Soraya de Chadarevian Professor UCLA Department of History and Institute for Society and Genetics Box 951473 6265 Bunche Hall Los Angeles, CA 90095-1473 # 1-310 267 4767 chadarevian@history.ucla.edu

CURRICULUM VITAE

Education

1989–91	postdoctoral training in history of science, Walther-Rathenau Fellowship Program, Berlin
1988	PhD in Philosophy, University of Konstanz, Germany
1978	advanced degree (Dinlom) in biology University of Freiburg, Germany

1978 advanced degree (*Diplom*) in biology, University of Freiburg, Germany

Nationality: Italian

Positions (including associations and affiliations)

2006– 2004–5 1997–2006	Professor, UCLA Department of History and Institute for Society and Genetics Visiting Scholar at the Max-Planck Institute for the History of Science, Berlin Senior Research Associate and Affiliated Lecturer at the Department of History and Philosophy of Science at the University of Cambridge
1997	Researcher at the Hamburg Institute for Social Research; Temporary Lecturer at the Department of History and Philosophy of Science at the University of Cambridge
1996	CNRS Poste-Rouge Researcher at the Centre de recherche en histoire des sciences et des techniques, La Villette, Paris (March –June)
1991–96	Research Associate (from 1993 Senior Research Associate) at the Wellcome Unit for the History of Medicine at the University of Cambridge
1989–90	Walther-Rathenau Fellow, Verbund für Wissenschaftsgeschichte, Berlin, associated with the Institute for the History of Medicine at the Free University
1989–90	Temporary Lecturer in the Department of Philosophy, University of Konstanz
1987–88	Visiting Scholar at the University of Texas at Austin
1980–85	Research Assistant at the Department of Philosophy, University of Konstanz
1979	Research Associate and Teaching Assistant at the Institute for Biology III (Molecular Biology) at the University of Freiburg i. Br.
1977–78	Research Student at the Botanical Institute of the University of Bologna, Italy

Awards and grants

2024-25 UCLA Committee on Research (COR) Research Award

- 2024-25 two 1-month Senior Research Fellowships at Max-Planck Institute for History of Science, Berlin
- 2023-24 UCLA Academic Senate Faculty Grant
- 2022 3-month visiting scholar, Max-Planck Institute for History of Science, Berlin
- 2021 UCLA Life Sciences Excellence in Research Award
- 2019 1-month visiting professor, EHESS, Paris

2018 -21 1-month visiting scholar, Max-Planck Institute for History of Science, Berlin (2018,2019 & 2021)

- 2016-17 Research Fellow, Institute for Advanced Studies of the Humanities, University of Edinburgh
- 2015-21 NSF Scholar award for project Heredity under the Microscope
- 3-month visiting professorship Max-Planck Institute for History of Science, Berlin;
 3-month visiting professorship, Ruhr Universitaet Bochum (Germany)
- 2012-13 Wellcome Trust Small Research Grant
- 2011 6-month Senior fellowship, Ville de Paris
- 2007–9 co-recipient, Mellon Foundation Transforming the Humanities Grant for UCLA Faculty seminar DNA and History
- 2004–5 research fellowship from the Max-Planck Institute for the History of Science, Berlin
- 2004–6 non-stipendiary senior research fellowship at Churchill College Cambridge
- 1997–2006 research grant from the Laboratory of Molecular Biology at Cambridge, with participation of the Medical Research Council (renewed 2000 and 2003)
- 1996 CNRS fellowship at the Centre de recherche en histoire des sciences et des techniques, La Villette, Paris (March – June)
- 1991–96 Wellcome Trust Fellowship at the Wellcome Unit for the History of Medicine at the University of Cambridge (renewed 1994 and 1995)
- 1989–90 Walther-Rathenau-Fellowship, Verbund fuer Wissenschaftsgeschichte, Berlin
- 1972–78 Scholarship German Academic Exchange Service (DAAD)

Memberships and services

Professional Societies, memberships

Society for the History of Technology (2023-); American Association for the History of Medicine (2018-); European Society for the History of Science (2018-); Society for Social Studies of Science (2004-); British Society for the History of Science (1991-); International Society for the History; Philosophy and Social Studies of Biology (1991-); German Society for the History of Science Society (1990-)

Committees and Services (recent)

UCLA

History Graduate Awards and Affairs Committee(2024-25) Graduate Admissions Committee (2016-17; 2018-19; 2023-24) Search Committee, History of Medicine Assistant Professor (2022-23) Luskin Center for History and Policy (2018-22) History Personnel Committee (2021-22) Teaching Committee (2015-16; 2017-18; 2019-20) History of Science field coordinator (2008-11; 2013-14; 2017-22; 2023-)

Institute for Society and Genetics Admissions Committee (2024-25) Faculty Search Committee, Biology, Biotechnology and Society (2021-22) Faculty Search Committee (2017-18) Vice-Chair for Personnel (2016-18)

Life Science Division

Life Sciences Excellence Awards Committee (2015; 2016; 2018; 2019; 2022) Convener, Fellows' meetings, Institute for Society and Genetics (2015-16; 2018-2020) Adviser to the Board, Biomedical Research Minor (2007-2020)

UCLA Academic Senate

Committee of Research (2018-22) Covid Response & Recovery Task Force – Research Continuity Working Group (2020-21) Post-Pandemic Research Visioning Working Group (2021)

Professional Societies History of Science Society, Vice-President elect (2024-26; President 2026-2028) History of Science Society, Program Co-Chair (2019-21) History of Science Society, Committee on Meetings and Programs (2019-21)

Journal advisory boards (current) Scientia, The Journal of the Italian Society of History of Science (2023-) Associate editor, Historical Studies in the Natural Sciences (2009-) Advisory editor, Studies in History and Philosophy of Biological and Biomedical Sciences (1998-)

International collaborations (current)

Crossing over: Art and Science at Caltech, 1900-2020 (exhibition project) (2020-24), Caltech Archives and Special Collections as part of The Getty Foundation, PACIFIC STANDARD TIME: Art x Science x LA (Fall 2024)

Human Cell Atlas, Archive Users Focus Group, Wellcome Sanger Institute, Hinxton UK (2023-)

TESaCo (Technologies émergentes et sagesse collective), working group at the Académie des Sciences Morales et Politiques, Paris (2020-2024)

Proteins and Fibers: Scaffolding History with Molecular Signatures, Max Planck Institute for the History of Science, Berlin, Department III, The Body of Animals (2018-2026)

Conferences, sessions, and exhibitions organized (last 10 years)

May-June 2023

Co-organizer series of three online roundtables on "Biotechnologies: quelle sagesse collective? Project: Technologies émergentes et sagesse collective" (TESaCo) de l'Académie des sciences morales et politiques, Paris

June 2017

Science and the City: Genetics in Edinburgh, 1-day workshop, Science, Technology and Innovation Studies, University of Edinburgh

November 2016

Co-organizer Histories of Data and the Database, 1-day international conference, Huntington Library

Spring 2016

Images do not speak for themselves, graduate student led exhibition, University Library UCLA

October 2015

Co-organizer Sequencing our past, 1-day international workshop, UCLA Institute for Society and Genetics

June 2012

Co-organizer, 3-day international workshop Making human heredity: populations and public health in the postwar era, Department of History and Philosophy of Science, University of Cambridge

May 2012

Organizer, 1-day International workshop Biohistories: biological markers and human populations in historical context, UCLA Institute for Society and Genetics

June 2011

Organizer, 2-day international workshop Human heredity: biology, anthropology and public health, Maison Suger, Paris

Interviews & Media (last 5 years)

Podcast series The DNA Papers, Episode 12 and 13, participant, Consortium for the History of Science, Technology and Medicine, <u>https://www.chstm.org/video/144#23525</u> (recorded 2023; posted 2024).

Interview by Antonio Martínez Ron for article "Nuevos datos sobre el papel de Rosalind Franklin: de víctima a codescubridora de la 'doble hélice' del ADN," el Diarios.es, 25 April 2023

"Machines of Mistrust – The Fabric of Digital Cultures," roundtable discussion, Thomas-Mann House, Los Angeles

Truth and Science, interview by Student Council in series In Search of Truth, Wende Museum, Los Angeles

Audio contribution to History of Science Walking Tour, Cambridge University Press Bookshop, April 2022

Interviewed by Stephen Ornes for article "Science and Culture: The Evolving Portrait of a Virus," PNAS 2021 Vol. 118 No. 29, https://doi.org/10.1073/pnas.2111544118

New Books Network, interviewed by Maia Woolner, Nov 24, 2020, https://newbooksnetwork.com/heredity-under-the-microscope-1

Then + Now: Short Takes by UCLA Historians in the Age of Corona: "Covid-19 and the lessons from history" (<u>https://luskincenter.history.ucla.edu/2020/05/13/then-now-short-takes-by-ucla-historians-in-the-age-of-corona/#toggl e-id-2</u>) and "The history and biology of Covid-19" (<u>https://luskincenter.history.ucla.edu/2020/05/13/then-now-short-takes-by-ucla-historians-in-the-age-of-corona/#toggl e-id-5</u>)

Interviewed for *Mussle Beach*, a project by Cooking Sections (London) for CURRENT:LA FOOD 2019, Oct-Nov 2019.

Interview by C. Honey for article on role of models in scientific research, Neue Züricher Zeitung, 31 March 2019, https://www.nzz.ch/wissenschaft/manch-ein-modell-hat-forscher-zum-durchbruch-verholfen-ld.1470426?reduced=tru e

Discussant at event *Dear Donor* following screening of T3511, November 2018, at Experimental Digital Arts, UCLA, Broad Art Center.

Interview for PBS documentary series on S. Mukherjee's book The Gene , May 2018

Interview by Sarah Pushman (EMBL) for the EMBL Newsletter, 22 December 2017 https://news.embl.de/lab-matters/molecular-biology-as-a-force-for-peace/

Interview by Room 608 Inc for film on James Watson in PBS American Masters Series, 8 November 2017; aired 2 Jan 2019.

Interview for Irreplaceable: A History of England in 100 Places, Science and Discovery series, episode: DNA, Rosalind Franklin & Photo 51, released 16 October 2017.

List of Publications

Books and guest-edited special journal issues

Heredity under the Microscope: Chromosomes and the Study of the Human Genome (University of Chicago Press, June 2020).

Histories of Data and the Database. Special issue, guest-edited with Ted Porter, *Historical Studies in the Natural Sciences* 48/ 5 (2018).

Populations and Human Heredity after 1945. Special issue, guest-edited with J. Bangham, *Studies in History and Philosophy in the Biological and Biomedical Sciences* 47 (2014), 45-190.

BioHistories, guest-edited special issue. BioSocieties 5/3 (Sept 2010), 301-405

Disciplinary Histories and the History of Disciplines: The Case of Molecular Biology. Special issue, co-edited with H.-J. Rheinberger. *Studies in History and Philosophy of Biological and Biomedical Sciences* 40 (2009)1-71.

Models. The Third Dimension of Science, co-edited with N. Hopwood (Stanford University Press 2004).

Designs for Life. Molecular Biology after World War II (Cambridge: Cambridge University Press 2002; reprinted 2003; paperback 2011).

Representations of the Double Helix (with Harmke Kamminga); revised and enlarged edition with new introduction by S. de Chadarevian (Cambridge: Whipple Museum for the History of Science, 2002). First published 1995.

Molecular Biology in Postwar Europe. Special issue, co-edited with B. Strasser. *Studies in History and Philosophy of Biological and Biomedical Sciences* 33, no. 3 (2002).

Molecularizing Biology and Medicine. New Practices and Alliances, 1910s–1970s, co-edited with H. Kamminga (London: Harwood Academic Publishers 1998)

The Tools of the Discipline: Biochemists and Molecular Biologists. Special issue, co-edited with J.-P. Gaudillière. *Journal of the History of Biology* 26, no. 3 (1996).

Zwischen den Diskursen. Maurice Merleau-Ponty und die Wissenschaften (Würzburg: Könighausen und Neumann, 1990).

Articles in books and journals

Les Cahiers de TESaCo N[°]4: Le biotechnologies: quelle sagesse collective? (co-edited with A. Le Goff, Serena Ciranna, S. Desmoulin), Académie des sciences morales et politique, Paris, June 2024.

"Commentary: Nationalism and transnationalism in anthropological research," *Perspectives on Science* 30 (2022), 194-198.

""Of some paradoxes in the historiography of molecular biology," Berichte für Wissenschaftsgeschichte 45 (2022), 462 – 467.

"Radioactive diet: food, metabolism and the environment, c. 1960," in A. N. H. Creager and J._P. Gaudillière (eds), Risk on the Table: Food, Health, and Environmental Exposure (New York: Berghahn Books, 2021), pp. 55-78.

"The molecular vista: current perspectives on molecules and life in the twentieth century," (with M. Grote, L. Onaga, A. N. H. Creager, D. Liu, G. Surita, S. E. Tracy) History and Philosophy of the Life Sciences 43/16 (2021). https://doi.org/10.1007/S40656-020-00364-5

"Covid-19: Rethinking the nature of the viruses," History and Philosophy of the Life Sciences 43/ 2 (2021). https://doi.org/10.1007/s40656-020-00361-8. Hebrew in *Zmanim – A History Quarterly* 145 (2021), 108-113.

"Normalization and the search for variation in the human genome," in: Southern Oceanic Topologies and Genealogies. Special issue edited by W. Anderson and S. Lindee, Historical Studies in the Natural Sciences 50/5 (2020), 578–595.

"DNA and history," in: Ben Fletcher-Watson and Jana Phillips, eds. Humanities of the Future: Perspectives from the Past and Present, Edinburgh: IASH, 2020. Occasional Papers, vol. 21, pp. 139-145.

"Things and data in recent biology," Histories of Data and the Database (special issue), *Historical Studies in the Natural Sciences* 48/ 5 (2018), 648-658.

(with Theodore Porter) "Introduction: Scrutinizing the data world," Histories of Data and the Database (special issue), *Historical Studies in the Natural Sciences* 48/ 5 (2018), 549-556.

"Whose turn? Chromosome research and the study of the human genome," Journal of the History of Biology 51 (2018), 631-655. DOI 10.1007/s10739-017-9486-7

"John Kendrew and myoglobin: protein structure determination in the 1950s," Protein Science 27(2018), 1136-1143.

"Making human populations," Perspectives on Science 25 (2017), 698-703.

"It is not enough, in order to understand the Book of Nature, to turn over the pages looking at the pictures. Painful though it may be, it will be necessary to learn to read the text: visual evidence in the life sciences, c. 1960," in Traces, ed. B. Bock von Wuelfingen (Berlin: De Gruyter, 2017), pp. 55-64. German: Spuren. Erzeugung des Dagewesenen, ed. B. Bock von Wuelfingen, Bildwelten des Wissens 13 (Berlin: De Gruyter, 2017), pp. 48-56).

"Ode to the ice bucket," in J. Radin and E. Kowal (eds), Cryopolitics: Frozen Life in a Melting World (Cambridge, MA: MIT Press, 2017), 83-88.

"The Future historian: reflections on the archives of contemporary science," *Studies in History and Philosophy in the Biological and Biomedical Sciences* 55 (2016), 54-60.

"Human population studies and the World Health Organization," Dynamis 35 (2015), 359-388.

"Laboratory of Molecular Biology (LMB)," eLS (Chichester: John Wiley & Sons, 2015), 1-3.

"Monod as founder of a new discipline: local and international contexts," *Comptes rendus - Biologies* 338/6 (2015), 419-423.

"Chromosome photography and the human karyotype," Historical Studies in the Natural Sciences 45 (2015), 115-146.

"Chromosome surveys of human populations: between epidemiology and anthropology," *Studies in History and Philosophy in the Biological and Biomedical Sciences* 47 (2014), 87-96.

(with J. Bangham): "Human heredity after 1945: Moving populations centre stage," Studies in History and Philosophy in the Biological and Biomedical Sciences 47 (2014), 45-49.

"Molecular biology," in *The Oxford Encyclopedia of American Scientific, Medical, and Technological History* (New York: Oxford University Press, 2014), 1-4.

"Putting human genetics on a solid basis: human chromosome research, 1950s-1970s," in B. Gausemeier, S. Müller-Wille, E. Ramsden (eds), *Human Heredity in the Twentieth Century* (London: Pickering & Chatto Publishers 2013), pp. 141-152.

"Things and the archives of recent sciences," Studies in History and Philosophy 44 (2013), 634-638.

"Epistemology and history," *History and Philosophy of the Life Sciences* 35 (2013), 13-18.

(with J.-P. Gaudillière), "Experimente mit Ribosomen," in L. Daston and J. Renn (eds), *Festkolloquium für Hans-Jörg Rheinberger. Beiträge zum Symposium am 24.1.2011 im Max-Planck-Institut für Wissenschaftsgeschichte* (Preprint 433), (2012), pp. 9-16.

"The making of an entrepreneurial science: biotechnology in Britain, 1975-1995," Isis 102 (2011), 601-633.

"Scientists' lives and the history of late twentieth century life sciences" [essay review], NTM Journal of the History of Science, Technology and Medicine 19 (2011), 407-412.

"The comparative and the exemplary: revisiting the early history of molecular biology," (with B. Strasser), History of Science 49 (2011), 317-336.

"Genetic evidence and interpretation in history," *BioSocieties* 5 (2010), 301-305.

"Mutations in the atomic age," in L. Campos and A. V. Schwerin (eds), *Making Mutations: Object, Practices, Contexts* (Berlin: Max Planck Institute for History of Science Preprint 393, 2010), pp. 179–188.

"Alte und neue Biologie oder wie molekular ist die Molekularbiologie?", in A. Ofak and P. von Hilgers (eds), *Rekursionen: Von Faltungen des Wissens* (Muenchen:Fink Verlag, 2010), pp. 199-216 (revised German version of "Mapping development", 2000).

"Microstudies versus big picture accounts?" *Studies in History and Philosophy of Biological and Biomedical Sciences* 40 (2009), 13-19.

[with H.-J. Rheinberger] "Introduction," *Studies in History and Philosophy of Biological and Biomedical Sciences* 40 (2009), 4-5.

"Viewing chromosomes," in S. Brauckmann, D. Thieffry, C. Brandt and G. Müller (eds) *Graphing Genes, Cells and Embryos* (Berlin: Max Planck Institute for History of Science Preprint 380, 2009), pp. 57–62.

"Lebende Moleküle," in C. Bigg and J. Hennig (eds), Atombilder: Ikonographie des Atoms in Wissenschaft und Öffentlichkeit des 20. Jahrhunderts (Göttingen: Wallstein Verlag, 2009), pp. 92-96.

"History of biology" and "The cell," in Emily Gomart (ed.), *Genesis: Life at the End of the Information Age* (Utrecht: Centraal Museum, 2007), pp. 24-29.

"The Selfish Gene at 30: the origin and career of a book and its title," Notes and Records of the Royal Society 61 (2007), 31–38.

"Rosalind Franklin e i suoi difensori," in E. Gagliasso and F. Zucco (eds), Il genere nel paesaggio scientifico (Roma: Aracne editrice, 2007), pp. 89-107.

"Mice and the reactor: The 'genetic experiment' in 1950s Britain," *Journal of the History of Biology* 39 (2006), 707–735.

[ed. with H. J. Rheinberger], *History and Epistemology of Molecular Biology and Beyond: Problems and Perspectives* (Berlin: Max Planck Institute for History of Science Preprint 310, 2006)

"Asilomar — ein Moratorium und was daraus geworden ist," Gegenworte 16 (December 2005), 74–77.

"Protein sequencing and the making of molecular genetics," in J. Witkowski (ed.), The Inside Story: DNA to RNA to Protein. Readings from Trends in Biochemical Sciences, (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press, 2004), 345–353.

"Mapping the worm's genome: tools, networks, patronage," in J.-P. Gaudillière and H.-J. Rheinberger (eds.), *Mapping Cultures in Twentieth Century Genetics* (London: Routledge, 2004), 95–110.

[with N. Hopwood], "Dimensions of modelling," in S. de Chadarevian and N. Hopwood (eds), *Models. The Third Dimension of Science* (Standford University Press, 2004), pp. 1–15.

"Models and the making of molecular biology," in S. de Chadarevian and N. Hopwood (eds), *Models. The Third Dimension of Science* (Standford University Press, 2004), pp. 339–368; German in C. Blümle and A. Schäfer (eds.) *Abstraktion in Kunst und Lebenswissenschaften* (Zuerich and Berlin: Diaphanes, 2007), pp. 173-197.

"Helix überall. Über den Karrierebeginn einer Wissenschaftsikone," Neue Rundschau 114, no. 3 (2003), 69–74.

"Relics, replicas and commemorations" *Endeavour* 27, no. 2, June 2003, 75–79.

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"The making of an icon," Science 300 (2003), 255–257.

"Portrait of a discovery: Watson, Crick and the double helix," Isis 94 (2003), 95–105.

"Reconstructing life: molecular biology in postwar Britain," *Studies in History and Philosophy of Biological and Biomedical Sciences* 33 (2002), 431–448.

[with B. Strasser], "Molecular biology in postwar Europe: towards a 'glocal' picture," *Studies in History and Philosophy of Biological and Biomedical Sciences* 33 (2002), 361–365 (editors' introduction to special issue).

"Mapping development or how molecular is molecular biology?" *History and Philosophy of the Life Sciences* 22 (2000), 335–350.

"Protein sequencing and the making of molecular genetics," Trends in the Biochemical Sciences 24 (1999), 203–206.

"Of Worms and programmes: *Caenorhabditis elegans* and the study of development," *Studies in History and Philosophy of Biological and Biomedical Sciences* 1 (1998), 81–105.

"Following molecules: hemoglobin between the clinic and the laboratory," in S. de Chadarevian and H. Kamminga (eds), *Molecularizing Biology and Medicine. New Practices and Alliances, 1910s–1970s* (London: Harwood Academic Publishers 1998), pp. 171–201.

"Introduction" (with H. Kamminga) in S. de Chadarevian and H. Kamminga (eds), *Molecularizing Biology and Medicine*. *New Practices and Alliances*, 1910s–1970s (London: Harwood Academic Publishers 1998), pp. 1–16.

"Sequences, conformation, information: biochemists and molecular biologists in the 1950s," *Journal of the History of Biology* 29 (1996), 361–386 (Spanish: "Secuencias, conformación, información: bioquímicos y biólogos moleculares en los años 50," *Arbor* 156 (1997), 15–44).

"Using interviews for writing the history of science," in T. Söderqvist (ed.), *The Historiography of Contemporary Science and Technology* (London: Harwood Academic Publishers, 1997), pp. 51–70.

"Internationale Wissenschaft und die Ökonomie wissenschaftlicher Kommunikation - Überlegungen im Anschluß an Marey's 'La méthode graphique' (1878) und Bernals 'The Social Function of Science' (1939)," in C. Meinel (ed.), *Fachschrifttum, Bibliothek und Naturwissenschaft im 19. und 20. Jahrhundert* (Wiesbaden: Harrassowitz, 1997), pp. 125–135.

(with J.-P. Gaudillière), "The tools of the discipline: biochemists and molecular biologists," *Journal of the History of Biology* 29 (1996), 327–330 (editors' introduction to special issue).

"Memoirs of a scientist-historian" [essay review of S.A. Fruton, A Skeptical Biochemist (1992) and Eighty Years (1994)], *Isis* 87 (1996), 507–510.

"Laboratory science versus country-house experiments: the controversy between Julius Sachs and Charles Darwin," *British Journal for the History of Science* 29 (1996), 17–41; Japanese translation in *Newsletter of the Japanese Society for Plant Physiology* 11 (2002), 51–82.

"Zur Konstruktion des Amateurs in der Botanik des 19. Jahrhunderts. Julius Sachs versus Charles Darwin," in E. Straub (ed.), *Dilettanten und Wissenschaft. Zur Geschichte eines wechselvollen Verhältnisses* (Amsterdam/ Atlanta: Rodopi, 1996), pp. 95–122.

"Molekularbiologie. Disziplin oder transdisziplinäre Bewegung?" Biologisches Zentralblatt 113 (1994) 99–105.

"Architektur der Proteine. Strukturforschung am Laboratory of Molecular Biology in Cambridge," in M. Hagner, H.-J. Rheinberger and B. Wahrig-Schmidt (eds), *Objekte, Differenzen und Konjunkturen. Experimentalsysteme im historischen Kontext* (Berlin: Akademie Verlag, 1994), pp. 181–200.

"Illustrations, instruments, skills, and laboratories in nineteenth-century German botany," in R. Mazzolini (ed.), Non-Verbal Communication in Science Prior to 1900 (Florence: Olschki, 1993), 529–562 (revised German translation "Sehen und Aufzeichnen in der Botanik des 19. Jahrhunderts," in M. Wetzler and H. Wolf (eds), Visuelle Realitäten (München: Fink Verlag, 1994),, pp. 121-144.

"Graphical method and discipline: self-recording instruments in nineteenth-century physiology," *Studies in the History and Philosophy of Science* 24 (1993) 267–291. [German version "Die 'Methode der Kurven' in der Physiologie zwischen 1850 und 1900," in Michael Hagner and Hans-Jörg Rheinberger (eds), *Die Experimentalisierung des Lebens. Experimentalsysteme in den biologischen Wissenschaften 1850/1950* (Berlin: Akademie Verlag, 1993), pp. 28–49; repr. in M. Hagner (ed.), *Ansichten der Wissenschaftsgeschichte* (Frankfurt: Fischer Taschenbuchverlag, 2001), pp. 161–188.]

"The art of experimenting in nineteenth-century German botany," Walther Rathenau Program in the History of Science and Technology, Multidisciplinary Discussion Papers no. 21, Berlin 1990.

"Lokales Wissen und standardisierte Praktiken. Vernunftkritische Überlegungen zu neueren Ansätzen in der Wissenschaftsgeschichte," in C. Menke and M. Seel (eds), Zur Verteidigung der Vernunft gegen ihre Liebhaber und Verächter (Frankfurt: Suhrkamp, 1993), pp. 66–83.

"Die Handschrift der Natur. Selbstschreibende Geräte in der Physiologie des 19. Jahrhunderts," in Der Druck des Wissens. Geschichte und Medium der wissenschaftlichen Publikation (Wiesbaden: Reichert, 1991), 21–22.

(With A. Dally and R. Kollek) Experimente mit der Evolution (Freiburg: Öko-Institut, 1991).

"Die Auflösung der cartesianischen Begriffswelt. Zur literarischen Form bei Merleau-Ponty," in G. Gabriel and C. Schildknecht (eds), *Literarische Formen der Philosophie* (Stuttgart: Metzler, 1990), pp. 166–177.

"Il mercato della scienza," in Scienza Esperienza (Milano) 4, no. 40 (1986), 9.

"Heidelberg: si discute di ingegneria genetica," Scienza Esperienza (Milano) 4, no. 36 (1986,),22.

"Allergien im Haushalt," in Christiane Grefe (ed.), Allergien. Leiden an der Umwelt (Hamburg: Konkret, 1985), pp. 84–96.

Co-author of Chemie im Haushalt, ed. Öko-Institut Freiburg et al. (Reinbek: Rowohlt, 1984).

(with A. de Santis, B.A. Melandri und A. Baccarini Melandri), "Oxydative Phosphorylation and Proton Translocation in a Lipoate-Deficient Mutant of Escherichia Coli," *Febs Letters* 97 (1979) 293–295.

Entries in New Dictionary of Scientific Biography, New Dictionary of National Biography, Reader's Guide to the History of Science, Reader's Guide to British History, Enzyklopädie Philosophie und Wissenschaftstheorie

Book Reviews

D. B. Paul and J. P. Brosco, The PKU Paradox: A Short History of a Genetic Disease, Isis, 105 (2014), 872.

H. Stevens, Life out of Sequence: A Data-Driven History of Bioinformatics, *Journal of the History of Biology*, 47 (2014), 495-496.

P. Doing, Velvet Revolution at the Synchroton: Biology, Physics, and Change in Science, Isis 101 (2010), 688-689.

Ronald E. Doel and Thomas Söderqvist (eds.), The Historiography of Contemporary Science, Technology, and Medicine: Writing Recent Science in *The British Journal for the History of Science* 41(2008), 127 - 129

S. Lindee, Moments of Truth in Genetic Medicine (John Hopkins University Press, 2005), Isis 98 (2007), 213-214.

A. Brown, J. D. Bernal: The Sage of Science (Oxford University Press 2005), Science 312 (2006), 849–850.

K. Radar, Making Mice: Standardizing Animals for American Biomedical Research, 1900-1955 (Princeton University Press 2004), *Journal of the History of Medicine and Allied Sciences* 61 (2006), 107–109.

P. Rabinow, French DNA: Trouble in Purgatory (Chicago: Chicago University Press, 1999), Annals of Science 60 (2003), 209–211.

B. Maddox, Rosalind Franklin: The Dark Lady of DNA (HarperCollins 2002), Microbiology Today 30 (Feb 2003), 46.

A. Creager, The Life of a Virus: Tobacco Mosaic Virus as an Experimental Model, 1930–1965 (Chicago University Press, 2002), *Science* 296 (2002), 663.

E. Edelson, Francis Crick & James Watson and the Building Blocks of Life (New York: Oxford University Press 1998), *Journal of the History of Biology* 34 (2001), 411–413.

W. Summers, Félix d'Herelle and the Origins of Molecular Biology (Yale University Press, 1999). Social History of *Medicine* 14 (2001), 581–582.

N. Rasmussen, Picture Control: the Electron Microscope and the Transformation of Biology in America, 1940–1960 (Stanford University Presss, 1997), *Isis* 91(2000), 400–401.

M. Morange, A History of Molecular Biology (Harvard University Press, 1998), Isis 90 (1999), 619-621.

F. L. Holmes, Hans Krebs. Vol. I: The Formation of a Scientific Life 1900–1933 (Oxford University Press, 1991), Annals of Science 51 (1994) 294–295.

K. Lorenz and F. Wuketits (eds), Die Evolution des Denkens (München 1983), Biologie in unserer Zeit 14 (1984) 63.

R. Spaemann/ R. Löw, Die Frage Wozu (München 1981), Biologie in unserer Zeit 13 (1983) 126.

F. Wuketits, Biologie und Kausalität (Berlin 1981), Biologie in unserer Zeit 12 (1982) 125–126.

Talks and invited lectures (in the last ten years)

September 2024

"Global and regional scales: strontium-90 as the first global pollutant," in symposium on Ontologies, transits, displacements, European Society for the History of Science meeting, Barcelona

September 2023

Panelist on roundtable "Reflections on the Recombinant DNA Controversy," at meeting Recombinant DNA: Fifty Years of Discovery and Debates and on roundtable "Framing the History of rDNA" at the post-meeting workshop on the History of Recombinant DNA, Cold Spring Harbor Laboratory

August 2023

"The postwar fortunes of biophysics," at Crossing the Disciplinary Boundaries of Physics: Niels Bohr Centennial Celebrations, Niels Bohr Institute, Copenhagen

July 2023

"Masks, birds, and explosion diagram," (with Ellen Pearlstein) at workshop Fibers of Existence - Disordering Animals, Max-Planck Institute for History of Science, Berlin

June 2023

"Heredity under the Microscope," seminar talk, University of Bielefeld, Germany

June 2023

"Towards a European research policy: EMBO, Asilomar, and the politics of scientific expertise," (with Francesco Cassata) at conference Engineering Life: Regulating Science, Risks, and Society in Europe, Rice University. Global Paris Center, France

June 2023

"Collecting data on a global scale: UNSCEAR and the making of environmental data," at workshop The Social Life of Data, Château de la Bretesche, Missillac, France

January 2023

"From genomes to microbiomes: on historical narratives and why they matter," Ca' Foscari, Venezia

Nov/Dec 2022

"Animal Materialities as Multiple: Historical Problems in 'Reading Animals'," panel contribution, Max-Planck Institute for the History of Science, Berlin

Nov 2022

"Skulls to humans: reconfigurations of biological anthropology in the post-war decades," commentary, History of Science Society Annual Meeting, Chicago

July 2022

"Machines of Distrust - The Fabric of Digital Cultures," podium discussion, Thomas Mann House, Los Angeles

May 2022

"In Search of Truth: Truth and science," panel discussion with Student Council, Wende Museum, Los Angeles

April 2022

"Heredity under the Microscope," invited lecture at Cell and Developmental Biology Club, UCLA.

April 2022

"Of some paradoxes in the historiography of molecular biology," workshop History and Historiography of the Life Sciences: Traces of Hans-Jörg Rheinberger, Max-Planck Institute for the History of Science, Berlin

January 2022

"Rendering the molecular world," Virtual Witnessing workshop, Caltech.

November 2021

"Heredity under the Microscope," Center for Science, Technology, Medicine & Society, UC Berkeley.

September 2021

"Heredity under the Microscope," book talk at Science Technology and Innovation, University of Edinburgh.

September 2021

"History of medicine and history of technology: the technical, the social and the postwar trajectory of WHO," New Cambridge History of Technology workshop, Max-Planck Institute for History of Medicine, Berlin.

February 2021

"Covid-19: Rethinking the nature of the viruses," Coronavirus Multispecies Reading Group, online.

December 2020

"Heredity under the Microscope: Chromosomes and the Study of the Human Genome," Cedars-Sinai History Group, Los Angeles.

Nov 2020 Book event, UCLA Colloquium History of Science, Technology and Medicine

August/September 2020

"Intangible yet all pervasive," at session Historical Ontologies, European Society for the History of Science Virtual Meeting, University of Bologna.

July 2020

"Heredity under the Microscope," Author Interview: Q&A session at Global Digital Festival of Science organized by the British Society for the History of Science.

April 2020

"DNA and History" at Humanities of the Future: Perspectives from the Past and The Present, Institute for Advanced Studies in the Humanities 50th Anniversary Celebrations. Canceled (publication planned).

April 2020

"Heredity under the Microscope," book talk at Science, Technology and Innovation Studies, University of Edinburgh. Postponed

January 2020

"Vision 2020: Transdisciplinary research and the new LMB," at workshop From multidisciplinary collaborations to interdisciplinary communities, King's College London

November 2019

"Cooperation and competition in the early history of the human genome project: narratives and counternarratives," keynote for workshop Shoulder to Shoulder? Cooperation and Competition in the Life Sciences, Ludwig-Maximilian Universitaet Munich

September 2019

"Reading the book by ignoring the words" (final commentary), Protein & Fibers Micro-workshop IV. Max Planck Institute for the History of Science, Berlin.

July 2019

"Of microscopes and molecules," session Revisit & Undone: Fresh Perspectives on Molecules and Life in the 20th Century, ISHPSSB 2019, Oslo.

July 2019

"Beautiful or dull? Studying chromosomes under the microscope," session Emotions of Observation: Affective Investments in Visualized Research Objects, History of Science Society Annual Meeting, Utrecht.

June 2019

"Betwixt and between: reconstructing animal histories with teeth" (commentary), Protein & Fibers Micro-workshop III. Max Planck Institute for the History of Science, Berlin.

May 2019

"Heredity under the Microscope" (presentation of book manuscript), special seminar organized by Cermes3 and Centre Alexandre Koyré, Paris

May 2019

"Normalization and the search for genetic differences in human populations", at seminar "La naturalisation des différences: l'hérédité contre l'environnement ? (XIXe-XXIe siècle)", directed by Luc Berlivet, Ecole des Hautes Etudes en Sciences Sociales, Paris.

May 2019

"Science and critique in the age of Trump", seminar at Cermes3, Paris.

May 2019

"Genetics and global public health: towards a historical framework", at seminar "Science, Medicine and Technology in the 20th Century", directed by J.P. Gaudillière as part of the Master Santé- Populations -Politiques Sociales, Ecole des Hautes Etudes en Sciences Sociales, Paris.

April 2019

"Normalization and the search for variation in the human genome," Fellows' Meetings, Institute for Society and Genetics, UCLA

November 2018

"Genetics and the study of human variation in the twentieth century," Paris Diderot, France

October 2018

"... as astonishing as a photograph of the back of the moon: chromosomes and the study of the human genome", Molecular Biology Institute, UCLA

January 2018

'John Kendrew and myoglobin: protein structure determination in the 1950s,' Structural Group, Molecular Biology Institute, UCLA.

December 2017

'Genetics and global public health: towards a historical framework,' keynote at international workshop Genetic Medicine, Genomics and Global Health, organized as part of the ERC Project 'From international public health to global health', CERMES, Paris.

November 2017

'John Kendrew and myoglobin: protein structure determination in the 1950s,' at conference 'Revolutions in Structural Biology' organized to celebrate the 100th Anniversary of the birth of Sir John Kendrew, EMBL, Heidelberg.

July 2017

'Special journal issues and electronic publishing,' at symposium 21st century challenges for history of science and history of medicine journals, 25th International Congress of History of Science and Technology, Rio de Janeiro, Brazil.

July 2017

'Human chromosomes in the atomic age,' at session Global perspectives on genetics: past and present, ISHSSP bi-annual meeting, Sao Paulo, Brazil.

July 2017

".... more exciting than the back of the moon": chromosomes and the study of human heredity,' Fellows' meeting, Institute for Advanced Studies in the Humanities, University of Edinburgh

June 2017

Michael Court Brown and the establishment of human genetics in Edinburgh, at workshop: The history of genetics in Edinburgh, Institute for Advanced Studies in the Humanities, University of Edinburgh

April 2017

'Of chromosomes and DNA', ISG Fellows' meeting, UCLA.

March 2017

'Radioactive diet: food, metabolism and the environment, c. 1960,' at workshop Risk on the table: Food, health, and environmental exposures, Princeton University.

December 2016

'Normalization and the search for variation in the human genome,' at workshop Southern Oceanic Topologies and Genealogies: Genetic Explorations of the Pacific and Australasia, University of Sydney.

November 2016

'Things and data in recent biology', at conference Histories of data and the database, Huntington Library.

November 2016

"As astonishing as a picture of the back of the moon": chromosomes and the study of human heredity', seminar talk, Mississippi State University.

November 2016

'Imagining the science archives of the future: a more active role for historians?' at session: Science Archives and Science Historians in the 21st Century, History of Science Society Annual Meeting Atlanta.

June 2016

'The introduction of cytogenetic testing in the clinic,' at Genetic tests and diagnosis, mini-symposium in context of Making Genomic Medicine project, Science, Technology and Innovation Studies, University of Edinburgh.

June 2016

'Radiation, international organizations and the Cold War', keynote speaker at workshop Claiming authority, producing standards: the IAEA and the history of radiation protection, Vienna.

December 2015

Populations of Cognition: Interconnected Histories of Human Variation in Latin America, final commentator, UNAM, Mexico City.

November 2015

'Heredity Data. Documenting Human Inheritance from the Rise of Eugenics to the Second World War', (session commentator), History of Science Society meeting, San Francisco, CA.

November 2015

"It is not enough, in order to understand the Book of Nature, to turn over the pages looking at pictures. Painful though it may be, it will be necessary to read the text", keynote at workshop Picturing the body in the laboratory: genesis and topicality of evidence-orientated imaging in institutions of the long 19th century and today, Humboldt Universitaet.

April/ Mai 2015

'From Molecular Biology to the HGP', at workshop Capturing the History of Genomic, NIH/NHGRI, Rockeville, MD.

April 2015

'Medicine in Context: Biomedical Body and Knowledge Production' (commentator), Thinking Gender conference, UCLA Center for Study of Women.

April 2015

'Heredity and the study of human populations: surveys and registries as tool for genetic control, c. 1960', seminar series Fabriquer le vivant? Centre Koyré, CNRS/EHESS, Collège de France, site Ulm, Paris.

March 2015

'A historian of science's perspective on genetic history' at workshop Integrating Genomics and Human History: Challenges and Opportunities, Institute for Advanced Studies, Princeton.