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## CONFERENCE CALENDAR



Arts on Fire 2019, an industrial arts festival and iron pour held annually at the Scranton Iron Furnaces, part of the Anthracite Heritage Museum Pennsylvania, USA. The annual free festival offers a variety of industrial processes including iron casting, blacksmithing, glass blowing, jewelry-making, stained glass, and welding. Inside, the director of the Anthracite Heritage Museum, Bode Morin, presents the response of managers of three distinct historic industrial sites to the coronavirus pandemic.

## EDITOR'S NOTE

This issue of the TICCIH Bulletin is dedicated to friends and colleagues struggling with the pandemic.

*James Douet, TICCIH Bulletin Editor*

## HELLO FROM YOUR NEW SECRETARY GENERAL

*Marion Steiner, Pontificia Universidad Católica de Valparaíso, Chile*

In November 2019, I took over from Stephen Hughes as TICCIH's Secretary General. Although many of you TICCIH folks may know me personally already from having met at one of our World Congresses, most of you definitely don't. So I take this opportunity of the new issue of our bulletin to say a few words about who I am, my fields of work and my commitment and the missions I have in mind for the forthcoming years in this position, from which I hope I can make a contribution to further expand our worldwide network of industrial heritage experts and enthusiasts.

It's 15 years from now when I first came in touch with TICCIH, while working on the first steps of the world heritage nomination of the Northern France Coal Mining Basin in late 2004. This project, which was finally successful in 2012, aimed at nominating a whole region as an industrial cultural landscape for world heritage. At the time, most people still perceived this as a crazy idea, not least for its unprecedented scale. As a staff member of the association which took on the challenge to organize the nomination process, it was my task to establish international contacts and get the necessary expertise into the project. Starting from a promising meeting with Louis Bergeron in Paris, I quickly came in touch with other industrial heritage experts around Europe, especially in the UK where I did a field trip in May 2005, visiting sites that were already on UNESCO's World Heritage list and interviewing people in charge of their management and previous nomination processes.

For me, as a young woman who had grown up in the German Ruhrgebiet, holding a geography degree from Humboldt University of Berlin and a French masters degree in geopolitics from University of Paris 8, discovering TICCIH as a global community of experts working on the interpretation, conservation and dissemination of industrial heritage, was great in both intellectual and personal terms. It linked back to so many issues I had been observing unconsciously in my surroundings from a very young age. Since 2006, I have participated in all TICCIH's World Congresses, in professional contexts that have changed continuously over time.

My professional career started with the Bassin Minier's World Heritage project, and ever since, I kept in touch with my French former colleagues. In this sense, it was a highlight when the 2015 TICCIH World Congress in Lille and its region gave us the opportunity to work together again after ten years, this time guiding one of the congress tours to the former Coal Mining Basin. More recently, I have been involved in another World Heritage project, of even bigger a scale. From 2016 until 2018 I was part of the Industrial Cultural Landscape Ruhrgebiet project team led by the Foundation for Industrial Monuments and Historic Culture, representing one of their partner institutions, the Regional Association of the Ruhr (RVR), as Vice-Director of RVR's Industrial Heritage Department.

But it's not only high-profile World Heritage projects that I have



**MARION STEINER**

dedicated my time and efforts. Understanding myself as an intellectual activist, I have worked for and with a range of industrial heritage associations in the past, and I keep on doing so. From 2011 until 2015, for example, I was the first coordinator of the newly established Berlin Centre for Industrial Heritage (BZI), which came into being as a joint cultural project of the University of Applied Sciences HTW Berlin and the Foundation of the German Museum of Technology, and is today an institutionalized research unit co-financed by the Land of Berlin. When BZI started work, highlighting the touristic potential of Berlin's industrial heritage was supposed to be our core task. We benefitted from the special circumstances in Berlin during the Cold War, which had prevented the modernization of industrial facilities on both sides of the wall. As a consequence, a lot of industrial facilities which would otherwise have been dismantled or replaced were still there and now served as a basis for us to re-visualize Berlin's industrial past as one major centre of the global electric revolution.

It was in this context, developing narratives around Berlin's historic role as 'Electropolis', and even representing a potential candidate for World Heritage status, that I started to critically interrogate the dominating narratives about technology 'Made in Germany' and its supposedly great contribution to modernity, social progress and local development in many cities around the world. My work quickly shifted from not only ensuring the conservation of the physical remains of these processes by setting up a network of industrial heritage actors in Berlin, but also to find new ways to interpret and disseminate this industrial heritage, creating new forms of story-building and story-telling that would allow for a more outward looking and socially more self-reflective perspective. This kind of reasoning was where I took my motivation from over the following years, researching for my doctoral thesis on the German electrification of two Chilean cities in the late 19th and early 20th century, while at the same time I kept on working for BZI and a little later for RVR.

The essential aim of my intellectual work is to challenge the usual viewpoints on technology transfer from the North, and contrast them with differing interpretations of the same processes from the global South. Thus, the Eurocentric perspective from which most of

the industrial processes have been interpreted up to date becomes evident, and for me, there was in fact no way back from this endeavour. In 2018, I resigned from my leading position in the Ruhrgebiet, finished my doctoral thesis, and in August started working as an Associate Professor at the Pontifical Catholic University of Valparaíso, in Chile, where I am now teaching Global Urban Geography and establishing my own Centre for Critical Industrial Heritage Studies (ESPI). The switch from a professional to an academic career also allowed me to realize a long-cherished wish: to live globally, with one foot in Valparaíso and the other in Berlin and my body serving as a bridge between two urban places in our globally interconnected world.

With regard to my missions as TICCIH's new Secretary General, this translates into two main issues. The first is about content: I want to contribute to decolonize the interpretation of industrial heritage, promoting conceptual proposals from the global South and especially Latin America. And the second one is about our network: our membership could still be much more diverse in terms of disciplines, professions, age and gender, but also culturally and geographically.

Concerning the reinterpretation of industrial heritage and of industrial processes from a truly global instead of Eurocentric perspective, I would like to deepen our reflection on the time frame we usually limit ourselves to when we define industrial activities. Rather than starting with the Industrial Revolution in England, we might take into account earlier periods of technology and knowledge transfer processes that were already in place in the context of the global expansion of the European economic model from the Middle Ages. Our Cuban colleagues never tire of repeating this view.

Also, I think that we need to talk much more about branches that have been essential in our global industrial production and consumption system ever since, such as the coffee, sugar and tobacco

industries - global food chains, to make it short. There is no point any more in sticking to the 'classic' sectors of the industrial revolution from a European point of view, like coal mining and steel making. Understanding global power relations and the profoundly unequal terms of trade between the North and the South, and between urban centres and the peripheries, is essential. Especially as we, as experts in the field, are actively constructing and attributing values to the physical and immaterial evidences of former (and current) industrial activities and processes. Their inevitable 'dark' sides, including global injustice and climate change, have to be addressed critically and even self-critically, particularly in the societies of the North.

Aspects like these have been at the core of my intellectual work with colleagues in and outside the TICCIH community over the past years, for example designing the annual conference 2017 of the German-speaking Working Group on Theory and Education on the Conservation of Cultural Heritage (see [Bogner et al. 2018](#); and Massimo Preite's review in [TICCIH Bulletin #84](#), p. 24-27:), and the round table discussion at the TICCIH Latin America Congress in Guatemala last November, and I hope to continue this reflection at our next World Conference in Montreal in 2021.

Concerning the future of our TICCIH network, the new subscription system now offers differentiated rates for individual membership, depending on your geographic region and income. Secondly, remember that once you are logged in to the TICCIH website as a member, you can create your own profile, accessible for other TICCIH members (only!) - a great opportunity for effective networking within our community. Thirdly, as you may have already noticed, we have refreshed the Bulletin's design together with my staff in Valparaíso. And lastly, at the time of writing we are finalising some nice material for a TICCIH membership campaign to be launched soon. This will be downloadable in different languages from our website, and can be used in whatever events TICCIH members and their

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**TICCIH** is the world organization on Industrial Heritage, promoting its research, recording, conservation and dissemination and education on industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership levels range from \$10 to \$40 (USD), corporate membership is \$65, and student membership levels range from \$5 to \$10.

There is an online membership form on [www.ticcih.org](http://www.ticcih.org)

The **TICCIH Bulletin** welcomes news, comment and (shortish) articles from anyone who has something they want to say related to our field. The Bulletin is the only international newsletter dedicated to industrial archaeology and the conservation of the heritage of industrialisation. The TICCIH Bulletin is published online to members four times a year.

Back issues can be downloaded as a pdf file from the TICCIH web site, [www.ticcih.org](http://www.ticcih.org)



friends organize locally. Thus, we hope to get in touch with a range of interesting new people from differing disciplines, professions, age and gender, and especially from Asian, Latin American and African cultures.

In short, my motivation is to bring people and continents closer together and to build bridges, by challenging and changing traditional viewpoints from a global perspective. I also see this job as a moral duty. My participation in the TICCIH World Congresses, every three years since 2006, each time meant a big push for my motivation and a lot of inspiration, which kept me happy and running over the next few years thinking about new research topics, becoming familiar

with unknown perspectives, getting in touch with more and other people, setting up new projects and networks... Now, I feel it's time to put something back to our global community: invest my time so that others can benefit from similar experiences, especially younger people who think globally and act correspondingly at their local scale, shaping our way into a global society, maybe also more just and more peaceful. Let's hope that all this works out well – and that we still have some time left at the end of each day to talk nonsense and take a deep look at the wide-open sea.

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## REPORT

### RUNNING HISTORICAL ENGINES SAFELY

*E. Cornet<sup>1</sup>, B. Chalançon<sup>2</sup>, G. Rapp<sup>1</sup>, A. Roda-Buch<sup>1</sup> and L. Brambilla<sup>1</sup>*

Conservators have to manage specific challenges when dealing with industrial and technical heritage. The challenge we decided to focus on is related to the functionality of historical vehicles.

The aim of the research project, entitled Acoustic Emission Monitoring of Historical Vehicles (ACUME\_HV), is to develop a diagnostic tool to help people in charge of historical vehicles (conservators, technicians, mechanics...) during the condition report and the maintenance of the engines. Ancient vehicles can be conserved statically or working. In this second option, historical vehicles can be started or used more or less frequently, depending on the purpose of the museum or the private collection. However, heritage institutions have always the responsibility to maintain the vehicle in a safe condition, for the artefact itself as well as for the driver, passengers and for the public.

In order to fulfill these sometimes conflicting requirements, traditionally the restorer dismantles completely the engine or proceeds with some preliminary tests to evaluate its condition and state. Starting an engine after a long period of not running without any diagnostic is not recommended, due to the risk of breakdowns. Depending on the use of the vehicle, if it has not been started for a



Acoustic emission test performed on a Renault AGI ©HE-Arc CR 2019

long time, it is possible to encounter several problems. Just to cite three examples, these might be the presence of corrosion products, bad sealing of valves or gaps between contact pairs of components. The maintenance is mainly dependent on the competence and the feelings of the persons in charge. Moreover, it can be a time-consuming process and lead to more problems if not detected on time.

To get a more precise way to assess the state of an engine, and one not wholly human-dependent, we wanted to explore the advantage of acoustic emission (AE) methods. The principle of this technique is to register acoustic waves generated by the rapid release of localized stress energy inside the material, e.g. impact or by crack formation. AE allows the detection, localization and characterization of any damage. It is generated mostly by material failure, friction, cavitation and collisions. In engines, AE signals come from the contact pairs, i.e. gears, camshaft, crankshaft, valves, connecting rod and piston, and also from the combustion process. The AE sensors placed in contact with an engine measure the transmission of the impacts

1. Haute Ecole Arc Conservation-restauration (Switzerland)

2. Association de Gestion du Musée National de l'Automobil (France)

inside the materials in the form of waves. The sensors are relayed by their preamplifiers to a computer that allows it to register and post-process the acquired data.

The technique comes from the industrial fields, for instance for controlling pieces of metal in rocket engines. It is already used in some fields of cultural heritage, such as for monitoring cracks in buildings or infestation within wooden musical instruments. In this project, we developed a protocol to adapt the AE technique to monitoring historical engines.

The research turned around three main parts. First, we needed to find a proper way to fix the sensor on the engine and to determine the best locations to register the AE signals. The second part consisted in cold tests, aiming at registering the acoustic signature of the engine when moved by hand. Thirdly, we tested the engine in running condition, with also the combustion process. The first two parts will be briefly described in the next paragraphs.

We choose to work on Renault AGI vehicles, known as the Taxi de la Marne from the First World War. The engine, with its two cylinders, is a basic one to start the AE study. The Musée National de l'Automobile de Mulhouse (MNAM) has three engines of this type, so we thereby had the possibility to test several in different states of conservation.

The first step of the project was to establish a protocol for the measurements. The sensors need to be in contact with the surface to monitor, in this case the external part of the engine, in order to record any changes occurring inside the materials. As the surface of an engine is not perfectly smooth we applied couplant, a kind of gel that facilitates the transmission of ultrasonic energy into the test specimen, to obtain a good signal. The couplant allows the signal to pass from the surface to the AE sensor. It needs to resist both cold and heat, to stay on the surface horizontally and vertically, and to be completely safe for the surface of the engine, which could be partially covered with oil-based paint. This means the couplant should not generate corrosion on the bare-metal parts nor modify the surfaces' aspect and paint. We tested several solutions, from industrial AE couplant, gels and grease to obtain the expected result. Finally, we decided to use a common grease from the brand Miocar®. It leaves no stains on the painted surfaces and has good viscosity for our purpose. Moreover, it is a common product available in many workshops with no risk to pollute the surface with alien components.

To obtain useful signals, we tested several positions for the four sensors to get the best signal from different AE sources inside the engine. The sensors need to be close to the contact pairs and location of the possible breakdowns. Even if the dimensions of the sensors are pretty small (less than 2 cm in diameter) we encountered also some spatial constraints due to the shape of the engine and the car structure. The best positions for the sensors on this kind of engine are one on the cylinder block close to the first cylinder, one close to the cylinder's valves, another one on the crankcase on the cover of the gears of the cam system and the last one on the crankcase leg.

Another important point is to use a position sensor, mounted on



Location of the sensors on the engine ©HE-Arc CR 2019



Renault AGI on the circuit of the MNAM ©MNAM 2014

the magneto drive shaft, to register the speed and the position of the internal pieces. These data are useful to correlate the position of the moving parts and the origins of the AE signals as well as to measure the speed for each position of the engine. The speed needs to be constant in order to compare the results of the different tests.

During the cold test phase, we registered the acoustic signature of an engine, bought by the MNAM for spare parts, mounted on a test bench. We know the state of this engine thanks to a complete condition report carried out prior to the first measurements, so it acted as a control. We turned the engine by hand, with a handle fixed on the crankshaft. We made several sets of tests in order to compare the results, for instance with and without sparkplugs, or by introducing controlled default such as a play between connecting rod and crankshaft. During this phase,

we tested also a 1909 Renault AGI (Inv. 2209) from the collection and the Renault AGI (Inv.7003) used for the live exhibition of vehicles within the museum.

During these tests, we highlighted a problem concerning the signal that we identified as the compression of the second cylinder. The discovery of this anomaly was done by comparing the two signals with sparkplugs of the bench test engine and the Renault AGI Inv. 2209. After a sealing test performed on the second cylinder, we detected a leak in the intake valve causing a loss in compression. This problem was not detected during the regular maintenance of the vehicle. Now the museum is aware about the presence of this malfunction and it has adapted consequentially the next maintenance program of this car.

In conclusion, at the end of the project, we obtained interesting results, compiled in a previous article (see below). We could acquire repeatable measurements and even detect a problem at an early stage on one of the vehicles tested. We have developed a non-intrusive protocol to perform the measurements of acoustic emis-

sions on a 2-cylinder engine. Currently, we plan to test other types of engines in order to create a database useful for conservation-restoration professionals.

This technique could become a useful tool to decide on the reactivation of an engine. In a collection, the recording of AE signals could become part of the maintenance protocol of the vehicles. Last but not least, a comparison of this database between two maintenances could be used to detect malfunctions at an early stage due to the frequency detection range of the method, more efficiency than human ear.

For more on the research see Roda-Buch A., Cornet E., Rapp G., Chalançon B., Mischler S., Brambilla L., “Diagnostic of Historical Vehicle’s Engines by Acoustic Emission Techniques,” *Proceedings of the 2019 IMEKOTC-4 International Conference on Metrology for Archaeology and Cultural Heritage*, Florence, Italy, December 4-6, 2019

## WORLDWIDE

### UNITED STATES

## GREEN GENTRIFICATION, HISTORIC PRESERVATION, AND NEW YORK’S HIGH LINE

Dr. Brian Rosa, *Universitat Pompeu Fabra, Barcelona*

An innovative public promenade created on top of a disused elevated railway in Manhattan, the High Line is recognized worldwide as among the most iconic urban landmarks and public spaces of the 21st Century. It has stimulated public interest in landscape design while simultaneously reintegrating an industrial ruin—destined for demolition—into the everyday life of New York City. As many critics and journalists have noted, through its elevation from the street below the High Line provides a unique experience of being at once in, and separate from, the city. Its architectural and horticultural design, vibrant public art, and cultural programming offer unique, immersive experiences while encouraging an appreciation of the historic urban landscape in a zone restricted exclusively to pedestrians. The park dramatizes the creative appropriation of abandoned infrastructure, and revives the nostalgic pastime of the urban promenade.

However, since its opening in 2009, with additional segments completed in 2012 and 2014, it has gradually been perceived by New Yorkers as less of a success and more of a ‘tourist-clogged catwalk’ and a ‘trojan horse for redevelopment.’ Even Robert Hammond, co-founder of Friends of the High Line, which instigated the project, acknowledged in 2017 that the ‘High Line has failed’ because the proj-

ect was too focused on design and execution, failing to adequately consider issues of social equity and inclusion in the zones through which it passes. Between the mid-2000s and today, largely stimulated by the presence of the High Line and the boom in luxury high-rises along its path, the West Chelsea neighborhood of Manhattan has arguably become the most socially unequal neighborhood in the entire United States, with the only remaining affordable housing being in two large public housing complexes (themselves under threat by redevelopment). Meanwhile, as other cities throughout the world see the success of the High Line as a conversion of an urban viaduct into a linear public space—with success being predominantly depicted in terms of stimulating real estate development and boosting tax revenues—dozens of similar projects have been proposed. As I have argued, ‘high line’ is no longer simply a proper noun; it has become a generic term for a typology of new urban space. In London alone, at least three have been proposed.

At the point in which I and Christoph Lindner conceived the edited volume *Deconstructing the High Line: Postindustrial Urbanism and the Rise of the Elevated Park* (Rutgers UP, 2017), there were few critical voices investigating the impacts that the High Line was having on



New York City, and indeed on a variety of projects worldwide that have come to be known as 'infrastructural reuse.' The few academic studies and coverage in design publications and the news media were overwhelmingly celebratory. Deconstructing the High Line remains the only book which takes a critical, multidisciplinary look at the impacts of the High Line. It focuses on the elevated park's impacts—both local and global—with special emphasis on concerns regarding environmental gentrification and entrepreneurial urbanism in an era of rising inequality.

We argue that any understanding of the value and significance of the High Line would be incomplete without a careful examination of its impact on its immediate surroundings and New York City as a whole, how it has influenced other urban design initiatives throughout the world, and what it reveals about contemporary processes of urban redevelopment. The volume brings together scholars from across the fields of architecture, urban planning and design, geography, sociology, and cultural studies to critically interrogate the aesthetic, ecological, symbolic, cultural, political, and social impacts of the High Line. In doing so, the book also considers the High Line's relation to public space, creative practice, and historic preservation.

I attribute the initial lack of criticism, in part, to the fact that city's rezoning of the surrounding area and resultant construction could not yet be seen, and because the momentum of tourist spectacularization had not reached its zenith. In the early years of the High Line the park offered largely uninterrupted views to the Hudson River, the historic Gansevoort Market Historic District (better known as the Meatpacking District), and the parking lots and self-storage facilities, reminding visitors of the formerly marginal status of an area colloquially known as 'gasoline alley.' However, it was precisely the rezoning of the surrounding West Chelsea area and the easing of height restrictions on construction that allowed the City of New York to appease property owners who had invested in land in anticipation of the viaduct's demolition. In other words, if we want to understand the High Line, we can only do so through understanding the entrepreneurial planning initiative that cemented the consensus of the city government and property investors.

The desire to 'save' the viaduct came before any particular ideas for how the space above should be reused. In this sense preservation plays a more important role than is often let on in the narrative surrounding the project, especially as Friends of the High Line gradually distanced themselves from preservation groups in light of concerns that too much preservation focus would threaten the perceived economic viability of the project and place design limitations on the park and its environs.

Notably, if we look back at the history of initiatives to 'save' the High Line viaduct since its proposed demolition in the 1980s, they began with friendliness with preservationists and antagonism with real estate interests. Nevertheless, the end result was largely the reverse: it has alienated or displaced many local residents and commercial activities and become the city's primary showcase for luxury housing, rising along the viaduct and enclosing the unique views that the park had revealed.

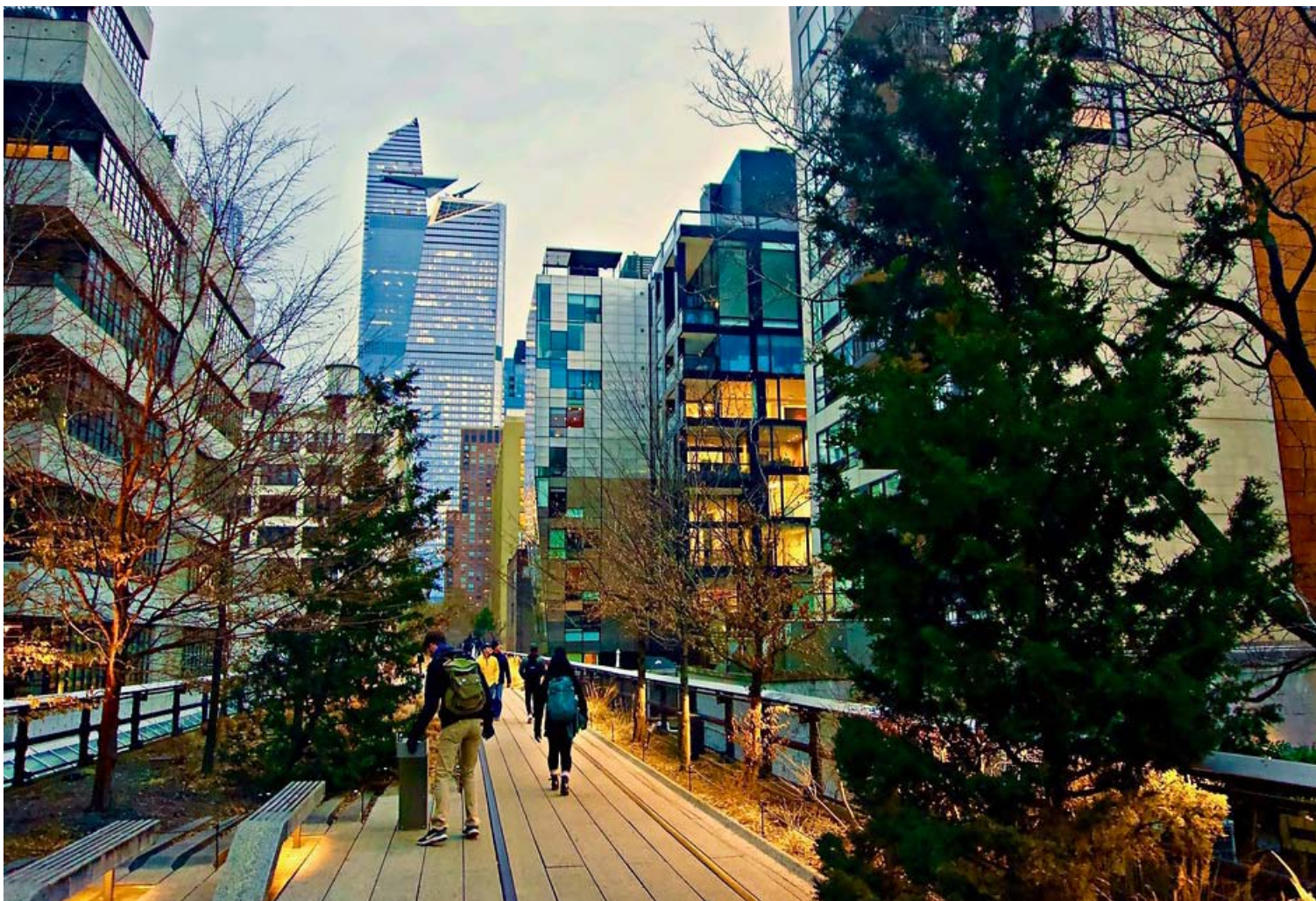
When we consider the High line and its implications within larger



processes of urban transformation it makes little sense to consider the park's successes and failures without acknowledging its relationship to larger processes of entrepreneurial, neoliberal, and culture-led urban restructuring, all trends which are associated with making urban spaces increasingly unequal and exclusionary. In this regard, the High Line needs to be understood as being deeply site-specific, while at the same time indicative of larger processes of urban change and new trends in the revalorization of urban infrastructure through landscape architecture.

It also needs to be understood through the lens of industrial heritage preservation, even if the High Line itself has had a shaky relationship with preservationist groups. It has been applauded by organizations such as the Cultural Landscape Foundation as a 'triumph of preservation' in the transformation of historic landscapes to meet contemporary human needs, while groups such as the Greenwich Village Society for Historic Preservation have decried the impact that the redevelopment stimulated along the High Line corridor as the widespread erasure of the built heritage through demolition and the gradual blockage of views onto the historic landscape by new-build luxury housing.

Consideration of the 'high line effect' should be a key topic in the conservation of industrial heritage because, in most cases, such reuse projects involve the resuscitation of abandoned transport corridors associated with industrial urbanization. The High Line is also the prime example of changing attitudes regarding the treatment of historic transport infrastructure as worthy of preservation. To various degrees, the Promenade Plantée in Paris (completed in 1993), the 606 in Chicago (opened in 2016), and the Reading Viaduct Park in Philadelphia (opened in 2018) are all portrayed as industrial



A section of the converted High Line railway shows landscaping, horticulture, and new apartments close by. Photo: Andreas Komodromos

heritage projects based on the adaptive reuse of urban elevated railways. Each of these cases also wrap built heritage into debates around the relationship between preservation and gentrification, which was recently highlighted in Stephen High and Fred Burrill's commentary in **TICCIH Bulletin #83**.

As a scholar who has researched the changing attitudes toward the heritage of transport infrastructure and industry in Great Britain,

the United States, and currently in Spain, in hindsight I feel that I have underemphasized the central role that the historic industrial landscape played in the High Line, and in a broader sense, the ambivalences of newfound interest in historic transport infrastructure. I am currently working on an academic article which explores the treatment of transport infrastructure as heritage and the competing cultural and economic values implicated in these changes.

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Walls of the ore bins are all that survives of U.S. Steel South Works. This site, located along the shore of Lake Michigan, was created by back filling using slag to extend land out into the lake. Once holding the raw material of steel processing, the ore bins now hold the products of natural decay.

## UNITED STATES

### INDUSTRIAL DECAY: NATURE'S AGENCY AT INDUSTRIAL HERITAGE SITES

*Gwen Stricker*

Industrial heritage comes with a complex system of values embodying historical, social, aesthetic, and economic narratives. Representative of a once booming economy, abandoned industrial sites now exemplify the negative consequences of material exploitation, environmental pollution, and deindustrialization. In recognizing these places as heritage, little attention is given to the significant mark made on urban and natural landscapes and environments. In my research, I argue that industrial heritage sites should be assessed for their environmental value as an opportu-

nity to recognize the agency of the natural environment to reuse what humans have deemed obsolete. Their decay becomes an ecologically productive process, counter to the portrayal of industrial ruins as entirely obsolete.

Limited research exists about the preservation of the relationship between nature and culture. Nature and culture have always been intertwined, but historical narratives highlight the ways in which humans shaped or manipulated nature, never discussing a dynamic flow



The remains of a tower and smoke stacks at Acme Coke Plant surrounded by re-emerging grasses and trees growing up through the previously paved landscape.

of power between the two.<sup>1</sup> Industrial ruins represent that power flow and ambiguity between human interventions and natural decay. The natural environment repossesses abandoned industrial space, growing around and in spite of attempts to manage or exploit it. But the re-emergence of nature in industrial ruins is only possible because of a cultural shift; their abandonment is the cultural catalyst that creates the condition of the ruin. Decay should not prevent industrial sites from being recognized as heritage places, their decay should be understood as a positive heritage value.

This argument was explored through Chicago's abandoned industrial heritage sites that exist in a state of decay, specifically the Acme Coke Plant (operational from 1917 to 2001) and U.S. Steel's South Works (operational from 1880-1992) located in the steel-dominated southeast area of the city, along with the Joliet Iron Works Historic Site just outside of Chicago in Joliet. The history of Chicago's growth was defined by industry, but some of the city's most influential and historically significant industrial sites are not designated as heritage places. The few physical remnants in a state of decay bear the burden of carrying the social, economic, and historical value of Chicago's steel industry today.

All three steel sites are characterized by nature physically proving its agency to use what people have discarded. Their decay is evidence of nature's reuse at varying scales, from the rich surface cover of biological growth to the widespread ground cover of grasses, weeds, and trees. Rare and resilient plant species colonize the leftover materials of steel production like iron ore, limestone, coke, and slag.<sup>2</sup> The processes of decay create a lush blend of organic plant growth and mechanical material patina, and the properties of natural and chemical processes blend together, influencing one another.

The case sites in this research have the potential to shift the way heritage practice interfaces with industrial ruins. Joliet Iron Works was designated as a ruin as part of the Illinois & Michigan Canal National

1. Timothy LeCain. "The ontology of absence," in *Ruin Memories: Materialities, Aesthetics and the Archaeology of the Recent Past* (New York: Routledge, 2014), 64.

2. Stella Brown. *South Works Deep Geological Study; The Human Role in the Formation of South Works: Iron, Limes & Slag*. (Chicago Park District, Public Art Initiative: 2018), 14.





Layer of biological growth over the debris of Joliet Iron Works.

Heritage Area. The two other sites fall within the boundary of the proposed **Calumet National Heritage Area**, an effort spearheaded by the Calumet Heritage Partnership. The proposal for a National Heritage Area is still pending approval, but the historical, cultural, and ecological evidence presented by the Calumet Heritage Partnership emphasizes the complicated and inseparable relationship between nature and culture. Acme Coke Plant and U.S. Steel Southworks are vital to the understanding of the Calumet Region, and allowing the continuation of their existing decayed conditions would frame the industrial heritage narrative as one with social and environmental impacts.

This research sought to provide evidence in support of the argument that natural attributes of decay can contribute to the heritage significance of the industrial case sites selected for analysis. While this approach undeniably has aesthetic implications, it is not motivated purely by the aesthetics of nature working on the canvas of industrial remnants. Rather, it was inspired by the idea that in their decay, they have found a new use. Their disuse by humans still serves a function; something about the tall grasses, trees, occasional street art, and unobstructed material decay feels productive.

While the argument relies on the abandonment of industrial heritage sites to allow an environmental presence to persist, it is important to acknowledge that there is a spectrum of intervention, or lack thereof, possible when promoting the environment as a stakeholder. Pushing this argument to the furthest extent, the natural attributes would be valued as the most indicative of the site's significance and therefore no preservation intervention would occur. This approach reveals conflicts with prevailing preservation practice in that it neglects physical material conditions, instead focusing on systems working with and on decaying industrial heritage sites. This approach also has public safety implications; however the sites at hand have existed in this condition for at least a decade with few issues.

An approach that would allow a low level of intervention would entail creating public access, which would include basic structural stabilization of major structures and design of non-imposing user paths. Following this would be an intervention that includes intentional toxic remediation of industrial heritage sites. This process can be achieved through two avenues: designed restorative ecological systems or intensive toxic material removal. The first would align more readily with the goals of assessing environmental value as it



promotes the idea that ecology can be interrelated with toxicity while protecting cultural importance.

An adaptive reuse approach, in which the site would undergo major architectural design intervention and likely preservation intervention, would largely counter the argument made here. Even if the design were to be inspired by the natural decay, an overly intrusive design approach would be detrimental to the existing condition.

Industrial heritage sites undergoing a re-naturing process provide the opportunity to shift negative perceptions of toxicity and decay to focus instead on the positive aspects of natural re-emergence and ecological health. This perspective was explored to reveal an alternate way of thinking about sustainability in preservation practice by affording natural attributes the potential to contribute to

heritage significance. This research was not an attempt to imagine drastic changes to the physicality of abandoned industrial places, but rather to re-imagine the heritage value of their existing condition.

My experience exploring this topic as part of a master's thesis has been exciting from the beginning, and although the thesis research will soon come to an end, I believe industrial heritage will be an important part of the trajectory of my career. I openly invite anyone interested in this idea to contact me, whether to offer advice, share personal experience, or simply chat about the potential outcomes.

*The author is a Master's student in Historic Preservation at Columbia University, GSAPP.*

[Contact the author](#)

## SWITZERLAND

### THE HISTORIC GORNERGRAT RACK-AND-PINION RAILWAY - AN INVENTORY

*Toni Häfliger, conservation specialist of railway heritage, Marion Zahnd and Marc Wiese*

The Gornergrat railway (Gornergratbahn, or GGB, in German) is a spectacular mountain railway in the Swiss canton of Valais. It circulates between the village of Zermatt (1604m above sea level) and the Gornergrat (3089m). In the light of a federal approval process for the replacement of a historic railway bridge at Zermatt, a railway line inventory was required. In this context, the historic Gornergrat railway line was for the first time systematically recorded and an appraisal of its cultural and historic merits undertaken.

When Nikolaus Riggenbach (1817-1899) patented his rack-and-pinion (r-a-p) system in 1863, the newly won ability to climb steep slopes provided touristic access to remote sites. Alongside the Riggenbach system, others developed their own types, such as 'Strub' and 'Locher', using gauges from 800mm to standard gauge. The most prevalent system worldwide however is the system developed by Riggenbach's former employee Carl Roman Abt.

In the last quarter of the 19th century, Switzerland was taken by a general enthusiasm for mountain railways. Engineers and speculators surpassed one another with new proposals, projects and applications for ever more spectacular railway projects in the Alps. Every project spurred new entrepreneurs to follow suit and incited jealousy in other regions. There are three high altitude railway projects in particular that arrest worldwide attention. First the Gornergratbahn (1896-1898) and the Jungfraubahn (1896-1912). In addition to these two formidable projects, the Matterhornbahn was to bring the triumph of modern technology over nature with its terminus at 4500 m, but was never executed.



Track and tunnel near Findelbach at 1900 (historic photograph)

The Gornergratbahn was constructed in merely two years, despite the high altitude and the short intervals between spring run-off and the onset of winter, and opened on 20 August 1898. The railway line was electrified from the very beginning. A three-phase system was used, operating with two parallel overhead conductors. A dedicated power-plant was constructed,





The rack rail is visible in this image of the Gornergrat line disappearing down the hillside, with magnificent panorama views of the surrounding mountain ranges. Photo: architecum 2018

complete with water supply management, pressure lines and turbines.

The line crosses different natural and geological landscapes. The lower, arboreous region alongside the valley with their craggy slopes is followed by a quite steep transitional zone within a thinning forest stand, and finally a high-altitude mountainous landscape, an open and heavily exposed terrain with permafrost.

What characterises the line are the precise retaining structures and hard shoulders, which were mainly carried out in a dry-wall construction method, as well as the numerous tunnels and snow sheds. The engineering structures are mostly well preserved in their original condition, unlike the train stations and their surroundings which have seen considerable change in the course of time. But equally contributing to the unique quality of the line are individual elements such as the large railway embankment leading up to the emblematic buildings of the summit station or the large girder bridge on its tall masonry pillars crossing the Findelbach stream.

By the end of the 19th to early 20th centuries, the new system incited a boom in r-a-p railways. In Switzerland, the earliest and still in use is the Vitznau-Rigi-Bahn (1871). There are around 280 in total worldwide, with close to 150 single systems and about 90 using both adhesion-drive and rack-and-pinion, approximately 40 are industrial railways. Only some 60 lines are still in use. Most such railways were constructed in Switzerland (28), Germany, Italy and France, to a lesser extent Austria and thereafter other European countries. But one can also find examples all over the world, though very few are still in use.

First and foremost, an inventory is a scientific expert opinion; as such it does not have any legal force which is only acquired by an act of endorsement by a competent authority. In practice, it will be necessary to balance the inventory's assessments with the intention of a proposed project (e.g. modernisation, investments, etc.).

The railway line as a whole consists of a variety of different elements, namely the infrastructure, which in its entirety as well as the sequence of all its individual parts defines the specific character

of the line. Typical for railway lines are a high degree of standardization and constructive repetition, specifically of bridges, retaining structures, tunnels, general buildings and railway infrastructure. It is therefore indispensable that an inventory for a historic railway line covers the line as a whole, its defining sections and its ensembles, and finally all the individual elements. In order to obtain meaningful results, all the relevant buildings and structures are to be recorded in their entirety. The findings will provide a global image of the system as a whole and help to understand its specifics and characteristics.

A central point of the inventory was the idea of considering the Gornergratbahn as a largely independent railway system, technically and operationally detached from the rest of the Swiss railway infrastructure. Therefore, its elements in terms of their cultural, technical and historic values were graded in the context of the line itself. Report and individual inventory sheets cover the history of construction and use, location, particular qualities, defects and sources of information as well as photographs and plans, both current and historic. In addition, a typology of all the objects has been compiled.

The rating of all the objects against the above criteria took place within the context of the line, always grading in four categories: very important, important, conditionally important, and not important. This detailed evaluation allowed the development of individual, nuanced objectives for protection, which were recorded on the objects' inventory sheets. An objective can be the conservation of the entire object unchanged, its restoration, the conservation of its material integrity or its appearance, the best possible integration of an intervention or the improvement of evidently disruptive qualities.

The GGB is also of considerable importance on the international level. The GGB was only the second originally electrified line ever constructed worldwide, the first having been the French Chemin de fer du Salève (1892) which was dismantled in 1936. From a technical perspective we should note for their total length the Bavarian Zugspitzbahn (GER, 1930, 2588m a.s.l.) or the Fayet-Nidd'Aigle-Bahn at the Mont Blanc (F, 1909, 2372m a.s.l.); the Achenseebahn (AT, 1889, 970m a.s.l.) which is still operated with steam locomotives, and from a typological point of view the Ribes de Freser-Vall de Núria in Catalonia (E, 1059m a.s.l.). Also of interest are the steam and diesel driven Snowdon Mountain Railway (GB, 1896, 1086m a.s.l.), the 112 km long line between Cosenza and Catanzaro (I, 1933, 829m a.s.l.), the Mount Washington Cog Railway in New Hampshire (US, 1093m a.s.l.), the 46 km long Nilgiri Mountain Railway (IND, 1899, 2371m a.s.l.) which is a World Heritage site, and the line which links Arcia (Chili) and La Paz (Bolivia) which however is only driven partially by rack-and-pinion (1913, 4235m a.s.l.).



Findelbach-Bridge (historic-photograph ca. 1900)



Findelbachbrücke 2018 (Photo architecum 2018)

The Gornergratbahn's high historical value has been clearly identified and the line's unique technical character and its pioneering achievements can be regarded as being of national and international significance - for its preservation the inventory can be a key tool.

[Contact the author](#)





Torviscosa in its landscape in 2000: 1 - Center for Information and Documentation; 2 - Factory; 3 - Leisure Building; 4 - Theatre; 5 - Workers' Houses; 6 - Clerks' Houses; 7 - Town Hall; 8 - Schools; 9 - Swimming Pools; 10 - Technicians' Houses. [SNIA Viscosa Historic Archive, Fondofotograficopositivi, FFSC\_AI I-083]

## ITALY

### RESEARCH AND DISSEMINATION FOR THE TORVISCOSA COMPANY TOWN

*Anna Frangipane and Maria Vittoria Santi, Udine University*

Located in the far north-eastern corner of Italy, Torviscosa is a profoundly interesting example of an early 20th century company town. As described in TICCIIH Bulletin #83, the entire settlement rotated around the production of viscose, a type of rayon fiber made from cellulose which was extracted from the giant cane that grew in the surrounding countryside. The large-scale cultivation of cane was a consequence of the vast operations for the reclamation of marshlands in the 1920s, in line with the Fascist regime's autarkic policies for achieving self-sufficiency of raw materials.

Beginning in spring 2015, the University of Udine has created the framework for a research project to promote awareness and appreciation of the factory town and its surrounding area, in parallel

with the launch of urban planning constraints, and working in collaboration with the Superintendence of Archeology, Fine Arts, and Landscape of the Region of Friuli Venezia Giulia and the municipal administration of Torviscosa. The principle goal is to protect this precious heritage through the actions summarized below.

The factory buildings, public buildings, residential buildings, and rural buildings of Torviscosa constitute a unique cultural heritage. Originally the property of SNIA, one of Italy's major manufacturing firms of the last century, a succession of property sales, factory closures, and bankruptcies in the town's recent history has led to their ownership by a number of different parties, both public (the Municipality of Torviscosa) and private (industrial and



Panels from the exhibition Torviscosa 1938-1968. Percorsi di conoscenza – Le abitazioni (2019).

agricultural firms, reclamation consortiums, and private homeowners).

The first research phase was carried out by civil engineering students at the University of Udine during the academic years 2014–2017. Over 80 students were involved in completing dimensional, material, and thermographic surveys of 12 different residential building types, both in the town itself and in the agricultural zones.

The second phase has been supported by a research grant created by the Region of Friuli Venezia Giulia to promote appreciation of Torviscosa through thematic networks and cultural associations. A series of in-depth studies and activities have been launched, organized as work packages which, starting from a geographical database of approximately 400 buildings and other structures, have permitted the data obtained from the archives and from over 200 bibliographical resources to be organized by date, building type, construction characteristics, and past and present designated uses. Some of the very first queries of the database made it possible to identify Torviscosa's most important architectural works (approximately 40 industrial, public, and residential buildings). These became the points of interest along three self-guided 'slow mobility' paths

that allow visitors to discover and gain an understanding of the town's architecture and residential building types. Two of the **itineraries** are devoted respectively to pedestrians and cyclists, while the third is an accessible path for use by people with mobility limitations. In particular, the bicycle paths are presented as possible thematic detours from the **CicloviaAlpe Adria Radweg** (CAAR), a busy bicycle route - the fruit of cross-border cooperation between Austria and Italy - that links Central Europe (Salzburg and Villach) to the Adriatic Sea (Aquileia and Grado).

The materials produced by the students were integrated and elaborated to configure an exhibition devoted to the residential buildings, Torviscosa 1938-1968. Percorsi di conoscenza – Le abitazioni [Paths of knowledge – Houses] from April - September 2019. The exhibition catalog contains images of the 28 panels created to provide information about Torviscosa's residential buildings and dedicated visitor paths. In parallel with these activities, the research also dealt with other topics which are the subject of ongoing studies, including an in-depth analysis of the industrial buildings, the possibility of activating a regional network of similar sites of interest, such as the Panzano shipyard district of Monfalcone and the mining town of Cave del Predil





foto-prospetto nord corte  
photo-elevation north courtyard



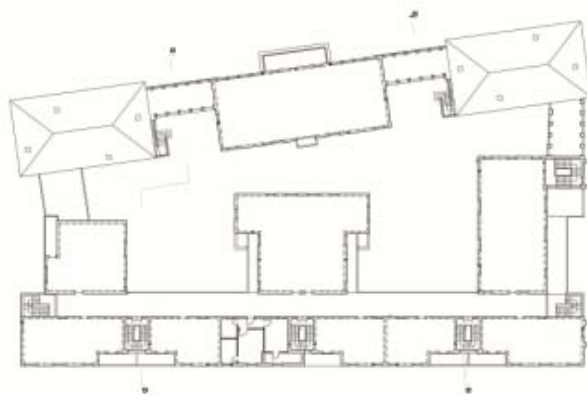
foto-prospetto sud corte  
photo-elevation south courtyard



prospetto sud  
south elevation



prospetto nord  
north elevation



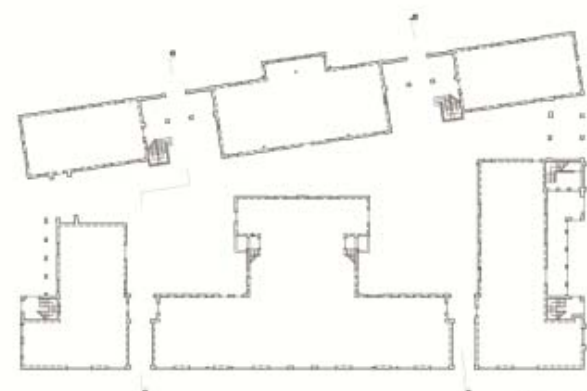
piano piano secondo  
second floor plan



sezione a-a  
section a-a



sezione b-b  
section b-b



piano piano terra  
ground floor plan



prospetto ovest  
west elevation



a.a. 2016 - 2017

Stephanie Anastasio  
Admir Asoski  
Luca Bigaron  
Carlo Cancian  
Giovanni Calotta  
Eli Cos  
Rosalba Iuliano  
Stanislav Pierskikh  
Federica Ronchese  
Michele Vit

Research data on housing in Torviscosa, plans, sections, elevations, mapping of deterioration patterns, thermal images, construction details, and proposals for energy conservation projects, that became the basis for the later phases of research.

(discussed in **TICCIH Bulletin #81**), and guidelines for renovating the residential properties.

Initiatives were launched to disseminate the results, both on a scientific level and amongst the population, including seminars open to the public (summer 2019), 'Meetings about the factory town' and visits to the exhibition and town. These activities are considered crucial for the success of the protective measures.

The third stage of the project consists of the establishment of a PhD scholarship for the creation of guidelines for residential renovations, in order to ensure uniformity despite the problems posed

by fragmented ownership, as well as a detailed study, in the form of a master's thesis in civil engineering presented in spring 2020, of Torviscosa's cinema and theater building, the roof structure of which contains an interesting example of pitched trusses in reinforced concrete.

The prospect of a second research grant on the part of the Region of Friuli Venezia Giulia leaves the door open to gaining important new insights in a future stage along this path of discovery and appreciation.

**Contact the author**



CIF foundry beside the River Douro at the beginning of the 19th century. The river was on the port wine route and access facilitated the transport of the agricultural machinery that the Company produced for the wineries upriver. Photo: Domingos Alvão, c.1920-1950.

## PORTUGAL

### THE INDUSTRIAL CASTING COMPANY (CIF), PORTO

*Diana Felícia*

Industrial Casting Company (CIF) is one of the last active iron foundry factories in Portugal, the legacy of a once prolific industry in the city of Porto in particular. It is located in Foz do Sousa (Council of Gondomar) on a rocky cliff facing the Douro river and, although it seems to be far from Porto itself, its geographical location may have been vital in the longevity of its business venture.

Owing to iron's versatility, speed of creation, durability and the variety of shapes it can take without compromising the pieces' integrity, the cast iron industries acquired a well-documented prominence in Europe for the past two centuries. Porto, particularly, was home to dozens of factories which were both created and lost to the vagaries of the demand of the 19th and 20th centuries. They produced a vast number of railings and fences, fountains and street lamps, all sorts of urban and street furniture, as well as sev-

eral shopfronts that lent a polished new look to trading premises in Porto.

On paper, the roots of CIF seem to date back to the late 19th century, where it looks to be the result of a merger between a series of smaller companies: Fundação de Gondomar; Paiva, Irmão & C.<sup>a</sup> and Fundições Reunidas Lda. The Industrial Casting Company as we know it was only established in 1931. In its first few decades, production was dedicated to agricultural and industrial machinery, along with iron cookware. It was only later that the Company extended to a range of other pieces, mainly urban and street furniture such as garden benches, urban lighting and drinking fountains.

For most of its history, the company's headquarters were located in Rua de São João (Porto), inserting it in the wider context of the



Porto iron industry: this was the city where it received its customers and where commercial relations were established. The study of this Company will allow the researchers to extrapolate their findings to similar factories in the city, all of which have now disappeared.

The factory building was, unsurprisingly, altered whenever necessary, following the needs of the company and its expansion. These changes were painstakingly documented by Domingos Alvão, a renowned local photographer, in a set of photographs which were kept at the premises. They provide evidence that CIF had its own private pier connected to the main body of the foundry, allowing for a quicker delivery process and in turn easing not only the unloading of raw materials, but also the movement of workers and the respective flow of materials. At the time, the country roads which provided access to Gondomar were particularly bad and CIF's access to a pier substantially alleviated this problem. CIF received the Grand Prize at the 1934 Porto Colonial Exhibition; as order numbers increased, records show that CIF employed around 400 employees from a wide range of backgrounds. It had its own fully functional carpentry workshop in the complex employing around 30 workers; it also had its own design workshop, which operated in the now vacant building right across the street.

The labour force was mainly male, but there were also a significant number of women and children. Youngsters served as apprentices in sections of the operation (such as in Carpentry, Metalworking and Forges, Foundry or Painting) as required. The women were respon-

sible for, among other tasks, collecting the coal which arrived at the pier; they would traditionally carry it on their heads. Thus it was not strange to mobilise female and child labour to help in the so-called male jobs (the same was observed with jewellery and joinery) consequently guaranteeing support to many of its inhabitants. This created a more efficient line of production and may have been another important reason for the durability of the company.

Throughout its years of operation, CIF has preserved a collection of foundry moulds, notable for their diversity of shapes and different categories of objects. This can be seen almost as an archive of the forms commercialised throughout the centuries. In addition, the Company has managed to preserve a vast collection of authentic papers.

Despite the scientific relevance of the study of this Company, few academic works mention it. This creates a vacuum which justifies the urgency of the research which we are developing within the scope of the PhD in Heritage Studies and supervised by D.A. (Art History S.) Ana Cristina Sousa. Our work aims to both analyse and organise such a significant collection, as well as to draft a timeline/history of the CIF; contributions which will not only fill a knowledge gap, but will also be decisive for a more informed vision of the cast iron industries in Porto.

*The author is an Art History PhD student, Faculty of Arts and Humanities, University of Porto, and research fellow at CITCEM, Transdisciplinary Research Centre 'Culture, Space and Memory'*

## INDIA

### RE-PURPOSING EXTINCT INDUSTRIAL SITES: HOWRAH JUTE PRESSES

*Abantika Mukherjee, conservation architect*

Jute for centuries has been an integral part of the culture of Bengal and the history of India. Known as Bengal's golden fibre, a paradigm shift happened when the British East India Company introduced jute as an alternative to flax to Dundee in Scotland at around 1838. A parallel and equally successful industry grew up in Bengal. The first jute spinning mill in India was established in 1855 near Sreerampore in Bengal, making jute one of the earliest mass-manufacturing types of industry that grew up in India.

The Hooghly industrial region is one of the oldest in India. British firms set up many jute mills in Bengal and by the end of 1895 Bengal's jute industry overtook that of Scotland. Many Scots immigrated to Bengal and set up jute factories there. Jute and jute products assumed great significance in international trade from the early 19th century, and by the mid-century jute and jute products

were traded to Germany, France, Scotland, Australia, Italy, France and Spain. More than a billion jute sandbags were exported from Bengal during the first world war.

Jute continues to contribute significantly to the agrarian and industrial economy of Bengal. Presently, however, there are trends of dereliction of specific typologies of industrial complexes which have changed their use, thereby impacting the overall urban morphology. At present, jute mills in West Bengal provide direct employment to 230,000 people and indirect employment to another 4 million. Since the beginning of 1980s the foreign market has reduced and there is more emphasis on the domestic market users, like the agricultural sector, fertiliser, cement and sugar industries. Domestic users are under compulsion to use jute products for packaging as per the Mandatory Jute Packaging Materials Act, 1987. Non-traditional mar-



The abandoned river-side building within the complex.

ket, hessian and carpet backing markets, and consumer market are gaining strategic importance in the present market situation. Value-added jute products like carpet, matting, furnishing fabrics, door mats, wall-coverings, bags, hammocks, briefcases, lamp shades, jute carpets and blankets, jute garments, geo-jute and various gift items are also gaining ground in the internal as well as the global markets.

From a study of the process of production, it is evident that the process of jute pressing for packaging marked the final stage of the process flow. The individual complexes of jute presses were the bridge between manufacturing and transport, and were a unique typology that has faced extinction in due course of time. The jute presses would be strategically located in the vicinity of both the jute spinning and production mills and the main trading connection. Before the establishment of the railways and even afterwards, the main mode of transport would be by river and thus the all jute presses had a private dock or a direct connection to the river. Another important observation about this unique typology is that these are

confluence spaces of two types of industries, the manufacturing and the trading industry, and so the linear arrangement of spaces is for ease of flow of activities without any clashes.

### Empress of India Jute Press

The Empress of India Jute Press is one of the derelict jute presses in the Ghusuri jute mills precincts in Howrah, Kolkata. It has been taken up as a pilot project for detailed demonstration of the proposed guidelines and interventions. The site is along the river frontage and approached from the main thoroughfare.

The historic use of the complex was as a gunny bag pressing and packaging centre where material was transported along the river. Later, pressing machines have been installed inside the working jute mills and these jute presses have been abandoned. The building is currently being used by multiple owners as storehouses and mechanical workshops. Some areas are also use for gunny bag stamp-



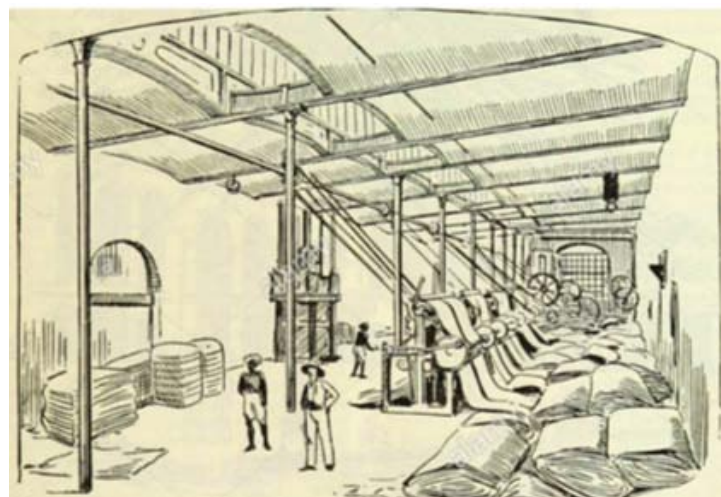
ing, packaging and storing. There are a number of spaces which are in a dilapidated condition and left abandoned. The upper floors of the industrial blocks are used mostly for cotton packaging and storing. The upper floor of the residential unit is completely inaccessible.

To the north of the complex is another derelict jute press, the Imperial Jute Press, while to the south is the historic Banerjee ghat (ghats are stepped plaza along the edge of water bodies providing access to the water) followed by another derelict jute industrial site. The riverfront is abandoned and inaccessible and the adjacent industrial sites are also derelict. These sites along with the Banerjee Ghat have a potential to be integrated for public access.

Additions and alterations have been done in various phases and thus presently group of buildings have a hybrid construction system including both the colonial and modern materials and features. There are both double- and single-storied buildings with an external staircase having very low risers and connecting jack-arch bridges. A circular cross-section brick chimney stands in the central part of the complex.

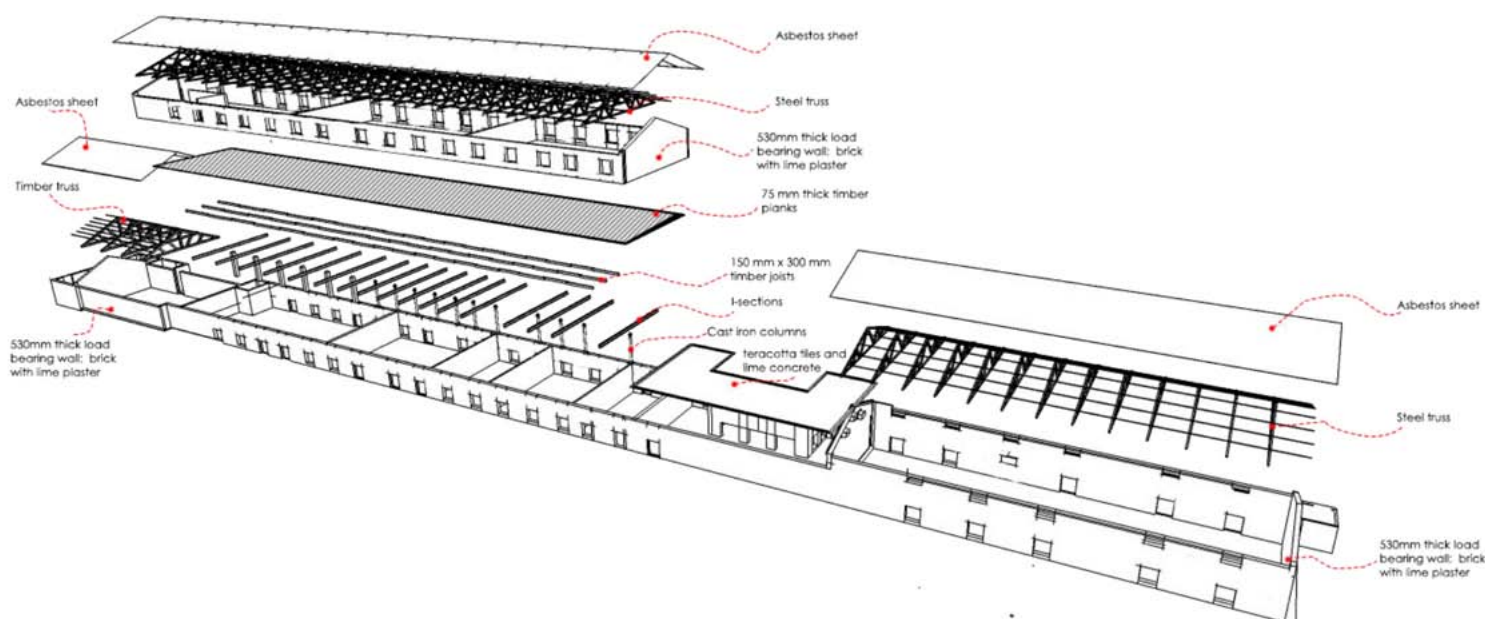
The historic parts have load-bearing type outer walls with brick in lime mortar; the columns are either brick, or cast iron and later I-sections. The modern additions have reinforced concrete (RC) columns. The intermediate floor slabs for most of the industrial blocks are constructed with timber planks spanned by timber beams. The block along the riverfront which was likely to be historically used as residence for higher officials have intermediate slab made of terracotta tiles and lime concrete spanned again by timber beams. Overhangs and outer corridors are supported by either cast iron brackets or RCC beams (in the modern additions). The industrial blocks have no ornamentation while the residential block has ornamented cast iron railings and brackets and decorative cornices.

In order to propose a justified adaptive reuse to the Empress of India



The cloth finishing department of an Indian jute mill with a hydraulic press packer behind the second column. The mill is iron-framed with a clerestory roof light. SOURCE: Dundee Year Book 1894 pp 93-103, Mark Watson

Jute Press complex, a detailed feasibility analysis has been carried out for the potential uses which can be proposed. The Empress of India Jute Press has been proposed to be re-used as Empress of India Jute Integrated Development Society under the national Jute Integrated Development (JIDS) Scheme. The proposed activities of this centre include vocational and educational training, sports and entertainment, and civic and cultural activities inspired by the traditions of working-class in Howrah Industrial area. The aim is to create a permanent institutional space in Howrah through which local youth and the community can take ownership of their past and future in the city.



Exploded view of the pressing unit showing construction details.

## IRAN

## INTERNATIONAL COMPETITION FOR ADAPTIVE REUSE OF REY CEMENT FACTORY

Sara Taymourtash, TICCIH Iran

The competition is looking for the best and most creative design and plan ideas for the re-use and regeneration of the Rey Cement Factory along with its feasibility study and economic plan.

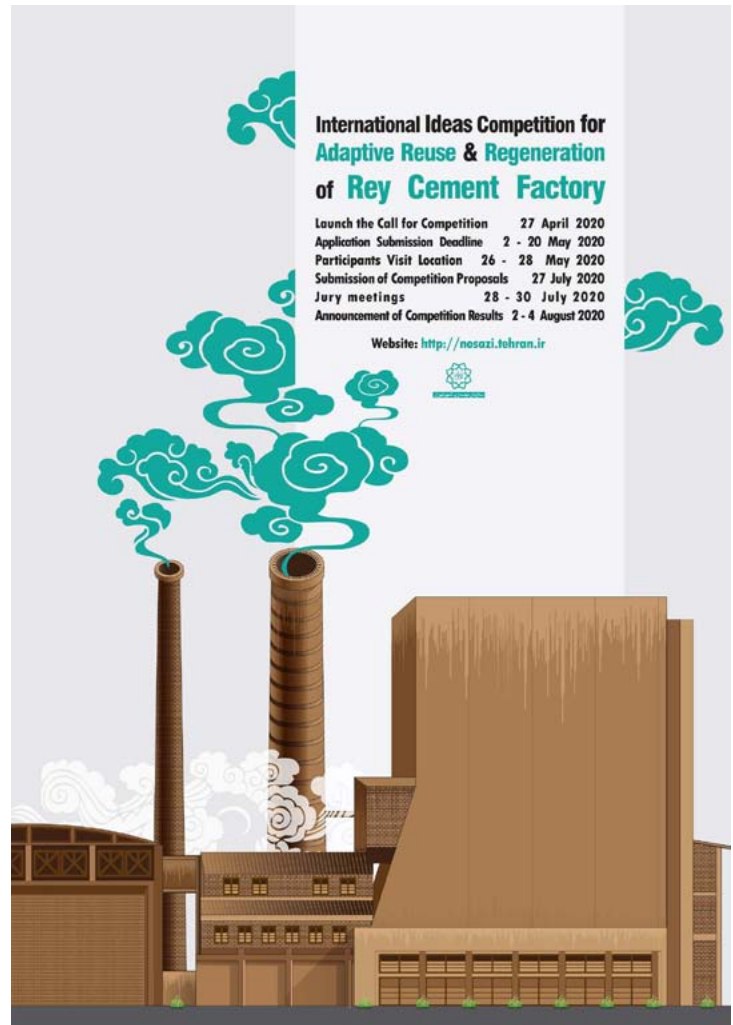
The Rey Cement Factory was the first cement factory in Iran and one of the first industrial complexes in the country. It is located in the northeast of Rey and District 20 of Tehran Municipality, an area of about 90,000 m<sup>2</sup>. Construction of the complex began in 1932 and the complex was developed in four different stages. The Rey Cement Factory was active until the end of 1983. At present, this complex has different buildings in different dimensions and sizes. Due to its history, size, and location, Rey Cement Factory has a high social, cultural and economic capacity to recreate and play a new role in the city, region and even country. The complex is currently in the hands of the Tehran Municipality, and the Urban Renewal Organization of Tehran, as the trustee of the complex, intends to put the ideas of planning and designing the complex together with the economic justification and the issues related to the investment of the mentioned ideas.

Interested and qualified national and international groups and companies are invited to participate. Each can only submit one work (with features that will be announced at different stages of the competition).

Application Submission Deadline: 2 to 20 May 2020. After receiving the final works, the jury will review them and select three works as first to third place. The prizes for the competition are as follows:

- First place: 2,000,000,000 IR-Rials [around 47,000 US\$]
- Second place: 1,000,000,000 IR-Rials
- Third place: 500,000,000 IR-Rials

Further information on this competition including the competition manual, which includes information about the Ray Cement Factory and its buildings, will be made available to registered and eligible participants. Those interested in more information and registration can refer to the website of Urban Renewal Organization of Tehran. <http://nosazi.tehran.ir/en>, or write to [reycementcompt@gmail.com](mailto:reycementcompt@gmail.com)





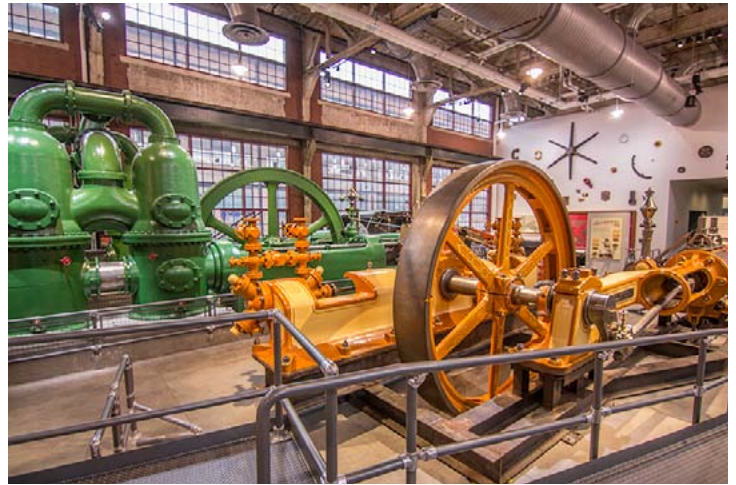
# INDUSTRIAL MUSEUMS AND THE COVID RESPONSE: A PERSPECTIVE FROM THE UNITED STATES

*Bode Morin, Anthracite Heritage Museum and US TICCIH representative, Daphne Mayer, National Canal Museum and Mike Piersa, National Museum of Industrial History*

Remotely managing closed museums from home allows us time to reflect on the value of cultural heritage and our roles in defining our places, histories, and identities. While some of us have the benefit or even luxury to reflect on the future, we watch as many of our institutions suffer significant losses due to the pandemic and our colleagues face layoffs unsure of whether they will be able to return to work, or if their museums will be able to reopen. Looking beyond our work lives, however, we see our communities hit hard with broad layoffs, inexplicable protests against public safety, and our neighbors succumbing to illness and death. We realize that while our professional roles are critical to a vibrant community, we are not a significant industry in a public health crisis. We anticipate a role in the next phase, a role in reminding people who we are and how our regional values impact them, and we will work to put the current crisis into some form of context and return our communities to some sort of vibrancy.

In late April, the United States had the most confirmed and reported cases of COVID-19 and the most infection-related deaths of any country. New York State alone has more confirmed cases than any country outside of the US and the fourth highest death rate. However, considering population and population density, the US has a moderate rate of infection especially in those low-density regions. The country is currently in various states of lockdown and social distancing. Most states have stay-at-home orders and require masks in all public spaces, but some states have granted exceptions for religious services, gun-purchases, and going to the beach. We are expecting some states to even fully lift quarantines by early May. Amid these conditions, the US government passed the CARES Act which is to provide an immediate cash infusion to every citizen while providing forgivable loans to small businesses to assist them with payroll expenses and lost revenue. While museums and non-profits are included in this program, the act also provided emergency funding to the **National Endowment for Humanities** to award 'grants to museums, libraries and archives, historic sites, independent research institutions, professional organizations, colleges and universities, and other cultural organizations across the country to help these entities continue to advance their mission during the interruption of their operations due to the coronavirus pandemic.'

While we are months away from seeing the first of what will be significant long-term impacts of this crisis, the museum industry in the US, which likely mirrors the rest of the world, is facing immediate short-term impacts. In New York City, the Museum of Modern Art is anticipating a \$7,000,000 loss, terminated all of its education and visitor services staff contracts, and mandated permanent pay cuts for upper level management, telling its employees 'it will be months,



Steam engines on display at the National Museum of Industrial History, Bethlehem, Pennsylvania, USA.



The National Canal Museum, Taylor, Pennsylvania.

if not years, before we anticipate returning to budget and operations levels to require educator services.' The Tenement Museum (NYC) which interprets migration to and living conditions in the US from the 1860s to 1920s, reduced its staff by 113, cut its operating costs by 70% and is struggling to make payments on its existing \$9.5m mortgage. The Henry Ford Museum (Dearborn, Michigan), one of the earliest and largest industry and technology museums, laid off 1400 staff while the Museum of Science in Boston (Boston, Massachusetts) laid off 372 staff and asked others to take a pay cut. These are all large, privately operated or funded museums and won't know for several months if any of these changes will be permanent or how they will need to restructure following this crisis. (See **Art Forum** and **Google Docs** accessed April 22, 2020)

The big questions about returning to some sense of future stability will revolve around revenue and visitation. How soon will

funders be able to assist cultural institutions and how soon will visitors feel financially comfortable and safe to return to museums and large public spaces is still an unknown. For public institutions, there is currently a general ethos to keep staff employed through the crisis to support some, even marginal, economic activity. However, those governments are looking at significant tax revenue shortfalls for the period and anticipate further long-term drops due to the number of people who now face unemployment and will contribute less tax revenue. Further, governments are spending significant sums of money on immediate public assistance and medical response and will need to fund readiness for future crises which will also impact pending budgets. Private sector contributions are likewise impacted by the loss of revenue from both direct sources and from investments that allow corporations, foundations, and other granting agencies to give money. These revenue shortfalls will deeply impact when and how we return to public programming.

The second factor affecting near-term and future stability is the likelihood of visitors returning to cultural institutions. Some portion of the population will not have the immediate financial resources to consider visiting museums for some period of time. However, recent studies have shown that among financially able patrons of cultural institutions there is a strong desire and expectation to start visiting sites within the next three months and a return to normal visitation patterns in six months. These expectations, however, do not apply equally among all types of institutions. Not surprisingly, patrons tend to expect to return to the types of places that offer space, a relative freedom of movement, and an element of virus security faster than to confined, crowded spaces or interactive exhibits. Historical sites, botanical gardens, and zoos for instance, rate highly for a faster return to normalcy while museums, performing arts venues, and movie theaters rate lower. (Source accessed April 23, 2020)

While we are unable to truly assess the near and long-term effects of coronavirus this soon, most institutions are attempting to map a rudimentary path forward. In 2018, three Pennsylvania industrial heritage museums, the Anthracite Heritage Museum of the Pennsylvania Historical and Museum Commission, the National Museum of Industrial History, and the National Canal Museum of the Delaware and Lehigh National Heritage Corridor formed a partnership to sponsor, organize, and execute the 2020 **Society for Industrial Archaeology** annual conference, slated for Bethlehem, Pennsylvania at the end of May. In March 2020, the SIA elected to postpone the annual conference until June 2-6, 2021. Each of these museums represents key themes in American industrial heritage and, while relatively small, each has a different funding mechanism and different governance. Each also elected to close in March for the duration of the crisis and is providing digital engagement and planning for reopening, whenever that happens. The Anthracite Museum is government-owned and operated, relying heavily on state tax revenue. The NMIH is a private non-profit relying largely on funds raised from external sources and generated revenue. The National Canal Museum, while a private non-profit, is operated by a **National Heritage Area** (where historic, cultural, and natural resources combine to form cohesive, nationally important landscapes), which was organized locally with



An exhibit at the Anthracite Heritage Museum, Taylor, Pennsylvania, USA.



The Society for Industrial Archaeology's 49th Annual Conference, originally scheduled for May 2020, was postponed until 2021.

initial federal funds and receives regular federal money in addition to earned revenue and income.

#### **Anthracite Heritage Museum (Bode Morin, Scranton, Pennsylvania)**

The Anthracite Heritage Museum is part of the Pennsylvania Historical and Museum Commission--an agency of the Commonwealth of Pennsylvania state government. The museum mission is to collect and interpret the cultural experience of the 250-year Euro-American history of anthracite coal production and the social, economic, environmental, and technological stories of this important fuel. The museum, and all state of Pennsylvania museums, closed on March 13, 2020. Maintenance staff continue to work at the museums, but professional and clerical staff are permitted to work from home with regular interactions with supervisors and digital meetings. Unfortunately, associate staff who primarily



engage the public and offer museum membership services through an affiliated non-profit organization have been laid off. The closure will have significant impacts on visitation. The spring is usually the busiest time of the year with school groups visiting for nearly two straight months and major fundraisers and public events scheduled to celebrate the warmer months. As expected, all schools in the state have been closed for the rest of the school year, all tours have cancelled, and the museum cancelled all spring events and programs. We have, however, been trying to keep a presence online with social media. We post daily Facebook messages about mission related historical topics and exhibits that will be available when we reopen and respond to collections and history inquiries. Our curators are working to make more of our collection and research materials available online and we have weekly digital staff and volunteer meetings to keep everyone informed about current policies and procedures.

The museum's operating budget is funded 70% by state revenue from taxes, regulatory fees, and real estate transfer fees, and 30% by admission revenue. The museum is supported by a non-profit entity that helps coordinate programs, membership, and the museum store which is funded by grants, events, sales, and partially from ticket revenue. While it is impossible at this point to say how operations will change when public activities resume, we will certainly be hit by budget cuts due to tax revenue shortfalls, the cancellation of events, lost admission revenue, and altered granting cycles. The museum is currently working on a reopening plan that takes into account the need to provide clean and sanitary public spaces, the likely slow return of large groups and programs, delays in filling open staff positions, and a general drop in individual income that would translate into museum visitation and store purchases.

#### **National Museum of Industrial History (Mike Piersa, Bethlehem, Pennsylvania)**

The National Museum of Industrial History is located inside a portion of the former Bethlehem Steel mill in Bethlehem, PA. NMIH is a Smithsonian Affiliate with the mission of forging a connection between America's industrial past and the innovations of today by educating the public and inspiring the visionaries of tomorrow. The museum is currently closed to the public due to the coronavirus shutdowns but is engaged in online programming broadcast on Facebook and YouTube. A variety of experts have been giving presentations on topics ranging from historic coal mining to the 1918 Spanish Flu and how it affected production at Bethlehem Steel. As an independent non-profit, staff have been busy securing funding to continue operations while also working on a variety of behind the scenes projects.

The museum's next exhibit, featuring Robert Fulton and the legacy of the steamboat, is expected to debut later this year. Plans are also being finalized to receive a 7,000-ton force Whitworth (UK built) armor-plate bending press. The 133-year-old, approximately 300-ton, machine must be moved over 3,000 feet to keep it from being demolished as part of a local casino expansion. When normal operations resume the museum expects to host an expanded summer camp program and more frequent demonstrations highlighting its narrow-gauge diesel locomotive, an original from Bethlehem Steel,

which runs on a short railway recreating its former use hauling scrap metal trains to steel-making furnaces.

NMIH currently sees its revenue stream as 78% contributed (private donations, foundations, and government grants) and 22% earned (admissions, memberships, gift shop, and event rentals). A Small Business Administration loan is helping the museum tide over the pandemic. Although donors have continued to support the museum, budgets are being revised with the assumption that traditional revenue streams will be in jeopardy as donors, government, and prospective attendees re-evaluate their spending in light of economic and health concerns. When reopening is allowed, strict care will be taken to ensure the safety of guests. Given the museum's proximity to a community college and multiple performing arts venues, we expect to open in a manner consistent with our neighbors. The longer-term future is bright as the museum has a six figure state grant earmarked for expansion and the upcoming bending press relocation is expected to draw international attention. The 25th Anniversary of the Last Cast at Bethlehem Steel in November has resulted in local partnerships that are elevating the museum to a level of cultural relevance never experienced before. Interest from regional and national groups, such as the American Institute of Steel Construction, is only growing stronger and is expected to help the museum broaden its appeal, reach new audiences, and attract new supporters.

#### **The National Canal Museum (Daphne Mayer, Easton, Pennsylvania)**

The National Canal Museum, based in Easton, PA, is a signature program of the Delaware & Lehigh National Heritage Corridor (D&L). Through its exhibitions and rides on one of the last mule-drawn canal boats in the U.S., the museum tells the story of America's historic towpath canals with a specific focus on the Lehigh and Delaware Canals that carried anthracite coal from the mines in Northeastern Pennsylvania to markets in the Lehigh Valley, Philadelphia, and beyond. Covering five counties in Eastern Pennsylvania, the D&L is both a National and State Heritage Area and is a Smithsonian Affiliate. While it began its existence as a government commission in 1988, it is now a non-profit organization. Despite its geographic scope, the D&L is a relatively small organization with only fifteen year-round employees – four of whom are devoted to the National Canal Museum, its collections, and educational programs. As a Heritage Area, the D&L receives grant funding from the federal and state governments, which accounts for just under half of its annual income. While never guaranteed, this governmental funding is a source of relative stability for the D&L when funding from the private sector (both philanthropy and earned income) is under stress, as it is now. We have fortunately received approval for a Payroll Protection Program loan, which will ensure that we can retain our salaried and hourly staff for the coming months. In the uncertain financial climate however, the D&L is developing contingency plans to account for a variety of scenarios, including an extended closure of the National Canal Museum and future declines in government funding.

The National Canal Museum was not scheduled to open to the public until early May 2020, so it has not suffered the immediate

impact of closures as acutely as other museums and sites that operate year-round. However, the museum was forced to cancel its very popular spring field trip program, Immersion Days, which would have run from late April through early June and served over 2,500 schoolchildren. This is not only a disappointment to the students and their teachers, but also represents a loss of revenue for the museum and wages for our team of educators. To continue to fulfill the museum's educational mission and to support families at home and the schools that teach the D&L's 4th grade curriculum, the museum is using its talented seasonal staff members to read aloud chapters of the curriculum's storybook – Tales of the Towpath for distribution on social media. Other forms of digital content are also being developed. When the museum does re-open (the current

target is June 6), we expect that operations will be very different. Any continued social distancing recommendations will surely limit group bookings, the number of visitors that can be accommodated on the canal boat, and personal interactions between visitors and our staff and volunteers. Like many museums, most of our volunteers are older individuals at high-risk to the virus and who may be uncomfortable with returning as docents and greeters. Keeping the museum clean and disinfected throughout the day, particularly its many hands-on interactives, will be another challenge. All in all, we expect 2020 to be full of hard choices about how best to balance health and safety, financial considerations, and our mission to educate and engage the public.

## TICCIH NEWS

## MESSAGE FROM YOUR PRESIDENT

*Dr Miles Oglethorpe*

It is difficult to get our minds around quite how much the world has changed since the last issue of this Bulletin, and I hope very much that all our members, their friends and their families are managing to cope in these difficult and often traumatic times. As Bode Morin describes in this issue of the Bulletin, CoVid19 is proving not only to be a potent destructive force in health terms, but is also throwing up extraordinarily tough challenges for a wide range of organisations and businesses, and unfortunately, industrial heritage is not immune.

Through the gloom, however, there is evidence of hope. It has become clear that a lot of our work can be done virtually, at least in part, through digital technologies. Paradoxically, I now find myself talking to a wider range of people than in normal times. Some of us are also finding time to do things that we had meant to do years ago, like sift through our image archives, and if appropriately equipped, we are scanning and sharing the best of our historic photographic endeavours.

As for international events, there are great examples of determination. Our colleagues in the Humboldt-Universität zu Berlin managed to adapt their conference, Cities and Historic Textile Complexes, Typology, Good Practice, and Global Perspectives for Conservation, into an online event. Another TICCIH thematic study on the heritage of the petroleum industry was due to be launched at a workshop in Ontario in May, but had to be postponed. Thanks to the ingenuity of hosts and sponsors, Fairbank Oil, the event will take place in 2020, but the study itself will be launched digitally via TICCIH and our partners, ICOMOS, and can be [downloaded](#) from



A now-familiar screen-shot from an online conference. Cities and Historic Textile Complexes, Typology, Good Practice, and Global Perspectives for Conservation was held in April and moderated by Dr Heike Oevermann. The conference supported TICCIH's textiles industry thematic study, which is due out next year. A summary of the discussion will be on the TICCIH website.

our webpage. This will enable the workshop to harness feedback generated by the study in the coming months.

One way of building on the work that has been done is to promote the international network of expertise that is growing through TICCIH. As most readers know by now, we have introduced an improved and more inclusive, affordable membership system. Our major challenge now is to attract members and build our network



further. This will become all the more valuable as we strive to recover in the aftermath of CoVid19.

In addition to the regions of the world where our membership is weak, we urgently need to recruit young professionals and students. It is encouraging to see two articles by young researchers in this issue. In some places, we do not have a healthy demographic so we must ensure that we pass on our knowledge, skills and expertise to younger generations. To help us do this, we need to lure back activists who may have allowed their membership to lapse.

In the meantime, we are very keen to enhance our collaboration with ICOMOS, and with this in mind, it's important that we help ensure its newly established Industrial Heritage international scientific committee (ISC) is successful. This, and our other aspirations are reflected in TICCIH's new subscriptions, which range from a special annual reduced rate of \$5 for students to \$10 for existing ICOMOS members and for low-income subscribers. For more details, go to <https://ticcih.org/membership/>. It is now easier to join and renew, and members can curate an attractive professional page with work

experience and research interests.

This brings me to another important reason to enrol and get involved – our next **international congress** in Montreal in September 2021. We anticipate it will be one of the largest ever gatherings of industrial heritage expertise in the world. It's especially important that our National Representatives get organised now, bearing in mind that they will vote on the makeup of the next TICCIH Board at the General Assembly during the congress. One of their key roles is to ensure that the membership in their countries is up-to-date and that they have its support through their national committee or equivalent organisation.

So, I'm very much looking forward to meeting many of you in person next year in Canada, but now that we are becoming masters of the new digital technologies, there's a real chance that I will have the pleasure of your virtual company long before then. I look forward to 'seeing' you!

## MEXICO

### THE X COLOQUIO LATINOAMERICANO DE PATRIMONIO INDUSTRIAL, 2022, MONTERREY, MEXICO

*Camilo Contreras Delgado, El Colegio de la Frontera Norte, Mexico.*

The celebration of the tenth Latin American Conference in 2022 is just one more of the many activities to convert Monterrey into an emblematic city of industrial heritage on the American continent. The conference is designed to consolidate the efforts that have been made by our compact community team working together since 2014. It began with a modest oral history project with ex-workers of one of the most important industries, the Foundry of Monterrey (1900-1986), where we charted the final days of this important industrial heritage. It has gone on to become an annual conference where people from Mexico, Brazil, Chile, Colombia, Guatemala and Spain among others have come together: in the 2019 conference, we were privileged to have over 100 participants.

The international conferences have been supported enthusiastically by academic, government and general social community entities of a private and public nature: the Universidad Autónoma de Nuevo León; El Colegio de la Frontera Norte; the State Government of Nuevo León through their General Archives and the Council for Culture and the Arts; the Foundry Precinct; the Museum of Steel Blast Furnace 3 and the Heineken Brewery.



The rehabilitated Monterrey station houses the Railway Museum, a library, a bookshop and exhibition halls. Photo: Fototeca del Instituto Nacional de Antropología



Participants at the 2018 meeting outside the El Parque Fundidora Foundry Precinct, ten years after the steelworks closed.

Why did Monterrey become so important industrially in Mexico and in Latin America in general? Monterrey was one of the industrial forerunners, beginning its development as early as 1890, with breweries, foundries and brick production. From then to 1910, the basic industry of the developing city was consolidated with the production of glass, cement and other minor industries relating to food production, manufacture and repairs of machinery and building materials among others, all of which changed definitively the urban profile of the city.

After the Mexican Revolution, the economic reactivation managed to establish a rhythm of production that allowed for a second period of industrialisation around the mid 1920s through to the mid 1930s. This was distinguished by integrated systems of production and diversification within the economic activity carried out by the companies. National and foreign (mainly US American) investment was essential in this process.

However, if we are to fully comprehend our industrial heritage, we have to look outside and beyond the closed walls of the factories and our national borders. The social environment that evolved from a central industrial plant, such as the houses for white-collar employees and factory floor workers in La Fama (1854) and the workers' quarters created around the factories such as Terminal, Moderna and Obrera among others are an example of what we mean when we talk of a holistic vision of our heritage. This overall panorama is vital when attempting to stave off processes of fragmentation of industrial landscapes where the focus tends to be solely on preserving what is attractive or spectacular (something that generally occurs when chimneys become an obsession).

The industrial heritage of Monterrey tells the story of many things such as the extinction of certain activities due to new products coming in to substitute the original raw materials or the whole



product becoming outdated (such as textiles and weaving being replaced by natural fibres, or wooden furniture going out of fashion); extinction due to the need to build new factories and update technology, leaving machinery, tools and whole buildings in disuse and losing the ancestral knowledge and skills related to the places and things abandoned; or extinction due to the dismantling of whole sectors, as occurred with passenger trains and therefore railway stations. In the post-industrial era, then, the State of Nuevo León is well positioned to lead in matters of preservation of industrial heritage in Latin America, just as it led before in industrial development.

Fortunately for us, we have had positive experiences that have proved that the communities are backing us in preserving our industrial past, recycling and re-using it. The former Railway Station of El Golfo houses the Casa de la Cultura cultural centre in Nuevo León. El Parque Fundidora Foundry Precinct was awarded the category of Museum on an Industrial Archaeology Site in 2001 and comprises 27 major elements of our industrial past, including blast furnaces, warehouses and chimneystacks. It is by far the largest site related to our industrial past and is an area designed for recreational purposes, leisure pursuits and business. Another emblematic site is the Museum of Glass that is unique in being located inside a working glass factory.

However, the social and human side of the intangible heritage related to our industrial past is still largely uncharted and missing from

the picture. These social mechanisms of life in the past and its forms of cultural expression can still be retrieved and shared in some of the industrial buildings presently in disuse. The atmosphere of work (both inside and outside the factory walls), the lost language of the past, the way life and work was organised, the know-how, the rituals, the lifestyles are all as valuable as any material cultural heritage and more fragile. Various places that have been rehabilitated lack soul and have no clear narrative that allows the visitors to connect emotionally with another time and space, now only represented by an anonymous heritage building.

Our Industrial Heritage conferences in Monterrey have allowed us to broach all these subjects in the presence of the community stakeholders at all levels and to raise awareness and reflection on the social relevance apart from the historical and cultural importance of industrial heritage at the level of local government. One of our distinguishing characteristics is that we have always set aside a privileged session for ex-workers of our industries to make their voices heard. That will be our contribution then to the TICCIH conferences in Latin America.

*Spanish translation by Margaret Hart Robertson.*

## CONFERENCE REPORT

### GUATEMALA

#### LATIN AMERICAN TICCIH CONGRESS IN GUATEMALA, 4 – 7 NOVEMBER, 2019

*Marion Steiner, Pontificia Universidad Católica de Valparaíso, Chile*

The IXth Latin American TICCIH congress was celebrated in La Antigua, Guatemala, following up on the one held in Cuba in 2016. The 2019 congress was jointly organized by TICCIH Guatemala and ARQUINDUGUA, the Association of Industrial Archaeologists in Guatemala. Despite the very difficult social and political situation in a range of Latin American countries at the time, 40 to 50 colleagues from Guatemala, Mexico, Argentina and Chile managed to attend the congress which was initially planned for 120 participants; some others arrived from Portugal, Spain and Germany. Most of the participants were archaeologists, and the mix with some historians, architects and geographers allowed for interdisciplinary exchange. The TICCIH Board was represented by José Manuel Lopes Cordeiro from Portugal and me, who had made it to Central America from rebellious Chile.



Round table discussion with Stefan Berger (Germany), Marion Steiner (Chile), Sinhué Lucas Landgrave (Mexico) and Mónica Ferrari (Argentina). Photo: Sinhué Lucas Landgrave.



The drying building on the Chocolá coffee farm.

The congress' four days' program was opened by a welcome speech of its dedicated organizer, Rubén Daríos, followed by video greetings from TICCIIH Life President Eusebi Casanelles and my own opening speech in the name of the Board and TICCIIH president Miles Oglethorpe. During the congress there were three parallel sessions of paper presentations, three plenary speeches and two round table discussions. In the latter, we exchanged viewpoints on the state of Industrial Heritage in Latin America and on the necessity for a re-conceptualization of industrial heritage from a Global South perspective. Podium participants included Humberto Morales and Sinhué Lucas Landgrave from Mexico, Mónica Ferrari from Argentina, Stefan Berger from Germany and me, and the discussion with the audience was lively. The congress' full papers have been published digitally (ISBN 978-9929-787-89-6).

The congress also included interesting site visits within La Antigua,

while its final day was reserved for a field trip to Guatemala City, where we visited the Relief Map of Guatemala in the City Park, the El Zapote micro brewery and the installations of the Museo de la Tipografía Nacional. A smaller post-congress tour on Friday took us to the historic coffee farm Chocolá, an impressive site in terms of both architecture and technology but also because it's a true expression of global history. During our visit, we learned that Chocolá was set up in the 1860s and first operated with Scottish machinery from the 1820s. Then it was taken over by a Catalan, whose wife sold the farm when he died and went back to Barcelona. There she married again and invested part of her Guatemala fortune in the construction of a huge house for her family, which became known as La Pedrera and is now part of the Gaudí World Heritage sites. Ownership of her former finca in Guatemala passed on to Germans who, during World War II, lost possession when the industry was nationalized. At the time of cooperative coffee farming



in Guatemala, Chocolá gained a painful reputation for having been managed by workers who backed the government during the Civil War – a burden of the past that still weighs heavily over the place today. Protected as a monument, the site includes the dryer building, a workshops building, the family's house and a hotel for visitors, a church, an administration building and workers settlements. Technically still amazingly complete, the constructions are nonetheless in a challenging state of conservation.

The last day of the congress, Monterrey was announced as the host of the next Latin American TICCIEH Congress in 2022. Read more about this place and the work our colleagues are doing there in [Camilo Contreras' article in the present Bulletin issue \(p. 28\)](#), which hopes to motivate you to travel to Mexico in 2022.

## OBITUARY

### UNITED STATES



**DR. EMORY LELAND KEMP**

*Dr. Billy Joe Peyton, Professor of History, Department of Social and Behavioral Sciences, West Virginia State University*

Dr. Emory Leland Kemp passed away on Monday, January 20, 2020, in Morgantown, West Virginia, from heart failure at the age of 88. He was born to Emory Leland Kemp and Anita Mae Hucker Kemp on October 1, 1931, in Chicago. The family moved to Champaign, Illinois, when Emory was age four. He graduated from University of Illinois High School and the University of Illinois, where he earned his degree in Civil Engineering with highest honors and received the Ira O. Baker Award as the outstanding civil engineering graduate in 1952.

Kemp worked as an assistant engineer for the Illinois State Water Survey before completing two years of compulsory military ser-

vice with the U.S. Army Corps of Engineers. In 1954, he traveled to London on a Fulbright Fellowship, where he received a diploma from the Imperial College of Science and Technology in 1955 and the Master of Science in Engineering from the University of London in 1958. As a structural engineer employed by engineering firms in London, Kemp worked on numerous projects including structural elements of the Sydney Opera House. Emory and his life partner Janet wed in 1958 before the couple relocated to the United States, where he earned his Ph.D. in Theoretical and Applied Mechanics at the University of Illinois in 1962.

With his doctorate in hand, Dr. Kemp accepted a position at West Virginia University as an associate professor of Civil Engineering specializing in structures and concrete, where he quickly rose to chair the Department of Civil Engineering. Emory's career took an auspicious turn in 1967 when he traveled to the University of Oklahoma to study their History of Science program and obtained approval to plan a similar course of study through WVU's History Department, where he taught classes on the Industrial Revolution and the history of technology. Regrettably, he could not convince the College of Engineering to require its students to take courses in the history of science.

In the 1960s, Kemp also participated in a movement to bring the British discipline of industrial archaeology to the United States. He helped to found the Society for Industrial Archeology (SIA) in 1971, established the Program in the History of Science and Technology at WVU in 1976, and the Institute for the History of Technology and Industrial Archaeology (IHTIA) in 1989. IHTIA documented historic sites and structures, held conferences, workshops and field schools, and published articles and monographs on a variety of relevant topics.

Throughout his distinguished career, Kemp lectured and published widely in civil engineering, especially focusing on the properties of concrete and methods to analyze historic structures, as well as the history of technology and industrial archaeology. His personal research interests centered on industrial processes in West Virginia, including mining, milling, glassmaking, bridges and railroads. A renowned scholar of the first order, he gained an outstanding reputation as an industrial archaeologist. Starting in the 1970s, public and private sponsors engaged Emory and colleagues to document his-

toric industrial and transportation resources through large-format archival photography, detailed process drawings, and narrative histories. Prior to his retirement in the early 2000s, Kemp led an IHTIA team that documented the pioneering 1860s pumping technology at Fairbank Oil Fields in London, Ontario, Canada. [Emory Kemp's archaeological study of early oil production written with Michael Caplinger, *19th Century Petroleum Technology in North America*, can be downloaded from the [TICCIH website](#)]

Possessing an abiding passion to document, preserve and interpret America's industrial heritage, he completed many restoration projects in West Virginia and beyond. Three significant exemplars are the 1852 Philippi (West Virginia) Covered Bridge after a devastating fire nearly destroyed the double-barreled 286-foot Long-type truss, the 1849 Wheeling (West Virginia) Suspension Bridge, the first long-span wire-cable suspension bridge in the United States and an ASCE Historical Civil Engineering Landmark, and the 1866 Louisville (Kentucky) Water Tower, a National Historic Landmark.

Kemp served as president of the Public Works Historical Society and the Society for Industrial Archeology, and was a fellow of the American Council of Learned Societies, American Concrete Institute, and the University of Edinburgh. Among his many honors, the most esteemed were his election as a Fellow of the Institution of Civil Engineers in the United Kingdom and the American Society of Civil Engineers naming him a Distinguished Member.

He is survived by his wife of 62 years, Janet Kemp; three children, Mark Kemp, Geoffrey Kemp and Alison (Edward) Anderson; and seven grandchildren.

Prior to his passing, Emory Kemp donated his papers to West Virginia University so others may continue his ground-breaking work. The [West Virginia and Regional History Center](#) in Morgantown houses the collection.



Emory Kemp with Neil Cossons and Charlie Fairbank, Fairbank Oil Fields, Ontario. Photo: Neil Cossons



## 2020

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### 18-22 August

FreieUniversität Berlin, GERMANY  
World Conference of Public History

### 14 September

St. Albert, Alberta, CANADA  
Athabasca University: ICCROM's 2020 International Summer School on Communication and teaching Skills in Conservation and Science

### 3 - 26 September

Gijón, Asturias, SPAIN  
XXII Jornadas Internacionales de Patrimonio Industrial: Hacia un 'New Deal' para el Patrimonio Industrial (on-line conference). CfP: 15 July 2020  
INCUNA <https://incuna.es/jornadas-incuna/presentacion/>

## 2021

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### Postponed to 2-6 June

Bethlehem, Pennsylvania, USA  
Society for Industrial Archeology 49th Annual Conference

### 30 August - 4 September

Montreal, CANADA  
TICCIH Montreal 2021: Industrial Heritage Reloaded. New Territories, Changing Culturescapes

### Date TBD

Oil Fields, Ontario, CANADA  
Experts' workshop and presentation of the TICCIH Thematic Report on petroleum heritage.  
For information contact the [Editor](#)



# TICCIH

THE INTERNATIONAL COMMITTEE FOR THE  
CONSERVATION OF THE INDUSTRIAL HERITAGE

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