



2019

SOCIETY FOR THE HISTORY
OF TECHNOLOGY

ANNUAL MEETING

MILANO
24-27 OCTOBER

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In collaboration with:

**MUSEO
NAZIONALE
SCIENZA
E TECNOLOGIA
LEONARDO
DA VINCI**

CONFERENCE ORGANIZATION

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THE SOCIETY FOR THE HISTORY OF TECHNOLOGY

The Society for the History of Technology (SHOT) was formed in 1958 to encourage the study of the development of technology and its relations with society and culture. As an interdisciplinary organization, SHOT is dedicated not only to the history of technological devices and processes, but also to the relationships of technology with politics, economics, labor, social change, business, the environment, public policy, science, and the arts and humanities. SHOT includes almost 1500 individual members and 1000 institutional subscribers. In addition to professional historians and museum curators, SHOT members include practicing scientists and engineers, anthropologists, librarians, political scientists, and economists. An international society, SHOT meets annually in North America, Europe, or Asia and also jointly sponsors smaller conferences focused on more specialized topics of common interest with other scholarly societies and organizations. *Technology and Culture*, a quarterly journal, is published by the Johns Hopkins University Press for the Society for the History of Technology. In addition, SHOT publishes an annual newsletter, and, the JHUP book series, *Historical Perspectives on Technology, Society, and Culture*. For further information about the Society, please contact Jan Korsten, SHOT Secretary, at SHOT.secretariaat@tue.nl, or visit our website, <http://www.historyoftechnology.org>.

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WELCOME TO MILAN!

For the first time ever SHOT's annual meeting is being held in Italy. It was 2008 when this event took place in another southern European country, Lisbon; we hope that this meeting will be equally successful.

Standing between the Po river and the foothills of the Alps, Milano is the capital of the Lombardy region and is the heart of Italy's largest metropolitan area. Nowadays Milano is renowned worldwide as one of the capitals of fashion and design; every year international events such as Milan Fashion Week and Milan Furniture Fair, only to mention the most famous, attract hundreds of thousands of visitors. Important as these sectors are, her economic prowess rests on wider foundations. Already at the end of the 19th century Milano was, along with Turin, the industrial capital of Northern Italy; mechanical and chemical companies such as Pirelli, Breda and Falck had their factories in the outskirts of the city. Milano was also the city where the first European commercial electric power station using Edison system was opened in 1883. The company for the production and distribution of electricity that was created at that time is still in operation and continues to bear the name Edison (now part of the EDF Group).

Since the second World War considerable change has taken place in the structure and location of traditional industries, but Milano remains the most important economic center of Italy, with a strong tradition in science and innovation culture. The city is home to the headquarters of national and multi-national banks and companies, and of Italy's National Stock Exchange; it is also at the heart of a thriving network of new high-technology industries, commercial enterprises and an expanding tertiary sector, including logistics and transports and media. The international profile of Milano was further enhanced four years ago when it was the location of the universal exposition Expo 2015; the theme was "Feeding the Planet, Energy for Life" and it attracted 22 million visitors.

Milano is an important city of research and education, with several public and private institutions such as the Polytechnic University, the Bocconi University, the Catholic University and the State University (to name only the oldest among them) attracting students from other Italian regions and from abroad.

Milano hosts also an extraordinary variety of historic buildings, monuments, museums and other treasures. The Duomo (the cathedral church), the Castello Sforzesco, and museums and art galleries such as the Pinacoteca di Brera (with its famous Observatory) the Museo del Novecento (with sections devoted to Futurism and Spatialism), the Triennale Museum of Italian Design and the Natural History Museum are among the most famous, but we invite you to

explore also some of the other equally important treasure troves. As for the performing arts, after having admired the elegant architecture of the Galleria, Italy's oldest shopping arcade, SHOT music-lovers can pay homage to the Milanese "temple of music", the La Scala opera house.

Needless to say, on the occasion of the 500th anniversary of Leonardo da Vinci's death, Milano pays due homage to his legacy, and there are numerous venues which SHOT participants can visit. The refectory of Santa Maria delle Grazie, with Leonardo's "Last Supper", is only a few yards away from the Palazzo delle Stelline where the SHOT meeting is held; although we decided to leave to individuals the choice of visiting it, we organized a special tour with other highlights for Leonardo's fans.

Finally, for those who are interested in contemporary architectural and urbanistic developments, we suggest to explore the new glamorous and architecturally innovative housing and business districts of Porta Nuova (featuring the famous Vertical Wood), and of CityLife. Their skyscrapers, designed by internationally renowned architects, have changed beyond recognition the skyline of the city.

It is clear from this general overview that the interconnection between technology, art and design is deeply rooted in the Milanese context, past and present. Adding to that, in the year of Leonardo da Vinci's anniversary it was almost inevitable for us to suggest "Exploring the Interface between Technology, Art, and Design", as the theme for this years SHOT meeting. We are delighted to see that the theme we proposed was well received, and that several sessions address it in a broad historical perspective.

We look forward to an exciting and stimulating meeting, and we hope you will enjoy your stay in Milano.

Anna Guagnini and Laura Ronzon

SHOT 2019 Local Arrangements Committee

WELCOME TO THE MUSEO NAZIONALE SCIENZA E TECNOLOGIA LEONARDO DA VINCI!

The Museo Nazionale Scienza e Tecnologia Leonardo da Vinci welcomes you to the 2019 SHOT Meeting in Milan. When we proposed our city as the venue of the meeting, we were well aware that 2019 was the year in which the 500th anniversary of Leonardo da Vinci's death was to be commemorated. So we are very proud to host the meeting in Milan, where he spent the longest and most prolific period of his professional life, and to provide the location for some of the SHOT events in our museum which bears the name of Leonardo da Vinci.

The origin of the Museo Nazionale Scienza e Tecnologia is deeply rooted in history of the industrial and technological development of Italy, and of Milan in particular. Its creation in 1953 was the result of the efforts of members of the local industrial and entrepreneurial community, most notably of Guido Ucelli, an electrical engineer and a humanist. Today it is the largest museum of science and technology in Italy and one of the most important in Europe. Many of its collections represent the development of science, technology and industry from the 19th century to the present, but the Museo also hosts the most important collection of Leonardo's machine models in a special permanent gallery which is being completely renovated.

Loyal to the ideal expressed by Ucelli, our institute strives not only to preserve and offer new interpretations of our historical heritage, but also, and above all, to be a "Museum of the becoming of the world". Through the combined work of our cultural heritage and education departments, the Museo is engaged in the constant attempt to offer a critical historical perspective on science and technology in relation to society and the environment. Our aim is to provide a better understanding of the challenges posed by technological and societal developments, at local as well as global level. We hope you will have time to explore the Museum during your stay, and our staff will be delighted to show around the result of our activity. Finally, our proposal to be a partner in the organization of the annual SHOT meeting is a further incentive to promote our work with historians of technology. Among our numerous collaborations, we are already engaged in museological research and projects at national and international level, and we participate in the production of resources for scholarly work, such as the Portal for the Archives of Science and Technology in Italy.

We look forward to consolidating our relation with the international community of which you are the representative.

Fiorenzo Marco Galli

General Director, Museo Nazionale Scienza e Tecnologia Leonardo da Vinci

SECRETARY'S NOTE

The Museo Nazionale Scienza e Tecnologia Leonardo da Vinci and the Palazzo delle Stelline in the historical center of Milan are the main venues for the 2019 SHOT Annual Meeting. Participants will get ample opportunity to explore – as the call for papers pointed out – the interface between Technology, Art, and Design

This year the Program Committee reviewed a significantly larger number of proposals than usual. They managed to build a program with ninety-three (!) sessions, including innovative 'you write, I present' sessions and several round tables. The local organizing team selected a series of tours in the city, and developed an inspiring plenary opening session. The Special Interest Groups are offering breakfast- and lunch meetings and workshops on Sunday. Finally various lunch sessions provide opportunities to meet the incoming *Technology and Culture* editor, and get to know European initiatives.

SHOT prides itself on being an open and friendly organization. You are welcome to sit in on the Executive Council's deliberations on Thursday. Graduate students are encouraged to meet the SHOT officers on Friday.

This year's program is the result of the hard work of the 2019 Program Committee. On behalf of SHOT, I want to thank committee members Cyrus Mody (committee chair), Yulia Frumer, and Ling-Fei Lin for putting together the program. I also want to thank our local organizers Anna Guagnini, Laura Ronzon and Fina Ribes Bertomeu for all their efforts and patience.

I also want to thank Tom Misa, Amy Bix, John Krige, Sonja Beekers, Jeroen Carbaat, Henk Treur, and our volunteers, for their assistance in organizing the annual meeting. Finally I want to thank the staff of the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, the Palazzo delle Stelline, and all other local organizations involved. This is going to be a great meeting, and SHOT owes you all a debt of gratitude for all your hard work!

I wish you a pleasant, inspiring, and fruitful meeting!

Jan Korsten

SHOT Secretary

PS: During the SHOT conference your conference badge provides free entrance to the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci. Don't forget to take the opportunity to discover this beautiful science and technology museum

OVERVIEW OF EVENTS AND ACTIVITIES

Thursday, 24 October (*All in Palazzo Delle Stelline unless otherwise indicated*)

12:00 Noon–6:00 PM	Registration Desk
8:30 AM–4:00 PM	Executive Council Meeting (open to all members) - Room: Chagall
1:30 PM–4:30 PM	City walking tour Tortona Area
4:00 PM–5:30 PM	Technology and Culture Editorial Committee Meeting - Room: Chagall
5:30 PM–6:00 PM	Walking to museum
6:00–7:15 PM	Opening Plenary (Museo Nazionale Scienza e Tecnologia - entrance at Via San Vittore 21)
7:30–9:30 PM	Opening Reception (Museo Nazionale Scienza e Tecnologia - entrance at Via San Vittore 21)

Friday, 25 October (*All in Palazzo Delle Stelline unless otherwise indicated*)

7:30 AM–6:00 PM	Registration Desk
8:00 AM–6:00 PM	Book Exhibit
8:30 AM–10:00 AM	Session Block 1 (10 sessions)
10:00 AM–10:30 AM	Coffee Break
10:00 AM–1:00 PM	City walking tour “From Industrial Art to Modern Design”
10:30 AM–12:30 PM	Session Block 2 (10 sessions – one of them Grad Student Workshop)
12:30 PM–2:00 PM	Lunch (attendees will be on their own, for nearby lunch options see page 16)
12:30 PM–2:00 PM	SIG Lunch Meetings: <ul style="list-style-type: none">● ECIG Lunch Meeting - Room: Chagall● SMITnG Lunch Meeting - Restaurant Mama Oliva (see page 12)● EDITH Lunch Meeting - Cloister Corridor (first floor)● SIGCIS Lunch Meeting - Cloister Corridor (first floor)
12:30 PM–2:00 PM	Lunch Sessions (see page 28)
1:00 PM–2:00 PM	Guided visits Museo Nazionale Scienza e Tecnologia: <ul style="list-style-type: none">● Leonardo Parade● Technological Mosaic
2:00 PM–4:00 PM	Session Block 3 (10 sessions – one of them Grad Student Workshop)

4:00 PM–4:30 PM	Coffee Break
4:30 PM–6:00 PM	Session Block 4 (10 sessions)
6:15 PM–7:00 PM	Grad Student Reception: Meet the SHOT Officers - Cloister Corridor (first floor) (<i>Location TBA</i>)
7:15 PM–9:30 PM	Plenary Lecture, 2018 da Vinci Medalist (<i>Museo Nazionale Scienza e Tecnologia – entrance at Via San Vittore 21</i>) Da Vinci Reception (<i>Museo Nazionale Scienza e Tecnologia – entrance at Via San Vittore 21</i>)
8:30 PM–12:00 Midnight	Grad Student Mixer (<i>Bar Magenta, Via Giosuè 13 (at the corner of Corso Magenta).</i>) <i>Participants that registered will receive a coupon for snacks and two drinks</i>

Saturday, 26 October (All in Palazzo Delle Stelline unless otherwise indicated)

7:30 AM–6:00 PM	Registration Desk
8:00 AM–5:30 PM	Book Exhibit
7:00 AM–8:00 AM	<ul style="list-style-type: none"> International Scholars Breakfast: The SHOT International Scholars Breakfast will take place Saturday 26 October, 7:00 AM – 8:00 AM Cloister Corridor Palazzo Delle Stelline (first floor). Envirotech Breakfast Meeting - Cloister Corridor (first floor)
All Day	Poster Sessions in corridors
8:00 AM–9:30 AM	Session Block 6 (11 sessions)
9:35 AM–11:05 AM	Session Block 7 (11 sessions)
10:00 AM–1:00 PM	Walking tour “Edison and the Scala Theatre”
11:05 AM–11:30 AM	Coffee Break
11:30 AM–1:00 PM	Session Block 8 (11 sessions)
1:00 PM–2:30 PM	Lunch (<i>attendees will be on their own, for nearby lunch options see page 16</i>)
1:00 PM–2:00 PM	Guided visits Museo Nazionale Scienza e Tecnologia: <ul style="list-style-type: none"> Study collections Extreme – Searching for Particles Astronomy and Space
1:00 PM–2:30 PM	SIG Lunch Meetings <ul style="list-style-type: none"> ASIA Network Lunch Meeting - Room: San Carlo Borromeo Jovians and Mercurians Lunch Meeting - Edison Spa building (see page 11) TEMSIG Lunch Meeting - Restaurant Mama Oliva (see page 12) WITH Lunch Meeting - Cloister Corridor (first floor)

1:00 PM–2:30 PM	Lunch Sessions
2:00 PM–5:00 PM	Walking tour Leonardo da Vinci
2:30 PM–4:00 PM	Session Block 9 (11 sessions)
4:00 PM–4:30 PM	Coffee Break
4:30 PM–6:00 PM	Session Block 10 (11 sessions)
7:30 PM–10:30 PM	Awards Banquet (including Cocktail Reception (<i>Museo Nazionale Scienza e Tecnologia – entrance Via Olona 6/bis (back entrance)</i>))

Sunday, 27 October (*All in Palazzo Delle Stelline unless otherwise indicated*)

8:00 AM–5:00 PM	SIGCIS Sunday workshop - Rooms: Bramante, Toscanini, Verdi. Breaks and lunch in Cloister Corridor (first floor)
8:00 AM–12:00 Noon	Albatrosses breakfast and workshop - Room: Marinetti
9:00 AM–12:00 Noon	Envirotech workshop - Room: Strehler
9:30 AM–11:30 AM	Prometheans meeting - Room: Grassi
10:00 AM–12:00 Noon	WITH-EDITH workshop - Room: Solari

Please note:

27 October 2019 – European Daylight Saving Time Ends

Sunday 27 October 2019 **03:00:00 AM** clocks are turned **backward** 1 hour to **02:00:00 AM**



SPECIAL INTEREST GROUP EVENTS

The **Albatrosses**, whose interests cover all things related to aviation and aerospace, will gather over Breakfast at Sunday between 8:00 AM–9:00 AM. Those who wish to attend should grab their food first from the general breakfast, then meet up with the group. The Albatrosses are also organizing a workshop on **Sunday** from 10:00 AM–12:00 (Noon).

To promote scholarship on Asian topics and to encourage historians from Asia to participate in our activities, SHOT members have organized the **Asia Network**. In Milan, it will gather for a lunch meeting on **Friday** from 1:00 PM–2:30 PM. Lunch not included. The group meets in *S. Carlo Borromeo*. For more information on the SHOT Asia Network contact Honghong Tinn at htinn@umn.edu.

The SIG on **Computers, Information and Society** (SIGCIS) will gather over lunch on **Friday** at 12:30 PM (cloister corridor first floor) (\$20). SIGCIS is also organizing an all day workshop on Sunday from 9:00 AM–5:00 PM, for \$45/\$90. For more details about this workshop, please visit <http://www.sigcis.org>.

EDITH (Exploring Diversity in Technology's History) supports both scholars and scholarship currently underrepresented in the history of technology and SHOT. In Milan, the group will meet over lunch on **Friday** at 12:30 PM (\$20) in the cloister corridor (first floor) of the conference center. EDITH is also organizing in collaboration with WITH a Lightning Session on **Sunday** in room Solari from 10:00 AM–12:00 (Noon).

WITH (Women in Technological History) will gather over lunch on Saturday at noon (\$20) in the cloister corridor (first floor) of the conference center.. WITH is also organizing in collaboration with EDITH a Lightning Session on **Sunday** in room Solari from 10:00 AM–12:00 (Noon).

Envirotech will have a breakfast meeting on **Saturday** at 7:00 AM (\$15) in the cloister (first floor) of the conference center.

The **Mercurians**--the Communications Technology Interest Group--and the **Jovians**--the Electrical History Interest Group--will be holding their annual luncheon meeting at **Saturday**, 1.00 PM -2.00 PM. The Jovians and Mercurians combined lunch will be hosted by Edison SPA at their headquarters building, Foro Buonaparte 31 (please notice that access to the building will be from the back entrance in via Luigi Illica 4, (about 10 mins walk from conference venue). There will be the usual agenda and conversation.

The **Prometheans** (SHOT's Engineering SIG) will hold an informal meeting **Sunday** from 9:30 AM–11:30 AM (room Grassi).

SMiTInG, SHOT's military technology interest group, will hold a lunch meeting on Friday in Restaurant Mamma Oliva (Via Vincenzo Monti, 33). Lunch will be at own expenses. SMiTInG Chair Bart Hacker invites anyone interested in the history of military technology to join the group. We'll leave from the main lobby of the hotel at 1:05 PM, or you can meet the group in the restaurant, if you prefer. No agenda, just conversation. If you want to join, please contact Bart (hackerb@si.edu) for reservations sake.

ECIG, SHOT's **Early Career SIG**, will gather for a lunch meeting on **Friday** from 12.30 PM–2:00 PM. Those who wish to attend should grab their food first, then meet up with the group in Room Chagall.

Saturday 26 October, 1.00 PM –2.30 PM **TEMSIG** will have an outside lunch meeting at Restaurant Mamma Oliva (Via Vincenzo Monti, 33). Lunch will be at own expense unless otherwise communicated. For more information on the TEMSIG meeting please contact Laura Ronzon at ronzon@museoscienza.it.

TOURS

- Note:*
- The walking tours will start at the registration desk in the Palazzo delle Stelline.
 - The museum tours will start at the main entrance of the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci (Via S. Vittore 21). It takes about 5 minutes to walk from the Palazzo delle Stelline to the main entrance of the museum.

Thursday 24 October

CITY WALKING TOUR

Tortona Area:

- Post industrial Tortona creative district, with Armani Silos, Ex Ansaldo factory and David Chipperfield MUDEC museum.
- Departs from Conference Center 1.30 PM, returns at 4.30 PM:
- 3 hour walking tour, \$27. Lunch not included;. Museum entrance is included.

Friday 25 October

CITY WALKING TOUR

From Industrial Art to Modern Design

- Walk around the Castle, in the very heart of the city, from the Middle Ages to Renaissance, to the industrial transformation at the turn of the XXth century
- Departs from Conference Center at 10.00 AM, returns at 1.00 PM:
- 3 hour walking tour, \$23/ Lunch not included.

FRIDAY GUIDED VISITS TO MUSEO NAZIONALE SCIENZA E TECNOLOGIA

Leonardo Parade

- The temporary exhibition in the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci with selected Leonardo models alongside Leonardesque frescoes by 16th century Lombard artists + behind the scene of the new Leonardo Galleries which will open later in 2019.
- Starts 1.00 PM.
- 1 hour guided tour at the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, \$5.

Technological Mosaic

- The development of the system and network of Italian infrastructures in the second half of the XXth century.
- Guided museum tour starts at 1.00 PM
- 1 hour guided tour at the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, \$5.

Saturday 26 October

CITY WALKING TOURS

Edison and the Scala theatre

- Follow the trail of the Italian Edison Company that first lighted the famous Opera house of La Scala in 1882.
- Departs from Conference Center at 10.00 AM, finish at the EDISON SPA building (10 minutes walk from Conference Venue) at 1.00 PM.
- 3-hour walking tour, \$25. Entrance to La Scala and its museum included. Lunch not included.

Leonardo da Vinci

- To the Sforza Castle and the Ambrosiana Museum with highlight of Leonardo da Vinci's works.
- Departs from Conference Center at 2.00 PM, return at 5.00 PM.
- 3 hour walking tour, \$40. Museum entry included, Lunch not included.

SATURDAY GUIDED VISITS TO MUSEO NAZIONALE SCIENZA E TECNOLOGIA

Study Collections

- You will see the on-site storage area of the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, with among others the collection of Italian motorbikes of the 50s and 60s.
- Guided museum tour starts at 1.00 PM.
- 1 hour guided tour at the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, \$5.

Extreme -- Searching for Particles

- The exhibition devoted to research on elementary particles as an example of international collaboration, and involvement of different actors and knowledge.
- Guided museum tour starts at 1.00 PM.
- 1 hour guided tour at the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, \$5.

Astronomy & Space

- Observing Space from the Earth and Earth from Space. Italian Astronomy highlights and rare American and Soviet space program objects.
- Guided museum tour starts at 1.00 PM.
- 1 hour guided tour at the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, \$5.

Sunday 27 October

- The all day tours to the Adda river industrial heritage, and to Ferrari have been cancelled due to the fact that we didn't reach the minimum number of participants.

RESTAURANTS AND BARS

Along Via Vincenzo Monti and Corso Magenta (especially the segment from Largo d'Ancona to the city center) there are many bars and restaurants. Please notice that most of them are rather small, and some are open only at lunch-time. Below we give only a few indications:

Bar and Bistrot Stellite Caffè & Gourmandises

Inside the Conference Center Le Stellite

Sandwiches, salads, first courses, cakes

Open 8.30-18.00, Monday to Friday (not Saturday)

Website: <https://www.facebook.com/pg/stellitecaffe/menu/>

Galli Pizza & More

Corso Magenta 78

Restaurant, pizza, salads, first and second courses, cakes; also take-away.

Open 12-00-15.00, 19.00-22.00. Closed on Sunday

Website: <https://galli-pizza-take-away.business.site/>

Leonardo Bistrò

Corso Magenta 78

Bar Restaurant, sandwiches, salads, first courses, cakes; also take-away

Open every day, 7.30-20.30

Website: <https://www.facebook.com/LeonardoBistrotcorsomagenta/>

La Vigna di Leonardo Bistrò

Corso Magenta 65

Bar Restaurant with an ample choice of hot dishes as well as gourmet sandwiches.

Open every day, 7.00 a.m. to 19.30 (lunch from noon to 15.00)

Website: <https://www.vignadileonardo.com/en/bistrot>

Bar Magenta

Via Giosuè Carducci 13

Opened in 1907, still preserving its deco style, an iconic bar-pub-restaurant well known to generations of Milanese people.

Sandwiches, salads, first courses and second courses, cakes, also take-away.

Open 7.30-2.00

Website <http://barmagenta.it/about/>

<http://barmagenta.en>

Mamma Oliva

Via Vincenzo Monti 33

Restaurant, and also pizze. In order to avoid delays with the payment (it is big but also very popular especially at lunchtime), ask the bill as soon as you order.

Website <https://www.mammaoliva.it/>

Bebel

Via San Vittore 3

Restaurant and pizzeria, very close to the Museo Scienza e della Tecnologia

Website <http://www.bebel.it/>

SESSION SCHEDULE

SHOT ANNUAL MEETING MILAN

Thursday, 24 October 2019

6:00 PM – 7:15 PM

Opening Plenary

*Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, Via San Vittore 21, Auditorium Hall**

Welcome

Thomas Misa (President of SHOT)

Fiorenzo Marco Galli (General Director Museo Nazionale Scienza e Tecnologia Leonardo da Vinci)

Exploring the Interface between Technology, Art, and Design

Moderator

W. Patrick McCray (University of California, Santa Barbara)

Originally trained as an engineer (Ph.D., 1996), W. Patrick McCray joined the History Department at the University of California, Santa Barbara in 2003. He is the author or editor of five books, including The Visioneers: How an Elite Group of Scientists Pursued Space Colonies, Nanotechnologies, and a Limitless Future which won the Watson Davis Prize from the History of Science Society as the “best book written for a general audience.” His new book – tentatively titled “Making Art Work” and due out in 2020 with The MIT Press – looks at the collaborations between artists, engineers, and scientists from the 1950s to the present and explores how new creative cultures were built and maintained. McCray has received fellowships from the American Council of Learned Societies, the California Institute of Technology, and the Smithsonian Institution. He is an elected Fellow of the American Association for the Advancement of Science (AAAS) and the American Physical Society (APS).

Speakers

Fabio Novembre (Architect and designer, Milano)

Fabio Novembre was born in Lecce in 1966 and graduated in Architecture at the Polytechnic University of Milan in 1992. One year later he moved to New York where he studied cinema. Novembre's studio, which he opened in 1994 in Milan became immediately an international reference for architecture and design, thanks to the strong expressiveness and iconicity of its designs. Over the years he collaborated with the most important Italian design companies and his work has been recognized and published worldwide for his visionary approach. Since 2019 Fabio Novembre

is Artistic Director of Driade (a famous Italian furnishing firm specializing in design products), Scientific Director of Domus Academy (a leading Milanese design school) and member of the Scientific Committee of the Design Museum Triennale di Milano.

Joachim Sauter (Media artist and designer, ART+COM Studios, Berlin)

After graduating from Berlin's Academy of Fine Arts Joachim Sauter has been working as a digital media artist and designer for over three decades. In 1988 he founded ART+COM studios together with other artists, designers, scientists, hackers and technicians. At present he leads the interdisciplinary group's innovative experiments, using new technologies to convey complex topics while exploring their potential for spatial communication and art.

In the course of his work he was invited to participate in many exhibitions, among them the Centre Pompidou, Paris; Venice Biennial; Stedelijk Museum, Amsterdam; Museum for Contemporary Art, Sidney, Deichtorhallen, Hamburg, Kunsthalle Wien; ICC, Tokyo; Getty Center, Los Angeles; MAXXI, Rome. Since 1991 he is full professor for "New Media Art and Design" at the University of the Arts Berlin and since 2001 adjunct professor at UCLA, Los Angeles.

Franziska Nori (Director Frankfurter Kunstverein)

Franziska Nori (born in Rome in 1968) is director of the Frankfurter Kunstverein since 2014. She was founding director of the Centro di Cultura Contemporanea Strozzi at Palazzo Strozzi in Florence from 2007 to 2014, headed the department for digital art and culture at the Museum für Angewandte Kunst (Frankfurt) from 2000 to 2003, and worked from 1996 to 2006 as a freelance curator for modern and contemporary art at several museums.

Since 2011 Nori is guest professor of museology and curatorial practice in contemporary art at the Marist University Lorenzo de Medici. She has published numerous essays and catalogues on present day art. Her curatorial approach focuses on contemporary art, digital culture and science. The most recent exhibitions she curated are "Perception is Reality: On the Construction of Reality and Virtual Worlds" (2017) and "I am here to Learn: On Machine Interpretation of the World".

Simona Maschi (Director Copenhagen Institute of Interaction Design)

Simona Maschi studied at the Polytechnic University of Milan where she completed both her PhD in Industrial Design and Multimedia Communication (2002), and her MA in Architecture (1996). Simona is co-founder and director of the Copenhagen Institute of Interaction Design where she heads a team that encompasses a world class consultancy, education program and a research lab. She has over 15 years teaching experience at various institutions including Denmark's Design School (DKDS), the IT University in Copenhagen and the Interaction Design Institute I'vrea in Italy. Simona is an expert in service design, scenario design and design methods and is passionate about design solutions that create a positive impact on the world. Recent projects have explored topics such as private and public transportation, health and wellbeing, sustainable housing, and smart cities. She was a member of the jury for the IXDA Interaction Awards 2014 and of a board of experts implementing new design strategies at the University of Macau in China.

Thursday, 24 October 2019

7:30 PM – 9:30 PM

Opening reception (following the Opening Plenary)*

Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, Via San Vittore 21

**Please note, only participants that pre-registered for the plenary and the opening reception will be admitted. Due to official regulations the maximum number of people inside the Auditorium Hall and the rooms used for the opening reception is fixed because of security reasons. We are not allowed to exceed that maximum number of people.*

Friday, 25 October 2019

8:30 AM – 10:00 AM

1: Technology, Art, and the Culture of Knowledge in Early Modern Europe

Agnesi

Organizer: **Pamela Long** (Independent Scholar)

Chair: **Eduardo A. Escobar** (University of Chicago)

Stefano Gulizia (New Europe College): *Timekeeping as a Habitus: Transit Trade and Automata in Venetian-Islamic Diplomacy, 1422-1582*

Matteo Valleriani (Max Planck Institute for the History of Science, Berlin): *Sheep and Fleet: Two Different Sorts of Machines at the Venetian Arsenal*

Pamela Long (Independent Scholar): *The Machine Drawings of Leonardo da Vinci: Art, Technology, and Observational Mechanics*

2: Russian Innovation in Global Perspective

S. Carlo Borromeo

Organizer: **Harley Balzer** (Department of Government, Georgetown University)

Chair and Commentator: **Jonathan Coopersmith** (Texas A&M University)

Pavel Demchenko (National Research University Higher School of Economics, St. Petersburg, Russia): *People of ports: norms and practices in the Russian Baltic ports at the XVIII century*

Alexandra Bekasova (National Research University Higher School of Economics, St. Petersburg): *Mediating between Producers and Consumers: “The Cement Question”, Testing Technologies, and Emergence of Material Scientists’ Expert Community in Late Imperial Russia*

Harley Balzer (Georgetown University): *Innovation after Communism: Russia in Comparative Perspective*

Irina Dezhina (Skolkovo Institute of Science and Technology, Moscow): *Government support of small innovative companies in Russia, the EU and the United States: Comparing Effects*

3: Rethinking Technological Design Through the Lenses of Agriculture and Basic Needs / New Approaches to the History of Food Technology

Leonardo

Organizers: **Barkha Kagliwal** (Cornell University) and **Paolo Savoia** (King's College London)

Chair: **Eric Schatzberg** (Georgia Tech)

Kellen Backer (Syracuse University): *Commanding Food Performance: David Noble and Designing Military Food*

Daniel Fischer (University of Arkansas, Fayetteville): *Above the Fortieth Parallel: Technology and Winter Security on the Northern Plains, 1854-1949 (Robinson Prize Candidate)*

Paolo Savoia (King's College London): *Cosmology and Technology in Pre-Modern Cheese-making*

Giorgio Marfella (University of Melbourne): *Grain elevators, self-climbing formwork and Australian concrete culture*

Andrea Borghini (University of Milan) and Beatrice Serini (University of Milan): *Ontological Frameworks for Food Utopias*

4: The Electrification of the Global South (I): Global Networks and Local Grids

Bramante

Organizer: **Jonas van der Straeten** (Technische Universität Darmstadt)

Chair: **Adewumi Damilola Adebayo** (University of Cambridge)

Ute Hasenöhl (University of Innsbruck): *Global Connections, Local Practices? Multinational Electrical Enterprises in British India*

Anto Mohsin (Northwestern University in Qatar): *Knowing Villages, Understanding Energy: Indonesian Electricity Planning in the 1970s*

Jonas van der Straeten (Technische Universität Darmstadt): *Expert Tensions: The Contested Electrification of East Africa under British Colonial Rule*

5: Visual Forms in the Age of Computational Re-Mediation

Porta

Organizer: **Clare Kim** (Washington University in St. Louis)

Chair: **Jérôme Baudry** (Swiss Federal Institute for Technology, Lausanne)

Laurel Waycott (Vanderbilt University): *Wallpaper, Crystals, and Symmetry: Pattern Recognition in a Pre-Digital Age*

Theodora Dryer (University of California, San Diego): *Data Optics: Aerial Reconnaissance Photographs as Algorithmic Medium*

Alexander Monea (George Mason University): *Digital Black Face: Towards a History of Race and Accessibility in Machine Vision Systems*

Clare Kim (Washington University in St. Louis): *Expressive Crease Patterns: Computational Origami and the Limits of Creativity*

Grace Kim (Getty Research Institute): *Faded Photographs and the Persistence of Mark Rothko's Colors*

6: Fabulating Histories by Way of Making I: Sound and Music

Manzoni

Organizer and Chair: **Yana Boeva** (Nuremberg Institute of Technology)

Commentator: **Susan Schmidt Horning** (St. John's University)

Christina Dörfling (University of Arts Berlin / University of Music Franz Liszt Weimar): *Inside Trautonium – Circuit Design for Musical Needs (1928-1933)* (**Robinson Prize Candidate**)

Magdalena Zdrodowska (Jagiellonian University): *The troubling visibility of sound amplification instruments*

Einar Engström (York University): *Hearing the Past Harmonically: On the Synthesis of Sound as the Synthesis of History* (**Robinson Prize Candidate**)

Ezra Teboul (Rensselaer Polytechnic Institute): *From Rhizomatic Organology to Variantology: The Fragmented Histories in Electronic Music Technologies* (**Robinson Prize Candidate**)

7: In the Shadow of the Nuclear

Toscanini

Chair: **Erik van der Vleuten** (Eindhoven University of Technology / Foundation for the History of Technology)

Sulfikar Amir (Nanyang Technological University): *Hidden Vulnerability: The Long Making of Nuclear Disaster in Fukushima Daiichi*

Kohta Juraku (Tokyo Denki University): *Calculation Automates the Decision: Historical Sociology of Radiological Consequences Simulation Technology for Nuclear Emergency in Japan*

Mahdi Khelifaoui (University of Ottawa): *Medicine vs Nonproliferation: How Canada's Medical Isotopes Production Became "Nuclear"*

Maxime Polleri (Stanford University): *Conflictual Collaboration: Citizen Science and the Governance of Radioactive Contamination after the Fukushima Nuclear Disaster* (**Robinson Prize Candidate**)

8: Walls, Borders, and Historians of Technology

Verdi

Organizer: **Amy Slaton** (Drexel University)

Moderator: **Lino Camprubi** (Universidad de Saviile)

Amy Slaton (Drexel University): *Making Difference, Making Danger: Engineering Trump's Wall*

Jennifer Lieberman (University of North Florida): *The Sociotechnical Imaginaries of Italian and American Prisons*

Lissa Roberts (University of Twente): *Construction Materials and Nation-Building in Revolutionary France (~1789-1850)*

Jesse Smith (University of Pennsylvania): *Building Tests for Building Stones: The NIST Wall*

9: New (Digital) Ways of Telling the History of Technology: Binaural Radio Plays, Video Essays and Web Documentaries

Volta

Organizer: **Stefan Krebs** (Luxembourg Centre for Contemporary and Digital History, University of Luxembourg)

Chair: **Gabriele Balbi** (Institute of Media and Journalism, USI Università della Svizzera Italiana)

Dominique Santana (Luxembourg Centre for Contemporary and Digital History, University of Luxembourg): *A Colônia Luxemburguesa" – An Interactive Web Documentary on Trajectories Made of Steel*

Andreas Fickers (Luxembourg Centre for Contemporary and Digital History, University of Luxembourg) and **Andy O'Dwyer** (Luxembourg Centre for Contemporary and Digital History, University of Luxembourg): *On the Road Again: A Video Essay on the Beginning of Transnational Television Transmissions in Europe*

Stefan Krebs (Luxembourg Centre for Contemporary and Digital History, University of Luxembourg): *A Radio Drama to Tell the History of 3D Recording Technology*

Friday, 25 October 2019

10:30 AM – 12:30 PM

10: Uncovering Histories of Techno-Optimism: Energetic Futures and the State

Leonardo

Organizer: **Morgan G. Ames** (University of California, Berkeley)

Chair: **Massimo Mazzotti** (University of California, Berkeley)

Michelle Grisé (Defense and Political Sciences Department, RAND Corporation):

Techno-Optimism and Nuclear Development in Pakistan

Kate McGurn Centellas (University of Mississippi): *A nuclear reactor on the Altiplano? The development of Neo-Andean techno-optimism under Evo Morales*

Janaki Srinivasan (International Institute of Information Technology, Bangalore) and **Elisa Oreglia** (King's College London): *China, India, and the Legacies of Western Techno-Colonialism*

Jacob Ward (University of Oxford): *Designing Neoliberalism for the Information Age: Thatcherist Techno-Optimism and the Selling of British Telecom*

Morgan G. Ames (University of California, Berkeley): *Tracing the Thread of “Charismatic Technologies” at MIT, from Cybernetics to One Laptop per Child*

David Burel (Arizona State University): *A Future Wrought in Foam and Wires: Techno-Optimism at Xanadu, the Smart Home of Yesteryear*

11: Melodious Machines: Intersecting Histories of Technology, Sound and Design

Agnesi

Organizer: **Beth A. Robertson** (Carleton University)

Chair: **Edward Jones-Imhotep** (York University)

Steve Jones (University of Illinois at Chicago): *Composers, Coders and Computers: Early Computing and the Networked Construction of Computer Music*

Susan Schmidt Horning (St. John's University): *The Old Made New Again: Technostalgia in Sound and Design*

12: Fabulating Histories by Way of Making II: Materiality and Community

Verdi

Organizer: **Yana Boeva** (Technische Hochschule Nürnberg, Germany)

Chair: **Einar Engström** (York University)

Commentator: **Amy Slaton** (Drexel University)

Irene Posch (University of Art and Design Linz, Austria): *Embroidering a Computer: A Process and Artefact to Rethink Histories of Technologies*

Daniela Rosner (University of Washington) and **Pernille Bjoern** (University of Copenhagen): *Fabulating Historical Data by Hand: AtariWomen and Historical Re-Telling*

Kostas Latoufis (National Technical University of Athens, National and Kapodistrian University of Athens) and **Aristotle Tympas** (National and Kapodistrian University of Athens): *Makeshift Engineering: Mastering the Art of Locally Manufactured Small Wind Turbines* (**Latoufis is a Robinson Prize Candidate**)

Ellen K. Foster (Purdue University / Drexel University and **Anne Goldenberg** (Independent Scholar): *A Feminist Fixers Manifesto: Histories of Feminist, Cyberfeminist, and Maker Culture Manifestos and Their Function in Shaping Culture and Practice*

13: On the Move: Technology and Identity

S. Carlo Borromeo

Chair: **Thomas Zeller** (University of Maryland)

Ross Bassett (North Carolina State University): *Before the Green Book: African-American Car Ownership and Infrastructures of Power in North Carolina, 1915-1930*

Karsten Marhold (Université Libre de Bruxelles): *Do artifacts have economics? A Look at Electric Vehicles in the Crisis of the 1970s*

JooHui Kim (Seoul National University): *Hydrogen for Clean Air and Corporate Social Responsibility: The Introduction of Hydrodesulfurization Technologies in South Korea in the Late 20th Century* (**Robinson Prize Candidate**)

Ellan Spero (Massachusetts Institute of Technology (MIT)): *Re-orienting Geographies of Connection Through National Airline Brands*

Sungook Hong (Seoul National University): *People's Car, Unique Model, and 'My Car': A Prehistory of the Hyundai "Pony"*

14: Broadening the History of Industrial Research and Development

Workshop-style Session

Volta

Organizers: **Joris Mercelis** (The Johns Hopkins University), **Michael Schneider** (Heinrich-Heine-University Duesseldorf), and **Mila Davids** (Eindhoven University of Technology)

Chair: **Anna Guagnini** (University of Bologna)

David Pretel (El Colegio de México, Mexico City): *The Virtues of Imperfection: Colonial Patent Systems in the Atlantic World during the Industrial Age*

Dan Rood (University of Georgia): *El Principio Sacarino: Purity, Equilibrium, and Whiteness in the Cuban Sugar Mill*

Gabriel Galvez-Behar (Université de Lille): *War and Peace in Industrial R&D : Allies' Strategies Toward German Patents around the First World War*

Michael Schneider (Heinrich-Heine-University Duesseldorf): *Global Business Interests and the Patent Law: German and American Chemical Enterprises and their Patent Strategies in Germany, Europe and the US before and after the First World War*

Louis Pahlow (Goethe-University Frankfurt a.M.): *Global Business Interests and the Patent Law: German and American Chemical Enterprises and their Patent Strategies in Germany, Europe and the US before and after the First World War*

Joris Mercelis (Johns Hopkins University): *Eastman Kodak and the Internationalization of Research and Development*

Kenneth Bertrams (Université Libre de Bruxelles): *In-house R&D and the Challenges of Internationalization: the Case of the Belgian Pharmaceutical Company UCB*

Mila Davids (Eindhoven University of Technology) and **Michelle Hsieh** (Academia Sinica): *“Transnational Connections and Industrial R&D: Taiwan and South Korea”*

Matthew Eisler (University of Strathclyde): *Managing Research and Development in the Era of Industrial Convergence*

15: Knowledge, Race, and Power in the History of Global Technology

You Write, I Present session

Toscanini

Organizer: **Yovanna Pineda** (University of Central Florida)

Chair: **Alan D. Meyer** (Auburn University)

Jethron Akallah (Maseno University): *The Notion of “Home and House”: Understanding the Technological Landscapes of Water and Sanitation Supply in Postcolonial Nairobi*

Robert Heinze (University of London): *Adapting “old” technology in “new” forms: informal transport infrastructure and the question of users*

Madhumita Saha (Amity Institute of Social Science): *Farmers, technology and modernisation of Indian agriculture*

Yovanna Pineda (University of Central Florida): *Maintenance, Repair, and Design: The Users of Farm Technology in Argentina, Twentieth Century*

Ricarda Musser (Ibero-Amerikanisches Institut, Berlin): *Users in dialogue with publishers: role and development of photography in Chilean illustrated magazines*

16: Everyday Technologies

Chagall

Chair: **Rachel Maines** (Columbia University Seminars)

Soo-Hong Min (Kyonggi University): *Making Those Worlds with This Material: Plasticity of Plastics in Korea*

Jan Hansen (Humboldt University of Berlin, Department of History): *Water Infrastructure, Everyday Practices, and How-to Knowledge*

Jan Henning (University of Toronto, Institute for the History and Philosophy of Science and Technology): *Opening the Red Box: The Fire Alarm Telegraph and Technologies of Emergency Response* (**Robinson Prize Candidate**)

Liang Yao (Peking University, Beijing China): *Bottling, the Soda Fountains, and Local Imitations of Soft Drinks in Republican China*

17: Electricity, Design, Aesthetics and the Cultures of Innovation/Adaption/Reutilization

Round Table

Bramante

Organizers: **Daniel Pérez Zapico** (University of Leeds), **Animesh Chatterjee** (Leeds Trinity University)

Chair and Commentator: **Graeme Gooday** (University of Leeds)

Ying Jia Tan (Wesleyan University): *Visualizing Compressed Development: Techno-optimism in the Yangtze Gorges Survey, 1944-47*

Abigail Harrison-Moore (University of Leeds): *Electric Lighting: The Housewife's Moral Challenge*

Michael Kay (University of Leeds): *"A mighty cobweb": electricity, aesthetics and the urban public space*

Philip Judkins (Buckingham University): *Dreams and Visions: the developing iconography of early radar displays 1935-45*

Daniel Pérez Zapico (University of Leeds): *Aesthetics, design and the appropriation of the electric light by the Spanish Catholic church (1880 – 1914)*

18: Put on Your Pain Suit and Party!

Workshop-style Session

Porta

Organizer: **Eliza Chandler** (Ryerson University)

Chair: **Esther Ignagni** (Ryerson University)

Kirsty Liddiard (University of Sheffield)

Eliza Chandler (Ryerson University)

Kim Collins (Ryerson University)

19: Graduate Student Workshop

Manzoni

Organizer and Chair: **Katrin Boniface** (University of California)

Commentators: **Anna Åberg** (Chalmers University of Technology) and **Elena Kochetkova** (National Research University Higher School of Economics, St. Petersburg)

Beatriz Martínez-Rius (Sorbonne University (Paris): *Training diplomats through marine geophysics: The Institut Française du Pétrole during the 1960s*

Akoijam Amitkumar Singh (Jawaharlal Nehru University): *Exploring Knowledge Production and Innovations in Solar Energy Technology: A case of Photovoltaic (PV) Technological Innovation System in India*

Mariana Prohmann (UTFPR, Rail and railroads): *Brazil between memories, conflicts and new possibilities*

Friday, 25 October 2019

12:30 PM – 1:55 PM Lunch Sessions

Meet the new Technology and Culture Editor

Leonardo

Organizers: **Tom Misa** (University of Minnesota) and **Ruth Oldenziel** (Eindhoven University of Technology)

In 2020 Ruth Oldenziel (Eindhoven University of Technology) will become the new editor-in-chief of SHOT's flagship journal *Technology and Culture*. Ruth will succeed Suzanne Moon (University of Oklahoma). Meet the incoming editor-in-chief and her team, learn about exiting plans and take the opportunity to exchange ideas on future development of *Technology and Culture*.

ERC projects and funding opportunities for the history of technology

Round Table

Bramante

Organizer: **Flavia Cumoli** (European Research Council Executive Agency)

Chair: **Lissa Roberts** (University of Twente)

Panelists

Flavia Cumoli (European Research Council Executive Agency): *Introduction and presentation of the ERC granting opportunities for potential applicants in the field of the history of technology*

Maria Rentetzi (Technical University Berlin): *Living with Radiation: The Role of the International Atomic Energy Agency in the History of Radiation Protection*

Mikael Hård (TU Darmstadt): *A Global History of Technology, 1850-2000*

Per Högselius (KTH Royal Institute of Technology): *Putting Water at the Centre of Nuclear Energy History*

Friday, 25 October 2019

2:00 PM – 4:00 PM

20: The Business of National Security in the American Century

Leonardo

Organizers: **Sean Seyer** (The University of Kansas) and **Angelina Callahan** (U.S. Naval Research Laboratory)

Chair: **John Krige** (Georgia Institute of Technology)

Kathryn Steen (Drexel University): *World War I and U.S. Patent Policy*

Sean Seyer (The University of Kansas): *Patents as Protection: “Saving” the Postwar American Aircraft Industry*

Michael Falcone (Northwestern University): *Mold Matters: Britain, the United States, and the Battle over Penicillin in World War II*

Jayita Sarkar (Boston University): *Reactor Exports and the Rise and Fall of U.S. Global Power*

Johan Gärdebo (KTH Royal Institute of Technology): *How come it never became profitable? Hopes and Hype in State-Owned Research and Development of Swedish Satellite Remote Sensing during the Late Twentieth Century*

Angelina Callahan (U.S. Naval Research Laboratory): *From American Flopnik to “The American Challenge” Objects and Objectives of Navy – Industry R&D 1955 – 1969*

21: Atomic Heritage: Assembling Atomic Cultures, Communities and Knowledge 1

Bramante

Organizer and Chair: **Egle Rindzeviciute** (Kingston University London)

Anna Storm (Stockholm University): *Urban Nuclear Reactors and the Security Theatre: The Making of Atomic Heritage in Chicago, Moscow and Stockholm*

Florence Frohlig (Stockholm University): *Transnational and Transboundary Reconciliation Processes Along the Rhine in the Shadow of the Fessenheim Nuclear Power Plant*

Elisabetta Bini (University of Naples Federico II): *Relaunching the 'Atomic State': Conflicts between the State and Citizens around Italy's Nuclear Program (1975-1985)*

Davide Orsini (Mississippi State University): *Governing nuclear waste disposal in Italy (1987 to the present)*

Tatiana Kasperski (Pompeu Fabra University): *Heritage Debates and Military Radioactive Waste After the Cold War*

Andrei Stsiapanau (European Humanities University): *Nuclear Clay*

22: Technology and Luxury

Chagall

Organizer and Chair: **Artemis Yagou** (Deutsches Museum)

Panagiotis Pouloupoulos (Deutsches Museum): *Technological substitution and innovation in the production of musical instruments at the turn of the 19th century*

Artemis Yagou (Deutsches Museum): *Novel and Desirable Technology: Pocket Watches for the Ottoman Market (late 18th – mid 19th c.)*

Joseph Wachelder (Maastricht University): *Populuxe and the design, dissemination and appropriation of educational toys in France, England, and German speaking countries, 1750–1830*

Camille Mestdagh (UBFC and Lyon 2 Universities): *The Luxury Furniture Industry in 19th century France: The Denial of Technology (Robinson Prize Candidate)*

Charlotte Holzer (Deutsches Museum): *The Hammesfahr glass fiber dresses from 1893: Showpieces for the Libbey Glass Company's Crystal Art Room (Robinson Prize Candidate)*

Patrick De Oliveira (Princeton University): *The Rarefied Airs of Distinction: Gendered Balloon Ascents and Aristocratic Modernity in the French Third Republic*

23: Sensing and Sounding

Agnesi

Organizers: **Lino Camprubí** (Universidad de Sevilla) and **Wilko Graf von Hardenberg** (Max Planck Institute for the History of Science)

Chair: **Wilko Graf von Hardenberg** (Max Planck Institute for the History of Science)

Jessica Lehman (Durham University): *The long waves of empire: Synoptic oceanography in the International Geophysical Year (1957-1958)*

Lino Camprubí (Universidad de Sevilla): *Strait Diplomacy: Geographic Fictions in the Law of the Sea*

Jennifer C. Hsieh (Fairbank Center for Chinese Studies): *Sonic Infrastructure: The Visuality of Sound in Measurement and Design*

Wilko Graf von Hardenberg (Max Planck Institute for the History of Science): *Seeing at a Distance: Measuring the Level of the Sea from Orbit*

Sam Robinson (University of Manchester): *Anticipation on the Ocean Frontier*

24: Railway Imperialism Reconsidered: Colonialism, Infrastructure, and Power

S. Carlo Borromeo

Organizers: **Julio Decker** (University of Bristol) and **Norman Aselmeyer** (European University Institute)

Chair: **Norman Aselmeyer** (European University Institute)

Commentator: **Gabrielle Hecht** (Stanford University)

Julio Decker (University of Bristol): *Under Construction: Colonial Railroads and Labour Regimes in German Southwest Africa, 1898–1915*

Nicola Ginsburgh (University of the Free State): *Race, Gender, Class, and Power on Southern Rhodesia's Railways, 1918–1980*

Nina Kleinöder (Philipps-University of Marburg): *An Economic Adventure? German Business in Colonial Railway Building in Africa, c. 1905–1914*

Sebastian Beese (University of St. Gallen): *The Frontier Paradox: Why German Engineers Built the Tanganyika Railway*

Erica Mukherjee (Stony Brook University): *Imagining Imperial Railways: Contestation and Cooperation in Land Acquisition for the East Indian Railway, 1850–1854*

25: Technoscience and Mysticism

Toscanini

Organizers: **Jamie Pietruska** (Rutgers University-New Brunswick) and **Jeffrey Mathias** (Cornell University)

Chair: **Cyrus Mody** (Maastricht University)

Jamie Pietruska (Rutgers University-New Brunswick): *Investigating “the ghost business”: The Seybert Commission, Paper Technologies, and the Material Culture of American Spiritualism*

Jeffrey Mathias (Cornell University): *A Mind Forever Floating: John C. Lilly and the ‘Human Bio-Computer’ 1964–1976*

Jan Muggenburg (Leuphana Universität Lüneburg): *From Magic to Systemics: Heinz von Foerster and the Reenchantment of Cybernetics*

Carolyn Kane (Ryerson University, Toronto): *The Psychedelic Surround: From Cybernetics to Experience Design*

Erika Dyson (Harvey Mudd College): *“Spook Business” and the Laws of Exposure: Adjusting the Difference Between Rogues*

Caley Horan (Massachusetts Institute of Technology): *Investing in the Stars: The Rise of Financial Astrology in 1970s America*

26: Cycling Goes Glocal: Local appropriation of the bicycle, bicycle production, cycling, and cycling policy

Verdi

Organizers: **Mila Davids** (Eindhoven University of Technology), **Sue-Yen Tjong Tjin Tai** (Rathenau Instituut), **Nathan Cardon** (University of Birmingham), and **Bernhard Wieser** (Graz University of Technology)

Mila Davids (Eindhoven University of Technology): *Introduction Cycling Goes Glocal*

Nathan Cardon (University of Birmingham): *Global Empires, Commodity Circuits, and Bicycle Technology, 1885-1905*

Sue-Yen Tjong Tjin Tai (Rathenau Instituut): *Global connections, local desires and the production of the Singaporean bicycle complex, 1890-1990*

Carlo Mari (University of Molise): *From local business systems to global value chains: a framework for understanding the bicycle industry. The Italian case*

Paula Urze (NOVA University of Lisbon) and **João Machado** (Interuniversity Centre for History of Sciences and Technology - University of Lisbon): *Building bicycles for plug-and-cycling in Portugal*

Yusuf Madugu (Bayero University): *Perception on Bicycle in Kano, Nigeria 1900-1940*

Njogu Morgan (University of the Witwatersrand, Johannesburg): *Cycle tracks, road safety and apartheid control in Springs, South Africa (1950s-1970s)*

Smritikumar Sarkar: *‘Satyagraha Revisited: Cycle Ban Agitation in Kolkata’*

Keisuke Nishi (University of Ryukyus): *Bicycle Spread and the Suburbanization in Germany from 1890 to 1920. Bielefeld as an example*

Bernhard Wieser (Graz University of Technology): *Bicycle production and its interplay with urban mobility policies: the case of Graz*

Ruth Oldenziel (Eindhoven University of Technology): *Connecting the dots & Relation to Cycling Cities Project*

27: Circulation and Use of Expert Knowledge

Round Table

Porta

Organizer: **Louise Skyggebjerg** (Technical University of Denmark)

Chair: **Laura Skouvig** (University of Copenhagen)

Thomas Brandt (The Norwegian University of Technology): *'De-provincializing' Engineering Education: The Circulation of Chemical Engineering Expertise between Trondheim and Dar es Salaam, 1960s-1980s*

Changxue Shu (KU Leuven): *Maintenance: A history of conservation science*

Lisa Kane (University of Cape Town): *Traffic Engineering Transfers: US Technical Manuals and Commercial Interests Come to South Africa 1960-1970*

Alex Bucklew (Mississippi State University): *Dangerous Design?: Risk Perception and the Knowledge Divide Pervading the GMO Debate*

Raechel Lutz (Frisch School): *Making a Petroleum Society: Representations of Oil Refining Technologies in 20th Century America*

28: Materializing historical intersections between art, science, technology and design: questions about media technology in science museums

All participants will be invited to take part in a hands-on, workshop style activity.

Volta

Organizer: **Simona Casonato** (Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, Milano)

Chair: **Massimo Mazzotti** (Center for Science, Technology, Medicine and Society, University of California,)

Discussants

Morgan Ames (Center for Science, Technology, Medicine and Society at the University of California, Berkeley)

Gabriele Balbi (USI Università della Svizzera Italiana)

Diego Cavallotti (University of Cagliari)

Simone Dotto (University of Udine)

Petrina Foti (Rochester Institute of Technology)

Paolo Magaudda (University of Padova)

Andrea Mariani (University of Udine)

Elena Canadelli (University of Padova)

29: Graduate Student Workshop II

Manzoni

Organizer and Chair: **Katrin Boniface** (University of California)

Commentators: **Maria Rikitianskaia** (Università della Svizzera italiana) and **Johan Gärdebo** (KTH Royal Institute of Technology)

Christopher Caulfield (Rensselaer Polytechnic Institute): *The Codification of Stigma into Law: Buprenorphine Patient Caps for Treating Opioid Use Disorder*

Thelma Bocquet (EHESS (School for Advanced Studies in the Social Sciences)): *Tame the microphone : an history of vocal performance in the 1930s*

Jiemina Tina Wei (Harvard University): *Liberation through the Biological: 'Feminist' Speculative Technologies in the Wake of the Pill*

Friday, 25 October 2019

4:30 PM – 6:00 PM

30: Atomic Heritage: Assembling Atomic Cultures, Communities and Knowledge 2

Bramante

Organizer: **Egle Rindzeviciute** (Kingston University London)

Chair: **Egle Rindzeviciute** (Kingston University London)

Linara Dovydaityte (Vytautas Magnus University): *The Making of Nuclear Cultural Heritage in Lithuania*

Jaume Valentines Alvarez (Nova University of Lisbon): *Nuclear Fascist Legacies in the City: The Barcelona Reactor, 1962-2005*

Misra Shaik Ali (Rensselaer Polytechnic Institute): *Atomic Infrastructures as Heritage and as a Mnemosyne of People: Discussion on the decommissioning of Indian Point Energy Centre*

Susanne Bauer (Oslo University): *Atomic Data Heritage: Calculating and Curating the Cold War Nuclear Experience*

31: Interconnected kitchens: Technologies and everyday knowledge of food and eating

Chagall

Organizer: **Alejandra Osorio** (Technische Universität Darmstadt)

Chair: **R. Douglas Hurt** (Purdue University)

Commentator: **Roger Horowitz** (Center for the History of Business, Technology, and Society, Hagley Museum and Library)

Timo Myllyntaus (Turku School of Economics): *Technology in the Making of Nordic Coffee Cultures*

Ruth W. Lo (The Italian Academy for Advanced Studies in America - Columbia University): *The Gas That Travels: Energy in the Modern Italian Kitchen*

James McDonald (Independent Scholar): *Milk, Modal Change, and Rethinking Regulatory Paradigms*

Alejandra Osorio (Technische Universität Darmstadt): *Cooking with care: Women and the circulation of knowledge in cooking practices of South America*

Danille Elise Christensen (Virginia Polytechnic Institute and State University): *The Politics of Preserving: M. Appert's Revolutionary Method and the Erasure of Traditional Domestic Knowledge*

32: The Electrification of the Global South (II): Loaded with Meaning

Agnesi

Organizer: **Adewumi Damilola Adebayo** (University of Cambridge)

Chair: **Jonas van der Straeten** (Darmstadt University of Technology)

Adewumi Damilola Adebayo (University of Cambridge): *African Agency and the Pre-history of Electrification in Lagos, c.1860s-1896*

Animesh Chatterjee (Leeds Trinity University): *The Social Life of Electricity in Colonial Calcutta, c. 1875-1925*

Michael Degani (Johns Hopkins University): *Electricity, Afro-Vitalism, and the Social Energetics of Substance*

Emanuel Lukio Mchome (Darmstadt University of Technology): *From "UMEME NI MAENDELEO" to "UMEME NI MAISHA": The Domestication of Electricity and the Encounter with Blackouts in Dar es Salaam, 1990s – 2018*

33: Design Outside of Design: "Hands-on" Work and the Politics of Expertise

S. Carlo Borromeo

Organizer: **Bess Williamson** (School of the Art Institute of Chicago)

Chair: **Grace Lees-Maffei** (University of Hertfordshire)

Jessica Smith (Colorado School of Mines): *Craft and Engineering: The Politics of Design for First Generation Engineering Students*

Jennifer Kaufmann-Buhler (Purdue University): *Maintaining the Open Plan Office: Facilities Managers as Design Practitioners*

Bess Williamson (School of the Art Institute of Chicago): *The Self-Help Shop: Care, Craft, and Design in the Mid-Century American Hospital*

34: Leonardo's Legacy

Porta

Organizer: **Cristiano Zanetti** (Villa I Tatti, The Harvard University Center for Italian Renaissance Studies)

Chair: **Claudio Giorgione** (Dipartimento Leonardo, Arte e Scienza Museo Nazionale Scienza e Tecnologia Leonardo da Vinci of Milan)

J.B. Shank (University of Minnesota): *The 16th-century Milanese origins of modern astronomical theory, or the curious transalpine journey of the Ellipse from Giovanni Ambrogio Maggiore's lathe to the Celestial Mechanics of Johannes Kepler*

Yoshimi Takuwa (Tokyo Institute of Technology): *Japan's first exposure to Leonardo da Vinci and the creation of his image as an 'inventor'*

Cristiano Zanetti (Villa I Tatti, The Harvard University Center for Italian Renaissance Studies): *The "Mechanical Leonardesques" and rotary technologies in Renaissance Milan*

35: Problems in Store: Designing Technologies of Storage

Manzoni

Organizers: **Kyle Bickoff** (University of Maryland) and **Nicole Welk-Joerger** (University of Pennsylvania)

Chair: **Erik van der Vleuten** (Eindhoven University of Technology)

Tae-Ho Kim (Chonbuk National University): *Export Industry that Changed Domestic Cuisine: Stainless Steel and Food Culture in South Korea*

Lucas Mueller (Massachusetts Institute of Technology): *Preserving Crops, Preserving Markets: Storage Technologies in the Postcolonial World (Robinson Prize Candidate)*

Nicole Welk-Joerger (University of Pennsylvania): *Safety by Design: Silo Design in Twentieth-Century United States*

Kyle Bickoff (University of Maryland): *Containerization in Digital Storage*

36: Connecting Publics: Representation, Communication, and Other Mediators of Modern Social Life

Leonardo

Organizer: **Marc Aidinoff** (Massachusetts Institute of Technology)

Chair: **Victor Seow** (Harvard University)

Michael Rossi (University of Chicago): *Parole and its Publics: Diagrams, Language, and Mass Culture, 1900 – 1939*

Alma Steingart (Harvard University): *Knowing the Public: Representing and Simulating the Electorate*

Andrew Lea (Johns Hopkins University): *MYCIN Explains Itself: Computing, Authority, and Trust in American Medicine* (**Robinson Prize Candidate**)

Gili Vidan (Harvard University): *Recognizable but Not Known: Negotiating Trust and Identification in the Age of Public Cryptography, 1972-1984* (**Robinson Prize Candidate**)

Marc Aidinoff (Massachusetts Institute of Technology): *Saving Government: Computerized Modernity and the Informatic Welfare State* (**Robinson Prize Candidate**)

37: Techniques of the Uncanny: Unwholesome Aesthetics of the Technological Encounter

Toscanini

Organizer: **Jeremy Greene** (Johns Hopkins University)

Chair: **Jeremy Greene** (Johns Hopkins University)

Yulia Frumer (Johns Hopkins University): *Prosthetic Normalcy and Uncanny Robotics in Japan*

Jeremy Greene (Johns Hopkins University): *Telepresence, Telemedicine, and the Uncomfortable Aesthetics of Medical Media*

Stephanie Dick (University of Pennsylvania): *“Why Did TD Gammon Work?”: Disbelief and Dismay At the Success of an Early Machine Learning Program*

Sharrona Pearl (Drexel University): *The Face as Prosthetic. What would it mean to think of the face transplant as a kind of prosthetic?*

38: Sonic Design: Radio Landscapes in the 20th century

Verdi

Organizer: **Ayanna Legros** (Duke University)

Chair: **Carolyn Birdsall** (University of Amsterdam)

Alejandra Bronfman (University at Albany, SUNY): *Radio Prolix: Sonic Excess in Cuban Media, 1959*

Ayanna Legros (Duke University): *Surveillance Free: The Transformation of Sonic Design at Columbia University's L'Heure Haïtienne Radio (1969-1971)*

Dylon Robbins (New York University): *Fielding National Designs: Mário de Andrade's Folkloric Research Expedition and the Sonic Transmission of the Margins*

39: Configuring Urban Environments

Volta

Chair and Commentator: **Eric Hardy** (Loyola University New Orleans)

Geoff Zylstra (New York City College of Technology – CUNY): *Industrial Divisions: Designing Class and Race into Philadelphia's Built Environment, 1820-1870*

Shorouk El Hariry (Technische Universität Darmstadt): *Spectacle in the City: Cinema and the Urban Technological Landscape in 20th Century Egypt* (**Robinson Prize Candidate**)

Michael Holleran (University of Texas at Austin): *Redundant networks and the persistence of legacy infrastructure: Los Angeles zanjias, 1781-1904*

Saturday, 26 October 2019

ALL DAY

Poster Sessions

In the corridors (time when organizers will be present will be indicated on the posters)

James Fleming (Beacon College): *Evolution of Technology College Course*

Anne Galperin (State University of New York at New Paltz): *Infographic Poster: Wearables in Evolution, Visualized*

Francisco Platas (Universidad Autónoma del Estado de México) and **Fermin Carreño** (Universidad Autónoma del Estado de México): *International Traveling Exhibition: Alzate's Mexican machines and other inventions in State of Mexico*

Fang Yibing (Institute for the History of Natural Sciences, Chinese Academy of Sciences, Beijing China) and **Yao Dazhi** (Institute for the History of Natural Sciences, Chinese Academy of Sciences, Beijing China): *Who was a Protagonist of Technology Transfer? A Case Study of John Bourne's Business Connection with China in the 19th century*

Michael Meindl (Radford University/Virginia Tech): *Animating Art, Labor, and Business: Early Development of Walt Disney's Multiplane Camera*

Nora Thorade (TU Darmstadt): *Diagram, scheme and block chart – the visualization of manufacturing systems in the 1980s*

Saturday, 26 October 2019

8:00 AM – 9:30 AM

40: Writing Global History of Technology from a Local Perspective

Bramante

Organizer: **Mikael Hard** (TU Darmstadt)

Chair: **Suzanne Moon** (University of Oklahoma)

Commentator: **Roland Wenzlhuemer** (Munich University)

Francesca Bray (University of Edinburgh): *Technological Landscapes and Technological Cultures: Tools for Connecting Global and Local History*

Harro Maat (Wageningen University): *Anti-commodities: Understanding Local Resistance and Persistence*

Mikael Hard (TU Darmstadt): *Trading Zones: Interpreting Local Encounters in the Dutch East Indies*

Angelika Eppe (Bielefeld University): *The Productive Power of Comparisons: A Global Microhistorian's Approach to Globalization/s*

41: Machines and Practices of the Self in Industrial Capitalism: Authorship, Dance, Graphics, and Sensing

Chagall

Organizer: **Edward Jones-Imhotep** (York University)

Chair: **Eugenia Lean** (Columbia University)

Adelheid Voskuhl (University of Pennsylvania): *Engineers' Authorship: Theorizing Capitalism, Selfhood, and Technology in the Second Industrial Revolution*

Edward Jones-Imhotep (York University): *The Selves of Scientific Management: Charting Human and Machine Failures at the Dawn of the Jazz Age*

Whitney Laemmli (Carnegie Mellon University): *Productive Pedagogies: Modern Dance and Industrial Education in Postwar Britain*

Hélène Mialet (York University/Berggruen Institute): *Managing the Self through Dogs and Machines in the Heart of Silicon Valley*

42: Picturing, Designing and Visually Representing US Espionage Technology from Satellites to Global Eavesdropping

Leonardo

Organizer: **Kristie Macrakis** (Georgia Tech)

Chair and Commentator: **Martin Collins** (Smithsonian Institution)

Matthew Hersch (Harvard University): *Picturing the Enemy: CORONA and the Construction of the Cold War Threat*

Christopher Long (Georgia Tech): *Discord in Design – How the Hexagon Satellite Got So Big (Robinson Prize Candidate)*

Kristie Macrakis (Georgia Tech): *Jarring Visual Representations of the US Global Espionage Empire*

43: Beyond Episteme and Techne: Computing as Art and Vice Versa

Agnesi

Organizer: **Elisabetta Mori** (Department of Computer Science, Middlesex University, London)

Chair: **Corinna Kirsch** (Stony Brook University, State University of New York)

Commentator: **Gerard Alberts** (Universiteit van Amsterdam)

Liesbeth De Mol (CNRS, UMR 8163 Savoirs, Textes, Langage, Université de Lille): *“Tis but thy name that is my enemy”. Some reflections on artistic and and scientific conceptions on and in the history of programming*

Elisabetta Mori (Department of Computer Science, Middlesex University, London): *“The Shape of Disorder”: Olivetti and Arte Programmata in Italy during the 1960s*

Pierre Mounier-Kuhn (CNRS, Université Paris-Sorbonne and Centre Alexandre Koyré): *Computer-related Artistic and Literary Experiments in France in the 1950s-1960s*

Sanneke Huisman (LIMA, Amsterdam): *Digital Canon?! Digital Art in the Netherlands 1960-2000*

44: Water between Art and Utility in Early Modern Monasteries

S. Carlo Borromeo

Organizer: **Ana Rodrigues** (CIUHCT, University of Lisbon)

Chair and Commentator: **Matteo Valleriani** (Max Planck Institute)

Ignacio Pereda (CIUHCT, University of Lisbon): *Historical Gardens and Water structures: Tomar Seven Hills (Robinson Prize Candidate)*

João Puga (CIUHCT, University of Lisbon): *The Aesthetics of Water in the Monastic Enclosure of Tibães (Robinson Prize Candidate)*

Magdalena Merlos (Council Archive of Aranjuez): *Norias, Water Wheels and Technology-of-Use'*

Ana Rodrigues (CIUHCT, University of Lisbon): *Manipulating Water in Terrestrial Paradises: Cloister Gardens*

45: Technology and Postcoloniality of/in the Global South

Porta

Organizer: **Mary Mitchell** (Purdue University)

Chair: **Douglas Hurt** (Purdue University, Indiana)

Commentator: **Andreas Weber** (University of Twente)

Yulia Lukito (University of Indonesia): *Colonial Exhibitions in the Dutch East Indies: The Display of Difference and the Manifestation of Architecture and Technology*

Jennifer Smith (Hong Kong University of Science and Technology): *Everyday Technologies of Survival: Ethiopia and Sudan in the 1970s & 80s*

Mary Mitchell (Purdue University, West Lafayette, Indiana, USA): *Settling for Less: Uncertainty and Time in Reparation for Envirotechnical Harm*

46: Gendered Struggles in Boundary Work

Manzoni

Chair: **Corinna Schlombs** (Rochester Institute of Technology)

Donna Drucker (Technische Universität Darmstadt): *“We Want Something That Is Sure, Safe, and Simple”: Motivation and Innovation in Barrier Contraceptive Methods for Women, 1908–1930s*

Sofia Perekrestova (St. Petersburg State University, Russia): *“All of us knew beforehand what a hard work is coming”: Women in Communications Offices in Russian Empire in the beginning of 20th century (Robinson Prize Candidate)*

Maria Rikitianskaia (Università della Svizzera Italiana): *From Marconi “Amazons” to “wireless widows”: gender issues in the 1910s radiotelegraph industry (Robinson Prize Candidate)*

47: Engineering Societies

Toscanini

Chair and Commentator: **Lars Heide** (Copenhagen Business School)

Gustav Källstrand (Nobel Prize Museum/Linköping University): *What kind of benefit? The Nobel committees in physics and chemistry assessing utility before the second world war – a preliminary report*

Mara Marginean (Academia Romana Filiala Cluj): *“Putting People First”: Sketch for a Social Forecasting Model in the 1970s Romania*

Tshombe Miles (Baruch College (City University of New York)): *The Intersection, of Race, Science, and Engineering During The Great Drought of Brazil, 1877–1879*

Niklas Stenlås (Department of History, Uppsala University): *The Hidden University. The Military Research Institutes as Research Producers in Cold War Sweden*

48: “Past futures” planning and promoting future technologies (1950s-1990s)

Volta

Organizer: **Paolo Bory** (USI Università della Svizzera italiana)

Chair: **Ellan Spero** (Massachusetts Institute of Technology (MIT))

Paolo Bory (USI Università della Svizzera italiana), **Ely Lüthi** (USI Università della Svizzera italiana), and **Gabriele Balbi** (USI Università della Svizzera italiana) : *The birth of CSCS: The past future of supercomputing in Switzerland*

Victor Marquez (Victor Marquez Architects, Mexico City, Mexico): *Supersonic Dreams and Subsonic Realities*

Henrike Hoffmann (ETH Zurich) and Daniela Zetti (ETH Zurich): *Switching to the Network. The Appropriation of Telecommunication Lines for Data Transmission at Swiss Universities in the 1980s*

Paolo Magaudo (University of Padova): *Past futures, owner's manuals and the Sony Walkman*

Federico Neresini (University of Padova): “Our friend, the atom”: *A past future scenario of nuclear power*

49: Science, technology, and international politics in a longue durée perspective

Round Table

Verdi

Organizers: **Pascal Griset** (Sorbonne Université) and Leonard Laborie (CNRS)

Chair: **John Krige** (Georgia Institute of Technology)

Alexander Pruss (Johannes Gutenberg University): *Archeology and the situation of armed conflicts in the Middle East*

Alice Milor (Sorbonne University): *Lobbying for car design and pedestrian safety: Building technological standards in the European Union (1994-2003)*

Maria Paula Diogo (Nova Lisboa University): *The Pink Map: techno-diplomacy in the age of New Imperialism*

David Burigana (Padova University): *Space Exploration for Diplomacy or Diplomacy for Space Exploration*

Saturday, 26 October 2019

9:35 AM – 11:05 AM

50: Recollecting Apollo: Perspectives on the Moon Landings

Round Table

Chagall

Organizer: **Roger Launius** (Launius Historical Services)

Chair: **Glenn Bugos**

Kari Edwards (University of Mississippi): *“So Lonely in the Universe”: American Religion and the Legacy of the Apollo Program*

Anne de Floris (Sorbonne Université – UMR SIRICE): *Finding a European Way to Manned Exploration in the Light of Apollo’s Legacy*

Michelle Hanlon (University of Mississippi Law School): *Preserving the Bootprints of Humankind’s Greatest Technological Achievement*

51: Artful Technologies and Technological Art in the 20th Century Part 1

Manzoni

Organizers: **Patrick McCray** (University of California, Santa Barbara) and Jacob Gaboury (UC-Berkeley)

Chair: **Patrick McCray** (University of California, Santa Barbara)

Commentator: **Jacob Gaboury** (UC-Berkeley)

Anne Collins Goodyear (Bowdoin College): *Cultivating Creativity: On the Lure of Art and Technology from the Late 1950s to Today*

Peter Sachs Collopy (Caltech): *Scanimate: Engineering Commercial Art*

Marco Mancuso (IUAV University of Venice): *Technology and Science on the crossing borders among art, design and contemporary culture. The Digicult experience and the international panorama*

Jacob Gaboury (UC-Berkeley): *Picturing Computation: Screen Photography and Computational Art*

Talia Shabtay (Northwestern University): *Photographer in the Laboratory: Berenice Abbott Picturing Physics”*

52: Encoding Technical Knowledge in the Pre-Modern World

S. Carlo Borromeo

Organizer: **Eduardo Escobar** (University of Chicago)

Chair and Commentator: **Pamela Long** (Independent Scholar)

Eduardo Escobar (University of Chicago): *How You Know: Codifying Technical Knowledge in Cuneiform Scholarship*

Matteo Martelli (University of Bologna): *How did the Ancients Decode Alchemical Recipes?*

Elio Nenci (University of Milan): *Where are the Building Instructions? The Case of the Water Lifting Device in the Renaissance*

53. Energy in Motion: Aesthetic Strategies and Cultural Translation in Energy-Themed Films

Marinetti

Organizer: **Hiroki Shin** (Science Museum, London)

Chair: **Elizabeth Bruton** (Science Museum)

Commentator: **Elena Canadelli** (University of Padova)

Hiroki Shin (Science Museum, London): *Translation, Conversion, and Domestication in UK Energy-Themed Films in the Twentieth Century*

Florian Hoof (Leuphana University Lüneburg): *Making Energy Manageable: Visualizing the Transition Between Thermodynamics and Cybernetics*

Serkan Karas (National and Kapodistrian University of Athens) and **Stathis Arapostathis** (National and Kapodistrian University of Athens): *Building visions and techno-political orders: In pursuance of oil and gas in the Eastern Mediterranean, 1950-2017*

54: Experimentations in Agricultural Technology, 1850s-1940s

Leonardo

Organizer and Chair: **Amalia Ribí Forclaz** (Graduate Institute of International and Development Studies)

Commentator: **Harro Maat** (Knowledge, Technology and Innovation group, department of Social Sciences Wageningen University, the Netherlands)

Yadhav Deerpaal (National Research University Higher School of Economics, St. Petersburg, Russia): *The Challenges of Constructing Railways in British Mauritius: Carving the Landscape (Robinson Prize Candidate) through the Conflicting Appropriation of Technologies during the Period 1858-1904*

George Sujeet (History of the Modern World, ETH Zürich): *Cotton-breeding, Commerce and*

Scientific Cooperation in the Bombay Presidency, c.1900–40

Michele Sollai (Graduate Institute of International and Development Studies, Geneva): *How to Feed an Empire? Agrarian Science, Indigenous Farming and the Development of Wheat Technology in Italian-occupied Ethiopia (1938-1941)*

Amalia Ribí Forclaz (Graduate Institute of International and Development Studies, Geneva): *International Organizations as Agents of Agricultural Experimentation in the 1940s*

55: Civil Defence: On Materialities in Civil Defence History

Bramante

Organizer and Chair: **Sarah Robey** (Idaho State University)

Commentator: **Silvia Berger Ziauddin** (University of Bern)

Peter Bennesved (Umeå University): *Becoming a Sheltered Society: Sweden and the Air-Raid Shelter from Idea to Materiality*

Katrin Heilmann (King's College London): *Governing Chinese Nuclear Materiality: the Cold War Air Defence Shelter*

Rosanna Farbøl (University of Southern Denmark): *Civil Defence in the City: Aarhus as a Site of the Imaginary Nuclear War*

Casper Sylvest (University of Southern Denmark): *New Directions in Civil Defence History: A Framework for Analysis*

56: Controlling the AI Future: Shaping Emerging Technologies

Porta

Jonathan Coopersmith (Texas A&M University)

Chair: **Morgan G. Ames** (University of California, Berkeley)

Jonathan Coopersmith (Texas A&M University): "Of promises and patrons": *AI promotion in Britain, America, and Japan, 1956-84*

Salem Elzway (University of Michigan): *Arming the Artificial Intelligentsia: AI, Robots, and the Design of National Security (Robinson Prize Candidate)*

Andrew McGee (Carnegie Mellon University): *Governing by Machine Logic: Early Debates over Policymaking by Technology as Precursors to Public Policy for Artificial Intelligence*

Ramesh Subramanian (Quinnipiac University): *Can India's messy complexity aid in Its AI Strategy? The historical context of ICT policy-making in India*

57: Agential Animals, Artifacts, Affects: Exploring Posthumanist Histories of Technology

Toscanini

Organize: **Mats Fridlund** (University of Gothenburg)

Chair: **Lisa Onaga** (Max Planck Institute for the History of Science)

Commentator: **Nina Lerman** (Whitman College)

Martina Schlünder (Max Planck Institute for the History of Science): *Lousy Research: Multispecies Entanglements and the Material Culture of Typhus Fever Vaccine Production from World War I to the Holocaust*

Jaehwan Hyun (Max Planck Institute for the History of Science): *'Tech-savvy primitives': Technology and the boundaries of modernity in human adaptability research on the sea women (Robinson Prize Candidate)*

Laurence Douny (Max Planck Institute for the History of Science): *The agency of Indigo: Dyeing techniques in pits in 19th and 20th century West Africa*

Mats Fridlund (University of Gothenburg): *Affecting artefacts: The air-minded intra-action of European emotions and gasmasks, 1936-1945*

58: Local Moves, Global Goals: Games of Enlightenment, Entertainment and Subversion under and after Socialism

Verdi

Organizer: **Jaroslav Švelch** (Charles University)

Chair: **Gerard Alberts** (University of Amsterdam)

Commentator: **Melanie Swalwell** (Swinburne University)

Ksenia Tatarchenko (Geneva University): *A Game with the Computer: Perfecting Human and Machine Intelligence under Late Socialism*

Mario Bianchini (Georgia Institute of Technology): *Computing Utopia: Expanding Personal Computer User Base Through Technological Toys in East Germany*

Jaroslav Švelch (Charles University): *The many deaths of Major Shatokhin: Subversion through computer games in Communist Czechoslovakia's paramilitary computer clubs*

Alesja Serada (European Humanities University): *Pre-Network Circulation: the Case of the First Belarusian Political*

59: Dynamic Objects of Complex Intersection: Devising Approaches to the Cultural Heritage of Technological Systems

Agnesi

Organizer: **Kimón Keramidas** (New York University)

Chair and Commentator: **Kimón Keramidas** (New York University)

Deborah Douglas (MIT Museum): *From “Vault” to “Platform”: Some Ideas and Ideals for Making the History of Technology and Science Accessible in Museums*

Allison Marsh (University of South Carolina): *Past Forward: Material Culture and the History of Electrical Engineering*

Andrew Gardner (Museum of Modern Art (MoMA)): *Collecting Digital in an Art Museum Context: MoMA's Design Collection Then and Now*

Jessica Walthew (Cooper-Hewitt Smithsonian Design Museum): *The Process of Historicizing Process: Collecting and Conserving Digital Design, Digital Tools, and Digital Practice*

Andrea Lipps (Cooper-Hewitt Smithsonian Design Museum): *The Process of Historicizing Process: Collecting and Conserving Digital Design, Digital Tools, and Digital Practice*

60: Dreamscapes of Mexican and Guatemalan Modernity

Volta

Organizer and Chair: **Diana Montaña** (Washington University in St. Louis)

Commentator: **Suzanne Moon** (University of Oklahoma)

Rocio Gomez (Virginia Commonwealth University): *A Staunch Refusal: A History of Silver Amalgamation in Zacatecas, Mexico*

Heather Chiero (Augusta University, USA): *“Those Damn Indians!” Indigenous Land, Water Rights and Political Power in Central America*

Diana Montaña (Washington University in St. Louis): *Waking up a nation with water: (En)visioning an industrial Mexico, 1900-1908*

Sonia Robles Faulk (Universidad Panamericana): *Accidental Amigos: The Newark News Radio Club's correspondence with Mexico's Public Education Radio Station, 1929-1931*

Saturday, 26 October 2019

11:30 AM – 1:00 PM

61: Technological Change and the Transformation of Personal Life

Bramante

Organizer: **Gary Cross** (Pennsylvania State University)

Chair: **David Nye** (University of Southern Denmark)

Gary Cross (Pennsylvania State University): *Media Technology, Fast Capitalism, and the Changing Meaning of Time in the 20th Century*

James Hay: *On the Watch: Rewinding the Long History of Self-tracking in Regimes of Self-government*

Susan Matt (Weber State University) and **Luke Fernandez** (Weber State University): *Vanity's Technologies*

Dani Shanley (Maastricht University): *"Failed" Movements, Lasting Legacies: Technology Assessment and Appropriate Technology in the 70s and 80s* (**Robinson Prize Candidate**)

Cesare Silla (University of Urbino 'Carlo Bo') and **Simone Tosoni** (Università Cattolica del Sacro Cuore): *Urban consumption of outdoor advertising as a 'media technology'*

62: Artful Technologies and Technological Art in the 20th Century Part 2

Manzoni

Organizers: **Patrick McCray** (University of California, Santa Barbara) and **Jacob Gaboury** (University of California, Berkeley)

Chair: **Patrick McCray** (University of California, Santa Barbara)

Commentator: **Jacob Gaboury** (University of California, Berkeley)

Rebecca Perry (Independent Scholar): *Collecting the Algorithm: Patric Prince's Computer Art Archives*

Alana Staiti (Smithsonian NMAH): *The Digital Michelangelo Project: Italophilia in Computer Graphics Research*

Roberto Carradore (University of Milan Bicocca), **Andrea Ceroni** (University of Milan Bicocca), and **Matteo Tonoli** (University of Milan Bicocca): *Italian Design seen from Interstitial Places. Milanese House Organs as Cenacoli of Garbo*

Melanie Swalwell (Swinburne University of Technology): *Creative Micro-computing in 1980s Australia: Circulation between the Domains of Art, Industry, and Academia*

Patrick McCray (UC-Santa Barbara): *Art Out of Order: The Software Exhibition of 1970*

63: Engineering Modernity-Coloniality I

S. Carlo Borromeo

Organizer: **Mara Dicenta** (Rensselaer Polytechnic Institute)

Chair: **Mara Dicenta** (Rensselaer Polytechnic Institute)

Heejeong Sohn (SUNY at Stony Brook): *Modern Image World: Clashes of Values and Technological Modernity in the Nineteenth Century Chosôn Korea*

Javiera Barandiarán (UC Santa Barbara): *Making the Atacama into a "Natural Laboratory"*

Mara Dicenta (Rensselaer Polytechnic Institute): *Living and dying in the Beaverscene: Science and coloniality in Tierra del Fuego*

Yannick Giovanni Marshall (Hobart and William Smith Colleges): *"In All Filth and Nakedness." Cleansing the Native Social Body*

64: Histories of African technological landscapes: The case of firearms

Agnesi

Organizer: **David Drengk** (Darmstadt University of Technology)

Chair: **Iva Peša** (University of Oxford)

Commentator: **Emily Brownell** (University of Edinburgh)

Clapperton Chakanetsa Mavhunga (Massachusetts Institute of Technology (MIT)): *Rethinking “Firearms in Africa” in Light of “the” 4th Industrial Revolution: Notes towards an Intellectual History and Theory of Technology in Africa*

Saheed Aderinto (Western Carolina University): *How the Gun became an African Heritage*

Felix Brahm (German Historical Institute London): *The Multifaceted Gun: The Case of Precolonial Central Tanzania*

David Drengk (Darmstadt University of Technology): *Controlling the African Forest: Daily Gun Use during the Abbey Revolt of 1910*

65: From Wireless to Broadcasting to Wireless, 1919-2019

Porta

Organizer: **James Schwoch** (Northwestern University)

Chair: **James Schwoch** (Northwestern University)

Michael Krysko (Kansas State University): *‘Basic’ Broadcasting: English Teaching and American International Radio, 1935-41*

Benjamin Lindquist (Princeton University): *Drawing Digitization or: What’s Synthetic about Synthetic Speech*

James Schwoch (Northwestern University): *5G and the Eschatology of the Radio Spectrum*

66: Expressive spaces: materials, politics, geography and culture in East Asian building design

Chagall

Organizer: **Xinhao Du** (Institute for the History of Natural Sciences, Chinese Academy of Sciences)

Chair: **Congcong Ren** (Institute for the History of Natural Sciences, Chinese Academy of Sciences)

Xinhao Du (Institute for the History of Natural Sciences, Chinese Academy of Sciences): *Sacrifice, Flavor and Aesthetic: The History of Greenhouse in Pre-modern China*

Congcong Ren (Institute for the History of Natural Sciences, Chinese Academy of Sciences): *Philosophical and Aesthetic Perspectives on Wood and Woodworking in Traditional Chinese Wood Culture: The Historical Background*

Xuanzi Ou (Peking University): *From Standing-reserves to Consumer Goods the Change of the Technique of Brackets in Minxi Hakka Cultural Region*

An He (Hubei Academy of Fine Arts): *Fragments and Indications: Based on a Case Study of Shanxi Province in the 14th Century*

Weiwen Li (Sorbonne University): *From giant log to giant hall: an architectural game between the emperor and his ministers*

67: Revolution and Resistance in Expertise: Gendered Transitions in 20th Century Technical Recruiting in U.S. and Europe

Toscanini

Organizer: Malin Nordvall (Chalmers University of Technology)

Chair: **Alan D. Meyer** (Auburn University)

Sam Schirvar (University of Pennsylvania): *The Last Computers: From Computer to Computer-Operator through the ENIAC Project* (**Robinson Prize Candidate**)

Samantha Breslin (University of San Diego): *"In programming... I don't give myself a gender": Complicating Gender Binaries in Computer Science*

Amy Sue Bix (Iowa State University): *Encouraging Engineer Jane and Coder Cathy: The Movement to Draw Young Women Into STEM, 1965-Today*

Malin Nordvall (Chalmers University of Technology): *"Say Yes to Technology!": Campaigning for Women in Swedish Engineering and Technical Industry, 1982-1988*

68: Global Space Personae: Image-making and Spaceflight Propaganda

Leonardo

Organizer: **Alexander C.T. Geppert** (New York University)

Chair: **Alexander C.T. Geppert** (New York University)

Haitian Ma (NYU Shanghai): *The Leapfrogging Visioneer: Vikram Sarabhai and India's Moral Leadership in the Global Space Age, 1958-1972*

Jordan Bimm (Princeton University) and **Patrick Kilian** (University of Zurich - ETH Zurich): *Dummy Astronauts: The Work of Scientific Mannequins in American Space History*

Tilmann Siebeneichner (Humboldt-Universität zu Berlin): *The German Space Race: Sigmund Jähn, Ulf Merbold and Spaceflight Propaganda in a Divided Nation, 1975-1985*

Xiaoyue Luo (NYU Shanghai): *The 'Father' of Spaceflight: Qian Xuesen, Image-Making and the Propagandistic Uses of the Chinese Space Program, 1950-1999*

69: Socialist Design and Consumer Technologies during the Cold War

Volta

Organizer: **Elena Kochetkova** (National Research University Higher School of Economics, St. Petersburg)

Chair: **Anna Åberg** (Chalmers University of Technology)

Commentator: **Julia Lajus** (National Research University Higher School of Economics – St. Petersburg)

Valentina Fava (Czech Academy of Sciences): *Co-constructing Soviet Automobility: Plans and Designs for a Soviet Fiat 124*

Elena Kochetkova (National Research University Higher School of Economics – St. Petersburg): *Biography of Milk Packages in Socialism: Materiality of Consumption and Technological Innovations in the Soviet Union during the Cold War*

Ślawomir Łotysz (Polish Academy of Sciences): *Lousy, Ugly, but Persistent. Making Electric Irons in Socialist Poland, 1960s-1980s*

Patryk Wasiak (Polish Academy of Sciences): *Polish Video Cassette Recorders and the Imaginaire of Socialist Technological Modernity of the 1980s*

70: The Anthropocene as a provocation to the history of technology – a performative debate

Marinetti

Organizer: **Helmuth Trischler** (Deutsches Museum)

Chair: **Nina Wormbs** (Royal Institute of Technology, KTH)

Panelists

Gabrielle Hecht (Stanford University)

Dolly Jorgensen (University of Stavanger)

Sverker Sörlin (Royal Institute of Technology, KTH)

Helmuth Trischler (Deutsches Museum)

71: Glossing over Things: Objects and Methods (A workshop on object-sources)

Workshop-style Session

Verdi

Organizers: **BuYun Chen** (Swarthmore College) and Sebastian Felten (University of Vienna)

Chair: **BuYun Chen** (Swarthmore College)

Panelists

Sebastian Felten (University of Vienna): *“Rock”*

Anna Grasskamp (Hong Kong Baptist University): *“Bowl of Pearls”*

Matthew Hockenberry (Fordham University): *“Telephone”*

Anne Pollock (King’s College London): *“Dynamite”*

Saturday, 26 October 2019

1:00 PM – 2:25 PM – Lunch Sessions

Materials Matter: Design thinking as pedagogical interface between science, technology and art

Round Table

Bramante

Organizer: **Gokhan Ersan** (Binghamton University SUNY)

Panelists

Valerie Imbruce (Binghamton University SUNY)

Pamela Smart (Binghamton University SUNY)

Marvin Bolt (Corning Museum of Glass)

Hilary Becker (Binghamton University SUNY)

Louis Piper (Binghamton University SUNY)

Gokhan Ersan (Binghamton University SUNY)

What is a Cultural History of technology in the 20th century?

Round Table

Volta

Organizers: **Lars Heide** (Copenhagen Business School) and **Anique Hommels** (Maastricht University)

Discussant: **Jennifer Alexander** (University of Minnesota)

Panelists

Per Högselius (Royal Institute of Technology, Stockholm): *Environment and materials: Extraction and preparation of materials*

Louise Skygebjerg (Technical University of Denmark): *Technologies and human thought: Hopes and worries in the age of things*

Valentina Fava (Czech Academy of Sciences): *Transport and trade*

Meet the book series authors: **Making Europe – A new history of Europe and Technology**

Round Table

Leonardo

Organizer: **Erik van der Vleuten** (Eindhoven University of Technology)

Panelists

Ruth Oldenziel (Eindhoven University of Technology) and **Mikael Hård** (Darmstadt University of Technology): *Consumers, Tinkers Rebels: The People Who Shaped Europe*

Helmuth Trischler (Deutsches Museum): *Building Europe on Expertise: Innovators, Organizers, Networkers*

Per Högselius (Royal Institute of Technology, Stockholm) and **Erik van der Vleuten** (Eindhoven University of Technology): *Europe's Infrastructure Transition: Economy, War, Nature*

Pascal Griset (Sorbonne-Université): *Communicating Europe: Technologies, Information, Events*

Maria Paula Diogo (NOVA University of Lisbon): *Europeans Globalizing: Mapping, Exploiting, Exchanging*

Saturday, 26 October 2019

2:30 PM – 4:00 PM

72: Visual Representations of Military Technology in the Great War: What Happened and Why It Mattered

Bramante

Organizer: **Barton Hacker** (Retired)

Chair and Commentator: **Kara Hammond** (Independent scholar)

Barton Hacker (Retired): *Visualizing Tanks: Images of a New Technology in Great War Official Art*

Noemi Quagliati (Rachel Carson Center, LMU Munich): *Exchanging Perspectives between Avant-Garde Aesthetics and Military Aerial Technology*

Andrea Siotto (Temple University): *New Eyes for the Army: How Artists, Photographers, and Scientists Reshaped Military Understanding of the Battlefield in the Great War*

Jeffrey Larrabee (US Army): *The Art of War: American Ambulance Imagery as Call to Action during the First World War*

73: Design, Failure, and Professional Culture in International Engineering History

Chagall

Organizer: **Amy Bix** (Iowa State University)

Chair and Commentator: **Amy Bix** (Iowa State University)

Laila Zwisler (Technical University of Denmark): *The Art and Sense of Engineering*

Mark Clark (Oregon Institute of Technology): *Assembling Leviathan: Edward Wortman, the Fremont Bridge Fracture, and the Art of Bridge Assembly*

Stephen Patnode (Farmingdale State College): *Playboys and Providers: Classified Masculinity in 1950s and 1960s Engineering Firms*

Brandi Caron (Concordia University): *On the Importance of Historiographical Approaches to Understanding Leadership in Engineering Education*

74: Simultaneous Inventions

Agnesi

Organizer: **Shaul Katzir** (Tel Aviv University)

Chair and Commentator: **W. Bernard Carlson** (University of Virginia)

Valérie Schafer (University of Luxembourg): *Facing parallel inventions: the French telecommunications strategies in the digital field (mid-1950s to mid-1990s)*

Steven W. Usselman (Georgia Institute of Technology): *State of the Art: Law and Invention in California's Industrial Renaissance, 1890-1925*

Shaul Katzir (Tel Aviv University): *Resources and needs in multiply and missed multiply inventions*

75: Technological Education and Practice between Arts, Craft, and Engineering

Leonardo

Organizers: **Roland Wittje** (Indian Institute of Technology Madras) and **Aparajith Ramnath** (Ahmedabad University, India)

Chair: **Ross Bassett** (North Carolina State University, Raleigh, North Carolina, USA)

Bidisha Dhar (Tripura University, India): *The Metropole and India: Crafting Linkages in Technical Education from the 19th to the Early 20th Century*

Aparajith Ramnath (Ahmedabad University, India): *Training the Technocratic Indian: Sir M. Visvesvaraya's Engagement with Technical Education Policy, c. 1900 – 1950*

Vaibhav Singh (University of Reading, UK): *Language, communication, technological infrastructure: South Asian printing in the machine age (Robinson Prize Candidate)*

Abigail McGowan (University of Vermont, USA): *Designing Labor: Design Pedagogies and Artisanal Work in India, 1947 – 1970*

Roland Wittje (Indian Institute of Technology Madras, India): *How to Train the Indian Engineer? German Workshop Practice in Engineering Education at IIT Madras*

76: Artful Technologies and Technological Art in the 20th Century Part 3

Manzoni

Organizers: **Patrick McCray** (University of California, Santa Barbara) and **Jacob Gaboury** (University of California, Berkeley)

Chair: **Patrick McCray** (University of California, Santa Barbara)

Commentator: **Jacob Gaboury** (University of California, Berkeley)

Lois Rosson (UC-Berkeley): *The Rock and Ball School: Tracing the Aesthetic Genealogy of American Astronomical Illustration* (**Robinson Prize Candidate**)

Dawna Schuld (Texas A&M): *Plastics and Plasticity in 1960s Los Angeles Sculpture*

Runjie Song (Chinese Academy of Sciences) and **Lu Gao** (Chinese Academy of Sciences): *The Technical Expression of Modern Art and Design in China*

David Schmüdde (Stevens Institute of Technology): *The Emergence of Computational Thinking in Art*

Kari Zacharias (Concordia University) and **Matthew Wisnioski** (Virginia Tech): *The Useful Arts?: Institutionalizing Transdisciplinary Art & Technology Collaboration*

77: Changing Climates: Technological Optimism Revisited

S. Carlo Borromeo

Organizer: **Sabine Höhler** (KTH Royal Institute of Technology Stockholm)

Chair: **Paul Josephson** (Colby College)

Sabine Höhler (KTH Royal Institute of Technology Stockholm): *Climate Change in the Laboratory: Plant Engineering and the Scaling of Growth Efficiency*

Erik Isberg (KTH Royal Institute of Technology Stockholm): *Thawing Frozen Time: Ice Core Drilling as a Practice of Synchronization, 1950-1980* (**Robinson Prize Candidate**)

Jeroen Oomen (Utrecht University): *Changing the Climate: There and Back Again?*

Nina Wormbs (KTH Royal Institute of Technology Stockholm): *Climate Change Non-Action: The Techno-Fix Argument in the Swedish Context*

78: Engineering Modernity-Coloniality II

Porta

Organizer: **Mara Dicenta** (Rensselaer Polytechnic Institute)

Chair: **Mara Dicenta** (Rensselaer Polytechnic Institute)

Discussant: **Javiera Barandiarán** (UC Santa Barbara)

Bucky Stanton (Rensselaer Polytechnic Institute): *Colonizing the Arkadian Underground: Archeology, Lignite Mining, and Space-Making*

M. Luísa Sousa (Interuniversity Centre for the History of Science and Technology (CIUHCT), NOVA University of Lisbon): *Constructing a colonial natural resource: Portuguese engineering research on laterite for road construction in Angola and Mozambique in the late colonial period*

Martin Meiske (Rachel Carson Center for Environment and Society / Deutsches Museum - Research Institute for the History of Science and Technology, Munich): *Exploring the Earth Through its Anthropogenic Scars. Geology and the Construction of the Panama Canal*

79: Designing and Defining Wasteful Margins: Powered by Waste

Toscanini

Organizer: **Jung Lee** (Ewha Womans University)

Chair: **Francesca Bray** (University of Edinburgh)

Victor Seow (Harvard University): *In Pursuit of Productivity: Psychotechnology and the Science of Work in Industrial China*

Sangwoon Yoo (Seoul National University): *Self-defining Waste: Cleanroom Operators and Maintainers in the Microelectronics*

Holly Stephens (University of Edinburgh): *Measuring Waste at the Margins: The Economics of Cotton Cultivation in Colonial*

Jung Lee (Ewha Womans University): *Making Waste one's Own: the Artisanal Capitalization of Waste*

80: Technology and the Oldest Irregular War in the Twentieth Century

Marinetti

Organizers: **Alexis De Greiff** (Universidad Nacional de Colombia) and **Simón Uribe** (Universidad del Rosario)

Chair: **Mikael Hård** (Darmstadt University of Technology)

Óscar Moreno-Martínez (Edinburgh University): *Violent Innovations in the FARC-EP. Design, Malicia and Expertise*

Alexis De Greiff (Universidad Nacional de Colombia) and **Isabel Peñaranda** (Universidad Nacional de Colombia): *Planning and designing colonization as a counterinsurgency technology: the Colombian case (1950-1980)*

Simón Uribe (Universidad del Rosario): *Making the state: roads, war, and local orders in the Farc territories*

81: Integrating German Scientists and Engineers into the Western Powers after World War II: New Perspectives

Verdi

Organizer: **Michael J Neufeld** (Smithsonian Institution)

Chair: **Michael J Neufeld** (Smithsonian Institution)

Commentator: **Angelina Callahan** (Naval Research Laboratory)

Charlie Hall (University of Kent): *Working with the Enemy: British Recruitment of German Scientists and Technicians after the Second World War*

Guillaume de Syon (Albright College): “We had Fun; We Even Picked up a Few Germans”: France’s use of German technologists 1944-1950

Monique Laney (Auburn University): *Project Paperclip’s impact on US Immigration Policies for the Highly Skilled*

82: Cybernetics: Past and Future

Volta

Organizer: **Egle Rindzeviciute** (Kingston University London)

Chair: **Ronald Kline** (Cornell University)

Commentator: **Egle Rindzeviciute** (Kingston University London)

Felicity Colman (University of Arts London): *Guattari’s Cybernetics and the Postmedia Algorithmic Condition*

Isabell Schrickel (Leuphana University): *The Evolution of Cybernetics*

Bernard Geoghegan (King’s College London): *Artificial Artificial Intelligence: From the Mechanical Turk to MTurk*

Gerard Alberts (University of Amsterdam): *AI and Angst: The ‘Artificial Head’*

Saturday, 26 October 2019

4:30 PM – 6:00 PM

83: The Computer and the Arts

Chagall

Organizer: **Giuditta Parolini** (Technische Universität Berlin)

Chair: **Patrick McCray** (University of California Santa Barbara)

Francesca Franco (University of Exeter): *Venice, 1970: Ricerca e Progettazione – The First Computer Art Show At the Venice Biennale*

Davide Carpano (University of California, San Diego): *Dealing with Uncertainty by Imagining the Future: Fictional Expectations, and the Commodification of Free and Open Source Software (Robinson Prize Candidate)*

Giuditta Parolini (Technische Universität Berlin): *'Musica ex Machina': Making Computer Music in Italy during the 1960s*

Mario Verdicchio (Università degli Studi di Bergamo): *'The Wilderness Downtown': Net Art in the 21st Century*

84: Describing and Owning: Constructing Objects of Intellectual Property

Bramante

Organizer: **Jerome Baudry** (Swiss Federal Institute of Technology, Lausanne)

Chair: **Dagmar Schäfer** (Max Planck Institute for the History of Science)

Commentator: **Eva Hemmungs Wirtén** (Linköping University)

Jerome Baudry (Swiss Federal Institute of Technology, Lausanne): *Writing/Drawing/Modeling Inventions: Regimes of Description and the 'Intellectual' in IP, France-United States ca. 1790-1850*

Hansun Hsiung (Max Planck Institute for the History of Science): *"All photographs are copies of some object": IP's Media Anachronism on the International Stage, ca. 1886-1908*

Wendelin Brühwiler (University of Zurich): *Shapes of Administration, Shadows of Communication: Registering Trademarks in France, ca. 1860-1890 (Robinson Prize Candidate)*

Nicolas Chachereau (University of Lausanne): *"Inventions Represented by Models": How Switzerland's First Patent System Excluded Chemical Inventions (1888-1907) (Robinson Prize Candidate)*

85: Between organism and machines. Interfaces of humans, machines and animals in the 20th century

Leonardo

Organizer: **Kevin Liggieri** (ETH Zurich, Science Studies)

Chair: **Kevin Liggieri** (ETH Zurich, Science Studies)

Commentator: **Martina Heßler** (Department of History, Technische Universität Darmstadt)

Julia Gruevska (Friedrich-Schiller-University Jena): *The animal machine. Critique on the behaviorist interface between organism and technique (Robinson Prize Candidate)*

Gaymon Bennett (Arizona State University): *Designs on the Dead: The Maker and the Made in a Space of 'Living Foundries'*

Ricky Wichum (Chair of History of Technology, ETH Zürich): *Accessing the Supercomputer – Interfaces between the Supercomputer and its Users*

Dawid Kasprawicz (Institute of Philosophy / Human Technology Centre, RWTH Aachen University): *Designing Workplaces through Machine Environments – The Action Office and the Human Factors Engineering*

86: Science for Space Diplomacy: Reassessing Actors and Practices for Power

S. Carlo Borromeo

Organizer: **Martin Emanuel** (Higher School of Economics, St Petersburg)

Chair: **Nina Wormbs** (KTH Royal Institute of Technology, Stockholm)

Commentator: **John Krige** (Georgia Institute of Technology)

Ronald E. Doel (Florida State University): *A Prelude to Space: How the International Geophysical Year (1957–58) stimulated Technoscience Collaborations in South America and the Developing World*

Martin Emanuel (Higher School of Economics, St Petersburg): *Science Diplomacy, Technology Transfer, and Cold War Neutrality: Swedish Collaboration in Space Physics with the US and the USSR, 1957–1980*

Laurence Roche-Nye (Labex EHNE, Paris): *Stressing Techno-Science, Reducing Political Tension: French-Soviet Collaboration in Space, the case of PVH*

David Burigana (University of Padua) and **Piero Messina** (ESA / École des Hautes Études en Science Sociales (EHESS): *Modules for Astronauts, a Successful Diplomacy? The Italian Strategy to Space Human Flights between Bilateral and International Negotiations*

87: Designs on Nature

Porta

Organizers: **Finn Arne Jørgensen** (University of Stavanger) and **Kjetil Fallan** (University of Oslo)

Chair: **Lisa Onaga** (Max Planck Institute for the History of Science, Berlin)

Kjetil Fallan (University of Oslo): *Ecosophy D: From Deep Ecology to Deep Design*

Finn Arne Jørgensen (University of Stavanger): *Touched Nature: Building in, with, and against the environment in Norway after 1960*

Jette Lykke Jensen (University of Southern Denmark): *Designing for bees or 'bee washing'? A critical examination of design and technology responses to the global bee decline*

Dolly Jørgensen (University of Stavanger): *Birds, birdhouses, and exploring non-humans as users of technology*

88: Workplace Technologies and the Organization of Labor

Agnesi

Chair: **Elizabeth Petrick** (New Jersey Institute of Technology)

Elizabeth Patton (University of Maryland, Baltimore County): *Where Does Work Belong?*

Home-based Work and Communication Technology Within the American Middle-class Postwar Home

Max Stadler (ETH Zurich, Science Studies): *Display Hazards, 1975-1985: Ergonomics, Design, and the Computerized Workplace.*

Joeri Bruyninckx (Maastricht University): *Tuning the Workplace The Herman Miller Research Corporation, Action Office and the Architectonics of Privacy*

William Logan (Pacific Union College): *A labor-intensive economy meets the information age: Computerized booking in the Indian Railways*

89: Technologies of Visual Experience

Toscanini

Chair: **Jo Wachelder** (Maastricht University)

David Hay (BT Group): *Art and design in General Post Office telecommunications publicity and advertising in the UK, 1925 – 1939*

Elizabeth Bruton (Science Museum): *From Sheds to Sitting Rooms: The Art and Design of Broadcast Radio and Television Sets in 1920s and 1930s Britain*

Michael Laurentius (York University): *Accepting the garish: Atomic kitsch as (a) science communication (technology)*

Carson Benn (University of Kentucky): *Appalachia on the Airwaves: Public Television in the Mountain South as A Means of Compensatory Education*

90: Technologies of Violence in Early Modern Eurasia

Round Table

Manzoni

Organizer: **Clare Griffin** (Nazarbayev University, Republic of Kazakhstan)

Chair: **Yulia Frumer** (Johns Hopkins University)

Hyeok Hweon Kang (Harvard University): *Wheellock Landmine: Artisan, Scholar and Technological Knowledge in 17th Century Korea*

Catherine Fletcher (Swansea University): *Luxury firearms at the courts of sixteenth-century Italy*

Florin-Stefan Morar (Harvard University/City University of Hong Kong): *Translating the Western cannon: European artillery in pre-conquest Manchu strategy*

Clare Griffin (Nazarbayev University): *Records of Bodies and Bodies as Records in Early Modern Russia*

91: Bodies of data: finding and framing ‘excess’ in histories of post-war design machines

Workshop-style Session

Verdi

Organizers: **Margot Lystra** (School of Urban Planning and Landscape Architecture, Faculty of Environmental Design, University of Montreal.

Chair: **Alana Staiti** (Smithsonian NMAH)

Silvia Casini (University of Aberdeen): *Affectivity and data-visualisation entanglements in the (re) invention of Magnetic Resonance Imaging technologies*

Margot Lystra (School of Urban Planning and Landscape Architecture, Faculty of Environmental Design, University of Montreal): *Driving bodies, sensory infrastructures: U.S. freeway design in The View from the Road*

Frances Robertson (Glasgow School of Art): *Drawing for design: ergonomic thinking, body visualisation, and the legacies of the life room*

92: Exploring the Early Digital - A Roundtable

Volta

Organizer: **Thomas Haigh** (U. of Wisconsin--Milwaukee & Siegen University)

Chair: **Pierre Mounier Kuhn** (CNRS, Paris-Sorbonne)

Panelists:

Thomas Haigh (U. of Wisconsin--Milwaukee & Siegen University)

Ronald Kline (Cornell University)

Ksenia Tatarchenko (Geneva University)

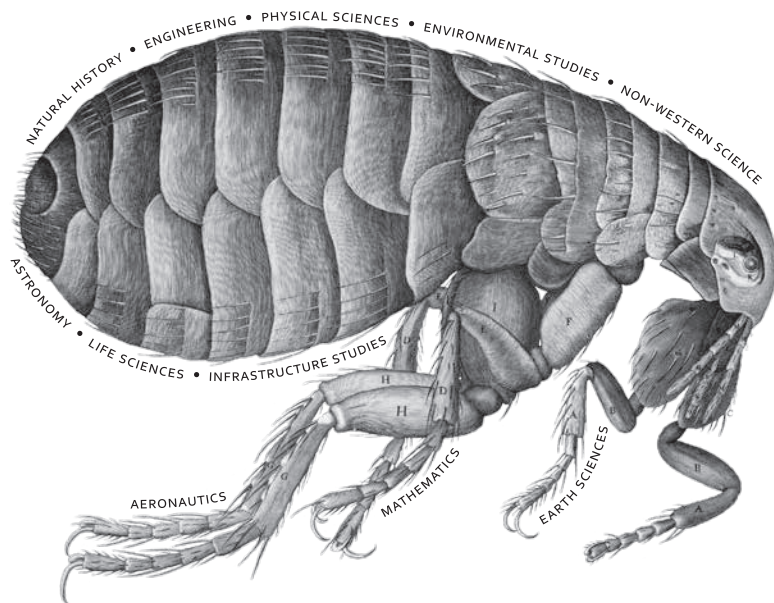
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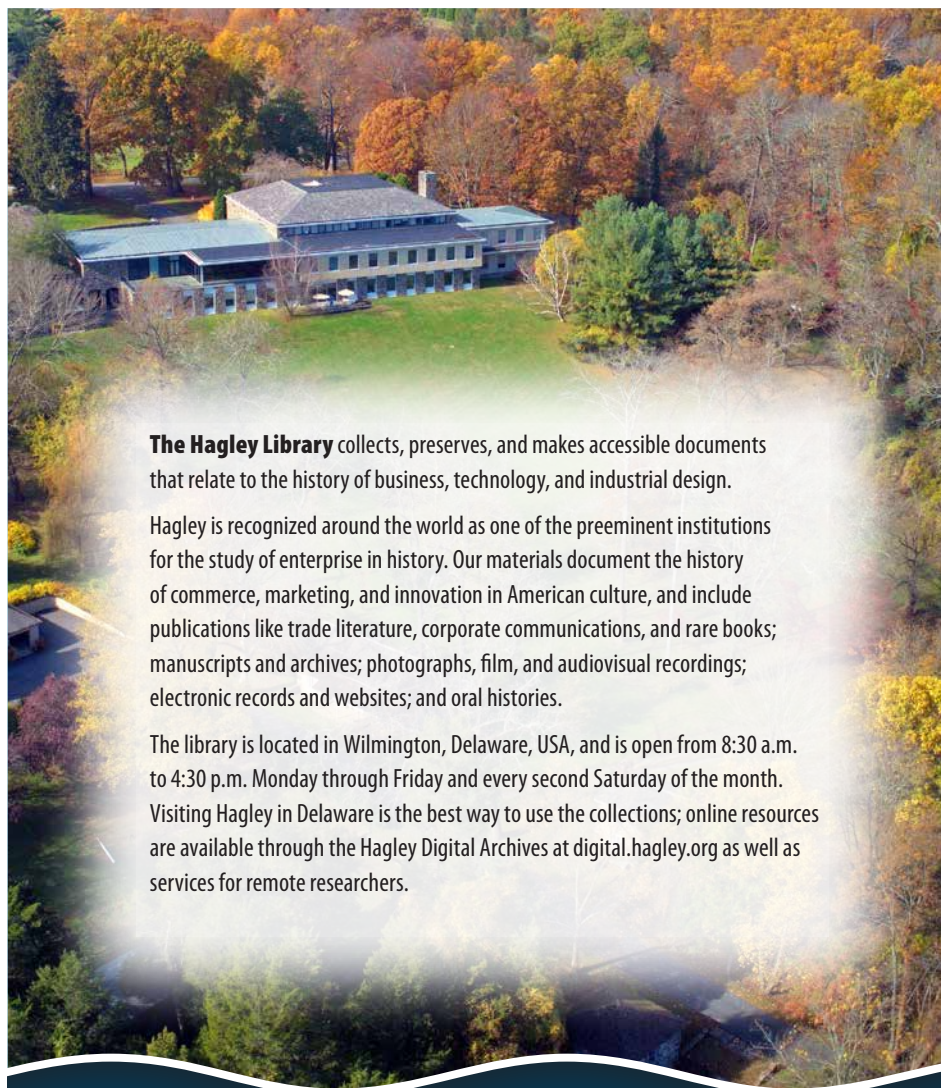
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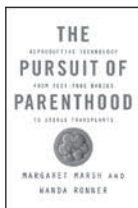
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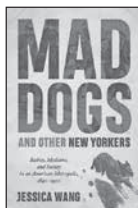


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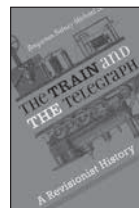


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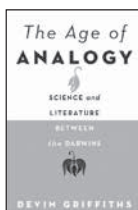


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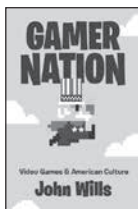


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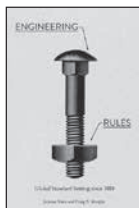


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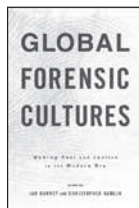


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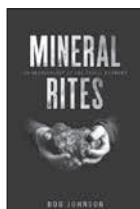


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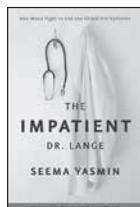


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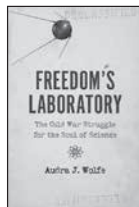


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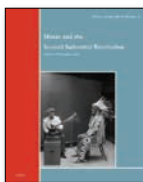


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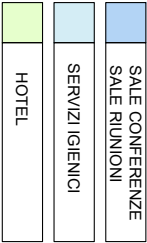
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