Technological Drive from Past to Future?
50 Years of ICOHTEC
The 45th ICOHTEC Symposium
17 – 21 July 2018, Jean Monnet University
Saint-Étienne, France

Scientific Programme

v26-A / 11 July 2018

Editors Timo Myllyntaus, Robert Belot, Aurélie Brayet and Luc Rojas

Publishers: ICOHTEC and Jean Monnet University
Printed by JMU, Saint-Étienne, France 2018
## Table of Contents

### Wednesday 18 July,

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 10:30</td>
<td>W1A Railways in the Making of Modern Societies 1</td>
</tr>
<tr>
<td></td>
<td>W1B The Dream of Flight in the Popular Imagination</td>
</tr>
<tr>
<td></td>
<td>W1C Encounters of New War Machines and Fictional Armored Shields</td>
</tr>
<tr>
<td></td>
<td>W1D Electricity in Cultural and Political Development</td>
</tr>
<tr>
<td></td>
<td>W1E Technological Mindset in Political Activism and Miracles in Cookery</td>
</tr>
<tr>
<td></td>
<td>W1F Energy and the Environment: Conflict or Compatibility</td>
</tr>
<tr>
<td>10:30 – 11:00</td>
<td>W2A Digital Uses and Tools for Historical Knowledge Management</td>
</tr>
<tr>
<td></td>
<td>W2B Railways in the Making of Modern Societies 2</td>
</tr>
<tr>
<td></td>
<td>W2C Technified Bodies at Work</td>
</tr>
<tr>
<td></td>
<td>W2D Approaches to Technological Utopias and Paradigms</td>
</tr>
<tr>
<td></td>
<td>W2E Technological Momentum: From Gunpowders to Modern Explosives and Propellants 1</td>
</tr>
<tr>
<td></td>
<td>W2F Electronics and Computers in History</td>
</tr>
<tr>
<td></td>
<td>W2G Technology as a Tool and a Target of Intelligence Agencies in the Second Half of the 20th Century</td>
</tr>
<tr>
<td>11:00 – 12:30</td>
<td>W3A The Conquest of Hydraulic Power and its Place in the History of Mankind (in French)</td>
</tr>
<tr>
<td></td>
<td>W3B Railways in the Making of Modern Societies 3</td>
</tr>
<tr>
<td></td>
<td>W3C Plastics, Emotions and Consumer Society</td>
</tr>
<tr>
<td></td>
<td>W3D Industrial Strategies from the Past to the Future</td>
</tr>
<tr>
<td></td>
<td>W3E Technological Momentum: From Gunpowders to Modern Explosives and Propellants 2</td>
</tr>
<tr>
<td></td>
<td>W3F Reception of Novelties in Radio, Broadcasting and Communication</td>
</tr>
<tr>
<td></td>
<td>W3G New Approaches to Industrial Heritage</td>
</tr>
</tbody>
</table>

### Thursday, 19 July

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 10:30</td>
<td>T1A Technical Democracy: What are its Antecedents and its Prospects? 1 (In French)</td>
</tr>
<tr>
<td></td>
<td>T1B West - East Transfer of Technology during the Cold War</td>
</tr>
<tr>
<td></td>
<td>T1C Plastics, Emotions and Consumer Society 2</td>
</tr>
<tr>
<td></td>
<td>T1D Manufacturing Industries, Management and Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>T1E 13th Annual Symposium of the Social History of Military Technology 1</td>
</tr>
<tr>
<td></td>
<td>T1F Technological Education and Exchange of Knowledge</td>
</tr>
<tr>
<td></td>
<td>T1G Human Impacts on Nature and Landscape</td>
</tr>
<tr>
<td>11:00 – 12:30</td>
<td>T2A Technical Democracy: What are its Antecedents and its Prospects? 2 (In French)</td>
</tr>
</tbody>
</table>
T2B  13th Annual Symposium of the Social History of Military Technology 2 ................................................................. 12
T2C  ICOHTEC Prize Session ........................................................................................................................................ 12

Friday, 20 July .............................................................................................................................................................. 13

9:00—10:30 ................................................................................................................................................................. 13
F1A  Technical Democracy: What are its Antecedents and its Prospects? ................................................................. 13 (In French)
F1B  Turns in the Energy Supply: Past, Present and Future 1 .................................................................................... 13
F1C  The History of Repair Cultures and the Temporalities of Technology ................................................................. 13
F1D  Technological Innovations in Architecture ............................................................................................................ 14
F1E  13th Annual Symposium of the Social History of Military Technology 3 ............................................................... 14
F1F  Humans Encountering Medical and Psychological Technology ............................................................................... 14
F1G  From Insights to Technology to Technological Futurism ....................................................................................... 15
F1H  How to Write Global History of Technology? Interactive Discussion Session ...................................................... 15
Saturday, 21 July .......................................................................................................................................................... 16

9:00 – 10:30 ............................................................................................................................................................... 16
S1A  Sustainable Buildings and Innovations 1 (in French) ............................................................................................ 16
S1B  Turns in the Energy Supply: Past, Present and Future 2 ..................................................................................... 16
S1C  Technological Nostalgia and Post Industrialist Idealism .......................................................................................... 16
S1D  Social Values Matter: Biotechnology and Medical Technologies ........................................................................... 17
S1E  13th Annual Symposium of the Social History of Military Technology 4 ............................................................... 17
S1F  Digitalisation: Revolution of Contemporary History ............................................................................................... 17
S1G  Search for Pure Potable H2O: Development of Water Supply Systems ................................................................. 17
S1H  Unusual Sounds: Girls with Electric Guitars, Finnish Synthesizers and New Issues in the Development of Computer Music ........................................................................................................... 18
Saturday, 11:00—12:30 ............................................................................................................................................ 19
S2A  Sustainable Buildings and Innovations 2 (in French) .............................................................................................. 19
S2B  Turns in the Energy Supply: Past, Present and Future 3 ..................................................................................... 19
S2C  Tourism – What Can History of Technology Contribute? ...................................................................................... 19
S2D  Beauty of Products: Technology and Design ........................................................................................................... 20
S2E  13th Annual Symposium of the Social History of Military Technology 5 .................................................................. 20
S2F  Taming Sounds and Transmitting Speech ............................................................................................................... 20
S2G  Support of Science, Technology and Society: Interactions and Innovations .......................................................... 20
S2H  Commanded Nature: Technology and the Environment in Authoritarian Regimes ................................................ 21
Wednesday, 18 July

9:00 – 10:30

W1A  Railways in the Making of Modern Societies 1

Location: H 13
Organiser: Timo Myllyntaus
Chair: Timo Myllyntaus

The Carrying Trade and the First Main-Line Railways in England, 1840-1850
Ms. Carolyn Dougherty

The Coming of the Mail and the News: Railways and Cultural Change in Rural Great Britain, 1840-1914
Professor Robert M. Schwartz

Portuguese Metropolitan and Overseas Railways and Harbours as Portals of Globalization, 1850s – 1910s
Researcher Hugo Silveira Pereira

Railways as Tools of Direct and Indirect Empires in Africa: Angola and Mozambique
Professor Bruno J. Navarro

W1B  The Dream of Flight in the Popular Imagination

Location: H 21
Organiser: Tom Crouch
Chair: Tom Crouch

"Like all novices, we began with the helicopter: “An Ancient Toy That Inspired the Air Age
Dr. Tom Crouch

Imaging Faster-Than-Light Travel and Fictional Spaceship Designs
Dr. Margaret Weitekamp

Fascinating Toys: Flying Cars Are Dead but They Will Always Be Fun
Researcher Dorothy Cochrane

W1C  Encounters of New War Machines and Fictional Armored Shields

Location: HR 5
Organiser: PC
Chair: Norman Aselmeyer

Development and Evolution of Seaplanes in Europe during World War One
Ph.D. candidate Marion Weckerle

Nothing at Risk?: Experiencing World War I in VR
Dr. David Howell

Lionization, Professionalization, and Mechanization: Three Contrasting Visions of Powered Armor in Speculative Fiction
Ph.D. candidate Ian Boley
**W1D Electricity in Cultural and Political Development**

Location: H 26  
Organiser: PC  
Chair: Alex Lesanu

**Electricity in the Making of Post-colonial Spain, 1880 – 1936**  
Dr. Daniel Pérez Zapico

**Politics of Urban Electricity Grid in Ottoman Istanbul during the World War I**  
Ph.D. candidate Duygu Aysal Cin

**The Heritage of the “Networks of Power”. Reading Monuments as Sources of the History of Technology**  
Dr. Michael Hascher

**Hydroelectric Projections. The Culture of Water Power in 1950s European Industrial Films**  
Ph.D. candidate Fabian Zimmer

---

**W1E Technological Mindset in Political Activism and Miracles in Cookery**

Location: E 11A  
Organiser: PC  
Chair: Marly Kamioji

**The Fullness of Containment: Investigations in the Diverse Global Social Formations Shaping World Opinion and Otherwise Confronting the Political Might of Nuclear Weapons Technology**  
Dr. Julie Boddy

"Kitchen Technology: A Biography of the Couscous Pot"  
Dr. Sylvie Durmelat

---

**W1F Energy and the Environment: Conflict or Compatibility**

Location: E 11B  
Organiser: Anthony N. Stranges  
Chair: Anthony N. Stranges

**How Wind Energy Contributes to the Reduction of CO₂ Emissions**  
Dr. Anthony N. Stranges

**The Atmosphere as a Commons – a Way to View Climate Change**  
Researcher Petter Wulff

**Energy Trilemma: Past and Future**  
Dr. Elena Helerea
Wednesday, 11:00 – 12:30

W2A  Digital Uses and Tools for Historical Knowledge Management

Location: H 21  
Organiser: Florent Laroche  
Chairs: Michel Cotte and Florent Laroche  

Synthesis on 3D Modeling and Simulation applied to the History of Technology  
Prof. Alain Michel  

Comparative History of Industrial Cultural Landscapes:  
The Question of Knowledge Modelling (Semantic Web and Virtual Reality)  
Director Sylvain Laubé, Ph.D. cand. Bruno Rohou, Ph.D. cand Marie Abiven, Director Ronan Querrec, and Director Serge Garlatti  

Ethnographic Field Methods, Digital Technologies and the Interpretation of Heritage  
Prof. Laurier Turgeon  

The Policy, the Digital Technology and the Public  
Director Pierre-Yves Guillot and M.A. Charlotte Soubeyrand  

W2B  Railways in the Making of Modern Societies 2

Location: H 13  
Organiser: Timo Myllyntaus  
Chair: Hugo Silveira Pereira  

The Electrification Try-outs in Stockholm, 1905-1907  
Lecturer Roine Viklund  

Conquering the Land: Nazi Germany’s Railways in the Far North  
Ph.D. candidate Mari Olafson Lundemo  

Railway and Internet Infrastructure – Similarities and Differences  
Researcher Olli Sjöblom  
Professor Reima Suomi  
Professor Timo Myllyntaus  

W2C  Technified Bodies at Work

Location: H 14  
Organiser: Karsten Uhl  
Chair: Karsten Uhl  

Body against Soul? German Psychotechnics and the "Whole Worker"  
Dr. Kevin Liggieri  

Discipline and Alcohol: Power, Bodies, and Infrastructure Construction around 1900  
Dr. Eike-Christian Heine  

History of Technology Meets History of the Body – Miners’ Bodies in the Age of Rationalization  
Dr. Lars Bluma  

Production Technology and the Body of the Shipyard Worker  
Dr. Christian Ebhardt
**W2D Approaches to Technological Utopias and Paradigms**

Location: H 11  
Organiser: PC  
Chair: Antoni Roca Rosell

**Utopias and Dystopias of Media Technologies in History**  
Dr. Jukka Kortti

**Back to the Future: Collapse and Technological Utopia in Science Fiction (In French)**  
Professor Bertrand Guillaume

**Internet Imaginary: Reflections on Masoud Khayam and Technology's Horizon of Expectations**  
Professor Babak Rahimi

**Throwing Light on Photonics: Genealogy of a Technological Paradigm**  
Dr. Marcin Krasnodebski

**Hyperobject and Hyperhistory: Remnants of Hiroshima**  
Dr. Mitsuhiro Hayashi

**W2E Technological Momentum: From Gunpowders to Modern Explosives and Propellants 1**

Location: HR 5  
Organisers: Brenda Buchanan, Yoel Bergman and Steven Walton  
Chair: Yoel Bergman

**Shotgun Momentum? Diversity in Early Modern Gunpowder Mixtures**  
Professor Steven Walton

**Exhuming Trodden Earth: Technologies of Saltpeter Production in Korea, 1592-1698**  
Ph.D. candidate Hyeok Hweon Kang

**Future Scenarios for the Safeguarding and Musealisation of the Vale de Milhaços Gunpowder Factory**  
Researcher Graça Filipe

**W2F Electronics and Computers in History**

Location: H 26  
Organiser: PC  
Chair: Susan Schmidt Horning

Prof. Richard Vahrenkamp

**Exploring History of Computing with Prototypes**  
Dr. Zbigniew Stachniak

**50 Years of the Development of Microelectronics and Society**  
Professor Vasily Borisov

**Rise and Fall of the Romanian State-owned Micro/nanoelectronics**  
Dr. Andreas Wild
W2G  Technology as a Tool and a Target of Intelligence Agencies in the Second Half of the 20th Century

Location: E 11A
Organiser: Miroslaw Sikora
Chair: Kristie Macrakis
Commentator: Kristie Macrakis

Stasi and Eavesdropping in the GDR in the Years 1956 to 1989
Researcher Detlev Vreisleben

Hungary’s Participation in the Technology Transfer During the 1970 – 1980 Period
Dr. Zsuzsanna Borvendég

Obtaining Strategic Intelligence by SIGINT – Surveillance of the President of Serbia S. Milošević by Croatian Intelligence Agency
Dr. Gordan Akrap

Comecon’s Complex-Program for Scientific-Technical Progress 1986-2000 and the Role of the Intelligence Services’ Community of Warsaw Pact
Dr. Miroslaw Sikora

W2H  Reassembling Crops for Changing Climates

Location: E 11B
Organisers: Harro Maat and Maria do Mar Gago
Chair: Francesca Bray

Following the Cloud: Long-term Trends of Making Coffee Grow in Colonial Angola, 1898-1939
Dr. Maria do Mar Gago

Jack of no Trade, yet a Probable King?
Dr. John Lourdusamy

Cultivating Oranges and Whiteness in the Global Mediterranean: South African Citrus Growers’ Cooperative and Californian Practices of Cloning
Dr. Tiago Saraiva

Temperate and Tropical Rice across the Atlantic: How the Americas became a Breeding Site for Asian and African Rice Farmers
Dr. Harro Maat
Wednesday, 13:30 – 15:00

W3A The Conquest of Hydraulic Power and its Place in the History of Mankind (in French)

Location: H 21
Organisers: Alexandre Herlea and Mircea Ivanoiu
Chair: Alexandre Herlea

Hydraulic Turbine Technology Disruption to Cope New Power Generation Paradigms
Professor François Avellan

Exploitation of Hydraulic Energy in Rural Traditional Technology in Romania: Resemblance and European Synchronism
Dr. Mircea Ivanoiu
Professor Alexandre Herlea

Aurel Bărgăuzan (1905-1960), Founder of the Hydraulic Machinery School in Timisoara, Romania
Professor Mircea Octavian Popoviciu

Hydropower Infrastructure on the Upper Course of the Dniester River: Historical Evolutions and Perspectives for the Ukraine – Republic of Moldova Relations
Dr. Dorin Dusciac

W3B Railways in the Making of Modern Societies 3

Location: H 13
Organiser: Timo Myllyntaus
Chair: Robert M. Schwartz

Railways and Global Integration: Remarks from an African Historian’s Perspective
Researcher Norman Aselmeyer

The Indian Railways: Negotiating Space & Time in a Colonial Context
Researcher Vanshica Kant

The Biggest Railway Catastrophe in the History of Romanian Railways: Context, Causes and Consequences
Researcher Eduard Cotorobai
Professor Liviu Alexandru Sofonea
Professor Victoria Cotorobai

W3C Plastics, Emotions and Consumer Society

Location: H 14
Organisers: Maria Elvira Callapez, Günter Lattermann and Stefan Poser
Chair: Stefan Poser

Historic Surrogates (“Ersatzstoffe”) and the Image of Plastics Today
Dr. Günter Lattermann

Building the History of the Portuguese Plastic Industry through Material Testimonies
Dr. Inês Soares
Professor Susana Sá
Professor Joana Ferreira
Plastics Hand in Hand with Consumers
Dr. Maria Elvira Callapez
Graduate student Sara Marques da Cruz
Graduate student Marta Martins Neto

**W3D Industrial Strategies from the Past to the Future**

Location: H 11
Organiser: PC
Chair: Lars Bluma

“Two Centuries of Progress and Adaptation: The Evolution of the Société d’Encouragement pour l’Industrie Nationale”
Dr. Andrew Butrica

Industrial Strategy, Techno-nationalism and the Limits of Economic Liberalism under Thatcher
Ph.D. candidate Tom Kelsey

Economics and the Fourth Industrial Revolution: a History of the Future?
Professor Simone Fari

Future Expectations in German Textile Industry: The Role of History on the Cusp of the 4th Industrial Revolution
Ph.D. candidate Robert Peters

**W3E Technological Momentum: From Gunpowders to Modern Explosives and Propellants 2**

Location: HR 5
Organiser: Brenda Buchanan, Yoel Bergman and Steven Walton
Chair: Steven Walton

An Early Industrial State-owned Enterprise: The Royal Gunpowder Mills Waltham Abbey, 1787–1816
Ph.D. candidate Sabrina Fröhlich

Did Making Gunpowder Make Good Revolutionaries? Using Saltpeter to Measure Popular Support for the American Revolution
Dr. David Hsiung

Comments
Dr. Brenda Buchanan

**W3F Reception of Novelties in Radio, Broadcasting and Communication**

Location: H 26
Organiser: PC
Chair: Jan Hadlaw

Professor Anne MacLennan

Dark Side of AMPEX
Mr. Roman Artemenko
W3G New Approaches to Industrial Heritage

Location: E 11A
Organiser: PC
Chair: Michael Hascher

Visual Memories of the Marble Industry – Using Cinema and Photography in Mining Heritage Studies
Ph.D. candidate Aramdo Quintas
Ph.D. candidate Alexandre Ramos

The Structural Rehabilitation of Tharsis Pier (Huelva, Spain), Monument of the Spanish Industrial Heritage
Ph.D. candidate Aurora Donoso-Sequeiros
Dr. Narciso Vazquez-Carretero

Photography and UNESCO Industrial Heritage World Heritage Sites of the Iberian Peninsula
Ms. Sheila Palomares Alarcón
Mr. Pietro Viscomi
Thursday, 19 July

9:00 – 10:30

TIA Technical Democracy: What are its Antecedents and its Prospects? 1 *(In French)*

Location: H 21
Organiser: Pierre Lamard, Mathieu Triclot and Yves-Claude Lequin
Chair: Pierre Lamard
Commentator: Yves-Claude Lequin

100 Years of Projects for Home Automation: the Figure of the Kitchen
Ph.D. candidate Noémie Boeglin

Culinary Technical Gestures and Domestic Rationalization: the Art of Managing Everyday Life
Dr. Aurélie Brayet

“La conférence des directeurs” or the Tool according to Henri Fayol to Scientifically Lead a Big Company, 1888-1918
Dr. Luc Rojas

T1B West - East Transfer of Technology during the Cold War

Location: H 13
Organiser: Timo Myllyntaus
Chair: Timo Myllyntaus

The Tight Rope over the Iron Curtain: Technology Transfer between Finland and the Soviet Union during the Cold War
Professor Timo Myllyntaus

Duplication Model of Transfer of Western Technologies in Soviet Metallurgy, 1920-1940
Ph.D. candidate Irina Sheveleva

Soviet Bureaucracy and the Postwar Technological Transfer at the Soviet Periphery, 1944-1947
Researcher Alexandru Lesanu

Home Technologies and the Question of Technological Drive in State Socialism
Dr. Patryk Wasiak

T1C Plastics, Emotions and Consumer Society 2

Location: H 14
Organisers: Maria Elvira Callapez, Günter Lattermann, Stefan Poser
Chair: Maria Elvira Callapez

Plastics, Emotions, and the Oil Crises in the 1970s
Dr. Stefan Poser

Summertime, and the Living is Plastic: PVC and the Creation of a Summer Toy Industry
Ph.D. candidate Angela Cope
Plastics - Friend or Enemy of Humans? Case Study for Romania
Dr. Laura-Mihaela Leluțiu
Dr. Elena Helerea

**T1D Manufacturing Industries, Management and Entrepreneurship**

Location: H 11
Organiser: PC
Chair: Andrew Butrica

Technical Innovation as a Solution to Political and Economic Crisis: the Example of the Early Industrial Complexes of the Shūsekan Jigyō in Japan
Ph.D. candidate Céline Zuretti

The German Electrical Industry and the End of the Electric Car in Germany before World War I: The Example of the Automobile Company NAG in Berlin - Technological Development and Entrepreneurial Decisions
Researcher Thomas Irmer

**T1E 13th Annual Symposium of the Social History of Military Technology 1**

Location: HR 5
Organiser: Bart Hacker and Ciro Paoletti
Chair: Ciro Paoletti

Catapults still are not Atomic Bombs: Why does Technological Determinism Continue to Enthrall Military Historians?
Professor Kelly DeVries

“Neither Catapults nor Atomic Bombs”: Technological Determinism and Military History from a Post-industrial Revolution Perspective.
Professor David Zimmerman

From the Military Revolution to RMAs: Technology, Military Institutions, and Society
Dr. Bart Hacker

**T1F Technological Education and Exchange of Knowledge**

Location: E 11A
Organiser: PC
Chair: Simone Fari

Instruments of Development: Indo-German Scientific Collaboration and Engineering Practices at IIT Madras
Professor Roland Wittje

The Harpist Clotilde Cerdà and the Promotion of Technical Education for Women in Barcelona, 1885
Dr. Antoni Roca-Rosell

The Role of Military School in the Development of Italian Technology during the 19th Century
Ph.D. candidate Elena Rinaldi
T1G  Human Impacts on Nature and Landscape

Location: E 11B
Organiser: PC
Chair: Harro Maat

Silk Industry of Moscow Facing the Pollution of the Environment, Second Half of the 19th Century - Beginning of the 20th Century (In French)
Mrs. Olga Melnichenko

Industrialization of Slovakia and its Impact on the Environment during the Period of Socialism
Professor Žurovska Hallon
Ph.D. candidate Michal Šurčo
Dr. Miroslav Sabol

Revisiting Wars against Nature: Irrigation Works in Nantong County, 1950s-1970s
Lecturer Yu Qiao

Does Technology Shape under the Pressures of Farmers or Shaping Farmers under the Pressure of Technology? (In Spanish)
Ph.D. candidate Bruno Esperante Paramos
Thursday, 11:00 – 12:30


Location: H 21
Organiser: Pierre Lamard, Mathieu Triclot and Yves-Claude Lequin
Chair: Mathieu Triclot
Commentator: Pierre Lamard

History of Technocritics: A Series of Ideas and Arguments in the Francophone World, from 1900 to Nowadays
Dr. Alexandre Moatti

A Human and Social Sciences Contribution to the Development of Technological Projects: “Ethnographic Design” and “Technical Democracy”
Dr. Mathieu Triclot
Ph.D. candidate Nicolas Simoncini
Dr. Bénédicte Rey

Another Technical Democracy is Possible: Approach of Responsibility by Ecofeminism
Dr. Marie-Pierre Escudié
Dr. Thomas Le Guennic

T2B 13th Annual Symposium of the Social History of Military Technology 2

Location: HR 5
Organiser: Bart Hacker and Ciro Paoletti
Chair: Bart Hacker

The Mortar and the Sword: Weapons in Fantasy and Reality
Professor David Ritchie

The Advantages of Brick Fortification, from Antiquity to the Modern Era
Professor Jean-Nicolas Corvisier

From Concept to Combat: The First Decade of the Medici Ducal Fleet, 1548–1558
Graduate student Andrew Tzavaras

T2C ICOHTEC Prize Session

Location: Amphitheater E 01
Organisers: Yoel Bergman, Hans-Joachim Braun and Elvira Callapez
Chairs: Hans-Joachim Braun and Elvira Callapez
Friday, 20 July

9:00—10:30

**F1A Technical Democracy: What are its Antecedents and its Prospects? 3 (In French)**

Location: H 21
Organiser: Pierre Lamard, Mathieu Triclot and Yves-Claude Lequin
Chair: Yves-Claude Lequin
Commentator: Mathieu Triclot

**Participatory Research, Part of a Deliberative Technical Democracy**
Dr. Bertrand Bocquet

**Gamma Detector in the Service of Technical Democracy: A Case Study on the Mine Waste Inventory in Piriac-sur-Mer (Loire-Atlantique, France)**
Dr. Saliha Hadna

Dr. Vincent Dray

**F1B Turns in the Energy Supply: Past, Present and Future 1**

Location: H 13
Organiser: Timo Myllyntaus
Chair: Timo Myllyntaus

**Hydroelectricity, Industrialization and Regional Development in São Paulo**
Professor Gildo Santos

**Energy, Desalination and Solar Ponds: Success and Oblivion of Salts and Solar Power in Atacama Desert, Chile and Beyond, 1907-1981**
Dr. Nelson Arellano

**The Hydroelectric Matrix in Brazil: Benefits and Drawbacks of the Interference of Public Power**
Ph.D. candidate Alexandre Ricardi

**F1C The History of Repair Cultures and the Temporalities of Technology**

Location: H 14
Organiser: Stefan Krebs
Chair: Hans-Joachim Braun

**Tero-Cultures: The Temporalities of Maintenance**
Professor Gabriele Schabacher

**Cultures of Self-Repair: Community, Identity and Appropriation of Technology**
Dr. Stefan Krebs

**Temporal Strata of Technologies: From Repair and Obsolescence to Questions of Technology’s “Afterlife”**
Professor Heike Weber
**F1D Technological Innovations in Architecture**

Location: H 11  
Organiser: PC  
Chair: Hermione Giffard

- Aesthetics and Acoustics: A History of the Concert Hall as an Epistemic Object  
  Dr. Darryl Cressman

- Carrier Weathermaster System Air-conditioning in Postwar Modern Architecture in Finland in the 1950s  
  Ph.D. candidate Seija Linnanmäki

- From the Place of "Production Machines" to the Place of "Dream Machines": The Factory Space as a Praise for Emptiness  
  Professor Raffaella Maddaluno

- Green at Heart: From Old Smokestack Industry to Platforms of Sustainable Urban Future  
  Dr. Markku Norvasuo

---

**F1E 13th Annual Symposium of the Social History of Military Technology 3**

Location: HR 5  
Organiser: Bart Hacker and Ciro Paoletti  
Chair: Ciro Paoletti

- Kriegsspiel Goes forth: Notes on the Early History of Professional Wargaming in the British Army  
  Professor Jorit Wintjes

- The First Ottoman Pre-dreadnought: The Abd-al-Kadar  
  Professor Esat Arslan

---

**F1F Humans Encountering Medical and Psychological Technology**

Location: H 26  
Organiser: PC  
Chair: Donna Drucker

- Technology in Health Care Facilities and Environment of the Patient  
  Dr. Agata Gawlak  
  Researcher Magda Matuszewska  
  Ph.D. candidate Paulina Szuba

- Technology and Expression of Love: Impact and Consequence of Technology on Love and Subsequent Human Emotions  
  Dr. Rituparna Das

- The History of Plasma in the Context of Sciences  
  Ph.D. candidate Anna Manukyan
**F1G From Insights to Technology to Technological Futurism**

Location: E 11B  
Organiser: PC  
Chair: Jukka Kortti

The Historical Significance of Korolyov Space Museum Collection, Zhytomir, Ukraine  
Researcher Olena Zosimovych

Future Mobilities and the Role of Historians  
Professor Simone Fari  
Researcher Massimo Moraglio

---

**F1H How to Write Global History of Technology? Interactive Discussion Session**

Location: Amphitheatre E 01  
Organiser: Jonas van der Straeten  
Chair: Jonas van der Straeten

Technology, Tradition and Deconstructing Arab Modernity  
Ph.D. candidate Shorouk El Hariry

From Fragmentation to Comprehensiveness:  
Towards a Profound and Well-balanced African History of Technology  
Ph.D. candidate David Drengk

History of Technology on Modern China: The State of the Art  
Ph.D. candidate Wei Wu

State of the Art: A Global History of Technology about India  
Ph.D. candidate Aloy Buragohain

Inventive Traditions and Dreams of Modernity:  
Current Trends in the History of Technology of Latin America  
Ph.D. candidate Alejandra Osorio
Saturday, 21 July

9:00 – 10:30

S1A Sustainable Buildings and Innovations 1 (in French)

Location: H 21
Organisers: Richard Cantin and Pierre Michel
Chair: Pierre Michel

Mosaic Tiles: The Technique
Graduate student Indio Vignes

The Carpenter’s Trade, between Tradition and Modernity: Alternating Training in Maisons Familiales Rurales
Mrs. Marie Pachtem, Mr. Denis Amblard, Dr. Richard Cantin

Dr. Richard Cantin, Ph.D. candidate Mike Coillot, Mr. Mohamed El Mankibi

S1B Turns in the Energy Supply: Past, Present and Future 2

Location: H 13
Organiser: Timo Myllyntaus
Chair: Gildo Santos

Crude Oil Technology Development and Globalization - Romania a Pawn on the Chessboard of Big World Powers
Ms. Elena-Angelica Dinu

Sociotechnical Imaginaries of Oil in Finland in the 1950s
Ph.D. candidate Tanja Riekkinen

Technologies of the Future: Based on Modern Methods of Quantum Chemistry
Professor Eldar Movsumzade, Ph.D. candidate Galina Kolchina, Prof. Olga Poletaeva, Ms. Anastasya Bakhtina

S1C Technological Nostalgia and Post Industrialist Idealism

Location: H 14
Organiser: PC
Chair: Roine Viklund

The Kind of Problem Innovation Is: Tracing the Intellectual Contributions of Jane Jacobs outside Urban Planning
Ms. Joanna Szurmak

Seeing the Past in Stages: Stagecoaches and Freight Wagons as Frontier Nostalgia in Western Canada, 1910-1960
Dr. Ben Bradley

History of Lifts in Poland – Development of Lifting Technology and Protection of Technical Heritage in the Context of Contemporary Security Requirements and Regulations
Ms. Katarzyna Pietrzak
**S1D Social Values Matter: Biotechnology and Medical Technologies**

Location: H 11  
Organiser: PC  
Chair: Anne MacLennan

**Stubborn Technology: Barrier Contraceptives in Twentieth-Century American History**  
Dr. Donna Drucker

**Ear Trumpets: The Obsolete, the Nostalgic, the Protective**  
Dr. Magdalena Zdrodowska

**S1E 13th Annual Symposium of the Social History of Military Technology 4**

Location: HR 5  
Organiser: Bart Hacker and Ciro Paoletti  
Chair: Bart Hacker

**World War I and the Improvement of the Italian Canal and Port System, 1915-1918**  
Dr. Ciro Paoletti

**Gender and the Gun: Feminizing Cannon in the First World War**  
Researcher Bruno De Corte

**Designing with Purpose: Human Factors Engineering in NASA**  
Dr. Layne Karafantis

**S1F Digitalisation: Revolution of Contemporary History**

Location: H 26  
Organiser: PC  
Chair: Heike Weber

**Magical Things. Demons inside the Machine**  
Dr. Heiko Schmid

**Digital Technologies and Sociotechnical Barriers: Some Lessons from the Soviet Experience**  
Researcher Liliia Zemnukhova

**Passing the Power: Guardians of Journalism Production Expertise at U.S. Newspapers, 1975-2015**  
Dr. Susan Keith

**From Kodak to Instagram: How Analog Photography Created Visual World**  
Ph.D. candidate Nevena Ilic

**S1G Search for Pure Potable H₂O: Development of Water Supply Systems**

Location: E 11A  
Organiser: PC  
Chair: Eike-Christian Heine

**Technological Advancements in Filtration Techniques in the Early Modern Period**  
Dr. Suryyia Manzoor

**Technological Advancements in Ancient Water Systems of Balochistan**  
Ph.D. candidate Muhammad Sohail
History of Methods and Technologies of Water Purification in Institutes of NAS, Ukraine
Ph.D. candidate Mariia Stankova

S1H Unusual Sounds: Girls with Electric Guitars, Finnish Synthesizers and New Issues in the Development of Computer Music

Location: E 11B
Organiser: Hans-Joachim Braun
Chair: Stefan Krebs

Garage Girls All Over the World Playing with Sound and Technology in the 1960s
Professor Susan Schmidt Horning

Erkki Kurenniemi’s Electronic Musical Instruments and their Role in Electroacoustic Music in Finland during the 1960s and 1970s
Researcher Mikko Ojanen

Images and Utopias of the Digital Musician in the History of Music Software
Researcher Andreas Möllenkamp

Computer Music and Improvisation: A Contradiction?
Professor Hans-Joachim Braun
Saturday, 11:00—12:30

S2A Sustainable Buildings and Innovations 2 (in French)

Location: H 21
Organisers: Richard Cantin and Pierre Michel
Chair: Richard Cantin

Wearing the Machine: Technological Evolution from Transportable to Wearable Machines
Ph.D. candidate Nada Ghribi

Influence of BIM-related Digital Technologies on Real Estate Management
Mr. Pierre Michel, Ph.D. candidate Xin Gong, Dr. Richard Cantin

Comments
Mr. Mohamed El Mankibi

S2B Turns in the Energy Supply: Past, Present and Future 3

Location: H 13
Organiser: Timo Myllyntaus
Chair: Nelson Arellano

Greenpeace and its Anti-nuclear Campaigns in Brazil, 1991 – 2011
Ph.D. candidate Marly Kamioji

Science, Energy and Knowledge: An Analysis of the Scientific Literature on the Synthetic Fuels Production Technologies in the 1970s and 1980s in the United States
Dr. Francesco Gerali

A Positive Example of the Operation of Binomial Political Authority: Powerful Technologies and Renewable Energies in the Period of Totalitarianism in Romania
Professor Victoria Cotorobai

S2C Tourism – What Can History of Technology Contribute?

Location: H 14
Organiser: Stefan Poser
Chair: Per Lundin

Touristic Space for a Deprived Period: Showcasing a Chapter of the History of Iron Technology in Ancient Gaya/Kaya, South Korea
Professor Constantin Canavas

Confronting Class: The American Motel in Early Post-war Sweden
Dr. Per Lundin

Technological Heritage: Question its Role in Tourism and in the Emerging Museums of the 21st Century
Dr. Maria Sampaio da Luz
**S2D Beauty of Products: Technology and Design**
Location: H 11
Organiser: PC
Chair: Layne Karafantis

An Emotional Tour of the Plart Collection
Ms. Pina Di Pasqua
Ms. Alice Hansen
Mrs. Antonella Russo

From Industrial Aesthetics to Design: the Teaching of Arts Applied Industry in Portugal. A Case Study – the Portuguese Ceramics
Professor Maria Helena Souto
Professor Ana Cardoso de Matos

---

**S2E 13th Annual Symposium of the Social History of Military Technology 5**

Location: HR 5
Organiser: Bart Hacker and Ciro Paoletti
Chair: Ciro Paoletti

Studying Armor Penetration to Advance Organizational Need – Three Influential US and German mid-WWII Studies-Compared
Dr. Yoel Bergman

Anglo-American Bombers over Romania in the Spring and Summer of 1944
Professor Traian Constantin Dumbraveanu

An Armoured Military Technological Twist
Professor Matitiahu Mayzel

With UN Air Support: Challenges, Changes, and Perspectives
Mr. Enrico Magnani

---

**S2F Taming Sounds and Transmitting Speech**

Location: H 26
Organiser: PC
Chair: Darryl Cressman

From Hal to Her: Cinematic Representations of Synthetic Speech
Ph.D. candidate Benjamin Lindquist

“Blueprint for Modern Living”: Promoting Residential Telephone Service in the United States, 1945-1965
Dr. Jan Hadlaw

---

**S2G Support of Science, Technology and Society: Interactions and Innovations**

Location: E 11A
Organiser: PC
Chair: Esat Arslan

Science and Technology History Studies in the National Academy of Science of Ukraine
Professor Alla Lytvynko
Contributions of Romanian Researchers and Applicants in the Evolution of the Complex Forum ICOHTEC
Professor Liviu Alexandru Sofonea

Informatics in Romania: Theoretical Developments and Applications
Professor Eufrosina Otlacan

Petre (Pierre) Sergescu: Science Historian and Promoter of the Discipline
Professor Alexandre Herlea

S2H Commanded Nature: Technology and the Environment in Authoritarian Regimes

Location: E 11B
Organiser: Viktor Pal
Chair: Slawomir Lotysz

Managing Natures in Interwar Poland: The Case of Pripet Marshes
Professor Slawomir Lotysz

Socialist Landscape Planning: The Construction of Mechanic Forest in Southern Moravia in the 1970s
Dr. Jiri Janac