

# ALEX WELLERSTEIN

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Science and Technology Studies, School of Humanities, Arts, and Social Sciences  
Stevens Institute of Technology, Hoboken, New Jersey, United States  
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## EMPLOYMENT

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- 2025-2026     **SCIENCES PO (PARIS)**  
Nuclear Knowledges Program, Center for International Studies (CERI)  
- Visiting Researcher
- 2014-present   **STEVENS INSTITUTE OF TECHNOLOGY**  
School of Humanities, Arts, and Social Sciences  
- Associate Professor with tenure (2021-present)  
- Director, Program in Science and Technology Studies (2020-2024)  
- David & GG Farber Fellow in Science and Technology Studies (2017-2020)  
- Assistant Professor (2014-2021)
- 2011-2014     **AMERICAN INSTITUTE OF PHYSICS**  
Associate Historian, Center for History of Physics / Niels Bohr Library & Archives  
(postdoctoral fellowship)
- Spring 2014   **GEORGETOWN UNIVERSITY**  
Lecturer, Department of History
- Spring 2011   **HARVARD UNIVERSITY**  
Lecturer, Department of the History of Science
- 2010-2011     **HARVARD KENNEDY SCHOOL OF GOVERNMENT**  
Research Fellow, Project on Managing the Atom/International Security Program,  
Belfer Center for Science and International Affairs

## EDUCATION

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- 2004-2010     **HARVARD UNIVERSITY**  
Ph.D., History of Science  
Dissertation: *Knowledge and the Bomb: Nuclear Secrecy in the United States, 1939-2008*.  
Committee: Peter Galison, Sheila Jasanoff, Mario Biagioli, David Kaiser (MIT)  
Language qualifications: German, Russian.
- 1999-2002     **UNIVERSITY OF CALIFORNIA, BERKELEY**  
B.A., High Honors, History (with emphasis in History of Science)  
Bachelor's thesis: *Compulsory Sterilization in California, 1909-1950* (Spring 2002)  
Honors thesis: *Berkeley and the Bomb: Discourse, Nuclear Weapons, and the University of California* (Fall 2002)

## PUBLICATIONS

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### Books

[\*The Most Awful Responsibility: Truman and the Secret Struggle for Control of the Atomic Age.\*](#) Harper, 2025.

[\*Restricted Data: The History of Nuclear Secrecy in the United States.\*](#) University of Chicago Press, 2021.

### Articles

["Truman Never Ordered the Use of the Atomic Bombs—But He Did Order Atomic Bombings to be Stopped,"](#) *Bulletin of the Atomic Scientists* (10 August 2025).

["Fact, Fiction, and the Father of the Bomb: On Christopher Nolan's \*Oppenheimer\*,"](#) *Los Angeles Review of Books* (30 August 2023).

["Can Trump Just Declare Nuclear Secrets Unclassified?"](#) *Lawfare* (18 August 2022).

["The Nuclear Dilemma: Deterrence Works, Up to a Point,"](#) *Engelberg Ideas* (7 June 2022).

["Low-Yield Nukes Are Still Dangerously Destructive,"](#) *Outrider* (25 May 2022).

["Secrecy and Verification in Nuclear Disarmament,"](#) in Pavel Podvig, ed., *Verifying Disarmament in the Treaty on the Prohibition of Nuclear Weapons* (United Nations Institute for Disarmament Research, 2022), 34-50.

["An Unearthly Spectacle: The Untold Story of the World's Biggest Bomb,"](#) *Bulletin of the Atomic Scientists* (29 October 2021).

(with Benoît Pelopidas), ["The reason we haven't had nuclear disasters isn't careful planning. It's luck,"](#) *Washington Post* (10 August 2020).

["Counting the Dead at Hiroshima and Nagasaki,"](#) *Bulletin of the Atomic Scientists* (4 August 2020).

["Did the U.S. plan to drop more than two atomic bombs on Japan?"](#) *National Geographic History* (Summer 2020).

["The Kyoto Misconception: What Truman Knew, and Didn't Know, About Hiroshima,"](#) in Michael D. Gordin and G. John Ikenberry, eds., *The Age of Hiroshima* (Princeton, N.J.: Princeton University Press, 2020).

["John Wheeler's H-bomb Blues,"](#) *Physics Today* 72, no. 4 (2019): 42-51.

["NC3 Decision Making: Individual Versus Group Process,"](#) Nautilus Institute, *Special Reports* (August 2019).

(with Kristyn Karl and Ashley Lytle), "[A nuclear bomb might not kill you. But not knowing how to respond might](#)," *Washington Post* (14 January 2019).

"[The many places of Cold War science](#)," *Isis* 109, no. 4 (December 2018), 806-808.

"[Manhattan Project](#)," *Encyclopedia for the History of Science* (April 2019).

"[The Hawaii alert was an accident. The dread it inspired wasn't](#)," *The Washington Post* (16 January 2018).

"[What We Lost When We Lost Bert the Turtle](#)," *Harper's Magazine* (December 2017).

"[Remembering the Chicago Pile](#)," *New Yorker* (2 December 2017).

(with Avner Cohen), "[If Trump wants to use nuclear weapons, whether it's 'legal' won't matter](#)," *Washington Post* (22 November 2017).

"[Remembering Laika, Space Dog and Soviet Hero](#)," *New Yorker* (3 November 2017).

"[Building an H-Bomb in plain sight](#)," *The Atlantic* (5 September 2017).

(with Edward Geist), "[The secret of the Soviet hydrogen bomb](#)," *Physics Today* 70, no. 4 (March 2017), 40-47.

"[The epistemology of civility and the civility of epistemology](#)," *Isis* 108, no. 1 (March 2017), 140-142.

"[No one can stop President Trump from using nuclear weapons. That's by design](#)," *Washington Post* (4 December 2016), B1.

"[The virtues of nuclear ignorance](#)," *New Yorker* (20 September 2016).

"[The psychological power of nuclear weapons](#)," *Bulletin of the Atomic Scientists* 72, no. 5 (2016), 298-303.

"[America at the atomic crossroads](#)," *New Yorker* (25 July 2016).

"[What presidents talk about when they talk about Hiroshima](#)," *New Yorker* (27 May 2016).

"[The battles of Chernobyl](#)," *New Yorker* (26 April 2016).

"[The demon core and the strange death of Louis Slotin](#)," *New Yorker* (21 May 2016).

"[A hydrogen bomb by any other name](#)," *New Yorker* (8 January 2016).

"[Five ways that nuclear weapons could still be used](#)," *The Guardian* (6 August 2015).

"[Nagasaki: The Last Bomb](#)," *New Yorker* (7 August 2015).

"[The First Light of Trinity](#)," *New Yorker* (16 July 2015).

(with Hanna Rose Shell), "[Technologist-Historian: Data Visualization Meets the Archive](#)," *Technology and Culture* 56, no. 1 (2015), 204-208.

"Atomic bomb" and "Hydrogen bomb," in *Discoveries in Modern Science: Exploration, Invention, Technology*, ed. James Trefil (Macmillan, 2015).

"[Interactive Map Shows Impact of WWII Firebombing of Japan, If It Had Happened on U.S. Soil](#)," *Slate: The Vault* (13 March 2014).

"[We Don't Need Another Manhattan Project](#)," *Public Interest Report* (Federation of American Scientists) 66, no. 4 (Fall 2013).

"[Bomb Appétit!](#)" *Lucky Peach* no. 6 (Winter 2013), 144.

"[A Tale of Openness and Secrecy: The Philadelphia Story](#)," *Physics Today* 65, no. 5 (2012), 47-53.

"Nuclear bomb" and "Nuclear proliferation," in *Encyclopedia of Military Science*, ed. G. Kurt Piehler (SAGE Publications, 2013).

"[So Long, Mom, I'm Off to Drop the Bomb: A Case Study in Public Usage of an Educational Tool](#)," *WMD Junction* (3 May 2012).

"[States of Eugenics: Institutions and the Practices of Compulsory Sterilization in California](#)," in Sheila Jasanoff, ed., *Reframing Rights: Bioconstitutionalism in the Genetic Age* (Cambridge, Mass.: MIT Press, 2011): 29-58.

"Die geheimen Patente – eine andere Sicht auf die Atombombe," in *Atombilder: Ikonographien des Atoms in Wissenschaft und Öffentlichkeit des 20. Jahrhunderts*, ed. Jochen Hennig and Charlotte Bigg (Berlin: Wallstein Verlag, 2009): 159-167.

"[From Classified to Commonplace: The Trajectory of the Hydrogen Bomb 'Secret'](#)," *Endeavour* 32, no. 2 (June 2008): 47-52.

"[Inside the Atomic Patent Office](#)," *Bulletin of the Atomic Scientists* 64, no. 2 (May/June 2008): 26-31, 60-61.

"[Patenting the Bomb: Nuclear Weapons, Intellectual Property, and Technological Control](#)," *Isis* 99, no. 1 (March 2008): 57-87. Reprinted in David Kaiser and Sally Gregory Kohlstedt, eds., *Science and the American Century: Perspectives on Science, Technology, and Medicine (Readings from Isis)*, (Chicago: University of Chicago Press, 2013).

### Selected reviews

[Essay review of Wirtz and Larsen, eds., \*Nuclear Command, Control, and Communications\*](#), *H-Diplo* (9 July 2024).

[Review of HBO's \*Chernobyl\*](#). *American Historical Review* 124, no 4 (October 2019): 1378-1380.

- [“The myth of apolitical science](#) [review of Audra Wolfe’s *Freedom’s Laboratory*],” *Science* 362, no. 6418 (30 November 2018), 1006.
- [“Of chemistry and conflict](#) [review of Jennet Conant’s *Man of the Hour*],” *Nature* 549, no. 7670 (September 2017), 28-29.
- [Review of John Krige, \*Sharing Knowledge, Shaping Europe\*](#), *H-Diplo/ISSF Roundtable* 9, no. 19 (July 2017), 11-14.
- [“The many hats of a Cold War scientist](#) [review of Joel Shurkin’s *True Genius*],” *Nature Physics* 13 (2017), 319.
- [Review of Sonja D. Schmid, \*Producing Power: The Pre-Chernobyl History of the Soviet Nuclear Industry\*](#), *Isis* 108, no. 1 (2017), 229-230.
- [“Civilization VI and its Discontents: Review of Sid Meier’s \*Civilization VI\*](#) (2016),” *Endeavour* 41, no. 1 (2017), 1-2.
- [“Bomb’s away?](#) [review of Dan Zak’s *Almighty*],” *Science* 353, no. 6299 (2016): 549.
- [“The race that wasn’t](#) [review of Graham Farmelo’s *Churchill’s Bomb*],” *The Nonproliferation Review* 22, no. 1 (2015): 93-97.
- [“Cult of the machine](#) [review of Michael Hiltzick’s *Big Science*],” *Science* 349, no. 6252 (2015): 1062-1063.
- [“Physicist. Defector. Spy?](#) [review of Frank Close’s *Half-Life*]” *Science* 347, no. 6224 (2015): 833.
- [Review of B. Cameron Reed, \*The History and Science of the Manhattan Project\*](#), *American Journal of Physics* 82, no. 9 (September 2014), 914.
- [Review of Brian Balmer, \*Secrecy and Science: A Historical Sociology of Biological and Chemical Warfare\*](#), *Isis* 104, no. 4 (December 2013), 863-864.
- [Article review of Sean Malloy, “‘A Very Pleasant Way to Die’: Radiation Effects and the Decision to Use the Atomic Bomb against Japan,”](#) *H-Diplo Article Reviews* 371 (17 October 2012).
- [“Heterodoxy and its Discontents,”](#) review of Michael Gordin, *The Pseudoscience Wars*; *Science* 338 (12 October 2012), 194-195.
- [“Nuclear Others](#) [essay review of Gabrielle Hecht’s *Being Nuclear*],” *Historical Studies in the Natural Sciences* 42, no. 3 (2012), 235-245.
- (with S.S. Schweber) [“Contingencies of the Early Nuclear Arms Race](#) [review of Michael Gordin’s *Red Cloud at Dawn*],” *Metascience* 20, no. 3 (2011): 443-465.
- [Review of J. Samuel Walker, \*The Road to Yucca Mountain\*](#); *Isis* 101, no. 4 (December 2010), 928-929.

## SELECTED TALKS AND PRESENTATIONS

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### 2026

“The Secret Cause of the Castle Bravo accident: The Technical, Political, and Cultural Context of a Cold War Error.” Invited colloquium, Department of the History and Philosophy of Science, University of Cambridge, United Kingdom, February 5, 2026.

### 2025

“The Most Awful Responsibility.” Book talk, Nuclear Knowledges Program, Sciences Po, Paris, December 16, 2025.

Invited discussant, round-table discussion on global academic freedom, La Cité internationale Universitaire de Paris, December 1, 2025.

“The Many Crises of 20<sup>th</sup>-century Physics.” Invited participant, workshop on L’Histoire des Sciences et des Techniques Face à la Crise, Alliance Sorbonne Université, Paris, November 18, 2025.

“How to Draw an Atomic Bomb: Secrecy and Aesthetics in Diagrammatic Representations of Nuclear Weapons.” Invited colloquium, Institut d’histoire et de philosophie des sciences et des techniques, University of Paris 1, Panthéon-Sorbonne, October 20, 2025.

“The Legacy of the Manhattan Project.” Invited paper, American Physical Society (Forum on the History and Philosophy of Physics), Anaheim, CA, April 17, 2025.

“Simulation–Games as Pedagogy and Practice.” Invited keynote address for a workshop on “Supporting Innovation in Classrooms,” Knox College, Galesburg, IL, February 1, 2025.

### 2024

“Little Boy after Hiroshima.” Invited lecture, Sandia National Laboratories, Albuquerque, NM, July 29, 2024.

Panelist for Roundtable on Expertise and Regulation, as part of a conference on “Experts, Politics, and Power: Scientific Narratives, Past and Present.” History of Science Society and the Library of Congress, Washington, DC, July 26, 2024.

“Visualizing the Bomb: New Frontiers for Communication about the Effects of Nuclear Weapons.” Rutgers University, Department of Physics, February 14, 2024.

### 2023

Panelist for Roundtable: “Destroyer of Worlds? The Role of Scientific Institutions in Military Innovation.” Harvard University, September 27, 2023.

Panelist for Roundtable: “What Goes Unseen: Reimagining the Legacy of J. Robert Oppenheimer.” Institute for Advanced Study, Princeton, NJ, July 7, 2023.

“Controlling Sensitive Technology: Lessons from the History of 20<sup>th</sup>-century Science and Technology.” Invited lecture, JASON group summer study, June 15, 2023.

“The Rise of Secrecy and the Nuclear Secrecy State.” Workshop hosted by Atomic Reporters, Albuquerque, New Mexico, June 7, 2023.

“Drawing the Bomb: Secrecy, Style, and Visual Representations of How Nuclear Weapons Work.” University of Puget Sound, April 13, 2023.

“The First Atomic President: Resolving the Paradoxes of Harry Truman.” Invited lecture, Science and Global Security Program, Princeton University, February 15, 2023.

## 2022

“Envisioning the Bomb: Nuclear Weapons and the Imagination.” Invited lecture, Whitman College, September 26, 2022.

“The Cuban Missile Crisis at 60 and Risk Reduction Today,” invited lecturer to a private dinner of twelve United Nations ambassadors on disarmament, hosted by the Swiss delegation to the United Nations and the Institute for Security and Technology, New York City, August 5, 2022.

“The Challenges and Opportunities of Civil Defense Messaging Today,” Homeland Defense Symposium, Air Force Academy, Colorado Springs, July 13, 2022.

“The Possibility of Much Bigger Bangs: The Role of Very-Large Nuclear Weapons in the High Cold War.” Colloquium, Carleton College, May 11, 2022.

Featured author, Hoboken Literary Weekend, Little City Books, April 2, 2022.

“The Secret Histories of Laser Fusion.” Colloquium, Deutsches Museum (Munich), January 17, 2022.

## 2021

“How to Lose a Lot of Weapons-Grade Uranium and Get Away With it.” STS Circle, Harvard Kennedy School, November 29, 2021.

“The Atomic Bombings as Past and Present: The Difficult History of Hiroshima and Nagasaki at 75.” History of Science Society/Society for the History of Technology Joint Annual Meeting, November 19, 2021. (Postponed from 2020 due to COVID-19.)

“The Tuballoy Project: Bloomfield’s Westinghouse Plant and Uranium Production for the Manhattan Project.” Montclair State University, October 21, 2021.

“What is a nuclear secret and who can make one?” Colloquium, Department of the History of Science, Harvard University, September 16, 2021.

Book talks about *Restricted Data: The History of Nuclear Secrecy in the United States* virtually at Stevens Institute of Technology (March 2021), Science and Global Security Program, Princeton University (April 2021), Sciences Po, Paris (April 2021), National History Center, Washington, DC (May 2021), Lyceum Society, NYC (June 2021), Middlebury Institute of International Studies at Monterey (June 2021), *Bulletin of the Atomic Scientists* (July 2021).

“Physicists and Nuclear Secrecy.” Webinar, *Physics Today*, May 5, 2021.

## 2020

“Seeing the Unthinkable: Historical and Contemporary Approaches to the Visualization of Nuclear War.” Colloquium, Niels Bohr Institute, Copenhagen, Denmark, December 4, 2020.

“The ‘Best-Kept Secret of the War’? The Successes and Failures of Manhattan Project Secrecy.” Los Alamos Historical Society, November 17, 2020.

“The Atomic Bomb and Visions of the New Post War Order.” Keynote speech, Inaugural Reddit AskHistorians Digital Conference, September 15, 2020.

“The Age of Hiroshima: The Nuclear Revolution on the 75th Anniversary of the Atomic Bombings.” Wilson Center, Washington, DC, February 13, 2020. Invited Panelist.

## 2019

“*Dr. Strangelove* in Retrospective.” Invited commentary, Project on Managing the Atom, Harvard Kennedy School, November 21, 2019.

“The ‘Best-Kept Secret of the War’? The Successes and Failures of the Manhattan Project’s Secrecy Regime.” Colloquium, Gallatin School, New York University, November 20, 2019.

“Revising the Cold War.” Panel participant, Lepage Center for History in the Public Interest at Villanova University, November 6, 2019.

“Drawing the bomb: Secrecy, style, and diagrammatic representations of nuclear weapons, diagrams.” Colloquium, Department of History and Sociology of Science, University of Pennsylvania, October 21, 2019.

“Lessons on Scientific and Technological Governance from Nuclear History.” Talk before a panel workshop of the National Academies of Sciences and Engineering, Stanford University, September 2019.

“The Challenge of the Atomic Bomb.” Annual AP Conference, Smithtown School District, Smithtown West and Smithtown East High Schools, Smithtown, NY, May 2019.

“The Legacy of Nuclear Secrecy in the United States,” Annual Meeting, American Physical Society, Denver, CO, April 2019.

“Reinventing Civil Defense,” Radiation Advisory Committee, New York City Department of Health and Mental Hygiene, Queens, NY, April 8, 2019.

“Cyberwar in a Nuclear Age & Nuclear War in a Cyber Age,” Farber Faculty Fellowship Talk, College of Arts and Letters, Stevens Institute of Technology, Hoboken, NJ, April 2019.

“NC3 Decision Making: Individual Versus Group Process,” Conference on NC3 Systems and Strategic Stability, sponsored by the Nautilus Institute, Stanford University, and the John D. and Catherine T. MacArthur Foundation, Stanford University, Stanford, CA, January 2019.

“Crisis Response and the New Nuclear Threat Landscape,” workshop on the anniversary of the Hawaii false alarm, sponsored by the Stanley Foundation and Carnegie Corporation of New York, Honolulu, HI, January 2019.

## 2018

“Nuclear secrecy in the American context,” Nuclear Knowledges Workshop, SciencesPo, Paris, France, November 2018.

“Reinventing Civil Defense: Duck and Cover for the New Nuclear Age,” TEDxStevens, Stevens Institute of Technology, Hoboken, NJ, September 2018.

“Patents, Priority, and Problems: Nuclear Weapons and Intellectual Property in the Cold War.” Society for Historians of American Foreign Relations Annual Meeting, Philadelphia, Pennsylvania, June 2018.

“Photographic Experiments with The Bomb.” Magnum Foundation, New York City, May 2018.

“Truman’s Bomb and the Making of the Atomic Presidency.” Lawrence Badash Memorial Lecture, University of California, Santa Barbara, May 2018.

“Nuclear Command and Control: A Brief Primer.” Nieman Foundation for Journalism at Harvard, March 2018.

## 2017

“Duck and Cover All Over Again.” Singularity University, California, July 2017; SIREN Seminar, Virginia Tech, November 2017.

“Remembering the Saved City: Kyoto, the Atomic Bomb, and the Nuclear Taboo.” Kyoto Museum for World Peace, Kyoto, Japan, August 2017.

“What Truman Knew (And Didn’t Know) About Hiroshima and Nagasaki.” Global Hiroshima Conference (sponsored by Princeton University and the Prefecture of Hiroshima), Hiroshima, Japan, August 2017.

“Civil Defense, Nuclear Fear, and Nuclear Salience: What We Lost When We Lost Bert the Turtle.” New Nuclear Imaginaries Workshop, Harvard Kennedy School, April 2017.

“Presidential Control of Nuclear Weapons: Then and Now.” Project on Managing the Atom Seminar Series, Belfer Center for Science and International Affairs, Harvard Kennedy School, April 2017.

“Secrecy and the Control of Science and Technology: Lessons from History and Sociology.” Future of Humanity Institute, University of Oxford, February 2017.

## 2016

“Nuclear Ships of States: Strategic Weapons and Redefinitions of Authority.” History of Science Society (HSS) Annual Meeting, Atlanta, Georgia, November 2016.

“Secrecy and the Bomb: From the Postwar to the Cold War,” Brown University, October 2016.

“The Nuclear Triad: A Very Brief History.” Invited talk, Timbie Forum 2016, U.S. Department of State, Washington, DC, July 2016.

“Maintaining the Bomb.” The Maintainers Conference, Stevens Institute of Technology, Hoboken, NJ, April 2016.

## 2015

“Clean, Limitless, Classified: The Secret Histories of Laser Fusion.” Global Technology, Global Impacts Conference, American Institute of Physics, College Park, MD, March 2014.  
Invited talk, New York City History of Science Consortium, Columbia University, New York, NY, October 2014. l’Institut des Sciences de la Communication du CNRS (ISCC), Université Sorbonne, Paris, France, December 2015.

“Digital Exposure and Academic Expertise.” History of Science Society (HSS) Annual Meeting, San Francisco, CA, November 2015.

Panel participant, “Roundtable: H.O.T. Goes Pop! Histories of Technology in the Public Eye.” Society for the History of Technology (SHOT) Annual Meeting, Albuquerque, NM, October 2015.

Invited commentator on a performance of Michael Frayn’s *Copenhagen*, Central Square Theatre, Somerville, MA, October 2015.

“Kyoto and Kokura: What the Spared Targets of 1945 Tell Us About Hiroshima and Nagasaki.” Invited talk, “Nuclear Legacies: A Global Look at the 70th Anniversary of the Hiroshima Bombing,” Princeton University, September 2015.

“The Possibility of Much Bigger Bangs: U.S. Official Interest in ‘Very High Yield’ Nuclear Weapons, 1942-1963.” Reppy Institute Seminar, Cornell University, September 2015.

Colloquium, Department for the History of Science and Technology, Johns Hopkins University, September 2015. STS Fellows talk, Harvard Kennedy School, October 2015.

“Nuclear History 101: The Past, Present, and Future of the Bomb,” at the 6th Annual Generation Prague Conference, hosted by the US Department of State and George Washington University, at the State Department, Washington, DC, July 2015.

“The Manhattan Project: A Crucible for Innovation,” at Manhattan Project 70th Anniversary Symposium, hosted by the Atomic Heritage Foundation, at Carnegie Institute for Science, Washington, DC, June 2015.

“What would Happen if a Nuclear Weapon went off in New York?,” Department of History, Upper School, Horace Mann School, Bronx, NY, April 2015.

Colloquium, Pre-circulated paper: “Gagging the H-bomb,” Department of History, University of New Mexico, Albuquerque, NM, March 2015.

“Atomic Misconception: How the Debate over Kyoto Affected Truman’s Understanding of Hiroshima,” CAL Humanities Forum, Stevens Institute of Technology, March 2015.

“The Practices of Secrecy: A Phenomenological Approach to Information Control Regimes,” East Coast Sociological Society Annual Meeting, New York, NY, March 2015.

“Personalizing the Bomb,” at The Dynamics of Possible Nuclear Extinction, at The New York Academy of Medicine (included panel discussion with Noam Chomsky and Hugh Gusterson), March 2015.

## 2014

Colloquium, “Digitizing the Bomb: Experiments with Nuclear History, Science, and Pedagogy,” School of History, Technology, and Society, Georgia Tech, Atlanta, GA, November 2014.

Chair, “Workshop: Digital and Computational History of Science: Tools, Platforms, Networks, and Corpora,” History of Science Society Annual Meeting, Chicago, IL, November 2014.

“Martian Dialogues: Leo Szilard, Edward Teller, and the Question of Nuclear Weapons.” Invited talk, Montclair State University, October 2014.

“John Wheeler’s H-bomb Blues: Secrecy, History, and a Missing Document in the High Cold War.” Colloquium, Gallatin School, NYU, November 2012; Colloquium, Physics Department, Catholic University of America, January 2013. NASA Goddard Space Flight Center, Greenbelt, MD, April 2014.

## 2013

“The Role of Europe in American Nuclear Secrecy.” Cold War Science Workshop, Lorentz Center, Leiden, the Netherlands, December 2013.

“There is No Mystery about Producing a 50 Megaton Bomb’: Very High-Yield Nuclear Weapons and the Limited Test Ban Treaty.” History of Science Society Annual Meeting, Boston, MA, November 2013.

“Getting to Know the Bomb: Experiments the Public Understanding of Nuclear Weapons.” Invited talk, Center for Nonproliferation Studies, Monterey Institute of International Studies, Monterey, CA, March 2013; Colloquium, Program on Science and Global Security, Princeton University, November 2013.

Panelist, “Power and Promise: What’s Become of Our Nuclear Golden Age?” Chemical Heritage Foundation, September 2013.

Invited panelist, “Transforming the Relationship Between Science and Society: The Manhattan Project and Its Legacy.” Atomic Heritage Foundation NSF Workshop, February 2013.

“The Hydrogen Bomb and the Shifting Focus of Cold War Scientific Secrecy.” Colloquium, National Museum of American History, January 2013.

## 2012

“The History of Nuclear Weapons and the Future of Proliferation.” Nuclear Policy Talk, Elliot School of International Affairs, George Washington University, December 2012.

“Networked history: Thinking through the Web.” History of Science Society Annual Meeting, San Diego, CA, November 2012.

“Caught in the Circle of Secrecy: Failed Attempts at Classification Reform in the Early Atomic Energy Commission, 1947-1950.” Policy History Conference, Richmond, VA, June 2012, and Society for Historians of American Foreign Relations Annual Meeting, Hartford, CT, June 2012.

“Scientific Secrecy and WMD Nonproliferation: An Analytical Framework.” Invited talk, Center for Nonproliferation Studies, Monterey Institute of International Studies, April 2012.

Invited panelist, “Ethically Impossible: A Panel Discussion on Non-Consensual Medical Research in Guatemala, Africa, and the United States.” Georgetown Law School, February 2012.

## 2011

“Nuclear Secrets in the Twilight Zone: The H-bomb ‘Gag Order’ of 1950.” History of Science Society Annual Meeting, Cleveland, OH, November 2011.

“Classifying Dual-use Science: Lessons from the Early History of Laser Fusion.” Colloquium, Program on Science and Global Security, Princeton University, October 2011.

“Gambling for H-bombs: Publicizing and Privatizing Laser Fusion, 1969-1975.” Maryland Colloquium in the History of Technology, Science, and Environment (University of Maryland, College Park), October 2011.

“Legalizing American Nuclear Secrecy.” Invited lecture and panel discussion, part of “Nuclear Secrets: Democracy and the National Security State,” EPIIC International Symposium for Global Leadership, Tufts University, February 2011.

### 2002-2010

“‘Restricted Data’: The Regulation of Nuclear Knowledge in the United States.” Seminar, Managing the Atom Project, Harvard Kennedy School, October 2010.

“Atoms for Peace, Atoms for Terror: Debating Secrecy versus Safeguards in the 1970s.” Colloquium, Department of Science and Technology Studies, Cornell University, September 2010.

“Why You Can’t Patent an Atomic Bomb: Nuclear Weapons as Intellectual Property.” Invited public lecture, “Science, Technology, and Legal Regulation” lecture series, Münchner Zentrum für Wissenschafts- und Technikgeschichte, Munich, Germany, June 2010.

“Secrecy and the Bomb: From the Postwar to the Cold War.” *States of Secrecy* Conference, Harvard University, April 2009. History of Science Society Annual Meeting, Phoenix, AZ, November 2009.

“Selling Secrecy: Laser Fusion, Classification, and the Turbulent 1970s.” STS Circle, Harvard Kennedy School, October 2008.

“The Committee on Declassification and the Question of Postwar Secrecy.” Society for Historians of American Foreign Relations Annual Meeting, Columbus, OH, June 2008.

“‘Old H-bomb Arguments Never Die!’: History, Secrecy, and the Teller-Ulam Priority Dispute.” History of Science Society Annual Meeting, Crystal City, VA, November 2007.

“Drawing the Bomb: Secrecy and the Visual Depiction of Nuclear Weapons.” 16th Annual Berkeley Symposium, *Interdisciplinary Approaches to Visual Representation*, University of California, Berkeley, March 2005; Society for Social Studies of Science Annual Meeting, Pasadena, CA, November 2005.

“The Organization of Compulsory Sterilization and Eugenics in California, 1909-1951.” West Coast History of Science Society Annual Meeting, University of California, San Francisco, 2002.

## **PUBLIC HISTORY AND WEB DEVELOPMENT**

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2024— *Doomsday Machines*. A blog about the postapocalyptic imagination in fact and fiction, including discussions of media (films, books, etc.), historical documents

and planning (e.g., Civil Defense), interviews with experts and interesting people, and discussions about game design and simulation modeling (e.g., *Oregon Road '83*, below). 4.2k subscribers (Substack) as of November 2024. Online at <https://doomsdaymachines.net/>

- 2022– *Oregon Road '83*. Experimental/educational videogame about the consequences of a full-scale nuclear exchange during the Cold War. *Oregon Trail* meets Choose-Your-Own-Adventure meets *The Road*. Conducted with support from the Stevens Pinnacle Summer Scholar Program and the Outrider Foundation. Soft launch planned for early 2025.
- 2018– *NUKEMAP KIOSK*. Development of touchscreen usable version of NUKEMAP that can be tailored for museum exhibits relating to nuclear weapons, free of charge. Current installations include: Intrepid Museum, New York, NY; REGAN Vest Museum, Denmark; Deutsches Historisches Museum, Berlin, Germany; and Fundación Canal, Madrid, Spain.
- 2019– *NUKEMAP-3D/VR*. Virtual-reality collaboration with Christopher Manzione. Still in development; public debut of prototype in August 2019. Planned debut of final product in early 2024.
- 2016-2018 Guest Curator, Intrepid Museum, New York, NY, for *A View from the Deep: The Submarine Growler & the Cold War*.
- 2017 *MISSILEMAP*. Interactive, web-based nuclear missile range and accuracy simulator. Online at [nuclearsecrecy.com/missilemap/](http://nuclearsecrecy.com/missilemap/)
- 2014 Consultant for the television show “MANHATTAN,” Season 2, WGN America/Lionsgate.
- 2012– *NUKEMAP*. Interactive, web-based nuclear weapons effects simulator. +60 million pageviews since launch. Online at [nuclearsecrecy.com/nukemap/](http://nuclearsecrecy.com/nukemap/)
- 2011– *Restricted Data: The Nuclear Secrecy Blog*. Regularly-updated historical writing for both popular and academic audiences. +5 million pageviews since launch. Online at <https://blog.nuclearsecrecy.com/>
- 2011-2014 Center for History of Physics, American Institute of Physics: aiding in exhibit content development; contributing to the oral history collection at the Niels Bohr Archive.
- 2009 “So Simple a Beginning: *The Origin of Species* at 150 years.” Experimental online academic collaborative project run by Thomas Levenson at the Science Writing program at MIT. Work includes technical development, historical research, and project conceptualization. Online February 2009. (*No longer online*)
- 2008 Developing *DOE Timeline, 1939-2008*, an interactive database of Department of Energy history that will be distributed both as a hard-copy inside the DOE as

well as on the web for public consumption. Office of History and Heritage Resources, United States Department of Energy. Distributed within the DOE, November 2008.

- 2007-2008 Developing Manhattan Project and Cold War web resources, Office of History and Heritage Resources, United States Department of Energy.
- 2006-2007 Researcher and author of the text an exhibit on the History of the MIT Department of Physics to commemorate the opening of the Green Center for Theoretical Physics. Kiosk and online exhibit (<http://web.mit.edu/physics/about/history.html> ) commissioned by the MIT Department of Physics, kiosk installed November 2007.
- 2004 “[Oppenheimer: A Life](#).” Online exhibit commissioned by the Office for History of Science and Technology, UC Berkeley, for the centenary conference on physicist J. Robert Oppenheimer. Winner of *Scientific American’s* Science and Technology Web Awards 2004 in the biography category. Also featured in Mitch Leslie, “NetWatch Exhibits: The Bomb’s Conflicted Father,” *Science* 304, no. 5670 (23 April 2004): 495. (*No longer online*)

## HONORS AND AWARDS

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Distinguished Teaching Faculty Award, Stevens Institute of Technology (2025) (Highest teaching award chosen by students)

Joseph H. Hazen Education Prize, History of Science Society (2022)

Jess H. Davis Memorial Award for Research Excellence, Stevens Institute of Technology (2022)

David & G.G. Farber Faculty Fellow in Science and Technology Studies, College of Arts and Letters, Stevens Institute of Technology (2017-2019)

Stevens Institute of Technology Employee Excellence Award for “Strengthened Reputation, Increased Prestige” (2018-2019)

Finalist, National Science Foundation “Vizzies” Award for Data Visualization (2014)

## SPONSORED RESEARCH

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2024-2025 “NUKEMAP sustaining and improvements,” Ploughshares Fund, \$24,000 (PI)

2023-2025 “OpenSIOP and TARGETMAP,” Future of Life Institute, \$145,000 (PI)

2023-2024 “*Oregon Road ’83*,” Outrider Foundation, \$20,000 (PI)

2021-2025 “New Nuclear History for Policy Outreach,” Carnegie Corporation of New York, \$200,000 (PI)

- 2018-2019 “The President and the Bomb (pilot project),” Ploughshares Fund, \$25,000 (Co-PI, with Avner Cohen, Monterey Institute of International Studies)
- 2017-2020 “Reinventing Civil Defense: Returning Nuclear Security to Civil Society,” Carnegie Corporation of New York, \$500,000 (Co-PI, with Kristyn Karl, Stevens Institute of Technology)
- 2016-2017 “RaDDMAP: An Open-Source Tool for Visualizing the Effects of a ‘Dirty Bomb’,” N Square Collaborative, \$25,000 (PI)
- 2016 “Dynamic Estimates of Urban Burning from Nuclear Attacks,” Future of Life Institute, \$20,000 (PI)

Total sponsored research funding to date: \$969,000

## **SELECTED SERVICE AND COMMITTEE MEMBERSHIPS**

- 2023– Member, Nuclear Disarmament and Nuclear Weapons-Free Zone Advisory Committee, New York City, NY (appointed by Mayor Eric Adams).
- 2022– Associate Editor, *Historical Studies in the Natural Sciences* (journal).
- 2020-2024 Director, Program in Science and Technology Studies, Stevens Institute of Technology.
- 2018– Member, Fissile Materials Working Group, Center for Arms Control and Non-Proliferation.
- 2018– Advisory Board member, Encyclopedia for the History of Science.
- 2018-2019 Member, Faculty Senate, Stevens Institute of Technology. (*elected position*)
- 2016-2017 Nominations Committee, History of Science Society. (*elected position*)
- 2016-2020 Member, Steering Committee, NSF Research Coordination Network for Computational and Digital History and Philosophy of Science.
- 2015-2019 Member, Technology and Communication Committee, History of Science Society.
- 2015-2019 Member, Advisory Committee, Atomic Heritage Foundation.
- 2015 Participant, NSF Data Management Workshop.
- 2014 Member, Ad-hoc Committee on Publications and Professional Excellence, History of Science Society.
- 2012–2014 Chair, Website Redesign Committee, History of Science Society.
- 2012–2019 Member, National Advisory Board, Alsos Digital Library for Nuclear Issues.

2012-2013 Organizing Committee, “Transforming the Relationship Between Science and Society: The Manhattan Project and Its Legacy,” NSF-funded workshop, organized by the Atomic Heritage Foundation (February 2013)

Member of the History of Science Society, Society for the History of Technology, American Historical Association, the Federation of American Scientists, and the International Studies Association.

## SELECTED MEDIA APPEARANCES AND INTERVIEWS

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“The History of Nuclear Weapons,” *Naked Scientists* (11 November 2025):

<https://www.thenakedscientists.com/articles/interviews/history-nuclear-weapons>

“Nuclear Historian Answers Nuclear War Questions,” *WIRED Tech Support* (12 August 2025):

<https://www.youtube.com/watch?v=CJTA2OinEHw>

Sarah Scoles, “Nuclear War Could End the World, But What if It’s All in Our Heads?” *New York Times* (22 August 2023), D1:

<https://www.nytimes.com/2023/08/21/science/nuclear-war-brain-neuroscience.html>

Tony Dokoupil, “Conflict in Ukraine Triggers Fear of Nuclear Warfare,” *CBS Mornings* (29 April 2022), television broadcast: <https://www.cbsnews.com/news/conflict-nuclear-warfare-ukraine-russia/>

“Still Armed, Still Dangerous,” NPR’s *On the Media* (1 April 2022):

<https://www.wnycstudios.org/podcasts/otm/episodes/on-the-media-still-armed-still-dangerous>

Brian Walsh, “Thinking Through the Unthinkable,” *Vox* (20 March 2022):

<https://www.vox.com/future-perfect/22981207/russia-ukraine-nuclear-war-civil-defense>

Matthew Gault, “Nuclear War Anxiety is Back. Here’s How to Manage it,” *Vice* (3 March 2022): <https://www.vice.com/en/article/jgmke8/nuclear-war-anxiety-is-back-heres-how-to-manage-it>

Charlie Warzel, “A 10-Year-Old Nuclear-Blast Simulator Is Popular Again,” *The Atlantic’s Galaxy Brain*, (3 March 2022): <https://newsletters.theatlantic.com/galaxy-brain/62210e0ddc551a0020883980/online-americans-nuke-themselves/>

William J. Broad, “When the Soviets Set Off the Biggest Nuclear Bomb, J.F.K. Didn’t Flinch,” *The New York Times* (30 October 2021), A13:

<https://www.nytimes.com/2021/10/30/science/tsar-bomba-60.html>

William J. Broad, “How a Star Times Reporter Got Paid by Government Agencies He Covered,” *The New York Times* (9 August 2021), D1:

<https://www.nytimes.com/2021/08/09/science/william-laurence-new-york-times.html>

William J. Broad, “The Black Reporter Who Exposed a Lie About the Atom Bomb,” *The New York Times* (9 August 2021), D1: <https://www.nytimes.com/2021/08/09/science/charles-loeb-atomic-bomb.html>

Maria Cramer, “‘Now I Am Become Death’: The Legacy of the First Nuclear Bomb Test,” *The New York Times* (15 July 2020), A12: <https://www.nytimes.com/2020/07/15/us/trinity-test-anniversary.html>

William J. Broad, “Fourth Spy at Los Alamos Knew A-Bomb’s Inner Secrets,” *The New York Times* (27 January 2020), D1: <https://www.nytimes.com/2020/01/27/science/manhattan-project-nuclear-spy.html>

John Kryzyzaniak, “Interview with Alex Wellerstein on NUKEMAP VR,” *Bulletin of the Atomic Scientists* (16 September 2019): <https://thebulletin.org/2019/09/interview-with-alex-wellerstein-on-nukemap-vr/>

“Atomic Age Declassified,” Smithsonian Channel (June 2019): <https://www.smithsonianchannel.com/shows/atomic-age-declassified/1005852>

Interviewee on Bill Nye’s “Science Rules!” podcast, Stitcher Media (March 2019): <https://www.stitcher.com/podcast/stitcher/science-rules-with-bill-nye/e/62043719>

Max Fisher, “An Unpredictable Trump and a Risk-Prone Kim Mean High Stakes and Mismatched Expectations,” *New York Times* (23 April 2018): <https://www.nytimes.com/2018/04/23/world/asia/kim-trump-north-korea-meeting.html>

Clyde Haberman, “This Is Not A Drill: The Threat of Nuclear Annihilation,” *New York Times Retro Report* (13 May 2018): <https://www.nytimes.com/2018/05/13/us/nuclear-threat-retro-report.html>

Daron Taylor, “What should you do if a nuclear weapon is heading your way?” *Washington Post* (26 January 2018): <https://www.washingtonpost.com/news/science/wp/2018/01/26/what-should-you-do-if-a-nuclear-bomb-is-heading-your-way/>

“Why are ICBMs so hard to shoot down?” Fareed Zakariya, GPS (CNN) (20 January 2018): <https://www.cnn.com/videos/tv/2018/01/20/exp-fareed-zakaria-gps-alex-wellerstein-missile-defense-why-missiles-are-hard-to-shoot-down.cnn>

“The ABCs of Nuclear War,” NPR’s *Science Friday* (29 September 2017): <https://www.sciencefriday.com/segments/what-might-actually-happen-during-a-nuclear-war/>

Sarah Vowell, “The Dangers of an Incurious President,” *New York Times* (9 August 2017), A19: <https://www.nytimes.com/2017/08/09/opinion/trump-fire-fury-north-korea.html>

Ralph Vartabedian and W.J. Hennigan, “Duck and cover 2.0: How North Korea is prompting new efforts to prepare for a nuclear attack,” *Los Angeles Times* (25 July 2017): <http://www.latimes.com/nation/la-na-nuclear-attack-preparations-20170725-story.html>

- “Nukes,” NPR’s *Radiolab* (7 April 2017): <http://www.radiolab.org/story/nukes/> (guest researcher and interviewee)
- Joshua Brustein, “Congratulations, Your Genius Patent Is Now a Military Secret,” *Bloomberg* (8 June 2016): <http://www.bloomberg.com/news/articles/2016-06-08/congratulations-your-genius-patent-is-now-a-military-secret>
- Armin Rosen, “A North Korean hydrogen-bomb test would be a game-changer,” *Business Insider* (6 January 2016): <http://www.businessinsider.com/heres-why-a-hydrogen-bomb-test-would-be-a-breakthrough-for-north-korea-2016-1>
- Scott Shane, “1950s U.S. Nuclear Target List Offers Chilling Insight,” *New York Times* (22 December 2015), A10: <http://www.nytimes.com/2015/12/23/us/politics/1950s-us-nuclear-target-list-offers-chilling-insight.html>
- “The 27 Best Feeds to Follow in the World of Science,” *Wired* (18 August 2015): <http://www.wired.com/2015/08/the-new-cultural-literacy-science-feeds/>
- Mariko Oi, “The man who saved Kyoto from the atomic bomb,” *BBC World News* (9 August 2015): <http://www.bbc.com/news/world-asia-33755182>
- Herman Wong, “How the Hiroshima bombing is taught around the world,” *Washington Post* (6 August 2015): <https://www.washingtonpost.com/news/worldviews/wp/2015/08/06/how-the-hiroshima-bombing-is-taught-around-the-world/>
- Geoff Brumfiel, “Why did the U.S. choose Hiroshima?” *NPR’s Morning Edition* (6 August 2015): <http://www.npr.org/2015/08/06/429433621/why-did-the-u-s-choose-hiroshima/>
- Interview with Robert Gast, “Ein Atomkrieg ist noch immer möglich,” *Süddeutsche Zeitung* (24 July 2015): <http://www.sueddeutsche.de/wissen/historiker-ein-atomkrieg-ist-noch-immer-moeglich-1.2580504>
- “Zündung der ersten Atombombe am (16.7.1945),” *Westdeutscher Rundfunk’s ZeitZeichen* (16 July 2015): <http://www.ardmediathek.de/tv/WDR-5-ZeitZeichen/Zündung-der-ersten-Atombombe-am-16-7-19/WDR-5/Audio-Podcast?documentId=29590308&bcastId=19365228>
- “Destroyer of Worlds,” *BBC Radio 4* (11 July 2015): <http://www.bbc.co.uk/programmes/b061pchg>
- National Geographic Channel, *American Genius*, Episode 7, “Oppenheimer vs. Heisenberg,” (22 June 2015): <http://channel.nationalgeographic.com/american-genius/episodes/oppenheimer-vs-heisenberg/>
- John Moritz, “Does Philly author reveal nuclear-bomb secrets?” *Philadelphia Inquirer* (6 April 2015): [http://articles.philly.com/2015-04-06/news/60836875\\_1\\_energy-department-nuclear-bomb-secrets-book](http://articles.philly.com/2015-04-06/news/60836875_1_energy-department-nuclear-bomb-secrets-book)

- “Buttons Not Buttons,” NPR’s *Radiolab* (12 December 2014):  
<http://www.radiolab.org/story/buttons-not-buttons/>
- William J. Broad, “Dawn of Nuclear Arms, Declassified,” *New York Times* (9 November 2014), D6: <http://www.nytimes.com/2014/11/11/science/the-dawn-of-nuclear-weapons-declassified.html>
- William J. Broad, “Transcripts Kept Secret for 60 Years Bolster Defense of Oppenheimer’s Loyalty,” *New York Times* (11 October 2014), A16:  
<https://www.nytimes.com/2014/10/12/us/transcripts-kept-secret-for-60-years-bolster-defense-of-oppenheimers-loyalty.html>
- Documentary, “Mach Stem: The Nagasaki Bombing Intensified,” *NHK World* (4 October 2014):  
<https://www.youtube.com/watch?v=UtoDoi5zM1o>
- Rob Garfield, “The Manhattan Project,” NPR’s *On the Media* (11 October 2013):  
<http://www.onthemedialab.org/story/manhattan-project/>
- Rebecca J. Rosen, “The Time a Cleveland Newspaper Divulged the Manhattan Project,” *The Atlantic* (20 September 2013):  
<http://www.theatlantic.com/technology/archive/2013/09/the-time-a-cleveland-newspaper-divulged-the-manhattan-project/279873/>
- Mark Thompson, “Nuclear Perspective: What’s the Fallout in Your Neighborhood?” *TIME magazine* (22 July 2013): <http://nation.time.com/2013/07/22/nuclear-perspective-whats-the-fallout-in-your-neighborhood/>
- David Kestenbaum, “The Rush to Patent the Atomic Bomb,” NPR’s *Morning Edition*, (28 March 2008): <http://www.npr.org/templates/story/story.php?storyId=89127786>