

# Daniel Liu

## Curriculum vitae

Ludwig-Maximilians-Universität München  
Historisches Seminar, Abt. Wissenschaftsgeschichte  
Geschwister-Scholl-Platz 1  
80539 Munich, Germany  
[d.liu@lmu.de](mailto:d.liu@lmu.de), [dan@dan-liu.net](mailto:dan@dan-liu.net)  
<https://dan-liu.net>

### Positions and fellowships

- Current** Principal Investigator, DFG Project [463389772](#) “Living Matter Under the Microscope,” and Research Associate (*Wissenschaftlicher Mitarbeiter*) at the [Chair for History of Science](#), Historisches Seminar, Ludwig-Maximilians-Universität München
- Mar–Dec 2021 Visiting Postdoctoral Fellow, Max-Planck-Institut für Wissenschaftsgeschichte (MPIWG) Department III, Berlin, Germany.
- July 2020–Feb 2021 Digital Humanities Consultant, “Oral Histories of Biology, Medicine, and Pandemic Response,” Cold Spring Harbor Laboratory Library & Archives, New York.
- 2018–2020 Research Fellow, ICI Berlin Institute for Cultural Inquiry
- 2016–18 Andrew W. Mellon Postdoctoral Fellow in Biohumanities, University of Illinois at Urbana-Champaign, Illinois Program for Research in the Humanities. Samantha Frost, supervisor.
- Nov 2017 MBL McDonnell Scholar, Marine Biological Laboratory, Woods Hole (MBL)
- May–July 2017 Visiting Postdoctoral Fellow, Max-Planck-Institut für Wissenschaftsgeschichte, Department II.

### Education

- PhD, 2016 History of Science, Medicine, and Technology. University of Wisconsin–Madison, Lynn K. Nyhart, advisor.
- Dissertation: “Visions of Life and Matter: Protoplasm, Scientific Microscopy, and the Origins of Molecular Biology, 1839–1941.”
  - Examination fields in history of biology, history of the physical sciences, history and philosophy of technology
  - PhD minor in History.
- MA, 2011 History of Science, Medicine, and Technology. UW-Madison. Thesis, “The Shoggoth of Science: Protoplasm and the Biological Disciplines, 1880–1940.”
- BA, 2008 History. Reed College, Portland, Oregon. Thesis, “The Phenomenon of Nature: A History of the Natural World of Karl Löwith and Hans Jonas.” Joel Revill, advisor.

### Publications

(P = *peer reviewed*)

- Feb 2021 with Mathias Grote, Lisa Onaga, Angela N. H. Creager, Soraya de Chadarevian, Gina Surita, and Sarah E. Tracy, “The Molecular Vista: Current Perspectives on Molecules and Life in the Twentieth Century,” *History and Philosophy of the Life Sciences* 43, no. 1, doi:[10.1007/s40656-020-00364-5](https://doi.org/10.1007/s40656-020-00364-5). (P)
- Jan 2021 “Introduction to Part IV: Towards a Renewed Historical Materialism,” in *Materialism and Politics*, ed. Bernardo Bianchi, Émilie Filion-Donato, Marlon Miguel, and Ayşe Yuva, Cultural Inquiry 20 (ICI Berlin Press), 271–76.

- Oct 2020 “Scaling from Weather to Climate,” in *Weathering*, ed. Christoph Holzhey and Arnd Wedemeyer, Cultural Inquiry 17 (ICI Berlin Press), 93–118.
- Nov 2019 “The Artificial Cell, the Semipermeable Membrane, and the Life That Never Was, 1864–1901,” *Historical Studies in the Natural Sciences* 49, no. 5: 504–555, doi:[10.1525/hsns.2019.49.5.504](https://doi.org/10.1525/hsns.2019.49.5.504). (P)
- Jan 2018 “Heads and Tails: Molecular Imagination and the Lipid Bilayer, 1917–1941,” in *Visions of Cell Biology: Reflections Inspired by Cowdry’s General Cytology*, ed. Karl Matlin, Jane Maienschein and Manfred Laubichler, (Univ. of Chicago Press), 209–45. (P)
- Nov 2017 “The Cell and Protoplasm as Container, Object, and Substance, 1835–1861,” *Journal of the History of Biology* 50, no. 4: 889–925, doi:[10.1007/s10739-016-9460-9](https://doi.org/10.1007/s10739-016-9460-9). Awarded the 2020 Everett Mendelsohn Prize for the best article published in *JHB* in the preceding three years (doi:[10.1007/s10739-020-09593-7](https://doi.org/10.1007/s10739-020-09593-7)). (P)
- June 2017 Essay review, “This Is the Synthetic Biology That Is,” *Studies in History and Philosophy of Biological and Biomedical Sciences* 63: 89–93, doi:[10.1016/j.shpsc.2017.03.002](https://doi.org/10.1016/j.shpsc.2017.03.002). Review of: Sophia Roosth, *Synthetic: How Life Got Made* (University of Chicago Press, 2017); and Andrew S. Balmer, Katie Bulpin, and Susan Molyneux-Hodgson, *Synthetic Biology: A Sociology of Changing Practices* (Palgrave Macmillan, 2016).
- June 2017 with Amanda DeMarco, “A Flâneur, But So What?: Franz Hessel and Objectivity in Weimar Berlin,” *Los Angeles Review of Books Blog*, June 26, 2017. <http://blog.lareviewofbooks.org/essays/flaneur-franz-hessel-objectivity-weimar-berlin/>
- March 2017 with Amanda DeMarco, “Paul Scheerbart and the Art of Science,” *Los Angeles Review of Books*, March 18, 2017. <https://lareviewofbooks.org/article/paul-scheerbart-and-the-art-of-science/>
- Under review* “Confronting the Limits of Optical Interpretation: Microscopic Details After the Abbe Diffraction Limit, 1874–1939,” in *Milieus of Minutiae*, ed. Elizabeth Brogden and Christiane Frey (University of Virginia Press). *Peer review expected 2022*.

## Prizes and grants

- 2021–24 Deutsche Forschungsgemeinschaft (DFG) third-party funding grant for principal investigators, project number [463389772](https://www.dfg.de/en/DFG-Grants/463389772): €302,295 for 36 months.
- 2020 Everett Mendelsohn Prize, for the best article published in the *Journal of the History of Biology* in the preceding three years, for “The Cell and Protoplasm as Container, Object, and Substance, 1835–1861.” (Citation: Karen Rader and Marsha Richmond, “2020 Everett Mendelsohn Prize,” *Journal of the History of Biology* 53, no. 1 (March 2020): 1–3, doi:[10.1007/s10739-020-09593-7](https://doi.org/10.1007/s10739-020-09593-7).)
- 2015–16 UW-Madison Chancellor’s Fellowship.
- 2015 Mellon-Wisconsin Summer Fellowship, award for dissertation writing and research.
- 2014–15 Charles C. Price Dissertation Fellowship, Chemical Heritage Foundation (CHF), Philadelphia, Pennsylvania.
- May 2013 Research grant, Othmer Library of Chemical History, CHF.
- Fall 2011 “Honored Instructor Award” in undergraduate teaching, UW-Madison.
- 2009–10 John Neu Distinguished Graduate Fellowship grant, UW-Madison Dept. of History of Science.

## Selected conference papers, invited lectures, and workshops

- May 2022 “On the Historiography of the Cell” workshop, MBL Woods Hole.
- Mar 2022 “Learning Light Controls: Theory, Application, and Correction and the Zeiss Vacation Courses for Scientific Microscopy, 1907-1924,” Indiana University Sawyer Seminar series “Rigor: Experimental Control, Analysis, and Synthesis in Historical and Systematic Perspective,” organized by William Newman and Jutta Schickore.
- Jul 2021 “The Cell Membrane as Exemplary Boundary: 10 Historical Examples of Membrane Function, 1802–Today,” part of session “Borderline Confusion: Unsettled Boundaries in the Life Sciences,” organized by Alejandro Fábregas-Tejeda and Jan Baedke, International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), Cold Spring Harbor Laboratory, New York.
- Apr 2021 “Learning Microscopy on Vacation: The Zeiss *Ferienkurse*, 1907–1924,” Chéz Paul discussion series, Historisches Seminar LMU München.
- Jan 2020 Panel discussant, “Art of Encounter: On Non-Human Art Production,” with artist Semâ Bekirović and philosopher Michael Marder; organized by Semâ Bekirović for the exhibition “Reading by Osmosis: Nature Interprets Us” with the Zentrum für Kunst und Urbanistik (ZK/U) and ICI Berlin.
- Dec 2019 Invited lecture, “Microscopic Imagination and Microtechnique After the Abbe Diffraction Limit, 1874–1939,” Univ. Regensburg History of Science Colloquium.
- Oct 2019 with Robert Meunier, “Life is Like Chemistry, Only More Complicated: The Loeb School and the Temperature Coefficient, 1900-1918,” part of workshop “Possibility and Certainty in Laboratory Environments,” ICI Berlin.
- July 2019 “Idioplasm, Plant Physiology, and the Heroic Age of Cytogenetics, 1858–1892,” part of session “Interfield Theories, Collaborations, and Organization in Heredity,” organized by Marsha Richmond, History of Science Society (HSS) meeting, Utrecht.
- July 2019 “Where does the History of Molecular Biology Begin?” part of session “Revisited & Undone: Fresh Perspectives on Molecules and Life in the 20<sup>th</sup> Century,” organized by Lisa Onaga and Mathias Grote, ISHPSSB, Oslo.
- May 2019 Invited paper, “Positivism vs. Molecular Imagination after the Abbe Diffraction Limit, 1874–1939,” presented at “Milieus of Minutae” conference, organized by Christiane Frey and Elizabeth Brogden, ICI Berlin.
- May 2019 Invited lecture, “Ideas of Life and Matter in the Aftermath of Protoplasm Theory” *Perspektiven der Wissenschaftsgeschichte*, Historisches Seminar der LMU München.
- August 2018 Invited lecture, “科学与社会的分离: 细胞膜历史中的编史学问题” (Dividing Science from Society: Historiographical Problems in the History of the Cell Membrane), Tsinghua University Department of the History of Science Lecture Series #15.
- May 2018 with Bonnie Mak, “Data Histories: Devices of Seeing, Describing, and Managing the World,” presented at symposium “The Classroom and the Future of the Historical Record,” School of Information Sciences, Univ. of Illinois at Urbana-Champaign.
- March 2018 Invited lecture, “Is it Pluralism, or is it Biophysics? Micellar Theory and the Philosophy of Science, 1858–1938,” Indiana University History and Philosophy of Science Colloquium Series.
- Nov 2017 “How the Artificial Cell Invented the Cell Membrane and Other Colloids, 1864–1935,” HSS annual meeting, Toronto. Session organizer, “Making and Knowing in the Biological Sciences.”
- Nov 2017 MBL McDonnell Scholarship and Workshop, “The Life Cycles of Microscopic Imaging in Biology,” MBL.

- Aug 2017 “Of Micelles and Molecules: Seven Lives of Non-Molecular Theories of Chemical Matter from 1858–1938,” 11th Intl. Conf. on the History of Chemistry, Trondheim.
- May 2017 Workshop participant, “A Century of Engineering Life: Cells and Organisms,” hosted by Arizona State Univ. and the MBL.
- Dec 2016 “Revisiting the ‘Dark Age of Biocolloidology’: Positivism and Reductionism in Interwar Biophysics,” presented at workshop, “New Styles of Thought and Practices in Early 20<sup>th</sup> Century Biology,” Ruhr University Bochum, Germany.
- Nov 2015 “The Biology of the Spherical Horse and the Molecular Orientation of Life, 1917–1941,” HSS annual meeting, San Francisco. Also presented at the Joint Atlantic Seminar for the History of Biology, Yale University, March 2015.
- Oct 2015 Workshop participant, “Revisiting Cowdry’s General Cytology: Looking Back to See Ahead,” MBL, Woods Hole.
- Sept 2015 “Seeing Cells Again: Molecular Vision at the Centenary of Cell Theory,” public lecture given as part of the “Seeing the Invisible” colloquium series hosted by the UW-Madison Program in the History of Science, Medicine, and Technology.
- July 2015 “Protoplasmic Structure and the End (?) of Cell Theory, 1882–1899,” ISHPSSB Montreal; and at Midwest Junto for the History of Science, UW-Madison, Apr 2015.
- Nov 2014 CHF Brown Bag Lunch lecture, “Molecules in Biology before Molecular Biology.”
- June 2013 Participant in the Ischia Summer School for the History of the Life Sciences, on “Creating Life: From Alchemy to Synthetic Biology,” Ischia, Italy.
- July 2011 “The Shoggoth of Science: Protoplasm and the Biological Disciplines, 1880-1940,” ISHPSSB, Salt Lake City.

### Conferences, workshops, and panels organized

- 2020 Organizer, “Context Collapse,” with author Ryan Ruby, ICI Berlin, May 27.
- 2019 Workshop co-organizer with Robert Meunier (Uni-Kassel), “Lab Environments: Spaces of Possibility and Certainty in Scientific Practice,” ICI Berlin, October 18.
- 2018 Symposium co-organizer with Rosine Kelz, “Beyond Therapy and Enhancement: Restructuring Ethical Debates on Biotechnological Innovation,” hosted by the Biohumanities Research Group at the University of Illinois, March 30.
- 2017 Session organizer, “Making and Knowing in the Biological Sciences,” HSS annual meeting, Toronto, November 11.
- 2016 Member of organizing committee, American Institute of Physics History Center Early Career Conference; hosted by AIP, Annapolis, Maryland, April 6–10.
- 2015 Member of organizing and programming committees, 58th annual Midwest Junto for the History of Science; hosted by University of Wisconsin–Madison, April 17–19.

### Teaching positions

- Spring 2018 Hum 395, “Imagining Molecular Reality,” University of Illinois at Urbana-Champaign. Honors undergraduate seminar. How is it that invisible things like molecules exert a powerful influence on our ideas about who we are, our relationship to the environment, and our treatment of one another? This course examines the development, visual culture, and political impact of atomism and molecular theory, from Democritus to DNA forensics.

- Spring 2014 Teaching Assistant, History of Science/Medical History 133: “Biology & Society, 1950–Today”; Prof. Nicole Nelson, UW-Madison. History of biology and biotech science governance, public participation in the life sciences, and the role of biological theories in human self-understanding.
- Spring 2013 Associate Lecturer, Interdisciplinary Agriculture 375: “Research Past and Present at the UW College of Agriculture and Life Sciences.” A team-taught course on the history and research at UW CALS, emphasizing the connections between current and past life sciences and agricultural research. Developed course structure for future iterations of the class.
- Spring 2012 Teaching Assistant, History of Science 202: “The Making of Modern Science”; Prof. Richard Staley, UW-Madison. History of the natural and human sciences from Newton to Einstein, with emphases on scientific institutions, precision measurement, and ideas of time and progress.
- Fall 2010, 2011, 2013 Teaching Assistant, History of Science/Integrated Liberal Studies 201: “The Origins of Scientific Thought”; Prof. Florence Hsia, UW-Madison. History of Western science from Ancient Greece to Isaac Newton, with emphases on metaphysics, science and religion, scientific institutions, anatomy, and natural history.

### Professional service, memberships and activities

- since 2022 Member of [editorial board](#), *Journal of the History of Biology*
- since 2019 Member of Biological Engineering Collaboratory, <https://bioengcoll.org>
- since 2011 Member of History of Science Society (HSS)
- since 2011 Member of International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB)
- 2017–20 Book reviews editor for H-Net group H-Sci-Med-Tech
- 2017–19 Member of American Physics Society Forum on the History of Physics
- 2015–19 Member of Biological Sciences working group, Consortium for History of Science, Technology and Medicine, Philadelphia (CHSTM)
- 2013–19 Member of Physical Sciences working group, CHSTM
- 2015–17 Book reviews editor for H-Net group H-PhysicalSciences
- 2011–16 Member of Midwest Junto for the History of Science
- 2015–16 Co-president of the History of Science, Medicine, and Technology Graduate Council, registered student group of the UW-Madison student body (ASM)
- 2013–15 Membership Secretary, Teaching Assistants’ Association (TAA), UW-Madison graduate assistants’ union (AFT Local 3220, AFL-CIO)
- 2013, 2014 Organized booth and table at Darwin Day public event, hosted by the UW-Madison Wisconsin Institutes of Discovery.
- 2013–14 Grad member Dept. History of Science’s Community and Alumni Relations Cmte.
- 2011–12 Department graduate assistant union steward, TAA
- 2012 Graduate student faculty liaison, Dept. of History of Science

*(last updated June 2022)*