



SHOT VIRTUAL FORUM 2020, 8-10 October 2020

PRELIMINARY PROGRAM
(JOINT SHOT-HSS SESSIONS INCLUDED)

Thursday, 8 October 2020

12:00 PM – 2:00 PM (Eastern Daylight Time)

ECIG Graduate Student Workshop I

Organizer: **Tasha Schoenstein** (Harvard University), **Betsy Frederick-Rothwell** (University of Texas, Austin), and **Juyoung Lee** (Johns Hopkins University)

Moderator: **Juyoung Lee** (Johns Hopkins University)

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

Mentor: **Prakash Kumar** (Pennsylvania State University)

Viswanathan Venkataraman (King's College, London): *Tapping the 'Underground Reservoir': The Deep Wells of London's Water Companies in the Late 19th Century*

You Wang (University of California, Los Angeles): *Good Dikes: Engineering and Community-Based Approaches to Agricultural Knowledge in Early Modern China*

Thamarai Selvan (Indian Institute of Technology Madras): *Histories of Musical Instrument Making as Craft and Technology in Colonial and Post-colonial South India*

Cheri Johnson (Virginia Tech): *Dissertation Proposal: Boundary-walkers: Insights into expertise and practices of translation between Indigenous knowledge and Western natural science at the climate change forefront*

Durgesh Solanki (Johns Hopkins University): *Imperial Disease: The British Empire and the Management of Plague in the Colonies*

3:00 PM – 5:00 PM (Eastern Daylight Time)

ECIG Graduate Student Workshop II

Organizer: **Tasha Schoenstein** (Harvard University), **Betsy Frederick-Rothwell** (University of Texas, Austin), and **Juyoung Lee** (Johns Hopkins University)

Moderators: **Tasha Schoenstein** (Harvard University), **Betsy Frederick-Rothwell** (University of Texas, Austin)

Mentor: **Scott Knowles** (Drexel University)

Mentor: **Mar Hicks** (Illinois Institute of Technology)

Sylvia Bates (University of Iceland): *Net-works: Inventing the Pelagic Trawl*

Kat Poje (Harvard University): *Catastrophe Bonds and the Business of Disaster*

Cat Coyle (Cornell University): *Dead Media Necronauts: Paleontologies of Media in the 'Dizzy Midst of the Digital Revolution'*

Yi Lu (Harvard University): *Bad Apples: Imitation and Innovation in Modern Computing*

Friday 9 October 2020

8:00 AM – 9:00 AM (Eastern Daylight Time)

SHOT Asia Network, Breakfast Meeting

Organizers: **Honghong Tinn** (University of Minnesota) and **Tae-Ho Kim** (National Chonbuk University)

ECIG business meeting

Organizers: **Juyoung Lee** (Johns Hopkins University) and **Betsy Frederick-Rothwell** (The University of Texas at Austin)

Albatrosses Breakfast Meeting

Organizers: **Angelina Callahan** (Naval Research Laboratory), **Jordan Bimm** (University of Chicago), and **Michael Neufeld** (Smithsonian National Air and Space Museum)

Prometheans Annual Meeting

Organizer: **Ellan Spero** (Massachusetts Institute of Technology)

At this remote meeting the Prometheans welcome all who are interested in the study of engineering and education. The agenda will consist of introductions and updates and planning for future activities in the year ahead.

Envirotech Virtual Breakfast

Organizer and Chair: **Etienne Benson** (University of Pennsylvania)

Chair(s): **Soledad Altrudi** (University of Southern California), and **John Baeten** (Indiana University)

Agenda: Round of introductions; Envirotech SIG business (including prizes, finances, and communications initiative); plans for the coming year

9:30 AM – 10:30 AM (Eastern Daylight Time)

Aviation in the Public Imagination

Organizer: **Peter Eveleigh** (University of Manchester)

Chair: **Deborah Douglas** (MIT Museum)

Commentator: **Alan Meyer** (Auburn University)

Roger Connor (George Mason University): *From Backyard to Battlefield: The Transformation of the American Autogiro*

Jessica Western (University of Canberra), **Peter Hobbins** (University of Sydney), and **Tracy Ireland** (University of Canberra): *Airframes and afterlives: the affective artefacts of aviation accidents*

Thomas Kelsey (King's College London): *More Than Just Noise: the opposition to Concorde in Britain, 1962-1974*

Peter Eveleigh (University of Manchester): *"Aeroplanes For Everybody Soon": The search for the Ideal Light Aeroplane*

Conversations on Technology from Latin America, Asia, and Africa – Round Table

Organizer: **Laura Twagira** (Wesleyan University)

Chair: **Prakash Kumar** (Pennsylvania State University)

Laura Twagira (Wesleyan University): *Clay Jars, Vaccinations, and Techno-Body Politics in Early Twentieth Century Mali (West Africa)*

Fabian Prieto-Nunez (Virginia Tech): *All technology is waste: Recycling as a method for historicizing technologies*

Yovanna Pineda (University of Central Florida): *Aesthetics of Invention: Interpretations of Local Community's History of Technology as Development in Argentina, Twentieth Century*

Ying Jia Tan (Wesleyan University): *The Cost of Energy Transition: Perspectives from the electrification of wartime China*

Fa-ti Fan (State University of New York at Binghamton): *Thinking through Thick and Thin: Concepts and Categories in Thinking about Technology in "Other" Regions*

Data Management and Territorialization

Chair: **Joseph November** (University of South Carolina)

Michelle Spektor (MIT): *Database of the Potential Dead: The Israeli Military's Collection of Soldiers' Biometric Data*

Daniel Cardoso Llach (Carnegie Mellon University): *City as Software: Designing the "Civil-industrial Complex" at Carnegie-Tech, 1969-1975*

Jeffrey Nagle (University of Pennsylvania): *"This Is Not the Future, This is the '70s": Systems Sciences, Personal Infrastructure, and the Cybernetic City in Morgantown, West Virginia*

Theodora Vardouli (McGill University): *Failure Cards, Problem Structures, and Architecture as Computation ca. 1960*

Earth Orbiting Satellites and the Making of Environment

Organizer: **Gemma Cirac-Claveras** (Universitat Pompeu Fabra)

Organizer: **Johan Gärdebo** (KTH Royal Institute of Technology)

Chair: **Etienne Benson** (University of Pennsylvania)

Gemma Cirac-Claveras (Universitat Pompeu Fabra): *Satellite remote sensing in France: From natural resources to the global environment*

Johan Gärdebo (KTH Royal Institute of Technology): *Sustaining the Digital Baltic Sea: Swedish Satellite Remote Sensing and Databases for the Baltic States in the post-Cold War era*

James Schwoch (Northwestern University): *Earth-Orbiting Satellites and the Making of the Environment: Radio Spectrum Auctions, Earth-Exploration Satellite Service, and 24GHz*

Ideologies of Urbanity: How Historical Modes of Thought Have Embodied the Built Environment with Meaning

Organizer: **Michael J. Corsi** (The Ohio State University) Chair: **Robert Kronenburg** (University of Liverpool)

Jacquelyne Thoni Howard (Newcomb Institute of Tulane University): *"Useless Goods": Patriarchy, Tools, and Infrastructure in Early French New Orleans and its Borderlands*

Michael J. Corsi (The Ohio State University): *Sverdlovsk Transformed: Forging Urbanity in a Metropolis of Metal*

David Zvi Kalman (University of Pennsylvania): *Unintended Messages: The Telegraph, the Jewish Sabbath, and the Construction of Community*

Robert Kronenburg (University of Liverpool): *The Role of Technology in Architecture*

11:00 AM – 12:00 PM (Eastern Daylight Time)

Controversial Figures

Chair: **Lee Vinsel** (Virginia Tech)

Alexander Magoun (IEEE History Center): *A Scientist under Suspicion: Vladimir Zworykin, the FBI, and the Perception of Divided Loyalties*

James Inglis (University of St Andrews): *Typewriters and female entrepreneurs in Scotland, 1880s to 1920s*

Ritaja Mukherjee (Jadavpur University): *Adventures of Tintin: Colonial use of technology on Environment and Culture*

Michael Bivona (Georgia Institute of Technology): *Blowback: Kareem Khan and the Emerging Shape of Justice, Under Drones*

JOINT SHOT-HSS SESSION

Flashtalks: Science in Contested Spaces

Organizers: Jan Golinski (President HSS) and Tom Misa (President SHOT)

Chair: Tom Misa (President SHOT)

Benedict Salazar Olgado (University of California, Irvine): *The Bataan Nuclear Power Plant: Imaginaries of Fear and Reason of State*

Charlotte M. Williams (University of Pennsylvania): *Smuggling the Sacred as Specimen: Objects, Instruments, and the "Scientifically Valuable"*

Francis Newman (University of Cambridge): *Indian, Authentic, and Obsolete? Late-Nineteenth-Century Sanskrit Equinoctial Sundials*

Kristen Carlson (University of Notre Dame): *"A Paradoxical Ode": James Clerk Maxwell's Poetry and Physical Science, 1844-1878*

JOINT SHOT-HSS SESSION

Actors' Categories: Language, Power, and Historical Analysis (Round Table)

Organizers: **Mary X. Mitchell** (Purdue University) and **Stephanie Dick** (University of Pennsylvania)

Chair: **Laura Stark** (Vanderbilt University)

Henry Cowles (University of Michigan)

Stephanie Dick (University of Pennsylvania)

Isabel Gabel (University of Pennsylvania)

Lukas Rieppel (Brown University)

Mary Mitchell (Purdue University)

Marc Aidinoff (Massachusetts Institute of Technology)

JOINT SHOT-HSS SESSION

The Future of Digital Humanities in the History of Science and Technology – Round Table

Organizer: **Kathleen Sheppard** (Missouri S&T)

Chair: **Stephen Weldon** (University of Oklahoma)

Commentator: **Stephen Weldon** (University of Oklahoma)

Sarah Naramore (The University of the South (Sewanee)): *Digital Humanities and Collaborative Projects*

Andreas Weber (University of Twente): *Digital Humanities and the Future of Natural History*

Abraham Gibson (University of Texas at San Antonio): *The Future of Deepfakes in the History of Technology*

James Fleming (Colby College): *Digital Projects in History*

Jerome Baudry (EPFL): *Building the Digital Library 'Savoirs'*

Alex Weaver (Independent Scholar): *Deep Learning for the Digital Humanist*

Laurynas Adomaitis (Scuola Normale Superiore (SNS)): *Geo-Referencing Early Modern Science: A Narrative Approach*

Molly Stothert-Maurer (Arizona State Museum) and **Lisa Duncan** (University of Arizona Libraries): *The Future of Born-Digital Materials in Special Collections*

Technologies of Survival: Exploration and Warfare in Extreme Environments

Organizer: **James Esposito** (The Ohio State University)

Chair: **Jordan Bimm** (Princeton University)

James Esposito (The Ohio State University): *Engineering a Human Torpedo: Admiralty Experimental Diving Unit High Pressure Oxygen Research at the Siebe-Gorman Company 1942-1945*

Caitlin Fendley (Purdue University): *First Contact: The Apollo 11 Astronauts as Explorers, Field Workers, and Test Subjects*

Matthew Wiseman (Western University): *Defence Research Medical Laboratories: Operational Stress and Military Experiments in Cold War Toronto*

Vanessa Heggie (University of Birmingham): *Everyday Technologies of Survival: Belonging and Innovation in the Anthropocene*

12:30 PM – 1:30 PM (Eastern Daylight Time)

**Plenary Opening
Business Meeting**

2:00 PM – 3:15 PM (Eastern Daylight Time)

Joint Plenary Keynote

“Artificial Intelligence & Social Justice”

Keynote Lecture by **Meredith Broussard** (New York University)

Professor Broussard is the author of *Artificial Unintelligence: How Computers Misunderstand the World*, winner of the 2019 Hacker Prize.

Introduction by **Edward Jones-Imhotep** (University of Toronto)

Sponsored by the Institute for the History and Philosophy of Science and Technology at the University of Toronto, the Society of the History of Technology, and supported by the HSS Elizabeth Paris Endowment for Socially Engaged History and Philosophy of Science.

3:30 PM – 4:30 PM (Eastern Daylight Time)

Cold War Geopolitical Infrastructures

Organizer: **Lisa Ruth Rand** (Science History Institute)

Chair: **Yeonsil Kang** (Drexel University)

Commentator: **Yeonsil Kang** (Drexel University)

Selika Ducksworth-Lawton (University of Wisconsin-Eau Claire): *No Road to Die on: The Twenty Fourth Infantry Regimental Combat Team's Response to Urban and Rural Infrastructure in the First Forty Days of the Korean Conflict*

Rohini Patel (University of Toronto): *Toxic Regimes: Agent Orange, Chemical Networks, and Pollution in Ontario, 1960s-1990s*

Lisa Ruth Rand (Science History Institute): *Maintaining American Hegemony: The Rise and Fall of Reusable Satellite Infrastructure, 1967-1987*

JOINT SHOT-HSS SESSION

In Memoriam of Aaron Stephen Moore: Infrastructure in East Asia

Organizers: **Juyoung Lee** (Johns Hopkins University) and **Hiromi Mizuno** (University of Minnesota)

Chair: **John DiMoia** (Seoul National University)

Yuting Dong (Harvard University): *Building Roads in Colonial Manchuria (1905-45)*

Joseph Seeley (University of Virginia): *Engineering the Korean War “Crossing of the Yalu”*

Juyoung Lee (Johns Hopkins University): *Corporate Consultants and Chemical Fertilizer Plants in Postwar East Asia*

Seohyun Park (Virginia Tech): *Technological Intervention in Rural Life: The Soyang Multi-purpose Dam Construction in Postcolonial Korea*

JOINT SHOT-HSS SESSION

Vital Signs: Grids, Galvanisms, and the Sociopolitics of Electricity

Organizer: **Samantha Wesner** (Cornell University)

Chair: **Michael Degani** (Johns Hopkins University)

Iwan Morus (Aberystwyth University): *Men of the Future May Become as Gods: Tesla's Wireless Electricity and the Dream of Infinite Energy*

Elizabeth Chatterjee (Queen Mary University of London): *Beyond electric despotism: the myth of the grid in postcolonial India*

Fredrik Meiton (University of New Hampshire): *Electrical Palestine: Technocapitalism & the Arab-Israeli Conflict*

Samantha Wesner (Cornell University): *"Great Shock of Civic Electricity": Electrical Vitalism and Collective Sentiment in the French Revolution*

Makers, Users, and Regulators: Social Histories of Hearing Aid Technology

Organizer: **Frank Mondelli** (Stanford University)

Chair: **Frank Mondelli** (Stanford University)

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

Frank Mondelli (Stanford University): *Feed/back: How the Hearing Aid Molded a Transnational Regime of Sound in Postwar Japan*

Jaipreet Virdi (University of Delaware): *Tinkering with Hearing Aids: Maintenance, Self-Repair, and Disability Agency*

Sarah Rose (University of Texas at Arlington): *"Why won't they get hearing aids?" Insurance, Age, Disability, and Medical Technology*

Saturday 10 October 2020

8:00 AM – 9:00 AM (Eastern Daylight Time)

EDITH Breakfast Meeting

Organizer: **Prasad Venugopal**, EDITH Board, Convener (University of Detroit Mercy)

Nina Lerman, EDITH Board, Treasurer (Whitman College)

Alana Staiti, EDITH Board, Co-Scribe (Smithsonian Institution)

Geoff Zylstra, EDITH Board, Co-Scribe (New York City College of Technology, CUNY)

The agenda for EDITH's virtual membership meeting at SHOT 2020 will include: updating attendees on recent activities, providing a financial report and discussing proposals for future EDITH initiatives. We will also be holding elections for the role of convener, per our bylaws. The main tasks of the convener include organizing and leading our annual meeting; helping to facilitate the annual EDITH grants application process as well as communicating with EDITH members and the SHOT Program Committee when needed. The role of convener is complemented by two co-scribes and a treasurer.

Young Scholars meet SHOT Officers: Team breakout sessions

9:30 AM – 10:30 AM (Eastern Daylight Time)

Bodies and Environments

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

Nathan Kapoor (Grand Valley State University): *Just Steam: Geothermal Energy and Indigenous Resource Reclamation in the Anthropocene*

William Vogel (University of Minnesota): *A Culture of Containment: Biological Warfare and Laboratory Safety in America's Cold War*

Dana Burton (George Washington University): *Accounting for the Encounter: the Politics of Proximity in NASA's Mars Sample Return Mission*

Youngju Lee (Darmstadt University of Technology): *Bodily Technologies and Menstrual Management in South Korea, 1970–1980s*

Colonial Subjects and Technopolitical Projects in Africa

Organizer: **William Storey** (Millsaps College)

Chair: **Laura Twagira** (Wesleyan University)

Damilola Adebayo (University of Cambridge): *Electric Power Contestations in Colonial Lagos, 1890s-1945*

Kairn Klieman (University of Houston): *Gulf Oil and Its Discontents in Angola, 1960-1975*

William Storey (Millsaps College): *Story of an African Scapegoat: Freedom, Risk, and the DeBeers Mine Fire of 1888*

Restraining the Natural Flow of Water: Cost to Society

Organizer: **Julie Mark Cohen** (Independent Scholar)

Chair: **Stephen Patnode** (Farmingdale State College)

Commentator: **Stephen Patnode** (Farmingdale State College)

Diego Arango López (Universidad Academia de Humanismo Cristiano): *Fire and Waterworks. The Notion of Risk of Fire in Valparaíso, 1843-1903*

John Baeten (Indiana University): *A Century of Improvements, Run a Muck: The Army Corps and the Wabash River, 1820-1935*

Jonah Bea-Taylor (U.S. Army Corps of Engineers): *Twenty-first Century Decisions: How the Corps of Engineers Came to Use Risk-based Approaches to Dam and Levee Safety*

Julie Mark Cohen (Independent Scholar): *The Oroville Dam Spillway: Engineered, Managed, and Regulated to Failure*

Science, Technology, Innovation, and Sports I

Organizer and Chair: **Eric Hintz** (Smithsonian Institution)

Tolga Ozyurtcu (University of Texas at Austin): *Waves of Innovation: Surfing, Technology, and Nature*

Katrin Boniface (University of California, Riverside): *Trotting Time: Advances in Horsepower*

Tyler King (University of Toronto): *Contact Sports to Contact with the Law: The History of CTE and the Emergence of a Legal Defence*

Arthur Daemmrich (Smithsonian Institution): *Stadium Technologies and the Consumption of Sport*

11:00 AM – 12:00 PM (Eastern Daylight Time)

From Preservation to Publication: A Digital Humanities Workshop

Organizer and Chair: **Jason Guthrie** (Clayton State University)

Jason Guthrie (Clayton State University)

Joseph Makkos (Louisiana State University)

Elvira Carrizal-Dukes (The University of Texas at El Paso)

Will Mari (Louisiana State University)

JOINT SHOT-HSS SESSION

Narratives of Seeds: Interrogating Disciplinary Boundaries between Histories of Science and Technology – Round Table

Organizers: **Prakash Kumar** (Pennsylvania State University) and **Helen Anne Curry** (University of Cambridge)

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

Prakash Kumar (Pennsylvania State University): *Hindi Literary Sphere and the Green “Revolution” in India*

Aleksandar Shopov (Max Planck Institute for the History of Science): *Sowing a City: Seeds in Ottoman Literature and Early Modern Istanbul*

Helen Anne Curry (University of Cambridge): *In Search of Native Seeds: Histories of Indigenous Agriculture and the Imagined Futures of Farming*

Divya Sharma (University of Sussex): *Rethinking the Green Revolution in India through subaltern ecologies*

Yuan Yi (Columbia University): *“Too Short to Spin”: Cultivating American Cotton in Industrializing China*

Courtney Fullilove (Wesleyan University): *Community Seed Banks and the Apparatus of Food Sovereignty*

Gabriela Soto Laveaga (Harvard University): *“Rogue” Seeds in Mexican Fields*

Sanjukta Ghosh (School of Oriental and African Studies): *Seed Improvement and Elite Roles: Colonial India 1921-29*

Tiago Saraiva (Drexel University): *Statistics and Emancipation from New Deal America to Guerrilla Warfare in Guinea-Bissau*

JOINT SHOT-HSS SESSION

The Meanings of Things: How Disability Reframes Histories of Knowledge and Its Artifacts – Round Table

Organizers: **Jessica Martucci** (Science History Institute) and **Hemachandran Kahra** (Indian Institute of Technology Madras)

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

Nicole Belolan (Rutgers University-Camden)

Pallavi Podapati (Princeton University)

Ashley Shew (Virginia Tech)

Jaipreet Virdi (University of Delaware)

Science, Technology, Innovation, and Sports II

Organizer: **Eric Hintz** (Smithsonian Institution)

Chair: **Arthur Daemrich** (Smithsonian Institution)

Matt Ventresca (University of Calgary): *Ice Buckets: Constructing Sociotechnical Histories of Hockey Helmets*

Robert Kronenburg (University of Liverpool): *Human-Machine Rapport in Sport: Gliding and Soaring*

Meg Maher (Smithsonian Institution): *The Speedo LZR: How the World's "Most Technically Advanced Swimsuit" Came to be Seen as "Technological Doping"*

Eric Hintz (Smithsonian Institution): *Moneyball: The Computational Turn in Professional Sports Management*

12:30 PM – 1:30 PM (Eastern Daylight Time)

SHOT Awards and Fellowships 2020

2:00 PM – 3:00 PM (Eastern Daylight Time)

Chill Technologies: Environmental Infrastructures of Cold

Organizers: **Betsy Frederick-Rothwell** (The University of Texas at Austin) and **Jesse Ritner** (The University of Texas at Austin)

Chair: **Sarah M. Pickman** (Yale University)

Yeonsil Kang (Drexel University): *Cold War's Cold Legacy: Soyanggang Dam, Local Environment, and the Envirotechnical Development in South Korea*

Jesse Ritner (The University of Texas at Austin): *Nuking the Slopes: How the Ski Industry Used the Cold to Overcome the Weather*

Jason L. Newton (Cornell University): *The Winter Workscape: Weather and the Meaning of Industrial Capitalism in the Northern Forest, 1850-1950*

Betsy Frederick-Rothwell (The University of Texas at Austin): *An Inclination to Work: Cooling Bodies and Building Technologies, 1895-1930*

JOINT SHOT-HSS SESSION

Animal Materialities

Organizers: Lisa Onaga (Max Planck Institute for the History of Science) and **Laurence Douny** (Humboldt University)

Chair: **Evan Hepler-Smith** (Duke University)

Sarah Lowengard (The Cooper Union): *Waste Not: Animal Fats, Animal Chemistry and Soap Amid Changing Industrial Practices 1750-1860*

Sarah Teasley (Royal College of Art): *When Is A Solution A Problem? Animal Glues In Laboratories And Workshops In Twentieth-Century Japan'*

Laurence Douny (Humboldt University): *Degumming West African wild silks in the 20th and 21st century Burkina Faso.*

Lisa Onaga (Max Planck Institute for the History of Science): *Biomaterial Matters: A History of Interstitial Things*

Numerical Machine Politics

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

Elizabeth Badger (University of Minnesota Twin Cities): *"And There Is No Other Market": How Market Research Narrowed Video Game Culture*

Zachary Loeb (University of Pennsylvania): *"The curse of the age" – Y2K and the computer as a threat to society*

Chris Rasmussen (Fairleigh Dickinson University): *"You can't beat 'em": Gambling machines and governments in the Machine Age*

Susannah Glickman (Columbia University): *The Construction of Quantum Histories and Futures*

Agency in the Network: Contextualizing Sustainability, Reconceptualizing the Grid

Organizer: **Julie Cohn** (University of Houston)

Chair: **Erik Conway** (Jet Propulsion Laboratory, California Institute of Technology)

Julie Cohn (University of Houston): *Large-scale Renewables and Local Gatekeepers: Moving Wind and Solar Power Across the Landscape*

Matthew Eisler (University of Strathclyde): *V2G, User Agency, and Grid Management in the Renewable Energy Era*

Graeme Gooday (University of Leeds): *Power Connections: Rethinking Agency and Teleology in Electrical Histories*

Mónica Humeres Riquelme (Alberto Hurtado University): *What Can the User's Trajectory Tell us About the Future? A Sociotechnical Analysis of Electrical Infrastructure Policies in Chile*

SHOT 2020 is supported by:



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