

02 - Understanding Innovation across Cultures and Technologies I: Narratives of Innovation in Eastern Europe, Japan, and the United States

Organizers: **Wiebe Bijker** (Maastricht University, Netherlands), **Lars Heide** (Copenhagen Business School, Denmark), and **Annapurna Mamidipudi** (Maastricht University, Netherlands)
Chair: **Wiebe Bijker** (Maastricht University, Netherlands)
Comment: **Annapurna Mamidipudi** (Maastricht University, Netherlands)

Valentina Fava (Technische Universität Berlin, Germany): History Matters: Tradition and Innovation in the Modernization of the Soviet and Czechoslovak Automobile Industry
Osamu Kamei (National Museum of Nature and Science, Japan): History of Japanese Petrochemistry Technology Development: From the Systematization of Technologies of NMNS
Lars Heide (Copenhagen Business School, Denmark): Dynamics of Innovation in Success and Limits to IBM Mainframe Computers

03 - Practitioner's Roundtable: Challenges and Opportunities for Working at the Intersections of Technology, Gender Equality, and Youth Empowerment in the 21st Century

Sponsor: **Tembusu College**
Organizers and chairs: **Lisa Onaga** (Nanyang Technological University, Singapore) and **Sierin Lim** (Nanyang Technological University and Singapore Women in Engineering, Science, and Technology Initiatives)

Panelists:
Sierin Lim (Nanyang Technological University and Singapore Women in Engineering, Science, and Technology Initiatives)
Pia Bruce and Mrinalini Venkatachalam (Singapore Committee for UN Women, Singapore)
Vanessa Rheinheimer (Engineers Without Borders, Singapore)
Kiruthika Ramanathan (Maker Faire Singapore)
Isaac Kerlow (Earth Observatory of Singapore, Nanyang Technological University)
Honor Harger (ArtScience Museum, Singapore)
Sami Kizilbash (Google South and Southeast Asia, Singapore)

04 - Ordering the Ethnic Minorities in the Southwest of China: Technology of Communication, Herb, and Race Taxonomy

Organizer: **Dong Yuyu** (Shanghai Jiao Tong University, China)
Chair and comment: **Niu Weixing** (Shanghai Jiao Tong University, China)

Dong Yuyu (Shanghai Jiao Tong University, China): New Communication Technology of Telephone and Telegram among the Tibetans of Sichuan in the Early Twentieth Century: Political Control and Social Impact
Zhu Jing (University of Edinburgh, United Kingdom): Conceptualizing an Ethnographic Body: Technology of Body Measuring and Observation in the Southwest of China in the First Half of the Twentieth Century
Hu Su (University of Edinburgh, United Kingdom): Producing Knowledges about a Herbal Medicine: The Caterpillar Fungus

05 - Animals and Technology: In the Sea

Organizer: **Dolly Jørgensen** (Luleå University of Technology, Sweden)

Chair: **Sverker Sörlin** (Royal Institute of Technology, Sweden)

Dolly Jørgensen (Luleå University of Technology, Sweden): Peering beneath the Surface: Technologies of Seeing Underwater Life in Public Aquariums, 1853–2015

Chein Kragen (University of Edinburgh, United Kingdom): Extending Laboratory Work into the Sea: A Study on Technology of Milkfish Artificial Propagation in Taiwan

Delfinn Tann (Nanyang Technological University, Singapore) [**Robinson Prize Candidate**]: Development of Technology in an Ornamental Fish Farm of Singapore due to Government Pressure

06 - Cinema and the History of Technology in Korea in the 1960s and 1970s

Organizer: **Sungook Hong** (Seoul National University, South Korea)

Chair and comment: **Tae-Ho Kim** (Hanyang University, South Korea)

Sungook Hong (Seoul National University, South Korea): *Six Daughters* and the Changing Technoscape of Korea in the late 1960s

Taehun Lim (Chosun University, South Korea): Cultural Films and the Political Propaganda of Mechanical Symbols during the Park Chung Hee Era

Young June Lee (Kaywon University of Art and Design, South Korea): *The Red Scarf* and the Synchrony of Speed in Modern War Machine

07 - Technology Rules

Chair and comment: **David Burke** (Auburn University at Montgomery, United States)

Joseph P. Lupton (Georgia Institute of Technology, United States): Unintended Consequences: E.U. and U.S. Regulation for Sustainable Sourcing and Its Impact on the Vietnam Furniture Industry and Lumber Sourcing in Asia

Arthur Daemrich (Smithsonian Institution, United States): Innovation by Regulatory Design: Incentives versus Mandates for Green Chemistry

David Mercer (University of Wollongong, Australia): Standards, “Smoking Guns,” and “Sustainable Uncertainty”: The Politics of Scientific Uncertainty in the History of Standard Setting for Electric and Magnetic Fields (EMF)

08 - National Objects

Chair and comment: **Stuart W. Leslie** (Johns Hopkins University, United States)

Saara Matala (Aalto University, Finland) and **Aaro Sahari** (University of Helsinki, Finland): Small Nation and Big Ships: Finnish Icebreakers and Technological Nation Building, 1877–1977

George Wilkenfeld (Independent Scholar, Australia): The Stobie Pole: An Unlikely Cultural Artifact of North and South, East and West

Crystal Abidin (University of Western Australia) and **Connor Graham** (National University of Singapore): History of the Digital Camera in Singapore, 1994–2006

09 - What Goes Up Must Come Down

Chair and comment: **Jeff Schramm** (Missouri University of Science and Technology, United States)

Leigh Edmonds (Federation University Australia): You Make Them, We Buy and Fly Them: The Experience of Flying Foreign Airliners in Australia in the 1930s

F. Robert van der Linden (Smithsonian Institution, United States): *Revolutions in the Sky: Reinventing Flight*—A New Exhibit at the National Air and Space Museum

Peter Hobbins (University of Sydney, Australia): The Moment of Impact: The Accidental Airspace of Aircraft Crashes

10 - Hydraulic Technologies in the Premodern World: East and West

Organizer: **Pamela O. Long** (Independent Scholar, United States)

Chair and comment: **Dagmar Schäfer** (Max Planck Institute for the History of Science, Germany)

Ling Zhang (Boston College, United States): Dyking or Diverting, Blocking or Channeling: Yellow River Hydraulics in Northern-Song and Jin China, 960–1234 CE

Adam Lucas (University of Wollongong, Australia): Water Rights and the Law of Nuisance in Post-Conquest England: Milling, Fishing, and Navigation

Pamela O. Long (Independent Scholar, United States): Hydraulic Engineering in Late Sixteenth Century Rome

Philip C. Brown (The Ohio State University, United States): Dike, Dam, Drain, or Polder? Water Engineering in Early Modern Japan

11 - Beyond Brain Drain, Brain Gain: Locating Western-Educated Asian Engineers

Organizers: **Ross Bassett** (North Carolina State University, United States) and **Hyungsub Choi** (Seoul National University of Science and Technology, South Korea)

Chair and comment: **Dong-Won Kim** (Harvard University, United States)

Ross Bassett (North Carolina State University, United States): Tradition and Modernity: Indian Business Families and MIT, 1922–1973

Hyungsub Choi (Seoul National University of Science and Technology, South Korea): The “Minnesota Project” and the (Re)construction of Engineering in South Korea, 1955–1962

Anto Mohsin (Northwestern University in Qatar): Adding Value or Proving One’s Self? B. J. Habibie and Indonesian Engineers Trained Overseas

Thursday, 23 June
1:00 PM–2:30 PM

12 - 10 Years of EASTS: Thinking with Regions in STS

Organizer: **Wen-Hua Kuo** (National Yang-Ming University, Taiwan)

Comment: **Sungook Hong** (Seoul National University, South Korea)

Sulfikar Amir (Nanyang Technological University, Singapore): STS in the Archipelago: Knowledge and Transformation in Indonesia

Togo Tsukahara (Kobe University, Japan): Shall We Never Bring Up the History of Colonial Science/Technology Again? Japanese Colonial Science/Technology and the Problems of Its Historiography

Hyungsub Choi (Seoul National University of Science and Technology, South Korea): The Social Construction of Imported Technologies: Reflections on the Social History of Technology in Modern Korea

Wen-Hua Kuo (National Yang-Ming University, Taiwan): Tracing Living Traditions: Asian Medicines and Their Paths toward Modernization

Izumi Nakayama (Hong Kong University, Hong Kong): Between the Breast and the Bottle: Exploring the Politics of Gender, Motherhood, and Technology in East Asia

13 - Understanding Innovation across Cultures and Technologies II: Social Embedding of Innovation—Women, Labor, Industry

Organizers: **Wiebe Bijker** (Maastricht University, Netherlands), **Lars Heide** (Copenhagen Business School, Denmark), and **Annapurna Mamidipudi** (Maastricht University, Netherlands)

Chair: **Annapurna Mamidipudi** (Maastricht University, Netherlands)

Comment: **Lars Heide** (Copenhagen Business School, Denmark)

B. Zorina Khan (Bowdoin College, United States): Women and Technology in Britain, France, and the United States: Evidence from 19th-Century Patents and Industrial Prizes

Jongmin Lee (University of Virginia, United States): Empowering and Poisoning: Viscose Rayon's Journey across the Pacific

Ling-Fei Lin (Nanyang Technological University, Singapore): The (Social) Shifting Effect of Innovation in the Laptop Industry: Whose Innovation, Whose Cost, and Whose Benefit?

14 - Undercurrents: Personal (and Tacit) Knowledge in Technology Studies

Organizer: **Lee Vinsel** (Stevens Institute of Technology, United States)

Chair and comment: **Jennifer Alexander** (University of Minnesota, United States)

Monique Dufour (Virginia Tech, United States): The Embodied Reader

Yulia Frumer (Johns Hopkins University, United States): Technological Encounters as Prisms into Undercurrents of Personal Knowledge

Lee Vinsel (Stevens Institute of Technology, United States): Habits, Experiences, and Dispositions in the Study of Regulation and Technological Change

15 - Sound Recording and Surveillance

Organizer, chair, and comment: **Mara Mills** (New York University, United States)

Joeri Bruyninckx (Maastricht University, Netherlands): Testing Animal Hearing: Sound Technologies as Hearing Aids in Twentieth-Century Bioacoustics

Jennifer Hsieh (Stanford University, United States): Selective Hearing: Decibel Meters in Taiwan's Noise Control System

Eun-Sung Kim (Kyung Hee University, South Korea): The Technical Surveillance of Social Movement: Comparing the Sensory Power of Cameras and Noise-Meters for Protest Control in Korea

16 - Systems Thinking: Complexity and Simplification when "Making Things Work" (Part I)

Organizer: **Dagmar Schäfer** (Max Planck Institute for the History of Science, Germany)

Chair and comment: **Hunter Heyck** (University of Oklahoma, United States)

Fan Fa-ti (State University of New York at Binghamton, United States): Thinking Networks, Sensing Disasters: Earthquake Prediction in Socialist China

Edward Jones-Imhotep (York University, Canada): The Dangers of Systems: Victorian Railways and the Rise of the Technological Accident

Carsten Reinharth (Chemical Heritage Foundation, United States, and Bielefeld University, Germany): Research Methods and Science Policy in Late-twentieth Century United States

17 - Experts in Transitions: Self-Images, Political Agency, and State Power in the Global Professionalization of Engineers, 1850 to 1940

Organizers: **Adelheid Voskuhl** (University of Pennsylvania, United States) and **Aleksandra Kobiljski** (National Center for Scientific Research, France)

Chair: **Tatsushi Fujihara** (Kyoto University, Japan)

Aleksandra Kobiljski (National Center for Scientific Research, France): The 1929 World Engineering Congress in Tokyo and the Reconfigurations of the Engineering Profession in Modern Japan

Adelheid Voskuhl (University of Pennsylvania, United States): Engineers' Identities in Post-Bourgeois and Post-Revolutionary Environments: Germany and the U.S., 1900 to 1933

Asif Siddiqi (Fordham University, United States): Feeding the Gulag: Soviet Engineers and Stalinist Terror

18 - The History of Technology in the Disciplinary System

Sponsor: **Asia Research Institute**
Organizer: **Yao Dazhi** (Institute for the History of Natural Science, China)
Chair and comment: **Ronald R. Kline** (Cornell University, United States)

Fang Yibing (Chinese Academy of Sciences, China), The Difficult Marriage of Industrial Archeology and the History of Technology: Towards a More Progressive Union in China
Dolly Jørgensen (Luleå University of Technology, Sweden), the History of Technology and Living Things

Zhihui Zhang (Chinese Academy of Sciences, China), The Rise of Engineering Studies in China, or A Fragmentation of Chinese History of Science and Technology?

Bradley Fidler (University of California, Los Angeles, USA), The History of Technology in a Shifting Geopolitical Economy

19 - Waste and Recycling during WWII: A Transnational Perspective on Waste Flows in Times of Total War and Occupation

Organizer: **Heike Weber** (Bergische Universität Wuppertal, Germany)
Chair: **Helmuth Trischler** (Deutsches Museum, Germany)
Comment: **Tetsuji Okazaki** (University of Tokyo, Japan)

Heike Weber (Bergische Universität Wuppertal, Germany): Scope and Impact of the Nazi “Recycling Regime”

Chad Denton (Yonsei University, South Korea): Salvage as National Spiritual Mobilization: Imitating the Germans in Wartime Japan, 1937–1945

Paul Kreitman (University of London, United Kingdom): Attacked by Excrement: The Political Ecology of Night Soil in Wartime and Postwar Tokyo

20 - Technology, Modernity, and Empire: Technological Innovations and American Colonial Rule in Early 20th Century Philippines

Organizer: **Aaron Abel T. Mallari** (University of the Philippines)
Chair and comment: **William K. Storey** (Millsaps College, United States)

Kerby C. Alvarez (University of the Philippines): Barometers and the Empire: Weather Instruments and the Philippine Weather Bureau, ca. 20th Century

Nicolo Paolo P. Ludovice (Ateneo de Manila University, Philippines): The War Against Carabaos: Social Responses to Tractors, Threshers, and Plowing Machines in the Philippines, 1890–1941

Aaron Abel T. Mallari (University of the Philippines): The Electric Chair, Penology, and the American colonial regime in the Early 20th Century Philippines

21 - Craft in the Face of Modernity

Chair: **Harro Maat** (Wageningen University, Netherlands)

Achintya Kumar Dutta (University of Burdwan, India): Engaging with Indigenous Technology in the Metal Craft of Rahr Bengal during Colonial Rule

Ana Duarte Rodrigues (University of Lisbon, Portugal): Traditional Irrigation Systems in the Southern Iberian Peninsula: A Key for Sustainability

Angelica Agredo (King's College London, United Kingdom) [**Robinson Prize Candidate**]: "Concrete roads and the bullock cart": Roads and Road Transport in India during the Interwar Years

Jorun M. Stenøien (Norwegian University of Science and Technology, Norway): Aquaculture a Melting Pot? What Is Valued as Good Craftsmanship in this Environment of Change?

Thursday, 23 June

3:00 PM–4:30 PM

22 - Systems Thinking: Complexity and Simplification when "Making Things Work" (Part II)

Organizer: **Dagmar Schäfer** (Max Planck Institute for the History of Science, Germany)

Chair and comment: **Hunter Heyck** (University of Oklahoma, United States)

Dagmar Schäfer (Max Planck Institute for the History of Science, Germany):

Controlling degrees: Work (*gongzuo*) in Qiu Jun's (1421–1495) *Statecraft Guide*

Matteo Valleriani (Max Planck Institute for the History of Science, Germany): The Systematization of Knowledge at Pope's Will: The Medieval Liturgic Calendar

Dagmar Wujastyk (University of Alberta, Canada, and University of Vienna, Austria): From Herbal-Based Medicine to Iatrochemistry: System Changes in Classical Indian Medicine

23 - Technology and Knowledge

Chair and comment: **Lee Vinsel** (Stevens Institute of Technology, United States)

Simon Dumas Primbault (European University Institute, Italy) [**Robinson Prize Candidate**]: An Anthropological Glance at the Writing and Conservation of Mechanical Research Notebooks in Late Seventeenth-Century Italy

Lif Lund Jacobsen (Danish National Archives, Denmark): Discovering the Earth's Inner Core: Instrumentalization, Scientific Networks, and Tacit Knowledge in 1930s European Seismological Research

Egle Rindzeviciute (Kingston University, United Kingdom): From Nuclear Winter to the Anthropocene: Government through a Virtual Milieu

24 - Making Modernity: Technology in Regional History

Organizers: **Erik van der Vleuten** (Eindhoven University of Technology, Netherlands) and **Francesca Bray** (University of Edinburgh, United Kingdom)
Chair: **Francesca Bray** (University of Edinburgh, United Kingdom)
Comment: **Keith Breckenridge** (University of Witwatersrand, South Africa)

Panelists:

Angela Leung (University of Hong Kong)
Gonçalo Santos (University of Hong Kong)
Ruth Oldenziel (Eindhoven University of Technology, Netherlands)
Helmuth Trischler (Deutsches Museum, Germany)
Nina Wormbs (Royal Institute of Technology, Sweden)

25 - Philosophical Anthropology and Histories of Technology: Philosophical Provocations

Organizer and chair: **Carl Mitcham** (Colorado School of Mines, United States and Renmin University of China)

Carl Mitcham (Colorado School of Mines, United States and Renmin University of China): Introduction—Relationships between Philosophical Anthropology and History of Technology
Jing Di (Renmin University of China): Presentation—José Ortega y Gasset: Existentialist Anthropology and the Periodization of Technology
Huang Xiaowei (Tsinghua University, China) and **Li Tong** (Renmin University of China): Presentation—Li Zehou: Toward an Aesthetic Anthropological Perspective on Technological Progress
Xue Guibo (Nanjing Forestry University, China): Comment—Environmental Ethics, Anthropology, and the History of Technology
Yao Dazhi (Chinese Academy of Sciences, China): Comment— Chinese Technology in Bertrand Gille's *Histoire des Techniques*: History and Anthropology
Li Sanhu (Guangzhou Academy of Governance, China): Comment— Engineering Studies Perspective on Anthropology and History of Technology

26 - Accidents and Disasters

Chair and comment: **Itty Abraham** (National University of Singapore)

Karampatsos Christos (University of Athens, Greece): Efrosiini Crossing Syngrou Avenue: Automobile Accidents and the Introduction of the Automobile in Greece (1900–1911)
Johannes-Geert Hagmann (Deutsches Museum, Germany): The 1923 Great Kantō Earthquake and the Construction of Self-Image of Japanese Science and Engineering in the Interwar Period
Alexis Rider (University of Pennsylvania, United States) [**Robinson Prize Candidate**]: A Mine Fire and Meaning: Beyond Envirotechnical Systems

27 - Food Technology under Cultural Changes in the East and West

Organizer and chair: **Tae-Ho Kim** (Hanyang University, South Korea)

Comment: **Tatsushi Fujihara** (Kyoto University, Japan)

Seung-joon Lee (National University of Singapore): Industrializing Diet: Food Technology and China's Total War

Xaq Frohlich (Korea Advanced Institute of Science and Technology, South Korea): The Informational Turn in Food Politics: The U.S. FDA's Nutrition Label as "Information Infrastructure"

Tae-Ho Kim (Hanyang University, South Korea): Searching for "a Refrigerator for Koreans": The Invention of Kimchi Refrigerator in South Korea in the 1990s

28 - Understanding Innovation across Cultures and Technologies III: The Crafting of Innovation in Africa, India, and Japan

Organizers: **Wiebe Bijker** (Maastricht University, Netherlands), **Lars Heide** (Copenhagen Business School, Denmark), and **Annapurna Mamidipudi** (Maastricht University, Netherlands)

Chair: **Lars Heide** (Copenhagen Business School, Denmark)

Comment: **Wiebe Bijker** (Maastricht University, Netherlands)

Frank Edward (Technische Universität Darmstadt, Germany): Drainage Infrastructures in Dar es Salaam, Tanzania, 1891–1960: When Technological Innovation and Health Intersect

Annapurna Mamidipudi (Maastricht University, Netherlands): Crafting Innovations for Sustainability: Learning from the Handloom Textile Weavers of South India

Nobumichi Ariga (National Museum of Nature and Science, Japan): Conceptualizing the Innovation in Government White Papers: Japanese "Gijutsu-Kakushin" (Technological Innovation) in the Postwar Period

29 - Nature, Technology, and Development: Biofacts in Engineered Environments

Organizers: **Lukas Breitwieser** (Technische Universität München, Germany) and **Franziska Torma** (Technische Universität München, Germany)

Chair: **Karin Zachmann** (Technische Universität München, Germany)

Comment: **Tiago Saraiva** (Drexel University, United States)

Suzana Alpsancar (Technische Universität Braunschweig, Germany): The Virtualization of Plant Collections and How It Affects the Naturalness and Technicity of the Collected Objects (Biofacts)

Eda Kranakis (University of Ottawa, Canada): Patents in the Making of Monsanto's Biotechnology Empire: The Case of Roundup Ready® Crops in Canada and Argentina

Lukas Breitwieser (Technische Universität München, Germany): Biofacts of the Atomic Age: Radiant Developments in Ghana's Agriculture

Franziska Torma (Technische Universität München, Germany): Provincializing Hybrid Corn? Reconstruction, Technical Assistance, and West German Agriculture

30 - Reconsidering Technical History of Technology

Organizer: **Chen-Pang Yeang** (University of Toronto, Canada)
Chair and comment: **Kenji Ito** (Graduate University for Advanced Studies, Japan)

Shaul Katzir (Tel Aviv University, Israel): The Technical Resistance to AT&T's Monopoly on the Quartz Clock

Takashi Nishiyama (State University of New York, Brockport, United States): Technical History of Technology: Aerodynamics for War and Peace in Japan, 1932–64

Chen-Pang Yeang (University of Toronto, Canada): Emergence of Informational Noise: Technology, Uncertainty, and an Alternative Origin Story of Information Science

31 - Technology in China across the Ages

Chair and comment: **Fan Fa-ti** (State University of New York at Binghamton, United States)

Chen Wei (Chinese Academy of Sciences, China): The Different Description Base on the Common Inclination: The Investigation of the Traction System of Chinese Chariots from J. Needham and Chinese Scholars

Jiren Feng (University of Hawaii at Hilo, United States): Intertwined Cultures in the Qing-Dynasty Architectural Terminology: The Building Knowledge Presented in the *Gongcheng Zuofa* (Construction Methods, 1734)

Jianjun Mei (Needham Research Institute, United Kingdom): Some Thoughts on Needham's Intellectual Heritage

32 - Comparative History of Communications Technologies

Chair and comment: **Graeme Gooday** (University of Leeds, United Kingdom)

Adrian James Kirwan (Maynooth University, Ireland) [**Robinson Prize Candidate**]: Developing Telephony at the Edge of the United Kingdom: The Telephone Company of Ireland, 1878–1893

Mark J. Crowley (Wuhan University, China): Technological Change and Post Office Communications, 1918–1945

Kathryn Holliday (University of Texas at Arlington, United States): The Windowless Technological Box: The Beginnings of the Invisible Telecommunications Network

Friday, 24 June
10:00 AM–12:00 PM

33 - From Mechanical Arts to Present Maker Movements: Forgotten Genealogies of Art, Technology, and Science

In cooperation with: **ArtScience Museum, Singapore**
Organizer: **Denisa Kera** (National University of Singapore)

Kaitlyn Marie Braybrooke (University of Sussex, United Kingdom) and **Sally Jane Norman** (University of Sussex, United Kingdom): Technologies and Performative Play: Re-Creation and Subversion of Institutionalized Cultures / Cultural Institutions

Denisa Kera (National University of Singapore) and **Markéta Dolejšová** (National University of Singapore): Prototypes of Science Instruments in Renaissance Science and Present DIYbio—Integrating Technology, Arts, and Crafts

Emile Devereaux (University of Sussex, United Kingdom): Participatory Cartography in Design Anthropology: Maps and Media for Speculative Futures

Kate O’Riordan (University of Sussex, United Kingdom): Fabulation and Fabrication: Biosensors, Experience, and Materialisms

Jennifer Parker (University of California, Santa Cruz, United States): Enacting Digital Art and Civic Opportunities: Data as Material for Action

34 - International Perspectives on the History of Gender and Technology

Co-Sponsors: **The Berkshire Conference of Women Historians** and **The Society for the History of Technology**

Organizers: **Susan Yohn** (Hofstra University, United States) and **Emily K. Gibson** (Georgia Institute of Technology, United States)

Chair: **Arwen P. Mohun** (University of Delaware, United States)

Comment: **Ruth Schwartz Cowan** (University of Pennsylvania, United States)

Margaret Vining (Smithsonian Institution, United States) and **Barton C. Hacker** (Smithsonian Institution, United States): Bridging the Ocean: Technology and Nineteenth-Century Women’s Transatlantic Activism

Sujin Lee (Cornell University, United States): Birth Strike: Yamakawa Kikue’s Socialist Feminist Critique of Sex and Class

Laura Bier (Georgia Institute of Technology, United States): The Pleasures of Domesticity: Household Appliance Advertisements, Gender, and the Democratization of Well Being in Nasser’s Egypt

Emily K. Gibson (Georgia Institute of Technology, United States): “L’art de faire un bon voyage”: Air France’s *Hôtesse de l’Air* and the Domestication of Flight and Travel within the Declining French Empire, 1946–1960

**35 - Roundtable: Craft and Art in Innovation, and Innovation in the Arts and Crafts—
Exploring New Engagements for the History of Technology**

Organizers: **Annapurna Mamidipudi** (Maastricht University, Netherlands)
and **Wiebe Bijker** (Maastricht University, Netherlands)

Panelists:

Annapurna Mamidipudi (Maastricht University, Netherlands)
Sushruti Santhanam (Savitribai Phule Pune University, India)
Pamela O. Long (Independent Scholar, United States)
Pamela Smith (Columbia University, United States)
Uzramma (Independent Scholar, India)
John Bosco Lourdasamy (Indian Institute of Technology Madras, India)
Francesca Bray (University of Edinburgh, United Kingdom)

36 - Technology for City, City for Technology

Organizer: **Buhm Soon Park** (Korea Advanced Institute of Science and
Technology, South Korea)

Chair and comment: **Takehiko Hashimoto** (University of Tokyo, Japan)

Stuart W. Leslie (Johns Hopkins University, United States) and **Yin Hang Phoebe Tang** (Johns
Hopkins University, United States): Staking a Claim to Biotech: Singapore and San Diego's
Science Cities

Robert Cowley (King's College London, United Kingdom): Science Fiction and the Smart-Eco
City

Buhm Soon Park (Korea Advanced Institute of Science and Technology, South Korea),
Youjung Shin (Korea Advanced Institute of Science and Technology, South Korea), and
Taemin Woo (Korea Advanced Institute of Science and Technology, South Korea): A Political
Life of "Galaxy City": Science Policy, City Planning, and Two Presidential Elections

Simon Joss (University of Westminster, United Kingdom), **Robert Kargon** (Johns Hopkins
University, United States), and **Arthur Molella** (Smithsonian Institution, United States): "Smart
City": Tracing the Historical Roots of the Contemporary Paradigm of Urban Technology

37 - Presidential Roundtable: Rethinking Society for the 21st Century

Organizers: **Johan Schot** (University of Sussex, United Kingdom) and
Suzanne Moon (University of Oklahoma, United States)
Francesca Bray (University of Edinburgh, United Kingdom)

Chair: **Bruce Seely** (Michigan Technological University, United States)

Panelists:

Johan Schot (University of Sussex, United Kingdom)
Suzanne Moon (University of Oklahoma, United States)
Itty Abraham (National University of Singapore)

38 - Fashioning Global Patent Cultures: Diversity and Harmonization in Historical Perspective

Organizers: **Graeme Gooday** (University of Leeds, United Kingdom) and **Steven Wilf** (University of Connecticut, United States)
Chair: **Graeme Gooday** (University of Leeds, United Kingdom)
Comment: **Steven Wilf** (University of Connecticut, United States)

Kjell Ericson (Yale University, United States): Science Applied in Aid of Nature: The First Pearl Patent and the Place of Industrial Property in Meiji Japan

Bernardita Escobar Andrae (University of Santiago, Chile): Alternative Patent Cultures in the Chilean Patent System, 1840–1910”

Courtney Fullilove (Wesleyan University, United States): Specimens of Ingenuity, and Their Consumption: Fire and Restoration in the U.S. Patent Office

Tania Sebastian (Gujarat National Law University, India): The India Twist to Patent Culture

39 - Technology and Capitalism as U.S. Foreign Relations: Transatlantic and Transpacific Perspectives

Organizers: **Corinna Schlombs** (Rochester Institute of Technology, United States) and **William Chou** (The Ohio State University, United States, and University of Tokyo, Japan)

Chair and comment: **Keith Breckenridge** (University of Witwatersrand, South Africa)

Corinna Schlombs (Rochester Institute of Technology, United States): The Promise of Productivity: Technology and the American Capitalist Model in U.S.-German Relations

Ying Jia Tan (Wesleyan University, United States): Sino-American Technological Diplomacy and the Nationalization of China’s Electrical Industries, 1941–1945

William Chou (The Ohio State University, United States, and University of Tokyo, Japan)

[Robinson Prize Candidate]: Constructing and Consuming the American Japanese Car: Transpacific Technology and Marketing, 1957–1982

Pierre Mounier-Kuhn (National Center for Scientific Research and Université Paris-Sorbonne, France): Transatlantic Configurations: Information Technologies between the U.S. and Peripheral Countries

40 - On the Co-Evolution of Technology and Culture: Technological Development, Birth Control, and Venereal Diseases Prophylaxis

Organizer: **Wolfgang König** (Technische Universität Berlin, Germany)

Chair and comment: **Suzanne Gottschang** (Smith College, United States)

Wolfgang König (Technische Universität Berlin, Germany): The Condom’s Difficult Path to Become a High-Tech Product in 20th Century Germany

Haiyan Yang (Peking University, China): Making the Pill: A Comparative Study on the Development of the Contraceptive Pill in China and the United States

Shoan Yin Cheung (Cornell University, United States): A Therapeutic for a New Millennium: The Birth Control Pill as “Medicine” in Contemporary Japan

Donna J. Drucker (Technische Universität Darmstadt, Germany): No Barrier to Innovation: The Trials of the Cervical Cap, 1976–1988

41 - Imagination/Meaning: Technological Dreamscapes, Fictions, and Futures

Organizer and chair: **Annie Tomlinson** (Cornell University, United States)

Comment: **W. Patrick McCray** (University of California, Santa Barbara, United States)

Finn Arne Jørgensen (Umeå University, Sweden): When the Humanities Went Digital (A History of Technology Told in the Future Tense)

Samantha Breslin (Memorial University of Newfoundland, Canada): Planning Creativity and Innovation: Imagining Technological Development in Singapore, 1986–2025

Jacob Ward (University College London, United Kingdom) [**Robinson Prize Candidate**]: “The future must be invented, not predicted”: Human Imagination and Computer Prediction in the British Post Office, 1967–1983

Annie Tomlinson (Cornell University, United States) [**Robinson Prize Candidate**]: The “Death Ray” and the Test Ban: Imagining America’s Neutron Bomb as Technopolitical Artifact and Regime, 1957–1963

42 - Robots in Asia: History, Culture, and Politics (Part I)

Organizer and chair: **Chihyung Jeon** (Korea Advanced Institute of Science and Technology, South Korea)

Comment: **Ann Johnson** (Cornell University, United States)

Anna Guevarra (University of Illinois at Chicago, United States): Simulations of Care: Labor, Globalization, and the Politics of Innovation in Korean Robotics

Heesun Shin and **Chihyung Jeon** (Korea Advanced Institute of Science and Technology, South Korea): Robots, Save Us: Visions of Disaster Robotics in South Korea

Huang Yu (The Chinese University of Hong Kong) and **Naubahar Sharif** (Hong Kong University of Science and Technology, China): Replacing Humans with Robots: Technological Change and Industrial Organization in the Pearl River Delta of China

Selma Šabanović (Indiana University, United States): Robotics Firsts: Tracing the Development of Robotics through Oral History Interviews

43 - Things on Display: Exhibitions as a Research Tool in the History of Technology

Organizers: **Andreas Marklund** (Post & Tele Museum, Denmark) and **Louise Karlskov Skyggebjerg** (Danish Museum of Science and Technology, Denmark)

Chair: **Mats Fridlund** (Aalto University, Finland)

Comment: **Deborah Douglas** (MIT Museum, United States)

Andreas Marklund (Post & Tele Museum, Denmark): Exhibitions as a Space for Data Creation: Investigating Information Age Intangibles

Frode Weium and **Henrik Treimo** (Norwegian Museum of Science and Technology, Norway): Exhibitions as Recontextualizations: A Recontextualized Telescope—Connecting Things, Exhibitions, and Research

Louise Karlskov Skyggebjerg (Danish Museum of Science and Technology, Denmark): Exhibition Work as a Way to Engage in Talks with Objects: Thinking with Objects

44 - Histories, Poverties, Technologies

Organizers: **Waqar Zaidi** (Lahore University of Management Sciences, Pakistan) and **Nina Lerman** (Whitman College, United States)
Chair: **Nina Lerman** (Whitman College, United States)
Comment: **Waqar Zaidi** (Lahore University of Management Sciences, Pakistan)

Anindita Nag (German Historical Institute, United States): Reading the Numbers: Statistics and the Politics of Food Scarcity in Colonial India

Dora Vargha (University of London, United Kingdom): Iron Lungs across the Iron Curtain: Respiratory Technologies in Times of Global Polio Epidemics

Kapil Subramanian (King's College London, United Kingdom): Private Tubewells and the Green Revolution

Kirsten Moore-Sheeley (Johns Hopkins University, United States): Disaggregating the "Rural Poor": The History of Insecticide-Treated Bed Net Use in Western Kenya

Friday, 24 June

1:30 PM–5:30 PM

SHOT Graduate Student Workshop

Organizer: **Lars Heide** (Copenhagen Business School, Denmark)

Participants:

Cecilia Cárdenas-Navia (Yale University, United States)

Chris Baumann (Stockholm University, Sweden)

Elena Kunadt (Bergische Universität Wuppertal, Germany)

Ericka Herazo Berdugo (Universidad de Los Andes, Colombia)

Fabian Bechtold (RWTH Aachen University, Germany)

Fabian Prieto-Ñañez (University of Illinois at Urbana-Champaign, United States)

Gu Xiaoyang (Peking University, China)

Karsten Marhold (Université Libre de Bruxelles, Belgium)

Kuan-Hung Lo (Virginia Tech, United States)

Lasse Blond (Aarhus University, Denmark)

Lei Huan-Jie (Renmin University of China)

Marcus Schmerl (Flinders University, Australia)

Paulina Faraj (Georgia Institute of Technology, United States)

Rebecca Miller (Science and Technology Policy Institute, United States)

Sanne Aagaard Jensen (University of Copenhagen, Denmark)

Yeh-Han Wang (National Yang-Ming University, Taiwan)

Zhao Yuting (Peking University, China)

Friday, 24 June
1:30 PM–3:00 PM

45 - *The Practical Application of Natural Philosophical Knowledge in Early Modern Europe*

Organizer and comment: **Adam Lucas** (University of Wollongong, Australia)

Gerhard Wiesenfeldt (University of Melbourne, Australia): Mathematics at Leiden around 1600: Technical Expertise and the Formation of Dutch Academic Culture

Luciano Boschiero (Campion College, Australia): Machines, Motion, and the Académie des Sciences, 1666–1686

David Philip Miller (University of New South Wales, Australia): The Natural Philosophy of Steam in the 18th Century

46 - *Presidential Roundtable: Why Feminist Perspectives on Technology Still Matter—A Global Conversation*

Organizer: **Arwen P. Mohun** (University of Delaware, United States)

Chair: **Francesca Bray** (University of Edinburgh, United Kingdom)

Panelists:

Chia-Ling Wu (National Taiwan University, Taiwan)

Annapurna Mamidipudi (Maastricht University, Netherlands)

Arwen P. Mohun (University of Delaware, United States)

Laura Ann Twagira (Wesleyan University, United States)

Karin Zachmann (Technische Universität München, Germany)

47 - *Roundtable: What Might a Global History of Spaceflight Look Like?*

Organizers: **Roger D. Launius** (Smithsonian Institution, United States) and
Alexander C. T. Geppert (New York University, United States,
and NYU Shanghai, China)

Roger D. Launius (Smithsonian Institution, United States): The *Longue Durée* of Space Exploration and the Amalgamation of a Technological Endeavor

Asif A. Siddiqi (Fordham University, United States): In Place and Left Behind: “Departure Gates” and the Many Global Histories of Space Exploration

Alexander C. T. Geppert (New York University, United States, and NYU Shanghai, China): Global Cosmo-Politics and the Planetization of Earth

Michael J. Sheehan (Swansea University, United Kingdom): National and Planetary Imaginaries in the Construction of Space Programs

Erik M. Conway (Jet Propulsion Laboratory, United States): Entangled Histories of Spaceflight: Thoughts on Preserving Nationalism in Global Histories

Xi Lu (Shanghai Institute of Satellite Engineering, China): Globalizing Deep Space Exploration: Cooperation and Win-Win

Monique Laney (Auburn University, United States): Migration, Nation, and Space Exploration

48 - Chinese Technology in Cross-Cultural Context

Chair: **Jianjun Mei** (Needham Research Institute, United Kingdom)

Wei Qian (University of Science and Technology Beijing, China): Technology Transfer from China to America? A Case Study of Ironworks in Mid-19th Century Kentucky

Hugo Silveira Pereira (Universidade Nova de Lisboa, Portugal): Technopolitics, Technodiplomacy, China, and Portugal: The Railway from Macao to Guangzhou (Late Nineteenth–Early Twentieth Centuries)

Chadwick Wang (Tsinghua University, China), **Mingyang Li** (Chinese Academy of Sciences, China), and **Hongyao Zhang** (University of Tokyo, Japan): The Abandoned Tradition and the Unopened Package: On the Failure of the Modern Chinese Sugar Industry

Zhihui Zhang (Chinese Academy of Sciences, China) and **Yulin Chen** (Hunan University of Science and Technology, China): Space Technology and Geopolitics: Post–Cold War China-U.S. Cooperation and Conflict on Commercial Satellite Launching

49 - Managing Risk in a Diverse World: Intersections of Disability, Race, Class, and Technology in the Creation and Confrontation of Disaster

Sponsor: **EDITH**

Organizers: **Fallon Samuels-Aidoo** (Harvard University and Northeastern University, United States) and **Anna Åberg** (University of Turin)

Chair and comment: **Ashley Carse** (Vanderbilt University, United States)

Fallon Samuels-Aidoo (Harvard University and Northeastern University, United States): Disaster Averted? Emergency Services for the American Rail Industry, 1970–1987

Minae Inahara (Osaka University, Japan): A Phenomenological Investigation of Disability Inclusive Disaster Risk Management: Vulnerabilities, Disasters, and Technologies

Philip C. Brown (The Ohio State University, United States): Facing Natural Hazard Disasters in Early Modern Japan

50 - Sexy Problems: Why Do Particular Technological Problems Become Interesting and Attractive at a Certain Moment?

Organizer: **Ann Johnson** (Cornell University, United States)

Chair and comment: **W. Patrick McCray** (University of California, Santa Barbara, United States)

Ann Johnson (Cornell University, United States): Cleaning up Combustion: The Quest for a Better Engine

Roger Eardley-Pryor (Chemical Heritage Foundation, United States): Bigger, Longer, Wetter: Stimulating Simulations of Biomolecular Dynamos with Supercomputers in Interdisciplinary Illinois

David C. Brock (Computer History Museum, United States): Build Slide: Presentation Software and the Logics of PowerPoint

51 - Robots in Asia: History, Culture, and Politics (Part II)

Organizer and chair: **Chihyung Jeon** (Korea Advanced Institute of Science and Technology, South Korea)

Comment: **David Lucsko** (Auburn University, United States)

Angela Ndalianis (University of Melbourne, Australia): From Edo *karakuri ningyo* to 21st Century Japanese Robots

Colin Garvey (Rensselaer Polytechnic Institute, United States): Risk and Governance of Artificial Intelligence in the USA and Japan

Hee Rin Lee (Indiana University, United States): Individualized Selves of South Korean Home and Social Robotics

52 - Industrial Warfare Emergent: Technological Legacies of the American Civil War

Sponsor: **SMITInG**

Organizer and comment: **Barton C. Hacker** (Smithsonian Institution, United States)

Chair: **Margaret Vining** (Smithsonian Institution, United States)

Seymour Goodman (Georgia Institute of Technology, United States): The Race to Hampton Roads

Merritt Roe Smith (Massachusetts Institute of Technology, United States): The Civil War and the Origins of the Global Arms Bazaar, 1865–1890

Jeffrey Larrabee (National Guard Bureau, United States): “A Brief Plea for an Ambulance System”: Lessons Learned and Re-Learned from the Civil War to the World War

53 - Technology Transfer Reconsidered: Three Cases of Transfer from the West to China

Organizer: **Lie Sun** (Chinese Academy of Sciences, China)

Chair: **Baichun Zhang** (Chinese Academy of Sciences, China)

Comment: **Per Högselius** (Royal Institute of Technology, Sweden)

Lie Sun (Chinese Academy of Sciences, China): German Krupp and Late Qing Chinese Artillery: Technology Transfer through Trade and Imitation

Bin Wang (Chinese Academy of Sciences, China): The Impact of Modern Railway Technology Transfer to China: The Case of the Kiaotsi Railway, 1898–1914

Jinfang Han (China Association for Science and Technology, China): The Reform of Higher Technical Education Following the Soviet Union’s Model: Beijing Area, 1949–1961

54 - Innovation through Connections

Organizer: **Jung Lee** (Academia Sinica, Taiwan)
Chair and comment: **Suzanne Moon** (University of Oklahoma, United States)

Kuang-Chi Hung (National Taiwan University, Taiwan): Scientific Forestry and Ecologies of War in Taiwan during the Japanese Colonial Rule

Sun-sil Oh (Seoul National University, South Korea): Coordinating a Reasonable Power System for South Korea

Jung Lee (Academia Sinica, Taiwan): Beating Twice for Innovation? Thinking Innovation through Papermaking in 19th Century Korea

Friday, 24 June

3:30 PM–5:00 PM

55 - Roundtable: Teaching History of Technology and Science and Technology Studies (STS) outside the Euro-Atlantic World

Organizer and chair: **Anto Mohsin** (Northwestern University in Qatar)
Comment: **Clarissa Ai Ling Lee** (National University of Malaysia)

Anto Mohsin (Northwestern University in Qatar): Introducing and Teaching Science and Technology Studies at a Media School in Qatar

Ellan F. Spero (Massachusetts Institute of Technology, United States, and Singapore University of Technology and Design, Singapore): Photographic Practice as a Tool for Critical Thinking About Technology in Local and Global Contexts

Catelijne Coopmans (National University of Singapore): STS as General Education at Tembusu College, Singapore

C. Ozan Ceyhan (Istanbul University, Turkey): Teaching History of Technology in Turkey

Chihyung Jeon (Korea Advanced Institute of Science and Technology, South Korea): Pedagogical Challenges in the History of Technology and STS in South Korea

56 - Pacific Crossings: A Roundtable on the Transpacific History of Technology

Organizers: **Augustine Sedgewick** (Independent Scholar, United States) and **Teasel Muir-Harmony** (American Institute of Physics, United States)

Chair and comment: **Marc S. Rodriguez** (Portland State University, United States)

Emily K. Brock (Max Planck Institute for the History of Science, Germany): Biodiversity as a Technological Challenge: Science, Power, and Trade in a Globalized Southeast Asian Tropical Hardwood Industry

Teasel Muir-Harmony (American Institute of Physics, United States): Selling Spaceflight in the Pacific Orbit: Comparing American Propaganda in Asia, Latin America, and Oceania

Augustine Sedgewick (Independent Scholar, United States): Coffee Production in the Transpacific Commodity Field, 1888–1941

57 - Computation and the Behavioral / Psychological Sciences: Intersecting Histories, Technologies, and Discourses

Organizer: **Luke Stark** (New York University, United States)

Ekaterina Babintseva (University of Pennsylvania, United States): Self, Computer, and Society: The Development of Computer-Based Education in the United States during the Cold War

Ian Hartman (Northwestern University, United States): “The Yoga of the West”: Biofeedback, Transpersonal Psychology, and the Beginnings of the Quantified Self

Luke Stark (New York University, United States) [**Robinson Prize Candidate**]: “It’s Messing with Me, It’s Mind Control”: Psychological Experimentation on Social Media Platforms and the History of A/B Testing

58 - Animals and Technology: On the Land

Organizer and chair: **Dolly Jørgensen** (Luleå University of Technology, Sweden)

Tamar Novick (Max Planck Institute for the History of Science, Germany) [**Robinson Prize Candidate**]: Documenting Production: The Story of *Stavit*, a Beastly Technology

Tiago Saraiva (Drexel University, United States): The Modern Evolutionary Synthesis and Pork: Guinea Pigs and Pig Breeding in the New Deal

Otniel E. Dror (Hebrew University of Jerusalem, Israel): Perpetuum Pleasure Mobile

Amy Fletcher (University of Canterbury, New Zealand): Listening to Extinction: Eco-Sound from the Movietone Sound System to Soundscape Ecology

59 - Long-Term Impacts of Joseph Needham’s Science and Civilization in China on the History of Technology I: Asia and Beyond

Organizers: **Philip C. Brown** (The Ohio State University, United States) and **Carl Mitcham** (Colorado School of Mines, United States and Renmin University of China)

Suzanne Moon (University of Oklahoma, United States): Needham in Southeast Asia? The Archive and Expanded Histories of Technology

Shi Xiaolei (Harbin Normal University, China): Changes in the History of Technology in China since Needham’s Work: The Perspective of the History of Mechanical Engineering

Jielin Dong (Soochow University, China) and **Wei Li** (Sun Yat-sen University, China): The Structure of Science and Technology across History: A “Human Needs” Perspective

Yulin Chen (Hunan University of Science and Technology, China) and **Zhihui Zhang** (Chinese Academy of Sciences, China): Reflective Studies on SHOT’s Intellectual and Social Organization: The Development Process of SHOT’s Theories, Themes, and Social Organization of the History of Technology

60 - Fashion and Technology: Consumers, Democratization of Luxury, and New Technologies

Organizer: **Emanuela Scarpellini** (University of Milan, Italy)
Chair and comment: **Ruth Oldenziel** (Eindhoven University of Technology, Netherlands)

Naoko Inoue (Tokyo Josai University, Japan): Silk Spinning Technology and Its Impact on Japanese Society in the Late 19th and Early 20th Centuries: The Democratization of Silk and the Emergence of the New Consumer Society

Miki Sugiura (Hosei University, Japan): Old and New Techniques in Recycling Kimono Clothing: A Connection?

Emanuela Scarpellini (University of Milan, Italy): Science and Technology in the Italian Fashion Industry

61 - Patenting, Promoting, and Politicizing New Technologies: Invention, Innovation, and Ubiquitous Know-How in 18th Century France and Britain

Organizer: **Adam Lucas** (University of Wollongong, Australia)
Comment: **Pamela O. Long** (Independent Scholar, United States)

Marie Thébaud-Sorger (National Center for Scientific Research, France): Playing with Scales for Mastering Nature: The Design of Micro-Inventions in 18th Century France and Britain

Benjamin Bothereau (School for Advanced Studies in the Social Sciences, France) [**Robinson Prize Candidate**]: The Imaginary and Technology: Public Lighting Representations in 18th Century Paris

Daryl M. Hafter (Eastern Michigan University, United States): Everybody's Know-How in the Age of Guild Regulations

Jérôme Baudry (University of Geneva, Switzerland) and **Rachel Gostenhofer** (Brown University, United States): From Priority to Property: Owning and Disowning Inventions in 18th Century France

62 - Risk and Opportunity in Spaceflight Technology

Organizer: **Paul E. Ceruzzi** (Smithsonian Institution, United States)
Chair and comment: **Alexander C. T. Geppert** (New York University, United States, and NYU Shanghai, China)

Paul E. Ceruzzi (Smithsonian Institution, United States): The Apollo Guidance Computer, the Integrated Circuit, and the Birth of Silicon Valley, 1962–1972

Ashok Maharaj (Tata Consultancy Services, India): Transnational Networks and Knowledge Flows in the Making and Launching of APPLE: India's first Geostationary Satellite

Michael J. Neufeld (Smithsonian Institution, United States): The Discovery Program: Competition, Innovation, and Risk in Planetary Exploration

63 - Making Games Go: Hardware and Software at the Intersection of Computer and Game History

Organizer: **Laine Nooney** (Georgia Institute of Technology, United States)

Chair: **Maria Haigh** (University of Wisconsin, United States)

Comment: **Melanie Swalwell** (Flinders University, Australia)

Laine Nooney (Georgia Institute of Technology, United States): Puzzling Engines: Game Design and Software Innovation at Sierra On-Line in the 1980s

Jacob Gaboury (Stony Brook University, United States): Procedure Crystallized: Graphics Card Histories and the Domestication of 3D

Stephanie Dick (Harvard University, United States): Games of Chance in the AI Winter

64 - Art and Image in Japan

Chair and comment: **Aleksandra Kobiljski** (National Center for Scientific Research, France)

Yakup Bektas (Tokyo Institute of Technology, Japan): Miyazawa Kenji's Journey to the Stars

Tobias Cheung (Humboldt University of Berlin, Germany): Metabolic Space: Kisho Kurokawa's Future Megalopolis and Its Biotechnic Culture

W. Patrick McCray (University of California, Santa Barbara, United States): Big in Japan: Technology, Art, and Osaka's Expo '70

65 - Bodies and Technologies

Chair: **Achintya Kumar Dutta** (University of Burdwan, India)

Heong Hong Por (University of Malaya, Malaysia): Keeping the Fighting Strength: Medicine and Knowledge of Bodies as Military Technology during Malaya's (Counter)Insurgency, 1948–1960

Kyuri Kim (Korea Advanced Institute of Science and Technology, South Korea): The Ironies of Surveillance: The Effects and Side-Effects of Introducing Technologies for Tuberculosis Surveillance and Governance in South Korea

Alana Staiti (Cornell University, United States) [**Robinson Prize Candidate**]: Bones, Skins, and Joints: ANIMAC and the "Body Language" of Computerized Motion

Saturday, 25 June
10:00 AM–12:00 PM

66 - (Post)Colonialism, Infrastructures, and the Environment

Organizers: **Ute Hasenöhrl** (University of Innsbruck, Austria) and **Jonas van der Straeten** (Technische Universität Berlin, Germany)

Jethron Ayumbah Akalla (Technische Universität Darmstadt, Germany): Un-packing the Socio-Political Character of LTS: The Race Question and Nairobi's Water and Sanitation Infrastructure, 1899 to 1963

Julio Decker (University of Bristol, United Kingdom): Ambitions, Environments, Realities: Imperial Infrastructure in the Philippines and German Southwest Africa, 1898–1918

Ute Hasenöhrl (University of Innsbruck, Austria): A Colonization of the Night? Lighting Technologies and Night-Time Practices in the British Empire

Agnes Kneitz (Renmin University of China): Watering Colonial Visions. German Infrastructure in Kiautshou Bay, 1897–1914

David Nilsson (Royal Institute of Technology, Sweden): Clash of the Civilizations at the “Septic Fringe”? City-Building, Modernization, and Resistance in Colonial Kampala

Jonas van der Straeten (Technische Universität Berlin, Germany): Development, Decolonization, and the Making of a Grid: The Electrification of East Africa, 1945–1960

67 - Game History and the Local I: Locating Histories of Technology

Organizer and Chair: **Melanie Swalwell** (Flinders University, Australia)

Comment: **Corinna Schlombs** (Rochester Institute of Technology, United States)

Alex Wade (Birmingham City University, United Kingdom): Magnetic Fields: Politics and Music in 1980s UK Videogames

Helen Stuckey (Flinders University, Australia): Wild Colonial Boys: How Nintendo Tried to Kill the Australian Games Industry

Ksenia Tatarchenko (University of Geneva, Switzerland): “Right to Be Wrong”: Gaming, Programming, and Transgression in Late Soviet Computing

Melanie Swalwell (Flinders University, Australia): Heterodoxy in Local Games Historiography

68 - Long-Term Impacts of Joseph Needham's Science and Civilization in China on the History of Technology II: Chinese Reception of Science and Civilization in China

Organizers: **Philip C. Brown** (The Ohio State University, United States) and **Carl Mitcham** (Colorado School of Mines, United States and Renmin University of China)

Chair: **Carl Mitcham** (Colorado School of Mines, United States and Renmin University of China)

Comment: **Jianjun Mei** (Needham Research Institute, United Kingdom)

Wenjuan Yin (Northeastern University Shenyang, China): Chinese Responses to *Science and Civilization in China* by Li Yuese and Colleagues

Kang Zhang (Renmin University of China) and **Junhai Zhao** (Renmin University of China):
The Needham Problem in China

Qian Wang (Dalian University of Technology, China): Daoism and Technology in China
69 - To Share or Not to Share? Collaborative Approaches to Technological Innovation and Knowledge Management, 1850–World War I

Organizers: **Joris Mercelis** (Johns Hopkins University, United States) and
Lynn Berger (Columbia University, United States)

Chair and comment: **Gabriel Galvez-Behar** (Université de Lille 3, France)

Peter B. Meyer (Independent Scholar, United States): Knowledge Commons, Industry, and
Military: Three Frames for Early Aeronautical Patents

Lynn Berger (Columbia University, United States): “Photography is Everybody’s Property”:
Peer Production and the Photographic Trade Press in the Nineteenth Century United States

Joris Mercelis (Johns Hopkins University, United States): Public Knowledge and Private
Enterprise: Nineteenth-Century Photography and the Practicability of Open Innovation

Elizabeth Bruton (University of Oxford, United Kingdom): Public Debate and Knowledge
Management: The Institution of Electrical Engineers and Wireless Knowledge Networks in the
Late 19th Century

**70 - Transforming Development: Agricultural Technologies and Knowledge Practices across
Asia**

Organizer: **Jenny Goldstein** (Cornell University, United States)

Chair and comment: **Suzanne Moon** (University of Oklahoma, United States)

Chris Shepherd (Australian National University, Australia): What Is Indigenous and What Is
Not? The Ambiguous Case of the Development Industry’s Revival of the *tara bandu* Ritual as a
Driver of Agricultural Modernization in Postcolonial East Timor

Jerome Whittington (National University of Singapore): Carbon Farming in the Thai
Agricultural Industry: Technological Innovation for Global Carbon Offsets

Harro Maat (Wageningen University, Netherlands): Circulating Improved Practices for Rice
Production: European Colonial Agricultural Science in Asia and Postcolonial Consequences

Jenny Goldstein (Cornell University, United States): Cultivating Carbon: Re-Engineering
Indonesia’s Peatlands and the Contradictions of Development

**71 - Rethinking Reproductive Technologies and Modernities: Pregnancy, Childbirth, and
Reproduction in East Asian Societies, 1800s–2000s (Part I)**

Organizers: **Suzanne Gottschang** (Smith College, United States) and **Gonçalo
Santos** (University of Hong Kong)

Comment: **Francoise Barbira Freedman** (Cambridge University, United
Kingdom)

Izumi Nakayama (University of Hong Kong): Defining Infertility in Japan, 1880–1925

Chiaki Shira (Shizuoka University, Japan): The History of “Artificial Insemination” in Japan,
1890–1948: Issues Concerning Insemination and Donor Sperm

Azumi Tsuge (Meiji Gakuin University, Japan): Motherhood and Prenatal Testing in
Contemporary Japan

Nana Okura Gagné (The Chinese University of Hong Kong): Pursuing Pregnancy in Contemporary Japan

72 - Infrastructures of Risk and Disaster (Part II)

Organizers: **Yeonsil Kang** (Korea Advanced Institute of Science and Technology, South Korea) and **Scott Gabriel Knowles** (Drexel University, United States)

Comment: **Kim Fortun** (Rensselaer Polytechnic Institute, United States), **Scott Gabriel Knowles** (Drexel University, United States), and **Lee Vinsel** (Stevens Institute of Technology, United States)

Kohta Juraku (Tokyo Denki University, Japan): Accident Investigation—Learning Process, Healing Process, or Forgetting Process?”

Yeonsil Kang (Korea Advanced Institute of Science and Technology, South Korea) [**Robinson Prize Candidate**]: Proof of Environmental-ness: Asbestos Risk and their Evidence in South Korea

Vivek Kant (Nanyang Technological University, Singapore) [**Robinson Prize Candidate**]: The Human as a System Component in Nuclear Installations: Jens Rasmussen and High-Risk Systems, 1961–1983

Max Liboiron (Memorial University of Newfoundland, Canada): Methodologies for Acting Upon Infrastructures of Slow Disaster?

73 - Exploring the Historical Roots of Contemporary Conversations about Engineering Education Reform

Sponsor: **Prometheans**

Organizer: **Atsushi Akera** (Rensselaer Polytechnic Institute, United States)

Chair: **Jeff Schramm** (Missouri University of Science and Technology, United States)

Comment: **Bruce Seely** (Michigan Technological University, United States)

Jingjin Wang (Tsinghua University, China): Engineering Education in Action: Reforms in Engineering Education in Twentieth-Century China

Kristina Edström (Royal Institute of Technology, Sweden): The Tension between Academic and Professional Values in Engineering Education: Comparing the Views of Carl Richard Söderberg and the CDIO Approach

Atsushi Akera (Rensselaer Polytechnic Institute, United States): Historical and Structural Foundations of the Proposed Changed in ABET’s Accreditation Standards

Qin Zhu (Purdue University, United States): What Counts as a Practical Engineer: Policy Controversies over the Practical Capability in Engineering Education since 1949

74 - THATCamp “Un-Roundtable”

Organizers: **Ellan F. Spero** (Massachusetts Institute of Technology, United States, and Singapore University of Technology and Design, Singapore), **Catelijne Coopmans** (National University of Singapore), and **Eric Kerr** (National University of Singapore)

Panelists:

2016 Singapore THATCamp Participants

75 - Presidential Roundtable: Phenomenotechnologies: Individual Perception, Collective Experience, and the History of Technology

Organizer: **Lino Camprubi** (Max Planck Institute for the History of Science, Germany)

Chair: **Daiwie Fu** (Yang Ming University, Taiwan)

Comment: **Daiwie Fu** (Yang Ming University, Taiwan) and **Bruno Latour** (Sciences Po, France)

Panelists:

Lino Camprubi (Max Planck Institute for the History of Science, Germany)

Javier Pérez-Jara (Beijing Foreign Studies University, China)

Mareile Flitsch (Völkerkunde Museum der Universität Zürich, Switzerland)

76 - Nationalizing Technologies in Postcolonial South Asia and East Asia

Organizer: **Aparajith Ramnath** (Indian Institute of Management Kozhikode, India)

William Logan (Auburn University, United States): Spanning the Brahmaputra: The Indian Government, Private Industry, and the First Bridge across Assam’s Great River

Aparajith Ramnath (Indian Institute of Management Kozhikode, India): From Post-war Reconstruction to Nation-Building: The Evolution of Technical Education Policy in India, 1938–56

Po-Jen Bono Shih (Virginia Tech, United States) [**Robinson Prize Candidate**], **Gary Downey** (Virginia Tech, United States), and **Kuo-Hui Chang** (National Taiwan University, Taiwan): Industrial Education Becoming Chinese: National Identity, Political Visions and Colonial Legacy in Early Postcolonial Taiwan (1945–1949)

Hsien-yu Chin (Yang Ming University, Taiwan): The Cold War in Rice Cookers: Gender and Kitchen Testing in Taiwan, 1950s–1970s

Suvobrata Sarkar (Burdwan University, India): Development of Electricity in a Colonial Metropolis: Calcutta in the Early Twentieth Century

77 - *Oceans' Technologies*

Organizer: **Hakon With Andersen** (Norwegian University of Science and Technology, Norway)

Chair: **William K. Storey** (Millsaps College, United States)

Comment: **Nil Disco** (University of Twente, Netherlands)

Thomas Brandt (Norwegian University of Science and Technology, Norway): Capturing the Power of the Ocean Waves: The Rise and Demise of a Research and Development Project for Ocean Wave Energy Conversion in Norway, 1970s–1990s

Alex Grainger (Independent Scholar, United Kingdom) [**Robinson Prize Candidate**]:

Boundaries of Nature and the Nature of Boundaries: Offshore Technologies, Political Regimes, and Timor Sea Oil and Gas, 1963–1975

Tizra Meyer (Norwegian University of Science and Technology, Norway) and **Johan Gärdebo** (Royal Institute of Technology, Sweden): Outer Space—Ocean Space: The Common Heritage of Remote Commons

Hakon With Andersen (Norwegian University of Science and Technology, Norway): Wind, Waves, and Ships

Saturday, 25 June

1:30 PM–3:30 PM

78 - *Nuclear Dreams in the Asia-Pacific*

Sponsor: **Tembusu College**

Organizer: **Pang Yang Huei** (Singapore University of Technology and Design, Singapore)

Chair: **Alan Chong** (S. Rajaratnam School of International Studies, Singapore)

Comment: **Ellan F. Spero** (Massachusetts Institute of Technology, United States, and Singapore University of Technology and Design, Singapore)

Kapil Patil (Indian Pugwash Society, India): Strategic versus Scientific and Social Motivations: India's Discourse on Peaceful Nuclear Explosions During 1964–1974

Clarissa Ai Ling Lee (National University of Malaysia) [**Robinson Prize Candidate**]:

Malaysia's Nuclear Dreams: There Was Technology, and Then There Was Science

Loh Shilin (Harvard University, United States): Nuclear Medicine in Japan: Imported Prospects and Human Health

Pang Yang Huei (Singapore University of Technology and Design, Singapore): Revolution and Science: The Career of Qian Sanqiang

79 - Roundtable: Technical Assistance and the History of Technology

Organizers: **John Paul DiMoia** (National University of Singapore), **Gisela Mateos** (National University of Mexico), **Maria Rentetzi** (University of Vienna, Austria), and **Edna Suárez-Díaz** (National University of Mexico)

Chair: **Suzanne Moon** (University of Oklahoma, United States)

Maria Rentetzi (University of Vienna, Austria): The IAEA Technical Assistance Programs: Solving Policy Problems Through Scientific Collaboration

John Paul DiMoia (National University of Singapore): From “Atoms for Peace” to Building a Domestic Program: the Legacy of Radioisotopes in South Korea, 1958–1973

Gisela Mateos (National University of Mexico) and **Edna Suárez-Díaz** (National University of Mexico): Technical Assistance Recreations of Development: The IAEA’s Mobile Radioisotope Exhibition in Latin America (1960–1965)

Karin Zachmann (Technische Universität München, Germany): Nuclear War against Insects: Technical Assistance Projects Promoted by the United Nations’ Specialized Agencies in the Cold War Era

80 - Infrastructures of Risk and Disaster (Part III)

Organizers: **Yeonsil Kang** (Korea Advanced Institute of Science and Technology, South Korea) and **Scott Gabriel Knowles** (Drexel University, United States)

Comment: **Kim Fortun** (Rensselaer Polytechnic Institute, United States), **Scott Gabriel Knowles** (Drexel University, United States), and **Lee Vinsel** (Stevens Institute of Technology, United States)

Greg Lusk (University of Chicago, United States) [**Robinson Prize Candidate**]: Can We Blame the Weather? The Emergence of Extreme Weather Attribution Technology

Susan Sterett (Virginia Tech, United States): Legal Engagement and Practices of Assistance

Tyson Vaughan (National University of Singapore) [**Robinson Prize Candidate**]: Re-mooring After Disaster: Re-thinking the Infrastructural Constitution of Community

81 - Rethinking Reproductive Technologies and Modernities: Pregnancy, Childbirth, and Reproduction in East Asian Societies, 1800s–2000s (Part II)

Organizers: **Suzanne Gottschang** (Smith College, United States) and **Gonçalo Santos** (University of Hong Kong)

Comment: **Francesca Bray** (University of Edinburgh, United Kingdom)

Jianfeng Zhu (Fudan University, China): Understanding the Cradle Project: Fetal Education, Modern Cerebral Science, and Traditional TCM Practice in Contemporary China

Gonçalo Santos and **Jun Zhang** (University of Hong Kong): Birthing Dramas and Generational Narratives: The Medicalization of Childbirth in Rural South China, 1960s–2010s

Suzanne Gottschang (Smith College, United States): Medicalizing Childbirth and Risk in China

Chen-I Kuan (Yang Ming University, Taiwan): The Limits of Technology in Childbirth: Who Pays the Price?

82 - Infrastructures of Planning in South Korea and Japan: The Global Origins of Developmentalism

Organizer and chair: **Aaron S. Moore** (Arizona State University, United States)
Comment: **Hyungsub Choi** (Seoul National University of Science and Technology, South Korea)

Juyoung Lee (Science and Technology Policy Institute, South Korea) [**Robinson Prize Candidate**]: The Practice of Planning in South Korea's First Comprehensive National Physical Development Plan, 1963–1972

Dong-Wan Gimm (Kyungnam University, South Korea): Scalar Politics and Technological Innovation: The Case Study of the Ulsan Refinery Plant

Yamane Nobuhiro (Waseda University, Japan): The Deployment of Developmentalism in Postwar Japan—Its Historical Processes and Dual Contexts

Aaron S. Moore (Arizona State University, United States): From Colonial “Asian Construction” to Post-Colonial “Economic Cooperation”: Japanese Engineering Consultants and the Development of South Korea's Hydropower Infrastructure

83 - Game History and the Local II: Global / Local Tensions in Spain, South Korea, and Sweden

Organizer: **Benjamin Nicoll** (University of Melbourne, Australia)
Chair: **Melanie Swalwell** (Flinders University, Australia)

Ignasi Meda-Calvet (Autonomous University of Barcelona, Spain): Microhobby: Remote Meetings for Sinclair Users in a Spanish Magazine in the 80s

Benjamin Nicoll (University of Melbourne, Australia) [**Robinson Prize Candidate**]: Bootlegging as Productive Ambiguity: The Zemmex and the South Korean Videogame Industry, 1985–1992

Kijun Yun (Korea Advanced Institute of Science and Technology, South Korea): The Mosaic City: Dreams and Realities of Pangyo Techno Valley

Ulf Sandqvist (Umeå University, Sweden): Then the Stars Align: The Formation of the Swedish Game Industry

84 - Regimes of Risk in the Global South: Energy and Techno-Politics

Organizer: **Katayoun Shafiee** (National University of Singapore)
Chair: **Daniel Wilford** (University of Michigan, United States)
Comment: **Sulfikar Amir** (Nanyang Technological University, Singapore)

Katayoun Shafiee (National University of Singapore): TVA Experiment in Iran: Calculating the Hydro-Politics of Risk in the Building of the Dez Dam, 1955–1979

Daniel Wilford (University of Michigan, United States): Fragile Forms: Mapping and Managing Seismic Risk in Post-Colonial Morocco

Pratama Yudha Pradhaksa (Virginia Tech, United States): The Social Construction of Risk and Islamic Activism: A Discourse Analysis of Indonesia's Anti-Nuclear Movement

Seung Hee Cho (Korea Advanced Institute of Science and Technology, South Korea): Risk in Climate and Radiation: Citizen Participation in Risk Measurement and Solar Energy Production

85 - *Re-Inventing the Human Scale: Science, Technology, and Global Climate Change*

Organizer: **Matthias Heymann** (Aarhus University, Denmark) and **Dania Achermann** (Aarhus University, Denmark)

Chair: **Matthias Heymann** (Aarhus University, Denmark)

Dania Achermann (Aarhus University, Denmark): Drilling Deep and Back in Time: Ice-Core Research and Global Climate Knowledge

Melissa Charenko (University of Wisconsin–Madison) [**Robinson Prize Candidate**]: Re-Scaling Proxy Data to Answer Questions about Anthropogenic Change

Nina Wormbs (Royal Institute of Technology, Sweden): Ground Truthing Remote Sensing: Getting the Global “Cold Facts” Right

Sabine Höhler (Royal Institute of Technology, Sweden): Local Weather Event, Global Climate Condition: Satellite Translations of El Niño

86 - *Long-Term Impacts of Joseph Needham’s Science and Civilization in China on the History of Technology III: Explorations of Asian / East Asian Technology since Needham*

Organizers: **Philip C. Brown** (The Ohio State University, United States) and **Carl Mitcham** (Colorado School of Mines, United States and Renmin University of China)

Bei-zhi Yin (China Agricultural University, China): Western Water Conservancy Experts Working in China and Co-operation with Chinese in Modern History

Dian Zeng (Tsinghua University, China) and **Wei Hong** (Tsinghua University, China): Master of the Night: Destiny of A Profession under Technological Changes

Darwin Stapleton (Hermann J. Albrecht Library of Historical Architecture, United States): Biomedical Education, Public Health Technology, and the Origin of the “Barefoot Doctors” at Ding Xian, 1928–1938

Eunjeong Ma (Pohang University of Science and Technology, South Korea): Reformulating Herbal Medicines in South Korea

87 - *Deus ex Machina? Rethinking the Concept of the Machine in the History of Technology*

Sponsor: **Asia Research Institute**

Organizer: **Martina Schlünder** (University of Toronto, Canada)

Chair and comment: **Lisa Onaga** (Nanyang Technological University, Singapore)

Martina Siebert (Berlin State Library, Germany/Independent scholar): The Qing Palace-Machine and the Growing and Organizing of Lotus

Martina Schlünder (University of Toronto, Canada): From Labs to Biopolitics: Exploring the Scale and Scope of Birthing Machines

Honghong Tinn (Earlham College, United States): Between “Magnificent Machine” and “Elusive Device”: Wassily Leontief’s Input-output Analysis and its International Applicability

Gayathri Haridas (Nanyang Technological University, Singapore) [**Robinson Prize Candidate**]: The Politics of Innovation in Singapore: Exploring the Machinery of the National System of Innovation

88 - *There, and Back Again: Asian Perspectives on East-West Technology Transfers in the Late 20th Century*

Organizer: **Alexander B. Magoun** (IEEE History Center, United States)
Chair: **Kenzo Okuda** (Independent Scholar, Japan)
Comment: **Jonathan Coopersmith** (Texas A&M University, United States)

Junbin Su (Xiamen University, China): Technology and Politics: China's Adoption of the PAL Color Television System in the 1970s

Mila Davids (Eindhoven University of Technology, Netherlands): There and Back Again: Taiwanese Perspectives of East-West High Tech Transfer, 1960s–2010

Jorijn van Duijn (Maastricht University, Netherlands) [**Robinson Prize Candidate**]: Breaking Barriers in the Asian Semiconductor Equipment Industry: ASM Pacific Technology and the Development of a Gold Wire Bonder, 1995–2000

Irene Anastasiadou (Technische Universität Berlin, Germany): The Southern Trans Asian Railway: A Global Project in the Cold War

89 - *Colonial Legacies of Technological Development in Asia, from the Age of Imperialism to the Cold War*

Organizer: **Leow Wei Yi** (National University of Singapore)
Comment: **Kuang-Chi Hung** (National Taiwan University, Taiwan)

Po-Yi Hung (National Taiwan University, Taiwan): Political Technology of Fruits: Mountain Agriculture and the Politics of Territorialization in Taiwan

Lijing Jiang (Nanyang Technological University, Singapore): Ideology and Economics of Aquaculture Technology in China, Taiwan, and Philippines during the Cold War: A Comparative View

Nadin Heé (Freie Universität Berlin and Max Planck Institute for the History of Science, Germany): Japan's Maritime Empire Reemerging? Technology Transfer in Fisheries during the Cold War in Asia

Leow Wei Yi (National University of Singapore): Two Phases of Colonial Science in British Malaya: From the 1850s to the 1920s