinar presentations
- Prepare handouts and simulated facility documentation for workshops
- Finalize the online registration and application review process
- Promote the webinar series and workshops to potential audiences, work with other regional service organizations to cross-promote the series, and contact institutions within a reasonable distance from each venue to encourage participation
- Organize and gather tools for the hands-on portions of the workshops

*Phase II: Presentation (Sixteen Months – July 2019 to October 2020)*

<b>2019 Webinar and Workshop Schedule</b>	<b>2020 Webinar and Workshop Schedule</b>
July – Webinar #1	January – Webinar #3
August – Workshop #1	February – Webinar #4
September – Webinar #2	March – Workshop #5, Workshop #6
October – Workshop #2	April – Webinar #5
November – Workshop #3	June – Workshop #7
December – Workshop #4	September – Workshop #8

- Coordinate and finalize all details in advance of each workshop
- Continue promotion of webinars and workshops
- Contact all registrants prior to each workshop to provide information on housing, schedule, etc
- Maintain a waiting list and contact institutions should any registrations open up
- Present five webinars
- Present eight workshops
- Survey webinar and workshop participants after each presentation
- Archive the webinar presentations on IPI’s website

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### *Phase III: Documentation (Two Months – November 2020 to December 2020)*

- Prepare and send out follow-up surveys to all workshop and webinar participants
- Tabulate the results of workshop and webinar surveys
- Disseminate project results at professional conferences and in professional publications

### **Evaluation**

It will be important to evaluate the success of educational materials and methods throughout the project as well as at the conclusion. Assessment will be ongoing throughout all three phases of the project and managed in the following ways.

### *Phase I: Planning and Promotion (Six Months)*

IPI will invite external reviewers to assess the curriculum content for the webinars, workshops, and related educational materials during the planning phase. Reviewers will be recognized experts with collections care or facilities administration backgrounds, have significant experience working in cultural institutions, and strong knowledge of program content. They will be asked to provide feedback on the overall strengths and weaknesses of the material, including any additions or changes in content or presentation. Feedback will be used to inform modifications to the curriculum and materials prior to beginning the presentations.

Additionally, an online survey will be used to inform curriculum content. This survey will be distributed via IPI's e-newsletter that has a readership of over 2,500 professionals. The survey will include questions about the nature of environmental management programs currently in place within cultural institutions, previous experience with related educational presentations, and topics of greatest interest or need relative to improving environmental management within institutions. This will ensure that all critical topics are incorporated into the curriculum. In addition, the survey will have the added benefit of notifying institutional staff of the upcoming webinars and workshops.

### *Phase II: Presentation (Sixteen Months)*

IPI will gather direct input about the presentations through participant surveys immediately following all webinars and workshops. Survey examples from a previous IPI education and training program are included in Appendix F. Respondents will be asked questions such as how the presentation enhanced their understanding of topics presented, which topics should be covered in greater detail, and what plans they have to apply the new knowledge. As a team approach is being emphasized, changes in knowledge will not be consistent (i.e. collections staff will likely learn more about mechanical systems, and facilities staff more about preservation), but an overall rating of the quality and usefulness of the presentation above a 3.5 (on a scale of 1-5, with 1 being poor and 5 being excellent) will be considered a success.

After each presentation, the survey feedback will be reviewed by project staff to help IPI judge its immediate success. Answers to free response questions in particular will allow for adjustments to improve any subsequent presentations.

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### *Phase III: Documentation (Two Months)*

A follow-up survey will be sent six months to a year after each webinar and workshop to evaluate the long-term success of the project by assessing how participants have applied the information gained to institutional activities (note: follow-up surveys on presentations occurring in the final months of the project will be conducted after the conclusion of the grant period). Examples of relevant implementations could include installing and utilizing dataloggers, creation of an environmental management team that meets regularly, and adjusting the operation of mechanical systems. The project will be considered a success if 30% or more of survey respondents have made a concrete change in their environmental management.

As part of the project, IPI will purchase access to three web software programs Campaign Monitor, GoToWebinar, and Wufoo which can be used to promote training opportunities, disseminate program information, collect registrations, create surveys, and evaluate feedback.

### **Project Staff**

**Christopher Cameron, IPI Sustainable Preservation Specialist, Co-Principal Investigator**, will have primary responsibilities and oversight of project activities in all three phases of the project. Mr. Cameron has served as principal investigator on several sustainable environmental management projects at IPI performing mechanical system analysis, facilitating team discussions, and delivering final reports including project analysis and future recommendations. He came to IPI certified in HVAC Maintenance and Repair, having worked as a Facility Manager for eleven years, and serving as Project Manager overseeing various building projects. Mr. Cameron will serve as the primary instructor for the workshops, and collaborate with other project staff on webinar and workshop curriculum and course materials development. He will also be the primary contact for coordinating and organizing workshop activities with host institutions, and assist with webinar delivery. Mr. Cameron will share NEH reporting responsibilities with co-PI Kelly Krish. He will spend 30% of his time on the project throughout the entire project period.

**Kelly Krish, IPI Preventive Conservation Specialist, Co-Principal Investigator**, will have primary responsibilities and oversight of project activities in all three phases of the project. Ms. Krish has a Master's of Science from the Winterthur/University of Delaware Program in Art Conservation. In her two years at IPI, she has worked on projects at approximately 20 cultural institutions, and has participated in both IMLS and NEH grant-funded projects. Ms. Krish will serve as the primary instructor for the webinar series, and will collaborate with other project staff on webinar and workshop curriculum and course materials development, and assist with workshop delivery. She will share NEH reporting responsibilities with co-PI Chris Cameron. Ms. Krish will spend 30% of her time on the project throughout the entire project period.

**Jean-Louis Bigourdan, IPI Senior Research Scientist**, has led several multi-year NEH-funded preservation environment research projects that inform the content of the proposed webinars and workshops including *Methodologies for Sustainable HVAC Operation in Collection Environments*, and *Understanding Moisture Equilibrium for Humanities Collections: A New Path to Sustainable Humidity Control*. Mr. Bigourdan will serve as an advisor for curriculum content development and delivery, with a primary

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focus on the webinar series. He will spend 10% of his time on the project during the first year of the project period.

**Jennifer Jae Gutierrez, IPI Executive Director**, taught undergraduate- and graduate-level courses in the art conservation department at the University of Delaware for eight years and will serve as an advisor for curriculum development and delivery. Her training and experience in problem based learning curriculum will be particularly helpful in developing effective breakout session exercises for the workshops. She will spend 5% of her time on the project during the first year of the project period.

**Lauren Parish, IPI Web & Publications Manager**, has ten years of experience at IPI assisting with content creation and delivery for educational programs involving both webinars and workshops. She will be responsible for the designing, formatting, and printing of workshop materials and will provide technical support for the webinar presentations. She will manage the *Campaign Monitor*, *GoToWebinar*, and *Wufoo* accounts used for webinar and workshop registration, program surveys, and webinar presentations. She will spend 15% of her time on the project throughout the entire project period.