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# Résumés

## *Abstracts*

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# Table des matières

<b>Session 1 - Conférences plénières</b>	<b>21</b>
L'inscription du bassin minier du Nord Pas-de-Calais sur la liste du patrimoine mondial de l'humanité, Jean-François Caron . . . . .	22
Musées et patrimoine industriel au XXI siècle, quels enjeux pour les musées de demain ?, Anne-Catherine Robert-Haiglustaine . . . . .	23
Des (vieilles) machines et des hommes : de l'usage du patrimoine industriel dans les sociétés postcoloniales, Lucie K. Morisset . . . . .	24
Technologies numériques et patrimoine. Une amitié de 30 ans, Robert Vergnieux	25
<b>S.2.A — Le patrimoine industriel à l'ère numérique</b>	<b>26</b>
3D modélisation informatique et patrimoine industriel, Jean-Louis Kerouanton [et al.] . . . . .	27
The SCHEMA-TEC project or the development of a method to schematically represent scientific, technical and watch heritage artefacts in operating condition, Christian Degrigny [et al.] . . . . .	28
De la vapeur au numérique, Joël Debout . . . . .	29
<b>S.2.B — Acteurs-clés</b>	<b>30</b>
Planning and management of industrial heritage as a community space -in the case of "Moji red brick Place" in Japan-, Ichihara Takeshi . . . . .	31
Role of the main actors of the Urals metallurgical industry in the preservation of its heritage, Elena Alekseeva . . . . .	32
Le patrimoine industriel en région bruxelloise, 25 ans d'actions, Guido Vanderhulst	33

**S.2.C — Les associations** 34

Citizens, associations and approaches to managing Britain's industrial heritage in the twenty-first century, Ian Bapty . . . . .	35
Le PREAC Mémoires du Travail, Alain Chopin . . . . .	36
The widespread development of industrial heritage of the Monferrato Casalese: the cement landscape, Maria Consolata Buzzi [et al.] . . . . .	37

**S.2.D — Restauration et conservation** 38

Les formations à la conservation-restauration des collections d'objets techniques et industriels, Benedicte Rolland-Villemot . . . . .	39
La restauration des machines exceptionnelles de l'ancienne brasserie Wielemans-Ceuppens, un projet socio-culturel original primé par Europa Nostra, Guido Vanderhulst [et al.] . . . . .	40
Death of the Huber Breaker: Loss of an iconic Anthracite feature, Bode Morin . .	41

**S.2.E — Réseaux de transport : routes et canaux ; chemins de fer** 42

A new building type characterized the landscape: lengthman's cottages along the Semmering railway in Austria, Roland Tusch . . . . .	43
Railway heritage, a case study for series, Marie-Noelle Polino [et al.] . . . . .	44
La représentation photographique de la construction des chemins de fer au Portugal et la création d'un paysage technique et industriel, Ana Cardoso De Matos . .	45

**S.2.F — Nouvelles recherches, échelles et outils** 46

Industrial heritage in Argentina. Analysis of the current situation, Mónica Ferrari	47
The Inventory of Industrial Heritage Resources in the USA, Leonor Medeiros . .	48
Le patrimoine industriel, témoin du système local d'innovation, outil de filiation : exemples en Aquitaine (France), Laetitia Maison-Soulard . . . . .	49

**S.2.G — Le rôle des institutions** 50

Enjeux de sauvegarde et de valorisation des Soieries Bonnet, fleuron du patrimoine de l'industrie textile (Jujurieux, Ain), Nathalie Foron-Dauphin . . . . .	51
La Région Île-de-France, nouvel acteur du patrimoine industriel, Nicolas Pierrot .	52
Collaboration of governmental and non-governmental organizations in research and promotion of Lithuania industrial heritage, Iveta Dabasinskiene [et al.] . . . . .	53
<b>S.2.H — Le patrimoine industriel en Europe centrale et de l'Est</b>	<b>54</b>
Lost illusions: Socialist era heritage of heavy industries in Hungary, Györgyi Németh	55
Enforcement of a comprehensive conservation in regeneration processes of industrial heritage sites in Slovenia, Sonja Ifko . . . . .	56
Industrial Heritage of Uranium Mining from the time of the German Democratic Republic (1946-1990), Helmuth Albrecht . . . . .	57
<b>S.2.I — Reconversion des bâtiments industriels</b>	<b>58</b>
The reuse of industrial buildings and sites: potentialities and risks, challenges and boundaries, Nivaldo Vieira De Andrade Junior . . . . .	59
Les stratégies de réhabilitation des halles métalliques au XXI <sup>e</sup> siècle. La question de l'authenticité et de l'artifice dans la sauvegarde des monuments urbains de l'âge industriel., Esteban Castaner [et al.] . . . . .	60
Reusing and updating industrial heritage for contemporary needs and activities: a few examples of architectural intervention in Puebla, Mexico., Jose-Ramon Perez	61
<b>S.3.A — Le patrimoine industriel à l'ère numérique</b>	<b>62</b>
3D Representations of Heritage – understanding the Leavers lace machine through documents, ethnography and animation, Tom Fisher . . . . .	63
Immersive Visualization and Industrial Heritage in Texas, Gabriela Campagnol [et al.] . . . . .	64
<b>S.3.B — Acteurs-clés</b>	<b>65</b>
Around the industrial World Heritage Zollverein XII : The Ruhr Region as Industrial Cultural Landscape, Axel Foehl . . . . .	66

Potentials of Industrial and Technical Culture Heritage in Croatia – Promoters and Regeneration Projects, Zrinka Barisic Marenic . . . . .	67
Industrial heritage in Flanders (Belgium): public perception and participation rates., Alexander Vander Stichele [et al.] . . . . .	68
La manufacture de tabac de Morlaix, Michel Cabaret . . . . .	69
<b>S.3.C — Les associations</b>	<b>70</b>
The contribution of Associations to the field of industrial archaeology. Can they compensate for lack of means and concern at institutional level?, Irina Iamandescu	71
L’Institut pour l’histoire de l’aluminium, une association au cœur de l’histoire d’un matériau, Thierry Renaux [et al.] . . . . .	72
<b>S.3.D — Restauration et conservation</b>	<b>73</b>
New Lights on the Broken Old Kaoping River Iron Bridge – the creative strategies towards the preservation and conservation of the longest iron Bridge in East Asia built in the 1910s., Chao-Ching Fu . . . . .	74
Les édifices industriels dans le champ des monuments historiques : une protection particulièrement fragile, Bastien Couturier [et al.] . . . . .	75
Santa Laura Saltpeter Facility. Atacama Desert, Chile Enhancement of a World Heritage site. Interpretation Center and the Iodine Museum., Jaime Migone . . .	76
Experience through Design   Design through Experience. The Design Station Project for Izmir (Turkey), Mediterranean City of Art, Culture and Design, Sergio Taddonio [et al.] . . . . .	77
<b>S.3.E — Réseaux de transport : routes et canaux ; chemins de fer</b>	<b>78</b>
Workshops of the Companhia Paulista in Jundiai, SP: a railway heritage under threat., Antonio Soukef Júnior . . . . .	79
Outline of Worship Railway at Shimane Prefecture in Japan and a Practical use and Expansion of the former Taisha Station, Ichiro Tsutsumi [et al.] . . . . .	80
Le chemin de fer au Cameroun, Reine-Flora Saounde . . . . .	81
<b>S.3.F — Nouvelles recherches, échelles et outils</b>	<b>82</b>

Western Origins of Chinese Modern Industrial Buildings and Its Localization— Case study of Textile Mills in Yangtze Delta area, China, Yiping Dong [et al.] . . . . .	83
The factories of modernity in "Campania felix": Heritage Under Threat, Castanò Francesca . . . . .	84
the Machine Tools Project, Daniela Wellnitz . . . . .	85
<b>S.3.G — Le rôle des institutions</b>	<b>86</b>
La Région Languedoc-Roussillon et le patrimoine industriel : de la connaissance à la valorisation, les étapes d'une politique patrimoniale et culturelle, Lisa Caliste . . . . .	87
Watercourses and Hydropower - New plan for Norwegian Industrial Heritage, Unn Yilmaz . . . . .	88
Le rôle déterminant des acteurs publics dans l'inscription du Bassin minier Nord- Pas de Calais au Patrimoine mondial, Catherine Bertram . . . . .	89
<b>S.3.H — Le patrimoine industriel en Europe centrale et de l'Est</b>	<b>90</b>
Recent industrial heritage – values to be discovered, Jana Horicka . . . . .	91
Industrial heritage and the World Heritage City of Gjirokastra, Bosse Lagerqvist [et al.] . . . . .	92
Perception of socialist industrial heritage in transition society – case of Vojvod- ina, Anica Tufegdzic . . . . .	93
<b>S.3.I — Reconversion des bâtiments industriels</b>	<b>94</b>
Zsolnay Cultural Quarter, Pécs, Hungary – Case study, Erzsébet Urbán . . . . .	95
Meat Packing districts – industrial heritage as authenticity and fiction, Eva Dahlström Rittsél [et al.] . . . . .	96
The Ditherington Flax Mill project, Shrewsbury UK; "Redeveloping the oldest iron-framed buildings in the world", Geoff Rich . . . . .	97
Les Magasins généraux de Pantin, Jean-Luc Rigaud . . . . .	98
<b>S.4.A — L'habitat ouvrier</b>	<b>99</b>

Pour une arquèologie de la colonie industrielle., Pablo López Calle . . . . .	100
Industrial Heritage in Campinas, Brazil - an approach from the remains of three industrial structures., Maria Andreotti . . . . .	101
Minsk Tractor plant settlement as a place of identity construction, 1944-1964, Linitskaya Natallia . . . . .	102
Labor communities in Italy: appraisal and perspectives of a research, Giovanni L. Fontana . . . . .	103
Les " villes de compagnie " du Canada - Company towns in Canada, Lucie K. Morisset . . . . .	104
<b>S.4.B — Automobiles</b>	<b>105</b>
A volatile network – Jean Prouvés gas-stations for TOTAL, Andreas Buss . . . . .	106
The Living Document Of Our Civilisation: The Motor Vehicle, Natasa Jerina Grom	107
<b>S.4.C — Le patrimoine des entreprises en activité</b>	<b>108</b>
Old hydroelectric power stations: a case of living industrial heritage in São Paulo, Brazil, Gildo Santos . . . . .	109
" L'usine à vendre " : objet patrimonial difficile à cerner - Etude de cas à partir de l'histoire du groupe Carrefour, Jean-Marc Villermet . . . . .	110
The Road of the Wool. Material culture itineraries in the province of Biella, Northern Italy, Giovanni Vachino [et al.] . . . . .	111
Industrial Heritage of Aluminium in Cameroon, Guy Grégoire Awono Zinga . . . . .	112
<b>S.4.D — Acteurs-clés</b>	<b>113</b>
Healing wounds, constructing future: At the heart of the Industrial colony. Citizen participation in management, promotion and dissemination of Industrial Heritage: Ancient Brass Factory in Spain., Marta Vera . . . . .	114
The role of volunteers in the protection and preservation of industrial heritage in Belgium: the Rupel case, Bruno De Corte . . . . .	115
RECLAIMING DETROIT: Community-led Regeneration after Motor City, Miriam Kelly . . . . .	116

## **S.4.E — Les associations** 117

Raisonnons Réseau !, Michel Taeckens . . . . .	118
Les Associations en danger ?, Assumpcio Feliu Torras . . . . .	119
L'action renouvelée de PIWB en faveur de la sauvegarde du patrimoine industriel en Wallonie et à Bruxelles (B), et particulièrement de l'industrie lourde du 20e siècle, Jean-Louis Delaet . . . . .	120

## **S.4.F — Réseaux de transport : routes et canaux ; chemins de fer** 121

Alishan Railway at the turning point, Nai-Yi Hsu . . . . .	122
Convergences of the railway's historical process and management of railway heritage (Brazil and Argentina), Eduardo Romero De Oliveira [et al.] . . . . .	123
Transportation landscapes: an approach to the archaeology of Spanish roads, 1748/1967, Rita Ruiz [et al.] . . . . .	124

## **S.4.G — Nouvelles recherches, échelles et outils** 125

Post-colonial and transnational. Industrial heritage at the cross-roads, Jan Af Geijerstam . . . . .	126
Reuse of Rosarios built industrial heritage. A choice and a chance for sustainable conservation., Carolina Rainero . . . . .	127

## **S.4.H — Patrimoines de l'électricité** 128

Patrimoine contaminé, les processus divergents de patrimonialisation du nucléaire civil en France, Yves Bouvier . . . . .	129
Les musées européens de l'électricité : à petits pas vers le réseau ?, Claude Welty [et al.] . . . . .	130
Le Grand Paris électrique peut-il se développer sans mémoire industrielle ?, Alain Beltran . . . . .	131

## **S.4.I — Reconversion des bâtiments industriels** 132

Adaptive re-use of industrial buildings for tourism purposes: Carob warehouses in Northern Cyprus, Beser Oktay Vehbi [et al.] . . . . .	133
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Preserving historical urban warehouses in Brussels by understanding their architectural and construction history, Marianne De Fossé [et al.] . . . . .	134
Docks in Prague (Holešovice) – Winter harbour in Bratislava : construction development of warehouses in two largest towns of interwar Czechoslovakia., Katarina Haberlandova [et al.] . . . . .	135
What to do with Waterside White Elephants? Management Approaches for Historic Urban Dry Docks and Shipyards, Jeffrey L. Beard . . . . .	136
<b>S.5.B — Images de l'industrie</b>	<b>137</b>
Abandoned in Place: A Quantitative and Qualitative Photographic Approach to Documenting and Interpreting the Industrial and Technological Remnants of the United States' Space Programs, Roland Miller . . . . .	138
The Birth of Corporate Identity – Industrial Promotion Styles at the World Exhibitions, Franziska Bollerey . . . . .	139
<b>S.5.H — Patrimoines de l'électricité</b>	<b>140</b>
Du nouveau sous le Soleil. Le patrimoine de l'Énergie solaire et ses nouveaux enjeux culturels, Sophie Pehlivanian [et al.] . . . . .	141
Patrimoine hydroélectrique transfrontalier dans les Alpes, un État des lieux pour une nouvelle perspective, Anne Cayol-Gérin [et al.] . . . . .	142
Global Electropolis: The German Contribution to the Electrification of Metropolitan Chile, Valparaiso and Santiago, 1880-1925, Marion Steiner . . . . .	143
<b>S.6.A — Eduquer, transmettre : nouveaux enseignements - Médiation</b>	<b>144</b>
Enseigner la réhabilitation du patrimoine industriel dans les écoles d'architecture, Jean Bernard Cremnitzer . . . . .	145
Assessing the impact of personal connections on future interest in industrial heritage, Alison Wain . . . . .	146
Quel enseignement pour le Patrimoine industriel ?, Jean-Luc Rigaud . . . . .	147
<b>S.6.B — Régénération urbaine</b>	<b>148</b>
Un nouveau Lyon naît à la Confluence, Bruno Benoit . . . . .	149

An experience of the socio-cultural effects of industrial heritage reuse in the capital of Iran, Tehran, Sara Taymourtash [et al.] . . . . .	150
Le paysage urbain d'Eindhoven : une réinvention de son patrimoine industriel., Nolwenn Sabau . . . . .	151
DISCOVERING ASPECTS OF LOCAL HERITAGE: THE CASE OF THE INDUSTRIAL RAILWAY AT HERAKLION, GREECE, Evangelos Charitopoulos [et al.] . . . . .	152
Determining factors in the conversion of power stations, Nordkraft Power Plant Case Study (Aalborg) in Comparison with other Plants around the World, Marie Janouskova . . . . .	153
<b>S.6.C — Archives orales</b>	<b>154</b>
Voices of Steel, Howard Bossen [et al.] . . . . .	155
Discussion of solutions of transmission for industrial heritage in China— Taking a slaughterhouse in Shanghai as an example, Xiaomeng Cai . . . . .	156
Sauvegarder la mémoire de la sidérurgie liégeoise : réflexions sur l'introduction de récits de vie au musée, Marie-Aline Angillis . . . . .	157
Un patrimoine en chantier, Serena Boncompagni . . . . .	158
<b>S.6.E — Conflits de valeurs</b>	<b>159</b>
Diachronic exploitation of landscape resources – tangible and intangible industrial heritage and their synthesis suspended step, Georgia Zacharopoulou . . . . .	160
Is this factory better forgotten?, Pierre Smars [et al.] . . . . .	161
Informal industrial heritage presentation : ” Stalker Trip ”, Nadezda Solonina . . . . .	162
<b>S.6.F — Paysages</b>	<b>163</b>
La vallée du Creux de l'Enfer et l'usine SGCO de Thiers : les conditions de la réappropriation d'un patrimoine industriel., Mathilde Lavenu . . . . .	164
Bormida Valley Industrial Landscape. Interconnected industrial heritages emergencies (infrastructures, plants and company towns) as keys to rediscover and understand a fragmented XIX ad XX industrial landscape in an inner Apennine valley in North-West of Italy., Alberto Manzini . . . . .	165

Paysages culturels mineurs dans le cadre de la planification de l'Etat Espagnol, María Del Carmen Cañizares Ruiz . . . . .	166
<b>S.6.G — Musées</b>	<b>167</b>
MIAT: From a classic museum of industrial archaeology to a partner in the reconversion of deindustrialized sites., Pieter Neirinckx . . . . .	168
The Dounreay Heritage Partnership Project – An innovative approach to developing successful museum partnership working activities, James Gunn [et al.] . . . . .	169
The International Lace and Fashion Museum in Calais, Anne-Claire Laronde . . . . .	170
<b>S.6.H — Nouvelles recherches, échelles et outils</b>	<b>171</b>
The OBS project or an integrated multidisciplinary approach for the study and conservation of the collection of the chronometric observatory of Neuchâtel, Switzerland, Christian Degrigny [et al.] . . . . .	172
Guidonia, the aeronautical research centre and its new town, Edoardo Currà [et al.]	173
La papeterie en France : quel Patrimoine Industriel ? Quelles préservations et mises en valeur ?, Louis André . . . . .	174
<b>S.7.A — Eduquer, transmettre : nouveaux enseignements - Médiation</b>	<b>175</b>
Le patrimoine des villages ouvriers et des villes-usines, vers une analyse planétaire, Gracia Dorel-Ferré . . . . .	176
Studying Industrial Heritage in Serbia – between formal and informal education, Anica Tufegdzic . . . . .	177
E-learning in industrial archaeology - the experience of the FORCOPAR 2 project implementation in Romania, Irina Iamandescu . . . . .	178
<b>S.7.C — Le patrimoine industriel à l'ère numérique</b>	<b>179</b>
Delimitation of the Industrial Cultural Landscape Control Area —The Case of the Tsu Huang Kun Area in Miaoli County, Taiwan, Cheng Hsien-Hsin [et al.] . . . . .	180
Industrial heritage in a digital age, Shane Kelleher . . . . .	181

The TECTONIQ project for valorization of digital textile industrial heritage of North of France, Eric Kergosien . . . . .	182
<b>S.7.D — Perspectives européennes</b>	<b>183</b>
De nouvelles vies à inventer, Marie-Thérèse Chaupin . . . . .	184
Les influences françaises en Serbie - architecture et paysage industriel à Pančevo, Ruzic Dragana . . . . .	185
Méta-morphosis. Rencontres post-industrielles, Franck Depaifve . . . . .	186
<b>S.7.E — Conflits de valeurs</b>	<b>187</b>
Questioning the adaptive reuse of Industrial Heritage and its interventions in the context of sustainability, Damla Mısırlısoy [et al.] . . . . .	188
Decay and awareness: recent approaches to industrial heritage in Brazil, Cristina Meneguello . . . . .	189
Changes of values in rehabilitation works of a unique industrial heritage site in Budapest - The case study of former Northern Gasworks of Budapest, Zorán Vukoszavlyev . . . . .	190
<b>S.7.F — Paysages</b>	<b>191</b>
Les terrils sont-ils un patrimoine paysager à conserver ou un sinistre témoin de la vieille industrie à gommer? Exemple de la ville de Khouribga (Chaouia Ourdira-Maroc), Jihad Tigarroumine . . . . .	192
Conserving and managing the industrial landscape: international comparison of policies and practices, Massimo Preite . . . . .	193
Creating sustainable development in the Arctic: abandoned extraction sites as assets for new Arctic futures, Dan Avango . . . . .	194
<b>S.7.G — Musées</b>	<b>195</b>
L'écomusée de l'avesnois, entre mémoire industrielle et expérimentation, Eric Fossey	196
Le Musée de la Rubanerie cominoise, outil vivant pour la transmission d'un patrimoine industriel textile singulier., Olivier Clyncemaillie . . . . .	197

Trente ans au service du patrimoine industriel du centre du Mexique: la protection et la mise en valeur du district minier de Pachuca et Real del Monte, Belem Ovieda 198

<b>POSTER Session 1</b>	<b>199</b>
Sampaio Ferreira & Co. factory in river Ave watershed, at Portugal: an Industrial Archaeology study., Guilherme Pozzer . . . . .	200
Matera's Mulino Alvino, recovery and refurbishment, Anna Mangiatordi . . . . .	201
The transformation of industrial heritage areas. Planning for the Chania's industrial areas., Despina Dimelli . . . . .	202
La manufacture des tabacs de la Belle de Mai à Marseille, 25 ans après sa fermeture : réflexions autour de sa reconversion à travers le prisme d'une machine à confectionner les cigarettes., Katia Baslé . . . . .	203
<b>S.8.A — Images de l'industrie</b>	<b>204</b>
Photography and Henry Ford's River Rouge Plant: A love affair across time, Howard Bossen . . . . .	205
Presentation, Re-presentation, Transformation: Public Art as a Medium of Transmission for Mining Heritage, Anne Thomas-Cumming . . . . .	206
Photography and Visual Culture of the Industry and Its Workers, Elisa Pomari .	207
<b>S.8.B — L'habitat ouvrier</b>	<b>208</b>
Vila Ferroviária de Paranapiacaba: reflexões sobre uma experiência de gestão sustentável da paisagem cultural, Vanessa Figueiredo . . . . .	209
Pour un inventaire des villes-usines européennes par le paysage, Simon Edelblutte	210
The Panzano Village (Monfalcone, Italy, 1908-1927), Edino Valcovich [et al.] . . .	211
<b>S.8.C — Eduquer, transmettre : nouveaux enseignements - Médiation</b>	<b>212</b>
Youth Engagement and City Building, Desiree Valadares . . . . .	213
the young and the active: a road to push heritage into the future, Federico Ottolenghi [et al.] . . . . .	214

**S.8.D — Perspectives européennes** **215**

Conservation et mise en valeur du patrimoine du lin en Europe, Adriaan Linters [et al.] . . . . . 216

What is ERIH- The European Route of Industrial Heritage?, Christiane Baum [et al.] . . . . . 217

**S.8.E — Les nouveaux territoires de l'art** **218**

La Friche la Belle de Mai et le Tramway : politiques et trajectoires de reconversion en lieu de création contemporaine, Marta Rosenquist . . . . . 219

The conservation and reuse of Cape Town's grain elevator as the Museum of Modern Art for Africa, David Worth . . . . . 220

Le seau de vapeur - l'expérience sensorielle et affective dans le processus de patrimonialisation, Olivier Muzellec [et al.] . . . . . 221

**S.8.F — Paysages** **222**

The Study on the Compositional Demarcation of Taiwan's Tsu- Huang- Kun Industrial Culture Landscape, Chengche Chen [et al.] . . . . . 223

Industrial Lansdcape of Llobregat river., Casanelles Eusebi . . . . . 224

Sugar refineries and cultural landscapes. Models and routes for the knowledge and valorization of an otherwise soon dying heritage, Alessandro Massarente . . . . . 225

**S.8.G — Tourisme industriel** **226**

Inventing Industrial Heritage in China: Tourism and Deep History, Andrew Johnston227

ARCHI.PLA – An app for industrial heritage, Ramello Manuel Fernando . . . . . 228

**S.8.H — UNESCO / ICOMOS / TICCIH** **229**

Maximising the Benefits of an industrial World Heritage nomination: The Forth Bridge, Miles Oglethorpe . . . . . 230

Industrial World Heritage, our moment is now! Global and local contexts in industrial World Heritage and the future for TICCIH., Fleetwood David [et al.] . . 231

Heritage Recognition of Industrial Site Karabük and Effects of the Unesco Designation on Preservation Process of Karabük, Meltem özkan Altınöz . . . . .	232
<b>S.8.I — Gestion et développement</b>	<b>233</b>
La Cité des électriciens, un projet pilote pour des enjeux régionaux, Philippe Prost	234
The Ural's industrial heritage: conception of the historical and cultural centers development, Olga Shipitsyna [et al.] . . . . .	235
<b>S.9.A — Régénération urbaine</b>	<b>236</b>
Industrial Heritage as a Driver of Urban RegenerationExemplified as the Conservation Project of Formosa Plastic Corporation's Kaohsiung (Taiwan) Plant, Ping-Sheng Wu [et al.] . . . . .	237
Industrial heritage, Urban Regeneration, and Architecture: Lessons from Brazil and USA, Gabriela Campagnol . . . . .	238
Le patrimoine minier du Nord-Pas de Calais comme levier d'une politique urbaine exigeante, Gilles Briand . . . . .	239
<b>S.9.B — L'habitat ouvrier</b>	<b>240</b>
Les logements Fiat Case Sud en Italie. L'étude de cas de Termoli., Maddalena Chimisso . . . . .	241
The “Uralmash Workers Village” in Ekaterinburg (Russia). Origins, development and transformation, perspectives (1926-2014)., Celetti David . . . . .	242
<b>S.9.C — Eduquer, transmettre : nouveaux enseignements - Médiation</b>	<b>243</b>
Publishing the IndustrieKultur Magazine – a “joint venture” between professionals and amateurs, Norbert Tempel . . . . .	244
Fournies - Médiation et patrimoine dans un contexte social et économique difficile, Laurent Nachbauer . . . . .	245
Continuity and Change in German Industrial Archaeology – the Ruhr example, Dr. Alexander Kierdorf . . . . .	246
<b>S.9.D — Perspectives européennes</b>	<b>247</b>

Industrial Heritage in Europe, Transnational Perspectives, Paul Smith . . . . .	248
The European character of Europe's industrial heritage: some cases in point, Pierre Laconte . . . . .	249
Les manufactures de draps fins aux XVIIe et XVIIIe siècles, une industrie européenne par excellence, Jean-François Belhoste . . . . .	250
<b>S.9.E — Les nouveaux territoires de l'art</b>	<b>251</b>
Patrimoine industriel et Art Contemporain, que peut-on attendre de ce rapprochement ?, Gérard Salagnon . . . . .	252
Bohain en Vermandois, la friche textile abandonnée, devenue théâtre citoyen et engagé, Miléna Kartowski-Aïach . . . . .	254
<b>S.9.F — Paysages</b>	<b>255</b>
A framework for analysis and comprehension of large scale port areas as technocultural landscapes - decomposition method and its application to the port of Osaka, Suzanne Sebo [et al.] . . . . .	256
Quelles valeurs et quels sens pour les paysages industriels ?, Marie Patou . . . . .	257
Architectural and semantic transformation of urban industrial landscape of Riga, Anita Anteniske . . . . .	258
Emergent traces from a mining district - The case of the Greece's mines of lignite in Ptolemais, Evdokia Mimikou [et al.] . . . . .	259
<b>S.9.G — Tourisme industriel</b>	<b>260</b>
KARAKURI and TOYOTA as Resources of Industrial Tourism, Masami Morita [et al.] . . . . .	261
Industrial Heritage Tourism literature. A systematic review and meta-analysis, Maria Concetta Perfetto . . . . .	262
Sulphur Mines of Sicily: Cultural and Tourism Itinerary, Maria Carcasio . . . . .	263
The idea of “Digital CultHeriScape” and the changing of the industrial landscape’s perception in Web 3.0 Era Tourism, Marco Trisciuglio [et al.] . . . . .	264

**S.9.H — UNESCO / ICOMOS / TICCIH** **265**

Comparing the incomparable Forth Bridge, Watson Mark . . . . .	266
Le patrimoine du salpêtre chilien (XIXe-XXe siècles) et sa valorisation, Valentine Aldebert . . . . .	267

**S.9.I — Gestion et développement** **268**

Le rendement économique et social du patrimoine industriel en Catalogne, Jaume Perarnau Llorens . . . . .	269
”Adaptive Reuse” of Industrial Heritage for “The Experience Economy” Purpose in Historical City Center of Ayvalik, Nagme Ebru Aydeniz [et al.] . . . . .	270
Les ocres du Luberon : un paysage industriel pour quoi faire ?, Mathieu Barrois .	271

**S.10.A — UNESCO / ICOMOS / TICCIH** **272**

Le Bassin minier du Nord Pas de Calais : Une stratégie d'aménagement et de développement fondée sur la protection et la valorisation d'un paysage industriel inscrit sur la Liste du patrimoine de l'UNESCO, Raphaël Alessandri . . . . .	273
Pick the Best: The World Heritage of the Timber Industry, Paul Mahoney . . . . .	274
Industrial Cultural Landscapes and World Heritage: Examples and Definitions. A report on two successive international congresses in Germany 2013 and 2015, Rolf Hoehmann . . . . .	275
The Future of the TICCIH/ICOMOS World Heritage Studies in promoting Industrial Heritage Nominations, Stephen Hughes . . . . .	276

**S.10.B — Automobiles** **277**

Creative brand and material / immaterial heritage enhancement. The Turin UNESCO Creative City application for the historical automotive heritage and the design, Rossella Maspoli . . . . .	278
MOTORING AND HERITAGE.An integrated approach to the studies of the impacts of the sector in the contemporary societies, its potentials as driver for cultural development and the UNESCO's cultural promotion, Rossella Maspoli . . . . .	279
Car Project. The architectural heritage and landscape of the car, John Minnis . .	280

**S.10.C — Musées****281**

Les Soieries Bonnet : de l'usine au musée. Réflexion autour d'un couple improbable., Anne-Sophie Vallée . . . . .	282
Textile Museums in Mexico Revisited. New proposals for the twenty-first Century, Humberto Morales Moreno . . . . .	283
Le Musée portuaire de Dunkerque, de l'ancrage territorial à la découverte de nouveaux horizons, Marie-Laure Griffaton . . . . .	284

**S.10.D — Nouvelles recherches, échelles et outils****285**

Le petit patrimoine industriel wallon: connaissance, reconnaissance, projets de mise en valeur. Projet pilote : la galerie d'exhaure des sites miniers du Rocheux, Oneux, Theux (Belgique), Pierre-Louis François . . . . .	286
Transmitting Aem's Industrial Heritage. From archival sources to the electrical landscape., Fabrizio Trisoglio [et al.] . . . . .	287
A mise en abyme of the industrial heritage: The Archives nationales du monde du travail in the former Motte-Bossut spinning mill (Roubaix), Vincent Bouilly [et al.]	288

**S.10.E — Conflits de valeurs****289**

Conflicts of Value, Cultural Consumption and Destination of Industrial Heritage Sites in Brazil, Priscila Henning . . . . .	290
Préservation du patrimoine industriel et restauration écologique, de l'incompatibilité à la complémentarité : inventer un nouvel équilibre nature/culture, Hélène Melin	291
Landscape of Cement Industrial Cities, Masaaki Okada . . . . .	292

**S.10.F — Avant la Révolution industrielle****293**

Archéologie de l'industrie ou Archéologie du Travail? Ville-usines et usine-doubles, deux cas significatifs du Patrimoine (proto)industriale italien., Gregorio Rubino .	294
Technical Evolution of China Sichuan Zigong Salt-well Drilling, Boying Liu . . .	295
Les “ patios de beneficia ” de la région de Pachuca del Monte (Hidalgo, Mexique), un patrimoine exceptionnel à mettre en valeur., Belem Oviedo . . . . .	296

**S.10.G — Régénération urbaine****297**

Transforming Strijp S : from Philips' industrial site to new residential and creative area., Irene Curulli [et al.] . . . . .	298
Habiter et travailler dans les usines désaffectées. Un projet de recherche en Andalousie., Rafael Serrano Sáseta [et al.] . . . . .	299
From deactivate landfill to “open museum of sustainability”: Victor Civita square in São Paulo, Brazil., M. Elena Castore . . . . .	300

**S.10.H — Le patrimoine industriel en Europe centrale et de l'Est****301**

Paysages industriels miniers roumains., Gabriela Pascu [et al.] . . . . .	302
Too much to handle? Legacy of Estonian industrialization, Henry Kuningas . . .	303
From Homes to ‘New Territories of Art’. New Trends in Developing Postindustrial Sites in Poland, Piotr Marciniak . . . . .	304

**S.10.I — Patrimoines de l'électricité****305**

Itatinga Hydropower plant: an industrial landscape, Denise Geribello . . . . .	306
L'aménagement hydroélectrique de Marèges, des installations conçues à l'échelle d'un territoire, Céline Barbin . . . . .	307
Archéologie, Ethnographie, Géographie culturelle et Histoire du Patrimoine Industriel pour comprendre les freins de la modernisation du Mexique. La compagnie hydroélectrique de Tlaxcala et ses acteurs, 1902-1937., Mariano Torres . . . . .	308

**S.11.A — UNESCO / ICOMOS / TICCIH****309**

The World Heritage Nomination Mining Cultural Landscape Erzgebirge/Krušnohoří, Helmut Albrecht [et al.] . . . . .	310
Industrial Heritage and international designations. The role of UNESCO frameworks, Giorgio Andrian . . . . .	311
The World Heritage Nomination Mining Cultural Landscape Erzgebirge/Krušnohoří, Helmut Albrecht . . . . .	312

**S.11.B — Automobiles****313**

Preservation in active use – challenges and new approaches for historic vehicles in private collections, Gundula Tutt . . . . .	314
<b>S.11.C — Musées</b>	<b>315</b>
Ecomuseo del río Genil y su Vega (Guadalgenil). La antigua azucarera de Santa Fe (Granada), Javier Gallego Roca . . . . .	316
Industrial Gas Museum in pursuit of Tourism/A chimera or an opportunity?, Maria Florou [et al.] . . . . .	317
Museum and industry: partnership for conservation and exhibition of the industrial heritage, Francesca Olivini . . . . .	318
<b>S.11.G — Régénération urbaine</b>	<b>319</b>
Use of redundant industrial buildings as injections to the cultural sector in Norway, Grete Swensen [et al.] . . . . .	320
<b>S.11.H — Le patrimoine industriel en Europe centrale et de l'Est</b>	<b>321</b>
Researching the 20th Century Industrial Heritage in Romania: Hunedoara Steelworks from the peak of its industrial development to tabula rasa, Oana Cristina Tiganea . . . . .	322
The Role of Aesthetics in the Regeneration of Former Industrial Areas, Aida Štelbien .	323
Industrial Heritage of Kryvyi Rih (Ukraine): condition, methodology of study, future, Vladimir Kazakov . . . . .	324
<b>POSTER Session 2</b>	<b>325</b>
The Comparative Study of the Tokyo Regeneration Plan from the Great Kanto Earthquake (1923), and Overseas Cities, Takashi Itoh . . . . .	326
Le territoire d'Epinac, à la recherche d'une nouvelle cohérence, Séverine Tillequin	327
Decorative Tiles of the late 19th Century and early 20th Century in Brazilian Southeast, Renata Poliana Cezar Monezzi . . . . .	328
Using the Traditional Management Model for Conservation the First Samples of Iranian Industrial Heritage in Traditional Windmills, Aydin Javani Dizaji [et al.]	329

HIT OR MISS, 150 Years of Torpedo Research and Development (R&D), Miljenko Smokvina . . . . .	330
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<b>Liste des auteurs</b>	<b>331</b>
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# **Session 1 - Keynotes**

# L’inscription du bassin minier du Nord Pas-de-Calais sur la liste du patrimoine mondial de l’humanité

Jean-François Caron \*<sup>1</sup>

<sup>1</sup> Vice-président Région Nord-Pas-de-Calais – Vice-président Région Nord-Pas-de-Calais – France

Le Bassin minier a été inscrit au Patrimoine mondial en 2012 en tant que “ paysage culturel ”. Ce territoire autrefois rural, s’étirant de la frontière belge à l’est, aux collines de l’Artois à l’ouest, est jalonné de trésors techniques et architecturaux issus de trois siècles d’exploitation du charbon.

Ce paysage, dont l’horizon a été redessiné par les terrils, offre de multiples facettes, tant l’impact de la mine a pris des formes différentes au sein de cette bande de territoire de 120 kilomètres de long et de 12 kilomètres de large. 4000 hectares de paysage abritant 353 biens remarquables, soit 25 % de la totalité du patrimoine minier sont concernés par l’inscription.

Nous reviendrons sur les étapes importantes qui ont marqué les 10 années de travail de préparation de la candidature, et les enjeux pour le futur.

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\*Intervenant

# Musées et patrimoine industriel au XXI siècle, quels enjeux pour les musées de demain ?

Anne-Catherine Robert-Hauglustaine \* 1

<sup>1</sup> Director General ICOM – Director General ICOM – France

“ Musées et patrimoine industriel, deux notions à (re)conjuguer dans un environnement culturel en constante évolution. Des premiers sites industriels transformés en musées dans les années 1980 aux parcs à thèmes industriels dans les années 2000, une large gamme de reconversion de sites a été expérimentée au cours de ces dernières décennies. A partir des années 1990, la création de musées accompagne la reconversion des régions industrielles. Mais quelle place pour les musées, quels enjeux ?

La reconnaissance de sites du patrimoine industriel par le Comité du Patrimoine mondial de l’Unesco joue un rôle indéniable dans le développement économique et culturel de ces lieux emblématiques.

Le projet de “ Recommandation sur la protection et la promotion des musées et des collections, de leur diversité et leur rôle dans la société ” élaboré par l’ ICOM et l’Unesco et présenté en mai 2015 est né d’une volonté d’étendre le rôle et les responsabilités des musées ainsi qu’à leur place dans notre société. Le seul instrument normatif international date de 1960.

Qu’en est-il aujourd’hui des liens avec les musées ? Comment développer un intérêt soutenu pour le patrimoine matériel et immatériel de ces régions ? Quels musées y associer ?

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\*Intervenant

# Des (vieilles) machines et des hommes : de l'usage du patrimoine industriel dans les sociétés postcoloniales

Lucie K. Morisset \*† 1

<sup>1</sup> UQAM, Département d'études urbaines et touristiques École des sciences de la gestion (UQAM) – Canada

Considérer le patrimoine industriel à l'aune du changement de notre regard sur le passé des territoires, ainsi que nous invite ce congrès de TICCIH, permet aussi d'ouvrir quelques pistes pour repenser le patrimoine de façon générale, par-delà l'acte de sacrifice bellement décrit par Krysztov Pomian. Le retrait de la sphère de l'utilitaire pour consacrer un objet aux “êtres supposés habiter l'au-delà” institue en effet le patrimoine comme un passif bien peu propice à susciter, à “l'âge de la discontinuité” (P. Drucker), la participation sociale que tous appellent de leurs voeux. La dévaluation caractéristique du patrimoine industriel, d'une part, et, d'autre part, les cités ouvrières et, peut-être plus encore, les villes de compagnie de l'Amérique, incitent en effet à approfondir la question de la valeur économique d'usage telle que l'a explorée Xavier Greffe. Elles invitent certainement à revoir la position et le rôle de l'utilisateur du patrimoine, qui ici n'est pas qu'un visiteur, puisqu'il est aussi souvent un habitant. Et si ce patrimoine industriel n'était pas qu'une trace du passé, mais bien aussi le réceptacle d'usages collectifs propices à engendrer, par delà le discours des experts, une production patrimoniale polyarchique ? Et si le patrimoine industriel, à l'âge de la discontinuité, conduisait à créer des communautés plutôt que des monuments ?

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\*Intervenant

†Auteur correspondant: morisset.lucie@uqam.ca

# Technologies numériques et patrimoine. Une amitié de 30 ans

Robert Vergnieux \*<sup>1</sup>

<sup>1</sup> ARCHEOVISION, CNRS – Université de Bordeaux (Bordeaux, France), CNRS – France

La Conception Assistée par Ordinateur a été mise très tôt au service du patrimoine archéologique par le biais du "mécénat technologique" industriel; quelque 30 ans plus tard, ces mêmes technologies sont utiles à l'étude, la sauvegarde et la valorisation du patrimoine industriel. Entre recherche, restauration, simulation, valorisation, sauvegarde et management, le patrimoine industriel de demain dispose de l'atout exceptionnel que représentent les technologies du numériques. Cependant, si le champ des technologies numériques utilisées est dopé par les innovations, encore faut-il que les modèles numériques produits à ces occasions participent à l'effort commun de valorisation, produisent un accroissement de connaissances et soient transmissibles et compatibles avec nous même dans le temps.

En archéologie, ce sont plus de 30 années qui ont été nécessaires pour que les usages du numérique se structurent. Pour le patrimoine industriel gageons que TICCIH contribue à réduire la longueur incontournable de ces phases de stabilisation.

A partir d'expériences pionnières on suivra comment la communauté des chercheurs s'est appropriée ces outils. Plusieurs cas d'étude menées depuis souligneront la grande complexité de ces études et la nécessité d'une réflexion méthodologique globale face au patrimoine en général et au patrimoine industriel en particulier.

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\*Intervenant

## **S.2.A — Industrial Heritage in Digital Times**

# 3D modélisation informatique et patrimoine industriel

Jean-Louis Kerouanton \* <sup>1</sup>, Florent Laroche \* <sup>†</sup>

<sup>1</sup> Centre François Viète : épistémologie, histoire des sciences et des techniques – Université de Nantes : EA1161, Université de Bretagne Occidentale (UBO), Université de Bretagne Occidentale [UBO] – Faculté des Sciences et des Techniques 2 rue de la Houssinière BP 92208 44322 NANTES Cedex 3, France

Les évolutions récentes des questions du numérique et de la modélisation informatique ont fait considérablement avancer les problématiques de recherche et de valorisation dans les domaines de l'histoire et du patrimoine. Dans la lignée des travaux générés par Michel Cotte (Dossier spécial de Documents pour l'Histoire des techniques n°18, septembre 2009) et de la session organisée précédemment par les auteurs de la proposition actuelle (Kerouanton, Laroche) à Tamperé en août 2010 (Digital uses for museology : a new way to describe technical and industrial heritage, in: Reusing the Industrial Past, ICOHTEC-TICCIH), il s'agira de faire le point des problématiques actuelles, de ses développements envisageables mais également des problématiques, voire des inquiétudes, qu'elle soulève.

Seront ainsi présentés et discutés les apports de la modélisation en terme de recherche fondamentale sur la connaissance des sites et des techniques de l'industrie, la compréhension de leur histoire en terme de développement topographique et bâti, la compréhension des procédés. Cette connaissance de base sera mise en rapport avec les traces patrimoniales (du vestige à l'usine en fonctionnement). Se pose ainsi naturellement la question de l'importance de ces nouvelles méthodes dans le processus de patrimonialisation et de valorisation. Danger pour certains comme alibi possible de la destruction, la modélisation et la valorisation numérique (tout particulièrement la 3D mais pas également les systèmes d'infigation géographiques ou la mise en oeuvre des bases de données relationnelles) peuvent bien au contraire apparaître comme un des éléments nécessaires de la connaissance et de l'explication à l'heure du web et de la réalité virtuelle. La session fera l'objet de discussions autour d'exemples français mais également internationales.

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\*Intervenant

<sup>†</sup>Auteur correspondant: florent.laroche@ec-nantes.fr

# The SCHEMA-TEC project or the development of a method to schematically represent scientific, technical and watch heritage artefacts in operating condition

Christian Degrigny \*†<sup>1</sup>, Guido Köhler \*

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<sup>1</sup> Haute Ecole Arc Conservation-restauration, Neufchâtel – Haute Ecole Arc Conservation-restauration, Campus Arc 2, Espace de l'Europe 11, 2000 Neuchâtel - Suisse, Suisse

<sup>2</sup> Zürcher Hochschule der Kunste, Zürich (ZHDK) – Zürcher Hochschule der Kunste, Zürich, Suisse, Suisse

There is no descriptive methodology for technical, scientific and watch heritage artefacts adapted to the conservation-restoration field that would allow the understanding and representation of the mechanisms involved in their current conservation state.

The SCHEMA-TEC project aims at developing a method to schematically represent such objects that is not limited to the understanding of their functionality but covers as well the whole conservation project (condition state, diagnostic and appropriate conservation proposals). Therefore the schematic representations are not only used to observe and describe the objects but to analyse them and share information in an interdisciplinary way between the actors of the project.

The levels of visualisation developed use an intuitive approach based on the macroscopic observation of the objects and continues with the study of functional parts and the associated mechanisms. Based on the use of 2D representation (such as Illustrator®) or 3D animation (Solidworks®) softwares, they leave considerable freedom of creation to the professionals involved. FAST and SADT diagrams normally employed in the engineering sector help to precise the link between an element of an object and its function and contribute to the choice of the best conservation-restoration proposal.

The data collected during SCHEMA-TEC (methodology, case studies with all raw materials (pictures, archival sources, etc.) and new tools (schematic representations and animations, etc.)) will be inserted in a specifically designed and open-source database. It will enable any professional interested in technical, scientific and watch heritage objects to benefit from the knowledge gained during the project and to contribute to its further development.

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\*Intervenant

†Auteur correspondant: christian.degrigny@he-arc.ch

# De la vapeur au numérique

Joël Debout \*† 1

<sup>1</sup> Université de Technologie de Compiègne (UTC) – Université de Technologie de Compiègne – rue du Dr Schweitzer Compiègne, 60200 FRANCE +33 3 44 23 44 23, France

à venir

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\*Intervenant

†Auteur correspondant: joel.debout@yahoo.fr

## **S.2.B — Stakeholders**

# Planning and management of industrial heritage as a community space -in the case of "Moji red brick Place" in Japan-

Ichihara Takeshi \*†<sup>1</sup>

<sup>1</sup> Kyushu international university – Japon

Japan's Industrial heritage which does not understand the practical use may often be destroyed. This study introduces an example to the international problem how an industrial heritage should be utilized in Japan.

The industrial heritage "Moji red brick Place" which is an object of this study is in suburb of Moji port that is a trading port of the Kyushu area in Japan made in the 1880s. Suzuki & Co. build crop's factories in the suburbs of Moji port. It changed Moji port to the International trading port in 1900s. In 1913, Suzuki & Co. built Teikoku brewery factories, this brewery continued operation till 2000. This brewery is Regenerated to "Moji red brick Place" now.

"Moji red brick Place" is a common name of four old buildings which were a part of the Teikoku brewery factories. In 1996 Closing determination of the SAPPORO BREWERIES Kyushu factory(Old Teikoku brewery). Collaborates with Kitakyushu city, SAPPORO BREWERIES and residents, town-planning are begun. And Kitakyushu city determined to save and utilize a part of brick heritages. 'Moji red brick club' () established in 2002, that was established in order to utilize these industrial heritages.

"Moji red brick Place" are four buildings restored by Sapporo beer Co., Ltd and Kitakyushu city, etc. (Town redemarcation project).

All buildings are managing by Non-profit Organization, 'Moji red brick club' now. Most incomes of this NPO are tenant incomes by practical use of these heritages. NPO has invited a marriage ceremony, a classic concert, the live, etc. to this area. For example, old warehouse is converted into the rental assembly hall, the conference room, and also the restaurant. And Old office is converted into 'Kitakyushu beer & brick museum in Moji' as a local museum about beer. The NPO is managing the heritages independently financially from administration. The initial investment concerning building repair is excluded. This industrial heritage is positively used as a local exchange institution rather than sightseeing now.

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\*Intervenant

†Auteur correspondant: iota\_titanus@yahoo.co.jp

# Role of the main actors of the Urals metallurgical industry in the preservation of its heritage

Elena Alekseeva \* 1

<sup>1</sup> Institute of History and Archaeology, Russian Academy of Sciences, Ural Branch (IIA UrO RAN) – Sophia Kovalevskaya street, 16 Eketarinburg 620990, Russie

As shown in our latest research (Alekseev V., Alekseeva E. L'Oural métallurgique, histoire et patrimoine. Edition française de Gracia Dorel-Ferre. Chambéry. Université de Savoie. 2011. 178 p.) the world industrial civilization has left a diversified and rich heritage in one of the major industrial regions of Russia – the Urals. It embraces multi-factory and mining complexes with industrial infrastructure, sophisticated equipment and technology; military-industrial complex; hundreds of settlements; enormously transformed natural landscape with the changed composition of water and air; huge transportation networks; specific social structure; developed system of generation and transmission of knowledge; regional mentality, Ural character, reflected in everyday life and artistic perception of the world. The presentation will be focused on the main actors of the Urals metallurgical industry in the XXI century and their role in the preservation of industrial heritage in the Urals, specifically: the Tube metallurgical company that financed conservation of the mid XIXth century blast-furnace in Polevskoy and the Ural mining-metallurgical company that established a remarkable Military museum of the Battle Glory of the Urals in Ekaterinburg.

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\*Intervenant

# Le patrimoine industriel en région bruxelloise, 25 ans d'actions

Guido Vanderhulst \*†<sup>1</sup>

<sup>1</sup> BruxellesFabriques – Belgique

En 1990, Bruxelles a été au cœur de l'organisation du 7ème Congrès du TICCIH. Il nous semble, 25 ans plus tard, intéressant de présenter l'évolution du patrimoine social et industriel de cette ville. En effet, le patrimoine bruxellois a acquis depuis ses titres de notoriété. Il est reconnu comme composante importante de l'identité et de l'aménagement du territoire régional. C'est essentiellement les associations qui ont été les initiatrices (particulièrement La Fonderie) de cette évolution. Guido Vanderhulst, comme expert et membre de la Commission Royale des Monuments et Sites, a joué un rôle important dans la prise de conscience de la valeur du patrimoine au niveau de l'évolution urbaine.

Le sauvetage et la réaffectation de certains sites sont devenus emblématiques de ce patrimoine urbain bruxellois comme Tour & Taxis, d'anciennes brasseries ou encore minoteries. La vocation économique, culturelle, touristique, le "goût du jour" pour ce patrimoine sont désormais acquis. Malheureusement, d'autres sites ont été perdus malgré leur valeur sociale, comme les anciennes Poêleries Godin à Laeken ou l'avenue du Port.

D'autres analyses et projets s'inscrivent dans cette évolution actuelle, comme les quartiers portuaires, les rives des canaux, objets aujourd'hui d'une pression exponentielle des promoteurs et autorités pour rencontrer le développement démographique sur un territoire limité pour des raisons politiques. L'affectation d'anciens espaces et bâtiments industriels en logements plutôt haut de gamme pose systématiquement le dilemme d'espaces encore nécessaires aux entreprises manufacturières, porteuses d'emplois pour les populations peu qualifiées.

L'exposé s'efforcera de faire apparaître, sans doute au cas par cas et grâce à des visuels, par quelles actions, quelles associations surtout, quelles dynamiques, quels apports scientifiques, cela a été ou non possible ?

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\*Intervenant

†Auteur correspondant: gvanderhulst@skynet.be

## S.2.C — Associations

# Citizens, associations and approaches to managing Britain's industrial heritage in the twenty-first century

Ian Bapty \*<sup>1</sup>

<sup>1</sup> Ironbridge Gorge Museum Trust (IGMT) – Ironbridge Gorge Museum, Coalbrookdale, Telford, Shropshire, TF8 7DQ, Royaume-Uni

The conservation of industrial heritage in the UK has long been linked to citizen action organized through charitable associations. Interestingly, this approach contrasts with a greater degree of direct government involvement in the preservation of industrial heritage in many other parts of Europe. Against a twenty-first century context of Europe-wide austerity, the British experience potentially offers important insights, especially where a new emphasis on the role of volunteers and associations is often mooted as one way forward for the care and development of our shared industrial past.

In Britain, the formation of industrial heritage preservation associations gathered pace after the Second World War (although the Cornish Engines Preservation Committee had been set up as early as 1936). Such bodies chimed with post-war ideals of citizenship on the one hand and nostalgia for declining industry on the other. Notable milestones included the pioneering rescue of the Talyllyn Railway by volunteers in 1951, and the establishment of the Ironbridge Gorge Museum Trust in 1967 as part of the Telford New Town development. Through the 1960s and 70s this process was in effect sanctioned via government policy. While many traditional historic sites were preserved by the state (or other nationwide bodies such as the National Trust), the new industrial heritage was typically placed either in the care of small charitable trusts or local councils.

The legacy today is mixed. In England alone, around 650 former industrial sites are open to the public and these are mainly run by charitable associations and local authorities. Research has shown that these sites are highly valued by the public and make a major economic and social contribution to the well-being of modern communities. Yet at the same time, pressing problems include issues of volunteer recruitment, technical skills transfer, adapting to a radically changing funding and visitor environment, and achieving modern 'best practice' conservation, management and visitor presentation standards.

Drawing in part on the work of the England-wide Industrial Heritage Support Officer (who is based with the Ironbridge Gorge Museum Trust and funded by English Heritage), this paper will explore the experience and challenges of conserving industrial heritage through the work of volunteer based associations. It will also set out some of the ways – such as the formation of regional self-help networks – that UK industrial heritage bodies are improving their capacity in the present times, and will consider the broader relevance of these approaches.

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\*Intervenant

# Le PREAC Mémoires du Travail

Alain Chopin \* 1

<sup>1</sup> PREAC Mémoires du Travail – Association Mémoires du Trav – 57 rue de Flers 59000 Lille, France

L'association (qui fut créée en 2006) porte la démarche du PREAC (Pôle de ressources pour l'éducation artistique et culturelle). Mémoires du travail, placé sous la double tutelle du ministère de l'Education (via le Canopé) et du ministère de la Culture (via la DRAC), partenaires institutionnels historiques.

A ce titre, l'association organise régulièrement des formations qui s'adressent aussi bien aux professionnels du milieu culturel, qu'au personnel de l'éducation nationale et aux porteurs de projets associatifs. Ces formations invitent différents intervenants (universitaires, professionnels, auteurs...) qui grâce à une approche pluridisciplinaire offre une ouverture littéraire, photographique ou artistique... ce qui permet sans cesse de questionner les différents points de vue sur le monde du travail et son patrimoine industriel.

De plus Mémoires du travail organise des rencontres appelées Bar des Mémoires. Ces moments de convivialité ouverts à tous et se déroulant dans un café, ont pour principe de croiser des regards d'universitaires, de professionnels, d'ouvriers, de riverains, d'artistes pour comprendre le passé et son articulation avec les futurs projets urbains. Chaque rencontre est couplée à une présentation artistique.

Enfin pour poursuivre sa démarche de formation l'association a synthétisé en un ouvrage plusieurs actes de colloques ayant pour thème : Mémoires et Territoires : repères pour l'action.

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\*Intervenant

# The widespread development of industrial heritage of the Monferrato Casalese: the cement landscape

Maria Consolata Buzzi \*<sup>1</sup>, Gian Mario Rossino

<sup>1</sup> Associazione Il Cemento – Corso Valentino 95, 15033 Casale Monferrato (AL), Italie

"Il Cemento nell'Identità del Monferrato Casalese" is a cultural association of public (eight municipalities) and private entities that was founded in 2006 to preserve the archeological heritage of the region's cement and binder industry. With scientific help from the Polytechnic University of Turin and substantial financial support from the Fondazione CRT, the association has been able to clearly define the impact and contribution made by the industry and its spin-off activities on Casale and its surrounding municipalities (Ozzano, Coniolo, Trino, Camino, Pontestura, San Giorgio, Morano sul Po) from the second half of the 1800s until the 1970s. The association is now transitioning into a new, more operational phase that is directly involved with the region itself and in line with European directives, a reflection of the growing interest of citizens in previously abandoned industrial sites, which after redevelopment and repurposing, reinforce the sense of belonging of the inhabitants, keep the historical memories alive for future generations, and offer places of interest for tourists. The Monferrato Casalese region is dotted with traces of its particular industrial past. With their networks of physical and social relationships, factories extend well beyond their boundaries, creating a system of houses, streets, infrastructure, services, etc., and also quarries in this particular case. The traces that can be seen outside urban areas have assumed an esthetic value, due not only to their specific forms or series of structures and buildings but also the positive relationship they have established with their surrounding environment after a spontaneous process of renaturalization. On the other hand, factories in urban areas must deal with the economic needs and interests associated with transforming the city.

As part of the process of developing the value of this cultural heritage, the awareness phase is now followed by strategies to preserve, conserve, manage and use the assets in accordance with models derived from similar experiences in Europe and Italy, ensuring that they are widely implemented and are included in the development of themed itineraries and creation of functional and symbolic attractions within this network.

The communication will discuss the operational practices for the cataloging of assets, the interaction between the research institutions and the stakeholders of the territory, with particular attention to the products of research (publications, conferences and app mobile devices). In addition, the master plan to enhancement of the local area will be presented, with particular attention to the project of recovery and reuse of the building referred to as "the Paraboloide" of Casale Monferrato.

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\*Intervenant

## **S.2.D — Restoration and Conservation**

# Les formations à la conservation-restauration des collections d'objets techniques et industriels

Benedicte Rolland-Villemot \* 1

<sup>1</sup> Institut national du patrimoine (INP) – Ministère de la Culture et de la Communication – Département des restaurateurs 150 avenue du président Wilson 93210 Saint-Denis La Plaine, France

Le code du patrimoine, pour les collections des musées de France reconnaît des critères de qualification et d'habilitation : des restaurateurs formés au niveau du master 2 dans des instituts de formation en restauration français ou européen. Or la déontologie de la conservation-restauration selon la théorie de Césare Brandi a été construite autour de l'œuvre d'art unique et de l'authenticité. Or le patrimoine industriel et les collections techniques posent la question de la frontière entre restauration, restitution, réparation. Comment alors associer à des restaurateurs du patrimoine, d'autres détenteurs de savoir faire? comment enseigner dans les écoles de restauration du patrimoine, des connaissances autour de l'histoire des techniques et des spécificités des collections d'objets industriels

Il existe des cas de figure très différents pour les opérations de conservation-restauration : dans le premier cas une opération de conservation-restauration archéologique et statique dans le cadre d'un musée . Dans le second cas une restauration-réparation fonctionnelle dans le cadre d'objets mobiliers classés ou une remise en fonctionnement. Dans ce cas d'une remise en fonction et d'un usage se pose alors le problème de l'entretien et de la maintenance : Quelles entreprises "restaurent ,réparent et entretiennent ?" Selon quels critères et quel cahier des charges ?

qui a les compétences pour restaurer ce type d'objets selon les recommandations du code du patrimoine concernant la conservation-restauration des collections des musées de France ? Jusqu'où accepter ces modifications qui sont des atteintes à l'intégrité physique des collections ?

la question de la nécessité de refonder la déontologie de la conservation-restauration à partir de la notion d'authenticité en définissant avec précision les termes de réparations, de restitution, de répliques, de substitution se posent . Cette réflexion se rapproche de celle de la conservation-restauration de l'art contemporain.

une réflexion transdisciplinaire autour de ce patrimoine est indispensable. Comment former à cette transdisciplinarité?

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\*Intervenant

# La restauration des machines exceptionnelles de l'ancienne brasserie Wielemans-Ceuppens, un projet socio-culturel original primé par Europa Nostra

Guido Vanderhulst\* <sup>1</sup>, Joaquín De Santos †‡ <sup>1</sup>

<sup>1</sup> BruxellesFabriques – Belgique

L'association BruxellesFabriques, sentinelle du patrimoine industriel et social de Bruxelles et de sa région, fut lauréate du Prix du Patrimoine Culturel de l'Union européenne / Concours Europa Nostra 2013 pour son étude sur la restauration des machines exceptionnelles de l'ancienne brasserie Wielemans-Ceuppens située à Forest. Cette étude, réalisée par Guido Vanderhulst, Président de BruxellesFabriques, visait à analyser la faisabilité de la restauration de ces machines à des fins didactiques. Elle sera présentée lors du congrès par Joaquín de Santos, membre de BruxellesFabriques. L'ancienne brasserie Wielemans-Ceuppens est un symbole pour la région de Bruxelles. Elle est un représentant majeur de l'une des industries qui a le plus marqué Bruxelles de son empreinte. Construites en 1894 et 1905, ces machines, à notre connaissance, seraient les seules restantes de ce type en Europe et l'une d'entre elles, le Compresseur de La Vergne, un spécimen new-yorkais, est unique au monde. Le jury international d'Europa Nostra a estimé particulièrement intéressante cette étude, qui a pour but de mettre en valeur le caractère unique de ces outils et d'examiner la faisabilité de leur restauration à des fins didactiques. En effet, l'étude va au-delà d'un simple inventaire des machines encore en place et des différents éléments matériel qui les constituent ainsi que de leur évolution, notamment en relation avec les progrès technologiques ou l'apparition de nouvelles énergies. L'étude est bien plus que cela : elle définit les caractéristiques à maintenir dans le cadre d'une restauration générale, et prévoit que les machines deviennent également un moyen didactique. En effet, l'étude va au-delà d'un simple inventaire des machines encore en place et des différents éléments matériel qui les constituent ainsi que de leur évolution, notamment en relation avec les progrès technologiques ou l'apparition de nouvelles énergies. L'étude est bien plus que cela. Elle représente un projet socio-culturel original pour ce site industriel historique – intégrant à la fois la restauration des machines - pouvant aller jusqu'à la mise en mouvement de certaines d'entre elles à titre didactique - ainsi que la formation et l'implication de personnes pour cette restauration et la communication envers le grand public. Le programme de restauration se déroulera par phases, machine par machine, et par "métiers". Chaque métier sera inséré dans une séquence de formation. Cette formation occupera trois ouvriers sur place en permanence ainsi qu'un chef de chantier. Les trois volets du projet ont été introduits auprès des autorités publiques. La nature novatrice du projet rend toutefois les démarches auprès des autorités plus complexes.

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\*Auteur correspondant: gvanderhulst@skynet.be

†Intervenant

‡Auteur correspondant: joaquin.desantos@gmail.com

# Death of the Huber Breaker: Loss of an iconic Anthracite feature

Bode Morin \* 1

<sup>1</sup> Pennsylvania Historical and Museum Commission (PHMC) – 2 Eckley Main St. Weatherly, PA 18255 (USA), États-Unis

The Huber Breaker was one of the last and largest Anthracite coal breakers in North East Pennsylvania (USA). Built in 1939, its function was to wash, break, size, and distribute coal from several linked collieries. It operated until 1976. The Huber was one of the most sophisticated of what had been hundreds of similar structures developed over the preceding century to process the region's particular type of hard coal. An iconic structure, it did not last to see the fall of 2014 when the Huber and its accompanying support structures were demolished for their scrap value. While sitting idle for nearly 40 years, several attempts were made to stabilize and preserve the site as a museum and monument to the hundreds of thousands of people who worked in and around the coal mines. Despite hopes, community support, and a strong local preservation organization, the breaker could not be saved. Many factors affected the final fate of the site including a poor regional economy mired in a decades-long deindustrialization process, the challenges of bankruptcy proceedings for two of the companies that would come to own the site, the challenges of attempting to preserve such a large and complex structure with high liability, and social and cultural factors stemming from poor economic conditions and broad distrust of corporate and state organizations. While many industrial sites are lost following their useful period, many others are saved either as monuments or with a new function all the while serving as a physical reminder of the recent history of the region. This paper will examine the factors that led to the construction, decline, and ultimate demolition of the Huber Breaker and explore how losses like this may be better fought in the future.

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\*Intervenant

## **S.2.E — Transport Networks: Roads and Canals; Railways**

# A new building type characterized the landscape: lengthman's cottages along the Semmering railway in Austria

Roland Tusch \*<sup>1</sup>

<sup>1</sup> University of Natural Resources and Life Sciences [Wien] (BOKU) – Universität für Bodenkultur  
Wien Gregor Mendel Straße 33, A-1180 Wien, Autriche

Today landscape is understood as a comprehensive term. Infrastructure and architecture are as much part of the landscape as man and nature. For ages Infrastructure networks play a structuring role in the landscape.

In the 19th the means of transportation of the industrialization was the railway. At this time, the Semmering region, 70 km south of Vienna, was sparsely populated. From 1848-1854 the 41.7 km long railway across the Semmering, one of the last branches of the Austrian Alps, was built. The Semmering region was structured by the railway. For the operation of the railway in the mountainous topography, a special building type has been developed: the lengthman's cottage as place to live and work for the lengthmen together with their families. Along the 41.7 km long railway 55 lengthman's cottages were built of which 47 still exist today.

A research project at the Institute of Landscape Architecture at the University of Natural Resources and Life Sciences Vienna put its focus on this building type. An inventory of the lengthman's cottages along the Semmering railway was one of the main targets. The research at the Austrian State Archives and investigations on site delivered results for significant questions. Why were there such a huge number of lengthman's cottages along the line? In which relation are the cottages to the mountainous topography and to the railway infrastructure? Which typologies of houses have been developed to react adequately on both the topography and the railway infrastructure? Which were the tasks of the lengthmen during the first years of operation? The architectural building survey provided information about the different types of lengthman's cottages. Precise sections of the cottages, the rail track and the topography were drawn which inform about the relation of the cottages to their surroundings.

In 1999 the Semmering railway has been the first railway in the world listed as a UNESCO world heritage. Still today, it is not only part of the national main line railway network but also of the Trans-European Networks. The so-called Baltic-Adriatic Corridor is one of the core network corridors crossing Austria. Although the subordinate buildings are not used for operation any more, still today they play a major role in characteristic of the Semmering region.

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\*Intervenant

# Railway heritage, a case study for series

Marie-Noelle Polino \*†<sup>1</sup>, Ana Cardoso De Matos \*

<sup>2</sup>, Andy Savage \*‡<sup>3</sup>

<sup>1</sup> Rails et histoire - the French railway historical society – Rails et histoire - the French railway historical society – France

<sup>2</sup> Universidade de Évora – Portugal

<sup>3</sup> Railway Heritage Trust – Royaume-Uni

Railways are a large technical system - and a network. Vehicles, buildings, machines, equipments are numerous and produced in series. The concept of ‘series’ in architecture was first detrimental. It meant the opposite of the work of art, which should be unique, authored by a single genius and unmistakably recognizable. Network architecture is twice a product of the age of industry: because it was mass produced after types and because the same building was duplicated many times along a railway line (stations, roundhouses, depots, warehouses, signal boxes, switches, cisterns, etc.).

The inventories developed by public agencies (e.g. in France), research institutes, heritage associations take a census of specimen, classify and describe them within the frame set by a historical and scientific method. Photography, which itself allows repetition and mass production of images, is now keen, as a work of art, on ‘typological’ approaches, exemplified for instance by the School of Dusseldorf and Hilda and Bernd Becher’s treatment of industrial equipments and landscapes. Railway photographs have been active since railway’s early times and railway photography developed as a popular practice, to fix down moving vehicles or vanishing remnants of railway heritage and landscapes, tracked down when trekking along disused railway lines. Our growing awareness of the interest of serial architecture and network equipment, boosted by the contemporary use of photography, together with the risk of complete erasure which is currently threatening parts of the railway system being now updated and transformed –for instance signal boxes and switches, or roundhouses built for steam engines– encourage us to challenge our perception of railway heritage.

The proposed session will include papers on: Railway architecture types and their international dissemination; how railway architecture and equipment series do exist on a multi-scale basis? (local, regional, national, international, global) ; Railway equipment inventories led around the world per series, especially roundhouses and signal boxes. How do case-studies take advantage of a serial approach? ; Choices for preservation and mediation of representative samples of railway heritage items taken out of series. How does the concept of series bring a fresh perspective to railway heritage studies and decisions made regarding railway heritage? ; The contribution of serial architecture and equipment to railway landscape identity –per country, or company. How does our representation / culture / imaginary of the railway system depend on series?

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\*Intervenant

†Auteur correspondant: secretariat\_general@ahicf.com

‡Auteur correspondant: Andy.Savage@networkrail.co.uk

# La représentation photographique de la construction des chemins de fer au Portugal et la création d'un paysage technique et industriel

Ana Cardoso De Matos \* <sup>1</sup>

<sup>1</sup> CIDEHUS - Universidade de Évora – Portugal

Si à la fin du XIXe siècle, la représentation photographique des travaux publics est rapidement devenue chose commune dans la presse, c'est qu'elle s'inscrivait dans la continuité des techniques de figuration préexistantes comme la gravure. Les progrès qu'a connu la reproduction photographique durant les décennies suivantes ont permis de diminuer son coût et ont favorisé son usage plus systématique dans les périodiques.

A la fin du XIXe siècle, divers photographes de renom ont pris en photo les travaux des ingénieurs. Dû aux difficultés de la construction des chemins de fer et de ses "œuvres d'art" comme la construction des ponts et viaducs, ces travaux ont attiré l'attention de ces nouveaux professionnels. Emilio Biel, par exemple, a réalisé une série de photographies dédiée au chemin de fer du Douro durant les années 1887-1910. Ces photographies ont été réunies dans l'album Caminho de Ferro do Douro (Chemin de fer du Douro).

Très souvent, les photographies des ouvrages d'art font également apparaître l'ingénieur qui les a conçus.

La photographie des chemins de fer et aussi la photographie d'un paysage technique et industriel. En effet l'implantation des réseaux de chemin de fer ont inscrit dans les paysage les marques d'un nouveau système technique qui a mobilisé des hommes, des techniques et des industries.

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\*Intervenant

## **S.2.F — New Research, scales and tools**

# Industrial heritage in Argentina. Analysis of the current situation

Mónica Ferrari \* 1

<sup>1</sup> TICCIH Argentina - Instituto de Historia y Patrimonio. Facultad de Arquitectura y Urbanismo. Universidad Nacional de Tucumán. (TICCIH Argentina. IHP - FAU - UNT) – Av. Néstor Kirchner 1800. San Miguel de Tucumán. cp. 4000., Argentine

In Argentina, during many years, various academic teachers and investigators have been developing preservation activities, conservation, research, documentation, retrieval and interpretation of industrial heritage. The work done has always been made from individual effort, often in an attempt to recognize industrial remains as heritage of the society. Gradually this recognition has been installing in the society by showing some good performances in preservation. In addition, the development of numerous academic studies have been strengthening the recognition and the creation of TICCIH Argentina from 2007, somehow contributed to support the preservation of heritage in some cases of risk.

There is much work that needs to be done about the industrial heritage, because the recognition of industrial heritage is hardly installed in the society and the problem involved the understanding of a difficult reality by the extension of a country that has a length of 5000 km, (1600 km more of the distance between Madrid and Moscow). Therefore, TICCIH Argentina is moving in new paths where we are basically trying to strengthen the group members with the 1st meeting of TICCIH members to be held in Tucumán in September 2014, updating the website and particularly, making an analysis of the current situation of the Argentina industrial heritage for the purpose of making a planning and coordination of the future activities.

Therefore, the aim of this work is to provide, firstly, a brief analysis of the current situation of industrial heritage, to collect the academic production, to identify the actors and their products, heritage documentation, protected sites and the provincial and national industrial heritage regulations and the industrial heritage recovery examples of good practice in some parts of the country and its impact occurred. Secondly, and as a contribution, we will explain a methodological proposal for railway heritage recovery oriented to a sustainable development.

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\*Intervenant

# The Inventory of Industrial Heritage Resources in the USA

Leonor Medeiros \* 1

<sup>1</sup> Michigan Technological University (MTU) – États-Unis

Industrial heritage sites are frequently exposed, under-appreciated, and at risk because there is no unified listing or inventory of sites and landscapes that allows evaluation and judgment about what resources are of value and in particular need of preservation. To address this need, at the Industrial Archaeology and Heritage Program at Michigan Technological University we are working to develop the first comprehensive nationwide Inventory of Industrial Heritage Resources in the USA, with the support of the J. M. Kaplan Fund.

The inventory of the industrial heritage resources of the USA is a crucial step for the protection and enhancement of these often over-looked elements, today one of the heritage fields that faces the biggest losses worldwide. The process of industrialization is a defining stage in the country's history and the absence of a unified listing or inventory of sites and landscapes leaves these heritage sites vulnerable, under-appreciated, and at risk.

The existence of a comprehensive survey and inventory will allow for preservation and advocacy actions that are based on good comparative data that takes in consideration the wider national reality. There have been previous approaches to this inventory (namely by the Historic American Engineering Record – HAER and the Society for Industrial Archaeology – SIA), but the new technologies and resources available to inventories today, provide a renewed opportunity for an inventory with this dimension.

The use of international standards in inventory practice, of open-sourced software, and of crowd based sources of information, by participating in ongoing developments in heritage systems of database management and by asking the industrial heritage community to contribute to the online database from whichever point of the country, constitutes an approach that represents the new times in heritage inventories.

This inventory project has begun in 2013, under coordination of Professor Patrick Martin, being co-PI Leonor Medeiros (PhD Student and Kaplan Fellow in Industrial Heritage). It will be online by the Summer of 2015 and stands as a solid example of the current transition to a model of inventory that develops online, is collaborative and community based and is personalized to the specificities of industrial heritage.

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\*Intervenant

# **Le patrimoine industriel, témoin du système local d'innovation, outil de filiation : exemples en Aquitaine (France)**

Laetitia Maison-Soulard \*<sup>1</sup>

<sup>1</sup> Service du Patrimoine et de l'Inventaire (Direction de la Culture et du Patrimoine, Région Aquitaine)  
– Région Aquitaine – 14, rue François de Sourdis - 33077 BORDEAUX Cedex, France

Ma présentation aura pour ambition de présenter la méthodologie et les résultats d'un programme de recherche mené sur le patrimoine industriel aquitain entre 2011 et 2014. Réalisé avec le soutien du Conseil régional d'Aquitaine et coordonné par la Maison des Sciences de l'Homme d'Aquitaine, ce projet a permis de réunir les professionnels de l'Inventaire général, de la mission PATSTEC (inventaire du patrimoine scientifique et technique contemporain), du centre de culture scientifique, technique et industriel local ainsi qu'un ensemble de chercheurs des universités de Bordeaux.

Centré sur l'histoire de la filière aéronautique et du bassin gazier de Lacq, ce projet a contribué à préciser les caractéristiques du système local d'innovation : un système issu des secteurs rattachés à la seconde révolution industrielle, largement piloté par l'Etat sur la base d'atouts régionaux et dont la dynamique récente réside dans l'innovation et l'adaptation au toyotisme. Enfin, ce travail a été l'occasion de réaliser un ouvrage, deux expositions et un webdocumentaire qui ont permis de valoriser l'histoire industrielle locale, notamment auprès des jeunes.

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\*Intervenant

## **S.2.G — The Role of Public Bodies**

# Enjeux de sauvegarde et de valorisation des Soieries Bonnet, fleuron du patrimoine de l'industrie textile (Jujurieux, Ain)

Nathalie Foron-Dauphin \* 1

<sup>1</sup> Conseil général de l'Ain – Conseil général de l'Ain – France

1 Les collectivités publiques : acteurs de la patrimonialisation des Soieries bonnet : Le site et les collections des Soieries Bonnet constituent un patrimoine industriel indissociable et exceptionnel. Fondée à Lyon en 1810, implantée à Jujurieux dans l'Ain dès 1835, l'entreprise cesse son activité fin 2001 après 200 ans d'histoire. Quelques jours après la fermeture, le Conseil général de l'Ain acquiert l'actif de la société avec le soutien du FRAM. D'une rare continuité historique, estimé à 300 000 objets et documents, le fonds a été sauvagardé dans son intégralité en vue d'éviter la dispersion d'un précieux témoignage de l'histoire départementale, nationale et européenne. Il bénéficie du statut de collections Musée de France et constitue le cœur d'un vaste programme de conservation, d'inventaire, d'archéologie industrielle, d'étude et de valorisation muséale. L'équipe recrutée comprend trois employés de l'entreprise, passeurs de mémoire et garants des savoir-faire. Les collections révèlent les étapes de création des étoffes et croisent l'univers de la mode et de la haute-couture. Tissus luxueux, outil de production, objets du quotidien, archives du monde du travail dévoilent également les multiples facettes de la vie ouvrière, l'histoire de l'usine-pensionnat et l'extension mondiale de cet empire de l'industrie textile. Elles sont conservées in situ et présentées au public, dans l'usine et la forge d'origine, appartenant à la Communauté de communes Rives de l'Ain- Pays du Cerdon depuis l'année 2000. Ces bâtiments, protégés au titre des monuments historiques, s'inscrivent au centre d'un tissu de constructions significatif de l'organisation industrielle, sociale, morale et religieuse des Soieries Bonnet : filature, moulinage, chapelle de l'usine, maison directoriale, arrivée du tramway, infirmerie, etc.

L'existence d'un musée d'entreprise depuis 1994, l'implication de l'association des Amis des Soieries Bonnet, l'investissement partenariale des collectivités publiques ont permis cette patrimonialisation rapide et complète.

1 les Soieries Bonnet : vers le musée de l'industrie de la soie : Un projet scientifique et culturel de musée de France, en cours d'élaboration, intègre les enjeux patrimoniaux, territoriaux, sociétales, économiques de ce patrimoine et la volonté de transmission des savoir-faire. Le bilan de 12 ans de préfiguration muséale oriente la valorisation du site vers un musée de l'industrie de la soie unique dans le paysage muséal, complémentaire au réseau de musées départementaux, des musées de l'industrie sur le territoire, des musées textiles et de la soie rhônalpins, nationaux et internationaux. Les spécificités des collections et du site offrent la perspective d'un projet abordant tous les aspects du fait industriel de la " fabrique " lyonnaise dans ses composantes textiles, techniques, sociales, économiques, commerciales, sociologiques, ethnographiques.

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\*Intervenant

# La Région Île-de-France, nouvel acteur du patrimoine industriel

Nicolas Pierrot \* 1

<sup>1</sup> Région Île-de-France – Région Île-de-France – 33, rue Barbet-de-Jouy 75007 Paris, France

Après 40 ans d'existence, l'Inventaire général – mission de recensement, d'étude et de valorisation du patrimoine imaginée par André Malraux en 1964 et assurée initialement par le Ministère français de la Culture – est désormais de la compétence des Régions (conseils régionaux). Acté par la loi du 13 août 2004 relative aux libertés et responsabilités locales, le transfert est effectif depuis le 1er février 2007. La Région Île-de-France a accueilli dès 2006 le service de l'inventaire, qui est devenu en 2009 le Service Patrimoines et Inventaire (SPI). Quelles furent les conséquences de cette décentralisation, en termes de politiques publiques ? Quel fut le sort réservé, plus particulièrement, au patrimoine industriel, dont le Ministère de la Culture avait fait l'un de ses axes d'étude majeurs depuis le début des années 1980 ?

Si, en Île-de-France, les missions d'inventaire transférées ont été confirmées, elles s'inscrivent désormais dans un cadre élargi. Il s'agit, d'une part, de mettre en place une véritable politique régionale en faveur du patrimoine, allant de l'étude à la gestion des dispositifs d'intervention : une refonte de ces dispositifs est actuellement à l'étude, avec l'idée de créer une aide spécifique en faveur du patrimoine non protégé d'intérêt régional. Cette aide pourrait notamment distinguer le patrimoine du XXe siècle, souvent menacé et particulièrement identitaire pour la Région. D'autre part, l'objectif est d'ancrer les études patrimoniales dans des projets d'aménagement du territoire – autrement dit, de répondre au projet SDRIF 2030 (Schéma directeur de la Région Île-de-France adopté par le Conseil régional le 18 octobre 2012) soucieux de “ Susciter le ”réflexe patrimonial” dans les projets d'aménagement : ”Prendre en compte le patrimoine, qu'il soit archéologique, architectural, urbain, industriel, environnemental, agricole, cultuel, etc., consolide le sens des projets urbains. L'intégration d'un volet patrimonial est recommandée dans tout projet d'aménagement, constitué d'une étude préalable et, le cas échéant, d'une réflexion sur un projet de reconversion (coût de l'investissement, viabilité économique, potentiel promotionnel, intérêt urbain, intérêt culturel)” ” (Projet de SDRIF 2030, t. 3, p. 139-140).

On se proposera ici de présenter les initiatives conduites, dans ce nouveau cadre, en faveur du patrimoine industriel, en insistant avant tout sur l'étude comme accompagnement des projets d'aménagement (diagnostics patrimoniaux, monographies, valorisation de sites en reconversion) et sur la recherche (inventaires approfondis pour publication, séminaire de recherche en collaboration avec l'Université), avant de présenter un florilège des nombreuses reconversions de lieux industriels – en lieux de culture et de création essentiellement –financés ou soutenus dans leur fonctionnement grâce aux dispositifs d'aide variés mis en place par la Région Île-de-France.

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\*Intervenant

# **Collaboration of governmental and non-governmental organizations in research and promotion of Lithuania industrial heritage**

Iveta Dabasinskiene \* <sup>1</sup>, Iveta Dabašinskien \* † <sup>1</sup>

<sup>1</sup> Iveta Dabašinskien – Neries kr. 22-3, Kaunas Lithuania LT- 48406, Lituanie

In Lithuania, as in other post-Soviet countries, the research and dissemination of industrial heritage is just beginning to gain momentum. Primarily this heritage is concerned with the public authorities - the Department of Cultural Heritage, but to the state initiatives increasingly contribute and local government - municipalities representatives, invokes public organizations and local community initiatives.

The aims of this article is to analyze the Lithuanian state institutions – Department of Cultural heritage and Center of Cultural heritage, which conducts researches, initiatives, which in Lithuania in industrial heritage preservation and dissemination process involve an increasing number of non-governmental organizations and to show changes in this co-operation during the 25 years of independence of Lithuania.

In the first part of this paper will be analyzed and presented the input of state institutions in the preservation of industrial heritage, the cases of cooperation with other organizations. This cooperation is most likely to occur during the preparation of local government initiatives, assistance and held shares of community-based organizations, research development and promotion, collaboration with universities, finally the programs for local community promotion and their own initiatives in their area of self studies.

The second part will be discussed the extent of the involvement of non-governmental organizations in the process of industrial heritage, the nature of organizations, examples of organizations. In the last, third, part of this article will be made recommendations and observations in which areas cooperation between governmental and non-governmental can still be improved, what steps should be taken to promote this cooperation and adaptation of worldwide practices in Lithuania.

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\*Intervenant

†Auteur correspondant: iveta.dabasinskiene@gmail.com

## **S.2.H — Industrial heritage in Central and Eastern Europe**



# Lost illusions: Socialist era heritage of heavy industries in Hungary

Györgyi Németh \* 1

<sup>1</sup> Centre d'histoire des sciences et d'histoire des techniques Université Paris 1 Panthéon-Sorbonne – 9 rue Malher, 75004 Paris, Hongrie

## Industrial heritage in the Eastern bloc countries Session Proposal

The Global and Local Section of TICCIH aims to continue its collaborative work by organising a separate session within the framework of the 16th congress in Lille, France. Following its previous sessions centred on various subjects at the Freiberg, Tampere and Taiwan TICCIH conferences, this time the Section will focus on the Eastern bloc countries in particular, analysing the current challenges related to industrial heritage conservation, in accordance with the driving thoughts of the congress organisers.

Although the term 'industrial heritage' was absolutely unknown in the communist era, the history as well as the material evidence of industrialisation and labour was highly appreciated in the countries of the Soviet bloc due to economic, political and ideological reasons. As a result, numerous industrial and technical museums were established, industrial monuments protected, scientific articles and books published on industrial history all over the countries. The change of the political system, however, has substantially modified the public attitude to the tangible and intangible heritage of industrialisation in the 1990s, frequently endangering its survival. Despite definite improvements related to its conservation and reuse in the past years of the 21st century, industrial heritage is still not properly recognized in the post-communist countries. Strikingly, the material remains of communist-era industrialisation have been the most neglected, deteriorating and disappearing rapidly.

This session will primarily drive attention to the specific difficulties related to the evaluation and conservation of the industrial heritage, originating in the communist period, in the Central and East European countries. What were the social effects of 'forced' industrialisation on local, national and regional level? How did it modify the personal life of workers? What initiatives have been made to preserve the heritage of communist-era industrialisation? By what actors? What were the reasons for its success or failure? How can preservation facilitate to solve current identity problems in the region? Can be any industrial remains found from the period with outstanding universal value?

These are only few of the questions to be discussed by the participants of the session.

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\*Intervenant

# Enforcement of a comprehensive conservation in regeneration processes of industrial heritage sites in Slovenia

Sonja Ifko \* 1

<sup>1</sup> University of Ljubljana, Faculty of architecture (UL, FA) – Zoisova 12, Ljubljana, Slovénie

The aim of the paper is to critically review the approaches to urban regeneration of industrial sites in Slovenia and to present the criteria for their comprehensive evaluation. The presented evaluation will be based on the criteria of an integrated preservation of industrial heritage sites, while all other criteria evaluating the performance of regeneration processes will also be considered, particularly in terms of their spatial planning development and the economic effects as the underlying assumptions of the evaluation.

Indeed, it should be noted that the existing evaluation of regeneration processes is mainly associated with the economic performance, and, perhaps, the appearance of the architectural design of the projects. So far, little consideration has been given to an integrated understanding of the heritage of the sites, which are today mostly evaluated through the lens of their overachievements (the greatest, the most advanced etc.), while the social role of industrialisation and its social development significance are all too often neglected. Generally, regeneration projects do not involve labour history and its heritage. Mostly due to the rejection of anything associated with the post-World War II socialist regime, the role of industrial labour is neglected and the subject of museum exhibitions of the recent past. It is, however, excluded from identity evaluations in the context of contemporary regeneration processes.

In the paper, a comparison of three case studies will be presented, i.e. the cases from two small towns – the mining sites of Idrija, which were in 2012 inscribed at UNESCO World Heritage List, the area of the ironworks complex in Ravne na Koroškem, and the case of regeneration of the former Tobačna tovarna site (Tobacco Factory) in Ljubljana, Slovenia's largest city.

In the conclusion, the benchmarks, i.e. the evaluation criteria for a comprehensive assessment of the regeneration processes, will be presented. They will be based on heritage values, not only of buildings and material elements but also their holistic – social/intrinsic aspects. They will be presented versus real estate values, which currently predominate while evaluating industrial regeneration processes. This is despite the fact that we all acknowledge that, in the long-term, heritage values will be the ones that will represent the development values. Along with the selected evaluation criteria, guidelines will be proposed to enforce heritage preservation not only as a category of cultural heritage, but also as an important development and economic category.  
Key words: industrial regeneration, comprehensive conservation, industrial heritage, evaluation.

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\*Intervenant

# Industrial Heritage of Uranium Mining from the time of the German Democratic Republic (1946-1990)

Helmut Albrecht \* 1

<sup>1</sup> Institute for Industrial Archaeology, History of Science and Technology (IWTG) – Silbermannstr. 2,  
09599 Freiberg, Allemagne

After the Second World War the Saxon uranium ore deposits of the Ore Mountains acquired the utmost strategic significance in connection with the development of Soviet nuclear weapons. Therefore an intensive search for uranium ores commenced immediately after the war in the Saxon Ore Mountains. After 1945, the greater part of the Ore Mountains mine and pit installations was placed under the control of the Soviet Military Administration in Germany (SMAD). Under the covert name "SAG Wismut" the state corporation started on the mining of the rich uranium ore deposits of the Saxon Ore Mountains. The mining operations in the middle of the densely populated Ore Mountains were unique in the world. They transformed the region enduringly. Under the control of SAG Wismut, the Ore Mountains became the setting for the development of a "state-within-the-state" of the new German Democratic Republic (GDR), with its own party and state security apparatus and its own transport and service institutions. The SAG Wismut came to be the most important uranium producer within the USSR's umbrella of power. In 1954 the SAG Wismut was transformed from a purely Soviet company into a Soviet-German corporation (SDAG Wismut).

With the demise of the GDR and the incorporation of East Germany into the Federal Republic of Germany, the mining operations of SDAG Wismut were shut down after 1990. More than 40 years of uranium mining left back a large number of mining and production sites, administration and social buildings, settlements and infrastructure as well as in large parts devastated and polluted landscape. Since 1990 a billion euro recultivation and demolition project under the control of the new founded federal "Wismut GmbH" tried to handle the legacy of the time of the SDAG Wismut. Most of the former Wismut sites were dismantled before they could be evaluated in regard to their historical and cultural importance as representatives of the last important mining period in the Ore Mountains and of the cold war times in Germany. Efforts to preserve the last remaining important parts as industrial heritage provoked public disputes about the handling of the physical remains of the communist dictatorship in East Germany. The paper will discuss the background of this discussion and the efforts to preserve the last witnesses of the time of uranium mining in the Ore Mountains.

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\*Intervenant

## **S.2.I — Adaptive Re-Use of Industrial Buildings**

# The reuse of industrial buildings and sites: potentialities and risks, challenges and boundaries

Nivaldo Vieira De Andrade Junior \* <sup>1</sup>

<sup>1</sup> Universidade Federal da Bahia - UFBA (BRAZIL) (UFBA) – Rua Caetano Moura, 121, Federação, Salvador, Bahia, CEP 40.210-905, Brésil

This paper intends to discuss some questions referring to the current process of valorization of the industrial heritage. Although industrial archeology as a discipline is very recent, in dozens of countries old and abandoned factories, warehouses, power stations, mills and industrial complexes have already been recognized as national monuments and, since the declaration of the Wieliczka Salt Mine in Poland in 1978, many industrial heritage examples have been included in the World Heritage List.

The reuse of abandoned industrial structures, instead of their demolition, can be justified by many reasons and, even when they don't have any particular artistic value, there are at least three mains reasons related to their cultural values for preserving them. Their historical value corresponds to their recognition as important registers of the process of industrialization that has changed the world in the last two and a half centuries. Their symbolic value is due to their great importance as uncommon landmarks on confused or homogenized urban or suburban landscapes. Their affective value is a consequence of their role in the occupation or densification areas and their importance in the constitution of the collective memory of the inhabitants of the neighborhood, city or region where they are found.

Besides cultural values, those buildings have, in general, two other characteristics that make their reuse even more justifiable. By one side, their versatility: thanks to their typologies and to the constructive techniques and materials that have been used, they frequently correspond to vast roofed spaces that can easily be adapted to most different uses. By the other side, their scale: as they frequently correspond to huge buildings or sites, their conversion to new uses can successfully contribute to the process of rehabilitating degraded urban areas.

After discussing some concepts from the most important contemporary theories of restoration and international charts, some recent examples of reuse of ancient industrial buildings and sites will be analyzed, identifying whether the anxiety to revert the process of degradation of those buildings and complexes has led to a situation in which some of their most significant characteristics – such as high ceilings, visible roof structures, free plans, visible structural modulation and a certain homogeneity in cladding materials and uniformity in the dimensions and rhythms of windows – have been totally unconsidered during the interventions and have resulted in transformations that destructed the spatiality of the buildings and complexes that were supposed to be preserved.

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\*Intervenant

# Les stratégies de réhabilitation des halles métalliques au XXI<sup>e</sup> siècle. La question de l'authenticité et de l'artifice dans la sauvegarde des monuments urbains de l'âge industriel.

Esteban Castaner \* <sup>1</sup>, Esteban Castañer Muñoz \* †

<sup>1</sup> Centre de Recherche Historique sur les Sociétés Méditerranéennes (CRHiSM) – Université de Perpignan : EA2984 – France

Les stratégies de réhabilitation des halles métalliques au XXI<sup>e</sup> siècle. La question de l'authenticité et de l'artifice dans la sauvegarde des monuments urbains de l'âge industriel.

La destruction des Halles Centrales parisiennes dans les années 1970 a entraîné une prise de conscience internationale. Depuis, la connaissance historique, la conscience civique et le soutien des administrations patrimoniales concernés ont donné lieu à un phénomène global de survie, sauvegarde et réhabilitation de ces édifices à travers le monde.

Les années 1980 et en partie 1990 ont vu coexister à travers le monde la continuité fonctionnelle, la restauration architecturale soucieuse de la rigueur historique ou l'abandon et la dessafectation de ces édifices monuments urbains.

La fin des années 1990 et les années 2000 ont été marquées par des dynamiques de reconversion et de réhabilitation liées à des mutations des modèles commerciaux mais aussi à des choix architecturaux. Ces choix, sans renoncer complètement à l'essence formelle des édifices, les ont modifiés pour optimiser l'utilisation d'une implantation urbaine privilégiée et pour y introduire des "gestes d'architecte" permettant de mettre à jour l'esthétique de l'industrialisation.

Ces processus de reutilisation de ces architectures posent la question de l'authenticité matérielle et fonctionnelle de l'édifice face à une reappropriation artificieuse. Un tel débat ne peut pas être soldé de manière réductrice mais à la lumière des réflexions récentes, comme celles de Natahalie Heinich et Jean Davallon parmi d'autres, sur la notion de Monument. La halle métallique, institution publique municipale garant de l'approvisionnement de la cité du monde industriel devient espace de la consommation privée diversifiée et sophistiquée à l'image de la société tertiarisée actuelle. Les cas de Barcelone, exemplaire par l'ensemble des halles métalliques conservées et par les politiques de réhabilitation mises en place serviront de fil conducteur et sera mis dans une perspective comparatiste internationale.

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\*Intervenant

†Auteur correspondant: castaner@univ-perp.fr

# Reusing and updating industrial heritage for contemporary needs and activities: a few examples of architectural intervention in Puebla, Mexico.

Jose-Ramon Perez \* <sup>1</sup>

<sup>1</sup> UNIVERSIDAD IBEROAMERICANA, PUEBLA (UIA) – Blvd. del Niño Poblano No. 2901, Colonia Reserva Territorial Atlixcáyotl, San Andrés Cholula, Pue. 72810, Mexique

The City of Puebla, a World Heritage Site since 1987, was founded by Spanish colonisers in 1531. It was the first European foundation in Mexico, the first city not to be established over pre-Hispanic settlements, and its site was chosen as a convenient location between the Aztec Capital and the coast, on a flourishing valley crossed by three rivers. Ever since that time, Puebla has benefited from hydraulic power, and the Almoloya, the Atoyac and the Alseseca have powered countless mills and factories. One of these mills, in the borough of Huexotitla, was built in 1537, and it was the oldest active mill in the continent before it ceased operating in 1979. With the damage repairs after the earthquake of 1999, I began leading a long reuse project, built in many stages, of which the most important was concluded in 2006: a block of offices and apartments in the main building, the factory proper, revalorising and exhibiting the history of the flour industry. Among the many olden mills still existing in Puebla, the Mill of Los Angeles, smaller and younger than Huexotitla, is another interesting example. It stopped grinding wheat decades ago, but its bakery was closed recently. Since then, it has been in a slow process of dismantling, after which there is still much to be rescued. An intervention project I finished a couple of years ago, to convert the mill into apartments, is awaiting investors to become a reality. One more industrial project of mine comprises a new lobby as a small “museum” inside a food processing plant, where new partitions of glass and steel divide the old redundant steam machine from the new ones which are presently functioning, while some more of these partitions, done in awkward shapes and angles define meeting rooms and archive space.

Another two industrial buildings in which I have done design work and construction supervision are now educational premises for the same institution: the Santiago High School and the El Pilar High School. Yet one more intervention I was able to complete is a new blinds and shades factory within and old textile factory, using three naves, two for production and one for the on-site office area, with no remains of the textile machinery but with a lot of industrial character. At the Lille-Region Congress, my presentation would end with two university projects: a large and very old textile factory in an area of recent urban regeneration in which a cultural centre is intended by the city authorities, and a textile laundering plant in a location where urban growth is pushing for a new mixed used project including mainly housing.

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\*Intervenant

## **S.3.A — Industrial Heritage in Digital Times**



# 3D Representations of Heritage – understanding the Leavers lace machine through documents, ethnography and animation

Tom Fisher \*† 1

<sup>1</sup> Nottingham Trent University (NTU) – Burton St, Nottingham, NG1 4BU,, Royaume-Uni

This paper describes a programme of research conducted in 2013 in the factory of Cluny Lace, Ilkeston, Derbyshire, UK. The factory is the last in the region to use the Leavers lace making technology that was invented in Nottingham in the early C19, and soon exported to Calais, and the rest of the world. The research combined oral history, ethnography and 3D computer animation. The intention was to go beyond the relatively shallow documentary approach often taken to the survivors of this industry and to attempt to properly understand the process of machine-lace making. It did this by registering the knowledge embodied in the workers – articulated through the ethnography and oral history interviews – as well as the knowledge embedded in the machines.

The work was a collaboration with the Victoria and Albert museum and the industrial museum that is part of Nottingham's city museums. These collaborators were particularly interested in the work of the computer animator who was employed for the duration of the project to produce a virtual 'working model' of the machine. Just as the ethnography required the ethnographer to engage physically with the processes involved in running the machines, and to become part of the factory community, the 3D computer animation required the researcher to both understand the technology from documentary sources, and to directly investigate, measure and model the machines at Cluny Lace – informed by the contact that was possible with the factory workers. The fact that this research has been done in a school of Art and Design, famous for its work in both traditional and advanced textiles technologies, and fashion, lies behind the manner in which it was designed, as well as the potential it has to inform the future. To a large extent, that future exists in museum contexts, and the knowledge gathered about the Leavers process makes it possible literally to 'animate' museum displays in the future. There is also the potential however to integrate the Leavers product into high-end fashion through design that is informed by clear knowledge of the process.

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\*Intervenant

†Auteur correspondant: tom.fisher@ntu.ac.uk

# Immersive Visualization and Industrial Heritage in Texas

Gabriela Campagnol \*†<sup>1</sup>, Stephen Caffey \*

<sup>1</sup>, Mark Clayton \*

<sup>1</sup>, Geoffrey Booth \*

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<sup>1</sup> Department of Architecture Texas AM University (TAMU) – États-Unis

<sup>2</sup> Department of Landscape Architecture and Urban Planning, Texas AM University (TAMU) – États-Unis

Picture yourself approaching a now-defunct industrial heritage site that today lies on the edge of one of the nation's largest cities. Now imagine it bustling with activity. Perhaps you are aware that this was once a privately owned enterprise, a flourishing company town. You recognize the architecture of the mill, the smokestacks, the worker housing and the original machinery. You walk inside the refinery and around the boilers. You know the place, but the time is different: this is not a tour of the site in the 21st century, but during the peak of its production—during the heyday of early 20th-century industrialization. Shifting seamlessly and effortlessly over a series of decades, you explore the post-industrial environment as it undergoes transformation, adapted for new uses. This comparison affords you a better understanding of place and space as evolving processes. How is this possible? You are experiencing industrial heritage through immersive visualization. Our interdisciplinary team is conducting architectural, archaeological, heritage, and urban historical research through immersive visualization to enable students in university-level core curriculum courses to enhance their spatial and sensory understanding of remote or distant places. This paper presents one case study, which focuses on the virtual heritage visualization of a quintessential factory town: Sugar Land, the former headquarters of Imperial Sugar, the first sugar refinery in Texas and the state's oldest extant business. This town, with an identity and a history intimately connected to the sugar industry, has been slowly losing its connection to its origins, and the industrial heart of the town is on the cusp of a large redevelopment project. If the redevelopment project fails to reflect the rich history of the people and the sugar industry, much of the history and identity of this town and its people will be lost. Digital technology has progressed to generate experiences of places and spaces that are otherwise difficult or impossible to access. Our research uses the Building Information Modeling CAVE, an interactive, immersive environment to enable groups of people to navigate through the digital models produced by the team.

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\*Intervenant

†Auteur correspondant: campagnol@tamu.edu

## **S.3.B — Stakeholders**

# Around the industrial World Heritage Zollverein XII : The Ruhr Region as Industrial Cultural Landscape

Axel Foehl \*<sup>1</sup>

<sup>1</sup> Rheinisches Amt für Denkmalpflege (RAD) – Ehrenfriedstr. 19, D-50259 pulheim, Allemagne

Work on preserving the industrial past of Europe's largest industrial agglomeration, the "Ruhrgebiet" started 45 years ago. It has moved from isolated heavy industry sites to a coherent perspective on the industrial grid of production, transport and technical infrastructure. Preservation and tourist aspects have been regarded as going hand in hand. The "Route of the Industrial Culture Ruhrgebiet" by now serves as a model internationally. The paper gives a concise summary of this process.

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\*Intervenant

# Potentials of Industrial and Technical Culture Heritage in Croatia – Promoters and Regeneration Projects

Zrinka Barisic Marenic \*<sup>1</sup>

<sup>1</sup> Zrinka Barišić Marenić, Ph.D. (Assist.Prof.) – Kačićeva 26, HR-10000 Zagreb, Croatie

Potentials of abounded technical heritage complexes had been recognized early in the XXth century in Croatia. Empty complexes of distinctive morphological value situated in wider center of historic town presented huge potentials for new purpose. One of the earliest example in Croatia is City Café and Cinema at former Great Arsenal in Dubrovnik realized in 1931-1933 upon architectural competition. Zagreb strongest industrial plant, Tannery complex is converted for Plaster cast exhibition of Croatian Science and Art Academy 1937-1945. Set of coincidences led to this earliest conversion of industrial complex for cultural purposes. Former Salt Magazine at Island of Pag is converted for Disco Club in 1986. Those examples present early sensibility for potentials of abounded technical culture heritage. On the contrary, there are numerous devastations or long period of abandonment of industrial complexes. 1990s project of housing museum in structure of former Paromlin, featured many others, didn't stop its demolition in 2013 due to weather conditions and despite its protection. Art exhibitions organized by Contemporary Art Museum took place in Vartex complex in Varaždin and in former Zagreb Paromlin, and individual artists light interventions in abounded structures are trying to focus the potentials of industrial heritage. Interdisciplinary interest for this field presents lectures at faculties of architecture, civil engineering and philosophy. Museum of Zagreb and Sisak organized significant exhibitions on industrial heritage, and increasing number of listed buildings of technical heritage. Beside institutions, initiatives of citizens groups and independent cultural scene, are raising awareness of professionals and wider public. Actual economic crises stopped realization of projects for Croatian Historical Museum in former Tobacco factory in Zagreb and Contemporary Art Museum in Rijeka. Recent realizations of placement of multi-use complex including city authorities of Zabok, residential and office complex Tuškanova in Zagreb and Lauba – house for people and art in Zagreb in former textile plants and warehouses, and library on former mine complex in Labin present outstanding examples, that won some of highest architectural awards in Croatia. Splice of local initiatives empowered by state and municipal institutions led to significant projects and realizations by the change of millennium. Contrary to devastations, potentials of industrial heritage are often focused by citizenship initiations and "independent cultural scene". Set of circumstances or continuous joint venture of different protagonists precedes quality rehabilitation of outstanding objects of technical culture.

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\*Intervenant

# Industrial heritage in Flanders (Belgium): public perception and participation rates.

Alexander Vander Stichele<sup>1</sup>, Joeri Januarius \*<sup>2</sup>, Tijl Vereenooghe†<sup>2</sup>,  
Robin Debo<sup>2</sup>, Danielle De Vooght<sup>2</sup>

<sup>1</sup> FARO. Flemish interface centre for cultural heritage (FARO) – Belgique

<sup>2</sup> Center of Expertise for Technical, Scientific and Industrial Heritage (ETWIE) – Belgique

The region of Flanders (Belgium) has a rich industrial past. But how do the Flemish citizens perceive the industrial heritage today? Some recent studies shed more light on the public perception of the heritage in Flanders, both tangible and intangible. In order to identify the specific characteristics of the industrial heritage community, the available data will be analysed more thoroughly and more data will be collected in 2014-2015. In 2010 FARO, the Flemish Interface for Cultural Heritage, organized a large population survey. 5000 randomly selected Flemings were sent a questionnaire in which they were asked questions about their heritage interest, heritage participation and the place heritage occupies in their lives. Their opinions were also asked about the importance of heritage and heritage institutions, the importance of knowledge about the past and about the role of government in relation to the heritage. In 2012 the new organization ETWIE was recognized by the Flemish government as a center of expertise for technical, scientific and industrial heritage. In the first place, ETWIE aims at supporting, stimulating and activating the 'heritage community' in Flanders and Brussels. This community consists of a broad variety of stakeholders, including not only professional organizations, but several volunteer organizations, museums and archives and individuals as well, all of them concerned with the safeguarding of technical, scientific and industrial heritage. As a network organization, ETWIE is dedicated to bring these people and organizations together and to stimulate the sharing of knowledge and expertise amongst them. ETWIE wants to raise the general public's awareness about the importance of the technical, scientific and industrial heritage. For this purpose, ETWIE collaborates with other sectors like tourism, education, research, media and so on. An important pillar is the 'intangible expertise' on the technical, scientific and industrial heritage. Since the UNESCO Convention (2003) and the policy paper of the Flemish minister of Culture (2010), heritage organizations in Flanders dramatically broadened the scope of their activities, in order to include not only buildings and objects, but the connected stories, traditions and knowledge too. ETWIE will submit a new policy plan to the Flemish government in 2016. In this plan ETWIE intends to identify more sharply the involved 'heritage community' and to shed more light on the public perception of and participation in industrial heritage in Flanders. Among other things, the available data from the FARO survey will be re-analyzed and completed to reach this goal. These results will not only be important for the Flemish heritage sector, but can act as a source of inspiration for heritage workers in other countries too. Therefore we want to share them with the other participants at the 2015 TICCIH Conference.

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\*Intervenant

†Auteur correspondant: tijl@etwie.be

# La manufacture de tabac de Morlaix

Michel Cabaret \* 1

<sup>1</sup> Espace des sciences, Rennes – espace des sciences, Rennes – France

Un projet d'avenir dans un site patrimonial d'exception

Progressivement desaffectees depuis les années 1970, la France herite d'un patrimoine architectural et industriel exceptionnel : les Manufactures de tabacs. Ces edifices donnent aujourd'hui naissance a des programmes de reconversions diversifiees et sont nombreux a accueillir de nouveaux usages non-industriels (universites, programmes immobiliers, lieux de creations et d'innovations...).

Cette presentation sera l'occasion de mettre en lumiere le projet de reconversion de la Manufacture des tabacs de Morlaix.

La Manufacture de Morlaix est erigee en plein Siecle des Lumieres, ce mouvement philosophique qui voulait " combattre les tenebres par la diffusion du savoir " en s'appuyant en particulier sur " le progres des sciences appliques au travail des hommes ".

Malgre un incendie qui ravagea une partie de ses combles en 1995 et une fermeture totale en 2004, l'ensemble architectural n'a pas pris une ride et le lieu n'a pas eu le temps de devenir une friche industrielle.

Aujourd'hui, la communaute d'agglomeration " Morlaix Communaute " souhaite faire revivre ce site au travers d'une reconversion globale. L'idee maitresse est d'ouvrir la Manufacture des tabacs –jusque-la fermee au public, revenus fiscaux du tabac obligent- et d'en faire un nouveau quartier de ville. C'est dans cette demarche que s'inscrit le projet d'installation d'un centre de culture scientifique, technique et industrielle (CCSTI) a La Manu.

L'installation d'un CCSTI dans un site patrimonial prestigieux de notoriete nationale, va conferer a ce centre une specificite unique en France pour la promotion de la culture scientifique. Cette initiative originale va redonner vie a cette Manufacture des tabacs dont les murs ont garde la trace de plus de 250 années de travail. Le patrimoine industriel sera un vecteur puissant pour developper les themes inherents a la culture industrielle, a la dynamique de l'évolution des sources d'energie et des mutations techniques, mais aussi a l'histoire des femmes et des hommes qui ont travaille pendant trois siecles a la Manu.

Ce projet s'appuie sur les competences et l'experience d'un centre de sciences deja reconnu nationalement, l'Espace de sciences de Rennes. Cette structure est forte de 30 ans d'experience dans la conception et l'animation d'expositions permanentes, temporaires et itinerantes.

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\*Intervenant

## **S.3.C — Associations**

# The contribution of Associations to the field of industrial archaeology. Can they compensate for lack of means and concern at institutional level?

Irina Iamandescu \* 1,2

<sup>1</sup> "Ion Mincu" University of Architecture and Urban Planning in Bucharest (UAUIM) – Academiei 18-22, Bucharest Romania, Roumanie

<sup>2</sup> Romanian Association for Industrial Archaeology (AIR) – Bd. Ion Mihalache 42-52, bloc 35, ap 79, 011193 Bucharest, Roumanie

While considering the contribution of Associations to the early years of industrial archaeology in countries like UK, Germany or USA, the paper is trying to show that the responsible activity - inventory, research, promotion etc. - of an independent body such as an NGO within the field of industrial archaeology can partially compensate for lack of means or concern at institutional levels and, especially in emergency situations, can make a significant contribution to the protection of industrial heritage.

The case of Romania is a paradox: in the early 1990's the country still preserved "time capsule" industrial sites that quickly started to become victims of the privatization processes and of the new economy, before the "discovery" of the new field of industrial archaeology. Although some initiatives of the central cultural administration for encouraging the research and debate in the field and for initiating a national inventory were promising in the early 2000's they were not sufficiently sustained further on. In a national context of low concern for heritage protection, the institutional reaction to the loss of industrial cultural values was particularly weak and many sites were irretrievably lost without any prior documentation.

A more "coordinated" reaction came from the civil society as well as University milieu and independent researchers. An effort of putting together these various "private" initiatives was made by the national Association for Industrial Archaeology (AIR) - A TICCIH affiliated body, and resulted in the creation of an informal national industrial heritage platform. Among the very concrete results of this activity were the launch of a specialized pilot inventory in 5 out of 42 administrative counties, the offering of industrial tours in Bucharest and other industrial regions, organizing seminars, workshops and events meant to present the topic to the public and to reactivate industrial sites. The scientific results of these independent activities - the inventory and survey results - were made public and offered to the National Heritage Institute (INP) that lacked means and human resources to do this kind of specialized campaign. This represented the nucleus for a very necessary national inventory and also the foundation of a steady formal cooperation between the two.

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\*Intervenant

# L’Institut pour l’histoire de l’aluminium, une association au cœur de l’histoire d’un matériau

Thierry Renaux \*<sup>1</sup>, Jenny Piquet \*

<sup>1</sup> Centre Alexandre Koyré - Centre de Recherche en Histoire des Sciences et des Techniques (CAK-CRHST) – École des Hautes Études en Sciences Sociales [EHESS], Cité des Sciences et de l’Industrie, CNRS : UMR8560, Ecole des Hautes Etudes en Sciences Sociales (EHESS) – 27 rue Damesme 75013 Paris, France

Fondé en France en 1986, l’Institut pour l’histoire de l’aluminium (IHA) est une association à but non lucratif qui poursuit trois missions principales : la préservation du patrimoine de l’industrie de l’aluminium ; l’étude pluridisciplinaire de l’histoire de l’aluminium sous ses aspects techniques, économiques, industriels, commerciaux, sociaux et culturels ; et enfin la valorisation de ses travaux par le biais de publications, d’outils Internet, de colloques, d’expositions, etc. L’IHA est un acteur singulier de la défense et de la promotion du patrimoine de l’industrie de l’aluminium. En s’appuyant sur la présentation de deux de ses secteurs d’activité – la gestion de collections documentaires et de fonds d’archives, et la gestion et la valorisation de collections d’objets – nous nous proposons de discuter de l’évolution de la place et du rôle de cet Institut depuis sa création, il y a presque trente ans. Placé au cœur d’un réseau de partenaires variés – industriels, universitaires, professionnels des archives et des musées, acteurs des collectivités locales et territoriales – l’IHA s’est construit un ensemble de savoir-faire variés et a connu une forte professionnalisation de son équipe permanente, ainsi qu’une internationalisation assez marquée. L’IHA travaille depuis sa création en étroite liaison avec les industriels de l’aluminium pour traiter les questions relatives aux archives. Il a ainsi été conduit à recevoir, en don ou en dépôt, des archives en déshérence ou menacées de disparaître, et a parallèlement produit ou collecté plus de 8 000 documents. Aussi nous nous demanderons comment, pourquoi et dans quels contextes (culturels et industriels), l’IHA est devenu un véritable Centre de conservation et de gestion d’archives et de ressources documentaires. Propriétaire de la collection d’automobiles Jean-Albert Grégoire-IHA et partenaire de la collection d’objets Jean Plateau-IHA[1], l’IHA a participé à la réalisation d’une trentaine d’expositions, en France, en Europe ou en Amérique du nord. L’éventail de la nature des projets est très large (musées permanents ou expositions temporaires, expositions privées ou grand-public, etc.) et le rôle de l’Institut varié, il va du simple prêt d’objets à la réalisation de l’exposition, en passant par du conseil scientifique. Ici, nous nous poserons la question de savoir ce qu’apporte à ce type de projets une structure telle que l’IHA et quels intérêts les différents partenaires trouvent à faire appel à l’Institut. Enfin, que ce soit pour ses collections documentaires, iconographiques ou d’objets ou celles de ses partenaires, l’Institut œuvre depuis une dizaine d’années à la mise en place de divers outils Internet visant à les gérer, mais également à permettre une plus large diffusion des ressources associées. Ainsi pour conclure, nous envisagerons les développements et les limites qu’offrent les TIC à une structure telle que l’Institut pour l’histoire de l’aluminium.

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\*Intervenant

## **S.3.D — Restoration and Conservation**



# New Lights on the Broken Old Kaoping River Iron Bridge – the creative strategies towards the preservation and conservation of the longest iron Bridge in East Asia built in the 1910s.

Chao-Ching Fu \* 1

<sup>1</sup> National Cheng Kung University, Taiwan (NCKU) – No. 1, University Road, Tainan, Taiwan, Taiwan

Old Kaoping River Iron Bridge was built by the Japanese Colonial government in Taiwan for trains to cross the Kaoping River (former Shimo Tamsui River Railway Bridge). It was famous for its elegant form and for being the longest iron bridge in East Asia when it was completed in 1913. After the termination of its function, the bridge becomes a landmark on the river as well as a railway cultural heritage. Designed by Japanese engineer Iida Toyoji, the bridge spent 8 years to construct due to the dangerous construction executed above the rushing river water. 42 workers and engineers sacrificed their lives during the construction. The bridge is 1526 meters in length, with 24 steel trusses as its main structure. The abutment of the bridge is built in brick and stone, with a span of 63.5 meters. When a new reinforced concrete bridge was built in 1987, the function of old KaopingRiverIronBridge terminated. It was listed as a local heritage in 1997 and became a national monument in 2005. Unfortunately, the bridge was damaged by a typhoon in 2005. Several trusses in the middle part of the bridge were devastated by the strong wind and fell into river. Thus, the bridge became two separated parts. The broken structure was further damaged by subsequent typhoons. This paper will review and discuss the creative strategies towards the sustainable preservation and conservation of this broken heritage bridge in Taiwan.

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\*Intervenant

# Les édifices industriels dans le champ des monuments historiques : une protection particulièrement fragile

Bastien Couturier \*<sup>1</sup>, Vincent Veschambre \*<sup>†</sup>

<sup>1</sup> Ecole Nationale Supérieure d'Architecture de Lyon (ENSAL) – Laboratoire LAURE - Lyon Architecture Urbanisme et REcherche – 3, rue Maurice Audin 69512 Vaulx-en-Velin Cedex, France

En marge des monuments historiques traditionnels, les édifices industriels ont progressivement acquis une reconnaissance patrimoniale. Cependant, ces nouvelles typologies architecturales s'adaptent mal à une muséification du bâti (pathologies du béton, amiante, corrosion des fers, etc.). Entre difficultés techniques de conservation et quête de légitimité, la reconnaissance de ce patrimoine reste fragile : ce secteur représente 1.9 % des monuments inscrits ou classés. Qui plus est, 8% des radiations de protections, effectuées depuis 1990, concernent des bâtiments industriels. Dans les 3/4 des cas, moins de quinze années se sont écoulées entre la protection et son annulation, ce qui atteste de la fragilité de cette reconnaissance patrimoniale. La thèse engagée à l'ENSAL porte sur les critères de sélection des monuments historiques, par le biais des annulations de protections depuis 1990. Cette étude vise à comprendre les enjeux des politiques de protections patrimoniales, entre la valeur intrinsèque d'un bien et sa valorisation effective par les pouvoirs publics. La parfumerie Chiris de Grasse (06) illustre ce parcours inachevé de reconnaissance patrimoniale. Inaugurée en 1899, protégée en 1989, “ Le bâtiment (...) a été démolie en 1999 (...) pour permettre la construction du nouveau palais de justice. (...) radié de l'inventaire supplémentaire par arrêté du 18 octobre 2004. ”. Certains bâtiments industriels, étroitement liés à leur fonction, sont parfois voués à disparaître lorsque l'activité s'interrompt (tuilerie de Trondes (54), papeteries de Villette à Corvol-l'Orgueilleux (58), moulin de la Roche à Fontenay-le-Comte (85)...). En effet, dans ce registre “ la reconnaissance de la valeur patrimoniale d'un édifice ne suffit pas [toujours] à assurer sa conservation ”(E. Réal, Réhabilitations textiles en Haute-Normandie, dans Traces, trajectoires et territoires(s), Pôle régional du textile, 2005, p. 21-26). D'autres édifices trouvent un “ second souffle ”, en devenant des lieux culturels. Cette reconversion fait cependant l'objet de débats, qui freinent le processus de patrimonialisation. Ainsi, la transformation du haut fourneau U4 à Uckange (57), par l'intégration d'un cadre muséal et artistique, a créé de vives polémiques : “ Usinor exprima son point de vue, qui n'a jamais varié depuis : Aussi respectables soient les arguments avancés, ce projet n'est pas du métier de sidérurgiste. ”. Classé en 1995, la protection au titre des monuments historiques fut annulée en 2000 pour vice de forme. Un nouveau classement fut néanmoins délivré en 2001(Notice PA00135420 – Base Mérimée). Cette étude, qui peut s'intégrer à la session n°3, met en exergue le fonctionnement institutionnel, les choix politiques, économiques et sociétaux, qui impactent la sauvegarde du patrimoine monumental, particulièrement lorsqu'il s'agit d'édifices industriels.

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\*Intervenant

<sup>†</sup>Auteur correspondant: [vincent-veschambre@lyon.archi.fr](mailto:vincent-veschambre@lyon.archi.fr)

# Santa Laura Saltpeter Facility. Atacama Desert, Chile Enhancement of a World Heritage site. Interpretation Center and the Iodine Museum.

Jaime Migone \* 1

<sup>1</sup> TICCIH Chile (Jaime Migone) – Pedro de Valdivia 1080 Santiago, Chile

The former Santa Laura and Humberstone Saltpeter facilities are part of UNESCO's World Heritage since 2005. Both sites are also highly protected by the Council of Chilean Monuments, and are part of the Endangered World Heritage. These sites are run by the Corporación Museo del Salitre (Saltpeter's Museum Corporation).

The enhancement program of this site comprises the restoration and refurbishment Project of the Old Management House of the Santa Laura Saltpeter, an initiative led by our office for over a year and currently on its last stage of execution. The Management House is an approximately 1,600 square meter building, with an additional 2,100 square meter patio area, built at the beginning of the XXth. century as office headquarters and housing for the English manager of the facility.

Its current condition is precarious and it was abandoned since 1961 until 2000, when the Saltpeter's Museum Corporation takes over its protection and a complex and slow process of enhancement is started. In 2012, the Ministry of Public Works launches a public contest to carry out the enhancement of the Management House, that is awarded to our institution and is on its final development phase nowadays.

The project consists in the structural consolidation and restoration of this building, in order to maintain its current condition state, as an example of industrial heritage restoration. This House will also harbor the Iodine Museum, a saltpeter by-product and quite unheard of within the productive process for so many years on the site.

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\*Intervenant

# Experience through Design | Design through Experience. The Design Station Project for Izmir (Turkey), Mediterranean City of Art, Culture and Design

Sergio Taddonio \*†<sup>1</sup>, Nağme Ebru Karabağ Aydeniz \*

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<sup>1</sup> Yasar University - Faculty of Architecture - Department of Interior Architecture and Environmental Design – Universitesi Cad. No: 35-37 Bornova, Izmir / TURKEY, Turquie

In the context of the ambitious vision of “Izmir, Mediterranean City of Art, Culture and Design”, proclaimed by the Izmir Metropolitan Municipality through the contribution of the Izmir Mediterranean Academy, the Design Station project, developed in collaboration with Master Students of the Faculty of Architecture - Interior Architecture and Environmental Design Department - of Yasar University in Izmir - Turkey, investigates the potentials of the local underused built heritage to be considered for new creative and social programmes as strategic constituent parts of the ‘Experience City’ (Evans G., 2001) and contributes to the local discussion on the above mentioned target by offering to the public audience and local authorities a programmatic action based on the ‘Re-Habilitation’ and Adaptation of the 1926’s dismissed and vacant Electric Factory located in the central and strategic harbour region to be turned into a Co-Creative Design Centre where local and international young designers and artists experience the research-and-interaction-based creative process aimed at re-thinking, re-working, re-branding and re-activating the art and design production at national and local level. Building Interventions and Adaptive Reuse - the re-habilitation and re-functionalisation of the ‘Group Heritage Building’ registered massive 1926’s Power Station with its advanced steel-framed structure filled with pressed bricks - as a medium for the protection of the collective memory of the city of Izmir and its industrial landmarks while providing a strategic response to the ambitious vision of a cultural-driven city regeneration by promoting a new design-research-based ‘place’ where local and international users share knowledge and investigate design while joining the mediterranean creative network. Experience through Design and Design through Experience. Experience Economy and Design. An academic investigation and design response aimed at promoting and experiencing the adaptive reuse approach for the ‘already built’ urban environment as precious resource for sustainable urban development actions. Urban regeneration actions with their social, economic, environmental benefits while promoting conversion projects of existing structures versus urban renewal policies and the demolition/reconstruction process.

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\*Intervenant

†Auteur correspondant: sergio.taddonio@yasar.edu.tr

## **S.3.E —Transport Networks: Roads and Canals; Railways**

# Workshops of the Companhia Paulista in Jundiaí, SP: a railway heritage under threat.

Antonio Soukef Júnior \* <sup>1</sup>

<sup>1</sup> FIAM-FAAM Centro Universitário – Avenida Lins de Vasconcelos, 3406. São Paulo - SP. CEP 04112002, Brésil

The workshops built by the Companhia Paulista de Estradas de Ferro in Jundiaí can be considered among the most significant Brazilian railway assets, both for their aesthetic and deployment qualities, and for the industrial activities carried out on the premises, since their spaces preserve the memory of the work of generations of railway personnel who performed their various functions there between 1893, the year they opened, and 1990 when they were permanently decommissioned.

In addition to their architectural and social value, the group of workshops in Jundiaí is also an important reference point in the territory as an articulator of the entire urban fabric and in the consolidation of the industrial landscape of the city.

Because of its particular location in the general map of territorial routes, Jundiaí was chosen as the end of the line for The São Paulo Railway Company Ltd, a British firm, created to transport the increasing coffee production from São Paulo to the port of Santos. As monopolists of the transport to the coast from 1867, they ordered the creation of other railways that were obliged to be connected to it, thus transforming Jundiaí into a bustling rail and industrial junction in which the Maintenance Workshops of the Companhia Paulista de Estradas de Ferro stood out.

This complex, during its almost one hundred years of operation, has undergone significant modifications and enhancements mainly due to technological changes driven by the replacement of steam traction by electric traction, and then by diesel-electric traction. Despite this, the complex maintained an impressive architectural consistency.

Unfortunately, most of the buildings of this complex are unused and in disrepair, being the target of invasions, vandalism, and theft of materials that if not stopped will cause irreparable damage to its structure and to the local ambience.

The question that appears most urgent, therefore, is to seek ways to repossess this group of workshops in order to meet the current demands of urban development without losing the characteristics which form its architectural and urban identity in a city in accelerated mutation.

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\*Intervenant

# Outline of Worship Railway at Shimane Prefecture in Japan and a Practical use and Expansion of the former Taisha Station

Ichiro Tsutsumi \*<sup>1</sup>, Tatsuo Kijima†<sup>2</sup>, Takashi Joichi‡<sup>2</sup>, Shoji Wada§<sup>3</sup>,  
Chiharu Ogawa¶<sup>3</sup>, Shoji Ishida||<sup>4</sup>

<sup>1</sup> Foundation for Transport Studies and Publications (FTSP) – Room 903, Shin Kokusai Building 4-1, Marunouchi 3-Chome, Chiyoda-ku 100-0005 Tokyo JAPAN (Office), 20-18, Kugayama 5-Chome, Suginami-ku 168-0082 Tokyo JAPAN (Home), Japon

<sup>2</sup> West Japan Railway Company, Head Office (JRW) – 4-24, Shibata 2-Chome, Kita-ku 530-8341 Osaka JAPAN, Japon

<sup>3</sup> West Japan Railway Company, Yonago Branch Office (JRW) – 2, Yayoi-cho, Yonago-city 683-0036 Tottori JAPAN, Japon

<sup>4</sup> Toyokawa Technical High-school (TTHS) – 14-2 Motoyashiki, Yokosuka-cho, Toyohashi-shi, 440-0093 Aichi JAPAN (Home), Japon

In Japan, two symbolic religions which are the ‘Shintoism’ and the ‘Buddhism’ have been preserved from ancient times. As these religions are concerned in Japanese life deeply, so many wooden made shrines and temples constructed at various places in Japan. Many pious people visit to them several times in a year. Historic religious wooden buildings are designated as cultural properties of self-governing bodies or/and nation. Many pious people usually walk to shrines and temples for a long time. After the Japanese public railway network, 3ft-6in gauge and steam traction, arranged in October 1872, they used this new convenient network gradually instead of their feet. For the purpose of these pious people’s transport, national or private railways and trams were constructed various places in Japan. We call this the ‘Worship Railway’. In this presentation, we will give an outline of the ‘Worship Railway’ at Shimane Prefecture. This prefecture is situated in the west of main island of Japan and it is well known as the World Heritage ‘Iwami Ginzan’ Silver Mines. Then, we will explain on the former Taisha line and terminus Taisha Station as shown in picture with other railway facilities. This terminus carried its mission as an entrance into the famous ‘Izumo Taisha’ Shrine for a long time. It was designated as the Cultural Properties of Japan in July 2004. A new practical use and expansion of this historic station through our first function will be explained. Contents of this presentation are as follows. 1.Object of this presentation ; 2.Outline of the ‘Worship Railway’ at Shimane Prefecture in Japan ; 3.Taisha line as an example of ‘Worship Railway’ ; 4.Terminus Taisha Station and railway facilities ; 5.Regional practical use and expansion of Taisha Station ; 6.Conclusion and future problems. Drawings and Photographs relation to the Taisha Line, Taisha Station and Japanese Regional Railways and so on will be introduced in this text.

\*Intervenant

† Auteur correspondant: tatsuo-kijima@westjr.co.jp

‡ Auteur correspondant: takashi-joichi@westjr.co.jp

§ Auteur correspondant: shiyouji-wada@westjr.co.jp

¶ Auteur correspondant: chiharu-ogawa@westjr.co.jp

|| Auteur correspondant: ishida96@tcp-ip.or.jp

# Le chemin de fer au Cameroun

Reine-Flora Saounde \*† 1

<sup>1</sup> Centre d'histoire des sciences et d'histoire des techniques (CH2ST) – Université Paris I - Panthéon-Sorbonne – France

The railroad company in Cameroon is the result of several events of political, economic and ideological orders which appeared since the 1850s, in particular with the arrival of the explorers and the Dutch, Portuguese, German and English traders. However, the setting up of the railroad construction site was at first the work of the German administration of 1906 and 1914. They first built the railroad of Douala to Nkongsamba and afterward from Douala to Eséka with the objective to extend the railway in Yaoundé and Tchad. From 1916 till 1960 the administration of the railroad passed in the hands of France which not only undertook restoration works of railroads destroyed during the war, but also pursued the extension to Yaoundé. The management of this railroad was made in collaboration with the Cameroon railroads State created in 1948. Besides, the “deindustrialization” of the 1950s in Europe, gave rise to Industrial Archaeology based on the necessity of protecting the elements of the industry of a historic importance, in other to avoid their disappearance. The study of Heritage of Industry so appeared and whose, railroad constitutes one of its components. The railroad became heritage, among which, the elements of a historic importance, an exceptional value are identified, inventoried, protected by national and international laws and take shelter from any forms of deteriorations. Cultural projects with museums and tourist trains for example contribute to the development of the historic railroad heritage. However, the railway heritage of Cameroon does not yet seems to benefit from solid protection measures, and, the elements of historic importance's such as monuments (railway infrastructure), ancient locomotives are neither well identify, nor classified or preserved. These elements should be inventoried according to the heritage inventories techniques to benefit from certain protection measures through numerous scientific and cultural projects. Besides, the implementation of an enhancement project of the railway heritage of Cameroon also involve a significant consideration of stakeholders; the collaboration with various stakeholders such as the State, the CAMRAIL, railway employee, local authorities, population and support of private, national and international donors. Only an active and effective communication with these actors can provide management and enhancement of heritage succeed. In addition, enhancement projects through eg museums, trainings, circuits, cultural projects seem certainly possible and feasible with many advantages. On the other hand, some constraints of economic, societal and educational levels could jeopardize their achievements. While considering the important role that heritage plays in our today's societies, the demonstration of a common will by actors could lead to the setting up of practical project successfully. That being said, the main actors could give themselves the means to achieve it if there is a will.

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\*Intervenant

†Auteur correspondant: reineflora2000@gmail.com

## **S.3.F — New Research, scales and tools**



# Western Origins of Chinese Modern Industrial Buildings and Its Localization— Case study of Textile Mills in Yangtze Delta area, China

Yiping Dong <sup>\*† 1</sup>, Binchao Hou <sup>2</sup>

<sup>1</sup> Xi'an Jiaotong-Liverpool University (XJTLU) – No.111 Ren'ai Road Suzhou Dushu Lake, Higher Education Town Suzhou Industrial Park, Jiangsu Province P.R.China 215123, Chine

<sup>2</sup> Tongji University [Shanghai] – 1239 Siping Road, Shanghai, Chine

In China, the adaptation reuse of the textile remains has been a popular method to “save” these industrial building recently. However, the historical value of these remains hasn’t be studied yet.

The selection of the “industrial heritage” is based on superficial observation and record in most cases. The current limited historical research of the industrial technology and the industrial architecture development in general lead to the consequence that the value of authentic industrial buildings has been undermined with the abuse of re-use. The scientific evalutation on industrial architectural heritage and good conservation practice should depend on the deep researches on these buildings, which demands interdiscipline methods and solid historical data. As the Chinese modern industries were established in the port cities through two main ways, the foreign investments and the “Westernization Movement” after the Opium War. The new manufactory demanded a new type of buildings, the modern industrial buildings, which have crucial influence on the modernization of Chinese architecture. This process could trace back to the western origins in different levels. The “imported” industrial buildings were dominated structures in earlier period, which were replaced by “localized” design and construction when the domestic industries were booming in 1920-30s.

Focusing on historical origins of the Chinese modern industrial buidlings and its technology tranfer routes, this paper will take the textile mills in Yangtze Delta area as samples. Yangtze Delta area has a long textile tradition in Chinese history. These “modernized” textile mills have been very important evidences to understand the modern industry history and the architecture technology evolution as well.

This paper will examine the existing textile mills in Yangtze Delta area, especially alongside the Grand Canal and the connection between Shanghai and the other important port cities, like Wuxi, Nantong, and Suzhou. With the field work and survey data, the researcher could make a historical mapping and show the evolution with the comparison of the architecture features to the origins in Western Countries, such as UK. The localization process of industrial buildings in China will be explored by comparative study in architecture design, construction technology and construction details.

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<sup>\*</sup>Intervenant

<sup>†</sup>Auteur correspondant: yiping.dong@xjtlu.edu.cn

# The factories of modernity in "Campania felix": Heritage Under Threat

Castanò Francesca \* 1

<sup>1</sup> Dipartimento di Ingegneria civile, Design, Edilizia e Ambiente - Seconda Università di Napoli (DIcDEA - SUN) – Real Casa dell'Annunziata, via Roma 29, 81031 Aversa - Caserta, Italie

The proposed contribution, formulated on the basis of ongoing researches that have been conducted for many years by the writer, focuses on the industrial heritage of southern Italy built during the twentieth century, underlining the close connections between industrial architecture and the Neapolitan conurbation, taken here as a frame of reference to assess the impact of the great industrialization promoted by the Cassa del Mezzogiorno on the rural environment and traditional agricultural vocation of these places. A radical change occurred in half century leading to a tangible inversion of regional economies which shows the significant presence of large industrial groups, from engineering to telecommunications, from the iron and steel sectors to the ceramics and textiles ones, deeply linked to the destiny of citizen, both in terms of cultural and demographic growth. Through the methodology of the history of architecture and urbanism, based on an extensive archival research, we intend to cast light on the rich and diverse sampling of buildings having high formal qualities and landscaping value. A real territorial palimpsest which includes, in a small geographical area, many factories built between 1950 and 1970 by the most authoritative exponents of Italian architecture as Riccardo Morandi, Luigi Figini and Gino Pollini, Franco Albini, Marco Zanuso and Eduardo Vittoria, Angelo Mangiarotti or Gigi Ghò. It is a relatively unknown heritage at the moment, mostly abandoned, not protected by any constraint, that only my recent investigations are trying to subtract to the progressive oblivion and for which it is necessary to make hypotheses, also provisional, to enable its return to the community, before its complete loss, as has happened in Salerno for Landis & Gyr, a marvellous forgot work designed by Luigi Cosenza. For all these former manufacturing sites located in strategic places of the Campania region, connected to the main regional infrastructures and sometimes located close to historical monuments, it is certainly possible to trigger the enhancement processes able to combine the interests of the community with the economical needs of a difficult regional reality. A goal achievable through the establishment of a real "observatory of industrial culture" where the university in agreement with the associations, public and private, and people themselves, find a common meeting ground to proceed to the identification, conservation and especially the management of the heritage in the complex framework of development policies of south contexts. This will allow on one hand to save a heritage under threat, revealing its architectural and testimonial values and, on the other hand, to provide the tools necessary to guide its physical and social transformations.

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\*Intervenant

# the Machine Tools Project

Daniela Wellnitz \*† 1

<sup>1</sup> STICK – Royaume-Uni

Engineering and industry collections provide a vital insight into Scotland's social and economic history. This tangible heritage links us to the millions whose lives have been shaped by technological improvement over the past three centuries. These collections represent the success of Scottish innovation in the field. The Scottish Transport and Industry Collections and Knowledge Network (STICK)iii with a range of members including museums, archives and heritage organisations aims to promote care and enjoyment of these collections. As a self-financing, multi-disciplinary subject specialist network, STICK encourages wider engagement with technological and industrial history collections across Scotland. Through research, stewardship, advocacy and project partnership, the network aims to Develop opportunities to advance acquisition, development, research and interpretation of transport and industry collections. Identify key issues facing long-term stewardship and development of transport and industry collections and work together to tackle these. Promote, encourage and advance access to Scottish transport and industry collections through a variety of mechanisms. Support informed, efficient and confident decision making in the acquisition and long-term care of transport and industrial heritage across Scotland.

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\*Intervenant

†Auteur correspondant: daniela@scotmaritime.org.uk

## **S.3.G — The Role of Public Bodies**

# La Région Languedoc-Roussillon et le patrimoine industriel : de la connaissance à la valorisation, les étapes d'une politique patrimoniale et culturelle

Lisa Caliste \*† 1

<sup>1</sup> Service de l'Inventaire, Région Languedoc-Roussillon – Ron Languedoc Roussillon – France

En Languedoc-Roussillon, l'émergence et la reconnaissance du patrimoine industriel doivent à la fois à l'action de la société civile et aux politiques institutionnelles. La prise en compte du patrimoine industriel par la DRAC Languedoc-Roussillon a en effet été précoce en France, dès 1988. Entre 1989 et 2007, 989 édifices industriels ont été étudiés par le service régional de l'Inventaire du Languedoc-Roussillon, soit 10% des édifices industriels recensés sur le territoire français.

La décentralisation de la compétence d'Inventaire aux Régions, par la loi du 13 août 2004, a renforcé cet engagement pour la connaissance du patrimoine industriel. Entre 2007 et 2010, la Région a mené une étude exhaustive des caves et distilleries coopératives languedociennes. Parallèlement, l'enquête à l'échelle départementale s'est poursuivie avec l'inventaire du patrimoine industriel de l'Hérault, dans le but d'obtenir une couverture complète du territoire régional. Cet inventaire a permis de compléter la liste élaborée depuis les années 1980. Mais ce programme de recherches traduit également un changement de logique. L'exhaustivité a laissé place à la sélection. De même, l'étude des monuments industriels a laissé place à celle du territoire. En suivant cette démarche, il était impossible d'exclure du périmètre de recherche les sites industriels récents. Le territoire étant devenu l'objet d'étude, il ne pouvait également être question d'en exclure ses acteurs. Éditée en 2014, la publication de cet inventaire a ainsi mis à l'honneur les paysages industriels tout comme les gestes du travail.

Si la Région œuvre pour la connaissance du patrimoine industriel, elle souhaite également développer une politique de diffusion de la culture scientifique, technique et industrielle. En 2010, elle a initié une collecte de la mémoire des mineurs dont les enregistrements ont été largement communiqués grâce à la Fédération des Radios Associatives du Languedoc-Roussillon. Par ses financements, elle participe également au développement des musées des techniques sur son territoire et accompagne la réhabilitation des édifices protégés tels les puits de mine et les phares. Pour valoriser ces bâtiments, elle soutient les manifestations culturelles organisées en leur sein, comme le festival Radio France dans les caves audoises ou Charbon Ardent sur l'ancien carreau minier de la Grand Combe. Face aux enjeux de développement culturel et économique, la Région cherche à définir de nouvelles pratiques de recherches mais également une politique de valorisation à différentes échelles, en association avec les acteurs locaux, notamment dans le cadre de visites d'entreprises, et les réseaux européens.

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\*Intervenant

†Auteur correspondant: caliste.lisa@cr-languedocroussillon.fr

# Watercourses and Hydropower - New plan for Norwegian Industrial Heritage

Unn Yilmaz \* 1

<sup>1</sup> The Norwegian Water Resources and Energy Directorate (NVE) – Norvège

The Norwegian Water Resources and Energy Directorate (NVE) is a directorate under the Ministry of Petroleum and Energy and is responsible for the management of Norway's water and energy resources, through licensing and inspection of hydropower schemes.

NVE is delegated the main responsibility for national heritage related to water resources and energy which is not protected through the Cultural Heritage Act. NVE has no ownership in any hydropower schemes, calling for close cooperation with owners and cultural heritage authorities.

In 2013 NVE completed the last of four inventories of the sector's cultural heritage. Following the inventories, NVE's legal means in contributing to the preservation of this heritage are being put to use through introducing conditions in licensing cases.

Challenges to the preservation of the sector's industrial heritage include new and stricter regulations for dam safety and an increased focus on renewal and upgrading of existing schemes. The new safety regulations are leading to demands of reinforcement or replacement of older dams, many of which have been included in the inventory. Renewal and upgrading is often economically and environmentally preferable to new developments, but involves replacements and changes to original structures. In 2015 NVE's cultural heritage management plan will be completed. The aim is for the plan to be a useful tool for NVE, cultural heritage authorities and owners in helping preserve the industrial heritage. NVE is also planning to work together with Statkraft and the Directorate for Cultural Heritage, on developing standards for the documentation of structures which cannot be preserved physically. In addition, NVE has taken organisational measures by initiating the establishment of an internal cross-departmental workgroup on industrial heritage. The workgroup will ensure the involvement of relevant internal and external parties in each process, and the standardised treatment of cases. As a measure to strengthen the protection of our sector's industrial heritage, NVE is focusing on cooperation with regional authorities. The aim is to increase the awareness of industrial heritage and to coordinate the use of our different measures in order to improve the preservation of this heritage. In order to make the sector's industrial heritage publicly accessible, NVE has published digital, interactive maps of the inventories. Furthermore, as a result of the new plan, all this data has now been entered into the national heritage database and GIS-system, ensuring access to national, regional and local authorities for use in planning processes. The same data has also been made accessible through the database's public version. NVE now also communicates the history of the sector's industrial heritage through different social media, aiming to increase awareness and engagement in a wider audience.

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\*Intervenant

# Le rôle déterminant des acteurs publics dans l'inscription du Bassin minier Nord-Pas de Calais au Patrimoine mondial

Catherine Bertram \*<sup>1</sup>

<sup>1</sup> Managing Director – Mission Bassin Minier Nord-Pas de Calais – Carreau de Fosse 9/9 bis rue du Tordoir BP 16 62 590 OIGNIES, France

La gouvernance et l'ingénierie sont la pierre angulaire du dispositif de gestion des Biens inscrits sur la Liste du patrimoine mondial. A fortiori dans la catégorie de “ paysage culturel évolutif vivant ” à laquelle appartient le Bien du Bassin minier Nord-Pas de Calais depuis 2012. Anticiper puis mettre en œuvre les conditions d'une organisation collective et partenariale des acteurs s'imposait : le Bien inscrit concerne 4 000 hectares de paysage et quelque 353 objets, bâtis et néo-naturels, répartis sur 87 communes, complexité néanmoins tempérée par la maîtrise publique de catégories importantes de sites. Pour autant, la variété et la multiplicité des objets, des acteurs, des procédures et des échelles du Bien du Bassin minier, vérifient l'une des évolutions nécessaires au respect de l'esprit de la Convention de 1972 et de la préservation de la “ valeur universelle exceptionnelle ” des Biens inscrits : la mise en place d'un Plan de gestion, reposant sur une gouvernance “ sur mesure ”, est devenue une nécessité ; les retraits de Biens de la Liste sont désormais une réalité. “ Sur mesure ” oui, car il n'existe point de recettes toutes faites pour combiner conservation et développement, préserver intégrité et authenticité et permettre l'évolutivité de territoires “ vivants ”. Le cadre partagé du Plan de gestion du Bassin minier permet de rassembler les différents acteurs et partenaires publics impliqués. Si l'Etat français est un acteur majeur de celui-ci et le garant du Bien inscrit, la gestion du Bassin minier Nord-Pas de Calais Patrimoine mondial est bien l'affaire de tous, et des collectivités en particulier. La gouvernance repose sur une instance d'orientation politique, la Conférence des Territoires, co-présidée par le Préfet de région et le Président du Conseil régional, et les comités locaux du Patrimoine mondial rassemblant les élus des intercommunalités et des communes du Bien inscrit et de la zone-tampon. Au niveau opérationnel, le gestionnaire du Bien désigné est la Mission Bassin Minier, outil d'ingénierie rassemblant l'ensemble des acteurs institutionnels, et travaillant en coordination avec les services de l'Etat, les structures-ressources et les équipes d'ingénierie du territoire. La mise en œuvre concertée du Plan de gestion nécessite la coordination des outils réglementaires de protection du patrimoine bâti et néo-naturel, des documents de planification mais aussi de la contractualisation, avec des accords-cadres avec les principaux propriétaires et gestionnaires et les intercommunalités. Enfin, défi ultime ! “ L'édifice ” de la gestion ne sera solide que si le “ ciment ” reste bon : ce ciment, c'est la vigueur du soutien populaire et associatif qui a donné le souffle à la candidature – hier – qui doit être poursuivie dans la gestion aujourd'hui, gage d'une transmission des valeurs, de la défense et de la valorisation du Bien pour les générations futures.

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\*Intervenant

## **S.3.H — Industrial heritage in Central and Eastern Europe**

# Recent industrial heritage – values to be discovered

Jana Horicka \*† 1

<sup>1</sup> Czech Technical University Prague, Faculty of Civil Engineering, Dpt. of Architecture (FCE CTU Prague) – Thakurova 7/2077, 166 29 Prague 6, République tchèque

During last 25 years, industrial heritage has become laicly more intelligible in the Czech Republic. The values are generally respected. However, the values are associated with the heritage of the industrialization. Post-war transformation of the industrial production is disregarded. Although there is a research performed to identify the values of post-war industrial architecture (Jan Zikmund, Research Centre for Industrial Heritage), an adverse memory of the recent history is alive. The paper presents several examples of post-war industrial heritage in the Czech Republic, discussing a development of the estate and analyzing experiences. The most significant loss of the post-war industrial heritage was a demolition of a large clothing factory building in Prostějov in July 2014, despite the tradition of clothing production in the city. On the contrary, two of Bafa post-war multi-story factory buildings were adapted for the regional cultural institute in Zlín (2011-2013). The paper emphasise a social aspect, approaching the post-war industrial heritage. The tradition of industrial archaeology as a complex discipline is missing in the Czech Republic. The research is mostly focused on technology and architecture. Sociocultural significance and social burden of the recent heritage are underestimated. To recognize values, a certain distance is needed. However, some of the post-war industrial buildings are occupied with the original production or a secondary use such as storage. Some of them have been left recently, after the year 2000. The thorny problem of the recent industrial heritage is communication of values, having a deficient distance.

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\*Intervenant

†Auteur correspondant: [jana.horicka@fsv.cvut.cz](mailto:jana.horicka@fsv.cvut.cz)

# Industrial heritage and the World Heritage City of Gjirokastra

Bosse Lagerqvist \*<sup>1</sup>, Diana Walters \*

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<sup>1</sup> Department of Conservation, University of Gothenburg (UGOT Con) – P.O. Box 130 405 30  
Goteborg, Suède

<sup>2</sup> Cultural Heritage without Borders (CHwB) – Sabbatsbergsvägen 6, 113 21 Stockholm, Suède

Global and Local Section of TICCIH  
Industrial Heritage in Central and Eastern Europe

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Industrial heritage and the World Heritage City of Gjirokastra

Albania is formerly the most closed country in Europe and has suffered from severe economic and political problems during the last two decades. In the southern part lies Gjirokastra, birthplace of former dictator Enver Hoxha, and home to diverse communities of Albanians and Greeks. Gjirokastra Old Town, proclaimed “Museum City” by the regime in 1961 and later turned into a UNESCO World Heritage City, climbs the steep western side of the Drinos valley. During the communist era the city was heavily industrialized with a metal work factory as well as factories for products such as shoes, refrigerators, and umbrellas. On the eastern side is the archaeological site of the ancient city of Antigonea, thus defining a landscape with long historical processes and a multitude of narratives and interpretations.

In recent years this landscape has witnessed increased efforts to secure what are perceived heritage values, focusing on the older structures i.e. the world heritage part of the city and the archaeological site. However, the structures of post-war era of Albania contribute significantly to the full context of the landscape, but since the mid-1990s and the collapse of Albanian post-communist economy the former industrial sites are increasingly deteriorating.

This paper will discuss the societally based problems in interpreting the industrial structures and accepting them as part of the heritage, and also discuss the potentials of those buildings for reuse in agricultural and tourism industrial development. The ambition is to turn this part of the valley into a large scale laboratory for heritage processes underpinning sustainable societal development, social justice and cultural tourism through empowering local people. The challenges of working in Albania are many and considerable, but this unique part of SE Europe is a living museum that demonstrates the interconnectedness of museums, landscape, communities and international cooperation.

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\*Intervenant

# Perception of socialist industrial heritage in transition society – case of Vojvodina

Anica Tufegdzic \* 1

<sup>1</sup> University of Novi Sad, Faculty of Technical Sciences (UNS, FTN) – Trg Dositeja Obradovica 6, Novi Sad, Serbia

Industrial buildings are specific representative of social progress and transformations. In various stages of last centuries industrial architecture had completely different meaning and symbolism, deriving from a given socio-political circumstances.

Industrialization was a priority to post-war Yugoslavia, and the industry was the driving force for progressive social transformation. New factories were the main symbols of socialism. So, it was possible to equalize socialism with industrialization, and according to some theorists, further industrialization with urbanization. Workers' self-management, as a form of joint decision-making in enterprises regarding care about employees, division of labor, general method of production, sharing and consumption of labor fruits, was the essence of Tito's policy. The worker was a foundation of the new state ideology, and the factory was a place of its manifestation and realization.

Once a symbol of state ideology, the factories from post-war period are today, in the transition period, a symbol of economic decline. Due to the present general negative attitude towards everything that was created during the socialism, the value and potential of industrial complexes and structures created in the post-war period of Yugoslavia have not yet been recognized.

For the greater part of the general, but also professional public, abandoned and devastated factories are not perceived as valuable. Therefore, for the purposes of this study, was conducted public opinion research in order to form a matrix for establishing criteria for socialist industrial heritage evaluation, as a prerequisite for successful presentation. In this paper will be theoretically discussed the issue of identity, which is behind the achievements of socialism, as well as possibility of its reinterpretation in the post-socialist period, on examples of several factories.

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\*Intervenant

## **S.3.I — Adaptive Re-Use of Industrial Buildings**

# Zsolnay Cultural Quarter, Pécs, Hungary – Case study

Erzsébet Urbán \* 1

<sup>1</sup> Budapest University of Technology and Economics (BME) – Hongrie

## Living technology and industrial tourism

Since its foundation in 1853, the Zsolnay factory has become a symbol of not only the city of Pécs but also the Hungarian national identity; it has grown to be an architectural and social reference point. Beside the production of fancy goods and architectural ceramics, the manufacture of chinaware also played an important role in the output. After World War I, as a result of the reduced country area, the number of purchase orders falled back which led to the shutdown of many divisions. The reuse of vacated buildings was the mutual interest of the factory and the city. The sustainable renewal of the abandoned industrial zones can be achieved with an integral approach. The newly included functions in this area should adjust to the needs of the present. Preserving the identity, there are several ways to show the industrial heritage of the active factories to the public: collection about its history, industrial museum, organized factory visits, workshops, industrial thematic park.

## Tradition and constant renewal

For the Zsolnay factory the artistic value and the constant renewal have always been a priority along with new technological solutions. Zsolnay Porcelain, eosin and pyrogranite are the most memorable results of the experiments that started in 1870. The change owing to the program of the European Capital of Culture 2010 - which created a contemporary district from the emptied areas - is a nice representations of this demand of constant renewal. Faculties of fine and creative arts settled next to the glazed ceramic production. These have a connection with the original manufacture, but institutions of design and social studies were also established on the campus. A constantly busy cultural quarter was formed. Every detail of the large-scale project reacts sensitively to the values of the existing built heritage. There are four finely interleaved quarters with different usage that show a heterogeneous picture overall. The industrial atmosphere is the strongest in the Creative Quarter with the Pyrogranite Square in its centre. The smallest additions were made in the so-called Míves Quarter where mostly the exact reconstruction of the original buildings occurred. The spirit of the factory is determined by the sophistically varied details of ceramics. The success of the project is presumably due to the series of small interferences, creating comprehensible spaces of human scale. Sustainable development. The renewal brought many positive changes such as new cultural institutes and development of infrastructure. The factory acquired a new source of income, so its chance for long-term persistance also grew. As a result of the development Pécs became an internationally relevant cultural centre.

Keywords: urban regeneration, re-use, industrial thematic park, cultural quarter

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\*Intervenant

# Meat Packing districts – industrial heritage as authenticity and fiction

Eva Dahlström Rittsél \*<sup>1</sup>, Mari Ferring \*<sup>†</sup><sup>2</sup>

<sup>1</sup> County Administrative Board of Stockholm – Box 22067, SE 104 22 Stockholm, Suède

<sup>2</sup> WSP Cultural Heritage unit – Suède

The concept of authenticity has been used in discussions about reuse, redevelopment and gentrification to describe and analyse changes in the structure of industrial areas (Zukin, 2010; Thörn & Hogersson, 2014)

During the last decades we have seen an increased number of transformations of industrial buildings and areas. In Stockholm, several industrial sites have been transformed to dwellings, offices, shopping malls, schools, etcetera.

The character of the transformation has changed during the years. Today, industrial heritage is commonly accepted as part of our cultural heritage, and many industrial sites and items are appreciated. “Industrial” have become cool, chic and stylish. (Willim, 2008; Dahlström & Ulfstrand, 2012)

This paper deals with the proposed transformation of the Meat Packing district in Stockholm. The questions are concentrated on what parts of the industrial historical identity that will fit in, and what will consequently be deselected in the planning for the development of the Meat Packing district in Stockholm. Our empirical material consists of observation studies, documents from the planning process, photographs, the computer-made images presenting the area and historical research of the area.

We will also make a comparison with international examples: the transformations of the abattoirs in Copenhagen and Helsinki and the Meat Packing District of New York. In our analysis of the findings, we use theories connected to the concept of urban narrative.

In the planning documents the goal is to create unique and authentic places. The industrial heritage is important in the creation of attractive sites. A planning based on “best cases” combined with planning regulations once developed for the function-separated city can result in dissatisfaction with the outcome. Antiquarians and conservationists use authenticity to describe the original structure and material. Authenticity is also a way to commercially promote an area with respect to, for instance, life-styles, fiction and the transformation of the buildings. The hypothesis of the paper is that social and cultural dimensions of sustainable development need to be openly discussed and satisfactorily integrated in the planning process.

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\*Intervenant

<sup>†</sup>Auteur correspondant: mari.ferring@wspgroup.se

# The Ditherington Flax Mill project, Shrewsbury UK; “Redeveloping the oldest iron-framed buildings in the world”

Geoff Rich \*<sup>1</sup>

<sup>1</sup> Feilden Clegg Bradley Studios – Royaume-Uni

The Flax Mill Maltings site contains seven listed industrial heritage buildings, all of which are at risk. The importance of the Main Mill in the history of engineering has international significance. In addition, the site is exceptionally rich in social, economic and technological history. Ditherington Main Mill is the oldest surviving iron-framed building in the world. Constructed in 1796, the Main Mill is a landmark in the development of world structures. The technology using cast iron columns, cast iron beams and wrought iron tie-bars led the way to the development of more sophisticated metal-framed high-rise buildings. The Ditherington site also has the third and eighth oldest iron framed buildings in the world. As well as the main buildings above the site included power transmission mechanisms, workshops, a packing shop, manager's office and workers' housing, a gas production facility, a well and other features. English Heritage cites the Ditherington site as an early steam-powered factory and a rare example of a large suburban factory for its time. Sir Neil Cossons in his article ‘Saving the Age of Industry’, also identifies Ditherington Flax Mill as being ‘by far the most significant Georgian building at risk’ in Britain. The Flax Mill Maltings stands in the heart of Castlefields, one of Shrewsbury’s most deprived communities. This project will be the catalyst to regenerate the wider site which will impact on the local economy and peoples’ quality of life. By careful conservation and repair of the historic fabric and buildings, this heritage led regeneration project will ensure a long and sustainable future for this globally-important site and be the catalyst for the wider regeneration scheme. The overarching aim is to conserve the historic buildings and open the doors so its unique and diverse heritage can be understood, enjoyed and appreciated by everyone. This project will protect, restore and safeguard the main historic buildings and ensure a sustainable future for them. An innovative structural solution has been developed which will once again place the Main Flax Mill as a leader in the use of new techniques and materials and will allow for future flexibility and re-instatement if required. The restoration works will create structures fit for modern reuse, providing the opportunity for the buildings to enter their third century of productive and community use, and will act as a catalyst for further developments and regeneration in the wider area. The project is particularly keen to have a pivotal role in helping regenerate and bring new life back to the local community (one of Shropshire’s most deprived), to deliver programmes for local young people who have had limited opportunities available to them locally and to target groups who have particular needs which are currently not being met.

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\*Intervenant

# Les Magasins généraux de Pantin

Jean-Luc Rigaud \*<sup>1</sup>

<sup>1</sup> EA 127 – Université Paris I - Panthéon-Sorbonne – France

Après de nombreuses expériences dans le domaine de l'entreposage de marchandises au service de l'approvisionnement de la capitale, la Chambre de Commerce et d'Industrie de Paris obtient en 1927 l'autorisation du département de la Seine de créer ses propres Magasins généraux. Les besoins en termes d'entreposage sont des plus importants, ils répondent à la consommation d'une population toujours plus nombreuse ayant accès au crédit mais également à l'internationalisation des échanges. L'aménagement d'un port à Pantin et la concession accordée permet à l'institution consulaire d'asseoir son leadership. Toutefois, la construction du bassin rencontrera bien des difficultés dans sa réalisation. Les bâtiments non signés sont à attribuer à l'Inspecteur général des Ponts et Chaussées, Louis Suquet. La priorité de l'ingénieur-architecte s'est portée sur un ensemble de deux blocs composés comme des tiroirs pour emmagasiner denrées et matériels. La fonction utilitaire a guidé le travail vers un lieu de stockage efficace et maîtrisé, proposant de multiples possibilités d'aménagement intérieur. Son attention s'est portée sur les questions d'espace, de lumière et d'ouverture. Si les bâtiments répondent à une fonction, celle de l'entreposage, le dessin des coursives, reliées par des passerelles, lui donne une dimension poétique forte. L'impression est accentuée par une construction en miroir qui va s'élevant en diminuant les hauteurs des étages. Les premières activités sont celles de l'entreposage des céréales et des alcools industriels mais rapidement la mise en place des offices des céréales et le monopole d'Etat sur les alcools vont venir contrarier l'affection première du site d'entreposage. A la veille de la réquisition allemande, si les entrepôts sont affectés au stockage de denrées des plus diverses, ils sont également sous exploités. Pendant l'occupation la Chambre de Commerce continue de bénéficier de la jouissance d'une partie des entrepôts, principalement pour l'alimentation de la population parisienne ; l'entreposage allemand correspondant à des besoins militaires mais également alimentaires à destination de l'Allemagne. En 1944, les troupes américaines réquisitionnent les Magasins généraux pour y stocker principalement du matériel médical. Lorsque la Chambre de Commerce reprend la gestion du site, l'environnement industriel et commercial a fortement changé. En effet, les besoins se sont diversifiés et l'ouverture au marché européen s'est intensifiée. En 1950, une gare routière internationale répond aux nouveaux besoins du commerce international et notamment à l'intérieur de la CEE. Les activités vont se poursuivre jusqu'à la fin des années 90, la réorganisation des lieux de stockage en région parisienne met un terme à près de 70 années d'activité. A la fermeture le site, propriété de la ville de Paris, est vendu à la société d'aménagement de la ville de Pantin (la Semip). Différents scénarios de réhabilitation sont étudiés mais celui présenté par l'agence de communication du groupe Havas (BETC) est le seul à aboutir.

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\*Intervenant

## **S.4.A — Workers' Housing**

# Pour une arquèologie de la colonie industrielle.

Pablo López Calle \* <sup>1</sup>

<sup>1</sup> Universidad Complutense de Madrid (UCM) – Departamento de Sociología III (Estructura Social)  
Facultad de Ciencias Políticas y Sociología Universidad Complutense de Madrid Campus de  
Somosaguas 28223 POZUELO DE ALARCÓN (Madrid) Tel: 913942888, Espagne

Après plusieurs années de recherche documentaire et visites sur le terrain sur le phénomène de la colonie industrielle en Espagne, États-Unis, Grande-Bretagne et, dans une moindre mesure, France ou Italie, nous pouvons arrirrons certains conclusions générales sur ce phénomène: d'abord, nous avons étudié, de façon générique, où nés les sources de légitimation et la légitimité dans l'ordre libéral qui ont permis aux entreprises qui entourent d'une ville industrielle de l'organisation de la vie sociale de la communauté. Deuxièmement, en prenant comme hypothèse que les différentes formes d'organiser la reproduction du travail en la ville dépendent des différentes formes d'organisation de la production, nous essayons de construire une sorte de typologie des villes usine basée sur ces différentes "stratégies rentabilité" des entreprises.

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\*Intervenant

# Industrial Heritage in Campinas, Brazil - an approach from the remains of three industrial structures.

Maria Andreotti \* 1

<sup>1</sup> Universidade Estadual de Campinas (Unicamp) – Campus Universitario Zeferino Vaz - Barão Geraldo  
Campinas - São Paulo - cep 13083 970, Brésil

The decline of the industrial activities is a global phenomenon that intensified in Latin American cities after the 1970s. With the reorganization of industrial production, patios and large buildings lost their original function, and so on, the re-activation of these brownfields in their multiple senses became a significant question in the beginning of the XXI century. As an important urban and industrial core in São Paulo State, Brazil, Campinas city could be understood as representative of the deindustrialization event. For this research three different industrial remainings were highlighted: the set of tannery buildings in the neighborhood known as Vila Industrial (Industrial Village), the hat factory Cury in the city center and the empty buildings that composed the Swift Company at Vila Proença neighborhood in Campinas.

This analysis had, as a start point, the set of tannery buildings in Vila Industrial, one of the first places to receive industrial installations, south of the railway that limited the city. Dated from the first decades of the twentieth century, it is an architectural example of the initial industrial period, which is today abandoned. The hat factory Cury, on the other hand, was installed in 1920 and stands as a counterpoint not only because of its central localization and ongoing production, but also because of its importance as an identity element for Campinas. The third factory in this study - the Swift Company remaining buildings - is located in an old industrial neighbourhood at southeast, also limited by the railway line, and is an example of a recent industrial installation in the city. This area became in the past decade one of the most preeminent axes of real estate speculation and city expansion, placing this industrial heritage at disappearance risk. The current activities of each example - two empty spaces and one in process of deactivation - compose a set of significant examples of what is happening with the industrial heritage in Campinas, and other Brazilian cities.

As representatives of Brazilian industrial process in three diverse periods and three different axes of installation in the city, these testimonies find themselves in the present time in a situation where their economic activity has lost importance as urban, and its buildings in process of emptiness faces the city real state. In the actual reappropriation process, the issues of identity and memory intrinsic of these places are not being considered. The main goal of this work is to focus on the importance of these industrial heritages in the growth and consolidation of Campinas city, presenting alternatives for the incipient ongoing process of destruction.

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\*Intervenant

# Minsk Tractor plant settlement as a place of identity construction, 1944-1964

Lunitskaya Natallia \* <sup>1</sup>

<sup>1</sup> Charles University in Prague, Faculty of Arts (CUNI) – Jana Palacha 2, Praha 1, 116 38, République tchèque

Industrialization campaign was launched in the Belarusian Soviet Socialist Republic by the end of the World War II, and the Tractor plant was one of the first among other production sites to appear in the capital city. The plant with the workers' settlement attached directly to it, furnished phenomenal growth of Minsk, drawing rural migrants onto working places. Being a socialist realist incarnation of garden city design, this landscape is of unique interest as a whole, and in particular, its types of housing, the mechanisms of distribution of space, as well as the material culture of everyday life. In this contribution, the late Stalinist, as well as Khrushchev's developmental and housing programs will be revisited, and an attempt at situating the settlement within the context of Central and Eastern European socialist urbanism will be undertaken. Spatiality of the settlement is seen as the source for discerning the ways in which people identified themselves with the soviet regime. With regard to the nowadays situation of non-recognizing the cultural value of the settlement, and taking into account the background of the functioning factory and its paternalist policy, the site demonstrates a continuos scheme of relationship between power and people in Belarus. The paper presents the current stage of work on the doctoral thesis under the same title.

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\*Intervenant

# **Labor communities in Italy: appraisal and perspectives of a research**

Giovanni L. Fontana \*† 1

<sup>1</sup> Università degli Studi di Padova – Italie

A venir

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\*Intervenant

†Auteur correspondant: giovanniluigi.fontana@unipd.it

# Les “ villes de compagnie ” du Canada - Company towns in Canada

Lucie K. Morisset \*† 1

<sup>1</sup> Université du Québec à Montréal (UQAM) – Canada

Cette communication porte sur les “ villes de compagnie ” du Canada : on entend, par cette transposition en français de la locution mieux connue de “ company towns ”, des villes ou des villages mono-industriels planifiés, où une compagnie a fait réaliser un plan urbain et construire des habitations pour les travailleurs de son industrie de ressources, ainsi que mis en place, à divers degrés, des équipements récréatifs, commerciaux, institutionnels ou communautaires tels que des magasins, des parcs, des écoles, des églises, etc. Ces établissements ont marqué la conquête du territoire, jalonnent l’histoire et émaillent l’imaginaire canadien, comme dans d’autres régions de l’Amérique ; on en compte quelque 254, dont une centaine plus importantes qui subsistent de façon visible dans le paysage, quoique dans divers degrés de conservation.

This paper focuses on Canadian company towns, understood here as single-enterprise planned communities, mostly around a resource-based industry, where one company commissioned an urban plan, built housing for its workers, and set up recreational, commercial, institutional or community facilities. As is the case in other regions of the Americas, these 254 settlements have marked the territory and history of Canada, as well as the Canadian imagination over time: a hundred of them, more important, still stand very clearly in the landscape, although in different states of preservation. While a last round of deindustrialization calls for a reflection about their future, we still know little of these founding territories: as the industrial heritage is still most often thought of as collections of machines, plants and mines, or narratives of class struggles, the planning, the ordinary architecture and the habitat have been, to some extent, left in the background.

This paper then brings a first overview of company towns in Canada in order to contribute to a more global reflection on the historiography of industrial planned communities. In particular, taking into account the consistency of their political, territorial and industrial environment, we will try to identify some particularities or differences that could help characterize this corpus, beyond industrial typologies and the paradigm of paternalism on which knowledge has largely been based to this day. In that manner, to describe some possible lines of interpretation will then lead to question the use of such knowledge nowadays, more especially regarding the production of industrial heritage in a context of deindustrialization and the relations between the future of heritage and the future of the territories that company towns inhabit.

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\*Intervenant

†Auteur correspondant: morisset.lucie@uqam.ca

## S.4.B — Automobiles

# A volatile network – Jean Prouvés gas-stations for TOTAL

Andreas Buss \*† 1,2

<sup>1</sup> Lutz Buss Architekten AG – Lutz Buss Architekten AG General-Wille-Strasse 15 CH-8002 Zürich,  
Suisse

<sup>2</sup> society of architectural historians – États-Unis

The motorway network combines local and more general elements. Special buildings, which are also popular, illustrate this fact: gas-stations form part of distribution networks and representatives of larger ideas in a local context. Against the background of topographic and economic conditions they reflect both the technological and artistic developments of their period. The French network of gas-stations underwent a change at the end of the 1960s, which not only illustrates the new distribution strategies of an increasingly mobile society, but also shows the advances made by building technology around this time.

As the opening of the motorway Lille-Paris-Marseille approached, the route had to be rapidly equipped with large service-stations of various brands. TOTAL commissioned Jean Prouvé to develop a new design for its gas-stations, although at the time there was almost no experience in France with buildings of this type. Within a short period Prouvé elaborated the initial series of prefabricated gas-stations, which had a distinctive appearance. Encouraged by the successful application of the industrialized construction system, TOTAL embarked on the modernization of the normal distribution network as a next step. This required a smaller and quite different type. To enable it to be adapted for different roadside sites, Prouvé designed a rotunda which spread throughout the country in the early 1970s. The aesthetic of these buildings formed a part of the brand's visual appearance before the oil crisis.

The buildings were demountable and were intended to have only a short life-span. Whereas the initial series for the motorways has been lost, the types made for the regional roads survived. My ongoing survey points out the transformations in the nationwide network of gas-stations some of which, modified to a greater or lesser extent, are still operating today. I will present different attempts at and ways of conserving a part of a heritage, which has – due to its lightweight construction – much more in common with the cars it served than with traditional building. Its presence in everyday culture distinguishes the theme from others in Jean Prouvé's architectural oeuvre, which has been undergoing an intensive process of musealization in the past decade.

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\*Intervenant

†Auteur correspondant: buss@lutzbuss.ch

# The Living Document Of Our Civilisation: The Motor Vehicle

Natasa Jerina Grom \*†<sup>1</sup>

<sup>1</sup> Culture commission SVAMZ (FIVA) – Slovénie

Today, we differ from one another by what we possess: some have everything, while others have less and less. However, vehicles continue to be the link between all socioeconomic classes, industrially developed nations and developing countries.

The motor vehicle has changed history; its use has not only enabled mobility and made the transport of people and cargo faster, but also facilitated a speedy development of new industrial sectors (e.g. design, development of materials and liquids), new jobs and the development of road infrastructure. Behind every vehicle, there is a more complex story, a story of the emergence of a vehicle and a story of a vehicle owner. All this is documented with various sketches, documents, photos, catalogues, items, etc., and is as important as the vehicle itself, since it operates as an integrated whole. All these documents serve as a “loft of memories” that must not be cleaned; otherwise the legacy inventory of a certain vehicle including an essential part of the vehicle’s history would be erased. Every item, vehicle included, contains individual or combined historical, stylistic, iconographic, technological and aesthetic information and messages: only a whole assembled in a proper synthesis can provide a clear picture and relevant conclusions why it is worth being preserved for future generations. Historic vehicles contribute to the perception of heritage in general, as well as society sustainable development, cultural growth and civil respect.

Taking into account the basic cultural function of movable technical cultural heritage and its direct integration into our daily lives, primarily in terms of education, knowledge transfer and past experiences, as well as the strengthening of a nation’s originality and cultural identity, FIVA (Fédération Internationale des Véhicules Anciens) Culture Commission created a document that sets forth certain standards related to this topic, the “Turin Charter”, which was already enacted and ratified by all 61 national member organizations of FIVA. This charter is meant to be used as a model for international policies related to historic motor vehicles as well as a guide for owners on how to best preserve their historic vehicles and how to protect the tangible and intangible evidence of the history of vehicles in order to pass it on. Without the evidence of past, we would lose the memory of yesterday!

Keywords: motor vehicle, FIVA, Turin Charter

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\*Intervenant

†Auteur correspondant: info@svamz.com

## **S.4.C — The Heritage of Businesses in Operation**



# Old hydroelectric power stations: a case of living industrial heritage in São Paulo, Brazil

Gildo Santos \* 1

<sup>1</sup> Universidade de São Paulo (USP) – Cidade Universitaria - 05508-090 São Paulo, Brésil

The worldwide energy crisis ignited by the oil price shocks in the 1970s forced public authorities to focus various alternatives for the electricity supply. Afterwards the massive de-industrialization that followed the adoption of neoliberal policies, coupled with anti-industrial pressure on the public opinion, weakened the historical trend towards building larger-capacity systems, with some notable exceptions. In this context, in the state of São Paulo, Brazil, a considerable number of centennial old power stations attracted the attention of policy-makers, despite their small contribution to the total electric demand. Beyond all expectation concerning useful life, their equipment had been either in continuous operation, or practically in condition of being easily reused again. In some cases the power units were externally modernized, and also outfitted with new equipment to be operated in parallel with the older one. A hundred years ago hydroelectric dams imparted relatively small changes in the environment, and as a matter of fact those power stations helped preserve native woods, and provided for a protected landscape amid destructive real estate speculation during a booming and aggressive urbanization process. On the other side of the coin, these installations can in general no longer benefit from clean waters, as their supply comes from rivers that receive the discharge of domestic sewage, which in developing countries is typically scantily, or not treated at all. As a result, despite preservation of the industrial heritage, comprising machinery, buildings, dams, lakes and even the external environment, older hydroelectric power stations still face difficulties in serving educational purposes. Besides operational difficulties caused by water quality, very little has been done to transform these installations into living witnesses of a past wake of industrialization. There are no connections to show that the electrification undertaken so many decades ago was a companion to the spread of coffee plantations and the railroads into the territory, which in turn led to the urbanization of vast expanses, and to the expansion of industrial efforts dating back to the 19th century. They seldom communicate to the present generation their stories, the impact and the meaning of their presence, and remain mute testimonies of their importance. The challenge still remains to associate this heritage of old power stations with the history of their technology, as well as to link this to the social and economic historical background of the country.

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\*Intervenant

# “ L’usine à vendre ” : objet patrimonial difficile à cerner - Etude de cas à partir de l’histoire du groupe Carrefour

Jean-Marc Villermet \*<sup>1</sup>

<sup>1</sup> Sciences de l’homme, du politique et du territoire (Grenoble) (SHPT Histoire - Ecole doctorale 454) – Université de Grenoble (liaison avec Université Savoie Mont-Blanc) – Université Pierre-Mendès-France SHPT Histoire - Ecole doctorale 454 Le Patio 1041 rue des Résidences BP 47 38040 Grenoble Cedex 9, France

Il y a quinze ans, en France, la revue *L’Usine Nouvelle* publiait un numéro spécial intitulé *Les entrepreneurs du siècle*. Il s’agissait d’attirer l’attention sur les révolutionnaires qui ont transformé des pans entiers de l’économie mondiale au XXe siècle et ouvert bien souvent de nouveaux horizons à leurs contemporains. Des hommes armés d’une certaine intuition, curiosité, capacité d’écoute et qui ont ressenti avant les autres l’amorce de changements fondamentaux dans leur propre environnement. Inventeurs des usines à vendre, les pionniers de la grande distribution en sont l’un des meilleurs exemples. Marcel et Jacques Fournier, Jacques et Denis Defforey font partie de ces entrepreneurs qui ont transformé en profondeur nos modes de vie et nos habitudes en imaginant de nouveaux lieux pour consommer avec des concepts révolutionnaires. Inspirés par les méthodes marchandes américaines dans la France des années 1960, pour la première fois ils inventent l’hypermarché. Ils inaugurent ainsi ce que la presse a rapidement appelé l’usine à vendre qui réunit toutes sortes de produits sous un même toit, à des prix extrêmement bas. Une nouvelle puissance économique émerge alors, la distribution, et une entreprise affiche progressivement son nom sur tous les continents : Carrefour. En quelques décennies, cette société née au cœur des Alpes françaises parvient à se hisser au 2e rang mondial de la distribution derrière la multinationale américaine Walmart. Ces inventeurs ont créé des infrastructures et du patrimoine, en relation étroite avec l’ensemble des industries du secteur des biens de consommation. A partir d’une étude de cas concernant l’entreprise Carrefour, il est intéressant de s’interroger au sujet de la construction d’une mémoire collective autour des réalisations de ses fondateurs et dirigeants. Que reste-t-il des créateurs de l’hypermarché ? Où se trouvent les archives ? Qui les gère ? De quels documents s’agit-il ? Comment garder la mémoire de réalisations éphémères ? Toutes ces questions – et beaucoup d’autres – renvoient plus généralement aux traces tangibles de la révolution commerciale contemporaine dont la société s’imprègne quotidiennement grâce à des supports très variés. Dans cet univers finalement plutôt abstrait, les traces tangibles concernant les usines à vendre s’estompent et, avec elles, les souvenirs. L’histoire et la conservation du patrimoine tenant une place limitée sur ce sujet l’enseignement à propos de ce même patrimoine est pauvre malgré quelques évolutions récentes : dans les collèges et les lycées, les programmes scolaires s’intéressent davantage aux transformations sociales et économiques d’une période plus ou moins longue selon les niveaux d’études.

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\*Intervenant

# The Road of the Wool. Material culture itineraries in the province of Biella, Northern Italy

Giovanni Vachino \*†<sup>1</sup>, Marco Trisciuoglio \*

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<sup>1</sup> DocBi Centro Studi Biellesi (DocBi) – via Marconi 26a, 13900 Biella, Italie

<sup>2</sup> Interuniversity Department of Regional and Urban Studies and Planning Politecnico di Torino / Università di Torino (DIST) – Castello del Valentino, Viale Mattioli 39, 10125 Torino, Italie

”The Road of the wool”, planned by DocBi and designed in conjunction with the Polytechnic of Turin during last 25 years, links Biella to Borgosesia is an important experiment of cultural tourism. It has been called ”The Road of the Wool” for several centuries. The route expands through the Strona and Sessera valleys, where textile industrialization was born, and after about fifty kilometers, it reaches Borgosesia, the seat of an old wool market. Along the route, there is an abundance of historical industries with diverse characteristics in their building typology and in their state of preservation. The perception of the ”wool landscape” is helped not only by ancient woolen mills (many of them are still active) and their chimneys, but also by infrastructures connected to them by workmen’s dwellings, by old water channels, by the ”path of workers” (opened in the last century for reaching woolen mills along rivers) and by the hoot of factory whistles, which characterize the ”sound-landscape”.

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\*Intervenant

†Auteur correspondant: docbicentrostudibiellesi@virgilio.it

# Industrial Heritage of Aluminium in Cameroon

Guy Grégoire Awono Zinga \*†<sup>1</sup>

<sup>1</sup> Université Paris1 Panthéon-Sorbonne – Université Paris I - Panthéon-Sorbonne – France

Les techniques et les métiers de l'aluminium se développent au Cameroun à un moment où le Cameroun ne possède aucune véritable infrastructure industrielle. Le groupe Pechiney Ugine Kuhlmann trouve sur le territoire camerounais une main-d'œuvre inexpérimentée en 1957, mais qui avec le temps, va s'expérimenter et constituer au fil du temps, une mémoire technique grâce à l'acquisition et à l'appropriation des savoirs et savoir-faire reçus des ingénieurs et techniciens européens. Sauf que sur le plan des rapports, la relation entre ALUCAM et la ville d'Édéa semble encore relever plus de destins parallèles que de destins croisés. Les repères de l'usine d'Édéa sont dès le départ mondiaux, tant par les circonstances de sa création que par ses débouchés. L'unité industrielle développe ses propres infrastructures, (en particulier pour l'approvisionnement en énergie électrique et en eau), construit ses propres cités pour ses seuls employés et vit en autonomie presque complète par rapport aux autres services de la ville, à l'exception du ramassage des ordures. Or les bâtiments et structures dans lesquels se développent les différents savoir-faire des activités de production (l'électrolyse dès 1957), puis de transformation (première transformation de l'aluminium à partir de 1962), peuvent présenter un intérêt d'un point de vue du patrimoine industriel. La reconnaissance de ce patrimoine est certes nécessaire, mais elle n'est pas suffisante. Elle doit en plus, être relayée par des actions de sensibilisation, pour faire prendre conscience dans ce pays de tradition orale que le patrimoine culturel immatériel des entreprises fait aussi partie du patrimoine national qu'il convient de sauvegarder et de valoriser pour les générations futures. Pour cela, il faut avant tout, être en possession d'un certain nombre d'éléments indispensables à la reconstitution et à l'interprétation de ce patrimoine. Puisque l'entreprise ALUCAM est toujours en activité comme la majorité des entreprises industrielles créées au Cameroun avant et après l'indépendance acquise en 1960, il n'est pas question de transformer l'usine en Musée. Il s'agit plutôt dans notre pour nous, de mettre en exergue le patrimoine culturel immatériel, qui est en fait, une partie importante du patrimoine industriel de cette entreprise à travers des mécanismes que nous suggérerons dans un projet de création d'un centre de conservation et de référence au Patrimoine culturel immatériel.

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\* Intervenant

†Auteur correspondant: [guyawono@ymail.com](mailto:guyawono@ymail.com)

## **S.4.D — Stakeholders**

# **Healing wounds, constructing future: At the heart of the Industrial colony. Citizen participation in management, promotion and dissemination of Industrial Heritage: Ancient Brass Factory in Spain.**

Marta Vera \*<sup>1</sup>

<sup>1</sup> Asociación Amigos de las Reales Fábricas de Riópar (AARFR) – San Vicente s/n, Riopar (Albacete), Espagne

Friends of the Royal Factories of Riópar association published in 2013 *Mirar lo propio con ojos propios*. Procedures of the lectures around Riópar Brass Factories; The book collects an experience of citizen participation in dealing with Industrial Heritage, developed in Riópar (Castilla-La Mancha, Spain) between August 13, 2011 and December 7, 2012. The project, conceived as PhD research methodology, approaches the first factory of zinc and brass established in Spain (1773), which suffered a traumatic closure in 1996. More than 230 years of industrial history; People's genealogy. By creating this space open to all, we multiply the information associated with each document found in research, by contrast with oral testimonies. This is a pro-active and community oriented research methodology, as it shares information, findings and questions to enhance different areas of knowledge, bringing us to places where it is not possible to arrive through the archive... a space to tell and listen, to ask and to propose, as a enabler; the work wants to allow citizen participation in the construction of discourses inside the Industrial Museum. The conferences took place in the old factory, today Museum of the Royal Brass Factories of San Juan de Alcaraz; for some workers it was their first step in, back since the closure. 21 authors (metallurgical workers, teachers, historians, architects, engineers, cooks ...) vividly reflect how past sneaks into our present: different people who apprehend the world from the context of their own experiences, united around a precious (and fragile) common heritage. The result is in itself interesting, but the main goal is the process; the work of diverse people united by the love for their own things and constant desire to understand their own biographies, what they see every day, and explain it to their people and visitors, from tourist to specialists, that has been done with little external aid and altruistic basis. The outcome of the experience is a multifaceted publication which examines in a rigorous and enjoyable way this singular industrial activity, which gave birth to the town that bears his name, Riópar Factories, adding, to the base of history, anthropological, sociological, artistic, cultural, musical, environmental and technical perspectives. But what is more important, it is the beginning of a larger community dialogue, which will allow a rational and humane use of cultural heritage - heart and soul of Riópar- and its further development, building together a better appreciation of the rich legacy of which we are responsible.

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\*Intervenant

# The role of volunteers in the protection and preservation of industrial heritage in Belgium: the Rupel case

Bruno De Corte \* <sup>1</sup>

<sup>1</sup> Booms Steenbakkerijmuseum 't Geleeg/ Brickworks Museum Boom - 't Geleeg – Belgique

The Rupel Region is a post-industrial area in Belgium. This region is located next to the Rupel River and has a surface of approximately 46 square kilometers. The landscape was radically reshaped as a result of clay extraction activities and the brick manufacturing process. The kilns, the adjacent drying sheds and the huge chimneys dominated the landscape of the region. The big empty clay pits which gave the region the nickname of the “Moon landscape”. Very typical was also the housing phenomenon, which added to the fragmentation of the landscape.

After WW2, a drastic change of production methods started. Brick-making shifted to the West of the country. The Rupel region became a depressed area. In addition came ecological crime. Within a few years, the Rupel area was becoming the trash can not only of the nation but also of adjacent countries.

Against this situation green grassroots movements started and they very fast understood that the old sites were in fact valuable industrial heritage. In 1975 a first proposal was introduced to protect some of the builded heritage. Also first steps were undertaken to collect objects. Other local initiatives followed, and at the end of the 80's the region had several small clay-related museums ran by volunteers. These initiatives were as small candles of hope in a dark night of recession. The interesting feature was their holistic approach. People were not only concerned about nature and the industrial heritage, but wanted also to preserve skills such as the shipbuilding which was closely connected to the brick making industry. As they were organized locally, they lacked region wide cooperation. On topdown level several initiatives were undertaken to the development of natural reserves and regeneration of the landscape. A derelict clay pit can transform into a biotope for extraordinary specimen of nature. But only in recent years governmental planning took seriously also into account the industrial heritage. Today, the big issue in this case is to find a functional balance between volunteers, governmental planning and the 5 local authorities. So here, finally, “topdown” meets “grassroots”.

Bruno DE CORTE, La fornace di Boom in Belgio - un ecomuseo per rivitalizzare l'antica regione industriale del Rupel, in: Scuolaofficina, periodico di cultura tecnica, June issue, Casa dell'innovazione e del patrimonio industriale/Bologna 1988, p.9-11.

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\*Intervenant

# RECLAIMING DETROIT: Community-led Regeneration after Motor City

Miriam Kelly \* 1

<sup>1</sup> Beyer Blinder Belle Architects Planners LLP (BBB) – 120 Broadway (20th Floor), New York, NY 10271, États-Unis

When Le Corbusier put forward utopian plans for a linear industrial city, he was inspired by Detroit. The Motor City of the 1930s functioned as an interconnected locus of production within which industrial plants, worker housing, distribution networks, commerce and civic activities were organised. Following the collapse of the motor industry, the history of racial division, abandonment of the city's historic core and rapid suburbanisation has burdened Detroit with a metropolitan landscape poorly adapted to the innovation it desperately needs. However, as Detroit tackles population loss, disinvestment, unemployment and dereliction, communities are galvanising to envision a radically better future for their city.

Detroit's industrial heritage is of global importance and includes sites of exceptional historic, architectural and cultural significance. Despite this, many of the city's most important industrial buildings are abandoned and at risk, and a coherent strategy for understanding and protecting industrial heritage has not been prioritised. In the absence of top-down initiatives, private individuals and community organisations are recognising the importance of the city's rich industrial heritage to their cultural identity and as a catalyst for regeneration.

The paper offers an insight into an extraordinary chapter in the phenomenon of Detroit, as the surplus of abandoned land transforms the Motor City from a dense industrial network into a 'canvas of green'. The paper sets out the global significance of Detroit's industrial heritage and the risks it faces in the context of a city in transition under extraordinary social and economic pressures. Through case studies, it assesses the conditions under which community groups are emerging and taking action towards the preservation and reuse of industrial sites. Under the twenty-year framework of the Detroit Future City Plan, the paper considers the possibilities for Detroit to transpose its industrial organisational rationale into a city of connected landscapes, within which community groups are pioneering innovative initiatives to reclaim their industrial past towards a more sustainable future.

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\*Intervenant

## **S.4.E — Associations**



# Raisonnons Réseau !

Michel Taeckens \* 1

<sup>1</sup> TAECKENS – . – France

Région à l'héritage économique riche, le Nord Pas de Calais est aujourd'hui encore au cœur de l'Aventure économique avec l'implantation d'entreprises dans de nombreux domaines, de pôles de compétitivité, d'organismes comme le CETI dans le développement des textiles innovants...

Le patrimoine industriel régional du XXIème siècle est le reflet de ce territoire qui a subi de lourdes pertes, de grandes fractures dans des domaines aussi variés que la mine, le textile, la chimie, les transports... Région-vitrine pour la dentelle tant à Calais qu'à Caudry, collections des industries textiles à la tissuthèque roubaisienne, machines textile "en mouvement" de la manufacture des Flandres ou de l'écomusée de Fourmies, concrétisation des vœux des houillères du Nord à Lewarde, "musées-ateliers" comme celui de la faïence et de la poterie de Ferrière la Petite, musée de collectionneur, les "Anciens", gardiens de la mémoire de la verrerie tant à Aniche qu'à Boussois, les "musées d'entreprises" de l'agroalimentaire... Le tourisme de découverte économique vient dialoguer étroitement avec ce patrimoine.

C'est dans ce contexte de patrimoine industriel que l'association PROSCITEC, Patrimoines et Mémoires des Métiers est apparu dans les années 80 et dans cette évolution que le Réseau s'est développé. Ce Réseau, constitué d'une cinquantaine de structures publiques et privées engagées dans la conservation et la valorisation du patrimoine de mémoire des métiers, s'attache à développer la circulation des informations, à faciliter la rencontre avec les publics, à favoriser les échanges de compétences professionnelles, à susciter la création d'outils communs et de projets collectifs dans l'objectif général d'une Montée en Qualité.

Au fil du temps s'est formé un "Réseau participatif" où les acteurs ont pris en main leur destin conjointement à l'aide des collectivités locales encourageant le développement de ces collaborations. Petites, moyennes ou grandes structures ont tous à gagner leur Avenir ! Nombre d'équipements de la mémoire industrielle sont aujourd'hui à un tournant de leur existence face à la nécessité de moderniser leur discours, renouveler les membres actifs ...

Un Réseau visible est un Réseau qui vit !

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\*Intervenant

# Les Associations en danger ?

Assumpcio Feliu Torras \* 1

<sup>1</sup> Asuncion Feliu Torras – Caponata , n° 14., Espagne

pour fonctionner, les principaux objectifs seront d'améliorer la qualité de vie de la société, agir de façon indépendante, le signalement d'abus, de négligence, etc .

Les conséquences de la vie en société, font que dans de nombreux cas les gens devraient être regroupés pour répondre à un certain objectif (développer et d'exploiter une entreprise, défendre un patrimoine culturel, industriel, etc ...)

Pour atteindre l'objectif, ces groupes de personnes devraient être en mesure d'agir sur leur secteur spécialisé, généralement une législation spécifique est créée pour permettre le bon fonctionnement, et donc d'agir, devant les institutions et les autorités de façon plus efficace .

Par exemple en France, sous la loi du 1er Juillet 1901, en ce qui concerne les associations est défini dans son article 1: "L'association est une convention par laquelle deux ou plusieurs personnes mettent ensemble, d'une manière permanente leur connaissances ou d'activités afin de partager les bénéfices ".

Cette définition est également valable pour d'autres pays.

Le rôle des partenariats dans la vie des villes et le développement d'activités sociales parfois est en fonction des besoins et aussi des protestations.

Le concept de partenariat est lié à la catégorie des personnes ayant le même but , mais au sens large, nous constatons que l'associationisme peut regrouper d'autres associations en son sein, ce qui serait une fédération, comme le cas d'E -FAITH (Fédération Européenne technique Archéologie Patrimoine Industriel) doté de la personnalité juridique et ses propres statuts, agroupe une trentaine , d' associations européenne qui travaillent dans le domaine du patrimoine industriel.

En ce qui concerne les associations européennes, la France est le pays de l'Union Européenne qui a les plus grandes associations dans le réseau associatif plus de 800 000 (selon la Delmas encyclopédie), d'autres Etats membres de l'Union européenne ont également des structures de partenariat, parfois moins développé. Leur législation nationale diffère: certains pays n'ont pas besoin d'être enregistrés , comme c'est le cas au Danemark, d'autres nécessitent un contrôle préalable comme l'Espagne. La liberté d'association est reconnue à toutes les personnes par l'article 11 de la Convention européenne des droits de l'homme.

Avec la crise actuelle, est il possible, pour les associations de volontaires,sans bût lucratif , conserver, et fonctionner comme jusqu'au présent ?

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\*Intervenant

# L'action renouvelée de PIWB en faveur de la sauvegarde du patrimoine industriel en Wallonie et à Bruxelles (B), et particulièrement de l'industrie lourde du 20e siècle

Jean-Louis Delaet \*<sup>1</sup>

<sup>1</sup> DELAET (PIWB) – rue du Cazier 80 6001 Marcinelle, Belgique

Berceau de la Révolution industrielle sur le continent européen, la Wallonie a enfin vu reconnaître sa juste place par l'inscription sur la Liste du Patrimoine mondial de l'UNESCO des quatre sites miniers majeurs que sont le Grand-Hornu, Bois-du-Luc, le Bois du Cazier et Blegny-Mine en 2012, quelques années après celle des ascenseurs hydrauliques du canal du Centre. Ces résultats sont dus notamment à l'action de coordination et de promotion en faveur de l'archéologie industrielle développée par l'association Patrimoine Industriel Wallonie-Bruxelles (PIWB).

A l'occasion de son trentième anniversaire, en 2014, PIWB a abordé la problématique combien difficile de la conservation du patrimoine de l'industrie lourde du 20e siècle par l'organisation d'un colloque et la remise d'un mémorandum au nouveau Gouvernement régional compétent en la matière. Il est urgent d'en préserver des vestiges remarquables : identifiés par des critères de sélection objectifs, les éléments les plus représentatifs doivent être protégés, restaurés et réaffectés. Il en va ainsi de la sauvegarde du dernier haut fourneau de la Région wallonne qui, comme pour le charbon, a contribué puissamment à l'histoire de la sidérurgie en Europe et dans le monde.

Cette communication sera aussi l'occasion de dresser un bilan de 25 années de travail de PIWB, depuis le 7e Congrès mondial du TICCIH, à Bruxelles, en 1990.

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\*Intervenant

## **S.4.F — Transport Networks: Roads and Canals; Railways**

# Alishan Railway at the turning point

Nai-Yi Hsu \* 1

<sup>1</sup> Railway Cultural Society, Taiwan (RCS) – 32, Gu-shan 1st Road, Kaohsiung 80444, Taiwan

The famous mountain and forest Alishan Railway comes to the turning point today. Alishan Railway, climbing from 30m elevation to 2274m, using many special civil engineer skills and Shay-type locomotives, creating a golden era of forest industry not only in Taiwan but also in Japan, and fighting with heavy rains and typhoons and earthquakes, is resigned a potential site of world heritage by Taiwan Government. But all aboves make it a heavy financial burden especially when tourists shifting to automobiles after opening of mountain road.

This railway was nearly totally damaged by the Molakot Typhoon in 2009. From Chiayi to Funchihu, halfway to Alishan, was reopened in the biginng of 2014. Complete reopen will be in the end of the same year.

There are some changes during the reconstruction: (1)New engineering skills are used so that some landscapes are changed. (2)Due to lack of water supply facilities, steam locomotives no longer climb mountain section, but just run the plain section and in the Alishan Forest Recreation Area. (3)The operation of this railway is transferred to Taiwan Railway Administration(TRA). (4)Tremendously lot of China tourists come to visit Alishan so the trains in the recreation area are all full of Chinese visitors. This is good for finance but bad for the service quality. (5)The government repaired many wooden houses and also coaches of this railway of Forest bureau in Chiayi to creat the Peimen Forest Cultural Recreation Area.

People in Taiwan begin to realize that this railway is very valuable after decades effort by the Railway Cultural Society Taiwan(RCST). However at this moment Taiwan people concentrate mostly on its civil engineer skills, such as a triple loops line at Dulishan, switch-back between Pingzerna and Alishan, some U-shaped curves and steep slopes up to 6.24%. What is the most valuable point still to be determined. We RCST consider its role in the development of Taiwan forest industry, maybe also significant influences on Japan and the colonized places of Japan at that time, to be the most important thing. Since then they make a complete system from cutting, extracting, collecting, transportating, storing, and trading logs and making them to be wooden materials. This system then is used widely in Asia where was occupied by Japan at that time. While a new trasportating system called Relaeyed Roapway System was developed to replace the Complete Railway System .Both systems can be seen in Taiwan and worked well in the mountain areas. This industrial dimention should be looked on more seriously.

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\*Intervenant

# Convergences of the railway's historical process and management of railway heritage (Brazil and Argentina)

Eduardo Romero De Oliveira \* <sup>1</sup>, Mónica Ferrari \* † <sup>2</sup>

<sup>1</sup> TICCIH International (TICCIH) – Brésil

<sup>2</sup> TICCIH Argentina – Pasaje Coronel José S. Roca 3962. Tucumán. cp.4000, Argentine

The Industrial Heritage Studies have had in the recent decades a considerable interest in South American countries. The joint academic research conducted among neighbouring countries have become a new challenge, not only by the promoting of research programs but also by interest in finding ways to management of railway's cultural landscape from a systemic view. Within this framework it is developing a comparative study on railway heritage between Brazil (UNESP) and Argentina (UNT-CONICET), where we see convergences processes.

The impact produced by the railway system has no similarity during the history of these countries, not after not before. In fact, these territories have the most extensive network of Latin America, near 34.059 km (Argentina) and 30.129 km (Brasil) including undergrounds, urban trains and others. Since the beginning of the installation of the railways to the closing down of a great part of the network, we could observe convergences of the railway's historical process. We believe that from a shared vision can be understand the processes of birth, growth and partial deactivation of the railroad, as well as identify the most appropriate tools for a comprehensive management process gives infrastructure that currently has no rail operation. By this way, it will tend to conserve, as an ultimate aim, a valuable heritage that was the germ of the development of vast territories.

Considering the hypothesis that there was a share history between Brasil and Argentina about difficulties relating to railway heritage, the general problem arises from the question: what is the relationship between the railway processes installation of both countries, during the XIX century and the early XX century? On the other hand, we ask: what are the problems related to the management of the heritage, particularly in themes of protection, that has architectural historic value and that are representative of that period? The studies will focus particularly in the State of São Paulo and Argentine Northwest region whose railway extensions had about 4,000 km (1907) and 4,000 km (1914), respectively, as paradigmatic cases for this comparison. In this opportunity, the aims of this work are to make a comparative historic analysis of the english intervention on railways infrastructures and a brief summary of the heritage protection. Methodologically, this work is bases on complex historical processes in which we pretend to obtain as results: common features, reciprocal influences, similarities and differences in development.

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\*Intervenant

†Auteur correspondant: mferrari10@gmail.com

# Transportation landscapes: an approach to the archaeology of Spanish roads, 1748/1967

Rita Ruiz \*<sup>1</sup>, Francisco Javier Rodriguez \*<sup>†</sup>

<sup>1</sup> Universidad de Castilla-La Mancha – Espagne

The historic and documental relevance of roads built by engineers on a specialist basis from the eighteenth-century onwards has been the subject of theoretic study by a number of authors. These roads, built for horse-drawn carriages and deeply transformed after the appearance of motor vehicles, provide valuable insights into the prevailing technology and engineering employed in their construction, their successive modification and in the complex configuration of transportation landscapes.

This can be considered a particularly vulnerable heritage, as with very few exceptions these continue to form part of the current road networks. However, in the vast majority of cases, modern and contemporary roads receive very little protection or acknowledgment. This lack is largely due to the fact that the protection of civil engineering heritage tends to focus purely on very ancient linear infrastructures or specific and isolated monuments such as bridges or dams.

In this context, Industrial Archaeology takes a more operational stance and insists on the need to consider all industrial remains, including public works, regardless of date and from a territorial perspective. Moreover, current approaches are focussed on the consideration of linear and networked industrial landscapes structured by transport, supply or communication infrastructures.

In all events, and even though various authors have maintained that roads also form part of this industrial legacy, the majority of works that have focused on the heritage of transport infrastructures have done so primarily with respect to railways and canals.

In fact, the very few works that have specifically dealt with the archaeology of roads have either covered far longer time periods, with a subsequent lack of depth regarding the last three centuries, or have focused on a specific road.

In this respect, the purpose of the paper is, firstly, to justify the economic and commercial role of these infrastructures using Spanish examples of roads built from the middle of the eighteenth-century and, secondly, to identify the most important features that characterize these assets and that should be considered in the assessment and preservation of this valuable heritage.

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\*Intervenant

<sup>†</sup>Auteur correspondant: Rita.Ruiz@uclm.es

## **S.4.G — New Research, scales and tools**

# Post-colonial and transnational. Industrial heritage at the cross-roads

Jan Af Geijerstam \* 1

<sup>1</sup> Industrial heritage association of Sweden/TICCIH Sweden (SIM/TICCIH Sweden) – c/o Jan af Geijerstam, Götgatan 99, 116 62 Stockholm, Suède

Industrial heritage practice as well as the scientific study of this practice has been and continues to be conducted within to national frames of reference. This is also evident regarding the motives for choosing sites to preserve and the way in which they are interpreted. The selection of sites is legitimised by the national, the choice in turn legitimises the national. Founded in a discussion of the concepts of global and transnational this paper will stress the necessity – and possibilities – which lies in putting an emphasis on interconnections and linkages across the globe, the transnationalisation of industrial heritage. This is fundamentally important in order to understand and interpret industrial heritage and to make it relevant in today's globally interconnected world.

The paper will discuss experiences from industrial heritage in India and Indonesia, but will end up in a discussion – and questions – regarding the possible similarities and differences between industrial heritage in these former colonies and industrial heritage in Eastern and Central post-communists countries. The latter will be made starting from the work done within the framework of the Nordic-Baltic research collaboration "Industrial heritage and societies in transition" (Marie Nisser, Maths Isacson, Anders Lundgren, Andis Cinis eds. 2012. "Industrial heritage around the Baltic sea.").

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\*Intervenant

# Reuse of Rosarios built industrial heritage. A choice and a chance for sustainable conservation.

Carolina Rainero \* <sup>1</sup>

<sup>1</sup> Facultad de Arquitectura, Planeamiento y Diseño. Universidad Nacional de Rosario. (FAPyD. UNR)  
– Riobamba 220bis. 2000 Rosario, Argentine

The conservation actions have become an issue that goes beyond conservation itself to wider approaches promoting a sustainable management. Furthermore, by recognizing the cultural heritage as a resource, a conservation project can be re-qualified and reached a new dimension in the context of opportunities and challenges. Rosario is a dynamic city that has grown based in the development of the regional railways' structure and its port. The industrial heritage, consisting of a large number of landmarks of the early agro-industrial activities, has a leading role shaping the urban landscape as the urban memory relays on it and has become a main factor in the city's transformation. In the last three decades the city has undergone different processes that set the built industrial heritage in jeopardy. Factories have been shut down and moved to the metropolitan areas and the railway stopped running leaving the stations out of use. In this context, during the eighties, significant buildings have been demolished producing a lack of identity in the urban landscape. It was during the nineties, that the local Government introduced a new approach to face the conservation of that large and complex heritage. The re-use of old train stations, storehouses and the port itself for institutional activities has brought an opportunity to preserve them. Nevertheless, there are many large industrial complexes still at risk. Taking this into account I have developed, in the framework of my PhD research, a methodology to face the conservation of these unique sites. The aim of this paper is to introduce for discussion the guidelines of the management plan that promote an alternative approach regarding industrial built heritage conservation actions. The first case of study I have been working on, to define and prove the methodology to be used in future cases, is the Swift meat packing complex -1907- located by the Parana River in the south area of the city. Before beginning the Plan, and as a preventive preservation action, the complex has been declared as a good cultural interest and it has been listed in the local Heritage Inventory. Methodology proposed to establish Swift Conservation Management Plan. A SWOT matrix is the chosen method to analyze and evaluate the complex, which allows to define the action programs. Steps: Identification, record and inventory of the resources (regarding both tangibles and intangibles values) ; Diagnosis ; Re-value ; Projects design ; Monitoring conservation management. The guidelines have to be established in order to promote the sustainable conservation of both the buildings and the site, and by the re-use of the complex contribute to the local development of the urban area.

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\*Intervenant

## **S.4.H — The Heritage of Electricity**



# Patrimoine contaminé, les processus divergents de patrimonialisation du nucléaire civil en France

Yves Bouvier \* 1

<sup>1</sup> université Paris-Sorbonne (Paris IV) – Université Paris IV - Paris Sorbonne – 1, rue Victor Cousin  
75005 Paris, France

La place du nucléaire dans l'histoire énergétique française est bien connue, au point que le pays est parfois appelé le pays “ le plus nucléarisé au monde ” puisqu'environ 80 % de l'électricité consommée est produite par des réacteurs nucléaires. Sur le plan du patrimoine industriel, le nucléaire correspond sans aucun doute à l'une des industries les plus emblématiques du pays depuis les années 1950. Il était donc logique que des processus de patrimonialisation interviennent, plus localement qu'à l'échelle nationale : musée de l'atome à la centrale nucléaire de Chinon, Visi-atom à Marcoule, musée de la mine d'uranium Urêka à Bessines-sur-Gartempe. En revanche, les sites en activité qui avaient été ouverts aux visites pendant les années 1980 et 1990 sont désormais fermés pour raison de sécurité. Et plusieurs sites fermés (Brennilis, Saint-Laurent-des-Eaux, Creys-Malville) sont en cours de déconstruction sans que la dimension patrimoniale ne soit simplement évoquée. La communication présentée vise à analyser les rapports entre les enjeux actuels (transition énergétique, construction de nouveaux réacteurs...) et les processus de patrimonialisation. Si l'on a pu considérer que les feux de l'actualité et que l'appropriation d'un sujet par la population pouvaient favoriser des processus de patrimonialisation, force est de constater que pour le nucléaire la vigueur des controverses et la polarisation des engagements conduisent plutôt à une neutralisation des acteurs et à différer l'étude de ce patrimoine. Mettant en jeu tant les acteurs locaux que nationaux voire internationaux (on se souvient des péripéties liées au nucléaire lors du classement de la vallée de la Loire au patrimoine mondial de l'Unesco), la patrimonialisation du nucléaire civil est tout sauf une évidence et illustre les enjeux du patrimoine industriel contemporain.

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\*Intervenant

# Les musées européens de l'électricité : à petits pas vers le réseau ?

Claude Welty \*<sup>1</sup>, Catherine Fuchs \* †<sup>2</sup>

<sup>1</sup> Fondation EDF – Electricité de France - EDF – France

<sup>2</sup> Musée Electropolis – Musée – France

De Lisbonne à Belgrade, de Funchal à Reykjavik, de Vilnius à Pavie en passant par Londres, Münchenstein ou Mulhouse, les musées consacrés à l'électricité sont assez bien répartis sur l'ensemble du territoire européen. Pourtant, ils procèdent de logiques souvent très différentes : certains ont été fondés autour de la valorisation d'un site industriel remarquable, d'autres d'une personnalité, d'autres encore autour d'un matériel. En outre, les musées publics côtoient des musées associatifs ou des musées d'entreprise. Au final, cette hétérogénéité des statuts et des discours –qui a de nombreux apports positifs en termes de patrimoine- a également freiné le passage à une véritable mise en réseau, malgré des collaborations ponctuelles.

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\*Intervenant

†Auteur correspondant: catherine.fuchs@electropolis.tm.fr

# Le Grand Paris électrique peut-il se développer sans mémoire industrielle ?

Alain Beltran \*†<sup>1</sup>

<sup>1</sup> Beltran (CNRS) – Centre National de la Recherche Scientifique - CNRS – France

La région parisienne possédait un patrimoine électrique exceptionnel, alliant le gigantisme des super-centrales de la première couronne (Gennevilliers, Vitry-sur-Seine, Saint-Denis...) aux qualités architecturales des sous-stations de Paul Friesé à l'intérieur même de la ville. Aujourd'hui, la diversité des acteurs en charge de ce patrimoine est directement liée aux contextes de sa construction, il y a plus d'un siècle (concession municipale, alimentation du métro, insertion de la région parisienne dans un réseau électrique national...). La destruction des grandes centrales et les recompositions urbaines ont rendu ce patrimoine largement illisible. A l'heure du "Grand Paris", et sans proposer un inventaire, cette communication vise à identifier les éléments majeurs du patrimoine électrique de la région tout en donnant une place aux "fantômes" que constituent les éléments détruits.

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\*Intervenant

†Auteur correspondant: beltran@univ-paris1.fr

## **S.4.I — Adaptive Re-Use of Industrial Buildings**



# **Adaptive re-use of industrial buildings for tourism purposes: Carob warehouses in Northern Cyprus**

Beser Oktay Vehbi <sup>1</sup>, Hulya Yuceer \* <sup>2</sup>

<sup>1</sup> Eastern Mediterranean University (EMU) – Eastern Mediterranean University, Famagusta Mersin 10  
Turkey,Northern Cyprus, Chypre

<sup>2</sup> Adana Science and Technology University (Adanabtu) – Yeşiloba Yerleşkesi Yeşiloba Mah.  
Öğretmenler Bulvarı 46278 sokak No:3 01180 Seyhan / ADANA / TURKEY, Turquie

Constituting a significant presence in the rural landscape of Cyprus, carob warehouses represent part of the vanishing evidence of the agricultural, industrial, social and economic life in the rural areas. Until 1930's, carob production and export was one of the leading sectors in the economy of Cyprus. However due partly to the development of the citrus plantations and partly to political changes, the decrease in the importance of carob crops has led to the warehouses being redundant. Currently a few of them have been adapted for different uses but the vast majority are in ruins.

The aim of this study is to emphasize the significance of carob warehouses as cultural heritage sites and to record their actual condition so that proposals for their conservation and re-use can be put forward. It suggests that opportunities for tourism development can be encouraged by re-presenting former carob collecting routes as a tourism path on which each stop is enriched with a warehouse given a new use.

In line with this aim, the study has three main sections. In the first section, the importance of carobs and carob warehouses in Cyprus are explored. In the second section, the architectural characteristics and current conditions of the warehouses from various villages are discussed. The study is then concluded with reuse proposals with respect to a suggested tourism route that is founded on the historic routes of ships collecting carobs during British rule of the island.

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\*Intervenant

# Preserving historical urban warehouses in Brussels by understanding their architectural and construction history

Marianne De Fossé \*<sup>†</sup>, Inge Bertels \*

<sup>1</sup>, Louis Vandenabeele \*

, Ine Wouters \*

<sup>1</sup> Vrije Universiteit Brussel - Architectural Engineering lab (VUB - ae-lab) – Pleinlaan 2 1050 Brussel, Belgique

Historical urban warehouses are remarkable structures. As essential facilities in national and international trade and industry, they were ‘cathedrals of modernity’: their presence signifying that a city was integrated into a commercial network made possible by evolving transportation technology. However today, despite their robust architecture, they are also very vulnerable urban heritage. Over the course of the 20th century many historical warehouses lost their original function and later changes and conversions often left strong traces. Today they are threatened with demolition due to the speed and intensity with which the urban space is being transformed and a lot of urban commercial and industrial zones are being redeveloped.

This paper presents current ongoing research, focussing on the development of knowledge about the history, structure, operation and architecture of warehouses and their embedment in the urban fabric to support their preservation and adaptive reuse. In this paper the results of archival and onsite investigations of nineteenth century Brussels warehouses are presented. The quantitative analysis of Brussels warehouses, giving insights in the overall evolution of the organisation of trade and its embedment in the urban fabric is complemented with qualitative research revealing the impact on the architecture, structure and materials applied. Brussels, Belgians capital city, had not only an important political and administrative function, but was also an important commercial and manufacturing city. Henceforth, a rich, diverse and unique collection of historical warehouses on its territory can be traced.

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\*Intervenant

<sup>†</sup>Auteur correspondant: Marianne.De.Fosse@vub.ac.be

# Docks in Prague (Holešovice) – Winter harbour in Bratislava : construction development of warehouses in two largest towns of interwar Czechoslovakia.

Katarina Haberlandova <sup>1</sup>, Nina Bartosova <sup>\*† 1,2</sup>, Matus Dulla <sup>1</sup>

<sup>1</sup> Institute of Construction and Architecture Slovak Academy of Sciences (USTARCH SAV) – Dubravská cesta 9 845 03 Bratislava 45, Slovaquie

<sup>2</sup> Faculty of Architecture STU in Bratislava (FA STU) – Námestie slobody 19 812 45 Bratislava, Slovaquie

Docks in Holešovice was founded in 1892. Until 1895, it was built as winter harbour, in second construction phase (1896-1910) as trade docks, by the firm Lanna. In 1906, they finished railway station. Between 1906-1926 was built series of ground and one-storey warehouses. In the second half of twenties of 20th century was created unique construction of public warehouse. This warehouse designed architect František Bartoš. Impressive functionalistic form of this object is mainly the result of modern ferroconcrete construction created by the company of engineer Karel Skorkovský

Winter harbour in Bratislava was founded just several years after foundation of the Prague's one. Its building and development was very similar. After year 1918, when czech and slovak territories were associated into common Czechoslovakian republic, many reinforced concrete companies from Czech part of new republic based their branches in Bratislava – new capital of the slovak part of Czechoslovakia. Company Skorkovský came to Slovakia in early twenties and between 1921 and 1922 built the largest 4-storey building in winter harbour- Warehouse 7. It's the same modern construction as warehouse in Holešovice, built five years earlier. That's one of the reasons, why the character of the building is still conservative and classicizing. Its architectural form is inspired by pragues factory Praga from 1917. Builder of this factory was famous czech engineer Stanislav Bechyně- associate and employer of Skorkovský company. Certainly, about the conservative image of the building decided also traditional environment of Bratislava (earlier Pressburg), at that time unwillingly and slowly accepting ideas of the functionalism.

At least, last ten years new construction progresses in both locations of pragues and bratislavaer harbours. Public warehouse in Prague still performs the origin function. Warehouse 7 decayed for several decades. Its renewal started in 2007. Origin planns were not realised, among other things because of objections of Slovak Monuments Board. Renewal was carried out only in the case of facades and ensuring interiors by ventilation. Today, after changing of the original projects and their consulting with conservationists, it's starting the second phase of renewal, which would create in this location cultural and recreation zone. It is great opportunity to attract here the citizens and at the same time to protect most important heritage values of the Warehouse 7.

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<sup>\*</sup>Intervenant

<sup>†</sup>Auteur correspondant: ninabartosova@gmail.com

# What to do with Waterside White Elephants? Management Approaches for Historic Urban Dry Docks and Shipyards

Jeffrey L. Beard \* <sup>1</sup>

<sup>1</sup> College of Engineering, Drexel University – États-Unis

Large-scale urban shipyards and dry docks of the United States were primarily built during an industrial growth period from the 1820s to the First World War. Most of these waterfront industrial sites have been de-commissioned, and both military and private locations are often in a transitional period between adaptive re-use or substantial reconfiguration. The management of this process had often been intermittent and protracted, resulting in loss of both continuity of community stewardship and loss of irreplaceable structural fabric. The first three east coast dry dock facilities and surrounding shipyards still exist (Portsmouth, VA; Charlestown, MA; Brooklyn, NY). The initial American dry docks were patterned after the pioneering steam-powered facilities built in Portsmouth, UK and St. Nazaire, FR, as the fledgling nation tried to build parity with the navies of established European empires. For North America, these enclosed basins were among the largest public works projects undertaken in the early 19th century, and were deemed essential to supporting the technology of a nation's high seas ships-of-the-line. Today, labor and material costs in many developed countries have rendered naval yards and dry docks – customized factories for ship-building and repair – unprofitable for their original use. In much of North America, coastal ports and river cities went into steep decline in the mid to late 20th century, resulting in the present search for means of urban regeneration and successor landscape and seascape activities that are sustainable. Among the questions for the researcher are 1) What heritage – from a local to national to world scale – is worth preserving and celebrating given the complex needs of the modern city; 2) Are the physical sites and their transportation networks (land and sea) able to be interpreted in a way that is comprehensible to today's audiences; and 3) Can the tangible and intangible worth of the industrial systems be reformulated or conformed to the dynamism demanded by contemporary urban citizenry? For example, downscaled ongoing ship repair activities could continue alongside cultural craft demonstrations showing the technological transitions of wood to iron to steel/aluminum/composite hulls, with concomitant explanations of material fastener technology from pegs to screws/bolts to hot rivets to electro-welding by man and machine. A multi-faceted, interactive and educational timeline approach for industrial heritage properties can begin to overcome the frozen-in-time and dusty attic mentality that is the albatross of some older museum and heritage sites. Case examples of historic urban working waterfronts, sometimes undertaken in conjunction with non-profit organizations, will illustrate some of the alternative heritage practices that have been explored in a handful of cities along the Atlantic coast, Great Lakes and Gulf of Mexico, albeit with varying degrees of success.

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\*Intervenant

## S.5.B — Images of Industry



# Abandoned in Place: A Quantitative and Qualitative Photographic Approach to Documenting and Interpreting the Industrial and Technological Remnants of the United States' Space Programs

Roland Miller \* 1

<sup>1</sup> College of Lake County (CLC) – 19351 West Washington Street Grayslake, IL 60030 USA, États-Unis

In this paper, I will discuss preserving and portraying the industrial and technological remains of America's space exploration history through both literal and abstract photography. For the past twenty-five years, I have been photographing space launch sites, test facilities, and spacecraft around the United States. The two bodies of work I will discuss are titled Abandoned in Place and The Space Shuttle.

Abandoned in Place is a photographic investigation of America's space launch and research facilities that played a crucial role in the early period of space exploration. The facilities photographed in this project are rapidly disappearing due to decay and demolition. Most of the launch facilities are located at the ocean's edge and are subject to harsh saltwater environments. Many were finished with paints that contain hazardous chemicals, which through oxidation are leaching into the local soil. Because of this contamination most of the steel launch towers have been demolished, and all that remains are concrete blockhouses and launch pads. Photography is the only practical method of preserving and interpreting these historic sites.

The images in The Space Shuttle project are intended to interpret the space shuttle program's part in the story of our desire to expand the human experience beyond Earth. This project examines the technological developments and the shuttle program's place in the history of space exploration in a manner not attempted by official government and photojournalistic documentation. The location of many of these sites on secure government facilities and their proximity to harsh coastal environments create unique issues for both access and preservation. Preservation through photography is one option that addresses both of these concerns.

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\*Intervenant

# The Birth of Corporate Identity – Industrial Promotion Styles at the World Exhibitions

Franziska Bollerey \* 1

<sup>1</sup> University of Technology Delft/Holland – Pays-Bas

The paper analyses representation methods and sales strategies of the industrialized nations during the World Fairs since the first such event in London in 1851. Its importance is mirrored in George Cruikshank's caricature where people from all continents flock around a globe crowned by Joseph Paxton's Crystal Palace. In it, industrial and cultural achievements were for the first time brought together in a global sense. Especially industrial processes and products proved the advancement of the respective nations.

The paper discusses conditions of competitiveness and national identities as mirrored at the occasions of these World Exhibitions. A second aspect debates their function as show cases for producers such as Wendel at Le Creusot or Krupp in Essen. The architecture of the exhibition halls is described as a showpiece for industrial innovation in the uses of modern building materials such as iron and steel.

The analysis will focus on the different types of industrial production and products and explain exhibition techniques used to promote specific industries and products and thus create individual corporate identities that became more and more important in the battle for clients. The line is drawn from here to the role of a Peter Behrens for the Berlin AEG concern as the creator of corporate identity by architecture and design of products after 1900, a development that started with the first World Exhibitions in London 1851, Paris 1855, again London in 1862, and again Paris in 1867, Vienna 1873 and Philadelphia in 18976.

With this overview the paper draws the attention to a so far rather neglected aspect of the industrial culture: the promotion of industrial achievements on the platform provided by the new instrument of World Exhibitions.

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\*Intervenant

## **S.5.H — The Heritage of Electricity**



# Du nouveau sous le Soleil. Le patrimoine de l'Énergie solaire et ses nouveaux enjeux culturels

Sophie Pehlivanian \*<sup>1</sup>, Silvi Cesare \*<sup>†</sup> 2

<sup>1</sup> Université Savoie Mont Blanc/LLSETI (LLSETI) – Université de Savoie – Domaine Universitaire de Jacob-Bellecombette B.P. 1104 73011 Chambéry Cedex, France

<sup>2</sup> Group for the history of solar energy (GSES) – Italie

Si l'ancrage des technologies solaires dans notre société occidentale repose sur des découvertes datant de plusieurs siècles – concentration solaire, effet photoélectrique, etc. – les réalisations qui marquent le point de départ aux usages modernes de l'énergie solaire, notamment en tant qu'énergie électrique, datent de la seconde moitié du XXe siècle. Dès les années 1940, l'énergie solaire intègre la recherche officielle française. Cette recherche, bien qu'attachée à des laboratoires français, est largement orientée vers l'échange et le partage de connaissance avec d'autres laboratoires européens ou du bassin méditerranéen qui s'intéressent également aux problématiques solaires. Compte tenu des contraintes induites par l'usage du soleil, les outils créés pour exploiter cette ressource sont, très vite, de grande envergure. Ils se constituent alors comme des jalons paysagers dans leur lieu d'implantation, souvent des régions rurales. Devenus objets culturels, ces outils scientifiques intègrent parfois la vie locale et se positionnent comme argument touristique de certaines régions. Les nombreux outils solaires constituent ainsi un patrimoine de l'énergie solaire qui s'instaure, à partir des années 1990, comme le témoin d'intentions technologiques avortées au milieu des années 1980. Bien que la production en série industrielle ne soit alors que rarement en vigueur, la mise en œuvre de programmes européens et la multiplication des entreprises spécialisées dans les installations solaires entre la fin des années 1970 et le début des années 1980 témoignent de l'ampleur du mouvement " solaire " de cette période. Les " objets-témoins " de l'énergie solaire bénéficient parfois de valorisations qui leur permet de remettre au jour des technologies oubliées ou enfouies à cause de l'échec qu'elles peuvent cristalliser. La puissance associative est alors nécessaire, voire primordiale, afin de valoriser ce patrimoine technique et de mettre en œuvre des programmes de conservation. Nous allons mettre en regard deux approches patrimoniales engagées autour de l'énergie solaire, par deux des pays impliqués dans ce domaine, l'Italie et la France. Le GSES (Groupe pour l'histoire de l'énergie solaire) italien a mis en œuvre, avec l'aide du Musil (Museo dell'Industria e del lavoro) de Brescia, un important travail de mémoire et de communication, suivi et régulier, autour de ce patrimoine. La France, quant à elle, ne bénéficie pas d'une action centralisée, mais plutôt de plusieurs types d'actions locales dont la plupart sont portées par des associations ou des initiatives individuelles. Dans les deux cas on s'intéresse, par ces actions, à un patrimoine culturel qui, bien que spécialisé, s'adresse à l'ensemble de la société.

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\*Intervenant

†Auteur correspondant: info@gses.it

# Patrimoine hydroélectrique transfrontalier dans les Alpes, un État des lieux pour une nouvelle perspective

Anne Cayol-Gérin \*†<sup>1</sup>, Anne Dalmasso \*‡<sup>2</sup>

<sup>1</sup> Conseil général d'Isère – Conseil général Isère – France

<sup>2</sup> LARHRA – Université Pierre Mendès-France - Grenoble II – France

Alors que des chemins de fer, des mines et de nombreuses autres industries ont bénéficié d'une reconnaissance mondiale par l'inscription sur la liste du patrimoine mondial de l'Unesco, les sites hydroélectriques n'ont pas encore été en mesure d'obtenir le précieux label. Ce n'est pas faute, pourtant, de qualité. Associés à des paysages façonnés par l'industrie, les grands barrages comme les petites centrales hydroélectriques constituent un patrimoine vivant, fréquenté par les touristes et pris en compte par les différents acteurs locaux (élus, entreprises, services du patrimoine...). De plus, ce patrimoine est fondamentalement transfrontalier dans les Alpes, créant un " espace hydroélectrique régional " tout à fait original. De la vallée de la Romanche en Isère, jusqu'aux multiples centrales suisses ou à la centrale de Vizzola, en passant par les grandes installations de Savoie ou les plus petits aménagements du val d'Aoste, la région entière conserve les traces de la circulation des ingénieurs, des techniques, des capitaux mais aussi des hommes qui ont bâti ces sites. Notre communication vise ainsi à interroger la pertinence d'une approche patrimoniale à l'échelle des Alpes, en termes de paysage, de techniques industrielles mais aussi de travail humain.

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\*Intervenant

†Auteur correspondant: a.cayol-gerin@cg38.fr

‡Auteur correspondant: anne.dalmasso@upmf-grenoble.fr

# Global Electropolis: The German Contribution to the Electrification of Metropolitan Chile, Valparaiso and Santiago, 1880-1925

Marion Steiner \*†<sup>1</sup>

<sup>1</sup> Bauhaus Universitat Weimar and Pontificia Universidad Catolica de Chile. – Allemagne

Along with the Baghdad Railway, the Latin American business of Germany's electrical industry has been the largest foreign investment of German capital before the First World War. With the Electric Revolution starting around 1880, the German Empire evolved into a major player on the world market, and the new technologies were exported worldwide. Key-players such as Siemens, AEG or Deutsche Bank, acting as inventors, entrepreneurs and financiers, founded joint subsidiaries for their global enterprises – such as the "German Overseas Electric Company" for the Latin American continent which enjoyed a high social standing in "Electropolis Berlin" in the early 20th century. Latin America at that time was regarded as an economically emerging continent and the local elites strived for a European lifestyle and proactively pushed along the modernization of their cities. In addition to the water supply and sanitation systems and extensive paving measures whose construction started around the same time, the electrification of public street lighting and urban transport was understood by them as symbols of technological progress and modern urban infrastructure. Dealing with the case study of Chile's metropolitan area consisting of the liberal global port-city of Valparaiso and the civil capital Santiago, my paper shows how Germany's electrical industry has conquered the world market from 1880 onwards. It highlights the role of German actors in the local contexts, examines how the German system was able to beat international competitors and shows under which circumstances the German influence ended after World War I. The case study also reveals that the new large-scale technical system installed by the Germans was less as a contribution to the sustainable urban development in the Global South, than it was an essential part of a global economic strategy to conquer the world market. Thus, the Latin American countries served as important and much welcomed markets for new technical products – in exchange for the raw materials Germany needed for its own industrial development. The presentation resumes the current state-of-the-art of my PhD research carried out since 2013 at Bauhaus Universitat Weimar and Pontificia Universidad Catolica de Chile. The research also contributes to the interpretation of Chile's built electric heritage: many remains from the early days of electricity are still there today but they are little known and have remained largely unexplored so far.

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\*Intervenant

†Auteur correspondant: steiner@rhondda.de

## **S.6.A — Educating and Sharing: New Ways of Teaching - Mediation**

# Enseigner la réhabilitation du patrimoine industriel dans les écoles d'architecture

Jean Bernard Cremnitzer \*<sup>1</sup>

<sup>1</sup> CREMNITZER – Ministère de la Culture et de la Communication, Ecole supérieure d'art de La Réunion, ECOLE NATIONALE D'ARCHITECTURE – France

Architecte et enseignant à l'ENSA Normandie et l'ENSA Paris-Belleville, je suis spécialisé dans l'enseignement du projet sur le patrimoine industriel, avec notamment la création d'un master spécialisé et d'un DSA Architecture et Patrimoine dans deux écoles d'architectures françaises. L'objectif de cette communication est d'expliquer la problématique spécifique de cet enseignement, sa complexité, ses attendus, et les résultats obtenus, tant en matière de programmation, de qualité architecturale ou de prise en compte de l'histoire de l'édifice à travers le projet. Il s'agit de révéler l'édifice et le site à travers sa transformation, et de transmettre aux futures générations son origine tant sociale qu'économique. L'architecte a ainsi un rôle de passeur, qui participe au processus de développement durable en conservant, valorisant, et en utilisant le potentiel, tant spatial qu'énergétique des édifices, dans le cadre de la requalification des territoires.

Différents exemples de projets d'étudiants indiqueront les courants et adaptations aux différentes typologies: grandes halles, bâtiments à sheds, architectures de trames régulières, etc.. Il s'agit d'expliquer également en quoi un programme de logements ou d'équipements intégré dans un ancien édifice industriel possède des qualités supérieures à un programme de construction neuve, et en quoi il peut lui donner une spécificité.

La question d'un enseignement spécifique se pose dans les écoles d'architecture qui ont trop souvent consacré leur pédagogie à la seule construction neuve, alors qu'aujourd'hui 65% de la construction concerne des interventions sur l'existant.

Les travaux réalisés par nos étudiants de Rouen et Paris sont élaborés en partenariat avec des collectivités locales ou des associations; ceci permet de diffuser des approches jusque là inconnues des décideurs politiques, qui peuvent ainsi s'appuyer sur ces résultats pour développer de nouvelles politiques urbaines en matière de friches industrielles.

Enfin, cet enseignement ne peut être le travail d'un seul enseignant de formation architecte, il réunit des compétences diverses, notamment des historiens, économistes, ingénieurs et spécialistes du développement durable.

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\*Intervenant

# Assessing the impact of personal connections on future interest in industrial heritage

Alison Wain \* 1

<sup>1</sup> University of Canberra (UC) – University of Canberra, Canberra, ACT 2601, Australie

Industrial heritage is almost always large and complex, and it is very often situated either outdoors or in predominantly uncontrolled environments. This makes its preservation and display expensive, time consuming, and subject to high ongoing maintenance requirements. These needs can only be met when there are enough people who care about the heritage to make its preservation worthwhile for the players who have the money, the political power, and the vision to make it happen. Understanding what people value about industrial heritage is therefore critically important to designing successful industrial heritage projects.

This applies not only in the present but in the future, and it is harder to predict how many people will be interested in the heritage in the future, or in what ways they will value and use industrial heritage. It is self-evident, though, that if they cease to value the heritage, or to find it relevant to their lives, they will cease to support its preservation. They will stop visiting it, stop caring for it as volunteers or private owners, and stop supporting politicians who suggest spending their taxes on its preservation. It is therefore important to analyse how community appreciation of industrial heritage changes with time, to develop ways of anticipating and planning for these changes.

This paper looks at the approaches to light industrial heritage demonstrated by successive generations of Australians. Most importantly, generations that feel a personal connection to the heritage have a strongly participative, hands-on approach, whereas generations that do not feel a direct personal connection demonstrate a respectful but detached approach. These different outlooks drive contrasting approaches to visitation, volunteering and private ownership of industrial heritage, and can be expected to have significant impacts on future interest in, and support for, industrial heritage preservation.

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\*Intervenant

# Quel enseignement pour le Patrimoine industriel ?

Jean-Luc Rigaud \*<sup>1</sup>

<sup>1</sup> Université Paris 1, Panthéon-Sorbonne (UP1) – Pres Hesam, Université Paris I - Panthéon-Sorbonne : EA127 – 12 place du Panthéon - 75231 Paris Cedex 05, France

Dans le contexte d'une plus grande prise en compte des questions patrimoniales et notamment celles concernant l'industrie, de nombreux enseignements ou pour le moins des informations sont diffusés. Quel sont les nouveaux enjeux et les nouveaux moyens de communication ? Si, il y a une dizaine d'années il s'agissait très souvent de faire prendre conscience, d'interpeller, aujourd'hui parallèlement à cette démarche, il s'agit également de former les nouveaux acteurs institutionnels du patrimoine industriel. La méthode est plus large, englobante et requiert des compétences associées. En effet, il s'agit aujourd'hui de former des étudiants qui auront, notamment, la charge de porter des dossiers de réhabilitation de sites industriels. Il est nécessaire d'associer à une connaissance de l'histoire de l'industrie et des techniques, à l'histoire sociale, des compétences en urbanisme, en architecture, en politique de la ville, en gestion publique... Pour ce faire, il pourrait être pertinent d'associer ces disciplines autour d'une étude de cas. C'est ainsi que j'inscris ma démarche à Paris 1 mais principalement à l'université de Versailles Saint-Quentin en Yvelines : proposer des études de cas mettant en communication des compétences variées.

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\*Intervenant

## **S.6.B — Urban regeneration**

# Un nouveau Lyon naît à la Confluence

Bruno Benoit \* 1

<sup>1</sup> Laboratoire de Recherche Historique Rhône-Alpes (LARHRA) – École Normale Supérieure [ENS] - Lyon, Université Jean Moulin - Lyon III, Université Pierre-Mendès-France - Grenoble II, Université Lumière - Lyon II, CNRS : UMR5190, École Normale Supérieure (ENS) - Lyon – Institut des Sciences de l'Homme - 14, avenue Berthelot - 69363 Lyon cedex 07, France

Depuis le début du 21e siècle, le sud de la presqu'île lyonnaise, appelée la Confluence, connaît une régénération urbaine de très grande importance. Ce quartier, autrefois marginalisé, voire ostracisé dans l'histoire urbaine lyonnaise, cherche à s'affirmer comme un nouveau centre de la métropole lyonnaise. La mutation n'est pas achevée mais le profil de nouveau quartier se veut écologique et responsable sur le plan énergétique.

A la place des installations industrialo-portuaires situées sur la Saône, du marché gare et des prisons, sortent de terre des immeubles de bureaux, des logements, des bâtiments administratifs, une université, un centre commercial qui cohabitent avec des pans de l'ancien foncier. Une darse a même été construite permettant à Lyon d'avoir un port de plaisance. Certes, la vocation maritime de Lyon a toujours été un voeu des édiles.

Cette volonté de conserver du patrimoine d'hier a pour but de témoigner auprès des nouveaux venus, mais aussi des anciens habitants, d'une volonté mémorielle afin que l'identité de "derrière les voûtes" ne disparaisse pas sous le béton. Un nouveau maillage de moyens de transport relie ce "nouveau Lyon" aux autres quartiers de la ville

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\*Intervenant

# An experience of the socio-cultural effects of industrial heritage reuse in the capital of Iran, Tehran

Sara Taymourtash \*<sup>1</sup>, Pirooz Hanachi<sup>1,2</sup>

<sup>1</sup> university of tehran (ut) – University of Tehran, Enghelab Square, Iran, Tehran, Iran

<sup>2</sup> Research Institute of Culture Art – Iran

Tehran was selected as the capital of Iran in 1785, but since 1921, with the beginning of Reza Khan's government and foundation of Pahlavi Dynasty (an era inspired by global liberalism), Tehran's social and financial life, and physical appearance changed. Tehran was transformed from a traditional city surrounded by fences and moats into a new city with a new structure. Reza Khan constructed a new city with modern buildings, wide streets and large squares in north of Tehran. Since then the difference between north and south of Tehran arose. The southern part, covering about 1:3 of Tehran's area, included factories and industrial lands; its social situation gradually became critical and caused urban problems.

Tehran's slaughterhouse was one of the industrial spaces in the south, and there were several factories in its neighborhood which industrialized the overall appearance of the district. Tehran's former slaughterhouse had a traditional production method which made the situation problematic in this area. In 1967 it was replaced by a mechanized slaughterhouse with a modern production line, which relatively improved the sanitary situation, but from a lifestyle point of view, surrounding areas were highly deprived.

In 1991, along with cleansing residential areas from obtrusive industrial activities, the slaughterhouse was transferred to the suburb, and in that very place, Tehran's municipality took initiative to construct the largest Cultural Center in one of the most deprived urban areas of Tehran. Bahman Cultural Center, with an area of over than 50000 square meters comprises of several halls, balcony cinemas, galleries, sport centers, public libraries and different cultural and educational divisions. The role of this Cultural Center in early 1990s was probably one of the most important reasons for the socio-cultural change in Tehran, which meanwhile led to the first cracks in the socio-cultural barrier between north and south of Tehran. This reuse had two clear strategies: on one hand it attempted to improve the cultural level of residents in a local scale, and on the other hand, in an urban scale, it provided an opportunity in order for the two contexts to encounter socio-culturally, to blur the boundaries of myth and reality, and to diminish the differences and separations.

In conclusion this study attempts to investigate the reuse effects of an industrial space both in local and in urban scales, an achievement in Iran which led to the improvement of its citizens' lifestyle. This will be presented in part 3-2 under the title of 'Urban regeneration'.

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\*Intervenant

# Le paysage urbain d'Eindhoven : une réinvention de son patrimoine industriel.

Nolwenn Sabau \* 1

<sup>1</sup> Eindhoven Museum – Pays-Bas

Eindhoven est actuellement la cinquième ville des Pays-Bas du point de vue démographique. Elle est reconnue comme l'une des régions les plus intelligentes du monde grâce à sa forte densité d'étudiants et d'ingénieurs. Son développement fulgurant a commencé à partir du dix-neuvième siècle grâce à l'installation progressive d'industries. Eindhoven n'était alors qu'un village parmi d'autres dans la région Brabançonne, une région à dominante agricole. S'installent dès le dix-neuvième siècle les industries textiles, chapelières, du tabac et d'allumettes. Le paysage urbain d'Eindhoven évolue alors avec l'installation de la plupart des fabriques le long du cours d'eau: le Dommel. Au tournant du vingtième siècle, Eindhoven est devenue une ville industrielle. Ce nouveau statut sera confirmé par l'installation de deux nouvelles entreprises : Philips, installé en 1891, et DAF, en 1930. Le tissu urbain se développe au fil de l'expansion de ces sociétés : nouvelles usines, nouvelles infrastructures et logements se multiplient. Le visage d'Eindhoven trouve son identité : une architecture moderne et industrielle. Aujourd'hui les traces du passé industriel restent omniprésentes dans le centre-ville.

Ces friches industrielles sont parties prenantes dans le réaménagement urbain. Le Strijp-S par exemple est un ancien complexe industriel de Philips devenu aujourd'hui un nouvel espace de vie. La superficie de ce complexe en plein essor permet d'associer plusieurs stratégies et différents acteurs de l'économie locale. Les activités culturelles comme un cinéma d'art et d'essai ou une école d'art photographique par exemple jouxtent les commerces, bureaux de conception et de design, le terrain indoor de skateboard ou encore des logements. Des événements culturelles ou commerciaux comme un marché durable ou encore un festival de design par exemple permettent un réinvestissement continu du lieu. D'autres exemples seront présentés lors de la conférence tel que le projet autour du terrain NRE, une friche industrielle comprenant entre autres l'ancienne usine à gaz.

Eindhoven réinterprète ainsi son passé industriel à travers ses lieux chargés d'histoire qui jalonnent le paysage urbain et restent prégnant dans la mémoire collective des habitants d'Eindhoven.

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\*Intervenant

# DISCOVERING ASPECTS OF LOCAL HERITAGE: THE CASE OF THE INDUSTRIAL RAILWAY AT HERAKLION, GREECE

Evangelos Charitopoulos \*†<sup>1</sup>, Konstantinos Mamalakis<sup>2</sup>, Stavros Kapsalis<sup>1</sup>, Konstantinos Mamalakis<sup>3</sup>

<sup>1</sup> Hellenic Ministry of Culture and Sports – Grèce

<sup>2</sup> National Technical University of Athens [Athens] (NTUA) – 28 Oktovriou (Patision) 42, 10682 Athens, Grèce

<sup>3</sup> Historical Museum of Crete – 27 Sofokli Venizelou Ave., 71202, Heraklion, Grèce

At Heraklion, the largest city of Crete, a small railway was established during 1930s. The purpose was industrial, namely the transportation of raw material, mainly stone blocks, for the construction of the jetty, the northern sea wall, of city's port. The railway had a metric gauge line connecting the approximately 6 km distance from the quarries at the west of Heraklion to the port. The use ended before WW II, and nowadays the majority of locals do not know even the very existence of this line, but traces of the railway are still visible. The various surviving parts are endangered since the line is not yet listed to monument status by the Archaeological Service. The documentation of the industrial railway is the main purpose of this study. A throughout survey of both written sources and in situ architectural remains and rails will be undertaken, in order to outline the historic evolution, concerning construction aspects, and record the surviving parts of the railway. Moreover, the data from the survey will be compared with old aerial photos and maps towards a cartographic reconstruction of the track in parts that have been lost. Given that the former railway corresponds to an urban and suburban context, a discussion for conservation and redevelopment issues will take place, in the framework of evolving local society as well as visitors from abroad to discover the line and seeking towards an adaptive reuse.

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\*Intervenant

†Auteur correspondant: echaritopoulos@gmail.com

# Determining factors in the conversion of power stations, Nordkraft Power Plant Case Study (Aalborg) in Comparison with other Plants around the World

Marie Janouskova \*† 1

<sup>1</sup> Czech Technical University in Prague (CTU Prague) – České vysoké učení technické v Praze Zikova 1903/4 166 36 Praha 6 Česká republika, République tchèque

This paper discusses the most important factors that affect the conversion of power plants aimed at finding new functions for the buildings.

The article describes the power plants in Aalborg, and Nordkraft in particular. It deals with the complex history of the building which, due to the increasing consumption of electricity, had to be extended several times. It also addresses the issues of finding a use for such large buildings and preventing their decay before the investor finds a suitable function for them. The paper deals with the reconstruction from the point of view of architectural solutions and details, organisational aspects of the conversion, approach to the immediate surroundings, and financing options. Some trends and opportunities for the reconstruction of similar buildings around the world are outlined in order to show the options for saving them by means of conversion.

This is a very topical question, as hundreds of decaying, non-functional power plants can be found throughout the world. It is important to rescue some and, by converting them, give them a new touch and a new use.

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\*Intervenant

†Auteur correspondant: janouskova.marie@seznam.cz

## **S.6.C — Oral History**

# Voices of Steel

Howard Bossen \*†<sup>1</sup>, Eric Freedman \*‡<sup>1</sup>

<sup>1</sup> Michigan State University (USA) – États-Unis

Citizens – the public – create the history that becomes part of industrial heritage. Their words—captured in oral histories, interviews, memoirs, correspondence and other first-person accounts such as contemporary journalistic accounts and contemporary music—inform and enrich visual depictions and physical interpretations of industrial sites.

Voices of Steel is a book project that gives voice to the human impacts and implications of steel in the United States and abroad. It recognizes that the steel industry could not and cannot operate without people, nor without a wide range of impacts on individuals and families, communities, the environment, politics, society, infrastructure and culture.

Few people have been inside a steel mill and even fewer understand the process of steelmaking. Even so, people and cultures have been and remain profoundly affected by steel. Both the drama and the routine of making steel elicit deep human emotions: molten metal and sparks; huge industrial complexes dominating the landscape; the promise of well-paying jobs and the despair when those jobs disappear; contaminants belching from smokestacks and spilling from outlet pipes; injured workers, dead workers and their grieving survivors; racial, class and industrial conflict.

This presentation will provide an overview to the wide-ranging content of the book that explores social history through discussions of workers' life, race and ethnicity, gender, communities, conflicts and culture, industrial history through the making of steel, steel used to build the modern world, as a material for destruction and as a medium for creativity for sculptors, artists, filmmakers and photographers. The presentation will then explore in-depth the content of two sections of the book. One dates back to Homestead Strike against Carnegie Steel Company in Pittsburgh, Pennsylvania, in the late 19th century. The second, while incorporating historical material, focuses largely on more than thirty photographers who were interviewed as part of this project.

Voices of Steel provides a means for citizens to understand and become engaged with those involved in the steel industry at all levels and over many years. It is a contribution to industrial heritage through its preservation of the voices of those whose lives were profoundly influenced by the steel industry.

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\*Intervenant

†Auteur correspondant: [bossen@msu.edu](mailto:bossen@msu.edu)

‡Auteur correspondant: [freedma5@msu.edu](mailto:freedma5@msu.edu)

# Discussion of solutions of transmission for industrial heritage in China— Taking a slaughterhouse in Shanghai as an example

Xiaomeng Cai \* 1

<sup>1</sup> Beijing Guowenyan Culture Heritage Conservation Center Ltd. Co. (CHCC) – Beijing, 100084, P.R., Chine

In China there are plenty of industrial heritage sites, disseminating in different locations and varying in different fields. However, the start of the industrial heritage protection arrived relatively late in China, compared to the western countries. In 2010 there was the first industrial heritage academic seminar in Beijing. Meanwhile, it also means that China has brought attention to this kind of heritage. But, the question comes too: how should we transmit them to future generations? What are the proper ways to give these sites new functions? Nowadays, the popular way in China is to alternate the industrial ‘ruins’ to cultural creative industrial bases because the huge spaces are adored by artists to present their works. This alternative is common and there are many good examples all over the world. However, when it comes to China, it looks different. The slaughterhouse in Shanghai is one of these cases.

The slaughterhouse is located at the crossing of Shajing Road and Liyang Road, Shanghai, China, where the International concessions settlement region was from 1845 to 1943. This modern concrete industrial building was designed by a British firm in 1931, and after 3 years' construction, was finally put in use in January 1934. The slaughterhouse in fact is a set of buildings with a four-floor cylindrical building in the center surrounded by subsidiary buildings. These two parts are connected by 26 bridges of various widths splayed out at different angles and heights. The cylindrical building functioned as the main workshop space which included slaughter bays, offal rooms, storage, and boiler rooms. The surrounding buildings were mainly the cowsheds, sheep sheds and pig sheds. It was inscribed on the list of Outstanding Historical Buildings in Shanghai in 2004. Three years later, the renovation project was finished and the slaughterhouse was renamed “1933 Old Millfun”. The initial purpose was to set up a cultural creative industries center. But after 7 years' management, it is more like a real estate redevelopment project at present.

Without intervention, the knowledge and awareness of the values of industrial heritage will dissipate. If we focus on transmitting these values, we will help to preserve our heritage and maintain a priceless link to the past.

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\*Intervenant

# Sauvegarder la mémoire de la sidérurgie liégeoise : réflexions sur l'introduction de récits de vie au musée

Marie-Aline Angillis \*<sup>1</sup>

<sup>1</sup> Université de Liège (ULg) – Place du 20-Août, 7 4000 Liège BELGIQUE, Belgique

Depuis 2014, la Maison de la Métallurgie et de l'Industrie de Liège (MMIL) et le Musée de la Vie wallonne travaillent conjointement autour d'un vaste programme de sauvegarde de la mémoire de la sidérurgie liégeoise. Ce projet de collecte de témoignages, qui pour sa première phase est planifié sur quatre années (2014-2017), rencontre plusieurs objectifs : documenter les collections matérielles conservées par les musées partenaires, rassembler des données sur la vie économique et sociale des ouvriers, sauvegarder les savoir-faire... A cette récolte s'ajoute la volonté de donner aux musées un rôle social fort par la création de Clubs-Mémoire. Lors de ces réunions, les témoins seront invités à partager leurs expériences, à revenir sereinement sur les difficultés et combats engendrés par la fermeture de leur outil de travail. Partant du principe que raconter son passé permet de le dépasser et d'envisager positivement l'avenir, les équipes des musées désirent offrir aux travailleurs la possibilité d'entamer le processus de deuil de leur activité, tout en reconnaissant la valeur patrimoniale de leur mémoire. A partir d'entretiens et d'observations menés dans différentes institutions ayant une politique de récolte de récits de vie plus ou moins développée - Musée national de l'Histoire de l'Immigration (Paris), Musée de la Mémoire vivante (Saint-Jean-Port-Joli, Québec), Bruxelles nous appartient asbl (Bruxelles), etc. -, je me propose de poser un regard critique sur le projet Témoins de la sidérurgie liégeoise, tout en relevant les enjeux et les écueils de ce type de démarche participative, tant du point de vue du témoin, que de celui du visiteur et de l'institution. Introduire le récit de vie au musée pose un certain nombre de problématiques - valeur patrimoniale du récit de vie, méthode de captation et de conservation, mise en exposition et valorisation, personnification du parcours, etc.-, auxquelles cette communication vise à apporter des éléments de réponses.

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\*Intervenant

# Un patrimoine en chantier

Serena Boncompagni \*<sup>1</sup>

<sup>1</sup> Ecole des Hautes Etudes en Sciences Sociales (EHESS) – Institut Interdisciplinaire d'Anthropologie – France

Serena Boncompagni  
Doctorante en anthropologie

IIAC-EHESS

Un patrimoine en chantier

Mémoire industrielle et patrimonialisation dans le Bassin minier du Pas-de-Calais

La contribution a pour objectif de réfléchir sur les processus de patrimonialisation de l'ancien Bassin minier du Pas-de-Calais à travers une double expérience de recherche : celle de l'ethnographe, doctorante en anthropologie menant une enquête sur les métamorphoses du territoire (Arrondissement de Lens) depuis deux ans et celle de l'allocataire de recherche en ethnologie de la France du Ministère de la Culture dans le cadre d'une recherche-action de quatre mois pour la valorisation de l'histoire et la mémoire de l'ancienne Cokerie de Drocourt. Je voudrais ainsi répondre aux deux questionnements formulés dans le point 1.1 de l'axe “ Ecouter, éduquer, transmettre ” de l'appel à communication.

A travers l'exploration du territoire et un travail sur les imaginaires sociaux et politiques de la population locale, je voudrais décrire les perceptions et les représentations des citoyens rencontrés sur mon parcours par rapport à ce processus. Dans le cadre d'une ethnographie de l'ordinaire, il ne s'agira de questionner exclusivement les associations concernés ou les acteurs plus actifs, mais de restituer la complexité des points de vues et renouer les liens multiples de la population avec l'histoire industrielle, très particulière, du territoire. Cela pourrait contribuer à mieux saisir le regard aujourd'hui posé sur le “ patrimoine industriel ” par ce qui “ cohabitent ” avec lui, (re)découvrent la mémoire d'un passé à la fois proche et lointain et font face au poids de son héritage.

Sur la base de notre expérience concrète, nous interrogerons en suite la place accordée à la population locale et aux anciens dans le cadre de ce processus, et nous proposerons des questionnements, des pistes de réflexion et des outils élaborés au cours d'une parenthèse de terrain, celle de la recherche-action, jamais vraiment fermée par la doctorante. A débattre et à partager avec les passionnés, les chercheurs et les professionnels du patrimoine industriel.

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\*Intervenant

## S.6.E — Conflicting Values

# Diachronic exploitation of landscape resources – tangible and intangible industrial heritage and their synthesis suspended step

Georgia Zacharopoulou \* 1

<sup>1</sup> GREEK MINISTRY OF CULTURE – MOUSON 89-91, 54634, THESSALONIKI, Grèce

It is expected that industrial heritage actually tells the story of the emerging capitalism highlighting the dynamic social relationship between the “workers” and the owners of the “production means”. In current times of economic crisis, it may even involve a painful past with lost social, civil, gender and/or class struggles, a depressing present with abandoned, fragmented, degraded landscapes and ravaged factories, and a hopeless future for the former workers of the local (not only) society; or just a conquerable ground for controversial investments. This is certainly an emotionally charged subject matter, with multiple readings and interpretations. However, this view is only partial when facing landscape during its historical evolution process. A diachronic study, thus, embraces all resources that probably gave rise to a variety of human activities; all of them embody heritage values -“subjectively” or “objectively” perceived- their evaluation, though, is a matter of an on-going process of the civil society.

Greece’s landscape accommodates a diversity of diachronic productive practices that may overlap historical periods, technological evolutions and social transformations. Pre-, early and industrial exploitation of resources does not remain firm but vary according to time and the needs of each society. The comparative scale of certain resource exploitation is highlighted as the key for the assessment methodology in close relation to the specific frame of a local landscape and a historical period.

Even though archaeological evidence may possibly reveal and document continuity in a range of sustainable productive processes without conflicts, great controversies emerge when new investments are “offered” as an antidote to economic crisis –not harmonized to the local scale, traumatizing thus the “spirit” of the landscape. Suggestions for incompatible productive use and investment planning imply irreversible and irreparable effects on the environment, society and economy of a region and are only faced through social awareness. Case studies of passive and/or active involvement of local communities, in synthesizing and enhance landscape’s “spirit”, its diachronic industrial heritage and the embedded tangible and intangible values, will support a pragmatic –not a suspended- step towards a sustainable future.

Quoting Neil Cossons (TICCIH Congress 2012) “Industrial imperialism ensures its position and protects its future not by the conquest of distant lands as by the securing of its sources of raw materials ... The modern world is as much under the control of the major industrial powers as it ever was during the colonial era”; if such a case can the industrial heritage sector remain apolitical?

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\*Intervenant

# Is this factory better forgotten?

Pierre Smars<sup>\*</sup> <sup>1</sup>, Kai-Cheng Yang <sup>†‡</sup> <sup>2</sup>

<sup>1</sup> National Yunlin University of Science Technology (NYUST) – 123 University Road, Section 3, 64002  
Dou-Liu, Yun-Lin County, Taiwan, Taïwan

<sup>2</sup> National Yunlin University of Science Technology (NYUST) – 123 University Road, Section 3, 64002  
Dou-Liu, Yun-Lin County, Taïwan

In Taiwan as in many other countries, Industrial Heritage has long been seen as an obstacle to regional development. Successful experiences abroad, like the Iron Bridge in the UK or the Ruhr Area in Germany, nevertheless showed that industrial heritage has the potential to reinforce regional identity and foster economic development. But in Taiwan this new awareness is far from general. At the local authority level and in the population, the interest is still very low.

In the case of Ping-Tung tobacco factory, the situation is possibly even worse. The company always kept a low profile. Still today, former workers do not like to discuss about their former job. Many of the locals know very little about the factory and have therefore no special emotional attachment to it.

Tobacco was nevertheless one of the most important products of the region. Together with sugar it fueled the economy and contributed to the emergence of the modern electronic sector in Taiwan. The product, its producers and the factories are witness of the cultural and economical history of the country.

In the 1970s, Ping-Tung factory was the main plant of the company for the South of the country. It was processing tobacco from all the 16 districts of the areas of Kaohsiung and Ping-Tung. Following a reorganization and rationalization plan, the factory was closed in 2002 and moved to a smaller plant outside of the city.

Since then, the factory and its numerous warehouses are abandoned. The most impressive and beautiful spaces of the complex are the machine rooms. Most of the equipment of the processing chain is well preserved. These spaces offer a great opportunity to create a tobacco museum. Actually, they could not be reused for anything else without loosing their heritage value. Such a museum would be unique in Taiwan but possibly also in the world. Most tobacco producers country have at least one dedicated museum (in Shanghai, in Tokyo, in Havana, in Delft, in Perugia and elsewhere). But these museums are not installed in the original industrial plants. That is what would make special a museum in Ping-tung. Our concerns about the ill-effects of cigarettes on health complicate the problem. Tobacco may be seen as a negative part of our heritage, better forgotten. This situation makes the tobacco factory revitalization particularly challenging, even to industrial heritage standard. But we believe that this part of history deserves recognition.

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<sup>\*</sup>Auteur correspondant: smars@yuntech.edu.tw

<sup>†</sup>Intervenant

<sup>‡</sup>Auteur correspondant: yangkc@yuntech.edu.tw

# Informal industrial heritage presentation : “ Stalker Trip”

Nadezda Solonina \* <sup>1</sup>

<sup>1</sup> Ural States Academy of Architecture and Arts (USAAA) – Karla-Liebknechta st. 23, Yekaterinburg, 620075, Russie

Industrial heritage in the context of the contemporary world is the multifaceted cultural phenomenon. Many people of the different ages and activities are interesting of industrial heritage. Today we have a wide range of different ways of industrial heritage presentation. Sites conservation, creation of precious or museum zones, large reconstruction actions for creating exhibition or concert spaces and many other ways can support social, cultural and economic relations. However industrial heritage has not only cultural and historical value, but it has also certain spiritual value. Proof of this is, for example, indifferent attitude of former workers of closed enterprises in cases when abandoned factory transformed into museum or cultural center. This fact can be seen in Zeche Zollverein, (EssenGermany) or in Riopar Brass Factory (Spain). Former workers can not only give some information about factory, but also be guides and tell exciting stories about so important places of their lives.

This is also another side of industrial heritage spiritual value, which is connected with much younger generation. Young people may not have any direct links with one or another closed or abandoned factory. These guys run desperately to meet adventure, which, in their opinion, necessarily wait for them in an abandoned industrial area. Sometimes they take perfect architectural pictures of dead buildings and constructions, which can claim for the creation of a separate direction in photo art.

One of the backgrounds of this cultural direction appearance in Russia is the book “Roadside picnic” written by Arkadiy and Boris Strugatskiye, which was published 1972 in Russian. The book was later translated into other languages and published in more than 20 countries. The concept “stalker” is permanently entered Russian language. In the context of the book “stalker” – is a person who, in violations of the prohibitions, penetrates into the Zone and make of it a variety of artifacts, which subsequently sells and it helps him to earn for living. In Russian language after the same film by Andrew Tarkovskiy this concept has acquired the meaning of a conductor, who is oriented in a variety of taboo and little known places and territories. So today we can say about the whole cultural direction, which appeared due to the literary work and has been able to develop in the decay of the industrial age, which left behind a lot of the abandoned “treasures”.

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\*Intervenant

## S.6.F — Landscapes



# La vallée du Creux de l'Enfer et l'usine SGCO de Thiers : les conditions de la réappropriation d'un patrimoine industriel.

Mathilde Lavenu \* <sup>1</sup>

<sup>1</sup> ensacf (ecole nationale supérieure d'architecture de clermont-ferrand) – Ministère de la Culture et de la Communication – 71 bd cote blatin 63000 clermont-ferrand, France

Située à l'est du département du Puy-de-Dôme (France), Thiers est une ville profondément liée à sa vocation industrielle et plus particulièrement à celle de la coutellerie. Présente sur ce site depuis le XIV<sup>e</sup> siècle, la coutellerie, aujourd'hui toujours en activité, est une production industrielle qui a façonné la ville et qui est désormais valorisée par les actions du musée de la Coutellerie créé en 1982.

Ce patrimoine industriel emblématique a fait l'objet, à partir de la fin des années quatre-vingt-dix, d'un travail d'inventaire assuré par la DRAC Auvergne. Cet outil de connaissance du patrimoine a permis d'appréhender ce corpus spécifique et identitaire dans sa globalité et a contribué à mettre à disposition un état des lieux pouvant éclairer les politiques publiques territoriales d'aménagement ou de valorisation.

Ce travail a plus particulièrement révélé la richesse des formes bâties des unités de production du XIX<sup>e</sup> siècle implantées le long de la vallée de la Durole. Également dénommée vallée du Creux de l'Enfer, c'est principalement sur ce secteur que la ville de Thiers a fait le choix d'intervenir depuis une dizaine d'années pour reconquérir ce paysage industriel délaissé par la coutellerie suite aux mutations techniques et économiques du XX<sup>e</sup> siècle. Cependant cette dynamique de reconquête fondée sur un programme culturel montre aujourd'hui ses limites et c'est dans ce contexte que s'inscrit le travail de recherche porté par l'ENSACF (École Nationale Supérieure d'Architecture de Clermont-Ferrand) en réponse à la sollicitation de la collectivité.

Conduite en 2013/2014 dans le cadre du Master METAPHAUR (MEmoire et Techniques de l'Architecture et du Patrimoine HAbitat Urbain et Rural), la réflexion a postulé que le paysage de la vallée du Creux de l'Enfer constituait un substrat traduisant la substance d'une réalité et qu'à ce titre cet existant pouvait convoquer l'invention. Le projet d'architecture, c'est à dire le processus de conception qui conduit à l'organisation spatiale d'un ensemble pouvant aboutir à son édification, a été l'outil mobilisé pour explorer les conditions de l'invention. Dans ce cadre, les notions de patrimoine, de mémoire et d'héritage ont été interrogées et elles ont permis de formuler une dizaine de propositions architecturales développées à partir de l'étude de cas de la réhabilitation de l'usine SGCO. Ce travail en voie d'achèvement devrait permettre de démontrer qu'au delà de sa mémoire et de son imaginaire, le paysage industriel du Creux de l'Enfer constitue un véritable vecteur de réappropriation active d'un territoire en marge.

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\*Intervenant

# Bormida Valley Industrial Landscape. Interconnected industrial heritages emergencies (infrastructures, plants and company towns) as keys to rediscover and understand a fragmented XIX ad XX industrial landscape in an inner Apennine valley in North-West of Italy.

Alberto Manzini \*<sup>1</sup>

<sup>1</sup> Università degli studi di Verona – Viale dell’Università, 3 - 37129 Verona, Italia

Both for those who live there, and for those who will get the first time, the visual impact that the Bormida valley raises is divided between two seemingly irreconcilable extremes: on the one hand the broad and constant presence of the forests, on the other hand the massive settlements industrial emerging, imposing, in the green landscape of the valley. From the 1880s until the late 60s Bormida valley, an inner Apennine mountain valley beyond coastal town of Savona in Liguria (North-West of Italy), experienced a substantial growth. This was triggered by the construction of the railway Torino-Savona, the implantation of chemical production, the presence of national wide companies and an undoubtedly ingenious 17 km long cableway for movement of coal from Savona’s docks to the heart of the valley. This growth, boosted by the WWI when this area became one of the national poles for pyric powder and explosives production, modernized and radically changed both territory and social life, making of Bormida valley a high industrialised area like few in Mediterranean panorama. The “industrial colonization” was determined by an important amount of infrastructures, industrial structures, warehouse and company towns that reshaped the landscape and determined its evolution in rupture with a secular artisanal, commercial and agricultural tradition. Nowadays, after decades of industrial crisis, this territory seems rediscovering a precedent work and social dimension where the industrial landscape, even if it’s one of the most relevant of Ligurian region and objet of an increasingly interest by academic community (research on Bormida’s company tows, the cableway works and the role of architect Cesare Mazzocchi in design SIPE’s monumental buildings) and economic actors (Bormida technological park), appears less and less understandable for large public. Our objective is to focus the attention on some interconnected industrial heritage relevancies –infrastructures, as the cable way that for more than a century today endorsed Bormida’s economy, company tows, like SIPE’s villages in Cengio and Ferrania which contribute to move the core of social life from collinear villages to new town rising along the Bormida river close to industrial plants or industrial structure characterised by high quality architecture that defined the SIPE’s style in Bormida valley – as vehicular objects to understand in a deeper way this landscape and its history.

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\*Intervenant

# Paysages culturels mineurs dans le cadre de la planification de l'Etat Espagnol

María Del Carmen Cañizares Ruiz \* <sup>1</sup>

<sup>1</sup> Departamento de Geografía y Ordenación del Territorio (Universidad de Castilla-La Mancha. UCLM)  
– FACULTAD DE LETRAS. AVENIDA CAMILO JOSÉ CELA S/N CIUDAD REAL 13071  
(ESPAÑA), Espagne

Les paysages culturels sont le résultat de l'interaction dans le temps du peuple et de l'environnement naturel, dont l'expression est un territoire perçu et apprécié pour ses qualités culturelles, fruit d'un processus et prise en charge de l'identité d'une communauté, selon la définition offerte en Espagne le Plan National du Paysage Culturel (2012). Basées sur les définitions du paysage à différentes échelles, traite de la notion de paysage culturel, de la contribution de l'UNESCO à l'Union européenne, accordant une attention particulière à la Convention européenne du paysage (2000) et, surtout, les susdits Plan National du Paysage Culturel et le Plan National du Patrimoine Industriel en Espagne.

Ces dernières coordonnées par l'Institut de Patrimoine Culturel de l'Espagne (Ministère de l'Éducation, la Culture et du Sport) sont devenus, dans le domaine des outils de planification, utiles basé sur le consensus et l'esprit de collaboration des communautés autonomes espagnoles qui, en outre, devrait servir de cadre de référence pour l'élaboration de nouvelles réglementations. Insérée dans un ensemble d'instruments pour élaborer des critères et modes de fonctionnement unifié sur des ensembles de biens culturels, coordonne la participation des différentes administrations et institutions, définir les critères d'intervention et optimiser les ressources selon les besoins de conservation de ces ensembles de patrimoine. L'objectif principal du Plan National de Paysage Culturel est la " sauvegarde des paysages culturels ", c'est-à-dire la création de mesures visant à assurer la viabilité du paysage culturel, y compris les mesures d'identification et de caractérisation, documentation, recherche, protection, amélioration, revitalisation, couvrant des aspects nécessaires de définition, de délimitation et de l'analyse des composants et de la gestion; tout cela dans une perspective de développement durable. Pour sa part, le Plan National de Patrimoine Industriel poursuit la protection et la conservation d'un patrimoine qui, par sa propre spécificité, une détérioration rapide et exposés à disparaître.

Dans ce contexte et à l'aide d'une approche géographique, s'approfondit dans la caractérisation des paysages culturels liés à l'exploitation minière, qui ont été incluses parmi les actions proposées dans ces Plans. Met en évidence les administrateurs de Plans du Paysage Culturel Minière à Almadén (Ciudad Real) et à la Sierra Minera (Cartagena - La Unión, Murcie), le Paysage Culturel à Ojos Negros (Teruel) et de l'El Hornillo Pier (Aguilas, Murcie), entre autres.

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\*Intervenant

## **S.6.G — Museums**

# **MIAT: From a classic museum of industrial archaeology to a partner in the reconversion of deindustrialized sites.**

Pieter Neirinckx \* 1

<sup>1</sup> Museum about Industry, Labour and Textile – Ghent – Belgium (MIAT) – MIAT, Minnemeers 9, B - 9000 Gent, Belgique

The MIAT is the reference museum on industry, labour and textiles and the contact point for tangible and intangible industrial heritage in Flanders. The museum was founded in 1977 to save the future of a number of machines from the first industrial revolution. Given the importance of the textile industry for Ghent and the surrounding area, the MIAT concentrated on that branch of industry when building its collection between 1977 and 1989. In the 1990s the museum widened its focus and started looking at the material culture of the industrial society. Concerned about the possible loss of important industrial heritage, MIAT accepted large scale machinery and equipment on offer from property developers and industrial plant managers. This resulted in a valuable and very diverse collection. But such large scale heritage is difficult to display in a museum setting. And it weighs literally and figuratively on the storage policy. Our current vision aims to reintegrate where possible, in a durable way, large collection pieces in public space. For instance a gantry crane from 1925, made by Titan Anversois is moved back to the historical port of Ghent. There she will refer to the former activity, act as landmark and tourist attraction and ambassador for the nearby museum. In addition the MIAT seeks to motivate project developers, urban planners and business managers to preserve valuable industrial heritage on site and to valorize it within their new projects. Hence a steam turbine STAL from 1935 was preserved on the formal textile factory De Porre in Ghentbrugge. Today it's part of the neighborhoods green park.

For these projects, the museum collaborates with the owners of the property, the urban planning services, heritage preservation, international restorers and consultancies, the neighborhood, the local school community and the university. In recent years the function of the MIAT has shifted from a classical collection acquirer to a cultural broker who shares his expertise and mediates within the broadest possible heritage community.

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\*Intervenant

# The Dounreay Heritage Partnership Project – An innovative approach to developing successful museum partnership working activities

James Gunn \* <sup>1</sup>, Beki Pope<sup>†</sup>, Joanne Howdle \* <sup>‡</sup>

<sup>1</sup> Dounreay Site Restoration Ltd (DSRL) – Dounreay, By Thurso, Caithness KW12 7TZ, Royaume-Uni

The Dounreay nuclear establishment on the North coast of Scotland was the centre of the UK's fast reactor R&D programme from 1955 to 1994 and is currently being decommissioned. The site had a museum/visitor centre located in a World War II building since 1960 and by 2001 it was needing replaced. An option study produced the idea of a partnership between the United Kingdom Atomic Energy Authority, The Highland Council and the Thurso Heritage Society, with all 3 donating their historic object collections to a new independent museum. The plan was to convert Thurso's Town Hall and adjoining Carnegie Library, into a museum and community facility, which would tell the story of Caithness from prehistory to the present day and include a permanent exhibition featuring Dounreay's industrial heritage.

A new charitable company was duly constituted and a funding package of £4 million was raised to renovate the two buildings. Caithness Horizons ([www.caithnesshorizons.co.uk](http://www.caithnesshorizons.co.uk)) opened its doors in December 2008. It was an instant hit with 86,000 visitors in the first year of operation and an average of 82,000 since then. The Dounreay visitor centre only attracted around 6,000 annual visitors in the summer months. The museum is fully accredited and a 5 star VisitScotland attraction, it is one of the top visitor attractions in the North of Scotland.

Caithness Horizons is not just a museum. It is a focal point for tourism in Caithness and the North of Scotland, as well as being a community and education facility that hosts such events as festivals, conferences, business receptions, artistic exhibitions and skill demonstration workshops.

Dounreay published a heritage strategy in 2010. Two of the main outcomes were the formation of an Advisory Panel consisting of local and national heritage experts and a partnership arrangement with Caithness Horizons and the National Museum of Scotland covering the donation of Dounreay objects to their collections.

This paper details the innovative and successful partnership approach that took the Dounreay visitors centre and placed it within a new museum in order to boost the socio-economics of the area. The museum is now a flagship for tourism in the North of Scotland and the promotion of tourism around the Caithness story is a key factor. It will also cover Dounreay's associated flagship heritage project, with its approach to nuclear heritage being a first in the UK and possibly the world.

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\*Intervenant

<sup>†</sup>Auteur correspondant: [bekipope@caithnesshorizons.co.uk](mailto:bekipope@caithnesshorizons.co.uk)

<sup>‡</sup>Auteur correspondant: [joannehowdle@caithnesshorizons.co.uk](mailto:joannehowdle@caithnesshorizons.co.uk)

# The International Lace and Fashion Museum in Calais

Anne-Claire Laronde \*†<sup>1</sup>

<sup>1</sup> Cité internationale de la dentelle et de la mode de Calais – Ville de Calais – France

Construite au cœur d'une ancienne usine de dentelle typique du XIXe siècle, la Cité internationale de la dentelle et de la mode présente, dans une scénographie originale, des collections exceptionnelles liées à l'histoire de la dentelle et de l'industrie calaisienne, à la création textile et à la mode en dentelle. Les collections se déploient sur 2500m<sup>2</sup> réparties en cinq galeries où sont évoqués les savoirfaire et les techniques, l'histoire économique et sociale, les usages mais aussi les aspects les plus contemporains de la dentelle. Lieu de vie et carrefour d'échange, la Cité se veut être un outil et une vitrine pour la profession, contribuant ainsi au rayonnement de la capitale mondiale de la dentelle mécanique. Témoin de l'incroyable épopee industrielle de Calais, la Cité invite le visiteur à un voyage exceptionnel au cœur de la dentelle. Tous les secrets de fabrication lui sont dévoilés, avec en point d'orgue la découverte de quatre métiers Leavers en fonctionnement. Des tulleuses professionnels produisent ainsi devant le public la véritable dentelle de Calais. Bien plus qu'un simple lieu muséal, la Cité est aussi un extraordinaire espace de découvertes. Expositions temporaires, activités culturelles pour les familles, échanges-rencontres, ateliers textiles, visites guidées pour les groupes... rythment le lieu.

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\*Intervenant

†Auteur correspondant: anne-claire.laronde@mairie-calais.fr

## **S.6.H — New Research, scales and tools**

# The OBS project or an integrated multidisciplinary approach for the study and conservation of the collection of the chronometric observatory of Neuchâtel, Switzerland

Christian Degrigny \*†<sup>1</sup>, Guillaume Rapp<sup>1</sup>, Romain Jeanneret<sup>1</sup>, Agnes Gelbert-Miermon<sup>1</sup>, Jacques Bujard<sup>2</sup>, Jean-Michel Piguet<sup>3</sup>

<sup>1</sup> Haute Ecole Arc Conservation-restauration (HE-Arc CR) – Campus Arc 2, Espace de l’Europe 11,  
2000 Neuchâtel, Suisse

<sup>2</sup> Office du patrimoine et de l’archéologie (OPAN) – Section Conservation du patrimoine, Rue de Tivoli  
1, 2000 Neuchâtel, Suisse

<sup>3</sup> Musée International de l’Horlogerie (MIH) – Rue des Musées 29, 2300 La Chaux-de-Fonds, Suisse

Collections of scientific and technical artefacts have a heritage value closely linked to their status of witnesses of a social, economic, industrial and cultural context. Therefore they might suffer from decontextualisation and loss of significance when separated from their functional environment. The OBS project, carried out with close collaboration between the Conservation Research Unit at the University of Applied Sciences Arc in Neuchâtel, the Heritage and Archaeology Office and the International Museum of Horolog, aims at developing an analytical method for the study and conservation of technical collections. The research started in 2013 and integrates in a multidisciplinary way conservation, historical and ethnological approaches applied to the collection of the Observatory of Neuchâtel. Unlike their buildings, the Observatories collections are rarely protected and are then particularly exposed to decontextualisation. The Observatory of Neuchâtel was faced to this problem when most of the objects were moved to the IMH in 2011 after the reallocation of the buildings. To contribute to the promotion and safeguarding of this exceptional heritage, emblematic of the regional development of the watchmaking industry, and more generally to the conservation of technical collections, the UR-Arc CR has developed an approach covering the following points: : identification of the specific constraints of the collection as regards the material preservation ; Technical and historical study of the collection including spatial and ethnological aspects ; Development of a preventive conservation strategy enabling the long-term preservation of the collection ; Optimisation of the compilation of integrated data in a sustainable database and of their searching using appropriate documentation tools. The talk will present the methodology followed as well as the current achievements on the corpus of artefacts selected and representative of the problems raised by the collection. The work of the multidisciplinary team will be detailed, in particular the contribution of conservators that make more understandable the functioning of the objects and the damage due to usage as well as of historians that utilize archival data to put back the objects in the context of their use.

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\*Intervenant

†Auteur correspondant: christian.degrigny@he-arc.ch

# Guidonia, the aeronautical research centre and its new town

Edoardo Currà \*<sup>1</sup>, Cesira Paolini<sup>1</sup>

<sup>1</sup> Dipartimento di Ingegneria Civile Edile e Ambientale - "Sapienza" Università di Roma (DICEA - Sapienza) – Via Eudossiana 18, 00184 Roma, Italie

In 1935, near Rome, the fascist Government inaugurated an extraordinarily advanced center of research dedicated to the aeronautical scientific and industrial development. The center was settled as a small independent town, with pavilions structured on a main axis. An interesting series of buildings host the heart of the centre: the wind tunnels and the hydrodynamic tank for testing prototypes (Currà, Paolini 2005). These structures have played a relevant role in the study of flying and supersonic fluid dynamics. Nowadays, even if they are in ruins, represent with dignity their historical and technical value. Furthermore, beyond these relevant factors, the site is also interesting for the presence of a functionalist "new town" strictly related to the center (Currà 2013). In fact, during the same inauguration day, it was laid the foundation stone of a new town: Guidonia. The town was ideated as a well organized "company-town" for civil and military workers and their families. The project was coordinated by Alberto Calza Bini and designed by Giuseppe Nicolosi, Giorgio Calza Bini and Gino Cancellotti. They planned the conceptual schemes for residences and public buildings, answering to the needs of a structured social group composed by soldiers and civilians. In depth, the Experimentation Center and the Higher Studies and Experiments Direction (DSSE) were originally established in this area in 1928, and three years later engineers of Aeronautic Army drew up a new master plan, with the final arrangement for the Centre. In the picture n° 1 it's possible to observe how the presence of the railway played a decisive role in the planning: to avoid soil subtraction to the airfields south of the railway line, they decided to build the Studies Center in the north of it, incorporating all in the military complex. Then the railway became the boundary between the spaces used for studies and experiments, located to the north, and those dedicated to the airport, to the south, and the position of the center influenced the planimetric organization of the following town. This last was based on cardo-decuman axes and "from the entrance of the Studies Center it starts an avenue, perpendicular to the main street, which will be the principal axis of the town, dedicated to housing and carrying on the square. The direction of the road allows a wide view of the Tivoli Mountains from the square and from the road" (Nicolosi 1936). The town and the aeronautical site offer a sequence of monuments to technique, research and architecture of international value. The need of their knowledge and valorization is more evident if we considered their condition of ruin in relation to the urban decay surrounding of Guidonia, nowadays part of the urban sprawl of Rome.

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\*Intervenant

# La papeterie en France : quel Patrimoine Industriel ? Quelles préservations et mises en valeur ?

Louis André \*†<sup>1</sup>

<sup>1</sup> université de Rennes 2 – Université Rennes 2 - Haute Bretagne – France

At the end of the XVIIIth century paper manufacture is practised in France in more than 600 small mill sizes spread, as paper consumption alike, all over the country. During the XIXth century, mechanisation led to the multiplication of the sites but also to the extinction of most small mills. Likewise, the use of pulp led to a dramatic raise of new regions such as the Alpes or the Landes during the following century. At the turn of the XXth century, France counts 600 paper factories. French paper industry remained dominated for years by the presence of family and national capital and a management paying attention to its heritage in all its forms. Made of many medium and small sized firms on a European scale, it was spread over a high number of departments and regions. In the early sixties, 275 factories are still registered at the time when the production is to rise drastically, increasing from 1 to 10 million tons a year between 1960 and 1990. Since, the crisis and the restructuring have led to a drastic decrease of the number of factories amounting to 94 sites as far as today.

This high number of sites remained active over the course of a long period of time, gave a varied heritage reflecting this historical diversity. Emblematic mills were protected at an early stage and XIXth century factories are much more represented nowadays. As in other factory sectors, the promotion of the heritage born from the paper activity from the second half of the XXth century is more problematic. What are the players and goals of these conversions ? Cultural ends and public players prevail. Comparing on a European scale shall highlight the French example.

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\*Intervenant

†Auteur correspondant: louisandre6@aol.com

## **S.7.A — Educating and Sharing: New Ways of Teaching - Mediation**

# Le patrimoine des villages ouvriers et des villes-usines, vers une analyse planétaire

Gracia Dorel-Ferré \* 1

<sup>1</sup> Langages, Littératures, Sociétés, Université de Savoie (LLS) – Université de Savoie – Domaine Universitaire de Jacob-Bellecombette B.P. 1104 73011 Chambéry Cedex, France

A la suite du colloque de Guise “ Villages ouvriers, utopies et réalités ”, Louis Bergeron écrivit une note pour ICOMOS, (1994, complétée en 2001), qui reste un point d’ancrage pour tous ceux qui s’intéressent au sujet. Depuis, j’avais proposé divers éclairages (architecture, société, choix économiques), développés à travers le temps mais aussi à travers l'espace.

Cette notion de variété, soulignée par R-G Guerrand, est essentielle et ne saurait se réduire à l'expression, courante aux Etats-Unis d'Amérique du Nord, de company town, que l'on voudrait voir appliquer à toute forme de village ouvrier. Il faut rappeler les caractères de ce patrimoine toujours très présent, ses origines, les évolutions entre le XVIII et le XIX siècles ; les transformations du concept, par son application à des structures d'Etat tant aux Etats-Unis que dans la Russie soviétique et dans l'Europe dominée par l'URSS. Dès les années 1960, la mobilité qu'offraient les voitures individuelles avaient condamné ces zones de densité uniformes ; aujourd’hui, le plus fréquemment l'habitat est distinct du lieu de travail. Malgré des vides énormes qui correspondent aux espaces encore non décrits, nous pouvons déjà donner une vue précise, riche et documentée de ce phénomène qui a concerné la planète entière. L'exposé se déroulera en trois temps, après une introduction qui rappellera une genèse marquée par le rôle et l'impact des utopistes : - Les formes de l'habitat ouvrier, à vol d'oiseau - Les composantes de l'habitat de l'industrie d'initiative patronale et le rôle de l'Eglise - La réponse ouvrière et le patrimoine issu des coopératives, bourses du travail et maisons du peuple

En conclusion, on retiendra la richesse de ce patrimoine, parti de l'Europe occidentale pour l'essentiel mais qui a gagné progressivement toute la planète, avec des variantes sensibles de l'Oural à la cordillère des Andes. Si la société qui l'a vu naître a sombré avec les désindustrialisations de la fin du XXe siècle, la question du logement a largement nourri les réalisations du XXe siècle qui nous semblent pourtant aller de soi.

Choix bibliographique : 1994 Dorel-Ferré, Gracia (dir) Villages ouvriers, utopie ou réalités ?, n° spécial de l'Archéologie industrielle en France, n°25, 2004 Dorel-Ferré, Gracia (dir) Habiter l'industrie, Cahier de l'APIC n°4, Reims. 2006 Dorel-Ferré, G. “ Les utopies industrielles : la circulation des modèles entre l'Europe et l'Amérique ” dans DAUMAS J.C. (dir) La mémoire de l'usine Presses Universitaires de Franche-Comté. 2008 Dorel-Ferré, G. “ Architectures du travail et nouvelle société dans les villages ouvriers et cités de l'industrie (1780-1930) ” dans DAUMAS J.C. et CHOUQUER G. (dir) Autour de Ledoux, architecture, ville et utopie, Presses Universitaires de Franche-Comté. 2012 Dorel-Ferré, Gracia “ Les villages ouvriers, des company towns ? ” ) à paraître dir. Giovanni-Luigi Fontana

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\*Intervenant

# Studying Industrial Heritage in Serbia – between formal and informal education

Anica Tufegdzic \* 1

<sup>1</sup> University of Novi Sad, Faculty of Technical Sciences (UNS, FTN) – Trg Dositeja Obradovica 6, Novi Sad, Serbie

The interest of the general and professional public for the industrial heritage in Serbia dates back only to the beginning of the 21st century. However, after more than a decade, industrial heritage is still marginalised. Unfortunately, it has not yet become the subject of systematic study and research.

In 2013, the Society of Conservators of Serbia declared industrial heritage as the most vulnerable category of historical material remains at national level, explaining this condition as a consequence of an obsolete legal and educational framework. Although industrial heritage is considered as part of the total corpus of cultural heritage, the current number of scientific studies and conservation projects indicate an inadequate approach to industrial history. It is particularly worrying that still there is no university course in the field of industrial heritage. Thus, the importance of forming a common strategy is emphasized, which would include all relevant governance structures and institutions at national and local level, as well as the private and civil sector.

Based on years of personal experience in the field of industrial heritage in this paper will be presented ways of studying this complex subject in the Serbian formal and informal educational system.

As a university lecturer and holder of the first PhD thesis in the field of industrial heritage history and protection, on the one hand, and an architect – conservationist, on the other hand, I will compare and systematize work of university students and professionals.

Analysis of the results of previous workshops, courses, seminars, competitions, as well as master diploma works and professional conservation projects, will serve as a framework for improving future educational practice.

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\*Intervenant

# E-learning in industrial archaeology - the experience of the FORCOPAR 2 project implementation in Romania

Irina Iamandescu \* <sup>1</sup>

<sup>1</sup> "Ion Mincu" University of Architecture and Urban Planning in Bucharest (UAUIM) – Academiei 18-22, Bucharest Romania, Roumanie

Starting from a previous project (FORCOPAR 1) that established the feasibility of a distance on-line learning program in industrial archaeology, the FORCOPAR 2 project, financed by the Leonardo da Vinci European program Transfer of Innovation, has put together in 2012/2013 a consortium of 12 partners in 4 European countries - France Belgium, Italy and Romania, under the coordination of "Ion Mincu" University of Architecture and Urban Planning in Bucharest (UAUIM).

The project has been determined by two observations. The first one is that everywhere through Europe a considerable part of the industrial heritage of the last centuries is significantly affected by interventions that go so far as the complete destruction of sites of great cultural value. The second is that in Europe there is insufficient training of professionals able to contribute to the safeguarding of this heritage and its enhancement through functional conversion.

The project's objective was to transfer the experience and knowledge of the first project to UAUIM while transforming, developing and adapting the contents for the implementation of the e-learning system in industrial archaeology which became operational in 2013. For that purpose an excellence centre for e-learning in industrial archaeology was created in UAUIM. The didactic section is based on an IT platform, in which authors from all 4 countries built an innovative learning structure for "students" having different professional backgrounds.

The educational platform, the didactic methods and the structure of the scientific contents, as well as the first year practical experience of this new e-learning platform in industrial archaeology are going to be explained and detailed in the presentation.

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\*Intervenant

## **S.7.C — Industrial Heritage in Digital Times**

# Delimitation of the Industrial Cultural Landscape Control Area —The Case of the Tsu Huang Kun Area in Miaoli County, Taiwan

Cheng Hsien-Hsin \*<sup>1</sup>, Chen Cheng-Che \*<sup>†</sup>

<sup>1</sup> Deparement of Urban Planning, National Chung Kung University – Taiwan

Miaoli County's Tsu Huang Kun Area was the first petroleum resource to be exploited in Asia. After many years of development, the landscape of today's petroleum industry has undergone many years of transformation, encompassing multiple cultural landscape resources including the dwellings left behind from Japanese colonial rule, the CPC Corporation Production Division office space and intact cable car rail, and the cultivated cultural landscape of the Hakka community. However, since this area is situated on rural land and has complex contrasts in elevation, the delimitation and control of the area is an issue worthy of research. This study mainly collected map data related to the Tsu Huang Kun Area, using a GIS system to correct and overlay the maps in order to integrate all the currently available information. The actual geology, topography, ecology, cultural landscape elements, current land use, and land ownership analysis data were collected to further investigate the scope of preservation and maintenance of the Tsu Huang Kun Area cultural landscape and to analyze its core zone and buffer zone. In addition, relevant regulations on the preservation and maintenance of the subregions were formulated according to different intensities. Since the research process involves investigations into industrial heritage value identification, land control mechanisms, and cultural heritage, this study is the first in Taiwan to provide specific techniques that should be considered when connecting cultural heritage to planning and control and can serve as a reference for related cases worldwide.

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\*Intervenant

<sup>†</sup>Auteur correspondant: chengche@mail.nhu.edu.tw

# Industrial heritage in a digital age

Shane Kelleher \* 1,2

<sup>1</sup> Ironbridge Gorge Museum Trust (IGMT) – Ironbridge Gorge Museum Trust, Coach Road, Coalbrookdale, Telford, Shropshire, UK, TF8 7DQ, Royaume-Uni

<sup>2</sup> Association for Industrial Archaeology (AIA) – Ironbridge Gorge Museum Trust, Coalbrookdale, Telford, Shropshire, UK, TF8 7DQ, Royaume-Uni

New terminologies and techniques are noticeably becoming part of the archaeologist's and other heritage professionals' everyday nomenclature and toolkit. The 'total archaeology' of the 21st century can call upon a vast suite of digital technologies such as Geographic Information Systems (GIS), 3D laser scanning, LiDAR (light detection and ranging) and 3D visualisations to assist them in identifying, interpreting, managing and disseminating the vestiges of the past. Whilst it has often been observed that the techniques used in 'traditional' archaeology don't transpose particularly well across into the realm of industrial archaeology, digital technologies, such as those mentioned above, lend themselves superbly to industrial heritage. In this sense it is just as satisfying identifying an 18th century inclined plane as a Neolithic enclosure in a LiDAR dataset, GIS is an excellent tool for interrogating, displaying and disseminating spatial data which is such a significant part of industrial archaeology as a discipline, whilst 3D visualisations/animations are excellent vehicles for portraying process flow, movement and the sounds of a historic industrial site.

It was in response to the increased use of digital technologies in an industrial heritage context that in 2012 the Association for Industrial Archaeology (AIA) launched its 'Peter Neaverson Award for Digital Initiative and Innovation', which is co-ordinated by the speaker. Its aim is to recognise the impact that developing digital technologies are having on our understanding, interpretation, dissemination, preservation and conservation of industrial heritage. This award has attracted an excellent and eclectic range of entries varying from animated reconstructions of historic industrial complexes to experimentations with sound and music in historic industrial buildings. This paper will provide an insight into these and assess the success of the techniques and explore the opportunities that they present for industrial heritage.

The paper will also draw upon the speaker's experience in utilising digital technologies in a wide array of industrial heritage contexts, such as the creation of a GIS-linked archaeological database for the Blaenavon World Heritage Site; producing an interactive GIS for Birmingham City Centre; utilising LiDAR data to engage local communities in the Ironbridge Gorge World Heritage Site and the Stiperstones National Nature Reserve; and using laser scanning and cloud-based Buildings Information Modelling techniques (BIM) to help record, manage and maintain historic industrial buildings and monuments in the Ironbridge Gorge. It will also discuss how digital interactives are set to play a key role in the redevelopment of the Museum of Iron, Coalbrookdale.

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\*Intervenant

# The TECTONIQ project for valorization of digital textile industrial heritage of North of France

Eric Kergosien \*† 1

<sup>1</sup> Groupe d'Etudes et de Recherche Interdisciplinaire en Information et Communication (GERIICO) – Université Lille III - Sciences humaines et sociales : EA4073 – France

The TECTONIQ project studies digital systems implemented by the actors involved in the management, dissemination and exchange of information about the textile industrial heritage in the North territory of France. The first objective is to draw a mapping of actors and heritage data available in heterogeneous digital databases. The second objective is to provide a knowledge representation to interconnect all data using the semantic web structure technologies. This step is crucial in order to assist the domain experts in producing and providing appropriate digital contents, and helping citizens to learn their own heritage. The originality of the proposed project is to be part of a multidisciplinary approach to provide stakeholders, experts and non-experts, help in the discovery of knowledge specific to their heritage, thanks to the extraction, structuration and visualization of knowledge from large and heterogeneous digital corpora. The studied territory is "Nord-Pas-de-Calais" in the north of France. In this paper, we present the methodology defined to get a stakeholder mapping of textile industrial heritage. Then, we detail the extensible semantic framework that cultural heritage information can be mapped to by using the CIDOC CRM ontology. At last, we describe the first steps of our approach to semi-automatically extract features related to the studied domain (spatial features, persons, organizations and thematic) from textual documents. To conclude, we discuss the preliminary results and we draw up the prospects for the second year of the project.

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\*Intervenant

†Auteur correspondant: eric.kergosien@univ-lille3.fr

## **S.7.D — European Perspectives**

# De nouvelles vies à inventer

Marie-Thérèse Chaupin \* 1

<sup>1</sup> ATELIER-Laines d'Europe – ATELIER-Laines d'Europe – France

Toutes ces usines de laine fermées à Biella (Italie) et à Roubaix (France): mortes, vides, sinistres ?

Et tous ceux qui y ont travaillé ou vivent dans les alentours : déprimés, résignés, tristes ?

L'inattendu a surgi, les immenses salles vides se sont animées quelques jours, quelques semaines. Rencontres, débats, expositions, musique, films, tontes, course à pied... les idées n'ont pas manqué, portées par une immense vitalité. Des liens se sont créés entre les éleveurs, la tonte, la laine brute et les ouvriers, les machines, les fils, les tissus. La musique, les œuvres d'art, les spectacles prennent la place des machines disparues.

Leurs histoires se ressemblent, même si les personnes ou les modes d'expression diffèrent. Ces deux initiatives sont nées spontanément, sans lien entre elles.

A Miaglano près de Biella, un centre de collecte de laine fonctionne déjà.

A Roubaix, on planifie l'installation d'une petite unité de peignage et de filage.

Après l'industrialisation, la grande distribution et la mondialisation, rêvons au futur, aux échanges possibles entre les ouvriers, magrébins, portugais ou français des usines du Nord de la France avec les Italiens de Biella. Partager leurs collectes de mémoires si semblables, leurs expositions et leurs projets d'avenir.

L'association ATELIER-Laines d'Europe coordonne des initiatives de valorisation des fibres naturelles produites en Europe, tant du point de vue économique que culturelles, historiques et pédagogiques.

A travers les histoires de ces lieux (grandes structures industrielles ou petites activités rurales) qui ont vécu grandeur et déclin, la communication présentera plusieurs exemples de revitalisation, parfois dans le prolongement de l'activité initiale, parfois sur des chemins nouveaux.

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\*Intervenant

# Les influences françaises en Serbie - architecture et paysage industriel à Pančevo

Ruzic Dragana \* 1

<sup>1</sup> Institut pour la protection des monuments historiques à Pancevo; Serbie – Z. Zrenjanina 26 000 Pancevo Serbie, Serbie

## LES INFLUENCES FRANÇAISES EN SERBIE - ARCHITECTURE ET PAYSAGE INDUSTRIEL À PANČEVO

.Notées, mais toujours insuffisamment connues et interprétées, les relations franco-serbes dans le domaine de l'architecture industrielle depuis la fin du XVIII siècle jusqu'à 1941 représentent un segment important des liens socio-économiques et culturelles entre deux États et les deux nations.

### AÉRODROME DE PANČEVO

En 1922 la Compagnie Franco-Roumaine de Navigation Aérienne (CFRNA), plus connue sous le nom de Franco-Roumaine fit une demande afin d'obtenir l'autorisation de faire atterrir ses avions de transports passagers et postaux à Belgrade, étape sur la liaison reliant Paris à Constantinople. L'aérodrome de Pančevo était une station relais entre Budapest et Bucarest sur la ligne Paris (aéroport du Bourget) - Constantinople. Ainsi, on put instaurer une ligne journalière régulière Paris – Strasbourg – Prague – Vienne – Budapest – Pančevo – Bucarest – Constantinople, qui permis au Royaume des Serbes, Croates et Slovènes d'être inclus pour la première fois dans l'organisation européenne du trafic aérien. Pour ces vols la Compagnie Franco-Roumaine engageait les avions français. Le premier vol de nuit international au monde avec des passagers à bord, eu lieu en 1923 sur la liaison Pančevo-Bucarest (Băneasa). Ils sont été effectués par des pilotes français Claude Beauregard, Maurice Noguès, Louis Guidon, etc. Avec ces événements l'aéroport de Pančevo était entré dans l'histoire de l'aviation mondiale. Puis, en 1936/37 au moment où l'ingénieur Bernard Laffaille réalisait le Pavillon français à Zagreb, il terminait également la construction des hangars d'aviation de Pančevo, où il utilisait, pour la première fois comme éléments de structure verticaux, des voiles mince plissé en forme de V. (V Laffaille)

### LA PREMIÈRE USINE MÉCANIQUE POUR LA PRODUCTION DES FENÊTRES EN VERRE A.D. À PANČEVO

La première usine mécanique pour la production des fenêtres en verre A.D (Verrerie) en Yougoslavie de 1931 /1932 est situé à Pančevo et avait été établie avec un investissement du capital français de la Manufacture des Glaces et Chimiques Produits de Saint-Gobain de Paris, dont les actionnaires, avec leurs partenaires de la Belgique et de la République Tchèque, ont conduit l'usine jusqu'à l'occupation quand on a été reprise par les Allemands. Le complexe de bâtiments de l'usine de verre de 1931-1933 est aujourd'hui abandonné et en danger.

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\*Intervenant

# Méta-morphosis. Rencontres post-industrielles

Franck Depaifve \*†<sup>1</sup>

<sup>1</sup> Meta-morphosis – Belgique

Des hommes, des lieux, des outils comme autant d'univers explorés pour illustrer notre démarche. Parvenir à esthétiser toute la poésie d'un lieu abandonné, aller à la rencontre des ouvriers, mineurs et métallurgistes. Leur donner la parole pour raconter leur Histoire, leurs histoires. Capturer les visages de ces anonymes, indispensables acteurs de la vie des usines ou des mines pour lesquelles ils ont souvent tout sacrifié. Laisser aux générations futures un témoignage de ce qui fut, pendant plusieurs générations, la fierté d'une ville, d'une région ou d'une nation et le quotidien de leurs ancêtres. Pour finir, expliquer aux descendants de l'immigration comment leurs fiers grands-parents ont participé à la construction de l'Europe...

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\*Intervenant

†Auteur correspondant: franck@meta-morphosis.org

## S.7.E — Conflicting Values



# Questioning the adaptive reuse of Industrial Heritage and its interventions in the context of sustainability

Damla Mısırlısoy \*†<sup>1</sup>, Kağan Günçə \*

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<sup>1</sup> Politecnico di Milano (Polimi) – Milano, Italie

<sup>2</sup> Eastern Mediterranean University (EMU) – Famagusta, Chypre

Memory is about the retreat to consciousness of experiences, accompanied by awareness that it has happened somewhere. Historic buildings are valuable in terms of collective memory. Cibali was an industrial zone in Istanbul. After the decision of moving the industrial zone to another place, the area remains abandoned for a while. In 1980s area had decided to regenerate. Cibali Tobacco Factory was one of these industrial heritage buildings which are preserved and converted to Kadir Has University. Cibali was built in the nineteenth century as a tobacco factory by Ottomans in 1876. Until 1995, building was used as a factory. It has been rented to convert the factory to university building in 2000. In 2002, building was opened as Kadir Has University. Then, in 2003 the project won the Europe Nostra Prize. Kadir Has University building has been selected as a case study of the research in order to question the success of the conversion and interventions in terms of sustainability. Aim of the study will be to question adaptive reuse project of the Cibali Tobacco Factory as university and its relationship between socio-cultural, economic and physical dimensions of the sustainability and also its effects on the environment and region. Adaptive reuse examples should not be accepted as single projects. Its contribution to the environment and the region is also crucial. Preservation of an individual building can be a catalyst to renewal of others. It can help the transformation of the whole area. There is always an interaction between the conversion projects and the environment. In order to achieve a successful conversion, appropriate functions should be given to the industrial heritage buildings according to the needs of the region. The method will be observation of the site, interviews and the literature survey. The success of the conversion will be questioned in terms of interventions to the industrial heritage, also in terms of economic and socio-cultural impact of the conversion to the region. The contribution of the new function to the sustainability will be analyzed through the observations and interviews in the district. Public awareness on the conservation of industrial heritage should be increased through restoration and reuse of the buildings. Public authorities should encourage preservation and restoration of the industrial heritage, Instead of destroying, they should be sustain since they is evidence of the people's lifestyle and culture living in or around it. Conserving this type of building and giving a new function according to their location, size and potential can help to future generations to understand where they are coming from.

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\*Intervenant

†Auteur correspondant: damla.misirlisoy@gmail.com

# Decay and awareness: recent approaches to industrial heritage in Brazil

Cristina Meneguello \* 1

<sup>1</sup> University of Campinas, São Paulo, Brazil (UNICAMP) – Depart. of History Rua Cora Coralina, nº 100 UNIVERSIDADE ESTADUAL DE CAMPINAS (UNICAMP) Cidade Universitária Zeferino Vaz 13083-896 - Campinas - SP Brasil, Brésil

During the last decade, industrial heritage in Brazil has progressively become an issue, due to massive demolitions brought by urban growth and events such as the World Cup (2014) and Olympiads (2016), but also due to few but successful recent efforts for evaluation, preservation and conversion. This presentation aims at dealing with three aspects of industrial heritage in Brazil, as follows: 1) on the one hand, recent losses of mills and warehouses, mostly in the states of Rio de Janeiro and São Paulo, indicating that urban sprawl and economic growth, associated with real-estate speculation, have been more powerful than the efforts of creating public awareness to the beauties and importance of industrial memory; 2) on the other hand, recent reconversions and recuperation of old industrial structures in distinct areas of Brazil, together with the listing of buildings and landscapes by official heritage organisms may point to a growing sensitivity to the quest for industrial heritage, increased by recent processes of desindustrialization and losses of traditional industrial crafts menaced by imported goods; 3) finally, it will evaluate industrial heritage in Brazil not as a set on individual places or buildings but as vast interconnected areas that may witness the industrial past, mostly in the state of São Paulo, focusing on the railway system and on the water generated electricity system as examples of industrial landscapes.

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\*Intervenant

# **Changes of values in rehabilitation works of a unique industrial heritage site in Budapest - The case study of former Northern Gasworks of Budapest**

Zorán Vukoszavlyev \* <sup>1</sup>

<sup>1</sup> Budapest University of Technology and Economics Department for History of Architecture and of Monuments (BUTE DHAM) – Muegyetem rkp. 3. K. II. 82. H-1111 Budapest, Hongrie

From the 1850-ies, Pest, Buda and Óbuda went through a dynamic development and were enriched with several infrastructural establishments – also the launch of gas public lighting represented the period's state of development. For supporting this utility, within a short time more than one coal based gasworks were erected in the area of the later capital of Hungary. Their some decade long concession contracts were bought off by the city council in 1910: the northern Buda area, which place had connections to the Danube and to the railways as well, was assigned for the settlement of the large central gasworks. Plans were coordinated by Zürich based engineer Albert Weiss. Beside the construction of the factory's typical elements, south to the industrial zone the residential district of officers and west to it that of the workers were established at the same time. The area of the former Gasworks was abandoned after 71 years but the rehabilitation started only a decade later. After the demolition of several industrial buildings in ruins and the revitalizing soil-change of the complete area, the place was continuously renewed within a concept of a complex investment. The main idea was based on the park composition following the pattern of nearby villa buildings. The scale of the buildings, the unified use of materials and the intensive landscaping of the park creates outstanding working conditions for the companies dealing with informatics and bio-technological innovation. During the almost two decades of new construction works on the vast territory the character of place has been radically changed. Since the main buildings of industrial heritage still exist, this is a turning point of preserving the identity. The developer came to aware of this situation and decided to continue with founding a new university research center in the old buildings. On one hand this branding gives specific meaning: high technology of contemporary life appears in hundred-years-old buildings. On other hand it demonstrates that the investors' thinking has changed significantly in Central Europe, too. Past interventions affected old warehouses and open storage areas, but these new rehabilitations meet historic structures in good conditons with equipments still on site to preserv. This raised the possibility of a value-oriented interventions with solid architectural design. The former water tower next to the tar-towers and recycling of wet and dry cleaning rooms, as well as the electric and gas meter houses are the focus of current transformations. Preserving the space and its indentity by the elements of past is facing new opportunities. The case study gives a highlight of these changing attitudes in a former socialist country after 25 years of democratic transition.

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\*Intervenant

## S.7.F — Landscapes



# **Les terrils sont-ils un patrimoine paysager à conserver ou un sinistre témoin de la vieille industrie à gommer? Exemple de la ville de Khouribga (Chaouia Ourdira- Maroc)**

Jihad Tigarroumine \* 1

<sup>1</sup> Université Hassan 1er - Settat – 11 rue mohamed daoud, cité des orangers Khouribga, Maroc

Les terrils est-ils un patrimoine paysager a conservé ou un sinistre de la vieille industrie à gommer Exemple de la ville de Khouribga (Chaouia Ourdira- Maroc)  
EL GHACHI MOHAMED, EL KHALKI YAHIA, TIGARROUMINE JIHAD

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Après la découverte des phosphates en 1919, la ville de Khouribga, région Chaouia Ourdira, Maroc, est devenue une ville industrielle avec une forte exploitation des mines qui crée des nouvelles formes qui transforment le paysage général de Khouribga

Ces exploitations ont des impacts sur le paysage. Autrement dit, l'exploitation des mines transforme le paysage de Khouribga.

L'extraction souterraine dégrade et défigure les profondes de cette ville minière, et laisse des traces minières qui transforment le paysage.

Les terrils, qui sont une colline artificielle construite par l'accumulation de résidu minier, sont témoin d'une industrie qui marque le paysage de la ville de Khouribga. D'une part ces terrils modifient entièrement le paysage visuel de Khouribga. Ces terrils miniers sont un enjeu de taille dans l'aménagement urbain des villes et régions qui les ont vus naître. Alors la question de la valorisation de ces terrils est parfois trop coûteuse d'une part, mais surtout cette idée heurte la sensibilité des habitants, attachés à cet élément de leur paysage et patrimoine. La question du devenir des terrils reste toujours posée dans la ville de Khouribga. D'autre part la question commerciale exploite à la manière d'une carrière de matériaux et met a supprimer ces terrils pour un développement économique.

Aujourd'hui, les terrils sont témoins d'une industrie qui marque le paysage de la ville de Khouribga. La question du devenir des terrils reste posée. Il faut les protégés en tant que témoignages de l'histoire minière et comment on peut crée une reconversion de ces terrils dans cette ville minière?  
Mots clés: bassin minier de Khouribga, paysage,impacts, terrils, patrimoine

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\*Intervenant

# Conserving and managing the industrial landscape: international comparison of policies and practices

Massimo Preite \* 1

<sup>1</sup> Université de Florence – Italie

The notion of “industrial landscape”, as an extension of the industrial heritage to include a whole valley, region, or city, cannot be reduced to a single concept, because it applies to different kinds of territories connected with industrial production: mining sites, industrial cities, company towns, technical networks etc. Although these examples are very dissimilar to each other, the landscape they generated is the most suitable framework for exploring their multidimensional value (both tangible and intangible), and promoting sustainable redevelopment programmes (tourism, cultural economics, creative activities, performing arts etc). Moreover, as examples of the interaction between production systems and the environment, industrial landscapes can be assimilated with the category of “cultural landscapes” that are still in a state of evolution. As such, policies for their protection are aimed at managing the conservation of their authenticity and integrity with their adaptation to take on an active role in the contemporary social, cultural and economic system. This paper will take an advance look at the findings of a comparative survey (in progress at the University of Florence) involving a group of industrial landscapes that enjoy wide recognition by international organizations such as the UNESCO World Heritage List, Europa Nostra, Council of Europe etc. The comparison will focus on the following topics:  
- an assessment of cultural values, and their relationships with the local community; the meaning of authenticity and integrity with reference to the industrial heritage as an evolutionary cultural landscape; models of participation by local communities in the management of industrial landscapes; how to marry conservation of authenticity and integrity values with reconversion of the industrial landscape, in order to promote new processes of sustainable economic development; how to promote urban regeneration programmes able to revitalize former industrial cities, without wiping out the testimonies of their industrial past, and how salvaging these testimonies can contribute to fostering the birth of new creative activities.

It is anticipated that one conclusion of this research study will be the development of a set of guidelines aimed at defining effective policies for evaluating the significance of the industrial landscape, promoting the best protection of these landscapes in accordance with their redevelopment, and improving local participation in their management and monitoring.

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\*Intervenant

# Creating sustainable development in the Arctic: abandoned extraction sites as assets for new Arctic futures

Dan Avango \* 1

<sup>1</sup> Royal Institute of Technology, Stockholm – Suède

The impacts of climate change on polar cultural heritage have received an increasing attention in recent years within the field of heritage research. Less attention has been placed on other processes of global change affecting the Arctic, where cultural heritage plays an important role – industrialization and de-industrialization. In recent years the circumpolar Arctic has been affected by a global mining boom, triggered by high world market prices on minerals as well as notions of the Arctic as a future arena for resource extraction in the wake of climate change. This mining boom is affecting communities in much of the Arctic region and holds a central place in debates about sustainable development there. A central item of these discussions focus on the question of how to handle the physical remains of mining sites once the boom is over and the activities have ceased. The attitudes to abandoned mining sites differ across the Arctic. In some cases they have been perceived as unwanted legacies of problematic pasts, making land reclamation a preferred strategy. In other cases abandoned mines and associated infrastructures have been re-defined as cultural heritage and have become anchor points for local identities and a resource for new economies. The objective of this paper is to present preliminary results from a research project aiming to explain these differences in order to understand under which circumstances abandoned large-scale resource extraction sites can be turned into resources for new futures in post-industrial Arctic communities. The focus is on the European Arctic, but in a circumpolar and bi-polar comparative perspective. The main questions are: how have different groups of actors interpreted and used physical remains of abandoned resource extraction operations, and why? Which policies are needed to turn abandoned resource extraction sites into resources for constructing new futures in the Arctic? By addressing these questions, the field of industrial heritage studies can make an important contribution to the discussion on sustainable futures in the Arctic.

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\*Intervenant

## **S.7.G — Museums**

# L'écomusée de l'avesnois, entre mémoire industrielle et expérimentation

Eric Fossey \*<sup>1</sup>

<sup>1</sup> écomusée de l'avesnois – écomusée de l'avesnois – France

Association de loi 1901, l'écomusée de l'avesnois est un réseau de 4 musées dont 3 sont labellisés Musée de France : MTVS-musée du textile et de la vie sociale à Fourmies, AMV-atelier-musée du verre à Trélon, MDB-maison du bocage à Sains-du-Nord et MBJ-musée des bois jolis à Felleries. Chacun de ses musées témoigne d'un passé industriel ou artisanal de l'Avesnois, mettant alors en valeur une histoire du travail dans cette région, dans les domaines suivants : textile, bois, verre ou paysage. La particularité de l'écomusée de l'avesnois qui fait aussi sa force est d'être implanté dans des bâtiments patrimoniaux, anciens lieux du travail, permettant une cohérence totale entre le contenant – les bâtiments – et le contenu – les collections.

Né en 1980 de la volonté de quelques habitants souhaitant poursuivre l'aventure industrielle par la reconversion culturelle suite à la désindustrialisation du territoire, l'écomusée de l'avesnois positionne aujourd'hui le travail comme axe scientifique et culturel pour son développement, thématique identitaire et identifiable à forte actualité. L'écomusée de l'avesnois poursuit ainsi la mise en place de programmations tout au long de l'année en cohérence avec cette nouvelle approche thématique : expositions, cycles de conférences-rencontres, programme de projections de films documentaires suivies de débat, actions de médiation à destination de tous les publics et en particulier les publics empêchés, etc. L'ouverture aux formes culturelles et artistiques actuelles est l'occasion pour l'écomusée de questionner la contemporanéité des gestes et métiers encore présents en son sein.

Enfin, l'écomusée de l'avesnois souhaite soulever et participer aux réflexions de fond concernant les écomusées et musées de sociétés par la mise en place d'actions expérimentales permettant de questionner la structure dans son identité : création d'une résidence de création et de recherche, mise en œuvre du projet LeM cellule de réflexion autour des outils numériques et des techniques ou encore Prolétarium, festival de création artistique contemporaine sur la thématique du travail.

Reprisant la définition même de l'écomusée par Georges-Henri Rivière de 1976 tout en l'actualisant, l'écomusée de l'avesnois s'attache à positionner de nouveau, par le biais de ces projets novateurs, le laboratoire comme un des trois principes de base de sa composition aux côtés de conservatoire et d'école. Au travers d'exemples d'actions déjà menées ou en construction et par le biais de cette proposition de communication, l'écomusée de l'avesnois souhaite plus particulièrement témoigner de cet axe nouveau, qui se révèle aussi être une forme de reconstruction, repositionnement, renaissance pour la structure après 30 ans d'existence.

L'écomusée de l'avesnois fait partie de la FEMS-Fédération des écomusées et musées de société

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\*Intervenant

# Le Musée de la Rubanerie cominoise, outil vivant pour la transmission d'un patrimoine industriel textile singulier.

Olivier Clynckemaillie \* <sup>1</sup>

<sup>1</sup> Musée de la Rubanerie cominoise (MRC) – 3, rue des Arts 7780 Comines, Belgique

Il y a plus de 800 ans, une activité textile (d'abord drapière puis rubanière), basée sur la qualité des matières premières et des gestes posés par les tisserands, s'est installée durablement à Comines. Durant le XVIII<sup>e</sup> siècle, le modèle s'est transformé pour devenir, cent ans plus tard, un fleuron industriel rayonnant bien au-delà de ses frontières naturelles. Malgré les vicissitudes de l'histoire puis les crises modernes, des entreprises de pointe perpétuent aujourd'hui encore cet héritage historique, notamment dans le façonnage et la production de rubans de haute technicité. Ouvert en 1985 et reconnu par le Ministère de la Culture de la Fédération Wallonie-Bruxelles de Belgique depuis 2008, le Musée de la Rubanerie cominoise est une structure associative professionnalisée qui conserve, restaure, étudie et diffuse le patrimoine industriel rubanier dans et autour de Comines (France et Belgique). Pour ce faire, la transmission des savoirs, y compris des gestes et des techniques, le dépouillement et l'étude d'archives comme la collecte de documents et de témoignages oraux liés aux industries textiles locales, servent de base à une médiation axée vers tous les publics, afin de lui apprendre à découvrir et/ou à se réapproprier ce patrimoine singulier souvent méconnu, parfois mal vécu car frappé par les épreuves sociales et économiques de la fin du XX<sup>e</sup> siècle et celles du début du XXI<sup>e</sup>. Des publications thématiques (constituées d'opuscules dédiés au grand public mais aussi d'études scientifiques décortiquant des parties insoupçonnées des collections ou mettant en valeur des traces historiques, ethnologiques et/ou techniques inédites) et des expositions temporaires y tutoient, par des visites vivantes (avec explications et démonstrations délivrées par un guide spécialement formé), une sélection de métiers à tisser, tous en état de fonctionner. La volonté de dialogue, de diffusion et de pérennisation, passe aussi par des collaborations étroites avec les industries rubanières encore en place et avec les membres de leur personnel. Ainsi, les "justes gestes" et certains secrets de fabrication peuvent être compilés, sauvés et enseignés aux générations futures. Par ailleurs, l'intégration de réseaux thématiques, dont le Musée de la Rubanerie est membre fondateur pour la plupart d'entre eux (Club Textile, Homusée, PISTe), permet, en plus d'accroître la visibilité de l'institution, de se positionner comme acteur effectif d'un univers souvent relégué au second plan par le grand public, et de participer par ce biais au développement intellectuel, touristique et économique de tout un bassin. Plus que jamais, le Musée de la Rubanerie cominoise cherche à mettre en connexion le citoyen contemporain et le monde industriel textile régional avec la réalité historique, technologique, économique, urbanistique et humaine d'une activité plusieurs fois centenaire et qui a modelé le territoire des deux Comines tout comme les hommes qui y ont vécu et y vivent aujourd'hui.

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\*Intervenant

# Trente ans au service du patrimoine industriel du centre du Mexique: la protection et la mise en valeur du district minier de Pachuca et Real del Monte

Belem Ovieda \* 1

<sup>1</sup> Archivo Histórico y Museo de Minería, A.C. – Mexique

La Compagnie minière de Real del Monte et Pachuca a été créée en 1824, à partir des propriétés minières de la famille Romero de Terreros qui en avaient commencé la mise en valeur au XVIII<sup>e</sup> siècle. Depuis lors, l'entreprise a changé de mains mais n'a cessé de travailler jusqu'à aujourd'hui.

Durant près de 300 ans, le district minier de Pachuca et Real del Monte, au Mexique central, a été le domaine d'application de la technologie la plus avancée, importée majoritairement d'Angleterre, Allemagne, Belgique, Suisse et Etats-Unis. La longue durée du travail de la mine est à l'origine d'une culture minière toujours tangible et d'un riche patrimoine constitué autour des archives historiques d'entreprise(1727-2002). Celles-ci ont été la pierre angulaire d'un projet global de sauvetage et de mise en valeur d'u ensemble qui comprend, aux côtés des archives écrites et iconographiques, les machines, l'histoire orale mais aussi les traditions et la gastronomie.

Ce travail est mené à terme, depuis 1987, par une association civile qui comprend actuellement les archives proprement dites, quatre musées, des galeries d'exposition temporaire et un théâtre.

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\*Intervenant

## POSTER Session 1

# Sampaio Ferreira & Co. factory in river Ave watershed, at Portugal: an Industrial Archaeology study.

Guilherme Pozzer \* <sup>1</sup>

<sup>1</sup> Universidade do Minho – Largo do Paço 4704-553 Braga, Portugal

The research proposal is the study of Factory Sampaio Ferreira & Cia in Riva d'Ave in Vila Nova de Famalicão municipality, built in the late nineteenth century, in order to interpret it as material culture in itself and the insertion in the urban area of this industrial heritage. In addition, through the development of a research in the field of industrial archeology, we seek to promote intellectual and academic integration between the Brazilian and Portuguese practices in the preservation, reuse and recovery of Industrial Heritage.

Riba d'Ave, in the municipality of Vila Nova de Famalicão, was an important textile manufacturing center in the Ave River watershed, in which the installation of factories had great importance to its modernization and urbanization. However, the industry in the Ave watershed began to develop only during the last two decades of the nineteenth century. It is in this context that the study object of this research proposal, the Factory Sampaio, Ferreira & Co., was founded by Narciso Ferreira on the left side of the river Ave, which was to become the first factory of its "industrial empire."

The installation of Sampaio Ferreira & Cia was of great importance in the industrialization of the Ave watershed for several reasons: it was the first major industrial unit in the municipality of Vila Nova de Famalicão (started with 200 knitting machines in 1910 had 846 employees), designed as "complete", that is to say, provided with all the production stages of tissue, and can be said that start the industrial pole of Riba de Ave, from the point of view of modern organization.

Nowadays, the industrial complex Sampaio Factory, Ferreira & Co., which served as a boost for economic, urban and social development of the region, is absolutely abandoned. In 2012, when completed 150 years since the birth of Narciso Ferreira, intensified public measures to reuse the space of the old factories and safeguard its industrial heritage, but they are still insufficient to understand how the inclusion of this facility changed the region's landscape and introduced new social relations in daily life and work, how did it allow the intensification of urbanization and improvement in city services, having completely changed the pace of living in the city. These and other issues, mentioned above, are among the research objectives.

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\*Intervenant

# Matera's Mulino Alvino, recovery and refurbishment

Anna Mangiatordi \* 1

<sup>1</sup> ANNA MANGIATORDI – Via Marmolada, 50/B - 70022 - Altamura (Ba), Italie

The Mulino Alvino is located at the north entrance of Matera City, a degeadeted area nearby the Archeological Park of the Rupestrian Churches of Matera. It is the last historic witness of an industrial sector, that of weath and pasta, which has characterized the economy of Matera by the end of the 19th century and the beginning of the 20th.

The building was a steam powered factory with mills to produce pasta and bread. It was equipped with roller mills by "Buhler brothers", becoming the first modern mill of the city.

Thanks to it Matera became one of the best pasta production center in south Italy. The pasta was exported in the whole Apulia and Locania. Its fame went far beyond the national borders: ancient registers tell us about the exportation of pasta in Egypt and France. It was present at the Paris Expo in 1900, where it won the Grand Honour Award and many other onoreficiencies in Marseille in 1899, in Rome in 1901, with a gold medal and many other cities.

The reflection on this theme starts from the recognition of the building's historic, architec-tonic and cultural value. According to the current regulations and urbanistic instruments, a new destination of use, compatible with the original historic character of the building, has been given. It aimes at the reintegration of the edifice inside the city with a new social function, mobility and accessability to the area.

Its position at the entrance of the city, the proximity to the regional park and the direct link to infrastructures both regional and national, offer a wide catchment area, using it as multifunctional center in order to promote the local agricultural and food sector and as park's visitors center.

The project provides a technological and structural requalification of the edifice of industrial archeology. The objectives at which the project aims can be summarized in three words: preservation, sustainability and energetic efficiency. The usage of light technologies, dry and reversible, hight energetic efficiency solutions, recyclable materials and ecocompatibles, has been privileged. All the operations have been done with an eye towards compatibility and respect of what already exists.

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\*Intervenant

# The transformation of industrial heritage areas. Planning for the Chania's industrial areas.

Despina Dimelli \* 1

<sup>1</sup> School of Architecture (arch.tuc.gr) – Kounoupidiana Campus, Chania, Crete, Grèce

The paper examines the Greek spatial policy, practices and the outcome of the urban regeneration in Greek cities, with a special focus on the industrial heritage of the city of Chania. Due to its architectural, social, historical and technological significance, industrial heritage is a recognised factor of the identity of many cities today and is often associated with interests of the local community. As a former capital of Crete and one of the most developed cities during the past century Chania has a number of unused industrial buildings and a lot of potential for developing on this base. Today, as the experience of the Greek cities shows, urban regeneration projects mostly focus on the promotion of commercial facilities and attempt to attract primarily tourists, students etc. to the city. So, in many cases urban regeneration of urban areas and more particularly industrial heritage areas, causes effects such as gentrification, lack of public facilities and the local community involvement and the loss of the sense of place. Some examples of alternative projects of European cases will be examined in order to investigate good practices that can be adopted after their adjustment in the examined area's particularities. A holistic and integral approach, is recognised as a possible direction for the area's future development focusing on its conservation and adjustment in the new urban needs of the city's citizens.

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\*Intervenant

# **La manufacture des tabacs de la Belle de Mai à Marseille, 25 ans après sa fermeture : réflexions autour de sa reconversion à travers le prisme d'une machine à confectionner les cigarettes.**

Katia Baslé \* 1

<sup>1</sup> Cicrp (centre interrégional de conservation restauration du patrimoine) – MIN CULTURE, Ministère de la Culture et de la Communication – 21 rue guibal 13003 Marseille, France

En 2013, dans le cadre de la préparation d'une journée intitulée “ découvrir ou redécouvrir la manufacture des tabacs – matinée usagers-informés ” de “ l'îlot du patrimoine ” issu de la reconversion d'une partie de la manufacture des tabacs située dans le quartier de la Belle de Mai à Marseille et destinée aux personnels des Archives municipales, du Cicrp (centre interdisciplinaire de conservation et restauration du patrimoine), de l'Ina méditerranée (institut national de l'audiovisuel), de la Cpm (conservation du patrimoine des musées) et du Fcac (fonds communal d'art contemporain), une recherche fût entreprise autour de la révélation de l'existence d'une machine à confectionner les cigarettes présente dans le pôle média. Bien que la date de sa présence avérée ai été récente (2006), une véritable enquête était à mener ; en effet la machine était introuvable. De fait elle avait été reléguée, après un bref temps d'exposition, dans la chaufferie du pôle media. De nombreuses questions se firent jour : d'où venait elle ? Quel type de machine était ce ? Quelles avaient été les motivations de sa présence et de sa “ disparition ” ? L'industrie qui se caractérise comme un ensemble de bâtis et de machines lors de sa création peut-elle survivre dans la mémoire identitaire du lieu en l'absence de connaissances historiques et techniques ? Quelles sont les approches en matière de conservation et de valorisation par les différents acteurs (monuments historiques, musées, collectivités territoriales, associations) ? Quelles sont aussi les différentes contraintes techniques que peuvent poser certaines machines (présence de plomb, d'amiante...) et qu'induisent elles de nos jours ? Comment actuellement concilier connaissances des savoir faire et valorisation de ces derniers à travers un ou des objets qui décontextualisés peuvent apparaître comme vidés de leur sens ? Comment envisager leur devenir patrimonial, “ en tant qu'héritage du passé mais aussi en tant que construction du présent ( Nora (Pierre) in Isabelle Balsamo, “ Tri, Sélection, Conservation ; Quel patrimoine pour l'avenir ? ” Actes de la table ronde organisée par l'Ecole nationale du patrimoine, les 23,24 et 25 juin 1999, Monum, Editions du patrimoine, Paris, 2001, p 17.) ” et comment les conjuguer avec “ le nouvel âge d'or de l'hygiène sociale (Parisi (Roberto) “ L'usine, l'espace et la ville à Naples dans une perspective historique : installation, réemploi, délocalisation ” in “ Mutations et reconversions des espaces de production (XVIIIe-XXIe siècle) ”, Rives méditerranéennes, numéro 38, 2011, Aix en Provence, op.cit., p 37) ”, à savoir le développement durable ?

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\*Intervenant

## S.8.A — Images of Industry

# Photography and Henry Ford's River Rouge Plant: A love affair across time

Howard Bossen \* 1

<sup>1</sup> Michigan State University (USA) – États-Unis

The steel industry was first linked to photography in the mid-1840s through a daguerreotype portrait of the German industrialist Alfred Krupp. Ever since that time photographers have been fascinated with it. They have made portraits, explored steel mills as architecture, landscape and as places of work. As the steel industry and photography evolved over time, photographers also explored the lives and communities of steel workers and products made with steel—from giant bridges to small stainless steel tools. They have looked at the effects of industrialization, deindustrialization and more recently the transformation of contaminated brownfield sites into new more environmentally friendly sites.

One industrial site in particular, Henry Ford's River Rouge plant in Dearborn, Michigan, has attracted world-class photographic artists for more than 80 years. Some photographers, such as Charles Sheeler, were hired by Ford to do a project in the plant. Others, Walker Evans for example, came on assignment for Fortune magazine Some, such as Brad Temkin, came on his own.

This paper explores the work of seven photographers who have photographed the River Rouge beginning with E. O. Hoppé's visit in 1926 through Temkin's in 2011. The photographs made by Hoppé, Sheeler, Bourke-White, Walker Evans, Robert Frank, Michael Kenna and Temkin create a unique visual history of one of the most important industrial sites of the 20th century from its early days to its reinvention in the early 21st century.

By studying these photographers' images of the River Rouge plant, the public today can come to an understanding of the long arc of industrial and photographic history. These photographs enable a visual exploration of the transition from a 20th century vertically integrated steel and auto manufacturing complex into one that prides itself on environmental responsibility through projects such as its giant green roof garden. In addition, an analysis of the photographs reveals how these photographers were influenced by the ideas of Modernism, Precisionism, social documentary thought, industrialization, deindustrialization and the environment. And how they passed on their interpretations of industry to the public.

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\*Intervenant

# Presentation, Re-presentation, Transformation: Public Art as a Medium of Transmission for Mining Heritage

Anne Thomas-Cumming \*<sup>1</sup>

<sup>1</sup> University of Dundee – University of Dundee, Nethergate Dundee DD1 4HN, Royaume-Uni

Since the last quarter of the twentieth century, the commissioning and installation of public artworks in the UK has reached an unprecedented level, outstripping even the Victorian enthusiasm for adorning public spaces with statuary. Whilst the introduction of public art is a tenet of contemporary concepts of high quality public realm, supported by policy at both national and local government levels, it has been particularly associated with the built environmental reorganisation of historic industrial areas now deemed to be in need of socio-economic regeneration and physical reformation. Within urban regeneration practice, public art is widely credited with the ability to both reaffirm and reinforce community identity, and the reflection of local community heritage is explicitly stated within either commissioning briefs or the declared intentions of the commissioned artist.

In classical antiquity, the art of memory was perceived as a visual art, in which images prompt the recall of events and emotions. This concept persists, underpinning contemporary practice in the deliberate retention of historical structural elements within a changing built environment. Such visible evidence of the past in the present is regarded as the foundation for local identity and distinctiveness. For many traditional industrial settlements, however, the demise of industry is rapidly followed by the removal of the majority of historic structures, despite the value placed on the expression of local ‘heritage’ as a necessary element in strategies for regeneration. This is especially true of mining settlements in the UK.

In many former industrial settlements, therefore, authentic sites are being substituted by new public artworks claiming to represent local cultural heritage – a variant on the compensation thesis posited by Ritter. As mining settlements are in whole or part abandoned, reshaped and re-colonised, it can be that the only tangible reminders of a once collective experience are those public artworks which claim to record and reflect the mining past.

Amongst the questions prompted by this scenario are those of the extent to which such artworks present an internal or external interpretation of mining communities, a record of the past or a reductive heritage discourse. Frequently employing an iconography familiar to past generations, how effectively can they communicate with generations increasingly removed from industrial experience? This paper examines extant representations of the miner, mining activity and mining communities as an archaeological assemblage, exploring their role as a medium of mediation between past, present and future.

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\*Intervenant

# Photography and Visual Culture of the Industry and Its Workers

Elisa Pomari \*† 1

<sup>1</sup> Universidade Estadual de Campinas (UNICAMP) – Cidade Universitária "Zeferino Vaz", Distrito de Barão Geraldo 13083-970 - Campinas - SP, Brésil

The photograph image has worked as a metalanguage of the industrialization in the 19th century: it was made possible by scientific advance, reproducible on a large scale and with greater speed. It industrializes the visual knowledge of the world and makes possible its cataloguing in quickly and intense manner. Sistematically established in Brazil before the industrialization, the photographic image becomes a way of documentation throughout the process of industrialization. Through the analysis of the album F. Matarazzo & Cia Industriaes (1904-1906), this work intends to point out some possibilities of analysis of the forms of photographic representation of the manufacturing space and its equipments, as well as the importance that the employees themselves implied to the photographs by representing their own intentions and creation inside such representations. The album arose from an initiative of Francisco Matarazzo, an Italian immigrant who became in Brazil one of the biggest industrialists of Latin America in the beginning of the 20th century, to create a photographic catalogue of his factories. Nowadays, the album is part of the documentation of the Department of Agriculture, Trade and Public Works of the State of São Paulo and currently composes a homonym collection in the Photographic Archives of the Memory Center at Unicamp., along with of the collection of the Department. The album is composed by 100 photos of the fallowing factories: Moinho Matarazzo, Fiação e Tecelagem Mariangela, Fabrica de Óleo Sol Levante, Fábrica de Banha A Paulista and Fábrica de Phosphoros Sol Levante. There are also photographs of offices, warehouses and the fleet of carts used for the carriage of goods. A portrait of Francisco Matarazzo opens the album. The photographs have subtitles in Portuguese, Italian, French and English. In addition, the album is accompanied by an explanatory bilingual booklet (English/Italian), in which there is a description of each of the factories, with precise details of its construction, and especially the operation of machines, its quantity, size, capacity, power, energy consumption, average production of the plant and the number of employees. The album is a photographic visit into the factories of F. Matarazzo & Cia.

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\*Intervenant

†Auteur correspondant: pomari.elisa@gmail.com

## **S.8.B — Workers' Housing**

# Vila Ferroviária de Paranapiacaba: reflexões sobre uma experiência de gestão sustentável da paisagem cultural

Vanessa Figueiredo \* 1,2

<sup>1</sup> Pontifícia Universidade Católica de Campinas - Faculdade de Arquitetura e Urbanismo (FAU PUCC)  
– Campinas-SP. <http://www.puc-campinas.edu.br/graduacao/>, Brésil

<sup>2</sup> The International Committee for The Canservation of the Industrial Heritage Brasil (TICCIH Brasil)  
– <http://www.patrimonioindustrial.org.br/>, Brésil

A harmonic relationship between cultural heritage preservation and socioeconomic development is a present challenge in the management of historic sites. The article discusses the relationship between classification and urbanistic instruments, such as the master plan and the special zones. The analysis focuses the recent experience of legislation entitled Special Area of Interest of the Paranapiacaba' s Heritage, in Santo André, Brazil. This instrument, sanctioned in 2007, articulates territorial planning with sectoral policies of preservation, environmental conservation and socioeconomic and urban development within a perspective of integrated and participatory management. The cultural landscape is considered not only an asset to be preserved for upcoming generations, but also a resource for the sustainable development of their communities.

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\*Intervenant

# Pour un inventaire des villes-usines européennes par le paysage

Simon Edelblutte \* <sup>1</sup>

<sup>1</sup> Université de Lorraine – Université de Lorraine, LOTERR – 23, boulevard Albert Ier BP 13397 54015 NANCY Cedex FRANCE, France

La ville-usine est définie comme une ville entièrement ou presque entièrement créée par un ou plusieurs établissements industriels. Équivalente de la company-town ou de la mill-town anglo-saxonne, l'expression se différencie de l'expression plus large "ville industrielle" qui peut désigner toute ville classique ayant accueilli des activités industrielles durant les Révolutions industrielles. Si la ville-usine est typique de la période fordiste et paternaliste en Europe occidentale, elle s'est répandue également Europe centrale et orientale, notamment à l'époque communiste et de façon encore plus systématique. Depuis la crise du fordisme et l'apparition de nouveaux paradigmes économiques liés à la mondialisation, la ville-usine n'est presque plus jamais fonctionnelle, notamment en Europe de l'Ouest (même lorsque l'usine fonctionne encore, elle s'est désengagée du système paternaliste). Il subsiste néanmoins d'importants héritages de ces villes-usines dans le palimpseste paysager qui conserve les traces des organisations spatiales anciennes. À la fin du XXème siècle, ces héritages ont pu entrer dans la catégorie patrimoniale mais souvent en ordre dispersé et de façon incomplète. La mise en patrimoine du paysage entier de la ville-usine existe cependant, mais dans des cas plus isolés, dont les plus emblématiques sont les villes-usines classées patrimoine mondial par l'UNESCO (Saltaire, Crespi d'Adda...). Or, pour étudier ces villes-usines héritées, l'approche par le paysage est particulièrement pertinente car elle permet d'appréhender la ville-usine comme un système où toutes les composantes, autour de l'usine elle-même, sont liées et fonctionnent autour d'un objectif productif commun. Usine, entrepôts, barrages et canaux d'alimentation, stockage et traitement des déchets, cités ouvrières, bâtiments économiques et sociaux (coopératives, écoles...) infrastructures de transport diverses, créent un paysage alors nouveau, devenu hérité aujourd'hui, mais qui reste un élément identitaire fort pour les populations locales, tant l'industrie a marqué les mentalités et imprégné la culture. Fondé sur des travaux préliminaires sur le paysage industriel et la ville-usine à l'échelle européenne, ce travail se veut un premier jalon pour la réalisation d'un inventaire des villes-usines du continent européen. Il identifiera les critères nécessaires à une définition précise de la ville-usine, autour d'éléments paysagers mais aussi démographiques, historiques et politiques liée à leur genèse. Aboutissant ainsi à une typologie des diverses formes de villes-usines, de la plus spontanée, souvent aux origines proto-industrielle et lentement constituée autour de plusieurs petites usines, à la plus organisée, la plus planifiée, construite plus récemment autour de grosses usines, principalement en Europe de l'Est, ce travail trouve également son utilité dans le cadre des thématiques du renouveau urbain, autour du paradigme de la reconstruction de la ville sur la ville. Les friches de toutes sortes laissent en effet beaucoup de place dans ces villes rétrécissantes (*shrinking cities*) que sont devenues les villes-usines, bien différentes des villes classiques ayant accueilli de l'industrie.

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\*Intervenant

# The Panzano Village (Monfalcone, Italy, 1908-1927)

Edino Valcovich <sup>1,2</sup>, Carlo Stival \* <sup>2</sup>, Diana Barillari <sup>2</sup>, Raul Berto <sup>2</sup>,  
Giovanni Cechet <sup>2</sup>

<sup>1</sup> Associazione Italiana per il Patrimonio Archeologico Industriale (AIPAI) – Italie

<sup>2</sup> Trieste University, Department of Engineering Architecture – Italie

In 1907 the Cosulich brothers' - italian Losinj shipowners - Trieste Shipyard started his activity in the Gulf of Panzano in Monfalcone. During the development of shipyard's productive activities, in 1908 the construction of different typology houses for workers started, very close to the industrial area. At Association of Public Utility Construction establishment in 1913, which will be directed by engineer Dante Fornasir until 1939 - direct emanation of the shipyard - a first construction plan begins; it will reach the number of 46 buildings in 1915.

During the First World War, damage to production facilities and civil buildings was huge. With the resumption of activities in 1920s and the contextual passage of Isonzo river territory of Trieste to the Kingdom of Italy, reconstruction work plan takes shape, and precisely the realization of an effective neighborhood under design responsibility of eng. Dante Fornasir. This plan will bring, at the opening date in 1927, to the creation of 193 buildings totaling 900 accommodations and a large variety of community services.

The Village has garden-city characters and keeps precise references to some urban models that characterized the utopias of 'worker paternalism' of the second half of the nineteenth century. The Village is equipped with necessary network infrastructure (roads, water supply, street lighting, sewerage, etc..) and an unusual - for the period - series of shared services such as a theater, public baths, shops, a stadium for football and athletics, tennis courts, two major hotels, one for unmarried workers, one for unmarried employees.

The Village was divided into two major areas: a part referring to workers' housing, the second consisting of the buildings for employees and managers. The building typologies are different for size and architectural quality, and were used in relation to the roles that users covered in the productive structure. Every single housing, even the smallest, is provided with a garden; the interesting architectural buildings' quality refers to the use of different architectural styles and can be substantially related to the characteristics of historicism and eclecticism. Much attention has been paid to the works of street furniture such as railings of the gardens, the stakes of public lighting, fountains of individual gardens, the entrance doors of the villas, the decoration of housing.

Are also carried out, in addition to homes, a significant number of services such as theater with 480 seats, public toilets, the shops, the stadium for football and athletics, accommodation for the workers and employees unmarried, a farm for agricultural products, the establishment of baths, beach, etc..

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\*Intervenant

## **S.8.C — Educating and Sharing: New Ways of Teaching - Mediation**

# Youth Engagement and City Building

Desiree Valadares \* <sup>1</sup>

<sup>1</sup> McGill University - School of Architecture – School of Architecture McGill University  
Macdonald-Harrington Building 815 Sherbrooke Street West Montreal, Quebec H3A 0C2 Canada,  
Canada

It is widely accepted that the best way to preserve industrial heritage is by educating and involving youth. As a practicing landscape architect and a part-time architectural educator, I wanted to challenge the assumption that industrial heritage landscapes and city building have the potential to appeal to Toronto's youth. Most importantly, that children could gain civic literacy through an understanding of built heritage and become active participants in their cities' planning processes.

My presentation will focus on my involvement as an instructor for 'Designing for the Green City' offered by the Art Gallery of Ontario in July and August 2014. My goal was to nurture meaningful participation by enlisting the energy, the ideas and hopes of young people ages eight to thirteen. During the span of one month, Toronto became our laboratory and our playground. Our studio grew impressively chaotic as we re-envisioned sites of debated development and gained confidence in voicing opinions and asking questions. My presentation will reveal our design process and conclude with strategies to involve youth through both, traditional and digital media.

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\*Intervenant

# the young and the active: a road to push heritage into the future

Federico Ottolenghi \* <sup>1</sup>, Cristina Meneguzzo \* † <sup>1</sup>

<sup>1</sup> Municipality of Sesto San Giovanni – Italie

Sesto San Giovanni Municipality is committed, together with other institutions and associations, to achieving the nomination of the town industrial heritage on the Unesco World Heritage List. This of course involves many different activities. What we want to focus on in this paper is: the set of actions aimed at building and fostering awareness of the industrial heritage and sharing a community feeling about it. An evaluation of the effectiveness of these actions. An analysis of the approach, the themes, and the methods involved, and their effects on the awareness, cohesion, and pride of the community. As for section i) and ii), we will provide a short description of the main projects related to the goals mentioned above: 2013: "16 non(n)i per l'Unesco" ; 2013/2014 "Sestopedia" (local version of Wikipedia) ; 2013/2015 "Jeco guides" for the North Milan area ; 2014/2015: "Giri di vita" ; 2014/2015: "Destinazione Sesto". We will also provide evidence of the results as far as they are available at the time the paper is delivered. As for section iii), we intend to explain and comment on the approach and the actions characterizing the projects:

- the transmission from and relations between grandparents and grandchildren ; the transmission from and relations between Italian former workers and first- or second-generation immigrant children ; the children's participation in guided workshops with different generations ; the making of small machineries related to traditional industrial production.

The guided tours are based on a double dimension approach: the first one refers to the landscape along the space line: hikes, bus tours or bike tours run through industrial buildings, workers' houses, parks and other facilities in order to connect them together. The second one refers to the timeline, intending to connect past, present and future (the ongoing urban transformation), thanks to the different actors involved (grandparents-former workers, children, administration officials, active citizens' groups and associations). The expected results are widespread awareness and participation, activation of the local community, intergenerational and intercultural transmission and cohesion, collective pride, new players such as student guides for their peers and immigrant guides for their national communities, transmission of intangible cultural heritage.

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\*Intervenant

†Auteur correspondant: c.meneguzzo@sestosg.net

## **S.8.D — European Perspectives**

# Conservation et mise en valeur du patrimoine du lin en Europe

Adriaan Linters \* <sup>1</sup>, Lucie Maluta \* <sup>†</sup>

<sup>1</sup> Vlaamse Vereniging vior Industriële Archeologie vzw (VVIA) – Postbus 30 Postkantoor Stationswijk  
B-9000 Gent, Belgique

Interpreting and presenting the flax fibre heritage in Europe

Flax is the most common vegetal textile fibre in Atlantic Europe, the Baltics, Russia,... while as well in these and in other regions textile fibres are also produced from hemp, nettles and broom with very similar principles: retting, breaking, scutching and hackling. There is very little difference all over Europe as concerns the processes, tools and machinery to produce these fibres. While there are many studies existing on the spinning and weaving of flax, till recently there was little interest in the preceding process, the preparation of the fibres – separating them from the stalk. This process was generally situated outside towns and villages, because of the bad smell during the retting.

Recently "flax heritage" suddenly and fastly was turned into a touristical product, not only in Flanders but also in many other regions. Sites and buildings are preserved, interpreted, opened to the public.

In Flanders and in the North of France a lot of flax sites (retteries, scutching mills - all small enterprises) are spread over the countryside in or near the Leie-valley - once the European centre of this flax trade and flax fibre industry.

The paper will deal with the social, economic and technological relationships between the flax regions in Europe. What stories can be told, what are common issues, what can be learnt by comparing traditions and technologies? What kind of co-operation, exchange of information and experiences is possible?

What is and what can be the role of volunteers, private owners and public authorities in interpreting and presenting the flax story in Atlantic Europe, between Portugal and the Baltic/Scandinavian countries?

The paper will be presented jointly by Adriaan Linters (Belgium) and Lucie Maluta (France)

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\*Intervenant

<sup>†</sup>Auteur correspondant: lucie.maluta@sfr.fr

# What is ERIH- The European Route of Industrial Heritage?

Christiane Baum<sup>1</sup>, Hildebrand De Boer\*<sup>2</sup>, Rainer Klenner †<sup>3</sup>

<sup>1</sup> European Route of Industrial Heritage (ERIH) – Robert-Bosch-Strasse 2 40668 Meerbusch, Allemagne

<sup>2</sup> European Route of Industrial Heritage (ERIH) – Allemagne

<sup>3</sup> European Route of Industrial Heritage (ERIH) – Allemagne

The ERIH network was established to encourage the appreciation, understanding, protection and promotion of our common European history and to facilitate this by the exchange of experience and by joint marketing. Across Europe, many of the “cathedrals of work” have become major attractions of cultural tourism attracting millions of visitors a year. This demonstrates that industrial heritage tourism is no longer a niche market but has grown into a major economic sector. The maintenance and interpretation of former industrial sites is often a challenge which needs innovative solutions. They need not be regarded as a burden because experience has shown that such sites can often be transformed into attractive and lively areas which make a positive contribution to our cities and communities. Since the 1960s institutions and organizations all over Europe have become increasingly concerned with the listing and conservation of the industrial heritage, which is often followed by the complex challenges associated with adapting the structures for sustainable new uses. However by the end of the 20th century there was a growing interest in industrial heritage and its importance for community identity and pride. Now industrial heritage tourism is recognized as a significant and growing part of the ‘cultural tourism’ market. Some of the most significant and exciting of the former industrial sites have been established as museums and together with associated cultural and leisure activities and events have raised public awareness and stimulated economic growth and community well-being. The ERIH project was initiated in 1999 funded by the EU with the objective of fostering this growing awareness of our shared European industrial heritage and to take it from what was perceived as a limited niche market to a mainstream cultural and tourism product. The successful “Route der Industriekultur” developed in the 1990’s in the Ruhr Area (DE) was the inspiration for ERIH both as a basis for a structured network for tourism and as an example of how industrial heritage could act as a major driver for planning and community regeneration. \_

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\*Auteur correspondant: hildebranddeboer@hotmail.com

†Intervenant

## S.8.E — ‘New Territories of Art’

# La Friche la Belle de Mai et le Tramway : politiques et trajectoires de reconversion en lieu de création contemporaine

Marta Rosenquist \*<sup>1</sup>

<sup>1</sup> Aix-Marseille Université - UFR Arts, Lettres, Langues et Sciences Humaines (AMU UFR ALLSH) – Aix Marseille Université – 29, avenue Robert Schuman - 13621 Aix-en-Provence cedex 1, France

La Friche la Belle de Mai, d'une superficie de 45.000 m<sup>2</sup>, se situe au cœur de l'ancienne Manufacture des tabacs de Marseille implantée dans le quartier depuis 1868. Désignée en 1992 comme lieu de culture multidisciplinaire, elle incorporait le théâtre, la danse, la musique expérimentale, et les arts visuels. Dans le cadre de Marseille-Provence Capitale Européenne de la Culture 2013, le site a connu une transformation spatiale fulgurante.

L'actuel Tramway provient, quant à lui, du Coplawhill Car Works. Datant de 1893, le bâtiment était le principal terminus, le dépôt et usine du Tramway de la ville de Glasgow. A la suite de la disparition des tramways vers 1960, le lieu hébergea le Museum of Transport jusqu'au 1986. Le spectacle Mahabharata de Peter Brook, qui se déroula dans l'immense halle de l'ancien dépôt du Tramway, mis en perspective pour la municipalité l'intérêt d'un usage culturel du site et l'évènement Glasgow Capitale Européenne de la Culture 1990 permit d'obtenir les subventions nécessaires pour préserver le site.

Ces deux lieux de création contemporaine sont considérés comme des vitrines culturelles de renommée internationale malgré leurs situations urbaines excentrées. La vocation culturelle de chaque site commença par des activités du domaine de spectacle, et les arts visuels ont souvent reçu une importance secondaire. Cependant, depuis 2013, une nouvelle galerie de dimension monumentale qui survole la voie ferrée a été ajoutée en haut des anciens magasins de la manufacture. Le Tramway, quant à lui, a été choisi comme lieu du prestigieux Turner Prize 2015. Le Tramway s'ouvre à son quartier, notamment à travers les Hidden Gardens, où la cheminée en brique était préservée ; la Friche, en revanche, semble résolument tourner le dos à la Belle de Mai.

Qu'est-ce que l'évènement Capitale Européenne de la Culture aura apporté au Tramway et à la Friche la Belle de Mai ? Quels facteurs déterminent qu'un site industriel reconvertis en lieu culturel s'ouvre sur son quartier ? Y a-t-il une place pour la mémoire industrielle ? A partir de notre recherche de thèse, qui incorpore des entretiens d'architectes, acteurs culturels, artistes, médiateurs d'art, hommes politiques, et historiens, nous souhaitons explorer ces questions actuelles à travers les cas de la Friche la Belle de Mai et du Tramway. Ainsi, nous tenterons de mieux saisir les forces et politiques en œuvre pour les nouveaux territoires de l'art.

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\*Intervenant

# The conservation and reuse of Cape Town's grain elevator as the Museum of Modern Art for Africa

David Worth \* 1

<sup>1</sup> University of Cape Town (UCT) – Private Bag X73, Rondebosch 7701, Afrique du Sud

Cape Town's 1 9 2 4 concrete grain elevator is being transformed into the Zeitz Museum of Modern Art Africa. This paper demonstrates a method by which, even before closure, dereliction, and any proposals for demolition or reuse, a proactive approach to identifying and articulating the cultural significance of an industrial site based on material and archival evidence, can contribute to the retention of that significance. It also shows that an informed understanding of past, current and future contexts, enables owners, designers and users to respond appropriately to the cultural significance of the site. The result here is the repurposing of a landmark industrial building, in a way that will demonstrate its original purpose by retaining major elements of original form and fabric.

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\*Intervenant

# Le seau de vapeur - l'expérience sensorielle et affective dans le processus de patrimonialisation

Olivier Muzellec \*<sup>1</sup>, Franck Larere \*

<sup>1</sup> Le Non-Lieu – Le non lieu – France

## LE SEAU DE VAPEUR / THE STEAM BUCKET

- l'expérience sensorielle et affective dans les processus de patrimonialisation / sensorial and emotional experience in the heritage process -

Le Non-Lieu (F) / patrimoine et création artistique / heritage and artistic creation

"Va chercher le seau de vapeur", disait-on au jeune ouvrier de la filature en guise de parcours initiatique. S'ils ne l'ont jamais trouvé, les anciens, qui ont subit l'épreuve, parlent encore avec amusement et émerveillement de cette vaine recherche.

Tenter de contenir, retenir -et par là de faire office de seau- une mémoire présente mais impalpable et qui s'échappe comme la vapeur, voilà bien ce qui unit les chercheurs, les passionnés, les militants.

Dans cette démarche, l'originalité de l'action culturelle n'est-elle pas de mettre en jeu des outils spécifiques s'appuyant sur des mécanismes sensoriels et affectifs ?

La réappropriation ainsi visée, qui seule permet la réactivation des mémoires collectives, n'est-elle pas au coeur des processus de patrimonialisation ?

Nous aborderons successivement :

1) Les entrailles de l'usine : Cavrois-Mahieu à Roubaix

- promenade dans un seau -

2) Présence et poésie industrielles dans les paysages du XXIe s. : les cheminées d'usine

- vous avez-vu des seaux ? -

3) Patrimoine industriel, de l'ignorance à l'envie : l'événement artistique

- quand le seau trouve vapeur -

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\*Intervenant

## S.8.F — Landscapes

# The Study on the Compositional Demarcation of Taiwan's Tsu- Huang- Kun Industrial Culture Landscape

Chengche Chen \*<sup>1</sup>, Hsienhsin Cheng

<sup>1</sup> Nanhua University – Taïwan

The Cultural landscape copes with planning demarcation and maintaining management. One of the key issues in the preservation of cultural landscape is to produce the effective and practical benefit. On the other hand, articulating the content and difference of the elements of landscape composition, and setting specific management policy for detailed demarcation in selected area are comparatively crucial. Since starting the first oil well in 1861, Taiwan's Tsu- Huang- Kun has maintained its operation. Accompanied by surrounding Hakka settlement and natural ecological environment, the area is an industrial heritage with multiple culture significance, and it was designated as official cultural landscape in 2008 and 2010 separately. By systematic investigation and analysis of Tsu- Huang- Kun, the study looking into its compositional characters and preservation criteria, as well as drawing different sections such as oil facility area, oil buildings and surrounding area, cultivated settlement area, national forest area and specific passage area. The investigation toward the complicated composition of industrial heritage has special referential value in clarifying subsequent maintaining job as well as setting and enforcing preservation plan and principle.

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\*Intervenant

# Industrial Lanscape of Llobregat river.

Casanelles Eusebi \* 1

<sup>1</sup> Museu Colonia Vidal (MCV) – Carretera C-16, km.78 Pl. Puríssima, s/n 08692 Puig-reig, Espagne

On a stretch of the River Llobregat there are 18 textile industrial colonies that define a unique industrial landscape. From the 1980s, factories were closing and working villages were loosing population. After some years of optimism when many initiatives were sat upvthey should stop for the country economic crisis. From the Museum Colonia Vidal a Industrial Heritage study of this territory is undertaken to inventory and delimit this disperse heritage as well as to advice the public institutions what actions could be carried out.

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\*Intervenant

# **Sugar refineries and cultural landscapes. Models and routes for the knowledge and valorization of an otherwise soon dying heritage**

Alessandro Massarente \*<sup>1</sup>

<sup>1</sup> Development of Integrated Architectural Design Programs for City, Environment, Landscape.  
Dipartimento di Architettura, Università degli Studi di Ferrara (ArcDes DA) – Via Quartieri 8, 44121  
Ferrara, Italie

The industrial processing of sugar beet was developed in Italy during the second half of the XIXth century, its cultivation spread in particular across the Po (river) Valley and along the Adriatic coast, and it was so specialized to become over the time among the most important worldwide both by extent and quality. They were huge industrial complexes characterized by vast external spaces for raw materials handling and first processing: buildings where products were treated and transformed, endowed with an efficient water pipeline within strictly correlated areas with road and railroad infrastructures, often located at the edge of urban agglomerations, at times plunged into the agrarian landscape. In 1997, the sugar refineries working on the national territory were 23 up to 2005, when the new community organization of the sugar market, as introduced by the EU, brought about for Italy a dramatic reduction in the cultivated surface much over the agreed on 50% surface. As a consequence, in the following year,<sup>13</sup> out of the 19 still working refineries were deactivated. In 2009, the sugar refineries still performing on the national territory have been reduced into the number of 4 (as against the 79 of 1960), whereas the cultivated national territory was fixed at about 60,000 hectares, versus an average of 260,000 hectares over the last twenty years. All this brings about one of the most serious processes of casting off, and often a consequent dissolution, of a cultural landscape consisting in buildings, equipment, infrastructures, archives, know-how. Their size is being still perceptible through the presence on the territory of some deserted complexes which, however, have not yet been altered by town planning, as well as of a scant number of centres for the study of industrial cultures still in activity, of filing sources but also oral sources linked to the memory of sites, production cycles, employed technologies, as conveyed by plant managers, by technicians and workers who have worked in the very sugar refineries up to some decades ago. Its memory is intended to be set off through models and routes capable of reconstructing from one side, the pre-existing characteristics of the buildings and the production cycle determining them, and on the other side, making the present production technologies known in those complexes where they are still working.

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\*Intervenant

## **S.8.G — Industrial Tourism**



# Inventing Industrial Heritage in China: Tourism and Deep History

Andrew Johnston \*<sup>1</sup>

<sup>1</sup> Xian Jiaotong - Liverpool University (XJTLU) – 111 Ren’ai Road, Suzhou, Chine

Exploring the Hubei-Huangshi Industrial Heritage Area in central China can illuminate the nature of the newly emerging field of industrial heritage in China and how understandings of industrial heritage differ between China and the West. This site, part of greater Wuhan city on the south bank of the Yangtze River in Hubei province, is in line for promotion by the nation as a UNESCO World Heritage Site. The Haungshi Industrial Heritage Area is composed of four primary sites: the ancient Tonglushan Copper Mine which dates from 1000 BCE; the integrated steel, iron, coal enterprise of Hanyeping Company from 1890 to 1948 developed with Japanese and European technologies; the Daye Iron Mine open pit, operated from 1890 but with an associated two thousand year use history; and the Huaxin Cement Plant, operated from 1949 to 2005 and based on American kiln technology. This heritage area is unusual from a Western point of view for three important reasons: it covers an extensive historical period from prehistory to the present; it includes a broad range of industries and resources; and it engages with tourism in a different manner from Western industrial heritage sites. For example, the historical and industrial breadth of the site makes an argument that modern industrialization is a continuation of a deeply Chinese history, in keeping with contemporary uses of the past in China more broadly. In addition, the conceptualization of this area as a tourist site includes the creation of a Daniel Libeskind-designed museum and amusement park elements that do not fit in with Western industrial heritage norms. This paper explores these three aspects of the Huangshi Industrial Heritage Area, how they illuminate the contemporary Chinese approach to industrial heritage, and how that approach challenges Western assumptions about the nature of industrial heritage sites.

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\*Intervenant

# ARCHI.PLA – An app for industrial heritage

Ramello Manuel Fernando \*<sup>1</sup>

<sup>1</sup> AIPAI Associazione italiana patrimonio archeologico industriale (AIPAI) – Italie

The aim of the project "Archi.Pla: Architecture and Places from Parish Maps to Territorial Brand" was to identify new strategies for the enhancement of cultural landscapes, starting from the research carried out by the communities on their own territories, where there was the need to enhance and promote that areas to new users.

"The issue of heritage (or, rather, of cultural memory) now requires, however, a paradigm shift. The "putting in memory" of a place or a group was at the same time directed by and to the same subjects, which were the first and legitimate protagonists. We have been asking ourselves a lot about those who dwell the ecomuseums, about people who are insiders of the cultural landscapes, while little we reasoned on those coming from outside: the users, the tourists (more or less educated), investors. In a word, the outsiders, those we called travelers. All of this means of course starting to think about traditional forms of construction of the image of a place directed to a stranger or a traveler, such as paper, a guide or a story. It also means understanding how much and how new technologies can interpret, increase or surpass the old methodological tools: we surveyed and cataloged thousands of items and, now, we have in our toolbox search engines which are becoming even more sophisticated".

From these premises, it rose the idea to work on a research product allowing a wider audience an easy use of the collected data.

Archi.Pla, created by the Turin Polytechnic, is an app that represents one of the final results of the research project. The app presents itself as a collection of case studies related to each other according to their belonging to the industrial heritage in the territory between Turin and Casale Monferrato along the river Po. Industrial heritage assets belong to different categories in a historical context included between the beginning of the XIXth and the middle of the XXth century.

Initially, the process of analysis was carried on putting up a map of the previously studied industrial heritage assets and trying to create accurate connections between them. The result of this operation were three routes (the cement production around Casale Monferrato, the agrarian capitalism near Settimo Torinese and the of water lands in the countryside of Vercelli) that can be enjoyed together or separately.

The Archi.Pla research, funded by the Piedmont Region through European Structural Funds Programme "Human Sciences", involved a large group of professors belonging to different departments of the Polytechnic of Turin. Coordinated by Prof. Trisciuglio of DIST, the project was completed in December 2013 and in addition to the app led to the publication of scientific articles and volumes.

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\*Intervenant

S.8.H — UNESCO / ICOMOS /  
TICCIH

# Maximising the Benefits of an industrial World Heritage nomination: The Forth Bridge

Miles Oglethorpe \* <sup>1</sup>

<sup>1</sup> Historic Scotland – Longmore House Salisbury Place Edinburgh Scotland EH9 1SH, Royaume-Uni

In January 2014, the UK Government submitted a nomination dossier to UNESCO in support of the Forth Bridge being included on the World Heritage List. The dossier contained two components, the Nomination Document itself, and a 'Management Plan'. The Plan describes how the nominated property is to be managed and conserved in the future, but it also seeks to examine ways in which partners and stakeholders can work together to maximise the benefits of potential inscription. This includes anticipating and controlling the potential impact on the adjacent local communities, maximising educational potential, and promoting business opportunities. However, most important has been the potential for increased tourism in the area, and the potential provision of access to the property itself, which is a significant challenge because it remains a busy operating railway bridge.

This paper will, in particular, focus on the work of the 'Forth Bridges Forum', the umbrella organisation that has prepared the World Heritage nomination, and the 'Partnership Management Agreement' that has been drawn up by the key partners to oversee the management the property. It will also cover issues such as interpretation and signage, local infrastructure, and education and skills. However, most attention will be paid to issues relating to virtual and physical access, especially in relation to 3D laser scanning and modelling.

A major aim has also been that the extensive work done in support of the nomination can be used to promote industrial heritage more generally. The Forth Bridge is an international engineering icon, and as such it is an inspiring structure. The belief is that by promoting it on the international stage, more people across the world will take an interest in industrial heritage, and in the people, processes and technologies that have combined to create our world.

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\*Intervenant

# Industrial World Heritage, our moment is now! Global and local contexts in industrial World Heritage and the future for TICCIH.

Fleetwood David \* , Miles Oglethorpe \* † <sup>1</sup>, Watson Mark \*

<sup>2</sup>, Leonor Medeiros \*

<sup>3</sup>, Sandved David \*

, Elisabeth Bjorsvik \*

, Per Morten Ekerhovd \*

<sup>1</sup> Historic Scotland – Longmore House Salisbury Place Edinburgh Scotland EH9 1SH, Royaume-Uni

<sup>2</sup> Historic Scotland (HS [soon to become HES]) – Longmore House, Salisbury Place, Edinburgh EH9 1SH, Royaume-Uni

<sup>3</sup> Michigan Technological University (MTU) – États-Unis

The session will cover the issue of global and local perspectives on World Heritage using the unprecedented level of industrial heritage currently being nominated or undergoing inscription to illustrate four major themes.

- What can industrial heritage do for World Heritage: connecting the worker to a global context?
- Balancing the global and the local context, challenges and successes.
- Accessing the international context
- TICCIH as a major player for industrial world heritage

The session will include speakers representing all of the major industrial world heritage bids and is an exciting opportunity to witness the wealth of industrial heritage globally at a truly exciting moment for our sector.

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\*Intervenant

†Auteur correspondant: Miles.Oglethorpe@scotland.gsi.gov.uk

# **Heritage Recognition of Industrial Site Karabük and Effects of the Unesco Designation on Preservation Process of Karabük**

Meltem özkan Altınöz \*† 1,2

<sup>1</sup> Karabük University (Asist. Prof. Dr.) – Turquie

<sup>2</sup> TICCIH member – Turquie

This paper aims to reveal heritage recognition of traditional Ottoman town Safranbolu, and industrial heritage site Karabük in the eyes of public, tourists, trades people and governments who are the major players of heritage network in the area. Even though, heritage and preservation values of Safranbolu have settled the same thing cannot be said for Karabük case. I think Safranbolu's the world heritage site recognition by Unesco, just next to Karabük, effects people's conscience about the heritage identification. Heritagization process of historic sites have strong connection with public and intuitional conscience that shapes political constructs. Particularly, inhabitants can control behaviors of politics therefore it is important to survey local behaviors and concepts and their bases to solve heritagization problems. In this regard, field work is an important methodology to reveal opinions and behaviors of Safranbolu and Karabük inhabitants while at the same time it contributes fundamentally to architectural and urban historical research. How the heritagization process of Safranbolu was started by local politics in the region and following the city is stamped as world heritage site by Unesco in 1992? Why Karabük, 8 km to Sarfanbolu, as an industrial site has often been neglected with its historic value? These all questions will be addressed in the paper to reveal heritage recognition of the locale. Key Words. Unesco, Safranbolu, Karabük, Heritage, Industrial Heritage

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\*Intervenant

†Auteur correspondant: meltemozkan@gmail.com

## **S.8.I — Management and Development**

# La Cité des électriciens, un projet pilote pour des enjeux régionaux

Philippe Prost \* 1

<sup>1</sup> Agence d'architecture Philippe Prost – sans – France

La Cité "des électriciens" est construite par la compagnie des mines de Bruay entre 1856 et 1861 pour loger les familles de mineurs. Progressivement désaffectée, inscrite aux Monuments Historiques, elle est devenue l'une des 5 cités-pilotes dans le cadre de l'inscription au patrimoine mondial de l'Unesco du bassin minier du Nord-Pas-de-Calais au titre du "Paysage culturel évolutif vivant " en tant qu'archéotype de la cité minière du XIX<sup>e</sup> siècle.

Pour le projet de réhabilitation de la Cité des Electriciens, le défi tient bien au sujet lui-même : un habitat ouvrier ordinaire représentatif des très nombreux logements construits dans le bassin minier du Nord-Pas-de-Calais ; et au projet pour cet habitat : le conserver et l'adapter aux nouveaux modes d'habiter comme aux problématiques environnementales, notamment en matière de thermique, et aussi en faire un lieu de découverte pour la population et le public, et un foyer de création pour des artistes.

La réhabilitation de ce monument du quotidien, celui de la vie ouvrière et de son habitat défini par un vocabulaire spécifique de corons, courées, voyettes et carins, en fait le support du témoignage d'une vie et d'une activité révolue : le projet vise à en faire un lieu tout à la fois de mémoire, de vie et de création pour le XXI<sup>e</sup> siècle.

Le site entièrement réhabilité abritera des logements adaptés aux exigences BBC dans les anciens corons (résidences d'artistes et gîtes urbains), ainsi qu'un nouvel équipement muséographique : le centre d'interprétation de l'habitat et du paysage minier, réparti entre le bâtiment central restauré et un bâtiment contemporain. Ce projet porté par la communauté d'agglomération Artoiscomm et soutenu par la Mission Bassin Minier est donc une occasion de faire la démonstration de la compatibilité entre patrimoine bâti et développement durable. C'est enfin un outil de développement économique, social et environnemental qui participe du futur du bassin minier appelé à devenir un espace ouvert et dynamique.

La communication reviendra sur l'histoire du lieu et la genèse du projet architectural, paysager et muséographique. Elle exposera l'avancée du chantier de travaux qui battra son plein en septembre 2015, et les découvertes et leçons qui ont pu en être tiré en tant qu'archéotype de restructuration urbaine, sociale, économique et écologique de l'ancien pays minier, qui comprend un très important parc de logements ouvriers.

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\*Intervenant

# The Ural's industrial heritage: conception of the historical and cultural centers development

Olga Shipitsyna \*†<sup>1</sup>, Nadezda Solonina \*

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<sup>1</sup> Ural States Academy of Architecture and Arts (USAAA) – Karla-Liebknechta st. 23, Yekaterinburg, 620075, Russie

The Ural industrial heritage is located on the territories of present Bashkortostan, Udmurtia, Permskaya, Sverdlovskaya and Chelyabinskaya regions. It is the large network of metallurgical factories and it counts more than 300 sites. Approximately one-third of the whole Ural's industrial heritage locates on the territory of the Middle Urals. Physical state of such objects varies from completely lost to well-saved and opened for public.

To define potential possibilities of the Middle Ural's industrial heritage rehabilitation and presentation, the monitoring of historically formed plants territories current state was conducted. Investigation of the current state of historically formed plants of the Middle Urals revealed 5 preservation degrees. These degrees depend on the conditions which influenced the formation and development of industrial enterprise. The plants located in the most profitable areas in relation to transportation routes and resource base have the greatest preservation degree. These sites combine current production and protected historical and cultural industrial relics. Accordingly the plants with depleted resource base located far away from major transportation routes have the lowest preservation degree.

The analysis of the current state of the historical metallurgical plants and mining enterprises of the Middle Urals contribute to reveal the specificity of the objects distribution of the different preservation degrees through the region. On the territory of each site there are actual industrial heritage objects – buildings and structures dated back to the period from 18 until 20 centuries. Almost relatively well preserved industrial site is the center of the cluster of several historical plants of different preservation degrees. Thus we can designate 9 historically formed industrial and cultural centers in the Middle Urals, which are the most effective for multipurpose presentation and promotion as cultural sites.

The current state of industrial heritage of the Middle Urals makes us consider the historically-formed industrial centers based on the industrial relics preservation degree. This is due to the fact that historical legacy has become an important point of attention in the conditions of post-industrial society development. Also it is the basis for determining of local cultural identity. The structure creation of industrial landscape cultural centers on the basis of the historically-formed Urals' plants clusters included industrial heritage sites will contribute to the economic and cultural development of the region.

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\*Intervenant

†Auteur correspondant: oshipits@usaaa.ru

## **S.9.A — Urban regeneration**



# Industrial Heritage as a Driver of Urban Regeneration Exemplified as the Conservation Project of Formosa Plastic Corporation's Kaohsiung (Taiwan) Plant

Ping-Sheng Wu <sup>\*†</sup> <sup>1</sup>, Hui-Wen Lin <sup>2</sup>, Wen-Huan Lee <sup>3</sup>, Min-Fu Hsu <sup>1</sup>

<sup>1</sup> Department of Architecture, National Cheng Kung University – No.1 University Road, Tainan 701, Taiwan

<sup>2</sup> The Institute of Creative Industry Design, National Cheng Kung University – No.1 University Road, Tainan 701, Taiwan

<sup>3</sup> Graduate Institute of Taiwan History, Culture and Languages, National Kaohsiung Normal University – No.116, Heping 1st Road, Kaohsiung 802, Taiwan

Taiwan's PVC plastics industry has long occupied a very important global position. As one of Taiwan's biggest private companies, the Formosa Plastics Corporation has in turn played a leading role in the industry. The Kaohsiung Plant of the Formosa Plastics Corporation, established in 1956 with the help of U.S. aid, became Taiwan's first PVC plastic materials factory. After expansion in 1958 and 1966, the plant became a complete space for employees to work and live in. Not only did the plant play a pivotal role in the growth of Formosa Plastics, it was also a witness to the radical social and economic changes Taiwan underwent from the 1960s to the 1980s. Cianjhen District's Shijia area, in which the Kaohsiung Plant is situated, was zoned for industrial use in the mid-1940s to meet Kaohsiung's development needs. The industrial zone gradually expanded in the 1980s to include areas surrounding the Port of Kaohsiung, as well as parts of Zuoying and Renwu. Today, the region has been rezoned as a special economic zone in accordance with overall development needs. Formosa Plastics' Kaohsiung Plant now faces the problem of relocation once its lease expires. This study will first review the plant's manufacturing facilities (including material supply, coincident production, dry packaging, and recycling and reuse systems) and discuss their unique value as artifacts of Kaohsiung's industrial heritage within historical, socioeconomic, and urban development contexts. The study will then argue that certain parts and areas of the plant should be set aside for preservation, in the interests of both providing green parkland for the general public, and preserving cultural assets. Finally, the study will propose a sustainable reuse strategy that will meet the needs of education, tourism, and the preservation of our industrial and cultural heritage. It is hoped that the considerations of this study will emphasize the Kaohsiung Plant's importance as Taiwan's only extant location in which the cultural heritage of PVC manufacturing remains, and spur the transformation of the plant into a creative landscape in which culture and industry could come together in an urban context.

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<sup>\*</sup>Intervenant

<sup>†</sup>Auteur correspondant: pswu@mail.ncku.edu.tw

# Industrial heritage, Urban Regeneration, and Architecture: Lessons from Brazil and USA

Gabriela Campagnol \*<sup>1</sup>

<sup>1</sup> Department of Architecture Texas AM University (TAMU) – États-Unis

Adaptive reuse has emerged as a common way to ensure the preservation of underused industrial buildings and landscapes. The sugarcane agro-industry promoted a variety of urban types and acted significantly on the construction of the territory throughout the Americas. Over the last forty years, sugar production landscapes have been facing profound changes. The Engenho Central de Piracicaba in Brazil, and the Imperial Sugar Land in USA, are prominent examples of former industrial sites under redevelopment. The Engenho Central, located on the banks of the Piracicaba River and near the historic center, is a city landmark. The sugar factory operated from 1881 to 1974. Since 1980s the site and its fate have been the subject of political controversy, stewardship debates, and several architecture and urban projects that exhibit divergent approaches towards preserving the industrial heritage. Sugar Land, Texas, which has an identity and a history intimately connected to the sugar industry, has been slowly losing its roots, and the industrial heart of the town is on the cusp of a large redevelopment project. Closed in 2002, the Imperial Sugar was the first sugar refinery in Texas and the state's oldest extant business. Through a comparative analysis of the urban regeneration actions, adaptive reuse projects, and design approaches for postindustrial sites in hemispheres south and north, this paper examines the role played by architecture and urban planning in defining the place of the industrial heritage.

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\*Intervenant

# Le patrimoine minier du Nord-Pas de Calais comme levier d'une politique urbaine exigeante

Gilles Briand \* 1

<sup>1</sup> MISSION BASSIN MINIER NORD-PAS DE CALAIS – XXXX – France

Pendant longtemps, l'urbanisme et les paysages issus de la période d'exploitation du charbon ont été associés à un vocabulaire négatif. Ils étaient les témoins d'une époque glorieuse mais révolue, symboles du déclin, du retard de ce territoire qui subissait une profonde crise économique, sociale et spatiale. Dans le Nord-Pas de Calais, des politiques ambitieuses en moyens financiers et en objectifs quantitatifs ont été mises en place. Quelques pionniers, visionnaires, ont compris que ces grands espaces que formaient les friches charbonnières, que cet habitat phagocyté sous le vocable réducteur de " corons ", que ces grandes cathédrales industrielles constituaient au contraire une ressource pour la résilience à venir du Bassin minier.

Ainsi, l'Etat, les collectivités territoriales et l'Europe ont mis en place des crédits spécifiques visant à engager la modernisation des cités minières et à traiter les friches industrielles (dépollution, démolition, réhabilitation du clos et couvert des éléments patrimoniaux emblématiques, préverdissement). Il est indéniable que ces politiques ont eu leur utilité, mais elles ne se sont pas inscrites dans des stratégies territoriales globales et il a pu apparaître que l'urbanisation du Bassin minier au cours des 30 dernières années opposait un processus de réparation et un processus de développement incontrôlé qui a très largement favorisé la périurbanisation du territoire.

Au début des années 2000, l'enjeu était à la maîtrise du développement urbain. Ces enjeux ont notamment été pris en charge par des outils réglementaires, mais avec une certaine difficulté. Le pari de l'inscription du Bassin minier au Patrimoine mondial comme les exigences du plan de gestion désormais à l'œuvre ont conduit à promouvoir un changement de regard et d'approche sur ce que l'on qualifie désormais de Patrimoine.

La liste des projets emblématique de ce changement est longue: un projet culturel autour de la musique sur la fosse d'extraction du 9-9 bis à Oignies, un projet de développement universitaire scientifique et culturel autour de l'image sur celle de Wallers-Arenberg, un pôle d'excellence sur le développement durable sur celle du 11-19 à Loos-en-Gohelle, un centre d'interprétation sur les paysages et l'habitat minier au cœur de la cité minière des électriciens à Bruay-la-Buissière. Cette dynamique riche de reconversion n'a pas encore permis d'inverser les tendances lourdes du territoire en matière de développement social et culturel. Mais c'est bien pour développer l'attractivité du territoire que tous ces projets urbains et paysagers ont été engagés, avec le souci de les combiner à des approches économiques et sociales. Avec une clé d'entrée particulière, faire du patrimoine minier le levier de la reconversion. Cette stratégie globale est connue, formalisée dans ses grandes lignes, l'enjeu est désormais de coordonner l'action des multiples maîtres d'ouvrages et financeurs concernés.

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\*Intervenant

## **S.9.B — Workers' Housing**

# Les logements Fiat Case Sud en Italie. L'étude de cas de Termoli.

Maddalena Chimisso \*<sup>1</sup>

<sup>1</sup> Università degli Studi del Molise (Unimol) – Università degli Studi del Molise via Francesco De Sanctis s.n.c. 86100 Campobasso., Italie

Dans une perspective historique, par rapport au contexte italien, les événements qui concernent les paysages industriels et les politiques territoriales du Sud de l'Italie peuvent être analysés à travers l'approfondissement des expériences très spécifiques. L'implantation de l'usine Fiat à Termoli (dans la région administrative du Molise) au début des années Soixante-dix du XX siècle représente, à notre avis, une expérience intéressante qui peut être utile pour connaître, à l'échelle locale, l'impact que l'usine Fiat à Termoli a eu par rapport aux politiques territoriales de développement économique du Molise.

La stratégie que, à partir du 1970, l'entreprise Fiat met en place concerne l'implantation des usines au Sud de l'Italie à travers l'investissement de son propre capital mais aussi du capital que l'État avait mis à disposition pour encourager le développement industriel dans les territoires de l'Italie du Sud (action qui est définie contrattazione programmata car il y a l'intervention public à côté des entreprises).

Comme pour des autres régions de l'Italie du Sud (on pense à la conception de la zone industrielle de la ville de Taranto fait par la société Tekne, ou à la planification de l'area industrielle que la société Italconsult fait à Catania), également à Termoli le lieu du travail est expression des techniciens spécialisés dans la conception des espaces pour l'industrie. En effet, à Termoli les structures industrielles de l'usine ont été conçus par le spécialistes de la Fiat Engineering, division que l'entreprise crée en 1972 pas seulement pour la réalisation des complexes industriels mais aussi pour les structures liées au tourisme, au commerce et aux logements pour les ouvriers.

Exactement sont les logements Fiat Case Sud qui nous donnent la possibilité de sortir de l'espace plus directement lié à la production en entrant dans la ville. Les professionnels de la Fiat Engineering conçoivent un complexe résidentiel, bâti avec le techniques propres de la préfabrication, dont la typologie de la conception architecturale est liée à un modèle d'habitation qui est réalisé pas seulement à Termoli mais aussi dans le petites villes limitrophes (Campomarino et Guglionesi) et dans autres territoires au Sud de l'Italie.

L'importance de cette typologie d'habitation a été reconnu aussi par le Ministère des biens et des activités culturelles et du tourisme de l'Italie qui a inscrit le Fiat Case Sud de la ville de Termoli dans la liste des biens à sauvegarder en tant que expression de construction du XXIème siècle liée aux architectures d'habitations à caractère populaire.

À travers le focus sur le Fiat Case Sud, la communication veut montrer comme l'implantation de l'usine Fiat à Termoli a contribué à développer des quartiers directement attachés à l'usine et donc comme l'usine même a eu une incidence sur les politiques territoriales du Molise.

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\*Intervenant

# The “Uralmash Workers Village” in Ekaterinburg (Russia). Origins, development and transformation, perspectives (1926-2014).

Celetti David \* 1

<sup>1</sup> Université de Padoue (Padova (Italie)) – Via del Vescovado 48, Italie

1926 in compliance with the first Five Years Plan began to construction work of the Uralmash plants, soon to become one of the biggest heavy industry facilities of the Soviet Union. It occupied as much as 30.000 workers and produced a wide range of equipment, from blast furnaces to presses, from cranes to tanks and heavy guns, from furniture to missiles. A project for the construction of a new social town was developed as soon as 1928. It included houses for workers, technicians, foreign experts and managers; health, sport, and entertainment facilities; nurseries and schools; transport networks. The quarter emerged as city within the city. The “factory town” rapidly competed with the old administrative centre for economic, social, and political relevance. In 1990s the areas went through a traumatic period, being widely controlled by criminal clans. More recently it experienced new development patterns mainly linked with the expansion patterns of the city.

The paper reconstructs this experience focusing in the 1928 projects, its ideological assumption, and material aims; in the actual realizations, with particular attention to the specific architectural, and functional characteristics of the houses built in the successive periods (late 1920s, 1930s, and post Stalin era); in the social aspects (housing for foreign specialists and managers, housing for workers, sport, educational and health facilities, relations between the Uralmash quarter and the rest of the city); in the transformations of the late 1980s and 1990s; in the current use of the old buildings and their meaning for the local population and city planners; and, finally, in their material, and cultural heritage. Notice will be also given to such aspects as the relation between the old industrial housing, and the current urban development; the material, social, political role of the Uralmash industry in structuring the workers village, its identity and boundaries; the economic, and cultural potentialities of the area in relation with its historical significance, and the existing company’s museum.

Source include primary documents taken from the local State Archive (Gosydarstvennyi Archiv Sverdlovskoi Oblasti), existing published scientific literature, newspapers and journal articles (among the whole collection of the Uralmash factory journal), as well as 23 interviews taken between 2011 and 2014 to current and former workers and managers of the Uralmash company.

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\*Intervenant

## **S.9.C — Educating and Sharing: New Ways of Teaching - Mediation**

# Publishing the IndustrieKultur Magazine – a “joint venture” between professionals and amateurs

Norbert Tempel \* 1

<sup>1</sup> Westphalian Museum of Industry (WIM) – Grubenweg 5 D-44388 Dortmund, Allemagne

The quarterly IndustrieKultur Magazine is covering the industrial heritage scene in Germany and Europe. In 1995 a private initiative realized to publish the first issue of a new magazine, dedicated to the questions of monument care and landscape as well as social movements and the history of technology and the environment, starting point for reporting being industrial monuments and sites as well as heritage in danger. Since then the Museums of Industry in Rhineland and Westphalia both entered the board of editors and over a period of 20 years more than 65 issues appeared, every issue devoted to a special topic – such like bridges, collieries, textile mills, iron and steel industry, industrial world heritage, women at work, oil production or hydropower stations. Another section of each issue is spreading regional news, book reviews, conference announcements etc. Around 2.500 copies were distributed around Germany, Europe and other parts of the world.

The magazine is published in cooperation with the German TICCIH section, the German ICO-MOS working group on technical and industrial monuments, ERIH and other societies in the field of the history of industry, transport and technology. Most work – apart from final editing, layout and printing – is done voluntarily: industrial archaeologists, monument officers, museum experts, academic people, conservators, architects, engineers, photographers and artists are readers of the magazine as well as contributors. Every year a special issue is dedicated to the industrial heritage of one specific country, most articles written by residents – mainly friends from the TICCIH community.

To meet the demands of such a vast variety of readers, experts and amateurs, our guideline is to write intelligible to all but in any case coherent in terms of technology, engineering and architecture.

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\*Intervenant

# Fourmies - Médiation et patrimoine dans un contexte social et économique difficile

Laurent Nachbauer \*†<sup>1</sup>

<sup>1</sup> écomusée de l'avesnois – écomusée de l'avesnois – France

Verreries, filatures, tissages, Fourmies connaît un essor industriel important au cours du 19ème siècle, transformant un village rural en une petite ville industrielle. Le siècle qui suit est celui du déclin et de la disparition de ces activités... De ces nombreux lieux de productions, construits de briques et d'acier, de pierre et d'ardoises, rares sont ceux qui ont pu être réhabilités ou reconvertis ; ces témoins du travail et de l'activité des hommes sur ce territoire ont quasiment tous été éliminés du paysage urbain, laissant place à des friches ou des projets de construction de logements sociaux. C'est dans ce contexte que l'écomusée de l'avesnois est créé en 1980, né de la volonté de quelques-uns de sauvegarder ce patrimoine, de le valoriser et, fidèle à la définition des écomusées, d'en faire un véritable outil de réflexion. Pour le visiteur, pénétrer l'écomusée c'est aller à la rencontre d'un territoire : de son histoire, de son activité, de sa population et c'est, en citoyen, se poser les questions qu'il suggère sur notre société contemporaine. Sensibiliser, comprendre, transmettre ce patrimoine sont les missions de l'écomusée de l'avesnois. Si en faire la visite, pour un public étranger à son territoire, peut répondre à ces objectifs, c'est un exercice plus compliqué pour la population locale. Le patrimoine industriel avesnois renvoie à sa population l'image d'une époque révolue, où l'activité était intense, où le travail nourrissait et occupait pleinement ses habitants.

Alors, dans un contexte difficile (30% de chômage à Fourmies) et où la pratique culturelle n'est pas spontanée, il nous faut :

- Etre innovants et développer de nouvelles formes de médiation (résidences d'artiste/nouvelles technologies/ ...)
- exploiter les nombreux dispositifs (CUCS/contrat de ville/ appels à projets...)
- travailler en partenariat (centre social/ insertion/...),
- Sortir de nos structures et Intervenir au plus près des populations
- Considérer tous les publics (jeunes/ seniors , familles, scolaire etc...)
- Convaincre

Pour donner la possibilité à tout citoyen de s'approprier ce patrimoine...

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\*Intervenant

†Auteur correspondant: l.nachbauer@ecomusee-avesnois.fr

# Continuity and Change in German Industrial Archaeology – the Ruhr example

Dr. Alexander Kierdorf \* 1

<sup>1</sup> TICCIH Germany – Allemagne

At the end of the 1960s, Industrial Archeology arrived at the Ruhr. Since more than 45 years, industrial heritage has been identified, preserved, restored and re-used. The region faced an economic transformation from coal, iron and steel to new industries such as education, digital technology and all kinds of service. During this transformation, the selection and preservation partially followed systematic selection, but also happened by chance and any kind of individual situation.

The proposed study is to analyse the development of criteria of selection and the knowledge of the material heritage of the Ruhr industry. It especially focuses on the beginnings and emergence of professional practice, scientific and educational activities. The industrial past, its structures and remains became one of the leading topics of the new university and urbanistic institutions created in the Ruhr. Geography, town planning and architecture were increasingly influenced by the wish to integrate the industrial heritage into the cultural fabric of the region.

Although nowadays many people have to do with industrial heritage, a profession called „industrial archaeologist“ (Industriedenkmalpfleger) cannot be seriously defined. Those working with the industrial heritage still are architects and town planners (Raumplaner), (art) historians or (historical) geographers by education, and seem to look at the subject mainly from their perspective – building and construction, architectural history or topography.

The complexity of the Industrial Heritage even in a region with a rather long history of work in this field seems impossible to integrate in one professional profile. So industrial archaeology became a classical field of interdisciplinary study and activity. Only by combining methods, interests and questions of different disciplines can develop the objects of industrial heritage in an adequate way, preserving its special aspects and facets and presenting an idea of their historic value and message.

So even after almost half a century of activity, the place and elements of „Industrial Archaeology“ as an activity or even a profession still is under discussion and in motion. This is especially of interest under the demand which is raised in the Ruhr to install a „center of competence“ on Industrial Heritage management, collecting and providing a confirmed body of experience.

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\*Intervenant

## **S.9.D — European Perspectives**

# Industrial Heritage in Europe, Transnational Perspectives

Paul Smith \* 1

<sup>1</sup> Direction générale des Patrimoines, Ministère de la Culture et de la Communication (Département du pilotage de la recherche et de la Politique scientifique) – Ministère de la Culture et de la Communication – 6, rue des Pyramides, 75001 Paris, France

Just as Britain was the first industrial nation, Europe was the first industrial continent. Many landscapes and sites throughout this continent bear witness today to what may be termed the “ European-ness ” of a common industrial past. Although most industrial historians and archaeologists still address national industrial histories, transnational perspectives are now readily recognized as essential for a proper understanding of certain sectors such as coal and steel (at the origins of the European economic community in 1952) or such major twentieth-century industries as automobile or aircraft construction. In the longer duration, these perspectives also serve to draw necessary attention to migrations from one European country to another by industrialists, engineers, architects or workers, some of these movements being spontaneous, in search of new profits or simply of a livelihood, others being provoked, in the case for example of governments inviting entrepreneurs to set up in their country to launch a new industrial sector. These transnational perspectives look too at the way capitalists invest abroad, at how parent firms set up subsidiaries or branch factories in another country, at how technology is transferred from one country to another, either legitimately, with acquisition of patents, or by copying, spying or even military occupation. Similarly, and in the face of the de-industrialisation which is the common fate of European countries today, exchanges, debate and joint research initiatives supported by the European Union (Raphael et Culture 2000 programmes) or the Council of Europe, or by NGOs such as TICCIH or Europa Nostra, have contributed to a better sharing of ‘good practice’ in understanding, conserving, re-using and interpreting industrial heritage sites.

A special session is proposed for the Lille region TICCIH conference in September 2015 to underline the importance of these transnational perspectives in understanding and keeping the industrial heritage in Europe. It will comprise four monographical papers, each one drawing particular attention to an aspect of the “ European-ness ” of the industrial heritage.

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\*Intervenant

# The European character of Europe's industrial heritage: some cases in point

Pierre Laconte \*† 1

<sup>1</sup> FFUE – Foundation or the urban environment – France

Through three examples the paper endeavours to describe how the European transnational industrial heritage is being adaptively reused for culture, education or leisure: - The steelworks of Ostrava were created under the Habsburg Empire and aimed at exports all over Europe. They were discontinued after the political change of 1989, remained abandoned for several years and in 2012 have been carefully restored as educational and cultural facility. This restoration had a deep social and cultural impact at local, regional, national and European level. - The Tour & Taxis international customs complex in Brussels replaced the imperial postal system created by Charles V. It lost its economic interest and was abandoned after the introduction of the European common market. Saved from destruction as a result of a Europe-wide campaign, it is now a privately owned multi-functional complex of exhibitions, leisure, offices and residences, complemented by a public park, with high regional impact, mainly through private investments. - The brewery Wielemans-Ceuppens was a pioneer of large-scale beer production aimed at international markets. Its machines were coming from different European countries. Some of these machines are still in existence. They are to be restored for educational purposes, in line with a study financed through a Europa Nostra award, and be part of the cultural and social impact of the restored Wielemans-Ceuppens brewery, now an exhibition and performance centre of regional/national importance. These three cases of preservation and adaptive reuse illustrate the Europa Nostra “method” of using the power of example to disseminate successful examples of heritage conservation. The paper concludes that the adaptive reuse of transnational industrial and engineering heritage can have an economic, social, environmental and cultural impact on its surroundings, extending nationally and internationally, among others through industrial tourism, thus meeting the 21st century challenges.

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\*Intervenant

†Auteur correspondant: pierre.laconte@ffue.org

# Les manufactures de draps fins aux XVIIe et XVIIIe siècles, une industrie européenne par excellence

Jean-François Belhoste \*† 1

<sup>1</sup> EPHE – École Pratique des Hautes Études [EPHE] – France

à venir

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\*Intervenant

†Auteur correspondant: jfbelhoste@wanadoo.fr

## **S.9.E — ‘New Territories of Art’**

# **Patrimoine industriel et Art Contemporain, que peut-on attendre de ce rapprochement ?**

Gérard Salagnon \* 1

<sup>1</sup> comité d'information et de liaison pour l'archéologie l'étude et la mise en valeur du patrimoine industriel (CILAC) – XXX – BP 20115 75261 PARIS cesdex 06, France

Résumé par Gérard SALAGNON pour:  
Patrimoine Industriel et Art contemporain, que peut-on attendre de ce rapprochement?

Tout d'abord il faut constater que celles et ceux qui s'intéressent au Patrimoine industriel ne s'intéressent pas nécessairement à l'Art contemporain. Et pour cause; ces deux disciplines ne diffèrent-elles pas radicalement ? La première relevant de l'histoire industrielle établie durablement à partir du XIXe siècle, et la seconde appartenant au champ contemporain de la création artistique la plus novatrice.

Néanmoins aujourd'hui les faits confirment que certains bâtiments, vestiges de l'ère industrielle, abritent de plus en plus souvent l'Art contemporain. Comment expliquer ce rapprochement théoriquement et historiquement improbable. Une fois constaté que peut-on en déduire qui serve ou desserve le patrimoine industriel, qui serve ou desserve l'art contemporain?

M'appuyant sur des exemples variés recueillis ces vingt-cinq dernières années, j'ai choisi de présenter cette réalité culturelle du 21e siècle, sans toutefois mélanger les genres. Nécessairement réducteur au regard des nombreuses expériences qui rapprochent l'industrie et l'artistique à travers la réutilisation de locaux, mais aussi de matériaux ou de techniques, cet exposé témoigne de pratiques utilitaires et muséographiques mettant en lumière le bien fondé de ce rapprochement, comme les limites de l'exercice.

Liées aux réalités des sociétés d'abondance face au besoin de reconvertis les friches, ces pratiques rejoignent ainsi la nécessité culturelle de ne pas faire table rase du passé, y compris le passé industriel et social comme nous le savons bien dans cette assemblée. Là où hier l'industrie a bâti pour des nécessités techniques et économiques, aujourd'hui l'art s'installe donc pour exprimer nos réalités sensibles contemporaines.

Gérard SALAGNON : Docteur ès Arts et Sciences de l'art (Paris I), professeur d'Arts Plastiques, président de la Société savante Le Bugey (2004-2014), administrateur du Cilac.

Summary by Gérard SALAGNON for :

Industrial Heritage and Contemporary Art: what can we await for this merger?

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\*Intervenant

First of all, we can observe that those who are interested in Industrial Heritage are not necessarily interested in Contemporary Art, and this for a good reason: these two subjects are radically different, aren't they? The first one is related to the industrial history which has been established durably since the XIXth century, and the second belonging to the contemporary part of the most innovative artistic creation.

However, nowadays the facts confirm that some buildings, relics of the Industrial period, are home to Contemporary Art. How can we explain this theoretically and historically unlikely merger? Once stated, what can we infer from this which may be useful or harm to industrial heritage or to contemporary art?

I will illustrate this cultural reality of the XXIst century by many different examples. They have been collected during the last twenty five years, without mixing the genres. Of course, this report can not be fully exhaustive with regard to the numerous experiences which have brought together the industry and art through building conversions, but also through materials or techniques. This talk witnesses of utilitarian and museographic practices, highlighting the legitimacy and limits of this merging.

Linked to the reality of the affluent societies facing the need to reconvert former sites, these practices fulfill the cultural need not to leave history behind, including the industrial and social past, as we all well know in this meeting. Where yesterday the industry built for technical and economical necessities, today art settles to express our sensitive contemporary realities.

Gérard SALAGNON : Docteur ès Arts et Sciences de l'art (Paris I), professeur d'Arts Plastiques, président de la Société savante Le Bugey (2004-2014), administrateur du Cilac.

# Bohain en Vermandois, la friche textile abandonnée, devenue théâtre citoyen et engagé

Miléna Kartowski-Aïach \*<sup>1</sup>

<sup>1</sup> Idemec – université aix marseille – France

A l'automne 2014, j'ai mené dans le cadre de l'école des arts politiques de Sciences Po Paris, une enquête anthropologique, sous forme de diagnostique territorial, dans la ville désindustrialisée et sinistrée de Bohain en Vermandois située dans le département de l'Aisne en Picardie. Stigmatisée et victime, la ville déshéritée de la région peine à se relever. Cependant lorsque l'on tente de pénétrer le tissu social, on se laisse emporter et toucher par les récits romanesques des habitants qui racontent l'âge d'or de Bohain, qui était la reine de l'industrie textile, où les ouvriers formés à l'école textile, détenaient les meilleurs savoirs faire de France. Rodier, Lessure et tant d'autres dirigeaient les dizaines d'usines de la ville dont on pouvait entendre la musique des métiers à tisser de jour comme de nuit. Mais la désindustrialisation a détruit toute une société sans perspective de reconversion. Les friches sont devenus les hangars fantômes à éviter et qu'il ne faut en aucun cas nommer.

Beaucoup d'ouvriers ultra qualifiés n'ont pas retrouvé d'emplois et l'histoire de Bohain s'est délitée.

Comment rendre compte de ces récits ? Transmettre à la population ce que l'enquête a soulevé ? Faire émerger de nouvelles potentialités pour ces friches en déshérence ? Comment faire de ces usines des lieux d'histoire mais aussi de transmission intergénérationnel ? Comment permettre à tous ces sujets de conter leurs récits et de transmettre leur précieux savoir faire ?

J'ai proposé aux bohainois, sujets de l'enquête, de participer à un laboratoire théâtral au sein de la friche textile Mercier, fermée depuis plus de six ans. Grâce à un processus organique d'improvisation, chaque acteur est devenu créateur de son récit tout en s'appropriant poétiquement les lieux ainsi que l'histoire de l'usine. La dramaturgie de la pièce s'est dessinée aux quatre coins de l'usine au sein de laquelle nous avions également créé des expositions, installations et stations d'écoute. La pièce "Bohain Sera" s'est jouée à deux reprises en présence de la population bohainoise au sein de l'usine, devenue théâtre. Pour beaucoup, ce fut le premier pas dans une friche en compagnie des ex-ouvrières de l'usine qui comptaient leur histoire. Devenu lieu de vie, de création et d'espoir, nombre ont évoqué, suite à la pièce, la possibilité de voir l'usine devenir un lieu de création artistique et de transmission du patrimoine industriel textile de Bohain au présent.

Comment l'art peut-il être un acteur majeur dans la préservation et la réappropriation de ce patrimoine industriel, mais aussi historique et immatériel ?

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\*Intervenant

## S.9.F — Landscapes

# A framework for analysis and comprehension of large scale port areas as techno-cultural landscapes - decomposition method and its application to the port of Osaka

Suzanne Sebo \*†<sup>1</sup>, Kazuhiko Sakakibara <sup>1</sup>

<sup>1</sup> Osaka Sangyo University environmental design department – Japon

We are investigating the landscapes and constructed elements of Industrial Port Terminals, i.e industrial working waterfronts, and are considering them as masterpieces of utilitarian design, i.e. active industrial heritage. Central scenes of global commercial trade, unique by their scale and complexity, the infrastructures of Industrial Port Terminals provide unique forms which are to be investigated from an architectural point of view, whereas constructed by a seemingly purely technical concern. An Industrial port, is a result of globalized engineering methods of construction, and is thus easily recognizable as “port”, as far as it is composed by numbers of standard elements. Nevertheless, every port in the world presents considerable formal singularities, as the context (geographical, historical, social, and cultural) is different from one site to the other. Therefore, we study the encountering between two concepts: “Cultural landscape” as defined by World Heritage chart, and “Technoscape” as developed by Masaaki Okada. In this paper, we intend to build a framework for a method of comprehending the “techno-cultural landscape” of working industrial port areas, by using a method of decomposition of the elements which constitute them. Our purpose is to define formal criteria that will enable us to make comparisons among different ports of different regions in the world. For this study, Japanese ports are chosen as particularly suitable in terms of size and complexity, and because extreme-eastern endpoints to worldwide trade in a major industrialized country. Moreover, as an archipelago, the relationship between land and sea is multiplied and operated in favor of the development of ports. The port of Osaka will be our sample for testing the method and is chosen as one port among others to which to apply the 3 following steps of decomposition: Step 1 “promenade” in site. It is quantitative raw survey process to get to knowledge of the site by recording as much aspects as possible of the site. Step 2 “categorization”. This second step aims to get to qualitative data, in order to build the corpus , i.e, to reduce infinite viewpoints to finite categories defining chosen facets (such as mapping view, panorama view, close up view, and isolated items view) of relevant chosen sub-areas. Step 3 “establishment of a structural model”, i.e identification of the relevant features of each facet as simplified schemes. Our overall interest with this analysis is to unfold the movements of a ”non-intentional spatial dramaturgy”, with the emergence of an original, multi-authored Oeuvre.

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\*Intervenant

†Auteur correspondant: suzanne.sebo@gmail.com

# Quelles valeurs et quels sens pour les paysages industriels ?

Marie Patou \* 1

<sup>1</sup> MISSION BASSIN MINIER – XXXX – Carreau de fosse du 9-9bis rue du Tordoir 62590 Oignies, France

Au risque de l'appauvrir, le paysage ne peut être réduit au simple résultat visuel des interactions entre l'homme et son environnement, qu'il suffirait d'étudier et de décrypter pour lui accorder une ou des valeurs. Car " le paysage est le regard même qui contribue à donner du sens à cette relation[1] ". Dépassant les valeurs physiques et leurs lisibilités, le paysage est un système construit d'idées et de perceptions, source de représentations et d'imaginaires et souvent de parti-pris induits. Le paysage interroge autant son processus de formation que ce qu'il suggère et déclenche par le regard et le sens qu'on y ajoute, individuellement comme collectivement. Le paysage industriel possède a priori un pouvoir suggestif peu à son avantage. Souvent comparés à " l'enfer ", ses représentations artistiques (entre autres), littéraires comme picturales, ont certes révélé les traits dramatiques et incontestables de l'Industrialisation mais qui, devenus chefs-d'œuvre de l'Art, ont contribué à forger un regard et un imaginaire presque universels qui le condamnent de facto: profanatrice de la nature et prédatrice de l'homme, l'Industrie et tout ce qui s'y rattache suscitent effroi, horreur, révulsion...

Dès lors, quelles valeurs et quels sens associer à ces paysages pour qu'ils soient reconnus et consacrés dans le regard de chacun ? Ne doivent-ils être que le support visuel d'un tournant majeur dans l'histoire de l'Humanité ? Faut-il leur attribuer une valeur symbolique de " contre-exemple " témoignant d'une activité prédatrice pour l'homme ? Doivent-ils être sources d'admiration pour les inventions, les innovations et les progrès techniques du " génie humain " ? Sont-ils porteurs de valeurs identitaires ?

Aujourd'hui encore, les valeurs connotées associées au patrimoine et au paysage industriels constituent un frein à leurs reconnaissances immédiates. Leurs défenseurs et les porteurs de projet doivent doublement convaincre. Quand ils y parviennent, c'est souvent en démontrant la valeur utilitaire. L'un des défis pour le patrimoine industriel et ses paysages au XXIe siècle sera probablement de faire en sorte qu'ils obtiennent leurs préservations d'abord pour leurs valeurs propres, en ré-interrogeant non seulement ce qui fait paysage mais aussi en re-questionnant les valeurs de l'Industrialisation et leurs transmissions.

WALTER François, à propos de la discipline anglo-américaine Humanistic geography, Les figures paysagères de la nation, Territoire et paysage en Europe (16e-20e siècle), Editions EHESS, Paris, 2004.

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\*Intervenant

# Architectural and semantic transformation of urban industrial landscape of Riga

Anita Anteniske \* 1

<sup>1</sup> Riga Technical University, Faculty of Architecture and Urban Planning (RTU) – zenes iela 18, Riga, Lettonie

Extensive industrialization shaped the urban landscape of the late 19th - early 20th century Riga. Residential development of the city followed, leading to its inscription on UNESCO World Heritage List due to the high architectural and urban quality. Currently, the prioritized protection and promotion of residential and public buildings as heritage landmarks combined with economic problems has an impact on neglect and deterioration of industrial buildings and areas of Riga. With not a single building being renovated and preserved as a museum and monument for industrial heritage, the survival of industrial heritage of Riga in its urban landscape and on the mind-scape of residents has been put under a serious threat.

The dominant approach towards industrial heritage of Riga is visual and functional assimilation. Human commercial, cultural or destructive activities are targeted towards small, but continuous alternations and transformation of structures and territories originally designated for production of goods. Lack of caring ownership and lack of positive social feelings towards long-lost enterprises that failed to survive in post-industrial era could be blamed for this attitude. Small architectural and visual alterations initiated by new owners organizing new activities there tend to erase the initial industrial image and to change visual and mental semantics of the buildings and sites.

The development of public and professional attitude towards industrial heritage of Riga during the last two decades will be examined in the paper by analysing examples of continuous commercial production activities, examples of radical functional and architectural transformations, and examples of cultural interventions of various scale and intensity. Large historical industrial urban ensembles along Brvbas iela, Ganbu dambis, Valmieras iela etc. will be examined to highlight their recent history of lost activities, changed and divided ownership, deterioration of structures and gradual simplification of layout. Several small-scale cases of renovation and reuse combining elements of preservation with considerable architectural intervention of prised quality will be revisited with a critical perspective on a long-term social and educational impact. Recent cases for commercial and non-commercial temporary art activities will be examined in the context of Riga's experience as Capital of Culture 2014 and the public belief in the great potential of culture and architectural heritage for the future development of the city in general.

Considering the economic and social threats of decreasing population and commercial pressure on survival of all the branches of cultural heritage, the aim of the paper is to search for those unique options only industrial heritage can provide for a better future, despite all odds.

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\*Intervenant

# Emergent traces from a mining district - The case of the Greece's mines of lignite in Ptolemais

Evdokia Mimikou \*†<sup>1</sup>, Lois Papadopoulos <sup>1</sup>

<sup>1</sup> University of Thessaly [Volos] Department of Architecture (UTH) – Pedion Areos, 38334, Volos, Greece, Grèce

A coincidental visit to the mines of DEI (Greece's public company of electricity) in the prefecture of Kozani in Greece was the cause of the research. The site of this research is in the wider area of Eordaia valley in a short distance from the towns of Ptolemais and Kozani. The mines have been extracting lignite for the production of electric power for the last 60 years. The big amount of the lignite's deposit caused a deep worksite of more than 110.000.000 square meters. The whole process generates power that serves the 40% of the current installed network of Greece. Generally the lignite constitutes the first raw material of the electrical production. The approach of the landscape of Ptolemais is an attempt to highlight spots that are immediately visible and recognizable and others, according to Costas Hatzimichalis, that are deliberately hidden. The aim of the research is to analyze these characteristics, positive or negative, which can be perceived by the observer.

The research contains a thorough analysis and interpretation of the specific site of the lignite mines. The first step is a description of the geographic elements, the historical data of the area and the productive process of the mining activity. References to local newspaper's articles, through a further archival enquiry, identify a crucial difference in the social impact of the mining activity on citizens in the past and now. Gradually, some basic characteristics of the landscape are revealed.

There is a more detailed analysis of the characteristics that evolves and mutates the space during the human activity. The current image of the landscape (industrial) is contrasted with the one in recent past (rural), before the beginning of the exploitation. The scale, the topography, the functions, the time, the details and the environment change through the lapse of time. The result is a hybrid landscape, totally different from the rural-”natural” one. Eventually, the aim of the whole analysis is to propose a different view of the human landscapes.

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\*Intervenant

†Auteur correspondant: evi.mimik@hotmail.com

## **S.9.G — Industrial Tourism**



# KARAKURI and TOYOTA as Resources of Industrial Tourism

Masami Morita \*†<sup>1</sup>, Shinji Morita \*‡<sup>2</sup>

<sup>1</sup> Ohkagakuen University – Japon

<sup>2</sup> Meijo university – Japon

There are many KARAKURI Ningyo dolls in Nagoya, Japan. KARAKURI Ningyo are, so to speak, wooden automata with exemplification of creative technology unique to Japan. But KARAKURI Ningyo have not been appreciated as a significant resource of industrial tourism. When we noticed and evaluated that Nagoya area had great ability to prepare good foundation for industrialization, KARAKURI Ningyo are expected to be recognized as a kind of industrial heritage.

KARAKURI Ningyo's internal working technology will be located in the ideal and technological route of escapement control apparatuses leading up to Sakichi Toyoda's Type G automatic loom with a nonstop shuttle-change motion as Japan's first power loom, Toyota Production System with robot control and Automation with a Human Element and farther humanoid robot development.

The exhibition of TOYOTA Commemorative Museum of Industry and Technology demonstrates not only the trace of Japan's industrial modernization with many textile machineries and automobiles but also Nagoya's ability to produce unique technology such as the Garabo Spinning Machine. The Museum provides an opportunity to consider the areal power to build up inter-connectivity between several local industrial elements; cotton cultivation, cotton manufacture as endogenous industry, nearby wood production and the assembly of skilled craftsman of wood working.

This industrial culture has been carried on with TOYOTA Group that was founded by Sakichi Toyoda, becoming the automobile empire it is today. Sakichi's son Kiichiro Toyoda developed automobiles and established Toyota Motor Co. Ltd., which has involved into TOYOTA Group and supported by it. TOYOTA Group now uses the buildings of the pilot factory built in 1911 by Sakichi Toyoda as TOYOTA Commemorative Museum of Industry and Technology.

Making efficient use of KARAKURI Ningyo and the TOYOTA Commemorative Museum of Industry and Technology as resources of industrial tourism is needed all the more to vitalize Nagoya and demonstrate the historical uniqueness of technology of Japan.

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\*Intervenant

†Auteur correspondant: masami-m@ohkagakuen-u.ac.jp

‡Auteur correspondant: smorita@meijo-u.ac.jp

# Industrial Heritage Tourism literature. A systematic review and meta-analysis

Maria Concetta Perfetto \* <sup>1</sup>

<sup>1</sup> Department of Management Business Administration University "G. D'Annunzio" of Chieti-Pescara (DEA Dipartimento di Economia Aziendale) – Viale Pindaro, 42 - 65127 Pescara (Italy), Italie

The heritage of industry began to be considered a part of history and culture at the end of the 1950s, when several researchers in England started approaching the rests of the early industrial period (XVIII century), creating the notion of 'industrial archeology'. Later, this new field of study evolved to include all the sites that suffered a massive decommission since the 1970s crisis of the traditional industrial system, conceiving the idea of 'industrial heritage'. Industrial heritage refers to the physical remains of the history of technology and industry, such as manufacturing and mining sites, as well as power and transportation infrastructure. The term is often also used in connection with museums or historic places related to industry, including worker housing and warehouses.

Industrial heritage tourism is related to visit industrial heritage sites, or museums with a special interest in industrial heritage. Despite the Industrial heritage tourism claims to offer benefits to the economy, to heritage protection, to local communities and to the wider society, there are little evidences of policy-makers that develop effective strategies to manage a sustainable development of industrial heritage resources. There is also little discussion of definitions of industrial heritage tourism in the academic literature, nor is there very much refereed tourism research on the subject (see, however, Edwards & Llurdés i Coit, 1996; Cole, 2004). This is a topic that goes across different study areas – it does not fit easily with tourism research, or with heritage researchers, or with regional studies.

The paper aims to provide a quantitative and qualitative assessment of articles in major tourism journals in order to enhance our understanding of the industrial heritage management. Several leading tourism journals are evaluated to identify the articles that focused on industrial heritage management. The time period from the 80s to today is adopted as the most appropriate time frame for the study. Content analysis is used to determine the quantitative extent of the contributions and the qualitative nature of the articles published in each journal. Moreover, the papers reviewed are classified by type: theoretical, methodological, empirical, etc. In addition, an analysis of the keywords included in any paper is conducted to derive useful information on linked sub-themes of research. Thus, this study reviews and analyses the research publications focusing on industrial heritage management. Through a comprehensive literature review, this paper identifies what we know about the theme, recommending a future research agenda on the phenomenon and encouraging comprehensive investigation into the influence and impact of industrial heritage on all aspects of the tourism industry.

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\*Intervenant

# Sulphur Mines of Sicily: Cultural and Tourism Itinerary

Maria Carcasio \* 1

<sup>1</sup> Associazione Italiana per il patrimonio archeologico industriale (AIPAI-Sicilia) – Piazzale Antonio Bosco 3/A - TERNI, Italie

For more than two centuries, the sulphur mines of Sicily were an endemic part of its economic history. During the 1800's, the mining activity, consisted of both the extraction and commercialization of sulphur. With the English Industrial Revolution, the mining acitivity expanded to become the world's foremost provider of Sulphur. Although some ownership and operation of the mines consisted of business investors from Sicily, the English, French, and toward the latter part of the 19th and into the 20th centuries, the North Americans dominate the mining operations, which became increasing in number, infringing upon agricultural territory and radically modifying the landscape upon the island. Obviously, due to its geographic position with respect to continuous volcanic activity, construction of the various mines took many forms. Many were caverns, others had to be constructed. The extraction, separation, and reduction or refinery, as well as shipment promoted the development of inland rail and roadway systems, as well as the facilities necessary for maritime transport and trade. Sadly, the wells, the thermo electrical centrals, the refineries, the mining infrastructures including sanitation service stations, each a font of testimony to the individual stories each miner and each mine lived, since the 1980's remain in utter abandonment. Sicilian regional laws of 1991 have declared the mines to be eventual museum sites; yet to date little action has been taken to realize the vast project which remains a part of not only Sicilian or Italian, but also of international historic value. The territories comprising the mines needs to be viewed as a valuable cultural, anthropological as well as geological/ecological resource necessary to the conservation and preservation of western world history. The stories of the human beings who lived and worked the mines, the minerals, the surrounding landscapes could provide a vast attraction for tourists, historians, geologists, world-wide, not to mention ecologists as the land could serve as a broad ecological conservation project. In short, there is a need to develop and realize proposals for the conservation of Sicilian cultural industrial heritage, eventual financing and development from which the rewards for our island community would be great indeed.

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\*Intervenant

# The idea of “Digital CultHeriScape” and the changing of the industrial landscape’s perception in Web 3.0 Era Tourism

Marco Trisciuoglio \* <sup>1</sup>, Wenwei Yu \* <sup>†</sup> <sup>1</sup>

<sup>1</sup> Interuniversity Department of Regional and Urban Studies and Planning Politecnico di Torino / Università di Torino (DIST) – Castello del Valentino, Viale Mattioli 39, 10125 Torino, Italie

Today it's the time of Cultural Landscapes (European Landscape Convention, 2000): we recognize the role of people in appreciating landscapes (by actions of simple viewing and tourism) and in creating/building landscapes (managing the earth and the nature, designing their shape). Among the Cultural Landscapes, the topic of Industrial Landscape ha its own specific characters, as new goal for new cultural tourism's types.

Today it's also the time of new media and new technologies. They could be useful in recognizing, looking at, loving places, catching from them both knowledge and pleasure, overall if they are “ordinary places”, with value of “ordinary heritage”.

Are ICT tools just more advanced systems to perceive landscapes or is the industrial landscape's perception changing by the effects of such tools?

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\*Intervenant

<sup>†</sup>Auteur correspondant: iamwenwei@gmail.com

S.9.H — UNESCO / ICOMOS /  
TICCIH

# Comparing the incomparable Forth Bridge

Watson Mark \* 1

<sup>1</sup> Historic Scotland (HS [soon to become HES]) – Longmore House, Salisbury Place, Edinburgh EH9 1SH, Royaume-Uni

This paper sets out to identify ways in which a bridge can be compared to others around the world and to identify, as far as possible, its comparators. The geo-cultural area is global in the case of steel bridges because late 19th-century communication within the engineering profession meant that any advance made in one part of the world would soon be known world-over. That helps to address UNESCO criterion (ii) on international exchanges.

Comparisons are made first according to the construction material used, steel, and second according to its form and span. From this derives the aesthetics of bridges, a thorny topic in the case of cantilever bridges. American theorists waged a successful battle against British hegemony and European styles, in, of all places, Japan, that will briefly be discussed. Bridges of the world are next compared against each other by span, listing first cantilever truss bridges, and then all types of bridges, than all types of man-made spans, and the length of time those records were held by various structures. The Forth Bridge features in each of these world-wide lists but not always at the top..

Then comparisons are drawn with bridges now on the World Heritage List, individually, or as elements of cultural landscapes, urban landscapes, or within mountain railway World Heritage sites, and to those few that are on tentative lists. Can such comparisons lead to valid tabulation of the iconic and other values ascribed to the bridges? Can elements of a bridge be broken down into attributes containing elements of outstanding universal value?

The paper aims to tackle the following questions in session 2.4:

What universal values can an industrial heritage property embody?

In candidatures for inscription on the world heritage list, can the specificities of the industrial heritage be brought to comply with UNESCO's categories and criteria?

Download the pdf on the left: <http://tccih-2015.sciencesconf.org/filetmp/0>

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\*Intervenant

# Le patrimoine du salpêtre chilien (XIXe-XXe siècles) et sa valorisation

Valentine Aldebert \*<sup>1</sup>

<sup>1</sup> Université Paris I Panthéon-Sorbonne (Master Erasmus Mundus TPTI (Techniques, Patrimoines, Territoires de l'Industrie)) – Université Paris I - Panthéon-Sorbonne – France

Les débuts de cette exploitation remontent aux années 1820 dans la région de Tarapaca. La première mention d'un chargement de salpêtre chilien (fertilisant) en destination de l'Europe date de 1830, à Iquique. Plus tardivement, l'exploitation du salpêtre se développe dans la région d'Antofagasta, ainsi que la mise en place de lignes de chemin de fer (années 1870).

On remarque la mise en place d'un véritable complexe technique composé par les lieux d'extraction du caliche (calicheras), les lieux de vies (campamentos et oficinas), les lieux d'élaboration du salpêtre (faenas), les moyens de transports et enfin les ports. La crise de 1929 ainsi que la découverte du nitrate synthétique par des chimistes allemands (Fritz Haber et Carl Bosch) en 1930 affaiblissent l'industrie du salpêtre chilien. Néanmoins les efforts pour la maintenir persistent encore, comme le prouvent la création d'un nouveau mode d'exploitation, appelé système Guggenheim (caliche de très faible teneur et lixiviation à 40°C), et mis en place dans deux oficinas : Pedro de Valdivia et Maria Elena. Cette dernière existe encore de nos jours. Dans la région de Tarapaca, deux oficinas se démarquent par leur exceptionnel état de conservation ; il s'agit de Humberstone et Santa Laura. L'inscription de ces deux sites sur la liste du patrimoine mondial de l'Humanité (UNESCO) le 17 juillet 2005 confirme leurs positions emblématiques au sein du patrimoine du salpêtre chilien.

Les limites de cette inscription : le cas de Pisagua

L'inscription de Humberstone et Santa Laura à la liste du patrimoine de l'Humanité permet la sauvegarde de deux sites représentatifs du patrimoine du salpêtre chilien, mais peu représentatifs de son histoire au vue de l'existence de sites majeurs tels que Pisagua.

Port d'une grande importance pendant le cycle d'expansion du salpêtre chilien (1870-1930), il a compté plus de 10 000 habitants. Pisagua évoque un épisode marquant de l'histoire de la Nation chilienne car il fut le théâtre du premier débarquement des troupes chiliennes lors de la Guerre du Pacifique ("Guerre du salpêtre") le 2 novembre 1879. Pisagua représente aussi un lieu de mémoire car il fut également un lieu de tortures lors de la dictature du Général Pinochet.

Capitale de département à l'époque, petit village de 200 habitants aujourd'hui, il possède toujours des vestiges de cette période : la torre-reloj et le teatro municipal (en pin oregon, datant de 1892). Tous deux déclarés monuments historiques par l'Etat chilien, ils sont inclus depuis 2013 dans un projet de restauration pour une mise en valeur patrimoniale. Le projet vise une conservation en vue d'une réhabilitation à utilisations multiples. L'exécution étant prévue en novembre 2014, il est possible de croire que les monuments sont maintenus dans leur état actuel. La réalité du terrain est tout autre.

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\*Intervenant

## **S.9.I — Management and Development**



# Le rendement économique et social du patrimoine industriel en Catalogne

Jaume Perarnau Llorens \*† 1

<sup>1</sup> Museu de la Ciència i de la Tècnica de Catalunya (mNACTEC) – Espagne

Différents moyens de conserver, réhabiliter et de fournir de nouveaux usages pour les espaces et les paysages industriels sont des exemples clairs et bons pour renforcer l'idée que le patrimoine culturel n'est pas nécessairement un fardeau social et économique et que, au contraire, peuvent être une importante outil pour la croissance et le développement économique et social dans une zone géographique. L'originalité, l'amélioration des systèmes mêmes, les technologies, les usages et les besoins de XXIe siècle peuvent faire devenir le patrimoine culturel de la société industrielle moderne un effet moteur unique tout en permettant sa préservation historique tandis que puisse fournir à la société qui l'avait créé et utilisé une ressource potentielle pour permettre un rendement efficace et justifiable sur l'investissement initial fait.

Des exemples déjà faits en Catalogne, avec un investissement public ou privé, ainsi que de nouvelles façons de rendre compte de cet retour social et des suggestions novatrices confirment la viabilité, donnent des raisons pour être optimiste et pour prendre en considération l'avenir imminent du patrimoine industriel.

Cette communication vise à découvrir les différents cas et des exemples où l'utilisation, la conservation et la promotion du patrimoine industriel contemporain d'une ville, d'une région ou d'une société quantifie un rendement économique et social positif, soit investissement économique et social, directement ou indirectement, dans leur propre économie, sur leur propre territoire et dans le même secteur économique concerné.

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\*Intervenant

†Auteur correspondant: [jperarnau@gencat.cat](mailto:jperarnau@gencat.cat)

# ”Adaptive Reuse” of Industrial Heritage for “The Experience Economy” Purpose in Historical City Center of Ayvalik

Nagme Ebru Aydeniz \*†<sup>1</sup>, Sergio Taddonio \*‡<sup>1</sup>

<sup>1</sup> Yasar University, Department Of Interior Architecture And Environmental Design – Turquie

This paper is focused on an “Adaptive Reuse” of an industrial heritage with “The Experience Economy” purpose and Gastronomy Center Project with the curiosity concept is developed for an Old Olive Oil Factory in Ayvalik. “The Experience Economy”, which is the new economy phenomenon, is a tool for Re-Functioning, Rehabilitation, Regeneration, Revalorisation, Conversion, Readaptation of abandoned industrial heritage. Ayvalik, which is located on the western coast of Anatolia, is an industrial settlement which owes its 19th century development to olive and olive oil production. Olive oil was produced in workshops and houses at first. Then it was started to be produced in factories in the last quarter of the 19.th century after the increasing volume of trade in Izmir-based Western Anatolia and magnificent industrial buildings with large volume were constructed which were very close to the port and commercial use, in the coastal plains. These buildings have a special place in historical continuity and urban identity of Ayvalik. Madra Olive Oil Factory, which is one of these industrial structures, was first constructed as a flour factory in 1800s by a Greek producer. After the population exchange between Greeks and Turks in 1923, the building passed into the hands of Madra family and two annexes were constructed on both sides of the old building in 1950s and abandoned at the beginning of 2000s. In addition to olive oil production Ayvalik has a great cuisine culture due to its multi-cultural population which consist of immigrants from Bosnia, Crete Island and other Greek islands. Gastronomic tourism, which is also known as “food tourism”, “tasting tourism” or “culinary tourism” is a rising value in the world in recent years. This paper represents a project which converts Madra factory into a Gastronomy Center of Ayvalik cuisine for locals and tourists. The main aim of the design is to keep people’s curiosity alive about the Ayvalik cuisine culture while serving their all senses. There is a circulation system which settled inside the existing historic building. This circulation system which is separated by gallery gaps and translucent walls, always shows the end of the complex, called “Result Area” from the beginning on but it never lets people reach there. By this way people always see result area while smelling and tasting foods, watching and learning how to cook, using interactive library and earth market but they can’t reach before they experience all Ayvalik and Mediterranean cuisine culture in every respect. As a result the industrial heritage will have been renovated and conserved while both contributing the attractiveness of the town and promoting the Ayvalik Cuisine.

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\*Intervenant

†Auteur correspondant: ebru.aydeniz@yasar.edu.tr

‡Auteur correspondant: sergio.taddonio@yasar.edu.tr

# Les ocres du Luberon : un paysage industriel pour quoi faire ?

Mathieu Barrois \*†<sup>1</sup>

<sup>1</sup> ÔKHRA – Conservatoire des ocres et de la couleur (ÔKHRA) – ôkhra – Conservatoire des ocres et de la couleur – France

- En 2012 une étude menée par l'ADT du Vaucluse et le Parc naturel régional du Luberon recensait sur le territoire du Pays d'Apt 576 800 visiteurs annuels. Les 5 sites liés à l'exploitation industrielle de l'ocre (3 carrières, une usine et un musée) reçoivent au total 430 000 visiteurs par an.
- En 1994 le travail de l'ocre occupait 11 personnes (producteurs), 20 ans plus tard la filière compte 50 salariés (etp) dont 20% pour la production et 80% pour la valorisation culturelle et touristique.

Ces deux éléments factuels soulèvent les questions suivantes :

Elément déterminant de la dynamique touristique du territoire et du département (un des 4 thèmes dominant avec Avignon, le vin et le vélo) pour quelle raison l'ocre demeure dans l'imaginaire des visiteurs un paysage naturel et non culturel ou industriel ? 3 des 5 sites de visites ouverts depuis 20 ans (usine Mathieu en 1995, musée de l'aventure industrielle d'Apt en 2004, Mines de Bruoux en 2009) s'inscrivent délibérément dans un patrimoine industriel revendiqué et mis en valeur.

Pourquoi ne pas utiliser cette ressource économique et patrimoniale internationalement reconnue pour répondre à nos interrogations contemporaines ? Quelle est la place de l'homme dans la transformation de son environnement ? Que reste-t-il de son intervention 50 ans après la fin de l'exploitation industrielle ? Comment utiliser nos ressources minérales naturelles de manière durable ? Le choix d'ôkhra de travailler à la transmission des savoir-faire nous conduit depuis 20 ans à associer directement culture technique et économie selon le principe que l'économie finance la culture qui cultive l'économie. A cette approche horizontale des usages techniques des matériaux de la couleur à travers les différents métiers et continents, s'est superposée une approche verticale sur le territoire en intégrant l'ocre dans son environnement géologique, économique, social et culturel. La nature du projet sur les savoir-faire et le choix de l'ancrage économique et culturel ont nécessité l'intégration de toutes les parties prenantes dès l'origine à la gouvernance du projet. La transformation de l'association ôkhra en coopérative d'intérêt collectif en 2004 n'a été que le prolongement logique de cette démarche. Cette coopérative de territoire compte parmi ses 250 sociétaires, salariés, fournisseurs, clients, bénévoles et collectivités territoriales, soit tous les acteurs producteurs de biens ou de services ou les bénéficiaires de l'action de la coopérative. Le projet actuel est de développer un pôle territorial de développement économique autour de l'ocre et des couleurs.

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\*Intervenant

†Auteur correspondant: mathieubarrois@okhra.com

## S.10.A — UNESCO / ICOMOS / TICCIH

# **Le Bassin minier du Nord Pas de Calais : Une stratégie d'aménagement et de développement fondée sur la protection et la valorisation d'un paysage industriel inscrit sur la Liste du patrimoine de l'UNESCO**

Raphaël Alessandri \*<sup>1</sup>

<sup>1</sup> alessandri (mbm) – mission bassin minier – France

L'inscription du Bassin minier sur la Liste du Patrimoine mondial en 2012 au titre des Paysages culturel, est le signe tangible d'un changement de regard sur ce paysage post-industriel. Elle est également le symbole de l'évolution des stratégies de développement engagé depuis une quinzaine d'années sur ce vaste territoire. Le long processus d'inscription sur la Liste du Patrimoine mondial (12 ans) a été l'occasion de construire une connaissance fine de cet héritage, de le faire partager, et d'imaginer une nouvelle trajectoire de développement qui articule protection, aménagement et gestion des paysages. La présentation permettra de développer trois aspects de cette démarche.

1 La connaissance pour changer de regard sur un territoire stigmatisé : Appliquer le concept de Paysage culturel à un territoire post-industriel, fortement anthroposé a permis de porter un nouveau regard sur un héritage longtemps stigmatisé. La présentation montrera sur la base d'exemples concrets le caractère " organique " de l'héritage minier (patrimoine technique et social, urbain et néo-naturel), mais également la manière dont la construction d'un " regard commun " peut alimenter et orienter les projets de renouvellement et d'aménagement.

2 Une stratégie de développement fondée sur l'héritage minier et le paysage. Le Plan de gestion UNESCO pour le Bassin minier considère les éléments de l'héritage minier (batis et néo-naturels) ainsi que les paysages remarquables qu'ils ont engendré, comme des potentiels sur lesquels fonder une stratégie d'aménagement plus durable du territoire. Cet héritage est donc considéré dans toute sa dimensions (sociale, urbaine, économique, culturelle, environnementale). La présentation s'attachera à montrer la manière dont Les éléments hérités de l'activité minière et plus généralement la prise en compte des paysages remarquables, sont envisagés comme des éléments capables d'améliorer le quotidien des habitants, de mailler positivement le territoire, de lutter contre les tendances à l'étalement urbain, mais également de contribuer au redéveloppement du territoire.

3 Articuler les outils de protection, d'aménagement et de gestion pour assurer le maintien de la VUE. Quelque-soit sa nature, le patrimoine du Bassin minier est sans cesse tiraillé entre la nécessité de poursuivre l'évolution générale du territoire et le besoin, dans une perspective d'avenir, d'en respecter les fondements. Le plan de gestion UNESCO du Bassin minier combine trois approches complémentaires: la réglementation, la contractualisation, marque de l'engagement des partenaires et un programme d'action ambitieux. La présentation évoquera le travail partenarial engagé depuis 12 ans avec l'Etat, les collectivités, les propriétaires et gestionnaires du Bien, pour imaginer et mettre en œuvre ce plan de gestion.

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\*Intervenant

# Pick the Best: The World Heritage of the Timber Industry

Paul Mahoney \* <sup>1</sup>

<sup>1</sup> Department of Conservation – Nouvelle-Zélande

Scope : This paper outlines a systematic comparative method to identify industrial World Heritage Sites based on outstanding universal value. The method is tested using a pilot study for the global forest industry. The pilot engages with a heritage topic named Global Wood, encompassing all uses of wood in all places in all eras: the highest possible level. The method likely has wider application in World Heritage. Model : The Global Wood model is developed using primary sources and comprises three era elements, each with four process elements. For all 12 core elements an outstanding heritage example was sought to evaluate the strength of the model. Each core element may have World Heritage potential. During the 320 year industrialisation era, power and machines were successfully applied globally to all four process elements, usurping hand craft methods. Pilot : A pilot study develops and tests a systematic comparative method to identify World Heritage Sites. The pilot investigates the harvest element of the industrialisation era. Because of the global extent and 320 year time period the scope was scaled down to a subset of harvest. Data availability influenced the choice of forestry railways for the pilot. The scale of data was still vast. Since 1850 an estimated 10,000 forestry railways have existed in 52 countries on all continents aggregating over 100,000 km. The method used to investigate the outstanding universal value of forestry railways considers three high-level investigative questions in sequential order: 1. Value: what is the nature of the lead value being considered? ; 2. Universal: is this value sufficiently substantive to be universal? ; 3. Outstanding: which site comparatively is the most outstanding for this value? A paper detailing this three step methodology will be presented to the 2014 ICOMOS Scientific Symposium. The Global questions arising include: 1. What was the nature of the development and distribution of forestry railways and were they sufficiently globally adopted to merit World Heritage consideration? ; 2. Are forestry railways sufficiently large scale and sufficiently distinctive to merit World Heritage consideration? ; 3. What ideal mix of qualities would be sought to designate a forestry railway as having exceptional heritage value for the industrialisation of harvesting? ; 4. What forestry railways of exceptional heritage value survive today and how do they rate on authenticity, integrity, protection and management? All 10,000 forestry railways were considered. The initial selection applied two broad eligibility criteria resulting in eight outstanding candidates in six countries. Then a more detailed global comparative analysis investigated those candidates. With outstanding candidates the result was close. Success has inspired further work to extend the comparative analysis across all process elements within the industrialisation era to build a stronger value proposition. Some initial results are available.

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\*Intervenant

# **Industrial Cultural Landscapes and World Heritage: Examples and Definitions. A report on two successive international congresses in Germany 2013 and 2015**

Rolf Hoehmann \* 1

<sup>1</sup> Bureau for Industrial Archeology – Annastrasse 26A D-64285 Darmstadt, Allemagne

The question of Industrial Cultural Landscapes developed in the last years following the nomination of several industrial sites in the World Heritage List, which claim themselves to be „industrial landscapes“ or use similar descriptions. The UNESCO World Heritage Center had discussed the definiton of „Cultural Landscapes“. Do we need a similar definition for the Industrial Heritage and its landscape?

The german TICCIH- and ICOMOS Industrial Heritage groups joined their forces to organize two successive international congresses on this topic. The first meeting was held in October 2013 in Freiberg/Saxony, the center of activities for the Ore Mountains German/Czech World Heritage nomination. Main topics were the presentation of examples of „industrial landscape/industrial cultural landscapes“ inscriptions and future proposals on the WH-List, like Ironbridge, Cornwall, Nord-Pas de Calais, Ore Mountains e.a.

The next conference will be held in Dortmund in February 2015. After the presentation of more examples like Blaenavon, Derwent Valley, the Harz Mountains Water Management System e.a., a full day will be devoted to discussions about the descriptions, definitions and finally probably a Charta for Industrial Cultural Landscapes.

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\*Intervenant

# The Future of the TICCIH/ICOMOS World Heritage Studies in promoting Industrial Heritage Nominations

Stephen Hughes \* 1

<sup>1</sup> The International Committee for the Conservation of the Industrial Heritage (TICCIH) – Bronsiriol, Brynymor Road, Aberystwyth, Ceredigion, SY23 2HX., Royaume-Uni

76 industrial heritage monuments & sites now form an integral part of the World Heritage List but that is still less than one per cent of the 810 cultural & mixed cultural and natural sites on the World Heritage List.

In early 1994 the World Heritage Committee of UNESCO adopted the Global Strategy for World Heritage Sites and the International Secretariat of ICOMOS responded by producing the Global Strategy Report in which the industrial heritage was identified as one of the areas under-represented. The subsequent Filling the Gaps Report confirmed those conclusions. In order to fill those gaps with respect to the Industrial Heritage the International Secretariat of ICOMOS encouraged TICCIH to commence a series of World Heritage Studies to provide criteria and context for more Industrial Heritage nominations for the World Heritage List.

Working with international colleagues from TICCIH the author of this paper produced the first of the World Heritage Studies on the Industrial Heritage in 1996 which set the template or future World Heritage Studies. TICCIH produced five joint World Heritage Studies with ICOMOS, all available on the ICOMOS website, before the author produced the last of the joint studies, after international consultation in 2003.

In 2012 the speaker, with the approval of the TICCIH Board, contacted the International Secretariat of ICOMOS to discuss a renewed programme of World Heritage Studies. Work began on an initial group of three new studies. These are led by appropriate industry experts from two countries with at least one of the experts being a member of TICCIH and the working group representing a range of experts with several TICCIH members being present. The draft studies are then made available on the TICCIH website and to the International Secretariat of ICOMOS for comment.

The first of the new Studies is On International Building-stone Quarries with a more focussed Study specifically on International Slate Quarrying & Mining. European funding has allowed two international meetings on the topic. A third Study has begun on International Copper-smelting sites with funding from the Leverhulme Education Trust. This has enabled three international seminars on the subject to be held. The fourth proposed study is on iron-smelting sites. Workable templates for further studies have been developed in consultation with ICOMOS and will be discussed during the presentation of this paper together with a provisional list, for discussion, of what future World Heritage Studies might be produced.

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\*Intervenant

## S.10.B — Automobiles

# Creative brand and material / immaterial heritage enhancement. The Turin UNESCO Creative City application for the historical automotive heritage and the design

Rossella Maspoli \* 1,2

<sup>1</sup> Politecnico di Torino [Torino] (Polito) – Politecnico di Torino - Corso Duca degli Abruzzi, 24 10129  
Torino, Italie

<sup>2</sup> Associazione Italiana per il Patrimonio Archeologico Industriale (AIPAI) – Italie

The Creative Cities Network programme involves cities around the world, interested in sharing experiences, ideas and best practices for cultural, social and economic development. In this perspective, the cultural potential of a industrial/post-industrial territory refers to the heritage active conservation and the innovative re-development. The industrial heritage memories represent the continuity and they are the guarantee for the stakeholders that the core values of the city-brand are authentic and true.

Four integrated city-branding themes characterize the candidature of the city of Turin - the Italian capital of automotive - as Creative City (2014) within the design field: automotive historical heritage and industry, design and creative innovation, technology innovation for mobility and automotive, urban regeneration and sustainable development.

The 're-creation of memories', according to the contemporary perception and the aesthetic vision as 'new territories of the arts', have emerged as central issues.

Indeed, UNESCO international declaration of intangible and tangible cultural value can play strategic roles: to increase attention to the industrial heritage, to strengthen the protection plan and to promote thematic network of cultural communication and industrial tourism.

The UNESCO Creative City candidatures can facilitate the foundation of research networks on historic 'motowns' committed to become creative/innovative cities, such as Turin, Detroit, Nagoya.

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\*Intervenant

# MOTORING AND HERITAGE. An integrated approach to the studies of the impacts of the sector in the contemporary societies, its potentials as driver for cultural development and the UNESCO's cultural promotion

Rossella Maspoli \*<sup>1</sup>

<sup>1</sup> Politecnico di Torino – Italie

Session proposal Associazione italiana per il patrimonio di archeologia industriale/ the Italian Association for the archeological industrial heritage. Most likely, there is no other phenomenon that has influenced our daily lives at a planetary scale as the motoring, and, in particular its implications in terms of vehicles mobility. A large spectrum of tangible and intangible aspects of the motoring have been shaping modern societies, ranging for the ‘mere’ industrial aspects, to the more cultural ones, having influenced (and being influenced by) music, visual arts, fashion, events organisation. An interesting conceptual and analytical perspective to this sector is given by the recent development of various initiatives related to the historical vehicles in relation with the UNESCO designation schemes. This approach is offering a very interesting matrix to analyse the various components of the motoring in relation to the different categories of heritage: from the tangible heritage to the intangible one (to cover the pure cultural aspects, as the traditions and the technical know-how); and from the Memories of the World Initiative (where we can find the 1886 Benz Patent of a gas engine) to the Creative Cities Network, where the city of Turin (Torino) has recently submitted its candidature, that was designed around the key role that the automobile industry has played in the past and how this heritage is being transformed into a driver for a creativity and innovation for the future. The issue of industrial heritage valorisation concerns the changing perceptions, in the 21st century, and the role it can play in the construction of collective identity and memory. The perspective is to move beyond the classical view of industrial history, to experience, to urge the consciousness of past events that continue in other forms to be current events. The documentation (cataloging, indexing, listing) and the coherent enhancement of the tangible and intangible assets of the Industrial Heritage can play an important role in re-defining the territorial brand and the marketing policies to sustainable development and cultural tourism. The industrial tourism is related to the cultural and loisir quality of the territory, it can combine the past and contemporary resources with regard to products, companies, architecture, landscaped routes and museums points. The automotive industrial sector shows considerable tourist promotion strategies and high number of tourist visitors. This success is related to the high symbolic value of the products and to the plans of corporate brand identity. The session intends to further developed all these heritage related aspects and to identify a possible future research clusters.

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\*Intervenant

# Car Project. The architectural heritage and landscape of the car

John Minnis \*† 1

<sup>1</sup> English Heritage – Royaume-Uni

English Heritage (now Historic England) undertook a major national survey of the impact of the motor car on the historic environment of England, looking at both buildings and landscapes. The project, led by Kathryn A. Morrison and John Minnis, was necessary as, despite the presence of the motor car in England for almost 120 years, little research had been done on its impact and it was difficult to assess the significance of motor-related buildings. A programme of research and fieldwork took place and resulted in two substantial books, several reports, extensive media coverage and enhanced protection through listing of some 20 buildings, together with much greater public awareness of England's motoring heritage.

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\*Intervenant

†Auteur correspondant: john.minnis@english-heritage.org.uk

## **S.10.C —Museums**

# Les Soieries Bonnet : de l'usine au musée. Réflexion autour d'un couple improbable.

Anne-Sophie Vallée \*<sup>1</sup>

<sup>1</sup> Centre d'Etudes et de Recherche en Histoire Culturelle de l'université Reims Champagne-Ardennes –  
Centre d'Etudes et de Recherche en Histoire Culturelle de l'universiteims Champagne-Ardennes –  
France

Jujurieux dans l'Ain. C'est en 1835 que le fabricant de soieries lyonnaise Claude-Joseph Bonnet implante son usine dans ce village du Bugey dont il est originaire.

Ainsi, en parallèle du monde des canuts, il développe son entreprise commerciale avec la création d'une filature ainsi que d'une usine de tissage. De plus, l'implantation d'un pensionnat au sein de l'usine pour loger la main d'œuvre féminine ; l'encadrement stricte de ces dernières par des sœurs religieuses ; le développement du travail à domicile en milieu rural ; la spécialisation dans la fabrication du tissu uni noir... font de lui un des plus importants fabricants soyeux de son époque.

À sa succession ses petits-fils étendent la renommée de l'entreprise au niveau international et développent la production avec l'introduction des tissus façonnés. L'entreprise ferme ses portes au début des années 2000. La désindustrialisation fait alors place au processus de patrimonialisation avec dans un premier temps le rachat des bâtiments par la Communauté de Communes Bugey Vallée de l'Ain. Un an après le Conseil Général de l'Ain rachète l'ensemble des collections présent sur le site en en faisant le plus grand fonds du pôle muséal du département avec environ 300 000 objets (archives, esquisses, tissus, échantillons, outils, machines...).

La rapide réactivité de la collectivité après la fermeture de l'usine ainsi que la conservation et la préservation des collections dans leur écrin originel en font un exemple de sauvegarde et de valorisation dans le domaine textile.

La question ici est de savoir si les Soieries Bonnet est un site exceptionnel et si oui en quoi. Pour ce faire une réflexion comparative avec divers autres usines textiles transformées en musées, telles que la Cité internationale de la dentelle et de la mode à Calais, la Manufacture des Flandres à Roubaix, l'atelier-musée du chapeau à Chazelles-sur-Lyon ou encore le musée de la soie à Derby en Grande-Bretagne, le musée Almgren Sidenvaveri à Stockholm en Suède, le musée Slater Mill à Pawtucket aux États-Unis, appuiera le propos. Le travail est de mettre en évidence la nuance entre les usines qui se sont transformées en musées, en gardant ainsi une lisibilité continue par rapport à leur histoire et leur patrimoine, et les musées dont les collections sont indépendantes du lieu où elles sont présentées afin de valoriser la spécificité du site des Soieries Bonnet.

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\*Intervenant

# Textile Museums in Mexico Revisited. New proposals for the twenty-first Century

Humberto Morales Moreno \* 1

<sup>1</sup> Université Autonome de Puebla-Mexique – Mexique

In the post-industrial Western civilization, the proliferation of museums in manufacturing, industrial and technological centers clearly remarks the end of the classic industrial age (between 1760 and 1945). First and second comers as the United Kingdom, Germany, France, Spain or the United States, have transformed their former productive landscapes into interpretation centers, museums and thematic parks. [... see attached file]

Despite the impossibility of constructing linear stories, not fragmented, this paper “revisit” current museology in textile museums in Mexico, watching changes in the modalities of performance and, consequently, of public service. In many modern non-industrial Mexican museums, the dominant approach is now different from the traditional erudition or linear reading. Even in many museums of art or science there is a commitment to a full awareness of the observers transforming them into quasi-painters or potential scientists. Interactive technology facilitates the possibility of historiographical update. On the other hand, painting murals, for example, became themselves works of art, in fundamental reference of a certain aesthetic consciousness of the 20th century. For this reason, it is impossible to reuse them in modern polyvalent senses. Hence the importance of choosing materials and presentation techniques that allow the systematic reinterpretation and optimum technical maintenance of long term and low cost. This is not the case of the traditional industrial museums in Mexico.

Our proposal here is to show in the case of the new Textile Industrial Museum project in the historical site of “La Constancia Mexicana” how it can be Orozco, on reform and Benito Juárez, or Juan O'Gorman restored the rhetorical role of a modern museology and museography saying or telling things rejecting the (silent) pedagogical rigidity of the traditional museums. The textile industrial heritage in Mexico runs since 1835 and need a kind of postmodern transition from the objects/fragments museology and museography, to a modern museum live stage.

What is the basic premise of any modern Museum? Its starting point is in the design of a narrative program aimed at a task: subjects (users, visitors or observers) purchased a certain cognitive habilitation (a historical knowledge, an aesthetic knowledge, scientific knowledge, etc). Museography is ultimately a vision device, creates a field of visibility and, consequently, of intelligibility. What is at stake is the relationship between Doing-seeing and Seeing-doing. Doing-seeing is achieved with the organization of space and thematic exposition, Seeing-doing with the guided tour. In Mexico, the new project of “La Constancia Mexicana” puts together tangible and intangible inheritance, rather than heritage, highlighting the original Mexican way to fabrics in a majestic industrial site retooled in an elementary school for young musicians, managed by the State Government of Puebla, the first industrial town in Latin America since 1835.

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\*Intervenant

# Le Musée portuaire de Dunkerque, de l’ancrage territorial à la découverte de nouveaux horizons

Marie-Laure Griffaton \*† 1

<sup>1</sup> Conservateur en chef du Musée portuaire de Dunkerque – Musée portuaire de Dunkerque – France

Depuis sa création, au début des années 80, à l’initiative des dockers et avec le soutien des collectivités locales, le musée a développé des liens très étroits avec les professionnels du port et les habitants du territoire.

Il présente, à partir de l’exemple de Dunkerque, l’histoire d’un port et de son fonctionnement, du XVII<sup>e</sup> siècle à la période contemporaine. Le musée propose de faire découvrir un univers aussi complexe que méconnu. Il évoque notamment le rôle essentiel du port dans le processus d’importation des matières premières -laines d’Australie, arachides d’Afrique, nitrates du Chili, minéraux du Brésil... pour alimenter des industries dunkerquoises telles que la sidérurgie ou l’usine Lesieur ainsi que des établissements de la région lilloise- et d’échanges de produits manufacturés. Il montre ainsi comment, au fil des années, les acteurs du port ont dû innover et s’adapter aux évolutions et enjeux de la mondialisation de l’économie et quelles ont été les répercussions sur les habitants du territoire.

Le musée offre un large panel d’approches pour s’adapter aux besoins d’un public très diversifié, des jeunes enfants à des techniciens chevronnés. Ces approches permettent que chacun, selon ses connaissances, ses envies, ses pratiques culturelles, puisse mener une visite en quatre temps : le premier, du rêve et de l’émerveillement ; suivi de la découverte des œuvres présentées ; puis de la curiosité qui conduit à s’intéresser aux thématiques, et enfin, celui de la compréhension et de l’envie d’approfondir ses connaissances et sa réflexion.

En montrant comment, au cours de l’histoire, les Dunkerquois ont su s’adapter et faire face à chaque crise, et en favorisant la découverte de nouveaux horizons, le Musée portuaire ouvre de nouvelles perspectives à ses visiteurs et peut ainsi contribuer activement à la construction de l’avenir de son territoire.

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\*Intervenant

†Auteur correspondant: MLGriffaton@museeportuaire.fr

## **S.10.D —New Research, scales and tools**

# **Le petit patrimoine industriel wallon: connaissance, reconnaissance, projets de mise en valeur. Projet pilote : la galerie d'exhaure des sites miniers du Rocheux, Oneux, Theux (Belgique)**

Pierre-Louis François \* <sup>1</sup>

<sup>1</sup> Université de Liège – Place du 20-Août, 7 4000 Liège BELGIQUE, Belgique

La Wallonie fut la deuxième puissance industrielle mondiale dans la seconde moitié du XIX<sup>e</sup> siècle. Complémentairement aux exploitations majeures faisant aujourd’hui l’objet d’un intérêt patrimonial reconnu, elle regorgeait d’une multitude de petites exploitations. Ce petit patrimoine industriel wallon est aujourd’hui délaissé et menacé. Il fait pourtant partie intégrante de notre histoire industrielle. Il contient ces maillons indissociables ayant permis l’essor de notre économie, de développements culturels et sociaux et de nombreuses techniques industrielles. De nombreux vestiges dispersés dans nos campagnes sont les derniers témoins de cette histoire. Méconnus de tous, ils sont souvent malmenés et disparaissent les uns après les autres au profit d’un remaniement territorial. Quel avenir pouvons-nous leur offrir ? Notre travail, réalisé dans le cadre d’un mémoire pour un master spécialisé en conservation et restauration du patrimoine (Master spécialisé en conservation et restauration du patrimoine culturel immobilier, réunissant les 5 pôles universitaires de la fédération Wallonie-Bruxelles et l’Institut du Patrimoine wallon.), propose, par l’étude d’un site pilote, la mise en place d’un plan de revalorisation destiné à être appliqué à l’ensemble des sites du petit patrimoine industriel wallon. Nous visons, dans un premier temps, l’identification, l’inventaire, l’enregistrement et l’analyse systématique des vestiges archéologiques du paysage industriel, à savoir le site lui-même, ses structures, ses composants, ses machines, etc. Une approche pluridisciplinaire permet de documenter et d’enregistrer le bien de façon méthodique et précise. Les informations récoltées permettent de mettre en place une reconnaissance du bien et des stratégies d’action. Différents niveaux de lectures sont proposés, du spécialiste au scientifique, en passant par l’habitant et le visiteur lambda. Dans cette optique, complémentairement aux options prises en matière de conservation, restauration, monitoring du bien, le projet pilote propose, en continuité avec la démarche opérée par les routes régionales et internationales du patrimoine industriel, la réalisation d’une carte de promenades didactiques parcourant ces paysages. Elle est complétée par des outils offrant les informations spécifiques au site. L’ensemble permet au visiteur de comprendre ce paysage industriel, son histoire et ses techniques, localement et dans l’appréciation globale de l’histoire industrielle wallonne. L’étude des impacts économiques de cette démarche patrimoniale précise en outre les opportunités apportées à l’économie culturelle, scientifique et touristique, ainsi qu’à la participation citoyenne dans les zones concernées.

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\*Intervenant

# Transmitting Aem's Industrial Heritage. From archival sources to the electrical landscape.

Fabrizio Trisoglio \*<sup>1,2,3</sup>, Francesco Carlo Toso \*

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<sup>1</sup> Fondazione Aem - Gruppo A2A – Piazza Po, 3 20144 Milano, Italie

<sup>2</sup> Politecnico di Milano (POLIMI) – Italie

<sup>3</sup> Associazione Italiana per il Patrimonio Archeologico Industriale (AIPAI) – Italie

Established in 1910 by the municipality of Milan, in order to manage electric production and municipal lighting services, Aem (Azienda elettrica municipale) has developed its important infrastructure throughout the XXth century, comprising a network of alpine hydroelectric facilities that closely link the development of the city with the alpine territories of Lombardy. Fondazione Aem was established in 2007, in order to preserve the historical heritage of the company, before the fusion with Asm of Brescia and the establishment in 2008 of A2A Group, a multi-utility involved in electric production, waste collection and gas service. The foundation has among its goals to safeguard the history and company culture of Aem, to preserve and disseminate knowledge on its cultural goods, including the historical archives of the former administration, an extensive photographic archive including ranging from documentation of construction works to both everyday life and important events in the history of the company and the city, to signature photography.

Headquarter of Fondazione Aem is the House of Energy and Environment, an old electric substation in Milan transformed into an interactive didactic energy museum and a place dedicated to the promotion of our historical archives.

In fact, the heritage of the company also includes important remains of industrial archaeology: historical power stations, substations and hydroelectric power plants built in the early decades of the XXth century and involving careful architectural design.

To promote the Aem's Industrial Heritage, since 2012 Fondazione Aem has included in its cultural programs the organization of tours in Milan including many historical buildings of the company and its industrial neighbourhoods. These tours, promoted with Politecnico di Milano, have produced short flyers which can be downloaded online from our website. A new goal of the foundation is now the creation of hydroelectric itineraries in Valtellina, integrating the industrial topic in the existing routes and disclosing a landscape layer which is today still marginal in the local cultural and tourism offer. The implementation of visit routes has begun in May 2014 with a cycle of experimental guided tours and will be brought forward with the creation of excursion itineraries in view of the Expo 2015.

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\*Intervenant

# A mise en abyme of the industrial heritage: The Archives nationales du monde du travail in the former Motte-Bossut spinning mill (Roubaix)

Vincent Boully \*†<sup>1</sup>, Louis Le Roc'h Morgère \* ‡

<sup>1</sup> Archives nationales, France (ANMT) – Archives nationales – France

Installées à Roubaix, les Archives nationales du monde du travail trouvent leurs origines en 1983, dans le projet du ministre de la Culture Jack Lang de créer des centres interrégionaux d'archives du monde du travail dans les grandes régions industrielles françaises, au premier rang desquelles le Nord-Pas-de-Calais. Dix ans plus tard, le Centre des archives du monde du travail de Roubaix est inauguré, au terme de grands travaux de réhabilitation de l'ancienne filature de coton Motte-Bossut. C'est à l'architecte Alain Sarfati qu'est confié l'exercice délicat de convertir ce bâtiment industriel du milieu du XIXe siècle en bâtiment d'archives moderne, et par là trouver un équilibre entre la préservation d'un patrimoine industriel bâti et la conception d'un lieu pour un autre type de patrimoine industriel : les archives. La création d'un service public d'archives consacré exclusivement aux "archives des entreprises industrielles, commerciales et bancaires, ainsi que de la vie syndicale et associative dans le cadre du monde du travail" répond au regain d'intérêt pour le patrimoine industriel dans les années 1970-1980. Devenues un service à compétence nationale du ministère de la Culture, les Archives nationales du monde du travail veillent aujourd'hui encore à la préservation et la valorisation des archives d'entreprises, d'architectes, de syndicats et d'associations. Entrés par don, dépôt ou acquisition, les documents d'archives y sont classés, répertoriés, conservés et communiqués. La communication proposée abordera ces deux thèmes principaux que sont la transformation d'un bâtiment industriel patrimonial d'une part, et le rôle des Archives nationales du monde du travail en France d'autre part.

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\*Intervenant

†Auteur correspondant: vincent.boully@culture.gouv.fr

‡Auteur correspondant: louis.lerochmorgere@culture.gouv.fr

## S.10.E — Conflicting Values



# Conflicts of Value, Cultural Consumption and Destination of Industrial Heritage Sites in Brazil

Priscila Henning \*† 1,2

<sup>1</sup> University of Campinas [Campinas] (UNICAMP) – Campus Universitário Zeferino Vaz, Barão Geraldo, Campinas - SP, 13083-970, Brésil

<sup>2</sup> Universidade Cruzeiro do Sul – Av. Regente Feijó, 1.295 - São Paulo/SP, Brésil

The attention given to cultural heritage has increased dramatically over the last century, reflecting a gradual consideration of these structures of both cultural and economic value. Culturally, the comprehension of heritage and its particularities have become more and more accessible to society as a whole as many of these places are revitalized, restored and publicized as a local tourist attraction. Economically, the touristic industry, which has been traditionally linked to the existence of heritage sites, has boomed during the last decades, according to the World Tourism Association (UNWTO).

Despite the growing recognition and valorization of built heritage and the vast production of literature regarding its preservation, the actions on these have reflected the misunderstanding and conflict of interests pertaining the subject. Many citizens don't understand its particularities, pathologizing signs of aging or outmoded style and expecting a spectacular treatment of the site as a consumable product – and these have resulted in many interventions which are in discordance to international discussions or theoretical paradigms on the subject. On the other hand, historic sites have been constantly challenged by pressure of real estate speculation due to the increase of the cost of land, especially in consolidated urban areas, and the emphasis placed on its practical usage. Though in a different context, these conflicting questions have all been the investigated by Alois Riegl in the beginning of the 20th century, and remain a valid perspective to elicit the contemporary challenges in conservation of build heritage.

This problematic is more acutely notable in industrial heritage sites, due to its usual large dimensions – making them more prone to financial pressure on the destination of its urban land to more contemporary and ‘useful’ structures – and its aspect and function. Since these sites haven’t been built intentionally to be artistic but functional, and in a technocratic society the fact that it has become outdated renders it useless in the opinion of most actors involved. Nevertheless, the importance of its historic value justifies its conservation, and the contradicting issues must be clarified urgently to face the frequent demolition of rare and important sites.

This paper proposes to discuss this problematic in the Brazilian scenario through the selection of case studies which illustrate the polarized treatments industrial sites have been receiving, such as SESC Pompeia and Estação da Luz, in São Paulo; the municipality of Paranapiacaba, Cais Estelita in Recife, and the district of Mooca, in São Paulo.

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\*Intervenant

†Auteur correspondant: prihenning@yahoo.com

# Préservation du patrimoine industriel et restauration écologique, de l'incompatibilité à la complémentarité : inventer un nouvel équilibre nature/culture

Hélène Melin \* 1

<sup>1</sup> Centre lillois d'études et de recherches sociologiques et économiques (CLERSE) – CNRS : UMR8019, Université Lille I - Sciences et technologies – Fac. Sciences éco. et sociales, France

Si la question du patrimoine industriel comme vecteur de développement culturel territorial est bien connue, son lien avec la problématique écologique reste encore aujourd’hui sous évoqué. Il ne s’agit pas de dire que la patrimonialisation a ignoré les conséquences environnementales des activités. Dès l’arrêt de l’exploitation charbonnière des mesures ont été prises pour traiter, confiner ou restaurer les espaces et mesurer la dangerosité des sols. Pour nombre d’autres friches, pétrochimiques notamment, la dépollution reste une question centrale et d’actualité. Ce qui nous interroge ici, c’est justement cette façon de traiter des liens entre espèces et milieux naturels et anciens lieux industriels. Ceux-ci ont souvent été vus comme des “ séquelles ” avant d’acquérir, de haute lutte, le statut de patrimoine. Une fois réhabilités au plan culturel, leur présence dans le paysage a été admise, parfois recherchée et mise en avant comme la reconquête d’une fierté régionale. Cependant, quid de leurs liens, anciens et nouveaux, avec les espaces “ naturels ” ? Il semble que leur impact sur la nature soit encore majoritairement conçu sur le mode de la prédation et de la dégradation. Industrie et nature sont présentées comme des antithèses. La situation n’est pourtant pas aussi simple. Il est connu qu’une biodiversité très spécifique s’est développée sur les terrils. Plusieurs anciens carreaux de fosse ont été classés en Espaces Naturels Sensibles dans le bassin minier Nord Pas de Calais. De la même façon, des expérimentations de phyto-remédiation, de dépollution par les plantes, sont menées au sein de friches urbaines, textiles et chimiques par exemple. On a en outre constaté la présence d’espèces rares en milieu industriel urbain, pourtant stigmatisé. Traiter de la question des paysages issus de l’industrie et de leurs rôles dans la vie des territoires sous l’angle de leurs interrelations avec les écosystèmes nous paraît fondamental. Il s’agit ici de revenir sur le dualisme nature-culture pour envisager les complémentarités entre valorisation du patrimoine industriel et restauration de la diversité biologique. La région Nord Pas de Calais est un exemple particulièrement pertinent. Du point de vue du nombre et de la diversité des anciens lieux industriels, implantés en milieu rural aussi bien qu’en milieu urbain et péri-urbain, bien sûr, mais également au regard des initiatives, souvent pionnières, menées, par des acteurs associatifs et des collectivités locales et territoriales. De nombreux exemples pourront être abordés : expérimentation d’une Transformation Ecologique et Sociale de la région par le CR Nord Pas de Calais, gestion écologique, éducation et sensibilisation à l’environnement par des associations, “ portraits nature ” de lieux industriels ou encore mise en place d’une politique “ laboratoire du développement durable ” dans une ancienne commune minière.

\*Intervenant

# Landscape of Cement Industrial Cities

Masaaki Okada \* 1

<sup>1</sup> Kinki University – 3-4-1 Kowakae, Higashi-Osaka, 577-8502 JAPAN, Japon

Limestone have been playing important roles in offering fundamental materials for construction of public infrastructure, such as buildings, bridges, or even small watergates in agricultural fields. There are many limestone quarries around the world and they formed the cement industrial cities around them with conspicuous industrial landmarks. Many labors gather and live in industrial cities to work not only at the quarry sites, but also at cement production companies or variety of related businesses. Cement industries brought wealth to the city and advanced infrastructures, such as high-graded trunk roads or rich architectures. In addition, huge cement works form characteristic technoscapes (industrial landscape) which is cherished by local people as their home landscape.

This paper exemplifies several cement industrial cities in Japan and analyzes the process of industrial landscape formation and local interpretation.

Japan has the most production of limestone (2007-11) per unit area of country in the world, which means it possesses the highest density of cement industrial landscapes, such as huge silos, NSP method cement kilns or tubular limestone conveyors. Technoscapes have been coexisting close to local community with diverse and different relations or conflicts, and have generated various meanings. Some shrines praying for god in the mountains have been moved from mountaintop to low lands in order to exploit the vein of lime beneath. Those moved shrines' architectures or gateways (Torii) were made from concrete and gorgeously designed. In addition, cement cities have traditional local festivals of Shinto and many of them are originated from prayer for safety of industrial labors. These industrial icons, no matter if they are tangible or intangible, show rational relation with local cement industry and have been succeeded with pride by local people till present. They are all worth being called cultural heritage and landscape.

In addition, limestone geology generates unique natural landscape, such as karst, limestone caves, or ravine. They have been appreciated as tourists' attraction for a long time. On their back, cement industries are located and forms apparent contrast.

The followings are analyzed examples. In Hitachi, the transportation facilities, such as conveyer pipes or cableway form linear landscape. In Hachinohe the quarry is locally called "Hachinohe-Canyon" and now attracts tourists. In Chichibu, the most prominent mountain has been mined and exposed its heavily-scratched surface. This mountain has been admired as the sacred place of god, and local people have held dilemma to its landscape: their wealth VS hurt of god.

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\*Intervenant

## S.10.F — Before the Industrial Revolution

# Archéologie de l'industrie ou Archéologie du Travail? Ville-usines et usine-doubles, deux cas significatifs du Patrimoine (proto)industriale italien.

Gregorio Rubino \*<sup>1</sup>

<sup>1</sup> Università di Napoli Federico II – Italie

À front de la littérature vaste sur la Civilisation Industrielle, nous connaissons encore peu sur l'âge des Manufactures. En particulier sur la circulation de modèles et connaissances techniques, sur la mobilité des artisans engagés dans les secteurs productifs différents, sur les typologies architecturales et sur les rapports entre les structures urbaines et le monde du Travail dans les villes d'ancien régime. La relation expose le cas spécial de Cerreto Sannita, ville-usine de la laine (travail diffus au domicile) et des usines doubles (papeterie-moulin) de l'Italie méridionale, encore existants sur le territoire, deux typologies productives du monde artisanal jamais développées aux manières de production industriels, mais cependant significatives de l'histoire, des technologies et des architectures locales. Le texte entend souligner par conséquence les limites de l'idée de Patrimoine Industriel exprès dans le Charte du Ticcih (Nizhny Tagil, 2003), au moment trop déséquilibré sur les témoignages matériels de la Révolution Industrielle, peu attentif aux modèles différents de développement pour zones géographiques et culturels et maintenant amplement dépassé, sur les expectatives et sur les critères de conservation du Patrimoine, des conséquences de la mondialisation.

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\*Intervenant

# Technical Evolution of China Sichuan Zigong Salt-well Drilling

Boying Liu \* 1

<sup>1</sup> Liu Boying (lby) – School of architecture, Tsinghua University Beijing, China 100084, Chine

Based on the technological introduction of Chinese sea salt and pond salt production, the article introduces emphatically the evolution of Chinese traditional hand-dug well and Zhuotong percussion well drilling technology used in Sichuan well salt production. The writer also introduces the Shenhai well in Zigong, which was the first drilling well in the world reached 1000m depth. The article compares China Sichuan salt well digging technology with that used in Europe and America, discusses the dissemination of China traditional salt well drilling technology in the world, as well as the applications in the exploitation of petroleum and natural gas drilling. Finally the article concludes that Sichuan traditional salt well drilling technology has high value in the history of technology, and is admired as the fifth greatest invention of China.

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\*Intervenant

# Les “ patios de beneficia ” de la région de Pachuca del Monte (Hidalgo, Mexique), un patrimoine exceptionnel à mettre en valeur.

Belem Oviedo \* 1

<sup>1</sup> Archivo Histórico y Museo de Minería, A.C. – Mexique

Pachuca et Real del Monte, au Mexique central, a été pendant près de trois siècles, l'un des principaux centres de production de l'argent. Les travaux de l'association “ Centre des Archives Historiques et Musées de la Mine ” ont, depuis près de vingt-cinq ans mis l'accent sur les importants vestiges du XIXe siècle qui ont fait l'objet d'une restauration minutieuse et d'une mise en valeur exemplaire, dont les précédentes conférences de TICCIH se sont fait l'écho.

Actuellement, l'attention se porte sur l'ensemble du paysage minier de l'arrière-pays de Pachuca, un paysage complexe, aux vestiges considérables, sur une durée de deux millénaires, depuis les mines d'obsidienne de la période de Teotihuacan jusqu'aux installations contemporaines pour l'extraction de l'argent.

Une mention spéciale doit être apportée aux “ patios de beneficia ”, les cours d'enrichissement où le minerai était traité. Les vestiges imposants prouvent l'existence de structures industrielles originales hors d'Europe dès le XVIe siècle. Confrontés aux documents d'archives abondants et à divers documents iconographiques contemporains, les “ patios de beneficia ” sont d'authentiques lieux du patrimoine industriel qu'il faut protéger et mettre en valeur. Ils permettent d'éclairer, de façon concrète, l'histoire d'une industrialisation sans grands capitaux ni marché autre que celui de l'Etat, une variante d'un intérêt exceptionnel pour qui veut comprendre les racines du monde contemporain.

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\*Intervenant

## **S.10.G — Urban regeneration**



# Transforming Strijp S : from Philips' industrial site to new residential and creative area.

Irene Curulli \*†<sup>1</sup>, Dimitra Babalis \*‡<sup>2</sup>

<sup>1</sup> Eindhoven University of Technology (TUE) – Den Dolech 2 5600 MB Eindhoven, Pays-Bas

<sup>2</sup> Università degli Studi di Firenze [Firenze] – P.zza S.Marco, 4 - 50121 Firenze, Italie

Aim of this paper is to illustrate the project of renewal of Strijp S, one of the former industrial areas from Philips' Electronics in Eindhoven, The Netherlands.

Eindhoven is the birthplace of Philips' Electronics, and until 2000 it was the manufacture area of the company, occupying large terrains for the production. The influence of Philips on the city of Eindhoven was not only economical but also 'physical' and social. Aiming for a healthy and productive life, Philips built industrial units, housing estates, public green areas, sport terrains. This strongly affected the urban development of the city.

After departure of the production, the Municipality was confronted with the presence of many 'vacant' sites (where historic characteristics and memories were strongly embedded) and the need of activating an operation of urban regeneration that would combine preservation, renovation and re-use for new activities. Within this large range of industrial sites, Strijp S is identified as case specific. The impressive 'white spine' formed by three tall white buildings and the first laboratory of Philips, named Nat-Lab, are the cornerstones of the company and are listed monuments. In this area was invented the first CD and produced millions of light bulbs. The site has an extension of 27 ha and is strategically located between the city centre and the open green field of De Wielewaal, creating a unique connecting corridor. The site is known as the 'forbidden city', due to restricted access to public. In 2006 the first buildings underwent to conversion, thus making this site accessible to people's use. The transformation includes a mixed program such as housing, offices, cultural activities and so on.

Firstly, this paper will discuss on the meaning and heritage values of these former industrial sites for the city of Eindhoven. The local and regional identity is still tied to these locations, although activity has moved away. Secondly, the specific area of Strijp S will be taken in consideration. The author will show the process of transformation of the site from enclosed industrial area to open residential neighborhood. Starting from the environmental issues of Strijp S (soil pollution), this paper will explain about the implications of the existing industrial heritage on the new design of the area. Moreover, it will point out both successes and failures of the conversion. The paper will conclude by showing how the industrial heritage of Strijp S has played a crucial role in the transformation of the historic urban landscape of the city of Eindhoven and why it is becoming a design reference for other projects of industrial conversion in The Netherlands.

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\*Intervenant

†Auteur correspondant: g.i.curulli@tue.nl

‡Auteur correspondant: dimitra.babalisi@unifi.it

# Habiter et travailler dans les usines désaffectées. Un projet de recherche en Andalousie.

Rafael Serrano Sáseta \*<sup>1</sup>, Manuel Benítez De La Rosa \*<sup>†</sup>, Carmen González Márquez , Marta Barbero Calderón , Andrea Adones Del Barrio<sup>‡</sup> , Antonio Díaz Alonso<sup>§</sup> , María Murillo Romero<sup>¶</sup> , Mónica Ruiz-Roso Luna<sup>||</sup>

<sup>1</sup> Professeur (ETSA Sevilla) – ave. Reina Mercedes, 2 41012 Sevilla, Espagne

Dans les derniers temps, l'Andalousie, comme d'autres régions de l'Espagne, a subi les effets pervers d'un phénomène qui touche directement à notre patrimoine industriel. Il s'agit d'une sorte d'instrumentalisation des vestiges historique visant à leur exploitation touristique. Les anciennes usines et sites industriels sont ainsi transformés en lieux de loisir et de divulgation culturelle. Or les bénéfices économiques des opérations de réhabilitation, menées soit par les entreprises du secteur soit par les communes ou par les gouvernements régionaux, passent souvent devant la considération des valeurs historiques. Nous éprouvons aussi un appauvrissement de notre industrie et de notre culture du travail, qui s'avère totalement dépendant de la monoculture de l'industrie touristique. Nous défendons que la réhabilitation de notre patrimoine industriel doit impliquer la mise en place d'une nouvelle industrie du XXIe siècle. Nous songeons à récupérer les anciens édifices industriels abandonnés en les transformant en lieux de production durable où de petites et moyennes entreprises consacrées aux nouvelles industries de l'information, la connaissance, la culture et l'artisanat puissent s'épanouir. Il nous semble également important de préserver l'identité des sites vis-à-vis du voisinage du quartier. Notre modèle d'intervention sur l'architecture industrielle reçoit l'inspiration des expériences menées par certains collectifs humains installés spontanément dans les espaces abandonnés ou marginalisés de nos propres villes. Nous avons analysé ces groupes de travail, qui partagent leurs ressources et qui collaborent sur des activités très diversifiées. Notre projet étudie la possibilité de mettre certains espaces industriels actuellement inutilisés à l'appui de ces initiatives, de manière contrôlée, offrant une alternative à revitaliser ces espaces par rapport à la réhabilitation de fonctionnement classique. Nous pensons aux formes de vie inspirées par le life-work, comme par exemple les premières communautés de lofts newyorkais qui vivaient à l'intérieur des usines désaffectées pour préserver et maintenir ces vieux bâtiments. Notre projet de recherche comporte une analyse des bâtiments industriels abandonnés dans l'agglomération de la ville de Séville, le but étant de sélectionner les cas pouvant être les plus favorables à l'expérience. Nous présentons un cas concret aux anciens nefs de fabrication de produits textile de l'entreprise Hytasa.

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\* Intervenant

† Auteur correspondant: rsaseta@us.es

‡ Auteur correspondant: rsaseta@us.es

§ Auteur correspondant: rsaseta@us.es

¶ Auteur correspondant: rsaseta@us.es

|| Auteur correspondant: rsaseta@us.es

# From deactivate landfill to “open museum of sustainability”: Victor Civita square in São Paulo, Brazil.

M. Elena Castore \*<sup>1</sup>

<sup>1</sup> Faculty of Architecture and Urbanism of the Federal University of Bahia (UFBA) – Brésil

The paper presents a successful example of urban regeneration in São Paulo, which allowed the city to restore a degraded area - home to one of three waste incinerators in the city of São Paulo, the incinerator Sumidouro - through its transformation into an interesting urban space. The area, with an irregular shape, measuring approximately 13.5 million square feet, surrounded by walls, is located in Pinheiros, a strategic area of the city of São Paulo, object of profound transformations, arising partly from improvements and expansion of the urban public transport network, during the last years. In 1949 in this area, a building for the incineration of household and hospital waste was built; it worked until 1989, after being used as a landfill by a Cooperative garbage until the end of 2006. With Cooperative's transfer to another location, the area - extremely degraded by soil contamination with residues of heavy metals, due to the ash from incinerated waste buried in the ground - was abandoned, becoming a possible object for real estate speculation. A public-private partnership led by the City of São Paulo and the Editorial Group April - which has its headquarters near the Incinerator area - improved the realization of the project of rehabilitation of this brownfield, through its transformation into a not conventional public square. The project, proposed for the first time in 2001, was only achieved in 2008, when Victor Civita Square was inaugurated. Despite the difficulties of the recovery of this heavily contaminated area, the architects Levinsky Adriana and Anna Julia Dietzsch found an economically viable and ecologically sustainable solution to rehabilitate the area for public use. The project included the creation of a suspended square on a wooden deck to about 1 meter from the ground level. The deck crosses the area diagonally and unfolds its side vertical surfaces with curvilinear forms, defining large urban “rooms” that diversify and encourage the use of public space. At the same time, it sets a museum’s open air route, linking up to the educational and cultural activities developed in the square. The same path leads to the building of the Incinerator that was recovered and transformed into a Museum of Sustainability, offering spaces for courses and other cultural activities too.

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\*Intervenant

## **S.10.H — Industrial heritage in Central and Eastern Europe**

# Paysages industriels miniers roumains.

Gabriela Pascu \*†<sup>1</sup>, Jacqueline Bayon<sup>2</sup>, Octavian Gheorghiu<sup>3</sup>

<sup>1</sup> Université "Jean Monnet" Saint - Etienne, Membre Université de Lyon, EVS - ISTMHE (EVS UMR 5600 CNRS) (France) – Université Politehnica Timioara, Faculté d'Architecture et Urbanisme (Roumanie) – Université Jean Monnet 10, Rue Tréfilerie - CS 82301 42023 Saint-Etienne Cedex 2 Tel : 04 77 42 17 00, France

<sup>2</sup> Université "Jean Monnet" Saint - Etienne, Membre Université de Lyon, EVS - ISTMHE (EVS UMR 5600 CNRS) (France) – Université Jean Monnet - Saint-Etienne – Université Jean Monnet 10, Rue Tréfilerie - CS 82301 42023 Saint-Etienne Cedex 2 Tel : 04 77 42 17 00, France

<sup>3</sup> Université Politehnica Timioara, Faculté d'Architecture et Urbanisme – Roumanie

La Roumanie, pays peu ou pas connu, du point de vue du patrimoine industriel, commence à découvrir dans ces derniers années son important héritage. Des petits projets ou des grandes menaces à ce patrimoine, commencent à attirer et à soulever des questions. Alors les premières qui se posent sont comment ont été construites et comment fonctionnent les anciennes, ou même les actuelles communautés industrielles roumaines ? Après un début tardif, en ce qui concerne l'organisation de l'industrie, surtout de l'exploitation minière, la Roumanie a connu au début de XXe siècle un ratrappage, de point de vue technologique, de l'intensification de l'exploitation et des démarches sociales. En conséquent, ce papier se concentre sur l'évolution des établissements miniers roumains, en commençant avec les années 1900 jusqu'à 2005 et leur rapport avec leur patrimoine minier. La précarité de l'organisation minière, jusqu'à 1918, a été causée par le contexte politique - administratif (concrétisé par des changements territoriaux) et le manque de puissance financière des industriels locaux. La Grande Union des territoires roumains en 1918, a signifié la récupération de la stabilité politique et le renforcement des stratégies économiques. Ce contexte a encouragé les entreprises avec des capitaux majoritaires roumains. A partir de ce moment, de nouveaux établissements miniers commencent à se développer ou à se créer. Ils sont basés principalement sur l'exploitation de charbon, fer et d'or. Les années entre les deux guerres mondiales ont représenté le début d'un développement d'organisation de ces établissements, la construction des colonies de travailleurs et des bâtiments aux fonctions connexes, servant l'ensemble de la communauté. Comme partout en l'Europe l'activité minière a continué après le deuxième Guerre Mondiale, mais dans d'autres paramètres. L'Europe de l'Est a été encore plus sensible aux changements, devenant le terrain d'influence de la Russie et du communisme. Cela a influencé dans une façon importante les colonies et les établissements miniers, surtout en augmentant leur taille. Le choc de la diminution de l'activité minière a été reçu, après 1990, avec des mouvements violents, et a produit des changements sur la dynamique du développement territorial et du paysage. Cet article, veut mettre le point sur: les caractéristiques urbaines et architecturales des établissements miniers roumains, en comparaison avec les tendances internationales, les politiques de développement territorial, et désire d'établir un portrait actuel de ces communautés diverses et dynamiques en temps.

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\*Intervenant

†Auteur correspondant: pascuggabi.arch@gmail.com

# Too much to handle? Legacy of Estonian industrialization

Henry Kuningas \* 1

<sup>1</sup> Estonian Academy of Arts – Estonie

Controversial Industrial Heritage : Present situation in Estonian industrial heritage field is controversial. A small country of 1,4 million inhabitants is now dealing with the “hangover” of soviet time big-scale forced industrialization, as well the social impact of several monofunctional towns. The rapid industrialization of Estonia took place in two major phases: first roughly from 1880 to 1914 and second 1944-1991. During the first phase Estonia was part of Russian empire and during the second phase part of USSR.

Industry as a means to colonization? According to popular belief among Estonians the industrialization in the high-industrial period in Estonia served the objective of veiled colonization and resulted in big scale immigration of foreign workers and the oversized exploitation of natural resources. Was the industrialization an instrument of sovietization? Or was the rapid migration merely the result of high-industrial period?

Preferential development of heavy and large-scale industry Although the industrial revolution reached Estonia in 1830s, the end of 19th and the beginning of 20th century saw a rapid growth of industrialization in Estonia. The oncoming WW I inflicted another boom in heavy and big-scale industry - machinery, shipbuilding, textile industry – which enjoyed numeral substantial orders from czarist government. Heavy and big-scale industry also became a priority during the soviet period command economy (1944-1991), when in unprecedented scale heavy industry was developed in Estonia.

Aftermath Similar problems in industrial sector emerged with the independency of Estonia in 1918 and in 1991. The situation has been very alike, since the problems were comparable: loss of big Russian market and (cheap) raw material, lack of marketing know-how, and the total amortization of industrial structure and equipment caused the bankruptcy or painful stagnation of most industrial enterprises.

Problem or possibility The legacy of industrialization is a complex issue, comprising multiple problems: architectural, city planning, social, environmental, political and economical. As the industrial heritage dating back to 19th and beginning of the 20th century is in its more spectacular forms now accepted by wider public as an architectural and culture-historic value, the legacy of soviet industrialization due to its enormous volume is considered more a problem than a possibility. From a different point of view it could turn out to be a surprising opportunity.

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\*Intervenant

# From Homes to ‘New Territories of Art’. New Trends in Developing Postindustrial Sites in Poland

Piotr Marciniak \* 1

<sup>1</sup> Poznan University of Technology (PUT) – Pl. M. Skłodowskiej-Curie 5 5 M. Skłodowska-Curie Square 60-965 Poznan, Pologne

The approach to postindustrial legacy in Poland is consistent with the current trends in the planning and renewing of degraded areas. In the past, the intensive expansion of cities was based, to a great extent, on the development of industrial sites. These included massive industrial projects realised in the interwar period and after World War II. The resultant urbanisation processes were also accompanied by an increase in housing developments. After the war, industrial plants, apart from fulfilling a traditional role in production, also became an area of specific propaganda-related competition between Eastern and Western Europe. Consequently, the architecture of industrial premises was very important, ensuring not only the necessary production facilities, but also showcasing the outcomes of local architectural studies.

Unfortunately, many former industrial plants, in particular those built after World War II, are becoming devastated or are being demolished. Poland is facing a huge problem regarding the using of postindustrial areas and their economic activation. On the one hand, many new big factories are being built, whilst on the other, the unwanted communist legacy is falling into ruin. Nonetheless, many sites, especially those from the early twentieth century, have become a creative testing ground for the new possibilities of making use of former industrial premises. An increasing number of these are being entered into new urban planning documents with the hope of their creative renewal.

The examples of postindustrial architecture regeneration are quite numerous: from the adaptation of a lamp maintenance building at the former Mining and Metallurgy Plant into a detached house, through the new Silesian Museum complex on the premises of the former Katowice Coal Mine and the redevelopment of the Old Brewery in Poznań, to the reconstruction of the EC1 Cogeneration Plant which has become part of the New City Centre in Łódź. These are only some of the examples of the creative approach to the adaptation and formation of a new cityscape that makes the most of postindustrial sites in Poland. Many new projects are also under way, for instance the renewal of the former shipyard areas in Gdańsk or of the former mining sites in Upper Silesia.

The presentation aims to show the Polish experience and attempts to find new forms for the renewal and making use of the postindustrial legacy. It also seeks to describe the new challenges facing local governments, business circles and architects in the field of urban regeneration and the building of a new cityscape. The source materials include Polish and Western texts, current projects, and unique archival materials and photographs.

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\*Intervenant

## **S.10.I — The Heritage of Electricity**

# Itatinga Hydropower plant: an industrial landscape

Denise Geribello \*†<sup>1</sup>

<sup>1</sup> Universidade de São Paulo (USP) – Cidade Universitaria - 05508-090 São Paulo, Brésil

Surrounded by the Atlantic Forest, Itatinga is a run-of-the-river hydropower plant located in a costal escarpment in São Paulo State, Brazil. It was built in the first decade of the 20th Century to provide energy to the Port of Santos, Brazilian largest port. This power plant has been working around the clock since 1910.

For the past decade or so, Itatinga has been going through a heritagization process. São Paulo's heritage agency (Condephaat - Conselho de Defesa do Patrimônio Histórico, Arqueológico, Artístico e Turístico) is elaborating a memorial to support its listing as cultural heritage on state level. Along the way, Itatinga's memorial was merged with the memorials of four other hydropower plants. The heritage agency's idea is to approach the industrial heritage by typology.

This paper aims to discuss the typology approach adopted by Condephaat and confront it with a landscape approach. Taken as an industrial landscape, Itatinga's structures would be analyzed together with the territory, the ecosystems that surrounds it and with the Port of Santos, an industrial heritage itself that determined Itatinga's existence and with which Itatinga's infrastructure is connected.

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\*Intervenant

†Auteur correspondant: z.geribello@gmail.com

# L'aménagement hydroélectrique de Marèges, des installations conçues à l'échelle d'un territoire

Céline Barbin \* 1

<sup>1</sup> Institut national du patrimoine (INP) – Ministère de la Culture et de la Communication – 2 rue Vivienne 75002 Paris, France

The hydropower plant of Marèges, a group of installations designed to scale of an area The hydropower plant of Marèges in the Dordogne Valley (Corrèze, France), was built to provide electricity to the railway. Built from 1929 to 1935, under the supervision of the famous chief engineer André Coyne, this plant was very innovative for the time.

Settled in an uninhabited valley, the building of Marèges required the organization of an area larger than the plant. The diversity of the installations, still on site, reflects the process of production of power, through the dam and the hydropower equipment obviously, but also through subsidiary installations like the housing project. Witnesses of the process of conception and building of the plant also remain in the landscape.

The technical importance of Marèges was taken into account since the beginning and the railway company looked forward to valorizing the plant and its landscape by hiring a Parisian architect and advertising on the image of Marèges.

To study this hydropower plant it is necessary to adopt a global lecture of the territory, which means taking into consideration the industrial installations, but also the landscape in general.

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\*Intervenant

# **Archéologie, Ethnographie, Géographie culturelle et Histoire du Patrimoine Industriel pour comprendre les freins de la modernisation du Mexique. La compagnie hydroélectrique de Tlaxcala et ses acteurs, 1902-1937.**

Mariano Torres \*<sup>1</sup>

<sup>1</sup> The International Committee for the Conservation of Industrial Heritage-Mexico (TICCIH-Mexico) – Calle Mina 110. Centro Pachuca de Soto, Hidalgo, Mexique

Dans cette histoire des techniques on avait trouvé l'adoption simple d'une technologie pointe importée, mais surtout dans idée d'affirmation et de légitimité politique : disons, maîtriser l'environnement immédiate et les hommes qui l'habitent. On va essayer une histoire culturelle des techniques inscrite dans l'analyse portant le développement d'une entreprise d'Etat dans l'époque considérée dans les idées reçues simplement comme d'appartenance à un capitalisme de type laisser-faire. L'euphémisation utilisée pour rendre socialement acceptable cette domination - car celle-ci va fonctionner comme propriété publique jusqu'à 1937- montre à quel niveau l'utilisation d'une culture technique est capable de se superposer, disons mettre en question l'idée de la révolution mexicaine comme une bouleversement sociale totalisante. Nous avons trouvé des continuités dans l'esprit de "modernisation" des couches sociales au pouvoir. On voie bien que certains des acteurs de la vie industrielle et publique ont été des personnes parfaitement au courant et capables de prendre la tête d'un mouvement de modernisation. La question donc est d'évaluer les freins, d'où ils viennent et comment ils se manifestent; comment éventuellement ils se transforment pour faire de la modernité quelque chose de lacunaire ou d'incomplet. L'innovation ici on la voie dans la perspective des élites modernisatrices plus comme un moyen de maîtriser que d'en rendre un service. Nous observons déjà une interrelation majeure dans les acteurs sociaux, de toutes les couches sociales participants, entre leurs actions politiques, économiques, pensée technique, attitudes modernisatrices, voir l'imaginaire et les rêves des élites directrices et de la collectivité qui apparemment les accepte sans autant laisser de coté l'exercice de son identité. Parmi les problèmes susceptibles d'être considérées, nous posons déjà les questions suivantes : Pourquoi tous ces efforts n'ont pas déclenché une sorte de "souveraineté technologique" ? Qui sont les véritables maîtres des ressources et des destinés du pays?

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\*Intervenant

## S.11.A — UNESCO / ICOMOS / TICCIH

# The World Heritage Nomination Mining Cultural Landscape Erzgebirge/Krušnohoří

Helmuth Albrecht \*†<sup>1</sup>, Friederike Hansell \*‡<sup>1</sup>

<sup>1</sup> Institute for Industrial Archaeology, History of Science and Technology at the Technical University Mining Academy Freiberg (IWTG) – Silbermannstr. 2 09599 Freiberg, Allemagne

The Mining Cultural Landscape Erzgebirge/Krušnohoří is located in the Saxon-Bohemian Ore Mountains within the south-eastern region of the Federal Republic of Germany and in the north-west of the Czech Republic. It is a large-scale and well-preserved example of a decentralized mining landscape within a Central European mountain region illustrating the profound impact of mining activities on the development of the specific landscape and its society. The series is composed of 85 component parts, corresponding to former mining and ore-processing areas. Each component part is characterized by a specific combination of three determining features: an exceptional diversity of raw materials, a chronological depth of more than 800 years of mining activities and a broad spectrum of mining, industrial and cultural monuments and associated cultural values. The mining landscape developed organically as a combined work of nature and of man and the region is a living and economic area in which economic, urban and infrastructural projects will be realised today and in future. Accordingly the nomination is made for a continuing cultural landscape in which the evolutionary process is still in progress. During the nomination process a basic foundation for the realisation of the project was provided by the participatory approach that was developed by the Institute for Industrial Archaeology, History of Science and Technology (IWTG) at the Technical University and Mining Academy of Freiberg/Germany. The procedure enabled to involve all relevant stakeholders such as associations and interested citizens, owners, municipalities, building and planning authorities, monument preservation authorities as well as external experts (ICOMOS, e.g.) in the nomination process. One central aim was to develop a broad basis for the project within the region and to ensure the compatibility of the protection and conservation of the mining cultural landscape with further economic and infrastructural developments. By this way, potential conflicts were identified in the forefront of the nomination and solved in a common discussion and decision process. The procedure enabled to involve all concerned stakeholders and at the same time enhanced the awareness for the protection and conservation of the important witnesses. The thorough nomination process has enhanced the awareness for the protection and conservation of the important witnesses and emphasized the necessity to preserve the shared heritage for future generations among all stakeholders. In January 2014 – after 14 years of work – the nomination file was signed by both State Parties and submitted to the World Heritage Centre in Paris.

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\*Intervenant

†Auteur correspondant: helmuth.Albrecht@iwtg.tu-freiberg.de

‡Auteur correspondant: friederike.hansell@iwtg.tu-freiberg.de

# Industrial Heritage and international designations. The role of UNESCO frameworks

Giorgio Andrian \* 1

<sup>1</sup> ASSOCIAZIONE ITALIANA PER IL PATRIMONIO ARCHEOLOGICO E INDUSTRIALE (AIPAI)  
– Sezione Veneto, at the Università degli Studi di Padova, Dipartimento di Scienze Storiche,  
Geografiche e dell'Antichità (DISSGEA), Via del Vescovado 30, 35141 Padova, Italia

UNESCO has gained a long lasting experience in the areas of heritage conservation and preservation and valorization at international level. Starting from the worldwide known ‘Convention on protection of the World Natural and Cultural Heritage’ (widely called ‘World Heritage Convention’) adopted in 1972, on the basis of which, the World Heritage List was created. The List intends to be representative of all tangible manifestations of cultures that are present in the world, ranging from the early stages of the human presence to the contemporary period. The paper will first examine the reasons why, out of 1001 inscribed sites all over the world, only 33 are related to the industrial heritage and how the ‘outstanding universal value’ that represents the ‘core’ of each WH designation, can contribute to identify the set of values of the industrial heritage assets. The conceptual and operational tools developed within the World Heritage community during the over 40 years of the Conventions existence are analyzed in the light of their correlation with the current trends in the industrial heritage management. In the second part of the paper, the other UNESCO tools will be taken in consideration in relation to their possible role for the contemporary industrial heritage management. In particular, the Convention for the Safeguarding of Intangible Cultural Heritage (adopted in 2003) and the Convention on the Protection and Promotion of the Diversity of Cultural Expression (adopted in 2005) are also offering interesting opportunities to handle with the intangible aspects of the industrial heritage and the set of values that is correlated with its management. Finally, the Creative Cities Network and the Memories of the World Initiative, both recently activated by UNESCO, are analyzed in the perspective of their contribution to link the industrial heritage preservation with its role as catalyst of innovation and creativity.

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\*Intervenant

# The World Heritage Nomination Mining Cultural Landscape Erzgebirge/Krušnohoří

Helmuth Albrecht \* 1

<sup>1</sup> Institute for Industrial Archaeology, History of Science and Technology (IWTG) – Silbermannstr. 2, 09599 Freiberg, Allemagne

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\*Intervenant





## S.11.C — Museums



# Ecomuseo del río Genil y su Vega (Guadalgénil). La antigua azucarera de Santa Fe (Granada)

Javier Gallego Roca \*<sup>1</sup>

<sup>1</sup> Javier Gallego Roca – Escudo del Carmen, 11 A.2.2, Granada (18009), Espagne

La antigua azucarera del Señor de la Salud constituye hoy un fragmento único del histórico paisaje cultural de la Vega de Granada. Su industrial monumentalidad ha caracterizado siempre a este territorio en continua transformación, la belleza natural que impresiona al visitante lo introduce en un itinerario catártico hacia el redescubrimiento artístico. El proyecto de rehabilitación, aquí presentado, se encuentra en progreso: utiliza un lenguaje directo e inmediato con aspectos claramente contemporáneos alzándose junto a los antiguos muros a la vez que los respeta. Con esta rehabilitación y este programa de reutilización la Administración Pública pretende potenciar una clara señal del cambio: cuidadoso y dinámico, se erige como una recuperación paisajística y arquitectónica de este vasto territorio con un valor natural, cultural y patrimonial únicos. Se pretende potenciar La Azucarera como Ecomuseo de la Vega, con una función social y cultural, abriendo el edificio para su vista e integrándolo en los itinerarios del Plan de recuperación de la Vega de Granada, dotándolo de una pequeña sala de exposiciones con uso múltiple con el fin de poder albergar actividades de difusión y talleres. El Ecomuseo del Río Genil y su Vega (Guadalgénil) será un proyecto de carácter multiprovincial que contribuyera a la valoración, conservación y difusión de la cultura agraria de los territorios vinculados al cauce del río Genil y su explotación industrial durante los siglos XIX y XX, especialmente con los cultivos azucareros, madereros y tabaqueros.

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\*Intervenant

# Industrial Gas Museum in pursuit of Tourism/A chimera or an opportunity?

Maria Florou \*<sup>1</sup>, Konstantinos Bitzanis \*

<sup>1</sup> Industrial Gas Museum, Technopolis Athens (IGM) – Pireos 100, Gazi, Athens, Grèce

Technopolis S.A. City of Athens is a company that organizes and hosts cultural events, since 1999. The last three years Technopolis counts more than 600.000 visitors and is known for the various successful cultural events, such as music festival, art exhibitions, theatrical performances etc.

Before that, it was operating as the Gasworks of Athens. It was inaugurated in 1857 in order to give light to the streets of Athens and the Palace. From 1887 to 1984 it also gave energy to households (heating, hot water, cooking) and industries. The Ministry of Culture in 1986, declared the plant and its machinery a unique monument (for Greece) of industrial heritage.

Today, the history of the Gasworks is presented in the Industrial Gas Museum, since January 2013. The museum visitor follows a “path”, that consists of 6 buildings and 13 stops. The whole experience focuses on the line production and the history of the gasworks related to the modern history of Athens. Documentaries, 3D images, moving steam engines, museum objects, photos, advertisements, compose the picture of the plant for 130 years.

Nowadays, one of the best examples promoting tourism is the “Athens Technopolis Jazz Festival” -a 4-day European festival- organized by Technopolis the last 14 years which attracts 15000 visitors from different countries, is an initiative that leads the way to the economic activities of the site. Accordingly, the IGM’s activities are programmed in a “networking basis”. That means that each one of our future action intends to attract new audiences and enhance domestic or foreign tourism. Educational programmes especially designed for schools from the periphery of Athens, exhibitions deriving from the local community or exhibitions that are shared between major Athenian museums such as the Acropolis Museum and the IGM, that aim to exchange visitors. Also, networking with European associations, such as ERIH and local associations, that promotes modern culture and leads the museum visitors to different “corners” of the past and present of Europe and Athens.

Shortly after the opening of the Museum, Technopolis’ administration starts operating a hub of innovation and entrepreneurship, “InnovAthens”. Its purpose is to promote new ideas and support groups of European citizens that have the criteria to develop.

This proposal aims to present the particularities of managing a place of industrial heritage in different perspectives, but having a common purpose: to attract locals and tourists and become a modern site of interest for the city of Athens in connection with its glorious ancient past.

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\*Intervenant

# Museum and industry: partnership for conservation and exhibition of the industrial heritage

Francesca Olivini \*<sup>1</sup>

<sup>1</sup> Museo Nazionale Scienza e Tecnologia Leonardo da Vinci - Milano (MNST) – Via San Vittore, 21  
20123 Milano, Italie

The concept of industrial heritage reminds us that the world we all live in is made of stuff. A universe of objects, mostly industrially manufactured, that changes our environment and our essence. This is also related to the general concept of production and to its evolution, that in some cases has marked a major turning point in history, producing changes in almost every field, from economy to society, culture, politic and environment.

The industrial heritage has to be considered as the set of both material and intangible statements related to the history of industry - like context, machinery, objects and people – that is able to reconstruct our history through the history of industry. It also remind us the role of both the material and intangible cultural heritage as historical sources.

Among the principal players who support and represent the industrial heritage we find museums, often sustained by local authorities or state institutions. Another player in this field is industry itself, with its need to remind, preserve and show its own history, but also its own achievements and activities. The merging of these two entities bring forth new corporate museums or collaboration between industry and existing ones.

This is the case of Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci di Milano (Italy), that since 1953 has constantly updated its topics, re-construed its collections and renovated its exhibitions, in collaboration with industrial partners such as single companies or industrial associations.

It is described here the Steel exhibition of this museum as a case history. In the exhibition, different partnership have contributed to give the industrial heritage the recognition it deserves by using the narrative potential of the material cultural heritage in the museums' exhibitions, and by saving, improving and even creating immaterial cultural heritage. As an example this study examines the restoration of the 1740 Galperti's trip hammer, the reconstruction of the Falck factory dates back to 1860, the display of the Stassano Furnace of the 1910, the actualization of the exposition based on the Mannesmann mill of the 1909, and the description of the innovative ESP process of 2008.

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\*Intervenant

## S.11.G — Urban regeneration

# Use of redundant industrial buildings as injections to the cultural sector in Norway

Grete Swensen \*<sup>1</sup>, Sveinung Berg<sup>†</sup>

<sup>1</sup> Norwegian Institute for Cultural Heritage Research (NIKU) – P.B.736 Sentrum, 0105 Oslo, Norvège

Major restructuring has taken place in late-modern society as a result of the massive close-down of heavy industries in a large number of Western countries. Many of these post-industrial sites have gradually become integrated into the larger urban fabric and have ended up being centrally located in cities. Urban densification and the demand for development and building sites increase the attractiveness of these areas among private developers. Architects and planners find the special qualities of such sites an opportunity to combine cultural heritage and innovative architecture in creating attractive city space. The cultural/creative sector, in particular, has entered these sites as inspiring environments for creative activity.

Old industrial plants are used as a basis for the incorporation of a wide range of activities, and give rise to new contexts in which historic structures and modern architectural forms coexist. Such coexistence, in which industrial architecture has found new uses and is contrasted by new architectonic idioms, has had broad appeal, and the model has acquired sympathisers amongst politicians, heritage management professionals, planners, developers and the general public.

The paper will discuss the motivations that govern different actors to be involved in such processes. While artists might find old industrial buildings cheap enough to rent as studios, entrepreneurs might see a potential for development which makes it worth investment. New interest groups and partners have been brought together through renewal of industrial heritage as a vital contribution to urban regeneration and development and will continue to challenge the future for industrial heritage as a possible resource. The discussion of the various actors' motivation for engagement will be based on results from a case-study carried out in three Norwegian cities, supplemented with the findings from a coarse-meshed telephone survey to gain information about the way the culture sector reuses industrial building to instigate cultural activities in the municipalities.

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\*Intervenant

<sup>†</sup>Auteur correspondant: sveinung.berg@niku.no

# La Flandre, une région sans “châteaux de l’industrie” ?

Patrick Viaene \* 1

<sup>1</sup> Universiteit Antwerpen – Belgique

Contrairement aux anciennes régions industrielles Wallonnes, les demeures aux allures de châteaux, construites à l’initiative d’entrepreneurs pendant l’ère de la première et de la deuxième révolution industrielle, sont rares en Flandre. Mais les maisons de directeurs érigées près des usines, datant principalement du XIX<sup>e</sup> siècle et du début du XX<sup>e</sup> siècle, aussi bien que les imposantes maisons de maître, construites par des patrons d’usine à l’intérieur ou en périphérie des centres urbains, ne manquent pas en Flandre. Il faut citer également la profusion de maisons patronales dans certains filières spécifiques comme les charbonnages (du Limbourg belge) ou le secteur textile (à Gand / Gent) et Renaix / Ronse), bien que là aussi la typologie de “demeure-château” n’est que rarement rencontrée. Il faut constater que jusqu’à présent peu de recherches scientifiques sur ce thème ont été menées à terme. Ceci peut étonner, car certains secteurs industriels importants en Flandre comme celui du textile, de la brasserie et bien d’autres nous ont laissé un patrimoine intéressant de demeures patronales, un patrimoine partiellement réaffecté avec (ou hélas dans de nombreux cas) sans respect pour les qualités patrimoniales de ces édifices. Les nouvelles fonctions des demeures sont diverses, allant de logement pour séniors, hôtellerie, commerces jusqu’à des fonctions culturelles et des bureaux. Mais souvent les nouvelles fonctions convergent mal avec les anciennes demeures patronales. La présentation que voici illustre d’abord, à l’aide de nombreux exemples, l’évolution typologique de la demeure patronale en Flandre dans l’espace et dans le temps. Ensuite la problématique de la réutilisation des demeures patronales est brièvement abordée, pour terminer avec quelques suggestions concrètes dans le contexte d’une pratique de “re-use” durable.

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\*Intervenant

## **S.11.H — Industrial heritage in Central and Eastern Europe**



# Researching the 20th Century Industrial Heritage in Romania: Hunedoara Steelworks from the peak of its industrial development to *tabula rasa*

Oana Cristina Tiganea \* <sup>1</sup>

<sup>1</sup> Independent researcher – Roumanie

The attention towards the study of the 20th century industrial realms in the Romanian context has grown in last 25 years, together with the revival of the preservation practice in the post-communist era. However, research and documentation processes are occurring at a slower pace than the disappearance of the industrial heritage, where the pressure of deindustrialisation, globalization and real estate speculation overcomes the growing trends in behaviour, and in the individual social awareness and civic duties in the matters of cultural heritage. Often, the archives disappear together with the industries they relate to. Thus, strategies for the identification of accurate and detailed documentation are fundamental in broadening the variety of research sources.

The case of the ex-metallurgic town of Hunedoara is an example of this issue. Positioned in south-west Transylvania, Hunedoara represents a landmark for both Hungarian and Romanian history, being directly linked with the mid-18th/late 19th iron and steel industries development in the eastern territories of the Austro-Hungarian Empire. During the second half of the 20th century, in the years of the communist hyper-industrialisation (1947 – 89), Hunedoara became a ‘national metallurgic icon’ increasing its size tenfold in the span of a few years, with profound territorial and socio-economic changes. The status of the town changed during the post-1989 political and economic shifts, when deindustrialisation led to the industrial site’s almost complete demolition, making a symbol of ‘Romanian decay’ out of it. Its disappearance was also directly linked with the territorial reclaim projects for the area (2007, 2010 – 2014), when the call to depollution was unanimous approached through massive demolitions that resulted in major voids in the urban layout and local identity.

In this article, the research methods employed will be discussed, together with the variety and diversity of sources used in the study of Hunedoara’s 20th century industrialization process, with particular attention to its industrial architecture and to the context that led to its own disappearance. While the historic archives represented the main source of documentation, a major role was played by photographic surveys done throughout the 20th and beginning of the 21st century. Thanks to this complementary source was in fact possible to fill the gaps left by the disappearance of heritage being even faster than how their documentation could be accomplished. Photography of industry, both during the construction and deconstruction phases, made possible to identify and analyze the individual industrial structures, architectures and infrastructures, together with their territorial impact.

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\*Intervenant

# The Role of Aesthetics in the Regeneration of Former Industrial Areas

Aida štelbien \* 1

<sup>1</sup> the Creative Industrial Park 'Architecture Centre' (CIP 'Architecture Centre') – Kalvarij Str. 1, LT-09310 Vilnius, Lituanie

The process of the regeneration of former industrial territories is only recently taking its pace in Lithuania. For instance, the area of brownfield sites in Vilnius, a capital of Lithuania, was estimated up to 500 ha in 2007, out of which 120 ha stretched in the centre of the city; among them a former grinding-machine works, a factory of radio-electronics, a former 'Vilniaus Tauras' brewery, a former welding equipment factory 'Velga', Vilnius bakery, Vilnius electricity meters factory, etc.

Whilst the first attempt to regenerate them was rather modest - mainly refurbishment of existent buildings, adapting them for the use as studios, living places or shops, now this process becomes harsher. The developers of real estate are taking over these brownfield areas with a claim to regenerate them. In some cases it is a big threat to historical areas, as the main criterion for investors is the economic value of such areas. As a threat it could be described because developers often value the economical potential of the former industrial land occupied in the city instead of paying attention to its historical inheritance.

Of course, one has to face the reality: in most cases, the developers, even - politicians and neighborhood's communities are not willing to preserve a brownfield - instead they prefer to start with a blank leaf by demolishing everything what is permitted (in some cases - even not allowed) to ruin.

This paper deals with such cases when developers are intending to demolish almost everything from the previous period. The paper is looking for possibility that even in these situations it is possible to keep the identity of a former industrial site via its aesthetic character. The term 'aesthetic character' covers built artefacts as well as urban spaces.

Why it is important to keep memories of built environment in former industrial territories? The inspiration for such attitude is the Brundtland Report (1987) which describes sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Thus, we cannot ignore the possibility that future generations will need to envisage a many-sided history of urban development.

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\*Intervenant

# Industrial Heritage of Kryvyi Rih (Ukraine): condition, methodology of study, future

Vladimir Kazakov \*† <sup>1</sup>

<sup>1</sup> Kryvyi Rih National University – Ukraine

The aspects of the study and future of industrial heritage of Kryvyi Rih City (Ukraine) have been considered at the article. The article presents the results of studying the city industrial heritage: the historical formation of industrial land, a summarized register of industrial heritage sites has been presented, a diversity of Kryvyi Rih city industrial heritage has been shown, the methodology of industrial heritage research has been characterized. The classifications of industrial heritage objects of the investigated territory have been developed. The directions of use and preservation of Kryvyi Rih industrial heritage objects have been proved.

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\*Intervenant

†Auteur correspondant: vladimir.kazakov@irm.kr.ua

## **POSTER Session 2**

# The Comparative Study of the Tokyo Regeneration Plan from the Great Kanto Earthquake (1923), and Overseas Cities

Takashi Itoh \* 1

<sup>1</sup> Japan Industrial Archaeology Society (JIAS) – 1-12-5 Yushima, Bunkyo-ku, Tokyo c/o Pulus One, Koyasu Bldg. 6F, Japon

In September, 1923, Tokyo was hit by the unprecedented big earthquake: the Great Kanto Earthquake. There were so many small rivers and canals that the downtown area in Tokyo of those days was called "Eastern Venice." At first this paper shows clearly how the engineers of those days considered the city revival procedure when reviving Tokyo. Moreover it analyzes what kind of urban design and townscape were created, focusing on the design and layout planning of bridges and parks. The Tokyo plan is summarized to the following five.

The Sumida River as "Exposition of Bridges"

The various types of bridges were constructed over the Sumida representing the capital Tokyo.  
2. Bridge as River Gate : The bridges constructed at the mouth of rivers which flow into the Sumida (the First Bridge) were designed as the gate of each river, and each design of the First Bridges was different for every river; 3. Arch bridges on the right-bank areas and truss bridges on the left-bank areas of the Sumid ; 4. Design hierarchy with the Imperial Palace at the center. The design of the bridges decreased and the design density of the bridges fell as it kept away from the Imperial Palace. Naturally, the cost of bridge construction also became cheap.; 5. 3 Networks Formation a. Green network of roadside trees and large-middle-small parks ; b. Water network of canals and rivers ; c. Ground and water traffic network

The bridge-foot plazas created the node points of those networks.

Secondly this paper verifies that the urban design and townscape of Tokyo appeared different from London (with big steel arch bridges), and St. Petersburg (with iron bridges), Venice (with stone bridges) and Suzhou (with stone bridges) in China which consist of small bridge groups.

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\*Intervenant

# Le territoire d'Epinac, à la recherche d'une nouvelle cohérence

Séverine Tillequin \* 1

<sup>1</sup> Tillequin – Université Paris 1 - Panthéon-Sorbonne – France

La ville d'Epinac (Saône-et-Loire, France) constitue un paysage hérité de son passé minier : le bourg médiéval historique se distingue des deux hameaux ouvriers, situés à l'est, dont il est séparé par une zone industrielle peu structurée, où se trouve le puits Hottinguer, gigantesque bâtiment classé à l'Inventaire supplémentaire des Monuments historiques. Il s'agit de s'interroger sur la place d'un patrimoine industriel omniprésent, afin de déterminer quels sont les problèmes posés par ces installations au niveau de l'aménagement du territoire et quelles peuvent être les solutions permettant de parvenir à une nouvelle unité urbaine tout en préservant les caractéristiques de chaque quartier.

La première partie sera consacrée aux tentatives de valorisation ou de reconversion de ce patrimoine déjà réalisées, que ce soit à échelle d'un bâtiment (reconstitution d'une maison ouvrière-type, reconversion d'anciens puits...) ou d'un " territoire " (aménagement de sentiers thématiques). L'objectif sera de montrer la diversité des possibilités mais aussi de souligner l'absence à ce jour d'une politique patrimoniale d'ensemble à échelle de la commune.

La deuxième partie se focalisera sur une partie du paysage : celle située entre le bourg et les cités ouvrières, constituée actuellement de zones plus ou moins éparses où cohabitent plusieurs types de bâtiment (habitations, entreprises, vestiges industriels, prés, friches...) et où se situe le puits Hottinguer, aujourd'hui en ruine. Il s'agira de présenter cet espace et de tenter une réflexion sur son potentiel de développement et les caractéristiques de l'environnement avant de s'intéresser plus particulièrement au puits Hottinguer, lieu symbolique et unique en son genre mais qui fait aussi l'objet de polémiques.

Enfin, la troisième partie présentera une réflexion sur le rôle que peuvent jouer non seulement cette friche mais également l'ensemble du patrimoine minier et industriel dans la mise en place d'une nouvelle cohérence urbaine mais aussi, plus généralement, territoriale, l'ensemble de l'Autunois-Morvan ayant été marqué par l'exploitation de ses ressources énergétiques (charbon, schiste bitumineux, uranium). On insistera sur les possibilités de développement économique durable, sur le plan touristique (en particulier du tourisme vert), éducatif et culturel mais également agricole et énergétique.

On conclura par un état des projets au moment de la présentation et un aperçu des différentes perspectives.

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\*Intervenant

# Decorative Tiles of the late 19th Century and early 20th Century in Brazilian Southeast

Renata Poliana Cezar Monezzi \* 1

<sup>1</sup> TPTI - Techniques, Patrimoine et Territoires de l'industrie – Université Paris I - Panthéon-Sorbonne – France

The tile as a decorative element in Brazilian architecture has undergone a series of transformations since its first appearance inside churches and chapels until its peak in the nineteenth century, when it began to decorate the facades of urban houses. Initially, this decorative material was imported from Portugal and applied inside buildings, because it was strictly handmade, expensive and specialized. From the Industrial Revolution, trade relations and tile production techniques transformed themselves and set up in a new dynamic. Tile production adopted the stencil technique, which made manufacturing parts much faster and cheaper, and enabled the expansion of the tile market and a large-scale application of this element outside buildings. In Brazil, the application of tiles on house facades, especially in the northeast, quickly became popular. Tiles, besides conferring an air of liveliness to the streets and buildings, protected houses from the weather. Coastal and inner cities, enriched by agriculture, by the extraction of natural resources or due to a close contact to Europe, had their production much more rooted to foreign architectural decorative influences and some European countries, such as Portugal, Italy and France, contributed significantly to the imports of this product for the decoration and enrichment of Brazilian Architecture.

In Brazil, until the late nineteenth century, domestic production of pottery products was hand-crafted and incipient. Only in the 1910s that the first crockery, earthenware and porcelain factories appeared in São Paulo. The first white china Factory in Brazil was the SA Factory Connection Santa Catharina (corporate name Fagundes, Ranzini & Cia), founded in 1913 by Italian immigrant Romeo Ranzini. In 1912, this Italian businessman hired groups of Italian workers and pottery technicians to come to Brazil, since there was no skilled labor to work in this type of industry. With the termination of employment contracts, the factory's foreign technicians founded their own white china factories. In 1937 there were 18 factories.

This research intends to look for new paths to understand the Brazilian tiling production, especially in Southeast, because little is known about the specific production of decorative tiles which covering the facades houses in the early twentieth century in Brazilian Southeast. The identification of national typologies and their application in architecture in Southeast have been little exploited, despite the rich existence of few tile samples on building facades, mostly in Santos, Itu (cities in São Paulo State) and in Rio de Janeiro (capital of Rio de Janeiro State). Investigate European production and its relations with the Brazilian national production were important resources for understanding the formation of decorative tiles industry in Brazil.

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\*Intervenant

# Using the Traditional Management Model for Conservation the First Samples of Iranian Industrial Heritage in Traditional Windmills

Aydin Javani Dizaji \*<sup>1</sup>, Sara Moshfeghnia†<sup>2</sup>

<sup>1</sup> Mehrabi Architecture School (Mehrabi) – No 3. Balavar st. - Enqelab st. - Tehran, Iran

<sup>2</sup> Mehrabi Architectural School (Mehrabi) – No 3. Balavar st. - Enqelab st. - Tehran, Iran

Iranian traditional windmills have emerged in the region of Sistan and Khorasan, are among the first examples of LLP management in traditional buildings. In these buildings, a group of people was shareholding in constructing and operating the windmills and benefits as much proportion (money or goods) as they have shared. Today, due to the abandonment of these buildings and replacement of industrial machines as well as modern society's approaches in production of high quality foods away from any contamination, these buildings have lost their role in people's lives. Perhaps reestablishing and utilizing these buildings would not be possible but before cannot be used to establish these buildings of the ways to get them, but the management and shareholding model used in these buildings can be a way to preserve heritage, specifically Windmills that are among the first examples of Iran's industrial heritage. In this paper, some traditional yet functional methods will be provided for the preservation of historical monuments in Iran by examining several examples of traditional management and shareholding methods in these regions.

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\*Intervenant

†Auteur correspondant: saramoshfeghnia@gmail.com

# HIT OR MISS, 150 Years of Torpedo Research and Development (R&D)

Miljenko Smokvina \* 1

<sup>1</sup> Miljenko Smokvina – 51000 Rijeka Vajnera 7, Croatie

## HIT OR MISS 150 Years of Torpedo Research and Development (R&D)

Research and Development (R&D) is common approach in almost any modern factory or scientific institution. "Hit or Miss" development of new products or services is today part of life for company managers and engineers. R&D is combination of using software knowledge and hardware facilities, which make possible to "Hit" with useful new marketable product or "Miss" with a wrong one.

The first systematic attempt in developing new product, naval underwater weapon, the Torpedo, started 150 years ago in Rijeka, Croatia (in 1866. it was Fiume, than Austrian kingdom), using today's R&D approach. Rijeka's torpedo factory from it's beginning thoroughly tested every new product. It was tested statically in the factory, and dynamically in the sea. Most important part of torpedo quality control was it's launching in the sea, from the torpedo launching and testing station, which was build on sea shore, near of the factory.

R&D of torpedoes was defined by strict set of procedures, which were obligatory for every new model of torpedo, and for every torpedo produced in the factory. The first torpedo testing station in Rijeka was built almost in same time when the torpedo was invented. Until 1966 when the torpedoes have been produced in Rijeka , 10 different types of torpedo launching station have been build. With export of Rijeka's torpedoes around World, and with development of new types of torpedoes in other World Navies, hundreds of torpedo testing station have been built around World on all continents.

Remaining of this torpedo testing station are valuable part of our common history of R&D. This historical torpedo testing stations are offering possibilities in preserving tangible heritage of this facilities and intangible heritage of torpedo constructing and testing knowledge, too. The best chance for preservation is organizing/establishing the European and World route/network of historical torpedo testing stations as part of naval and engineering technology and R&D heritage.

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\*Intervenant

## Liste des auteurs

- ÖZKAN ALTINÖZ, Meltem, 232  
ŠTELBIEN, Aida, 323  
ADONES DEL BARRIO, Andrea, 299  
AF GEIJERSTAM, Jan, 126  
ALBRECHT, Helmuth, 57, 310  
ALDEBERT, Valentine, 267  
ALEKSEEVA, Elena, 32  
ALESSANDRI, Raphaël, 273  
ANDRE, Louis, 174  
ANDREOTTI, Maria, 101  
ANDRIAN, Giorgio, 311  
ANGILLIS, Marie-Aline, 157  
ANTENISKE, Anita, 258  
AVANGO, Dan, 194  
AWONO ZINGA, Guy Grégoire, 112  
AYDENIZ, Nagme Ebru, 77, 270  
BABALIS, Dimitra, 298  
BAPTY, Ian, 35  
BARBERO CALDERÓN, Marta, 299  
BARBIN, Céline, 307  
BARILLARI, Diana, 211  
BARISIC MARENIC, Zrinka, 67  
BARROIS, Mathieu, 271  
BARTOSOVA, Nina, 135  
BASLE, Katia, 203  
BAUM, Christiane, 217  
BAYON, Jacqueline, 302  
BEARD, Jeffrey L., 136  
BELHOSTE, Jean-François, 250  
BELTRAN, Alain, 131  
BENITEZ DE LA ROSA, Manuel, 299  
BENOIT, Bruno, 149  
BERG, Sveinung, 320  
BERTELS, Inge, 134  
BERTO, Raul, 211  
BERTRAM, Catherine, 89  
BINCHAO, Hou, 83  
BITZANIS, Konstantinos, 317  
BJORSVIK, Elisabeth, 231  
BOLLEREY, Franziska, 139  
BONCOMPAGNI, Serena, 158  
BOOTH, Geoffrey, 64  
BOSSEN, Howard, 155, 205  
BOULLY, Vincent, 288  
BOUVIER, Yves, 129  
BRIAND, Gilles, 239  
BUJARD, Jacques, 172  
BUSS, Andreas, 106  
BUZZI, Maria Consolata, 37  
CAÑIZARES RUIZ, María Del Carmen, 166  
CABARET, Michel, 69  
CAFFEY, Stephen, 64  
CAI, Xiaomeng, 156  
CALISTE, Lisa, 68

- CAMPAGNOL, Gabriela, 64, 238  
CARCASIO, Maria, 263  
CARDOSO DE MATOS, Ana, 44, 45  
CARON, Jean-François, 22  
CASANELLES, Eusebi, 224  
CASTAÑER MUÑOZ, Esteban, 60  
CASTANO, Francesca, 84  
CASTORE, M. Elena, 300  
CAYOL-GERIN, Anne, 142  
CECHET, Giovanni, 211  
CELETTI, David, 242  
CESARE, Silvi, 141  
CEZAR MONEZZI, Renata Poliana, 328  
CHARITOPOULOS, Evangelos, 152  
CHAUPIN, Marie-thérèse, 184  
CHEN, Chengche, 223  
CHENG, Hsienhsin, 223  
CHENG-CHE, Chen, 180  
CHIMISSO, Maddalena, 241  
CHOPIN, Alain, 36  
CLAYTON, Mark, 64  
CLYNCKEMAILLIE, Olivier, 197  
COUTURIER, Bastien, 75  
CREMNITZER, Jean-Bernard, 145  
CURRÀ, Eduardo, 173  
CURULLI, Irene, 298  
DÍAZ ALONSO, Antonio, 299  
DABAŠINSKIEN, Iveta, 53  
DAHLSTRÖM RITTSÉL, Eva, 96  
DALMASSO, Anne, 142  
DAVID, Fleetwood, 231  
DAVID, Sandved, 231  
DE BOER, Hildebrand, 217  
DE CORTE, Bruno, 115  
DE FOSSE, Marianne, 134  
DE SANTOS, Joaquín, 40  
DE VOOGHT, Danielle, 68  
DEBO, Robin, 256  
DEBOUT, Joël, 29  
DEGRIGNY, Christian, 28, 172  
DELAET, Jean-Louis, 120  
DEPAIFVE, Franck, 186  
DIMELLI, Despina, 202  
DONG, Yiping, 83  
DOREL-FERRE, Gracia, 176  
DULLA, Matus, 135  
EDELBLUTTE, Simon, 210  
EKERHOVD, Per Morten, 231  
FELIU TORRAS, Assumpcio, 119  
FERRARI, Mónica, 47, 123  
FERRING, Mari, 96  
FIGUEIREDO, Vanessa, 209  
FISHER, Tom, 63  
FLOROU, Maria, 317  
FOEHL, Axel, 66  
FONTANA, Giovanni L., 103  
FORON-DAUPHIN, Nathalie, 51  
FOSSEY, Eric, 196  
FRANÇOIS, Pierre-Louis, 286  
FREEDMAN, Eric, 155  
FU, Chao-Ching, 74  
FUCHS, Catherine, 130

- GÜNÇE, Kağan, 188
- GALLEGUEROCA, Javier, 316
- GELBERT-MIERMON, Agnes, 172
- GERIBELLO, Denise, 306
- GHEORGHIU, Octavian, 302
- GONZALEZ MARQUEZ, Carmen, 299
- GRIFFATON, Marie-Laure, 284
- GUNN, James, 169
- HABERLANDOVA, Katarina, 135
- HANACHI, Pirooz, 150
- HANSELL, Friederike, 310
- HENNING, Priscila, 290
- HOEHMANN, Rolf, 275
- HORICKA, Jana, 91
- HOWDLE, Joanne, 169
- HSIEN-HSIN, Cheng, 180
- HSU, Min-Fu, 237
- HSU, Nai-Yi, 122
- HUGHES, Stephen, 276
- IAMANDESCU, Irina, 71, 178
- IFKO, Sonja, 56
- ISHIDA, Shoji, 80
- ITOH, Takashi, 326
- JANOUSKOVA, Marie, 153
- JANUARIUS, Joeri, 68
- JAVANI DIZAJI, Aydin, 329
- JEANNERET, Romain, 172
- JERINA GROM, Natasa, 107
- JOHNSTON, Andrew, 227
- JOICHI, Takashi, 80
- KÖHLER, Guido, 28
- KAPSALIS, Stavros, 152
- KARABAĞ AYDENİZ, Nağme Ebru, 77, 270
- KARTOWSKI-AÏACH, Miléna, 254
- KAZAKOV, Vladimir, 324
- KELLEHER, Shane, 181
- KELLY, Miriam, 116
- KERGOSIEN, Eric, 182
- KEROUANTON, Jean-Louis, 27
- KIERDORF, Alexander, 246
- KIJIMA, Tatsuo, 80
- KLENNER, Rainer, 217
- KUNINGAS, Henry, 303
- LOPEZ CALLE, Pablo, 100
- LA CONTE, Pierre, 249
- LAGERQVIST, Bosse, 92
- LARERE, Franck, 221
- LAROCHE, Florent, 27
- LARONDE, Anne-Claire, 170
- LAVENU, Mathilde, 164
- LE ROC'H MORGERE, Louis, 288
- LEE, Wen-Huan, 237
- LIN, Hui-Wen, 237
- LINTERS, Adriaan, 216
- LIU, Boying, 295
- MISIRLISOY, Damla, 188
- MAHONEY, Paul, 274
- MAISON-SOULARD, Laetitia, 49
- MALUTA, Lucie, 216
- MAMALAKIS, Konstantinos, 152
- MANGIATORDI, Anna, 201

- MANZINI, Alberto, 165  
MARCINIAK, Piotr, 304  
MASPOLI, Rossella, 278, 279  
MASSARENTE, Alessandro, 225  
MEDEIROS, Leonor, 48, 231  
MELIN, Hélène, 291  
MENEGUELLO, Cristina, 189  
MENEGUZZO, Cristina, 214  
MIGONE, Jaime, 76  
MILLER, Roland, 138  
MIMIKOU, Evdokia, 259  
MINNIS, John, 280  
MORALES MORENO, Humberto, 283  
MORIN, Bode, 41  
MORISSET, Lucie K., 24, 104  
MORITA, Masami, 261  
MORITA, Shinji, 261  
MOSHFEGHNIA, Sara, 329  
MURILLO ROMERO, María, 299  
MUZELLEC, Olivier, 221  
NÉMETH, Györgyi, 55  
NACHBAUER, Laurent, 245  
NEIRINCKX, Pieter, 168  
OGAWA, Chiharu, 80  
OGLETHORPE, Miles, 203, 231  
OKADA, Masaaki, 292  
OKTAY VEHBI, Beser, 133  
OLIVINI, Francesca, 318  
OTTOLENGHI, Federico, 214  
OVIEDA, Belem, 198  
OVIEDO, Belem, 296  
PAOLINI, Cesira, 173  
PAPADOPoulos, Lois, 259  
PASCU, Gabriela, 302  
PATOU, Marie, 257  
PEHLIVANIAN, Sophie, 141  
PERARNAU LLORENS, Jaume, 269  
PEREZ, Jose-Ramon, 61  
PERFETTO, Maria Concetta, 262  
PIERROT, Nicolas, 52  
PIGUET, Jean-Michel, 172  
PIQUET, Jenny, 72  
POLINO, Marie-Noelle, 44  
POMARI, Elisa, 207  
POPE, Beki, 169  
POZZER, Guilherme, 200  
PREITE, Massimo, 193  
PROST, Philippe, 234  
RAINERO, Carolina, 127  
RAMELLO, Manuel Fernando, 228  
RAPP, Guillaume, 172  
RENAUX, Thierry, 72  
RICH, Geoff, 97  
RIGAUD, Jean-Luc, 98, 147  
ROBERT-HAUGLUSTAINE, Anne-Catherine, 23  
RODRIGUEZ, Francisco Javier, 124  
ROLLAND-VILLEMET, Bénédicte, 39  
ROMERO DE OLIVEIRA, Eduardo, 123  
ROSENQUIST, Marta, 219  
ROSSINO, Gian Mario, 37  
RUBINO, Gregorio, 294  
RUIZ, Rita, 124

- RUIZ-ROSO LUNA, Mónica, 299
- RUZIC, Dragana, 185
- SABAU, Nolwenn, 151
- SAKAKIBARA, Kazuhiko, 256
- SALAGNON, Gérard, 252
- SANTOS, Gildo, 109
- SAOUNDE, Reine-Flora, 81
- SAVAGE, Andy, 44
- SEBO, Suzanne, 256
- SERRANO SÁSETA, Rafael, 299
- SHIPITSYNA, Olga, 235
- SMARS, Pierre, 161
- SMITH, Paul, 248
- SMOKVINA, Miljenko, 330
- SOLONINA, Nadezda, 162, 235
- SOUKEF JÚNIOR, Antonio, 79
- STEINER, Marion, 143
- STIVAL, Carlo, 211
- SWENSEN, Grete, 320
- TADDONIO, Sergio, 77, 270
- TAECKENS, Michel, 118
- TAKESHI, Ichihara, 31
- TAYMOURTASH, Sara, 150
- TEMPEL, Norbert, 244
- THOMAS-CUMMING, Anne, 206
- TIGANEA, Oana Cristina, 322
- TIGARROUMINE, Jihad, 192
- TILLEQUIN, Séverine, 327
- TORRES, Mariano, 308
- TOSO, Francesco Carlo, 287
- TRISCIUOGLIO, Marco, 111, 264
- TRISOGLIO, Fabrizio, 287
- TSUTSUMI, Ichiro, 80
- TUFEGDZIC, Anica, 93, 177
- TURCHETTI, Gaia, 54
- TUSCH, Roland, 43
- TUTT, Gundula, 314
- URBÁN, Erzsébet, 95
- VACHINO, Giovanni, 211
- VALADARES, Desiree, 213
- VALCOVICH, Edino, 211
- VALLEE, Anne-Sophie, 282
- VANDENABEELE, Louis, 134
- VANDER STICHELE, Alexander, 68
- VANDERHULST, Guido, 33, 40
- VERA, Marta, 114
- VEREENOOGHE, Tijl, 68
- VERGNIEUX, Robert, 25
- VESCHAMBRE, Vincent, 75
- VIAENE, Patrick, 322
- VIEIRA DE ANDRADE JUNIOR, Nivaldo, 59
- VILLERMET, Jean-Marc, 110
- VUKOSAVLYEV, Zorán, 190
- WADA, Shoji, 80
- WAIN, Alison, 146
- WALTERS, Diana, 92
- WATSON, Mark, 231, 266
- WELLNITZ, Daniela, 85
- WELTY, Claude, 130
- WORTH, David, 220
- WOUTERS, Ine, 134
- WU, Ping-Sheng, 237

YANG, Kai-Cheng, 161

YILMAZ, Unn, 88

YU, Wenwei, 264

YUCEER, Hulya, 133

ZACHAROPOULOU, Georgia, 160