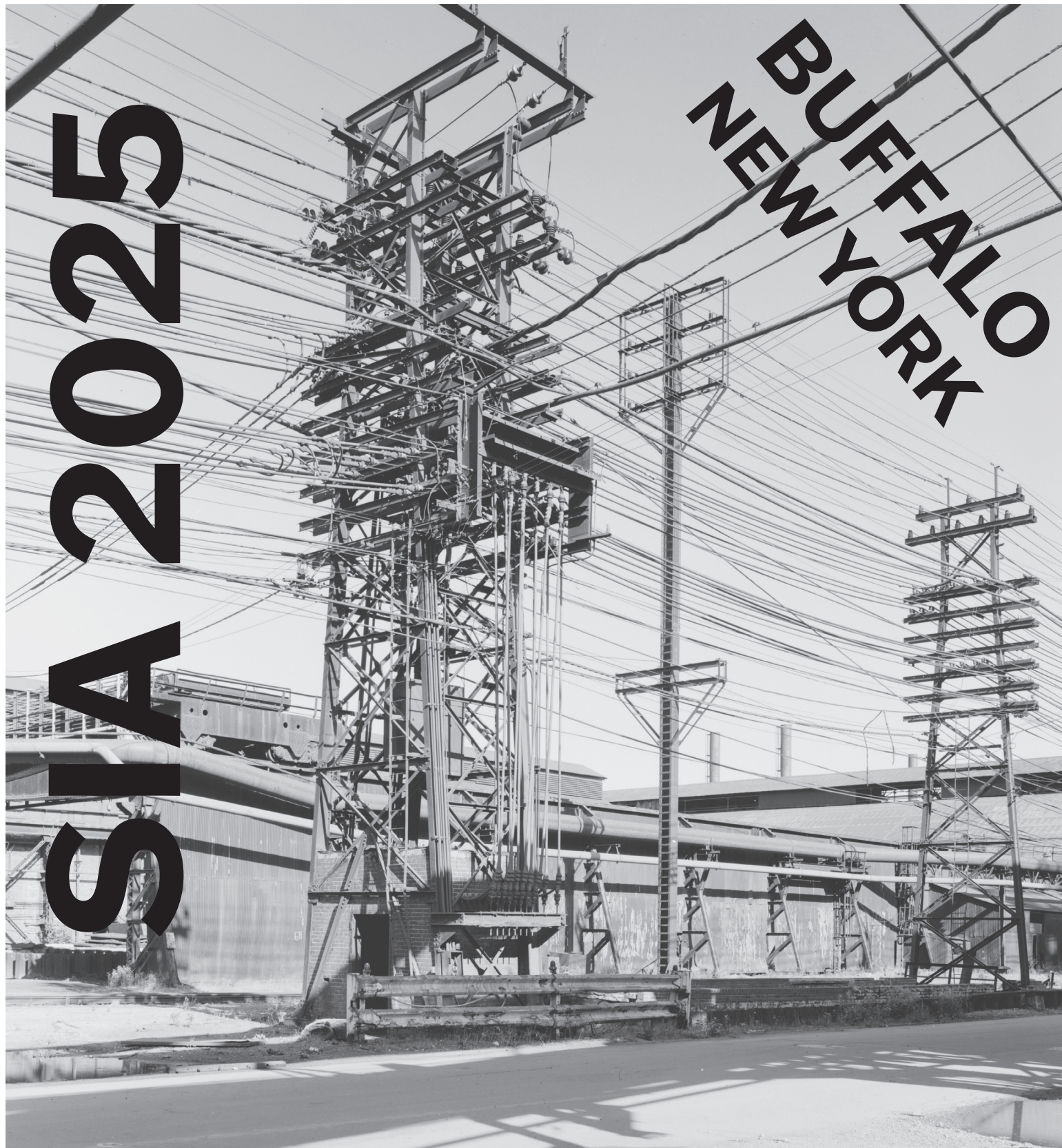




SIA 2025

**BUFFALO
NEW YORK**

**SOCIETY FOR INDUSTRIAL ARCHEOLOGY
53rd ANNUAL CONFERENCE
MAY 29 - JUNE 1, 2025
CONFERENCE PROGRAM**

SIA 2025 CONFERENCE SCHEDULE

All locations are within the HYATT REGENCY BUFFALO except where noted (*, **)

All tours (▶) depart from the hotel lobby

WEDNESDAY, MAY 28, 2025

3:00 PM - 5:00 PM SIA Board of Directors Meeting..... Hyatt Regency Board Room

THURSDAY, MAY 29, 2025

7:00 AM - 8:00 AM Self Check In Hyatt Regency 2nd Floor Registration Booth

2:00 pm - 3:30/5:00 PM ▶ T1 / T1a – Explore Buffalo Walking Tour / Edward M. Cotter Fireboat

11:45 AM - 6:00 PM ▶ T2 – Forest Lawn & Frank Lloyd Wright Martin House Tour

8:00 AM - 6:00 PM ▶ T3 – Hydroelectricity in Canada at Niagara Falls (PASSPORTS REQUIRED)

4:00 PM - 6:00 PM Self Check In Hyatt Regency 2nd Floor Registration Booth

6:30 PM Welcome Reception Hyatt Regency Atrium Bar

FRIDAY, MAY 30, 2025

7:00 AM - 8:00 AM Self Check In Hyatt Regency 2nd Floor Registration Booth

8:00 AM - 6:30 PM ▶ F1 – Erie Canal Locks and Water Pumping Station

8:00 AM - 4:45 PM ▶ F2 – Buffalo’s Elmwood Village, West Side, and the Lake Erie Waterfront

8:00 AM - 5:30 PM ▶ F3 – Industrial Processes and Products, Past and Present

8:10 AM - 5:00 PM ▶ F4 – Harnessing the Power of Niagara Falls

SATURDAY, MAY 31, 2025

7:30 AM - 8:15 AM Self Check In Hyatt Regency 2nd Floor Registration Booth

ALL DAY Exhibits, Posters & Book Sales

8:15 AM - 11:20 AM Morning Presentation Sessions Hyatt Regency Ballroom E, F, G

11:30 AM - 1:30 PM Annual Business Meeting & Luncheon Hyatt Regency Main Ballroom

1:45 PM - 4:25 PM Afternoon Presentation Sessions Hyatt Regency Ballroom E, F, G

4:35 PM - 5:20 PM Poster Session with Cash Bar & SIA Strategic Plan Discussion

6:00 PM Saturday Banquet Dinner Duende at Silo City*

SUNDAY, JUNE 1, 2025

9:00 AM - NOON ▶ S1 – Buffalo Harbor Cruise**

9:00 AM - 10:30/NOON ▶ S2 / S2a – Explore Buffalo Walking Tour / Edward M. Cotter Fireboat

▶ Please arrive at least 15 minutes early for tour departures. Departure times are firm. Return times may vary.

* Reached by bus from the hotel; bus departs hotel at 5:30 PM.

** Bus leaves hotel at 8:45 AM; boat leaves dock at 9 AM

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

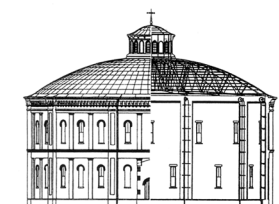
**53rd ANNUAL
CONFERENCE**

**MAY 29 - JUNE 1, 2025
BUFFALO, NEW YORK**

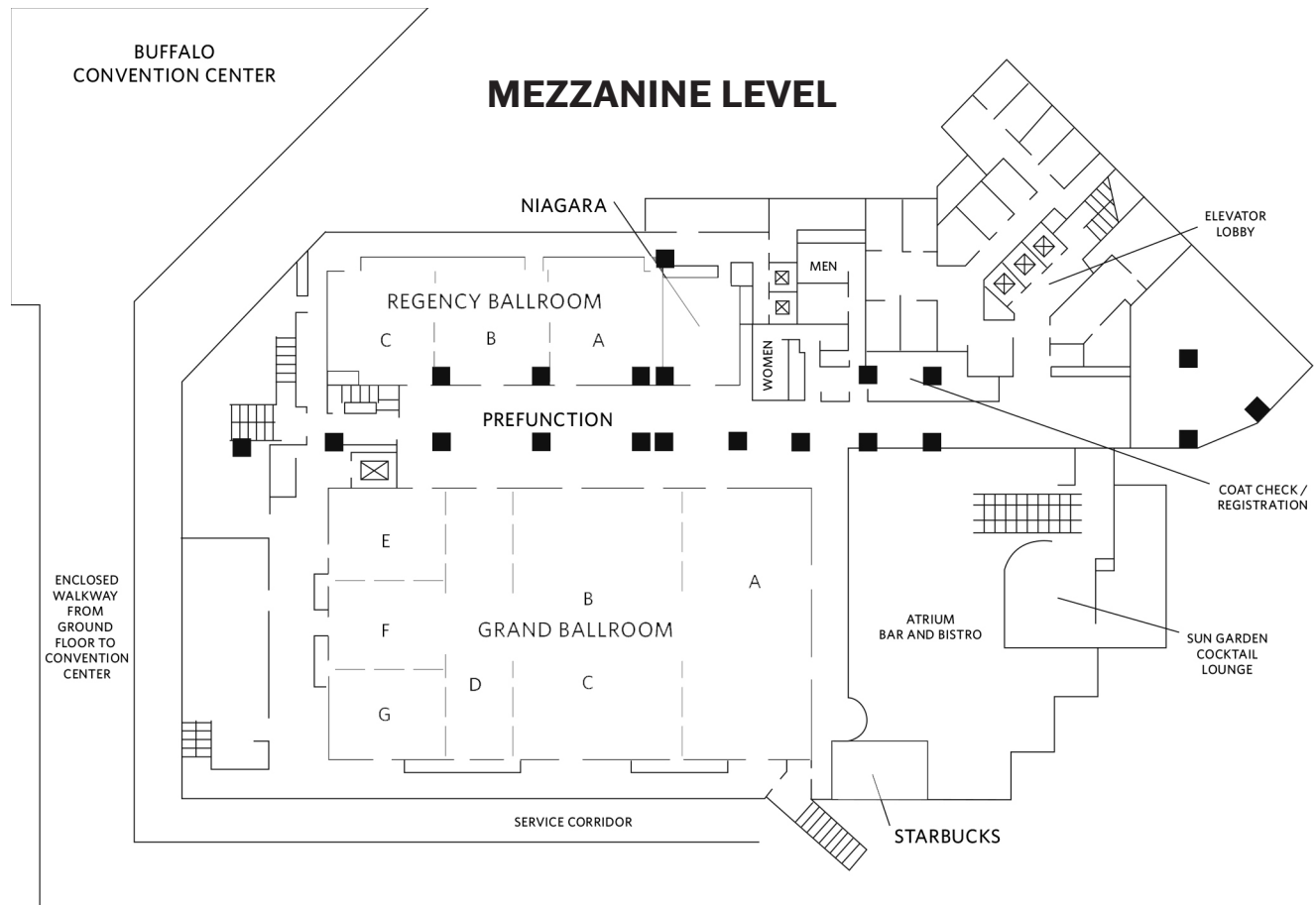
**CONFERENCE
PROGRAM**

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
MICHIGAN TECHNOLOGICAL UNIVERSITY
1400 TOWNSEND DRIVE
HOUGHTON, MI 49931-1295

www.sia-web.org



MAP OF CONFERENCE HOTEL



Most conference events take place on the Mezzanine level of the hotel, shown above:

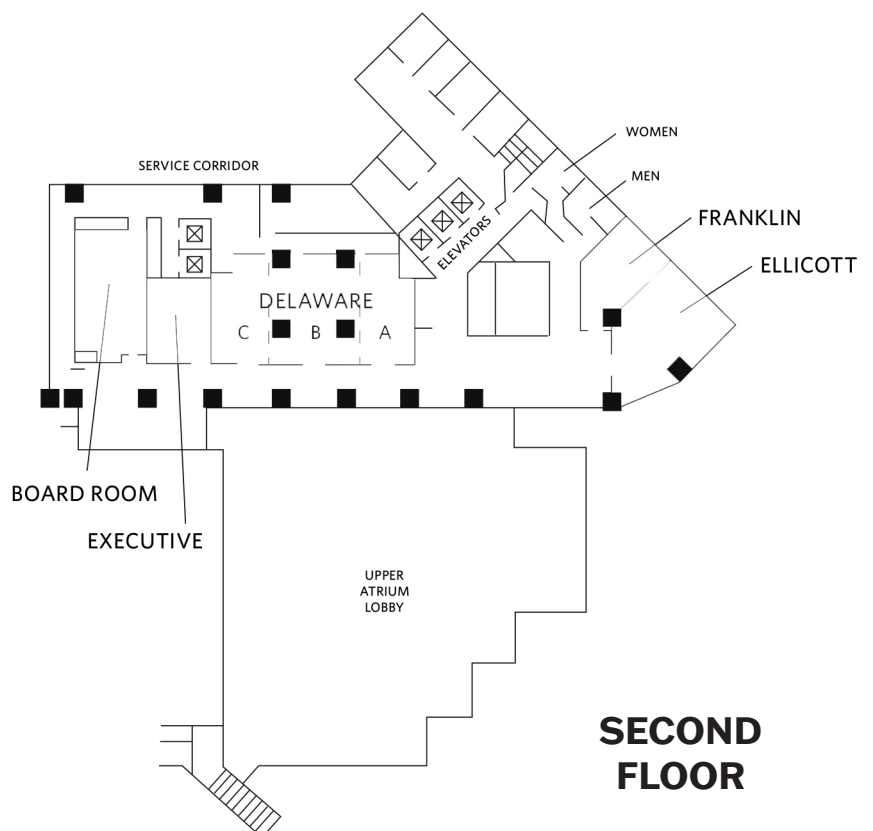
The Registration/Check-In Booth will be at the Coat Check/Registration

The Thursday Night Welcome Reception will be in the Atrium Bar and Bistro

Saturday Paper Sessions, Poster Sessions and the SIA Strategic Plan Discussion are in the Grand Ballroom, Rooms E, F, and G

Saturday's Business Luncheon is in the Grand Ballroom proper

Wednesday afternoon's SIA Board Meeting takes place in the Board Room on the second floor, shown at right



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9 PORTS, PUBLISHING & BAKELITE

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10:05 - 11:20 AM

15 BRIDGES & AQUEDUCTS

17 TELLING STORIES – THE POWER OF NARRATIVE

19 HERITAGE, TECHNOLOGY, & HUMANISM: IN CELEBRATION OF PATRICK MARTIN (PART II)

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23 ATOMS TO ROCKETS – IA ON A GOVERNMENTAL SCALE

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SIA BUFFALO 2025

PAPER SESSIONS

LIVING ARTIFACTS / 8:15 – 9:55 AM, GRAND BALLROOM E

Day Peckinpaugh

Craig Williams

On June 7, 1921 the new canal motorship, the Interwaterways Line 101, arrived at the just completed Barge Canal Terminal in Buffalo. Its inaugural transit of the “Improved Erie Canal” was recognized as the harbinger of great things to come for the State’s rebuilt canal system. Coming from the McDougall yard in Duluth, it was the first vessel specifically designed to accommodate the dimensions of that new canal. In the decades that followed the 101, later renamed the Day Peckinpaugh, hauled goods from the Great Lakes to the Atlantic via that new canal. Its last commercial voyage in 1994 also marked the end of regularly scheduled shipments on the canal. It returned to its homeport of Erie, PA, sitting idle until 2005 when plans for its scrapping inspired a consortium of private, state, and federal agencies led by the Canal Society of NYS to rescue the vessel and return it to New York State waters. Ownership was transferred to the New York State Museum along with its immediate listing on the National Register of Historic Places, confirming its status as the most historically significant still-operating vessel on the system. Funding from the America Recovery and Reinvestment Act brought needed repairs that enabled it to be a flagship for the 2009 Hudson-Fulton-Champlain Quadricentennial. It traveled from Plattsburgh to New York harbor with on-board exhibits enjoyed by thousands. Since then the Peckinpaugh has remained tied to a canal wall in Waterford, NY as the State Museum abandoned plans for further educational use. Sold at public auction in late 2024, its status remains uncertain with scrapping once again in its forecast. This presentation will review this history and explain the potentials and failures that have characterized its preservation.

Craig Williams is the president of the board of directors of the Canal Society of New York State. He retired in 2014 as senior historian at the New York State Museum in Albany, after more than thirty years of service. At the Museum, he helped lead efforts to document and preserve artifacts from the Willard Psychiatric Center, resulting in the much-acclaimed 2004 exhibition “Lost Cases, Recovered Lives - Suitcases from a State Hospital Attic”. He coordinated the Museum’s curatorial team at the World Trade Center site after the attacks of September 11, 2001 and in 2011 led the Museum’s recovery of artifacts from the 1971 Attica Uprising. The largest historic artifact that he ever collected was the 1921 canal motorship, the Day Peckinpaugh.

Lock 33: Celebrating Vestiges of the Hennepin Canal

Racheal Lute

Completed in 1907, the Hennepin Canal follows a natural low area between the Mississippi River at Rock Island and the Illinois River near Hennepin. The main canal spans 75.2 miles, with a 29.3 mile feeder canal which controlled the water level along the entire system. Planning began in 1834 for an inland waterway to revolutionize regional distribution of goods; however, construction delays coupled with the growth of rail transportation meant the Hennepin Canal missed the great Canal Era (c. 1790-1855) and was all but obsolete by the time construction was completed. Commercial navigation ceased in 1951.

Despite this, the canal remained an important aspect of the local community. Originally, 14 overseer’s and 38 lockkeeper’s houses were located at key locations along the main and feeder lines, as along with hundreds of supporting structures - the majority of which have been lost. The grandest of these residences was the Overseer’s House located at Lock 33, the guard lock at the feeder inlet in Rock Falls. This grand house was also the residence of the chief engineer over the entire canal operation in the earliest years of navigation.

There are currently six buildings at Lock 33 remaining from the canal’s operational period, including the Overseer’s House and the last remaining Lockkeeper’s House. The collection of historic structures within this site provides insight into an important and under-appreciated aspect of Illinois’s industrial history. The canal functioned as a community for the overseers, locktenders, patrolmen, and their families due to the shared responsibility of operating the canal and subsequent common lifestyle. This presentation will provide the history of the Hennepin

Canal from its planning, operation, decline of use, and its contemporary use as a recreational waterway. The architectural significance and integrity of the Lock 33 site and the planned rehabilitation will also be discussed.

Racheal Lute, PhD., is an Austin-based member of the technical engineering staff at Rath's, Rath's and Johnson, Inc. Racheal has 15 years of engineering experience specializing in the areas of rehabilitation and preservation of building enclosures with a focus on evaluating material performance. Her work encompasses architectural conservation and rehabilitation from research to implementation. Her professional experience includes laboratory analysis of construction materials, field investigation, and condition assessment of numerous building types. She specializes in the assessment of concrete and masonry structures providing mitigation strategies for material deterioration. Racheal is also a lecturer in the Historic Preservation Program at The University of Texas School of Architecture.

Richmond's New Pump House: Reinterpreting Victorian Engineering in the Modern Age

Penn Markham

Constructed between 1881-1883, the New Pump House supplied drinking water to the city of Richmond for 41 years. Its story is interwoven with that of the city it served, playing a critical role in the rebirth of the Confederate capital devastated by the Civil War.

Rapid growth in Richmond's population during Reconstruction resulted in the need for a cleaner, more reliable source of drinking water located upstream from the city's existing waterworks. This led to the selection of the Three-Mile Locks of the James River & Kanawha Canal as the site of the new pumping station and its accompanying reservoir. The New Pump House featured nine piston pumps driven entirely by hydraulic turbines, which could lift 12 million gallons of water per day to the reservoir located 170 feet uphill. In addition to serving as the waterworks, the New Pump House featured an open-air pavilion on its second floor that hosted a variety of social events at the turn of the 20th century.

Advances in electrical technology rendered the building's machinery obsolete after only a few decades, and the New Pump House was shut down and abandoned in 1924, its equipment sold for scrap a few years later.

In 2017, the Friends of Pump House began working to preserve and revitalize the building. Our efforts have focused primarily on documenting its history, preventing further deterioration, providing opportunities for the public to learn about the building, and seeking funding for its eventual restoration. The proposed paper will focus on the Pump House's history and technology, while also discussing the process of saving a historic building and reinterpreting it for a new generation more than a century after it was last used.

Dr. Penn N. Markham received his B.S. in electrical engineering from Virginia Polytechnic Institute and State University in 2006, and his Ph.D. from the University of Tennessee, Knoxville in 2012. Since joining Dominion Energy in 2017, he has worked in both the Distribution Grid Planning and Electric Transmission System Operations Engineering groups. He currently leads the Business & Data Analytics team, focusing on smart meter analytics and software development. He is currently the president of the Friends of Pump House, a volunteer organization devoted to preserving and restoring the historic New Pump House in Richmond, Virginia.

Dr. Markham is a licensed Professional Engineer in the Commonwealth of Virginia and a senior member of the IEEE.

PORTS, PUBLISHING & BAKELITE / 8:15 – 9:55 AM, GRAND BALLROOM F

Ancient urban centers of peninsular India: from narration to remains

Saravanan Ramankutty

The geographical settings of Peninsular India paved way for the growth of maritime contacts with foreigners. Pepper was the important exported item from here because this region only having spice production on the West Coast of India. The paper is attempting to an analysis the available textual references regarding the urban centres in this region. There were a number of centres mentioned in classical Greek and Sangam literatures. For instance, Naura, Tyndis, Nelcynda, Balita, Bacare and Muziris were the major port towns of Malabar Coastal Plain which represented only in the literature but not able to find out these sites on the ground so far. There are a lot of studies on site based as well as state based regarding the various aspects of ancient port towns. But, it is mainly focused on factual narration and theoretical interpretation.

Saravanan Ramankutty has presented papers in foreign countries like Spain and Sri Lanka and has participated in several archaeological explorations, excavation, conservation and preservation programs, organized by Archaeological Survey of India as well as Kerala Council for Historical Research. In addition, they have published a number of articles in national and international journals.

Railroad Printing

Gary Frost

One heavy industry that enabled the daily operation of all others was letterpress printing. A demonstration of this industrial interdependence is exemplified by railroad printing. Printed and annotated forms authorized, monitored, recorded and compiled operations. Examples include train crew orders, dispatcher report sheets, employee timetables, rule books, train tickets, business account ledgers, inspection forms, and technical monographs. Production methods of each are described including methods of tabular composition, wax engraving of maps, stereo plate casting, leger ruling, color printing, and ticket numbering. Inter-industry item labeling and manufacture identification are noted.

The presentation is supported by exemplar illustrations, summary of a study essay, bibliography and endnotes as well as an afterward on the interpretive and forensic attributes of paper based archival evidence of extinct industrial operations. The study is limited to U.S. practice from 1850 to 1950 encompassing a concluding era of flat-bed letterpress method of printing from metal and advent of lithographic off-set color printing from cylinder and web presses. Technical specialties dedicated to railroad operations such as tabular composition and wax engraved system maps are discussed.

Gary Frost is the Conservator Emeritus of the University of Iowa Libraries. He holds a Master of Arts degree from the School of the Art Institute of Chicago. He has served on faculties at Columbia University, University of Texas and Buffalo State University providing instruction in book conservation and library preservation practice. Current work includes instructional and collection development agendas for the University of Iowa Library Book Model Collection and research and interpretation at the Print Shop & Book Bindery restoration depicting communal heritage bookmaking in Middle Amana, Iowa. Frost has received the Banks/Harris Award of the American Library Association and Lifetime Achievement Award from the Guild of Book Workers.

“In Shades that Contrast with or Match One’s Frock Charmingly”: a chaîne opératoire for Bakelite Bracelet Production

William Dunsmore

A small archaeological project consisting of five shovel tests in Long Island, New York yielded an unexpected discovery – 167 fragments of early plastic production debris, found in a non-local fill. The curious assemblage came in a variety of colors including blue, green, brown, gray, and shell to name a few. More intriguingly, all of the artifacts were round, and those large enough to measure had identical diameters. We argue that these artifacts were discards of a bakelite, or other early plastic/resin, bangle manufacturer.

Bakelite bangles, which were popularized in the late 1920s and early 1930s, have been studied for their significance in fashion and decorative arts, but little is known about their manufacturing technique. By studying the recovered assemblage itself we have been able to categorize the bakelite artifacts into nine different artifact classes, which form a chaîne opératoire from the raw material (a bakelite tube) to the final product (a wearable piece of jewelry).

William Dunsmore is a senior archaeologist at ACME Heritage Consultants LLC. He has worked on archaeological projects in the New York City, New England, the American Southwest, the Pacific Northwest, and the Cycladic Islands of Greece. He obtained his master's degree from Bard Graduate Center, where he studied the rise of lager beer in the nineteenth century and its impacts on the German American community in New York City and throughout the United States. William's research interests are varied and include historical, industrial, and contemporary archaeology, ancient and historic beer production, and immigration studies.

HERITAGE, TECHNOLOGY & HUMANISM: IN CELEBRATION OF PATRICK MARTIN (PART I) / 8:15 – 9:55 AM, GRAND BALLROOM G

Most students have come to know Pat Martin through his foundational work in the Industrial Archaeology and Heritage Program at Michigan Technological University (established 1992). Yet his influence as a researcher, academic mentor, and advocate for public interests extends far beyond thematic, programmatic, and national boundaries. He has forged distinct pathways in engaged cross-disciplinary research. His interests have covered a broad swath of historical industries, ranging in scope from local to international settings, and from field research to heritage administration. He is remarkable not only for his integration of environmental, social, and technological themes but also in his dedication to mentoring the whole student. This double session celebrates his substantive legacies by combining presenters' reflections on their work with discussions of his enduring influence. Panelists in the second session will address his contributions to two broad topics: A) Heritage, Industry, and Building Collaborations; and B) Teaching, Mentoring, and Life Lessons.

Pat Martin's Industrial Heritage: Past, Present, and Onward! Introduction to the Double-Session for Patrick Martin

Sarah Cowie and Paul White

We, as former students of Pat Martin's, welcome attendees to join us in celebrating his past, present, and ongoing contributions to Industrial Archaeology and Heritage. This double session includes several short papers celebrating his enduring influence on our work. These are followed by a panel discussion addressing his contributions to two broad topics: A) Heritage, Industry, and Building Collaborations; and B) Teaching, Mentoring, and Life Lessons.

Spring Break is For Children: Maintaining focus on Pat Martin's contributions to the Industrial Archaeology of Isle Royale

Seth DePasqual

This paper traces Pat Martin's contributions to the industrial archaeology of Isle Royale, a remote freshwater archipelago positioned in the middle of Lake Superior. His initial work began in 1987 and was part of a 4-year contract with the National Park Service gathering baseline documentation of assorted historical sites island-wide. The core of this time was committed to the island's extensive historic copper mining history, which initiated during the mid-1840s and bookended in the 1890s. Although his research highlighted many commonalities between island and mainland industries, he recognized the state of preservation found among island resources as unique and in many regards the backbone of regional significance. In the years since the island survey, he has mentored several student theses chasing a variety of research angles on island mining endeavors. Perhaps most salient among the more recent efforts is his support and management of the Park's first National Historic Landmark, the Minong Copper Mining District, which celebrates the longevity of precontact copper mining in our region. Pat's signature on island research is indelible, and we have much to thank him for within our project records and archival holdings.

Seth DePasqual is a Cultural Resources Manager for Isle Royale National Park and has been conducting field work on island since 2009. Formally trained as an archaeologist (MS MTU IA - 2009), he has studied the past in locations across the American west, South-central Alaska, and Norway's Spitsbergen archipelago. Citing the island's rich inventory of precontact and historic endeavors, Seth considers Isle Royale (Minong to regional Ojibwe) to be a dream medium for archaeological research.

Canals, Counterfeiting, and Cheese

Grant Day

The Ohio & Erie Canal, connected Lake Erie at Cleveland, Ohio with the Ohio River at Portsmouth, Ohio. This 308-mile canal was built between 1825 and 1832. The trip from Cleveland to Cincinnati was advertised as 80 hours, prior to the completion of this canal the trip took weeks to complete. The Ohio & Erie Canal also allowed Ohio farms to export their products to New York City; this trip was reduced from 30 days to 10 days. The canal allowed Ohio farmers to export their products such as grain, flour, cheese, pork, lard, and whiskey among other items to the eastern markets and beyond. The canal brought prosperity, people, and industry to Cleveland and Ohio. By 1850, Ohio was the third most populated state. The canal spurred innovations, specifically in the realm of processing grains and cheeses for export. This paper will examine these innovations via investigations of the Brown/Bender Farmstead. Jim Brown, the first recorded resident of the farmstead was a notorious counterfeiter who printed millions of dollars of phony currency and was often on the run or incarcerated during the early-mid 1800s. However, his wife and son skillfully and successfully ran the farm during his absence. Under his son's management the farm reported producing over 5,000 pounds of cheese per year.

Grant Day earned BA degrees in both Anthropology and Public Relations at Grand Valley State University in Grand Rapids, Michigan. He graduated with honors from Michigan Technological University with a MS degree in Industrial Archaeology. During his 30-year career he has conducted archaeological research throughout the United States of America, Canada, Mexico, West Indies, The Netherlands, and Micronesia. Grant is a PADI certified Dive Master and has participated in underwater archaeology projects in the Great Lakes, Florida Keys, and the Marshall Islands. Currently, Grant serves as the Cultural Resources Program Manager at Cuyahoga Valley National Park.

Preserving Nike Site Summit Missile Battery in Anchorage, Alaska

Daniel O'Rourke

Nike missile sites were once a common feature of the landscape during the Cold War (1945-1991). Nike missile sites contained batteries of anti-aircraft missiles and were intended to protect major population centers in the United States from aerial attack. The development of Intercontinental Ballistic Missile (ICBMs) rendered these defenses obsolete. Few of these locations now remain. One missile location, known as Site Summit, located outside Anchorage, Alaska is being maintained as a historic property by the United States Air Force. This paper will discuss recent efforts by the United States Air Force assisted by Argonne National Laboratory personnel in preserving and maintaining this increasingly rare type of facility.

Dan O'Rourke serves as a Principal Cultural Resource Specialist in Argonne National Laboratory's Environmental Science Division. He is a graduate of the Industrial Archaeology Program at Michigan Technological University.

How to Make Gold from Rust: Reconstructing Technology the Pat Martin Way

Paul White

A consistent theme across Pat Martin's career has been his unflagging enthusiasm for fieldwork. Irrespective of whether he was digging or standing over an excavation unit, surveying the remains of an industrial complex, or visiting a place briefly, Pat expressed curiosity and respect for what lay under his feet. A favorite takeaway from seeing him in action is how often he demonstrated that recording and analyzing a site were not mutually exclusive actions. Like an alchemist at work, Pat's puzzling over why something was placed where it was or how a technological system functioned generated discoveries, added nuance, and opened new lines of inquiry. This paper identifies key field findings from a long-term project involving the documentation of Alaska's gold mining landscapes. Here I focus on the interpretation of milling facilities built to process ore extracted from the mine. Despite historical remnants being most frequently encountered as a jumbled assortment of rusted equipment and deteriorated timber, this paper highlights the advantage of the Martin approach. Specifically, his modeling of how to engage with what one sees has returned a bevy of findings, from revealing local technological modifications and adaptations to insight into historical working conditions.

Paul White is an Associate Professor of Geography at the University of Nevada, Reno, whose research focuses on the archaeological documentation of industrial sites in North America. His research interests center upon the social, technological, and environmental transformations associated with the mining industry. He has worked also as a consultant for the U.S. Environmental Protection Agency

and conducted safety hazard assessments on abandoned mining lands. His articles on mining have appeared in *Historical Archaeology*, *IA: The Journal of the Society for Industrial Archeology*, and the *Mining History Journal*. His book, *The Archaeology of American Mining* (2017), which synthesizes 50 years of archaeological scholarship, received the Mining History Association's Clark Spence Award.

BREAK (Pat Martin Bingo)

Death Valley Days: A HAER Summer Field Season for the Record and Beyond

Gianfranco Archimede

Michigan Technological University's Industrial Archaeology (MTUIA) program was contracted by Death Valley National Park to conduct field work during the typical 12-week summer season of 2000 to document several historic gold mining sites for inclusion in the Historic Engineering Record (HAER). MTUIA founder Pat Martin was instrumental in creating this unique opportunity for my graduate research project and collaboration with former MTUIA graduate Paul White. Our work consisted of historic research and photographic documentation of five historic gold mining sites that we visited and mapped between June and August of 2000. This presentation will give a synopsis of the project with focus on the organization of it as just one example of the many successful and significant projects completed by MTUIA graduate students over the decades that were ushered, guided and coordinated by Pat Martin. It will also demonstrate how instrumental the Death Valley project was in the course of my 20-year career at Paterson, NJ in the establishment and development of the Great Falls National Historical Park and current HAER work at the Allied Textile Printers site within the national park.

Gianfranco Archimede has served for the past twenty years as Director of the Division of Historic Preservation for the City of Paterson, New Jersey and Executive Director of Paterson's Historic Preservation Commission. He provides programmatic guidance to the city on preservation planning and cultural resources, oversight of Paterson's public preservation projects, designation of new historic landmarks, and regulatory permitting review for hundreds of large and small scale construction projects within Paterson's three national, state and local historic districts. Gianfranco had the privilege to assist with the establishment of the Great Falls State Park and the Great Falls National Historical Park between 2006 and 2011, and now serves as the city's liaison in support its development. He also provides executive staff services to the Historic Preservation Commission, including administration of annual legacy programs for public awareness and education, for which the Paterson HPC was honored in 2015 with a NJ Historic Preservation Award for Outstanding Achievement. He served as Vice President to the Roebling Chapter of the SIA and organizer of the Chapter's annual symposium held in Paterson, NJ for ten years. He also served one term as a board member to the SIA. Gianfranco holds a Master of Science degree in Industrial Archaeology from Michigan Technological University, and a Bachelor of Arts degree in American Studies from State University of New York Oswego.

You Can't 'File' This One Away: Pat Martin, the West Point Foundry, and How the Best Projects Never End

T. Arron Kotlensky

Pat Martin and the West Point Foundry of Cold Spring, New York are forever entwined for many of those who came up through the Michigan Tech IA master's program in the early to mid 2000s. Tapped by Scenic Hudson in 2001 to make sense of their new land purchase with its wooded Escheresque industrial ruins, Pat convinced the new land owner to think big and draw on grand IA of the past, like the work of Roland Robbins at Saugus Iron Works and John Cotter at Hopewell Furnace. Thinking big meant doing big, and that meant running a succession of seven field schools at the site, with the last taking place in 2008. A graduate of those field schools and the Tech master's program, I had the unexpected good fortune to continue to work at the West Point Foundry, first as a contractor archaeologist to monitor construction work completed at the site in 2012 for site enhancements, then to return a few years later to complete a National Historic Landmark nomination for the site, leading to a successful designation in 2021. These efforts were more than a postscript to the tremendous investigations Pat oversaw twenty years ago, they were outgrowths of his guidance and experience. Through photographs, this presentation will cover the successes of the past fifteen years to keep the heavy IA work of Michigan Tech at the West Point Foundry alive, relevant, and far from forgotten.

T. Arron Kotlensky is a 2006 graduate of the Michigan Tech IA program. Following graduate school, he worked in cultural resources consulting, focusing on the Northeast and Gulf Coast, tackling a wide array of projects involving archaeology and historic preservation. More recently, he has worked as a staff archaeologist for PennDOT and served the SIA as its president from 2022 to 2024. He is a recipient of the Robert M. Vogel prize, receiving the award in 2014 for his article, "From Forest and Mine to Foundry and Cannons: An Archaeological Study of the Blast Furnace at the West Point Foundry." He lives in the North Side of Pittsburgh.

After the Gun Foundry: Reflections on Industrial Archaeology, Michigan Tech, and Pat Martin, 2005-2025

Dan Trepal

Over the course of my 20-year career as a professional archaeologist, Dr Patrick Martin's vision for industrial archaeology has remained a touchstone strongly influencing my own perspectives on how we 'do' IA, as recounted through fieldwork experiences, from the West Point Foundry to Isle Royale's precontact copper mining districts, and beyond. This paper presents a blend of personal and professional reflections on the author's experience as a student, graduate (twice), and faculty member of Michigan Technological University's Industrial Archaeology program under Dr. Martin's mentorship.

Dan Trepal serves as Visiting Assistant Professor (Social Sciences) and Senior Geospatial Research Scientist (Geospatial Research Facility) at Michigan Technological University. An MTU Industrial Archaeology program alumnus, Dr. Trepal has previously served as an archaeologist for the National Park Service in Alaska, as well as working in the cultural resource management industry across the US. More recently specializing in the applications of GIS and remote sensing to archaeological research, his research interests include historical cast iron technology, the archaeology of mining, the industrial archaeology of the American Rust Belt, and digital deep mapping technology as a tool for heritage management.

BRIDGES & AQUEDUCTS / 10:05 - 11:20 AM, GRAND BALLROOM E

Roebbling's Niagara Railway Suspension Bridge

Paul King

In 1855, John Roebbling completed the world's first successful railway suspension bridge, across the Niagara Gorge, just above the falls. A turning point in his career, its success spread Roebbling's reputation worldwide and led to greater commissions including the Cincinnati Covington Bridge across the Ohio and the Brooklyn Bridge across the great East River in New York. Even English Engineer Robert Stephenson, who abandoned the idea of a railway suspension bridges after failed attempts by others wrote, "no one appreciates more than I do, the skill and science displayed by Mr. Roebbling in overcoming the striking engineering difficulties by which he was surrounded".

In 1847, Roebbling had been bested by fellow American engineer Charles Ellet Jr. who won commissions for the Wheeling Suspension Bridge and the original commission for the Niagara Railway Suspension Bridge. This same year, while Ellet began work on his two bridges, Roebbling focused on his four suspension aqueducts for the Delaware & Hudson Canal and moved his wire rope business from Saxonburg PA to Trenton NJ. Successful expansion of his business would make Roebbling financially independent, allowing him to focus on his engineering work.

In 1849, Ellet's Wheeling suspension bridge would become the world's longest span taking the title from the Grand Pont Suspendu in Fribourg Switzerland, completed in 1834 by French Engineer Joseph Chaley. Five years later the tides would change with Roebbling having taken over for Ellet at Niagara after a falling out with the bridge directors and the collapse of Ellet's Wheeling Suspension Bridge in a May 1854 windstorm, a month before Roebbling opened the lower deck of his Niagara Bridge to pedestrians.

As we come together in Buffalo for our annual conference, it is fitting to celebrate this local work and one of Roebbling's greatest, the world's first successful Railway Suspension Bridge.

Professor King is a scholar and historian who specializes in the early work of John A. Roebbling, engineer of the Brooklyn Bridge. He is particularly interested in how Roebbling's early ideas evolved and influenced the development of 19th century suspension bridges. He has published papers on the subject, including Roebbling's Hudson Valley Aqueducts for the Hudson River Valley Review and Roebbling's Niagara Railway Suspension Bridge for the NY History Journal.

In demand as lecturer, he serves as a historical consultant to the National Park Service, providing tours of Roebbling's Delaware Aqueduct and returning each spring to introduce summer staff to the history of its construction. His technical addendum of Roebbling's cast iron roller saddles is part of the Historic American Engineering Record published by the Library of Congress. In 2024, he received the Cultural Achievement Award from the Upper Delaware Council in recognition of his support of Roebbling's Delaware Aqueduct.

Dunlap's Creek/Cast Iron Bridge: Rehabilitating the First Metal Arch Bridge in the United States

Keith T. Heinrich

Constructed between the summer of 1836 and July 4, 1839, Dunlap's Creek Bridge, also known as the Cast Iron Bridge, is the first cast iron bridge built in the United States. Built by the Army Corps of Engineers under Captain Richard Delafield, the bridge spanned Dunlap's Creek along the National Road, also known as the Cumberland Road, and was the fourth known bridge at this location. In 1922, the bridge deck was replaced and cantilevered support brackets and sidewalks were installed. Over the years, this work, along with commercial development along the banks of Dunlap Creek obscured the original design of the bridge. Currently, PennDOT District 12-0 is undertaking a rehabilitation of the bridge that will remove the sidewalk system, carefully disassemble the cast iron structure of the bridge and take it off site for braze welding repairs, and repair the bridge abutments. All of

this work is designed to not diminish the qualities of the bridge that qualify it for listing in the National Register of Historic Places. The work, along with the construction of a sensitively designed pedestrian bridge upstream, will allow everyone to see the bridge structure and understand how the bridge would have appeared when it was completed in 1839. This presentation will briefly discuss the consultation on the project under Section 106 of the National Historic Preservation Act of 1966, other historic resources around the bridge, the disassembly and rehabilitation of the bridge, and the planned reinstallation of the bridge. Also discussed will be challenges encountered during the project and local support for the project.

Keith Heinrich has been the aboveground Cultural Resource Professional for PennDOT districts 9-0 and 12-0 since September of 2020. Keith earned his Bachelor of Arts degree in history and archaeology from Lycoming College in Williamsport, PA. After working as a field archaeologist for several years after graduation, Keith enrolled in the Anthropology graduate program at East Carolina University in Greenville, NC, earning a MA in Anthropology while working at a small local CRM firm. After working his way up to a project archaeologist at that firm, Keith took a job with the PA State Historic Preservation Office (PA SHPO), where he eventually spent 13 year in the National Register of Historic Places (NRHP) section. It was here that he gained experience in the aboveground side of historic preservation, fully committing to it when he moved to the consulting world before returning to state service with PennDOT.

The Many Aqueducts at Nettle Creek over the I&M Canal : the 8th Time is the Charm

Meg Kindelin

An aqueduct in some form has carried the Illinois and Michigan (I&M) Canal over Nettle Creek since 1848. The I&M Canal is a National Historic Landmark that connected Lake Michigan to the Mississippi River via the Illinois River and that played a key role in the development of Northern Illinois. As the canal traveled west it encountered large tributaries and aqueducts were needed to cross these waters requiring considerable engineering.

This presentation will review the history of the many aqueducts at this crossing, the reason they failed over time, and how this newest structure hopes to carry the I&M Canal into the next century not as an active commercial waterway but now as a recreational trail. It will present a history of the Nettle Creek and its place along the I&M Canal, the ways that a new structure needed to address climate change while harkening back to the design of a 1933 CCC era structure.

The Nettle Creek Aqueduct experienced seven major reconstructions between 1847 and 1938. The most recent was constructed in 1933 by the Civilian Conservation Corps (CCC) but was washed away in a historical flood in 2013. The last one is the newest one - the New Nettle Creek Aqueduct. A hydrology study concluded that any efforts to recreate the 1938 design would not sufficiently relieve the long-term flooding hazards in the nearby town of Morris. The AE team encountered several challenges in creating the new Aqueduct. The new aqueduct arch superstructure design, 4 times the size of the CCC-era design, had to carefully emulate CCC-era precedents and integrate new design parameters. The team analyzed previous failures to develop new design options, and salvaged historic elements like the wood and iron sluice gate and limestone were saved for interpretation.

Meg Kindelin, AIA, President and Owner of JLK Architects, has 26 years of experience in Architecture, History, and Historic Preservation. She is in the process of founding the Chicago Big Shoulders Chapter of the SIA! With degrees in Anthropology, Architectural History, and Architecture, Meg became interested in Industrial Archaeology while earning an MA in Architectural History at UT Austin. As an Architect, she's led the preservation and rehab of 40+ bridge and infrastructure projects in the City of Chicago and the Region such as Bascule Bridges, Fixed Spans, Aqueducts, Train Stations, Canals, Locks, and Power Stations. She is active in the Association for Preservation Technology, the AIA, Landmarks Illinois, and other organizations. Her architectural projects have won national awards from the AIA, the National Trust, and the Victorian Society of America. She is married with two teen sons and was a Scoutmaster for Boys Scouts Troop 1 for 7 years.

TELLING STORIES – THE POWER OF NARRATIVE / 10:05 - 10:30 AM, GRAND BALLROOM F

Heritage and Power at Ariel Foundation Park

Lucy Gibbs

Adaptive reuse of industrial structures and landscapes has become an increasingly popular option to sustainably preserve industrial heritage while meeting contemporary community needs. This paper focuses on how the sources of funding and decision-making can shape industrial-adaptive reuse. In order to examine these processes, I use a case study in Mount Vernon, Ohio, where a former glass factory and gravel mining site has been repurposed into a community park. Examining the process of adaptive reuse can often provide more insight into heritage narratives and community reception than evaluating the subjective “success” of the finished product. At Ariel Foundation Park, larger themes involving wealth and power can be investigated because the project was privately funded, planned, and executed. The Ariel Foundation Park website and a sponsored book, *Ariel Foundation Park*, illustrate the process from the perspective of the decision-makers. Survey responses provide voices directly from the community. Articles from local news organizations and my personal experiences while visiting the park help contextualize the identified patterns and themes.

This paper focuses on the major benefactors and decision makers, and the narratives of industrial heritage depicted by the park’s layout and interpretive signs. Those responsible for funding and decision-making acted in contrast to the best practices regarding community involvement agreed upon by practitioners and scholars. The survey responses illustrate how private funding and decision-making may have impacted community perceptions of the project and of the industrial heritage it depicts. While private funding and decision-making allowed the park to be constructed with incredible efficiency, it also caused some community members to feel disconnected from the park. Additionally, I argue that more community involvement would have depicted the industrial heritage of the site and surrounding community more accurately and inclusively.

Lucy Gibbs is a current master’s student at Michigan Tech in the Industrial Heritage and Archaeology program within the department of Social Sciences. She received her bachelor’s degree in history at Kenyon College in Gambier, OH. She is interested in public history/archaeology, post-industrial communities, and agricultural history/foodways.

The Pottery Industry in Nabeul and Djerba: Archaeological and Cultural Heritage from the Punic Period to the Modern Era and the Role of Strategic Design in the Preservation and Enhancement of the Industrial Heritage

Dr. Houda Kohli Kallel

The pottery industry in Nabeul and Djerba is one of Tunisia’s major cultural and industrial heritages, influenced by traditions dating back to the Punic period and evolving right up to the modern era. In a context marked by globalization and the growth of tourism, it is essential to explore the integration of strategic design to preserve and enhance this heritage. This article examines how strategic design can reconcile innovation, heritage preservation and sustainable economic development in the pottery industry. The study is based on a qualitative methodological approach, combining analysis of archaeological archives, case studies of contemporary craftspeople, and interviews with designers and heritage experts. This analysis made it possible to assess how strategic design influences the techniques, production and marketing of pottery while respecting traditional know-how. The results show that the application of strategic design in Nabeul and Djerba has improved product quality while maintaining ancestral craft practices. This has enabled traditional pottery to be adapted to the needs of the modern market, particularly in the cultural tourism sector, while preserving its authenticity. Strategic design has also facilitated the improvement of distribution and export channels, increasing the visibility of craftspeople on an international scale. The integration of strategic design has created a balance between preserving industrial heritage and modernizing craft production, supporting a sustainable approach to economic development. This model shows that strategic design can be a key lever for preserving authenticity while stimulating the economic and cultural development of local craft communities.

Dr. Houda Kohli is Assistant Professor of Graphic Design at the Higher Institute of Arts and Crafts in Sidi Bouzid Kairouan University, Tunisia. She holds a PhD in Art Technology from the University of Carthage, and her research focuses on digital art, monumental heritage and heritage preservation. She took part in the TICCIH 2022 Congress in Montreal, addressing industrial heritage as part of the Canada Research Chair in Heritage. Her work is published in international journals and conferences (springer, web science), with a focus on technology and sustainability in art and heritage.

Public Opinions on Digital Industrial Heritage

Kyle Parker McGlynn

The exploratory survey examines how individuals perceive and engage with digital industrial heritage (DIH) resources. It gathers information from 387 participants at three different locations: academic conferences, on-line social media platforms, and gaming conventions, utilizing a combination of eighteen multiple-choice and open-ended questions. The survey aims to address the following: how, what, and why people access DIH, the barriers they encounter when interacting with DIH, their opinions on what DIH is doing well, areas for potential improvement, and any thematic connections between age, survey location, and preferences for DIH. Additionally, it explores the interactive relationship between physical industrial sites and museums within the context of DIH. The paper concludes by synthesizing the key themes identified in the survey to offer informed recommendations on how industrial heritage might engage with digital heritage in the future.

Kyle Parker-McGlynn is a PhD candidate in Industrial Heritage and Archaeology at Michigan Technological University with an expected graduation date of summer 2025. Kyle has a BS and MS in Geography, focusing on geoarchaeology modeling. He currently works as an Educational Liaison for Flagbearer games. His research interests include digital preservation, empowerment through technology, digital educational outreach, digital heritage, virtual tours, educational gaming, and Geographic Information Systems (GIS).

HERITAGE, TECHNOLOGY & HUMANISM: IN CELEBRATION OF PATRICK MARTIN (PART II) / 10:05 – 10:30 AM, GRAND BALLROOM G

Vernacular Engineering, Technological Appropriation, and “Making Do”

Sarah Cowie

Curiosity about the technological choices people made in the past has been a hallmark of Pat Martin’s approach to industrial heritage. For me, spending time with him at a site always involved an excitement to figure things out on the ground, to understand processes and materials in place within each unique landscape. He inspired me first as his student and in later years in my own career to wonder what inspired past people to make the choices they did, which were sometimes real headscratchers. And that has always been a part of the fun, to recognize those unique intersections of individual agency, knowledge, materials and landscape, and to sometimes marvel at their results. In keeping with that excited curiosity, this paper explores a concept I have noted at many sites over the years (e.g., canals, dams, mills, and bridges) that I call vernacular engineering, as it relates to concepts of technological appropriation and “making do.”

Sarah Cowie specializes in industrial and historical-period archaeology of the American West. She earned her M.S. in Industrial Archaeology from Michigan Technological University and her Ph.D. in Anthropology from University of Arizona. She has worked in cultural resource management throughout the United States and now is an Associate Professor of Anthropology at the University of Nevada-Reno. Her research has garnered awards and fellowships from the Society for Historical Archaeology, the Wenner-Gren Foundation for Anthropological Research, and the National Academy of Sciences, as well as a Presidential Early Career Award for Scientists and Engineers from the White House Office of Science and Technology Policy.

Making a Go of It: Adapting to Change Over Time as Pat Martin’s Last Student

Sean Gohman

As Pat Martin’s last student to receive a degree in Industrial Heritage and Archeology (IHA) from Michigan Tech, I was specially placed to witness Pat’s transition from teacher/advisor to administrator/advisor. When I arrived at Michigan Tech in 2008, the West Point Foundry work, the major research project for Pat and the program for nearly a decade, was just coming to an end. And thanks to the economic crisis of that year the research funding was drying up as well. Pat’s students, once assured of West Point Foundry support, now had to find new avenues for achieving a degree. No more buckets of funding, but rather an assortment of projects to keep one afloat. He was also transitioning to an administrative role as department chair after years of hand-on advising in the classroom and in the field. This all meant that under Pat’s mentorship, I was more independent than most graduate students. But Pat kept me afloat. Whether it was pushing me to teach myself GIS for others’ book project maps, helping me convince local granting agencies to change their applications process to receive funding for three years of research and an eventual PhD to add to my MS (and book credit), or adapting to an ever-changing timeline (and research design for that PhD’s completion), Pat was always there for me as a student, as a burgeoning professional, and as a human being. This brief paper captures the variety of projects and lessons learned while working under Pat’s mentorship during this period of transition for himself, myself, and the IHA program.

Sean Gohman has a PhD in Industrial Heritage and Archeology at Michigan Technological University, and is currently the Executive Director of the Keweenaw National Historical Park Advisory Commission. The Commission was established, along with the national historical park, by an Act of Congress on October 27, 1992. The seven-member commission serves at the request of the Secretary of the Interior and is mandated to operate in support of the varied activities of Keweenaw National Historical Park, while acting as a conduit between the park and its neighboring communities.

PANEL DISCUSSION

In this session, panelists will address Patrick Martin’s contributions to two broad topics: A) Heritage, Industry, and Building Collaborations; and B) Teaching, Mentoring, and Life Lessons.

Panelists: Gianfranco Archimede, Sarah Cowie, Seth DePasqual, Amanda Gronhøvd, Dan Trepal, Tim Tumberg, Paul White, Craig Wilson

Discussion Moderators: Paul White and Sarah Cowie

See above for biographies for Gianfranco Archimede, Sarah Cowie, Seth DePasquale, Dan Trepal and Paul White.

Amanda Gronhovd has worked as an archaeologist for over 30 years and been a member of the Society for Industrial Archeology since 1996. She has worked throughout the Upper Midwest and Southwest as well as Texas, Kansas, Oklahoma, California, and Alaska. However, her area of interest lies in Minnesota's iron industry; specifically, mining technologies, and how mine development impacted the social and economic fabric of northern Minnesota. She currently serves as the Minnesota State Archaeologist, where she works to record and protect the state's archaeological sites (including industrial!), and unrecorded cemetery and burial sites.

Tim Tumberg: I met Pat and Susan Martin in May 1995, about one month before starting the still-new IA Master's program at Michigan Tech and in Spring 1997, I became a member of IA's 4th graduating class. Pat influence on me exceeds that of a typical mentor. I was initially unenthused about pursuing a graduate degree in IA because I honestly didn't think I'd like it much, but Pat taught me about IA as well as why it's important. Thanks to Pat, 30 years later I identify primarily (and proudly) as an Industrial Archaeologist.

Craig Wilson is chief curator for Mackinac State Historic Parks, a network of museums in Michigan's Straits of Mackinac region which includes Fort Mackinac, Colonial Michilimackinac, the Old Mackinac Point Lighthouse, Historic Mill Creek, the Mackinac Island Native American Museum, and the Richard and Jane Manoogian Mackinac Art Museum. He previously served as curator of history and museum historian, and received an MS in Industrial Archaeology from Michigan Technological University in 2010. He lives in Mackinaw City.

IRON I / 1:45 – 3:00 PM, GRAND BALLROOM E

Steelworkers Transfers to Bethlehem Steel's Lackawanna Mill

Jill Schennum

This paper examines the uneven processes of deindustrialization in the Bethlehem Steel Corporation, often pitting workers and local unions against each other in ways that undermined worker solidarity and union strength. Transfer rights were written into most steelworker contracts so that as mills downsized, displaced workers were able to access transfers to other Bethlehem Steel mills. In Bethlehem, PA workers were eligible for transfer from Bethlehem Steel's flagship mill to the coke works in Bethlehem's much-downsized plant in Lackawanna, NY. While once the largest steel mill in Bethlehem Steel's repertoire, by 1995 the Lackawanna steel mill, which closed its hot end in 1982, consisted of a galvanized steel finishing plant and a coke works. A number of Bethlehem workers ended up transferring to the Lackawanna coke works in an effort to put in the time to attain their pensions. However, they encountered hardships in Lackawanna including local worker resistance to transferees, loss of seniority, difficulty of commuting and maintaining two residences, and the loss of meaningful work as work increasingly became defined as a means towards the pension. The coke works closed in 2001 throwing these Bethlehem transferees out of work. They then had to fight their union, the state, and the steel company to finally access pension benefits.

While these transferees ultimately were able to attain their pensions, this process shows the difficulty in combatting deindustrialization when local unions are tied to local workers' and their interests, transferees may have no long-term commitment to the new plant, and the steel company's goal is shedding workers prior to attaining their pensions.

Dr. Schennum has a Ph.D. in cultural anthropology and is the author of *As Goes Bethlehem*. She has conducted ethnographic research on ex-steelworkers and processes of deindustrialization in Bethlehem, PA for the past 15 years. She chairs the Department of Social Sciences at the County College of Morris. Dr. Schennum has been engaged in public anthropology in Bethlehem, including serving as an Officer with the Steelworkers' Archives.

1850: Welsh immigrant iron roller settles in Black Rock 18 years after arriving in NYC

Hardy Marc Howell

A couple of Pittsburgh businessmen saw the industrial potential of Black Rock in 1846. Their investment created the Buffalo Rolling Mill and Iron Works. Demand for iron products in the mid-west was great, and only a lake away. Together with superior transit to the east via Erie Canal or railroads, the location looked like an industrial hub waiting to happen. Pittsburgh had mastered the puddling furnace to convert pig iron to wrought iron. So why not Black Rock? With the addition of skilled puddlers and iron rollers, Black Rock could be a Pittsburgh. As for the labor needed, highly skilled puddlers and iron rollers, many of whom were Welsh, were emigrating to the United States.

Black Rock wasn't ready for David Howell when he arrived in New York City from Merthyr Tydfil, Wales in 1832. An eighteen-year transit time seems excessive, but young Howell, with skill, luck and pluck, survived industrial failures and labor conflict to arrive at Black Rock. There was a great family price to pay, as he, first as a young single man, and then married, moved from place to place. He first traversed from NYC to the industrial areas of eastern PA where Welsh culture was common, then to the dated country iron works at Antietam, MD. Antietam Iron Works was desperately trying to transform from pig iron dominant production to automated cut nail manufacture. On to the technical success at Mount Savage, MD rolling mill where the first "U" railroad rail was rolled. Labor/management conflict and industrial financial collapse ended that sojourn. The

family moved to Pittsburgh, PA, but a notable labor riot chased them to Black Rock in winter 1850. There had been worse in the deadly confrontation between owners/army and exploited labor in the 1831 Merthyr Rising, but Black Rock finally became home.

Marc Howell was born and raised about eighteen miles south of Buffalo in agricultural southern Erie County, NY. Memories of 1950s Buffalo include: the Bethlehem steel plant haze in Lackawanna, the grain boats at Pillsbury elevators, and the Cleveland Cliffs ore ships at winter anchorage inside the breakwater. He earned his BS from Valparaiso University in 1967 setting his life's course in biology and chemistry. His MS and PhD in immunology were conferred in 1968 and 1972 by the University of Illinois. While residing in Frederick, MD in 1978, his parents found his immigrant Grandfather's citizenship document among family papers in Western NY. It had been recorded in nearby Hagerstown, MD in 1840. The 20th century agricultural nature of central MD does not fit his iron roller history. Marc's interest in resolving this puzzle has fed his interest in iron industrial history. Marc and his wife are retired in Frederick, MD.

New England Gas & Coke and the Boston Energy Economy, 1894-1962

Thomas Speight

The New England Gas and Coke byproduct coking plant operated in Everett, Massachusetts from 1899 through the early 1960s. When the plant opened, it was the largest and most modern facility of its type in the world, and only the third such facility in the United States. As such, the plant marked an important step in the introduction of byproduct coking technology to the United States, and the rapid advancements in the domestic steel industry.

Coking plants are typically located either at steel mills or near coal mines, but Boston had neither. Instead, the NEGC plant played a unique role in the energy economy of New England during the first half of the 20th Century, as a source of industrial and domestic fuel and byproduct chemicals, and as a crucial asset to several successive vertically-integrated energy companies. The facility was also an outgrowth of the 19th-century trade in Canadian bituminous coal from Nova Scotia's Cape Breton Island to New England. The plant also played a key role in the "Boston Gas Wars" of the 1880s and 1890s, which saw the gas industry evolving from a very localized one to large-scale corporate operations.

This presentation will discuss the origins, location and operational history of the coking plant using primary sources. This presentation is based in part on the presenters' 2018 book *Manufactured Gas Plant Remediation: A Case Study*, published by CRC Press/Taylor & Francis, which the Geological Society of America awarded the Burwell Award for 2021.

Thomas Speight has twenty years' experience in the environmental field as a consultant and regulator, including approximately fifteen years with a primary focus on assessment and remediation of contaminated sites. He is a Massachusetts Licensed Site Professional and a Certified Hazardous Materials Manager.

ATOMS TO ROCKETS – IA ON A GOVERNMENTAL SCALE / 1:45 – 3:00 PM, GRAND BALLROOM F

Exploring the Hidden Works of the U.S. Atomic Energy Commission

Linda Musser

Shortly after the formation of the U.S. Atomic Energy Commission (AEC) following World War II, the agency initiated a program to share unclassified information related to atomic energy with researchers and the general public via a system of depository libraries and information centers. Over the next 30 years, the AEC issued thousands of reports on paper, microfiche and microopaque and sent them to the selected depository libraries to be maintained and made available for loan. As libraries began to digitize their holdings, however, the AEC materials were not included and today, they remain largely invisible. The Dept. of Energy's free OSTI.GOV database lists many of the reports issued by the AEC but not all and many are not freely available online. This is unfortunate as the materials distributed as part of the AEC depository program contain a wealth of useful information and records related to early investigations into atomic energy, its potential uses and impacts. Topics cross multiple scientific disciplines - physics, chemistry, meteorology, biology, geology, engineering – and other fields such as psychology and ethnography. The collection includes reports from the Atomic Bomb Casualty Commission, reports on uses of HeLa cells, impacts of radiation on lizards (Godzilla precursors?), numerous facility and equipment reports, and translations of reports from countries around the globe. This talk will share examples of some of the more interesting reports found while improving access to this collection, discuss some of the challenges facing similar collections of technical materials, and share how researchers can become aware of and advocate for these interesting and overlooked collections.

Linda R. Musser holds the rank of Distinguished Librarian at the Pennsylvania State University. She earned a B.S. in Civil Engineering and worked in industry and for the U.S. Army Corps of Engineers prior to earning a M.S. in Library Science. As a librarian, she has experience as a programmer and a cataloger and currently is the head of the Fletcher L. Byrom Earth and Mineral Sciences Library. Her research interests include the literature of science and engineering, library operations, and sustainability.

Nuclear Ship Savannah: Where Decommissioning and Historic Preservation Intersect

Erhard Koehler and Anne Jennings

The Nuclear Ship Savannah is the world's first nuclear-powered merchant ship, built and operated by the Maritime Administration (MARAD) as part of President Eisenhower's Atoms for Peace program, in partnership with the former Atomic Energy Commission. In service from 1962-70, the passenger-cargo ship served as a floating ambassador promoting the safe and peaceful use of nuclear power, visiting 32 domestic and 45 international ports, allowing visitors to tour the ship and even watch the nuclear engineers at work. After successfully completing its programmatic goals and objectives, Savannah was removed from service in 1970. Because of its historic significance, Savannah was designated a National Historic Landmark (NHL) in 1991. Savannah is in the final phase of decommissioning its nuclear power plant, an act that typically requires the complete removal of the plant, which in the case of Savannah, is a character-defining feature. Although decommissioning is generally not compatible with the goals of the National Historic Preservation Act (NHPA), MARAD embraced the challenge and established preservation-minded decommissioning principles to guide the process. As a result, MARAD was able to preserve significant portions of Savannah's nuclear power plant, while also improving the ship in the process—to the point where it is a museum in all but name. As the decommissioning process concludes (anticipated early 2026), MARAD's goal is to preserve the ship, and a Request for Proposals will be issued in 2025 for conveyance of the ship to an interested entity. This presentation will showcase the history of the ship and how MARAD bridged the gap between decommissioning and the NHPA, resulting in a ship that serves as a time capsule of the atomic age. MARAD's approach highlights what can be done when a federal agency takes a proactive and innovative approach to preservation and can guide future decommissioning efforts.

Erhard Koehler is a 1987 graduate of the State University of New York Maritime College, with a BE degree in Naval Architecture. After 3-1/2 years as a structural and field-support engineer with the Philadelphia Naval Shipyard, he joined MARAD's Office of Ship Operations in Washington, DC in 1991. An avid amateur maritime historian, Erhard enthusiastically jumped at the assignment in late 1992

to oversee Savannah's return to MARAD custody from the Patriots Point Naval and Maritime Museum, and her subsequent 1994 drydocking and relocation to the agency's reserve fleet site near Newport News, Virginia. He remained with the ship as a project engineer and member of the licensee organization during its protective storage period. In 2004 he succeeded to the agency's senior Savannah management positions and is responsible for all program activities related to licensed operations, maintenance, repair, custody and preservation of the Savannah.

Anne Jennings is an architectural historian/cultural resource specialist who received her master's degree in Historic Preservation from the University of Vermont in 2002. Since then, she has primarily worked on government contracts, assisting federal, state, and local agencies comply with the NHPA and other regulations. Her projects have taken her across the country, where she has surveyed, evaluated, and documented a wide variety of resources, ranging from a Missile Alert Facility in Wyoming to a small-scale stone culvert in Connecticut. Anne also worked at the NYC Landmarks Preservation Commission and the NYC Parks Department, helping to preserve NYC's significant built resources. Since 2022, she has been assisting the Maritime Administration with the decommissioning and disposition of the NHL Nuclear Ship Savannah, to ensure that the work is done in compliance with the NHPA, with an end goal of preservation of the ship.

Space: The Final Frontier of Industrial Archaeology?

Jonathan Coopersmith

Interest in collecting, preserving and protecting the heritage and history of space exploration and exploitation is increasing domestically and internationally. This paper provides an overview with a goal of reaching out to the larger industrial heritage community to benefit from its experience and activities.

The institutional focus is on the National Center for Preservation Technology and Training (NCPTT) of the National Park Service. Since 2009, NCPTT has organized annual conferences on preservation topics ranging from the maritime cultural landscape to cemeteries. The 2023 and 2024 symposia, "Preserving the Race for Space," ("Small Steps and Giant Leaps," and "From the Earth to the Moon and Beyond") focused on space. NCPTT is not alone in its interest as demonstrated by the 2024 "Summit on Outer Space Heritage," organized by the Smithsonian Air & Space Museum and American Institute of Aeronautics and Astronautics (AIAA), and the upcoming 2025 World Archeological Congress session, "From Apollo to Artemis: 25 Years of Space Archeology." Growing international activities include a UNESCO-proposed International Workshop on Space Technological Heritage.

The challenges and opportunities encompass not only preservation of the past but also protection of the future. The increasing number of missions and commercialization of space raises questions for the preservation of space heritage. What will happen if – when - the Moon becomes a site for tourism, depositing human ashes, mining, and other intrusive activity? To spark public awareness, the World Monument Fund named the Moon as one of its 25 endangered sites in 2025. Closer to Earth, satellites also raise environmental sustainability issues both in operation and afterward. To maximize their effectiveness, space heritage advocates should reach out to the industrial heritage community to learn how it perceived and handled similar issues. Preserving the future starts with the past.

Jonathan Coopersmith (j-coopersmith@tamu.edu) is a Professor Emeritus of History at Texas A&M University, where he taught the history of technology and wrote about Russian electrification, pornography, space commercialization and the 180-year history of the fax machine. His current research includes failure in technology, and the importance of froth, fraud and fear in emerging technologies. He co-organized the 2018 NSF-funded "To Boldly Preserve: Archiving the Next Half-Century of Spaceflight" conference (www.toboldlypreserve.space) to promote the collection and preservation of space history and the 2023 "Technology Policy – Think Deeply and Build Things" workshop of historians of technology, policymakers, and policy implementers with the Arizona State University Consortium for Science, Policy and Outcomes (CSPO). At the 2024 National Center for Preservation Technology and Training (NCPTT) symposia, "Preserving the Race for Space," he presented "Preserving the present to ensure the future of the past."

A TOXIC LEGACY / 1:45 – 3:00 PM, GRAND BALLROOM G

Debris and the Machine: California State Government and the Construct of the Mechanical Gold Dredge

Simmons Stearn

This paper examines the mechanical line-bucket dredging machine of late-19th century Northern California which emerged out of a necessitated reinvention of gold mining interactions with the waterscape following the notorious hydraulic mining controversy. This paper examines the particular ways in which these dredges interacted with water and sculpted the landscape in conjunction with the rise of the California Debris Commission, a state government entity that defined legal frameworks for mechanical gold dredging during its development and that utilized the technology towards river navigability efforts. Current scholarship fails to examine the opportunistic relationship between private gold mining enterprise and the California state government that incentivized gold mining operations to clear riverways of debris from hydraulic mining. It is imperative to examine this relationship because it sheds light on how the design of the mechanical gold dredging system allowed for the miraculous lawful movement of water and sediment by mining companies after the 1884 Sawyer Decision. This paper argues that this was supported by the conceptualization of mechanical gold dredging operations as closed systems which was achieved through the particular design of its architecture and the way in which the machine organized debris; Gold dredging operations, like the architecture of the line-bucket dredging machine itself and its tailings, were conceived of as a tangible, compact, and calculable circuit. The California Debris Commission's strategic employment of the mechanical gold dredgers for clearing debris and bulwarking riverbeds further constructed a perception of the technology and debris as discrete and controllable matter. Supporting this conceptualization is the shift in the migration of debris which changed with the development of mining technologies from natural depositions, to natural depositions overlain by siltier hydraulic mining debris, to finally an artificial separation of coarse and fine sediments by dredging.

Simmons Stearn is a Master of Architecture Candidate at the Massachusetts Institute of Technology. She previously received a Bachelors of Science in Civil Engineering from the University of California, Berkeley. Her work explores the aesthetic sensibilities of engineered forms and the intersections between architectural design, infrastructure and industrial landscapes, particularly as it informs adaptive reuse and post-industrial development trends. At MIT, she has worked as a researcher in the Urban Risk Lab and with Spoon Climate Studios on industrial waste material circularity, bridging her interests in industrial relics to span the scale of the modular, mass-produced to the architectures of industrial networks.

Porous Heritage and Chemical Sensitivity: Re-imagining the Dark Materiality of Industrial Heritage

Juntao Yang

A major path in critical industrial heritage research is to problematize the monumentality of heritage, which is often closely linked to the rhetoric of masculinity and specific political ideologies, and mainly relies on the stability and unquestionability of heritage to establish a certain discursive status and power relations. Therefore, there is repression, resistance and negotiation in the heritage-making process. This article argues that closely related to the loss of power in the struggle against industrial heritage discourse is that marginalized groups are often forced to bear the additional burden of industrial development and its decline. These embodied traumas open up a channel between the material agency of industrial harmful residues and chemical toxicity and the physiological sensitivity/vulnerability of marginalized groups, allowing for the co-creation of mediation, education and self-empowerment space in the heritage-making process. Therefore, as silent subjects hidden under the visibility of industrial heritage, the absence of marginalized group and their complex relationship with the unstable and porous industrial heritage deserves to be self-revealed and become the focus of research.

This article calls for an urgent rediscovery and reconceptualization of the widespread disharmony in industrial heritage (sometimes dubbed the dark heritage), and to view these disharmony as the source of a potential new heritage ontology. One possible path seems to be to introduce the concept of embodiment, in which industrial heritage is reflected in the long-term impact of its harmful residues and chemical toxicity on the body and life state of those affected. These impacts are slow, imperceptible, and cumulative, and it is difficult to construct

them using the previous Enlightenment rationality and stable sensory experience. Therefore, it is necessary to pay attention to those diffuse and unstable body sensitivities, marginal and even hysterical (non-)utterance, and small and nearly invisible emotions and affect outbursts in the heritage-making process.

Juntao Yang is a postgraduate student at Columbia University, School of the Arts. Yang is also a critic, curator and artist.

Adventures with Pollution on the Niagara Frontier: Fish tumors from the Buffalo River; Pesticide/Flame Retardant; Heat Exchangers, A Bakelite Knock-Off

Simon Litten

Cheap electricity generated at Niagara Falls and salt from Syracuse were the building blocks of the chemical industry on the Niagara Frontier. Dyes, phenolic resins, flame retardants, and many other products flowed out from the area. Chemical production resulted in wastes dumped, most notoriously, in the Love Canal site, but also in waterways. Many of the dumped chemicals are very stable and can be found years later in river bottoms. Before the 1972 Clean Water Act (navigable waters of the United States should be fishable and swimmable) some rivers, like upper Hudson River, Newtown Creek or Gowanus Canal in NYC, were treated as sacrifice zones. Investigators found native fish in the highly industrialized Buffalo River with a variety of tumors that could be reproduced by painting extracts of Buffalo River sediment on laboratory fish. I went to investigate.

A fire retardant called Dechlorane was manufactured in Niagara Falls. It got out. Dechlorane was discovered to be identical with an ant pesticide, Mirex, widely used in the South and which was later found to be more harmful than originally believed. The mouth of a small stream in the City of Niagara Falls had sediments containing as much as 10% PCB. Mercury levels were also very high. Historical research suggests that both PCBs and mercury had been used as heat exchange media by upstream chemical manufacturers. Durez (durable resin) was a Bakelite knock-off made by a "patent pirate" in North Tonawanda. Wastes from the plant found in a cove adjacent to the Niagara River had concentrations of chlorobenzenes high enough to start dissolving my coring equipment. The process also generated dioxin-like polychlorinated dibenzofurans.

Dr. Litten first became acquainted with toxic chemicals through a graduate course in industrial pollution control. He was hired into the optimistically named Toxic Substance Control Unit of the New York State Department of Environmental Conservation. He spent the next 30 years driving around New York state looking for PCBs, mercury, dioxins and other nasty things. As a former economic history student, he also collected information about the chemicals, their inventors, and the background of their applications. Dr. Litten spent much of the 1980s doing field work in the Buffalo and Niagara Rivers.

AFTERNOON SESSION II (3:10 – 4:25 PM)

IRON II / 3:10 – 4:25 PM, GRAND BALLROOM E

19th Century Staten Island, NY Iron Mines

Peter S Tannen

Approximately 300,000 tons of good-quality iron ore was mined by German and Irish miners in Staten Island in the 1830s through 1880s. The first mention of these iron ore deposits occurred in the mid-17th century. Europeans settled in this area due to the rich iron ore deposits. Since a receding glacier exposed much of the ore, surface mining was initially used, but this gave way to underground mining. In its heyday this iron ore was refined and used in iron foundries and was also finely ground for use as the pigment red ochre. A railway was proposed to transport the ore to waiting barges in New York Harbor, but it was never completed. By the 1880s the Lake Superior Iron Ranges dominated American iron mining. The Staten Island mines closed as they were no longer economically viable. Today only deserted pits with brown colored soil remain. No machinery or other artifacts remain other than the Staten Island Museum's curious local specimen of Iron-oxide that replaced plant roots over the eons.

Peter Tannen was born and raised in the New York City Area, moving to the San Francisco Bay Area in 1971. Although a Society of Industrial Archeology member and Zoom presentation follower for several years, he attended his first in-person event, the Fall Tour in 2023, and is now back for more. He has a BS in Mechanical Engineering from New York University and MS in Mechanical Engineering from Stanford University. A life-long bicyclist, he made a mid-life career change from mechanical engineering to transportation planning and served as San Francisco's first Bicycle Program Manager for 14 years prior to his retirement. He now enjoys studying the history of technology through an engineering perspective. With a keen interest in New York City's history, he found out that there were once iron mines in Staten Island and started mining the Internet for information.

The Valentine Iron Ore Washing Plant (36CE256): A Tin Anniversary Presentation

Gary Coppock

Ten years ago (aka the tin anniversary) my article about the Valentine Iron Ore Washing Plant (36CE526) appeared in Volume 41 of *IA: The Journal of the Society for Industrial Archeology* - a theme issue on the Archeology of Industry in Pennsylvania, a topic that I had successfully pitched to the journal's editor, Fred Quivik. The site was identified during a Phase I archaeological survey for an (as yet to be built) industrial park in Centre County, Pennsylvania. Subsequent Phase II and III/Data Recovery investigations, which included background research, further excavation, and public education efforts. Research revealed information about the iron ore washing process while excavation revealed the physical layout of the former industrial plant. Educational efforts included public lectures, the creation of a museum exhibit by the Centre County Historical Society, and the publication of results in *IA: The Journal of the Society for Industrial Archeology*, *Pennsylvania History: A Journal of Mid-Atlantic Research*, and in PennDOT's *Byways to the Past Technical Series*. Prior to Abraham Valentine's invention of the log washer in 1842, charcoal iron furnaces relied on boulder and stalactite-size masses of limonite iron ore (aka lump ore) obtained via shaft mining techniques. The log washer, which separated small ore fragments from the clay in which it occurs, allowed iron master's to utilize strip-mining techniques to economically obtain the small iron ore fragments (i.e., wash ore) that had previously been discarded as waste. By the end of the nineteenth century log washers were in use throughout the United States and Europe. This paper focuses on the results of Cultural Resource Management (CRM)-mandated excavations at the Valentine Iron Ore Washing Plant (36CE526) and describes the methods that were used to disseminate the results to both the archaeological community and the general public.

Since obtaining an MA in anthropology from Penn State in the late-80s, Gary has completed data recovery investigations at numerous prehistoric, historic, and industrial sites in the Mid-Atlantic region. Within the realm of industrial archaeology his primary interests include ironworks, canals, and company towns. In 2015 Gary initiated and co-edited (with Fred Quivik) Volume 41 of *IA: The Journal of the Society for Industrial Archeology* - Theme Issue on the Archeology of Industry in Pennsylvania. He has also been published in *North American Archaeologist*; *The Journal of Middle Atlantic Archaeology*; *Pennsylvania History: A Journal of Mid-Atlantic Studies*; and in PennDOT's *Byways to the Past Technical Series*. He currently serves as a newsletter editor for the Council for Northeast Historical Archaeology and the Pennsylvania Archaeological Council, and as the archaeological book review editor for the journal *Pennsylvania History*.

An Online Directory of Iron and Steel Heritage Sites and Museums... And More!

Anthony Meadow, Randolph Beck, and John Mandell

It is not so easy to find historical sites and museums that focus on the iron and steel industries, indeed on industrial heritage sites and museums in general. What if we could build an online directory of these places that would make it easy to find them. After all, if railfans can do it why can't we?

In this session we will look at why an online directory of iron and steel sites (and industrial heritage sites in general) is important for us as members of the SIA and more generally for the general public. An online directory will help make the public more aware of industrial history and heritage, attract more visitors to these sites, and encourage more people to join the SIA. We will present a live demonstration of the initial version of the online directory. We will also explain how others can help list sites that are not yet included.

Anthony Meadow has been a member of the SIA for thirty years and was elected to the board a year ago. Since retiring from the software company he helped start in 1985 he has been working to start the Iron and Steel Heritage Forum, what will be the first special interest group of the SIA. He has a strong interest in the iron and steel industries. He has given two papers on the steel industry in the western US at SIA conferences.

Randolph Beck (PE) had a 40 year career in product development, marketing, and corporate management before retiring in 2012 to pursue various adventures including America's Great Loop, a 7,500-mile loop around the eastern U.S. and Canada via inland rivers, canals, locks and lakes. He holds degrees in math and electrical engineering from Rice and an MBA from the University of Texas at Austin. Personal interests include cruising inland waterways in a vintage Hatteras motor yacht, cruising back roads in a vintage British roadster, learning history, and exploring historic sites. He and his wife Eileen have been SIA members since 2017.

John Mandell is a retired electrical engineer with management experience in the software products industry. He became especially interested in steam engines in the 1980s, and began building working models. His interests expanded since joining the SIA in 2007. Now he enjoys taking long road trips with his wife, Cathy, to seek out obscure locations related to industrial history. He also has been involved with restoration projects involving historic machinery.

MINES, COMPRESSORS & BACKROOM TREASURES / 3:10 – 4:25 PM, GRAND BALLROOM F

Mining Technologies on the “Story of Butte”

Fred Quivik

Butte and Anaconda, Montana, comprise one of the largest National Historic Landmark Districts in the U.S., and groups in both cities have undertaken a number of projects to preserve and interpret their cultural heritage, including important resources that represent their industrial heritage. A couple years ago, two groups in Butte, the Butte-Silver Bow Public Archives and Butte CPR (a preservation advocacy organization), launched a new project, “Story of Butte,” which is a website and an app for smart phones that allows people either to take on-line, virtual tours or to use their phones to guide themselves around tours “on the ground” in Butte. The first several tours on “Story of Butte” were of neighborhoods. More recently, “Story of Butte” has added thematic tours, including Headframes of Butte (interpreting the city’s thirteen surviving steel headframes), Murder of Frank Little (sites associated with the lynching of the I.W.W. organizer following the Granite Mountain mine disaster in 1917), and the Butte Warehouse Explosion of 1895 (which killed 57 and almost wiped out the entire newly-professionalized Butte Fire Department). In 2024, the sponsors contracted with experts to develop three new tours, Mining Technologies (prepared by Quivik), Superfund (Butte & Anaconda are the location of the largest Superfund complex in the U.S.), and Railroads of Butte (for much of the twentieth century, five major railroads served Butte, leaving a significant array of railroad infrastructure). In this presentation, Quivik introduce the “Story of Butte” website and then describes details of the Mining Technologies tour he prepared, including the sites he chose, the historical photos he used to illustrate the sites’ histories, and the approach he took to interpreting the sites’ technological histories.

Fred Quivik retired in 2015 from teaching in the Department of Social Sciences at Michigan Tech, where he was affiliated with the grad program in Industrial Heritage and Archaeology. He served a six-year stint as editor of *IA: The Journal of the Society for Industrial Archeology*. Now living in Saint Paul, MN, he continues working as an expert witness in environmental litigation. One of his on-going cases involves Butte & Anaconda, allowing him to continue developing expertise in Butte’s industrial history. Quivik is the current president of the SIA.

From Riches to Ruin: The Delaware Mine Compressor House

Jill Muraski

The second season of Michigan Technological University’s field school at the Delaware Mine, a copper mine located in Michigan’s Keweenaw Peninsula, was focused on the compressor house. Built in an attempt to allow the mine to more efficiently mine copper, the compressor house was in use for less than a decade before Delaware’s underground mining ceased. The excavation’s central aim was to reveal structural and use patterns within the building’s interior. Archaeologists revealed sections of the house’s boiler room and various portions of the walls, providing evidence of the building’s separation of the boilers from the compressors, the location of machinery, and insight into the compressor house’s mine rock construction. A glimpse into a final attempt to mine successfully in Keweenaw County, the compressor house offers a new perspective into the story of the Copper Country. This research was completed as part of Michigan Tech’s Industrial Heritage and Archaeology program.

Jill is a recent graduate from Michigan Tech’s Industrial Heritage and Archaeology program. Her specialty lies in extractive industries, particularly copper mining in Michigan’s Upper Peninsula.

The Ghosts of Transportation’s Past: Artifacts from the Oregon Department of Transportation Proto-Museum

Rebecca Burrow

For the last 75 years, the Oregon Department of Transportation (ODOT) has been collecting artifacts related to the agency mission, providing a safe transportation system for the people of Oregon. This means the collection

has pieces related to highway construction and maintenance, driver services, freight mobility, railroads, aviation, and more. The collection is haphazard and has been poorly stored, with dates ranging from survey tools from the 1910s up through recordings of ODOT film reels from the 1970s. Due to the disorganization of the collection and problems with the building where it's located, many artifacts have already been lost to decay and disposal. In the 1990s, a history committee was formed to catalogue the collection, but the records were not maintained and most of the identification tags have themselves been lost to decay in the intervening 30 years. Now, a new effort is underway to reestablish the collection, identify the key pieces, and develop a traveling exhibition before the potential treasures are lost forever. Given the lack of tags for context and the wide range of potential modes of transportation represented, there are a lot of questions about the items. The intent of this proposed poster is to discuss the plans for the future of the ODOT museum and to share some of the mystery artifacts.

Rebecca Burrow is an engineer with a background in history and preservation. She has worked in multiple positions within the Oregon Department of Transportation and is currently the Maintenance Services Manager. While no longer in the Bridge Engineering section, she still loves historic bridges and their preservation. Additional current interests include: transportation history, asset management, and storytelling.

Afternoon Session III (4:35 – 5:20 PM)

DISCUSSION OF SIA STRATEGIC PLAN / 4:35 – 5:20 PM, GRAND BALLROOM E

Discussion focused on the Committee Structure Presented in the Plan

Moderated by David Vago and John Mayer

Last year, the SIA board of directors embarked on a process to develop a Strategic Plan aimed at updating and revitalizing our organizational structure. SIA vice president David Vago and board member John Mayer coordinated the undertaking and drafted the Plan, based on contributions from the board and other SIA members. The Strategic Plan was adopted at the board's March meeting and will be present to the membership during the annual meeting. A major focus of the plan is on enhancing the ways SIA committee structure functions to make our collective efforts more effective in to promoting the aims and purposes of the SIA. This meeting will give members an opportunity to understand the Strategic Plan better and help to implement it.

POSTER SESSION / 4:35 – 5:20 PM, GRAND BALLROOM G

Crook's Mills: How to Find a Ghost Town

Mary Scherbatskoy

In the mid 18th century, Robert Crook established a grist mill in the West Parish of Westminster, Vermont, then a pioneering fringe of European settlement in the Upper valley of the Connecticut River. The area was known as Crook's Mills; it became a village and small industrial center at a natural crossroads in the rough topography above the valley. Records show rapid industrial innovation, adjustment and decline during the 19th century - although on a very small scale - as local producers were affected by world events such as the Merino Wool boom and the opening of the Erie Canal. In the 1930s, major road works divided the historic landscape, and the village was forgotten.

We present the many types of evidence which contributed to the rediscovery of Crook's Mills - from informal and archival sources to survey data and initial field investigation. Such evidence includes the work of dedicated local amateurs, recently processed Town records, accidental collections of family memorabilia, the work of the local historical society, local archeologists, and other resources in this community so aware of its history. We also note the exasperations of misleading data - from 18th century errors in surveying to commonplace assumptions of the 21st century.

Understanding a complex historic landscape beset by data of varying accuracy cannot be a unique problem, but Crook's Mills is challenging. The tyranny of the present blinds us. It was essential to view the landscape as tribal people and first settlers saw it, then use evidence and imagination to show how it was used and transformed. The Vermont Archeological Inventory (VAI) explicitly recognizes the category of 'ghost town'. Crook's Mills is one such. This poster presents how we found it, hiding in plain sight - and now listed in the VAI as VT-WD-0411.

Mary Scherbatskoy has spent a lifetime in research, education and practice in cultural and industrial heritage, and in the presentation of such work to the public and to the source communities. She was Co-founder and Co-director of ARTS Inc. (Art Resources for Teachers and Students), an arts-in-education center based in the Chinese and Hispanic communities of the Lower East Side of NYC from 1970-92. In Scotland, she was Co-founder and Secretary of the Grimsay Boatshed Trust, North Uist, from 1998 - 2020, which practiced and documented traditional wooden workboat repair. She also involved as Co-founder and Trustee of Uist Wool which re-established a traditional Harris Tweed spinning mill. Now in Vermont, she is the landowner of part of the Crook's Mills village, and received a 2024 DeLony Preservation Grant to support its interpretation.

The Shape Grammar of Water Towers

Simmone Stearn

This poster will exhibit the Shape Grammar, a visual computing methodology developed at MIT by George Stiny and James Gips, of the water towers documented in Bernd and Hilla Becher's seminal work *Water Towers*. These photographs were formative to the typological categorization of the water tower infrastructure and record their unique architectures which rely on formalizations of tangency, boolean, and symmetry. This analysis will focus on the grammars of two components of the water tower: the "chamber," the volumetric form in which water is stored, and the "frame," the symmetric truss-frame system which upholds the chambers, as well as the relationship between these two components. The poster will first derive the shape grammar rules and vocabulary through analysis of the photographs. It will subsequently sample the rules to generate novel water tower designs through the shape grammar computation, revealing the language of their formal compositions.

Simmone Stearn is a Master of Architecture Candidate at the Massachusetts Institute of Technology. She previously received a Bachelors of Science in Civil Engineering from the University of California, Berkeley. Her work explores the aesthetic sensibilities of engineered forms and the intersections between architectural design, infrastructure and industrial landscapes, particularly as it informs adaptive reuse and post-industrial development trends. At MIT, she has worked as a researcher in the Urban Risk Lab and with Spoon Climate Studios on industrial waste material circularity, bridging her interests in industrial relics to span the scale of the modular, mass-produced to the architectures of industrial networks.

Industrial and Trade Catalogs in the HathiTrust Collection (and elsewhere)

Linda Musser

Trade catalogs are a valuable tool for researchers seeking illustrations and examples of historical uses of various materials. Many of these catalogs feature detailed engineering dimensions as well as illustrations of items in practical use. While many libraries did not collect or retain trade catalogs, some did and those items are increasingly becoming available online via collaborative digital libraries such as the HathiTrust Digital Library and the Internet Archive. This poster will provide some background and contrast between the HathiTrust and other digital repositories and share illustrations from some of the many trade catalogs that are now freely available.

Linda R. Musser holds the rank of Distinguished Librarian at the Pennsylvania State University. She earned a B.S. in Civil Engineering and worked in industry and for the U.S. Army Corps of Engineers prior to earning a M.S. in Library Science. As a librarian, she has experience as a programmer and a cataloger and currently is the head of the Fletcher L. Byrom Earth and Mineral Sciences Library. Her research interests include the literature of science and engineering, library operations, and sustainability.

IN CELEBRATION OF PATRICK MARTIN
(DETAILED SCHEDULE)

TIME	GRAND BALLROOM G
8:15 - 9:55 AM	HERITAGE & HUMANISM : In Celebration of Patrick Martin (Part I) Sarah Cowie and Paul White - "Pat Martin's Industrial Heritage: Past, Present, and Onward! Introduction to the Double-Session for Patrick Martin" Seth DePasqual - "Spring Break is For Children: Maintaining focus on Pat Martin's contributions to the Industrial Archaeology of Isle Royale" Grant Day - "Canal, Counterfeiting, and Cheese" Daniel O'Rourke - "Preserving Nike Site Summit Missile Battery in Anchorage, Alaska" Paul White - "How to Make Gold from Rust: Reconstructing Technology the Pat Martin Way" Gianfranco Archimede - "Death Valley Days: A HAER Summer Field Season for the Record and Beyond" T. Arron Kotlensky - "You Can't 'File' This One Away: Pat Martin, the West Point Foundry, and How the Best Projects Never End" Dan Trepal - "After the Gun Foundry: Reflections on Industrial Archaeology, Michigan Tech, and Pat Martin, 2005-2025"
10 MINUTE BREAK	
10:05 - 11:20 AM	HERITAGE & HUMANISM : In Celebration of Patrick Martin (Part II) Sarah Cowie – "Vernacular Engineering, Technological Appropriation, and 'Making Do'" Sean Gohman - "Making a Go of It: Adapting to Change Over Time as Pat Martin's Last Student" Panel Session (Paul White and Sarah Cowie, moderators) - <i>In this session, panelists will address Patrick Martin's contributions to two broad topics: A) Heritage, Industry, and Building Collaborations; and B) Teaching, Mentoring, and Life Lessons.</i> Panelists: Gianfranco Archimede, Sarah Cowie, Seth DePasqual, Amanda Gronhqvist, Dan Trepal, Tim Tumberg, Paul White, Craig Wilson

SOCIETY FOR INDUSTRIAL ARCHEOLOGY 53rd ANNUAL CONFERENCE - SCHEDULE OF PAPER SESSIONS FOR SATURDAY, MAY 31, 2025

TIME		GRAND BALLROOM E	GRAND BALLROOM F	GRAND BALLROOM G
8:15 - 9:55 AM	LIVING ARTIFACTS	Craig Williams - "Day Peckinpaugh" Raacheal Lute - "Look 33: Celebrating Vestiges of the Hempen Canal" Penn Markham - "Richmond's New Pump House: Reinterpreting Victorian Engineering in the Modern Age"	PORTS, PUBLISHING & BAKELITE	HERITAGE & HUMANISM : In Celebration of Patrick Martin (Part I) <i>See inside back cover for detailed schedule of presentations in this special session dedicated to Patrick Martin.</i>
		10 MINUTE BREAK		
10:05 - 11:20 AM	BRIDGES & AQUEDUCTS	Paul King - "Roebling's Niagara Railway Suspension Bridge" Keith T. Heinrich - "Dunlap's Creek/Cast Iron Bridge: Rehabilitating the First Metal Arch Bridge in the United States" Meg Kindelin - "The Many Aqueducts at Nettle Creek over the I&M Canal: the 8th Time is the Charm"	TELLING STORIES: THE POWER OF NARRATIVE	HERITAGE & HUMANISM : In Celebration of Patrick Martin (Part II) <i>See inside back cover for detailed schedule of presentations in this special session dedicated to Patrick Martin.</i>
2 HOUR BUSINESS LUNCH				
1:45 - 3:00 PM	IRON & STEEL HERITAGE I	Jill Schennum - "Steelworkers Transfers to Bethlehem Steel's Lackawanna Mill" Hardy Marco Howell - "1850: Welsh immigrant iron roller settles in Black Rock 18 years after arriving in NYC" Thomas Speight - "New England Gas & Coke and the Boston Energy Economy, 1894-1962"	ATOMS TO ROCKETS - GOVERNMENT-SCALE I A	A TOXIC LEGACY (1:45 - 3:00 PM)
10 MINUTE BREAK				
3:10 - 4:25 PM	IRON & STEEL HERITAGE II	Peter S Tannen - "19th Century Staten Island, NY Iron Mines" Gary Coppock - "The Valentine Iron Ore Washing Plant (36CE256): A Tin Anniversary Presentation " Anthony Meadow, Randolph Beck, and John Mandell - "An Online Directory of Iron and Steel Heritage Sites and Museums... And More!"	MINES, COMPRESSORS & BACKROOM TREASURES	
10 MINUTE BREAK				
4:35 - 5:20 PM	DISCUSSION OF SIA STRATEGIC PLAN (BALLROOM E)	<i>Conversation focused on the committee structure presented in the SIA Strategic Plan - Moderated by David Vago and John Mayer</i>	POSTER SESSION (BALLROOM G)	