

CURRICULUM VITAE

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Date of birth: February 22, 1984
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CURRENT POSITION

2021– Assistant Professor and Ph.D. Supervisor, Department of History of Science, Technology and Medicine, Peking University

EDUCATION

2016 The University of Chicago, Ph.D. History of Science (CHSS)
2010 The University of Chicago, M.A. History of Science (MAPSS)
2009 Institute for Advanced Study of Pavia
Diploma di Licenza, Class of Science and Technology
2009 University of Pavia, “Summa cum Laude” (110/110 e lode) M.Sc. Physics
2006 University of Pavia, “Summa cum Laude” (110/110 e lode) B.Sc. Physics

EMPLOYMENT RECORD

2017–21 Research Fellow, The University of Chicago
2015–18 Lead Data Analyst (Galileo Correspondence Project), Stanford University

FIELDS OF SPECIALIZATION

- Historical development of molecular simulations, 1960s-2000s
- Computational statistical mechanics
- Cross-disciplinary methods in theoretical physics, molecular biology, materials science

PUBLICATIONS

- 14 — “Melting of Silicon, 1985–1989: A New Era of Molecular Simulations” (Under Review, *Technology & Culture*).
- 13 — “Theory & Simulation: Sidney Yip’s Role in Driving Materials Science and Scientific Dialogue in the Cold War Era” (Under Review, *Historical Studies in the Natural Sciences*).
- 12 — “Free-Energy Calculations in Soft and Hard Matter: From Early Challenges to the Advent of Umbrella Sampling” (Accepted in *Archive for History of Exact Sciences*).
- 11 — “SHAKE and the Exact Constraint Satisfaction of the Dynamics of Semi-Rigid Molecules in Cartesian Coordinates, 1973–1977,” *Archive for History of Exact Sciences*, 2023, 77:345–371, <https://doi.org/10.1007/s00407-023-00306-0>. Communicated by Olivier Darrigol.
- 10 — “The Emergence of Protein Dynamics Simulations: How Computational Statistical Mechanics Met Biochemistry” (with Benoît Roux and Giovanni Ciccotti), *European Physical Journal H: Historical Perspectives on Contemporary Physics*, 2022, 47: Article Number 13, <https://doi.org/10.1140/epjh/s13129-022-00043-y>.
- 09 — “The Universe: A Book Written in the Mathematical –and the Programming– Language,” *Il Nuovo Cimento C*, 2021, 44: Article Number 25, <https://doi.org/10.1393/ncc/i2021-21025-6>.
- 08 — “The Breakthrough of a Quantum Chemist by Classical Dynamics: Martin Karplus and the Birth of Computer Simulations of Chemical Reactions” (with Benoît Roux and Giovanni Ciccotti), *European Physical Journal H: Historical Perspectives on Contemporary Physics*, 2021, 46: Article Number 12, <https://doi.org/10.1140/epjh/s13129-021-00013-w>.
- 07 — “Sense Experiences and ‘Necessary Simulations:’ Four Centuries of Scientific Change from Galileo to Fundamental Computer Simulations” (with Benoît Roux and Giovanni Ciccotti), *KNOW: A Journal on the Formation of Knowledge*, 2020, 4:63–87, <https://doi.org/10.1086/708257>.
- 06 — “Newtonianism and Information Control in Rome at the Wake of the Eighteenth Century,” *Annals of Science*, 2020, 77:108–126, <https://doi.org/10.1080/00033790.2020.1714291>.
- 05 — “Talking about Secrets: The Hanford Nuclear Facility and News Reporting of Silence, 1945–1989,” in Felicity Mellor and Stephen Webster, eds., *The Silences of Science: Gaps and Pauses in the Communication of Science* (New York: Routledge, 2017), pp. 115–134.
- 04 — “The Work of the Roman Newtonians in the Italian Enlightenment,” *Viewpoint: Magazine of the British Society for the History of Science*, 2015, 108:8–9.
- 03 — “Corrado Gini and the Scientific Basis of Fascist Racism,” *Medicina nei Secoli Arte e Scienza*, 2014, 26:821–856.
- 02 — “Hanford and the middle ground between ‘knowing’ and ‘not knowing’,” *Bulletin of the Atomic Scientists*, “Voices of Tomorrow,” Oct. 31, 2013.
- 01 — “Die nukleare Anlagen von Hanford (1943–1987): Eine Fallstudie über die Schnittstellen von Physik, Biologie und die US-amerikanische Gesellschaft zur Zeit des Kalten Krieges,” in Christian Forstner and Dieter Hoffmann, eds., *Physik im Kalten Krieg* (Berlin: Springer Spektrum, 2013), pp. 77–87.

Encyclopedia Entries & Book Reviews

- 12 — Giovanni Battimelli, Giovanni Ciccotti, and Pietro Greco’s Computer Meets Theoretical Physics: New Frontier of Molecular Simulation, *Isis: A Journal of the History of Science Society*, 2022, 113:461–462.
- 11 — Hannah Marcus’ Forbidden Knowledge: Medicine, Science, and Censorship in Early Modern Italy, *Isis: A Journal of the History of Science Society*, 2022, 2:436–437.
- 10 — “Zucchi, Niccolò,” *Dizionario Biografico degli Italiani*. Enciclopedia Treccani (2021).
- 09 — “Zamboni, Giuseppe,” *Dizionario Biografico degli Italiani*. Enciclopedia Treccani (2021).
- 08 — “Margulis, Lynn,” in Hugh R. Slotten, ed., *Oxford Encyclopedia of the History of American Science, Medicine, and Technology* (New York and Oxford: Oxford University Press, 2014), Vol. 2, pp. 21–22.

- 07 — “Menard, Henry William,” in Hugh R. Slotten, ed., *Oxford Encyclopedia of the History of American Science, Medicine, and Technology* (New York and Oxford: Oxford University Press, 2014), vol. 2, pp. 78–79.
- 06 — Dom Paschal Scotti’s Galileo Revisited: The Galileo Affair in Context, *Reading Religion*, March 31, 2018, online.
- 05 — David Norbrook, Stephen Harrison, and Philip Hardie’s Lucretius and the Early Modern, *Renaissance Quarterly*, 2017, 70:249–251.
- 04 — Owen Gingerich’s God’s Planet, *The Quarterly Review of Biology*, 2015, 90:315–316.
- 03 — Keith Parsons’ It Started with Copernicus: Vital Questions about Science, *The Quarterly Review of Biology*, 2015, 90:201.
- 02 — Crystal Hall’s Galileo’s Reading, *Annali d’Italianistica*, 2015, 33:459–461.
- 01 — Richard Dawkins’ The Magic of Reality: How We Know What’s Really True, *The Quarterly Review of Biology*, 2012, 87:402.

TEACHING

- *History of Western Science & Technology* (3-Credit Graduate Course)
- *Science, Technology and Society* (2-Credit Graduate Course)
- *Historical Methods* (2-Credit Graduate Course)

SELECTED TALKS

- “Sidney Yip and the Integration of Molecular Simulations into Materials Science: The Pioneering Period, 1965–1985” - School of Physics, Peking University, August 2023
- “The Emergence of Computational Statistical Mechanics and its Early Applications in Theoretical Physics and Molecular Biology, 1950s–1980s” - Department of History of Science, Technology and Medicine, Peking University, December 2022
- “Multiple Linear Regression, Partial and Multiple Correlation in Quantitative Historical Research” - Department of Information Management, Peking University, May 2022
- “From Quantum Chemistry to Classical Physics: Martin Karplus and the Computational Approach to the Three-Body System in the (H, H₂) Reaction” - Italian Physical Society, Online Meeting, September 2021

I have lectured at the University of Tokyo, Kyoto University, Harvard University, the University of Cambridge, Imperial College London, among others. For more details, please visit my website.

RESEARCH GRANTS

- 北京市自然科学基金委员会 (10/2023-09/2025): 200,000 RMB
- 北京海外学人中心 (03/2023-03/2024): 150,000 RMB
- 北京大学 (01/2022-12/2025): 200,000 RMB

AWARDS

- “Excellence Award” in University Teaching (北京大学青年教师教学基本功比赛), Peking University (2023)
- Best Communication in the History of Physics, Italian Physical Society (2020)
- Ernst W. Puttkammer Resident of the Year Award, The University of Chicago (2013, 2016)
- Min-Sun and Anita Cheng Fellowship, The University of Chicago (2009)
- Special Award, European Union Contest for Young Scientists (2003)
- First Prize, Italian National Contest for Young Scientist, FAST Milan (2003)