Joel David Hamkins

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Academic appointments

University of Notre Dame, 2022–
- John Cardinal O'Hara Professor of Logic, Department of Philosophy
- Concurrent Professor of Mathematics, Department of Mathematics

Peking University, Beijing, China 2025–2029 (part year appointment, usually June/July)
- Guest Chair Professor, Department of Philosophy 2026–2029
- Visiting Professor, Logic Group June 2025

Fudan University, Shanghai, China Fudan Scholar, July 2025

University of Oxford, 2018–2025
- Professor of Logic, 2018–2022, Faculty of Philosophy, University of Oxford
- Sir Peter Strawson Fellow in Philosophy, 2018–2022, University College, Oxford
- Praelector in Philosophy, 2018–2022, University College, Oxford
- Associate Faculty Member, 2022–2024, Faculty of Philosophy, University of Oxford
- Affiliated Faculty, 2018–2022, Mathematical Institute, University of Oxford
- Departmental Visiting Research Fellow 2023–2025, Mathematical Institute, Oxford

IUSS Scuola Universitaria Superiore Pavia, Italy, Visiting Scholar, September 2022

The City University of New York, 1995–2021, with various leaves
- The Graduate Center of CUNY
  - Doctoral Faculty in Mathematics since 1997
  - Doctoral Faculty in Computer Science since 2002
  - Doctoral Faculty in Philosophy since 2013
- College of Staten Island of CUNY, Mathematics
  - Distinguished Professor 2020, Full Professor since 2003, tenure granted 2000
  - Associate Professor 1999-2002, Assistant Professor 1995-1998

Isaac Newton Institute of Mathematical Sciences, Cambridge, U.K.
- Visiting Fellow, August–October, 2015
- Visiting Fellow, March–April, June, 2012

New York University
- Visiting Professor of Philosophy, January–June, 2015
- Visiting Professor of Philosophy, July–December, 2011

Fields Institute, University of Toronto
- Scientific Researcher, August, 2012

University of Vienna, Kurt Gödel Research Center, Guest Professor, June, 2009

Universiteit van Amsterdam, Institute for Logic, Language & Computation
- Visiting Professor, April–August 2007
- NWO Bezoekersbeurs visiting researcher, June–August 2005, June 2006

Universität Münster, Institut für mathematische Logik, Germany
Mercator-Gastprofessor, DFG, May–August 2004

Georgia State University, Associate Professor Mathematics and Statistics, 2002-2003

Carnegie Mellon University, Visiting Associate Professor of Mathematics, 2000-2001

Kobe University Graduate School of Science & Technology, Japan
JSPS Research Fellow, January–December 1998

University of California at Berkeley
Visiting Assistant Professor of Mathematics, 1994-1995

Academic credentials

Ph.D. in Mathematics, May 1994, University of California, Berkeley
C.Phil. in Mathematics, December 1991, University of California, Berkeley
B.S. in Mathematics, May 1988, California Institute of Technology
M.A. (by resolution), September 2018, University of Oxford

Areas of specialization

Logic and the Philosophy of Mathematics, including mathematical logic, philosophical logic, set theory, the philosophy of set theory, the philosophy of computability, infinitary computability, the logic of games, infinitary game theory, modal logic, mereology, potentialism, categoricity, definability, strong axioms of infinity, infinitary utilitarianism.

Books

[1] Joel David Hamkins. *The Book of Infinity*. In production. MIT Press, 2026.

[2] Joel David Hamkins. *Lectures on the Philosophy of Mathematics*. MIT Press, 2021. ISBN: 9780262542234. https://mitpress.mit.edu/books/lectures-philosophy-mathematics.

[3] Joel David Hamkins. *Proof and the Art of Mathematics: Examples and Extensions*. MIT Press, 2021. ISBN: 9780262542203. https://mitpress.mit.edu/books/proof-and-art-mathematics-1.

[4] Joel David Hamkins. *Proof and the Art of Mathematics*. Winner of MAA 2024 Daniel Solow Author's Award. MIT Press, 2020. ISBN: 978-0-262-53979-1. https://mitpress.mit.edu/books/proof-and-art-mathematics.

Edited volume

[5] N. Greenberg, J. D. Hamkins, D. R. Hirschfeldt, and R. G. Miller, eds. *Effective Mathematics of the Uncountable*. Vol. 41. Cambridge University Press, ASL Lecture Notes in Logic, 2013. ISBN: 9781107014510. http://wp.me/s5M0LV-emu.

Books in preparation

[6] Joel David Hamkins. *Ten Proofs of Gödel Incompleteness*. book in preparation, currently 129 pages. 2026.

[7] Joel David Hamkins. *The Surreal Numbers*. book in preparation, currently 172 pages, serialized on Infinitely More. 2026. https://www.infinitelymore.xyz/t/surreal-numbers.

[8] Joel David Hamkins. *Infinite Games, Frivolities of the Gods*. book in preparation, 376 pages, Infinitely More. 2025. https://www.infinitelymore.xyz/s/infinite-games.

[9] Joel David Hamkins. *A Panorama of Logic*. book in preparation, currently 425 pages, serialized on https://www.infinitelymore.xyz/s/panorama-of-logic. 2024.

Published articles

[10] Joel David Hamkins. "The modal logic of arithmetic potentialism and the universal algorithm". *Philosophia Mathematica* 34.3 (2026). to appear. DOI: 10.1093/philmat/nkag001. arXiv:1801.04599.

[11] Joel David Hamkins. "Throwing darts at the real line". *Notices Amer. Math. Soc.* 73.4 (2026). Short Stories column, to appear. DOI: 10.1090/noti3315.

[12] Joel David Hamkins, Russell Miller, and Julia Kameryn Williams. "Forcing as a computational process". *Computability* (2026). to appear. arXiv:2007.00418. http://jdh.hamkins.org/forcing-as-a-computational-process.

[13] Joel David Hamkins and Theodor Nenu. "Did Turing prove the undecidability of the halting problem?" *Journal of Logic and Computation* 36.1 (2026), 18 pages. DOI: 10.1093/logcom/exaf075. arXiv:2407.00680. https://jdh.hamkins.org/turing-halting-problem.

[14] Joel David Hamkins. "Nonlinearity and illfoundedness in the hierarchy of large cardinal consistency strength". *Monatshefte für Mathematik* 208 (2025). (also appeared on Qeios, 2022, https://doi.org/10.32388/T63YDP), pp. 687–728. DOI: 10.1007/s00605-025-02082-1.

[15] Joel David Hamkins. "On the covering reflection principle". *Mathematisches Forschungsinstitut Oberwolfach Report* 22.1 (2025), pp. 107–109. DOI: 10.4171/OWR/2025/2.

[16] Joel David Hamkins. "The fundamental theorem of finite games". *Notices Amer. Math. Soc.* 72.8 (2025). Short Stories column, pp. 858–860. DOI: 10.1090/noti3203.

[17] Joel David Hamkins. "The Nearly Perfect Predictor Theorem". *Notices of the American Mathematical Society* 72.3 (2025). Short Stories column, pp. 308–309. DOI: 10.1090/noti3098.

[18] Joel David Hamkins and Ruizhi Yang. "Satisfaction is not absolute". *The Review of Symbolic Logic* (2025), pp. 1–28. DOI: 10.1017/S1755020325100907. arXiv:1312.0670. http://wp.me/p5M0LV-Gf.

[19] Joel David Hamkins. "Every countable model of arithmetic or set theory has a pointwise definable end extension". *Kriterion—Journal of Philosophy* (2024). DOI: 10.1515/krt-2023-0029. arXiv:2209.12578. http://jdh.hamkins.org/pointwise-definable-end-extensions.

[20] Joel David Hamkins. "How the Continuum Hypothesis could have been a Fundamental Axiom". *Journal for the Philosophy of Mathematics* 1 (2024), pp. 113–126. DOI: 10.36253/jpm-2936. arXiv:2407.02463.

[21] Joel David Hamkins. *What is the Infinite?* Invited essay for the collection Infinity Essays, Dr. Gindi, editor. 2024. https://www.dr-gindi.com/essays/what-is-the-infinite.

[22] Joel David Hamkins and Wojciech Aleksander Wołoszyn. "Modal Model Theory". *Notre Dame Journal of Formal Logic* 65.1 (2024), pp. 1–37. DOI: 10.1215/00294527-2024-0001. arXiv:2009.09394.

[23] Joel David Hamkins and Bokai Yao. "Reflection in second-order set theory with abundant urelements bi-interprets a supercompact cardinal". *Journal of Symbolic Logic* 89.3 (2024), 1007–1043. DOI: 10.1017/jsl.2022.87. arXiv:2204.09766.

[24] Joel David Hamkins. "Fregean abstraction in Zermelo-Fraenkel set theory: a deflationary account". *Annals of Mathematics and Philosophy* 1.2 (2023). arXiv:2209.07845. https://mxphi.com/wp-content/uploads/2023/10/HA.pdf.

[25] Joel David Hamkins. "Infinite Wordle and the mastermind numbers". *Mathematical Logic Quarterly* 69.4 (2023), pp. 400–416. ISSN: 0942-5616,1521-3870. DOI: 10.1002/malq.202200049. arXiv:2203.06804. http://jdh.hamkins.org/infinite-wordle-mastermind.

[26] Joel David Hamkins. "Self-similar self similarity". In: *The Language of Symmetry*. Ed. by Benedict Rattigan, Denis Noble, and Afiq Hatta. Chapman and Hall/CRC, 2023. Chap. 4, pp. 37–50. ISBN: 9781032308494. DOI: 10.1201/9781003306986.

[27] Joel David Hamkins and Davide Leonessi. "Infinite Hex is a draw". *Integers* 23 (2023). Games Section, paper G6, http://math.colgate.edu/~integers/xg6/xg6.pdf. DOI: 10.5281/zenodo.10075843. arXiv:2201.06475. http://jdh.hamkins.org/infinite-hex-is-a-draw.

[28] Raffaella Cutolo and Joel David Hamkins. "Choiceless large cardinals and set-theoretic potentialism". *Mathematical Logic Quarterly* 68.4 (2022), pp. 409–415. arXiv:2007.01690. http://jdh.hamkins.org/choiceless-large-cardinals-and-set-theoretic-potentialism.

[29] Ali Enayat, Joel David Hamkins, and Bartosz Wcisło. "Topological models of arithmetic". *Fund. Math.* 256.2 (2022), pp. 171–193. ISSN: 0016-2736. DOI: 10.4064/fm928-1-2021. arXiv:1808.01270. http://wp.me/p5M0LV-1LS.

[30] Joel David Hamkins and Davide Leonessi. "Transfinite game values in infinite draughts". *Integers* 22 (2022). Paper G5, http://math.colgate.edu/~integers/wg5/wg5.pdf. DOI: 10.5281/zenodo.10999646. arXiv:2111.02053. http://jdh.hamkins.org/transfinite-game-values-in-infinite-draughts.

[31] Joel David Hamkins and Øystein Linnebo. "The Modal Logic of Set-theoretic Potentialism and the Potentialist Maximality Principles". *Review of Symbolic Logic* 15.1 (2022), pp. 1–35. ISSN: 1755-0203. DOI: 10.1017/S1755020318000242. arXiv:1708.01644. http://wp.me/p5M0LV-1zC.

[32] Alfredo Roque Freire and Joel David Hamkins. "Bi-interpretation in weak set theories". *Journal of Symbolic Logic* 86.2 (2021), pp. 609–634. DOI: 10.1017/jsl.2020.72. arXiv:2001.05262. http://jdh.hamkins.org/bi-interpretation-in-weak-set-theories.

[33] Victoria Gitman, Joel David Hamkins, and Asaf Karagila. "Kelley-Morse set theory does not prove the class Fodor theorem". *Fundamenta Mathematicae* 254.2 (2021), pp. 133–154. ISSN: 0016-2736. DOI: 10.4064/fm725-9-2020. arXiv:1904.04190. http://wp.me/p5M0LV-1RD.

[34] Joel David Hamkins and Kameryn J. Williams. "The Σ_1-definable universal finite sequence". *Journal of Symbolic Logic* (2021). DOI: 10.1017/jsl.2020.59. arXiv:1909.09100.

[35] Neil Barton, Andrés Eduardo Caicedo, Gunter Fuchs, Joel David Hamkins, Jonas Reitz, and Ralf Schindler. "Inner-model reflection principles". *Studia Logica* 108 (2020), pp. 573–595. DOI: 10.1007/s11225-019-09860-7. arXiv:1708.06669. http://jdh.hamkins.org/inner-model-reflection-principles.

[36] D. Dakota Blair, Joel David Hamkins, and Kevin O'Bryant. "Representing Ordinal Numbers with Arithmetically Interesting Sets of Real Numbers". *Integers* 20A (2020). Paper A3, http://math.colgate.edu/~integers/vol20a.html. DOI: 10.5281/zenodo.10657470. arXiv:1905.13123. https://wp.me/p5M0LV-1Tg.

[37] Andreas Blass, Jörg Brendle, Will Brian, Joel David Hamkins, Michael Hardy, and Paul B. Larson. "The rearrangement number". *Trans. Amer. Math. Soc.* 373.1 (2020), pp. 41–69. ISSN: 0002-9947. DOI: 10.1090/tran/7881. arXiv:1612.07830. http://jdh.hamkins.org/the-rearrangement-number.

[38] Victoria Gitman, Joel David Hamkins, Peter Holy, Philipp Schlicht, and Kameryn Williams. "The exact strength of the class forcing theorem". *Journal of Symbolic Logic* 85.3 (2020), 869–905. DOI: 10.1017/jsl.2019.89. arXiv:1707.03700. http://wp.me/p5M0LV-1yp.

[39] Jörg Brendle, Will Brian, and Joel David Hamkins. "The subseries number". *Fund. Math.* 247.1 (2019), pp. 49–85. ISSN: 0016-2736. DOI: 10.4064/fm667-11-2018. arXiv:1801.06206. http://jdh.hamkins.org/the-subseries-number.

[40] François G. Dorais and Joel David Hamkins. "When does every definable nonempty set have a definable element?" *Mathematical Logic Quarterly* 65.4 (2019), pp. 407–411. DOI: 10.1002/malq.201700035. arXiv:1706.07285. http://jdh.hamkins.org/definable-sets-with-definable-elements.

[41] Marcia J. Groszek and Joel David Hamkins. "The implicitly constructible universe". *Journal of Symbolic Logic* 84.4 (2019), pp. 1403–1421. ISSN: 0022-4812. DOI: 10.1017/jsl.2018.57. arXiv:1702.07947. http://jdh.hamkins.org/the-implicitly-constructible-universe.

[42] Miha E. Habič, Joel David Hamkins, Lukas Daniel Klausner, Jonathan Verner, and Kameryn J. Williams. "Set-theoretic blockchains". *Archive for Mathematical Logic* (2019). ISSN: 1432-0665. DOI: 10.1007/s00153-019-00672-z. arXiv:1808.01509. http://wp.me/p5M0LV-1M8.

[43] Ali Enayat and Joel David Hamkins. "ZFC proves that the class of ordinals is not weakly compact for definable classes". *Journal of Symbolic Logic* 83.1 (2018), pp. 146–164. DOI: 10.1017/jsl.2017.75. arXiv:1610.02729. http://jdh.hamkins.org/ord-is-not-definably-weakly-compact.

[44] Gunter Fuchs, Victoria Gitman, and Joel David Hamkins. "Ehrenfeucht's Lemma in Set Theory". *Notre Dame Journal of Formal Logic* 59.3 (2018), pp. 355–370. DOI: 10.1215/00294527-2018-0007. arXiv:1501.01918. http://jdh.hamkins.org/ehrenfeuchts-lemma-in-set-theory.

[45] Victoria Gitman and Joel David Hamkins. "A model of the generic Vopěnka principle in which the ordinals are not Mahlo". *Archive for Mathematical Logic* (May 2018), pp. 1–21. ISSN: 0933-5846. DOI: 10.1007/s00153-018-0632-5. arXiv:1706.00843. http://wp.me/p5M0LV-1xT.

[46] C. D. A. Evans, Joel David Hamkins, and Norman Lewis Perlmutter. "A position in infinite chess with game value ω^4". *Integers* 17 (2017), Paper No. G4, 22. DOI: 10.5281/zenodo.10657427. arXiv:1510.08155. http://wp.me/p5M0LV-1c5.

[47] Gunter Fuchs, Victoria Gitman, and Joel David Hamkins. "Incomparable ω_1-like models of set theory". *Math. Logic Q.* (2017), pp. 1–11. ISSN: 1521-3870. DOI: 10.1002/malq.201500002. arXiv:1501.01022. http://jdh.hamkins.org/incomparable-omega-one-like-models-of-set-theory.

[48] Michał Tomasz Godziszewski and Joel David Hamkins. "Computable Quotient Presentations of Models of Arithmetic and Set Theory". In: *Logic, Language, Information, and Computation: 24th International Workshop, WoLLIC 2017, London, UK, July 18-21, 2017, Proceedings*. Ed. by Juliette Kennedy and Ruy J.G.B. de Queiroz. Springer, 2017, pp. 140–152. ISBN: 978-3-662-55386-2. DOI: 10.1007/978-3-662-55386-2_10. arXiv:1702.08350. http://wp.me/p5M0LV-1tW.

[49] Joel David Hamkins and Thomas Johnstone. "Strongly uplifting cardinals and the boldface resurrection axioms". *Archive for Mathematical Logic* 56.7 (2017), pp. 1115–1133. ISSN: 1432-0665. DOI: 10.1007/s00153-017-0542-y. arXiv:1403.2788. http://wp.me/p5M0LV-IE.

[50] Joan Bagaria, Joel David Hamkins, Konstantinos Tsaprounis, and Toshimichi Usuba. "Superstrong and other large cardinals are never Laver indestructible". *Arch. Math. Logic* 55.1-2 (2016). Special volume in memory of R. Laver, pp. 19–35. ISSN: 0933-5846. DOI: 10.1007/s00153-015-0458-3. arXiv:1307.3486. http://jdh.hamkins.org/superstrong-never-indestructible/.

[51] Victoria Gitman and Joel David Hamkins. "Open determinacy for class games". In: *Foundations of Mathematics, Logic at Harvard, Essays in Honor of Hugh Woodin's 60th Birthday*. Ed. by Andrés E. Caicedo, James Cummings, Peter Koellner, and Paul Larson. AMS Contemporary Mathematics. Newton Institute preprint ni15064. 2016. arXiv:1509.01099. http://wp.me/p5M0LV-1af.

[52] Victoria Gitman, Joel David Hamkins, and Thomas A. Johnstone. "What is the theory ZFC without Powerset?" *Math. Logic Q.* 62.4–5 (2016), pp. 391–406. ISSN: 0942-5616. DOI: 10.1002/malq.201500019. arXiv:1110.2430. http://jdh.hamkins.org/what-is-the-theory-zfc-without-power-set.

[53] Joel David Hamkins. "Upward closure and amalgamation in the generic multiverse of a countable model of set theory". *RIMS Kyôkyûroku* (2016), pp. 17–31. ISSN: 1880-2818. arXiv:1511.01074. http://wp.me/p5M0LV-1cv.

[54] Joel David Hamkins and Makoto Kikuchi. "Set-theoretic mereology". *Logic and Logical Philosophy, Special issue "Mereology and beyond, part II"* 25.3 (2016). Ed. by A. C. Varzi and R. Gruszczyński, pp. 285–308. ISSN: 1425-3305. DOI: 10.12775/LLP.2016.007. arXiv:1601.06593. http://jdh.hamkins.org/set-theoretic-mereology.

[55] Joel David Hamkins and Cole Leahy. "Algebraicity and Implicit Definability in Set Theory". *Notre Dame Journal of Formal Logic* 57.3 (2016), pp. 431–439. ISSN: 0029-4527. DOI: 10.1215/00294527-3542326. arXiv:1305.5953. http://jdh.hamkins.org/algebraicity-and-implicit-definability.

[56] Yong Cheng, Sy-David Friedman, and Joel David Hamkins. "Large cardinals need not be large in HOD". *Annals of Pure and Applied Logic* 166.11 (2015), pp. 1186 –1198. ISSN: 0168-0072. DOI: 10.1016/j.apal.2015.07.004. arXiv:1407.6335. http://jdh.hamkins.org/large-cardinals-need-not-be-large-in-hod.

[57] Brent Cody, Moti Gitik, Joel David Hamkins, and Jason A. Schanker. "The least weakly compact cardinal can be unfoldable, weakly measurable and nearly θ supercompact". English. *Archive for Mathematical Logic* (2015), pp. 1–20. ISSN: 0933-5846. DOI: 10.1007/s00153-015-0423-1. arXiv:1305.5961. http://jdh.hamkins.org/least-weakly-compact.

[58] Gunter Fuchs, Joel David Hamkins, and Jonas Reitz. "Set-theoretic geology". *Annals of Pure and Applied Logic* 166.4 (2015), pp. 464–501. ISSN: 0168-0072. DOI: 10.1016/j.apal.2014.11.004. arXiv:1107.4776. http://jdh.hamkins.org/set-theoreticgeology.

[59] Joel David Hamkins. "Is the Dream Solution of the Continuum Hypothesis Attainable?" *Notre Dame Journal of Formal Logic* 56.1 (2015), pp. 135–145. ISSN: 0029-4527. DOI: 10.1215/00294527-2835047. arXiv:1203.4026. http://jdh.hamkins.org/dream-solution-of-ch.

[60] Joel David Hamkins, George Leibman, and Benedikt Löwe. "Structural connections between a forcing class and its modal logic". *Israel Journal of Mathematics* 207.2 (2015), pp. 617–651. ISSN: 0021-2172. DOI: 10.1007/s11856-015-1185-5. arXiv:1207.5841. http://wp.me/p5M0LV-kf.

[61] Ali Sadegh Daghighi, Mohammad Golshani, Joel David Hamkins, and Emil Jeřábek. "The foundation axiom and elementary self-embeddings of the universe". In: *Infinity, Computability, and Metamathematics: Festschrift celebrating the 60th birthdays of Peter Koepke and Philip Welch*. Ed. by S. Geschke, B. Löwe, and P. Schlicht. Vol. 23. Tributes. College Publishers, 2014, pp. 89–112. arXiv:1311.0814. http://jdh.hamkins.org/the-role-of-foundation-in-the-kunen-inconsistency/.

[62] C. D. A. Evans and Joel David Hamkins. "Transfinite Game Values in Infinite Chess". *Integers* 14 (2014), Paper No. G2, 36. ISSN: 1553-1732. DOI: 10.5281/zenodo.10454032. arXiv:1302.4377. http://jdh.hamkins.org/game-values-in-infinite-chess.

[63] Joel David Hamkins. "A multiverse perspective on the axiom of constructibility". In: *Infinity and Truth*. Vol. 25. LNS Math Natl. Univ. Singap. World Sci. Publ., Hackensack, NJ, 2014, pp. 25–45. DOI: 10.1142/9789814571043_0002. arXiv:1210.6541. http://wp.me/p5M0LV-qE.

[64] Joel David Hamkins and Thomas Johnstone. "Resurrection axioms and uplifting cardinals". *Archive for Mathematical Logic* 53.3-4 (2014), p. 463–485. ISSN: 0933-5846. DOI: 10.1007/s00153-014-0374-y. arXiv:1307.3602. http://jdh.hamkins.org/resurrection-axioms-and-uplifting-cardinals.

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[66] Samuel Coskey and Joel David Hamkins. "Infinite time Turing machines and an application to the hierarchy of equivalence relations on the reals". In: *Effective Mathematics of the Uncountable*. Vol. 41. Lect. Notes Log. Assoc. Symbol. Logic, La Jolla, CA, 2013, pp. 33–49. arXiv:1101.1864. http://jdh.hamkins.org/ittms-and-applications/.

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[75] Joel David Hamkins and Justin Palumbo. "The rigid relation principle, a new weak choice principle". *Mathematical Logic Quarterly* 58.6 (2012), pp. 394–398. ISSN: 0942-5616. DOI: 10.1002/malq.201100081. arXiv:1106.4635. http://jdh.hamkins.org/rigid-relation-principle/.

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Book reviews

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Articles available as preprints

[136] Joel David Hamkins. "A potentialist conception of ultrafinitism" (2025). Under review. Adapted from my talk at the Ultrafinitism Conference at Columbia University, April 2025. arXiv:2512.06564. https://arxiv.org/abs/2512.06564.

[137] Joel David Hamkins. "Pseudo-countable models". *Mathematics arXiv* (2022). arXiv:2210.04838. http://jdh.hamkins.org/pseudo-countable-models.

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Book awards

1. Daniel Solow Author's Award 2024, awarded by the Mathematical Association of America, for my book *Proof and the Art of Mathematics*, MIT Press 2020.

Collaboration and mentoring

In the graph of research collaboration in logic, I find myself serving as a vertex of connectivity, with over 50 research collaborators coming from diverse research areas. I have forged collaborations drawing together researchers from distant research areas, spanning the range from established senior research colleagues to junior researchers, with whom I often take a mentorship role.

Google Scholar metrics

All data is available at my scholar.google.com profile.

Number of Citations: 4077

H-Index: 31

i10 Index: 87

Micropublishing and other online content

1. My substack: Infinitely More. 10K subscribers. 140 weekly essays published since January 2023, including serialized chapters from my various books-in-progress, *The Book of Infinity*, *A Panorama of Logic*, and *Infinite Games: Frivolities of the Gods*. About 800K views since January 2023. Many of these essays are cited in the research literature.

2. MathOverflow.net, a Q&A forum for advanced mathematics research. I am the leading contributor and top user by 'reputation' score, out of over 65,000 mathematicians on MathOverflow, a distinction I have held continuously since 2010. I have made over 2000 posts there, each a brief technical essay on a graduate-research-level topic, mostly logic, and these have been cited in dozens of instances in the regularly published research literature. My MathOverflow contributions have reportedly reached over 5.5 million people.

3. My blog: Mathematics and Philosophy of the infinite. I have written several hundred research-level expository posts on diverse topics in logic, philosophy, and mathematics. My Math for Kids series, describing fun mathematical activities for children, has proved extremely popular, sometimes breaking into tens of thousands of views in the first few days of a new post and several times making it to the front pages of Reddit and Hacker News. Several of my most popular posts have been translated into French, Italian, Slovenian, and Mandarin.

4. My YouTube channel. I post videos of lectures and talks and other philosophial and mathematical content, 3500 subscribers. My Oxford lecture series on the philosophy of mathematics had over 10,000 total hours of viewing time, with 75,000 views.

5. One of my epistemic logic puzzles was the central focus of a popular video by Presh Talwalkar, Mind Your Decisions, "Solve this logic puzzle to get into Oxford," with over 3 million views for this one logic puzzle and over 7000 comments, https://youtu.be/PVFwUGE6mBU.

6. The same puzzle along with several others was the main focus of the article "Can you solve it? Oxford University admissions questions, Brainteasers for budding philosophers," by Alex Bellos in The Guardian, 12 July 2021. https://www.theguardian.com/science/2021/jul/12/can-you-solve-it-oxford-university-admissions-questions

7. I have written song lyrics for several mathematical/philosophical music videos:

   - "Ode to Hippasus," a musical proof of the irrationality of $\sqrt{2}$, lyrics by Joel David Hamkins, Barbara Montero, and Hypatia Hamkins, music by Hannah Hoffman, https://youtu.be/DGIA2U2iPCk.
   - "Plenitudinous Primes," musical proof of the infinitude of primes, lyrics by Joel David Hamkins, music by Hannah Hoffman, https://youtu.be/WEyEpwAeaaI.
   - "The Liar (a logic song)," musical account of the Liar paradox, lyrics by Joel David Hamkins, music by Hannah Hoffman, https://youtu.be/VvcPGE_gs94.

8. My work on infinite chess was the basis for the PBS Infinite Series video, "Infinite Chess," March 2017, with over 350,000 views and over 1000 lively mathematical/chess comments posted on this particular video. https://youtu.be/PN-I6u-AxMg

9. See also my popular logic, math and philosophy posts on Twitter: @JDHamkins, over 20,000 followers.

Philosophical interviews

1. Interviewed by Lex Fridman, "Infinity, Paradoxes, Gödel Incompleteness & the Mathematical Multiverse," Lex Fridman Podcast #488, 31 December 2025. https://youtu.be/14OPT6CcsH4. 250K views in the first week. More than a dozen shorter excerpts from this interview have appeared separately.

2. Interviewed by Sean Carroll for Mindscape Podcast, "Joel David Hamkins on Puzzles of Reality and Infinity," 15 July 2024. preposterousuniverse.com/podcast/2024/07/15/282

3. Interviewed by Francesco Cavina for Back to the Stone Age podcast, 17 May 2024. https://youtu.be/2OUPleigOiY

4. Interviewed by The Human Podcast, 4 May 2024. https://youtu.be/hAWzBgx7t40

5. Interviewed by Rahul Sam, "The Gödel incompleteness phenomenon," a sweeping discussion of the philosophy of mathematics, 13 January 2024, https://youtu.be/7Mhioir_-Ic

6. Interviewed by Matthew Geleta, "Philosophy of mathematics and truth," Paradigm Podcast, 23 August 2023, hrefhttps://youtu.be/563qSYUByakhttps://youtu.be/563qSYUByak.

7. Interviewed by Richard Fisher of the BBC for the article, "The numbers that are too big to imagine," BBC Future, Immensities Mathematics series, 20 March 2023, https://www.bbc.com/future/article/20230320-the-numbers-that-are-too-big-to-imagine

8. Interviewed by Lluís Amiguet, "La inteligencia artificial es imperfecta; la humana, también," back cover interview for La VanGuardia, 22 March 2023, https://www.lavanguardia.com/lacontra/20230322/8842770/inteligencia-artificial-imperfecta-humana.amp.html

9. Interviewed by Robinson Erhardt (a second time), with Graham Priest, for the podcast, "Joel David Hamkins & Graham Priest: The Liar Paradox & The Set-Theoretic Multiverse | RP #60, 9 March 2023. https://youtu.be/8LHeOK3Etik

10. Interviewed by Robinson Erhardt for the podcast, "Paradox, Infinity, & The Foundations of Mathematics | RP #42," 9 January 2023. https://youtu.be/zEdQbMziYfE

11. Interviewed by Nathan Ormond for *Digital Gnosis*, "Frege's philosophy of mathematics," 10 December 2021. https://youtu.be/jIwm0XnqbNI

12. Interviewed by Evelyn Lamb and Kevin Knudson for their podcast series *My Favorite Theorem*, 22 September 2021, https://kpknudson.com/my-favorite-theorem/2021/9/22/episode-70-joel-david-hamkins.

13. Interviewed by Daniel Rubin, "Infinite sets and foundations," 26 August 2021 https://youtu.be/acjJ5-OSuZM.

14. Interviewed by Theodor Nenu for *Philosophical Trials (#1)*, "Joel David Hamkins on Infinity, Gödel's Theorems and Set Theory," April 2, 2020. https://youtu.be/Z1A6BENfS-o

15. Interviewed by Richard Marshall for 3:AM Magazine, "Playing Infinite Chess," March 25, 2013. https://www.3-16am.co.uk/articles/playing-infinite-chess

Selected invited conference and colloquia talks

1. Owen G. Owens Memorial Lecture, Wayne State University, Detroit, April 2026.

2. Distinguished 2025 DePrima Memorial Lecture, "What is your number? Logic puzzles for mathematicians," California Institute of Technology, November 2025.

3. "The elementary theory of surreal arithmetic is bi-interpretable with set theory," Notre Dame Logic Seminar, November 2025.

4. "Did Turing ever halt?" History and Philosophy of Science Colloquium, Notre Dame, October 2025

5. "The elementary theory of surreal arithmetic is bi-interpretable with set theory," Conference on the occasion of Jörg Brendle's 60th birthday, Kobe University, Japan, September 2025

6. "How the continuum hypothesis might have been a fundamental axiom," International Conference on the Philosophy of Mathematics, Lanzhou, China, 25 July 2025

7. "The computable surreal numbers," Fudan University, 13 July 2025

8. "Pointwise definable end-extensions of models of arithmetic and set theory," Seminar on Frontier Issues in Logic and Philosophy, The First Forum on Logic and Philosophy, Changchun, China, 19 July 2025

9. Lecture series on the philosophy of mathematics (9 lectures), Fudan University, Shanghai, China, 30 June – 25 July 2025

10. "Potentialist conceptions of infinity," Conference on Infinity, Peking University, 24 June 2025

11. Lectures on Set Theory (10 lectures), Philosophy Department, Peking University, Beijing, June 2025

12. "How we might have viewed the continuum hypothesis as a fundamental axiom necessary for mathematics," Oxford Phil Maths seminar, May 2025

13. "A modal approach to ultrafinitism," Ultrafinitism conference, Columbia University, April 11–13, 2025

14. The Reinhardt Lecture (distinguished invited lecture), University of Colorado, Boulder, "How we might have taken the continuum hypothesis as a fundamental axiom, necessary for mathematics," March 12, 2025

15. "Determinateness of truth does not come for free from determinateness of objects," (In)determinacy in Mathematics conference, National University of Singapore, November 2024

16. "The covering reflection theorem," Madison Logic Seminar, October 2024

17. "Infinite-time computable analogues of the universal algorithm," Generalized Computability Theory Workshop, Castro Urdiales, Spain, August 2024

18. "Forcing is simply the iterative conception undertaken with multivalued logic," ForcingFest, Oslo, June 2024

19. "The continuum hypothesis could have been a fundamental axiom," CFORS Grad Conference, Oslo, June 2024

20. "How the continuum hypothesis could have been a fundamental axiom," UC Irvine Logic & Philosophy of Science Colloquium, March 2024.

21. "What if your potentialism is implicitly actualist?" Oxford conference *Challenging the Infinite*, March 2024.

22. "What is second-order predicate modal logic?" First-order Modal Logic (FoMoLo) Seminar, 12 February 2024.

23. "The covering reflection principle," Notre Dame Logic Seminar, 6 February 2024

24. "Pluralism in the foundations of mathematics," invited ASL talk, APA Eastern Division meeting, New York, 16 January 2024.

25. "The computable model theory of forcing," Rutgers Logic Seminar, 4 December 2023.

26. "The Wordle and Absurdle numbers," CUNY Logic Workshop, 17 November 2023.

27. "An exploration of infinite games—infinite Wordle and the Mastermind numbers," Harvard University, 16 October 2023.

28. "The surprising strength of second-order reflection in urelement set theory," XVII International Luminy Workshop in Set Theory, October 2023.

29. "What is potentialist second-order logic?" Konstanz Actualism and Potentialism Conference, 28–29 September 2023.

30. "Introduction to infinite games," Infinite-games Workshop, 5 October 2023.

31. "A deflationary account of Fregean abstraction in set theory, with Basic Law V as a ZFC theorem," Axe Histoire et Philosophie des mathématiques, Séminaire PhilMath Intersem 2023, Paris, June 2023.

32. "Infinite games—strategies, logic, theory, and computation," Northeastern University, Boston Computation Club, June 2023.

33. "Natural Instances of Illfoundedness and Nonlinearity in the Hierarchy of Consistency Strength," Oxford Philosophy of Mathematics Seminar, May 2023.

34. "How to find pointwise definable and Leibnizian extensions of models of arithmetic and set theory," Oxford Logic Seminar, May 2023.

35. "Realizing Frege's Basic Law V provably in ZFC," CUNY Set Theory Seminar, May 2023.

36. "Set-theoretic forcing as a computational process," Midwest Computability Seminar, Chicago, May 2023.

37. "Varieties of potentialism," Oslo, Infinity and Intensionality Project, April 2023.

38. "Natures of Proof," Pacific APA, Commentator at Book Symposium, San Francisco, April 2023.

39. "Pointwise definable and Leibnizian extensions of models of arithmetic and set theory," Madison Logic Seminar, April 2023.

40. "The Math Tea argument: must there be numbers we can neither describe nor define?" University of Barcelona March 2023

41. "Strategic thinking in infinite games," CosmoCaixa Science Museum, Barcelona, March 2023. This is part of their "The Greats of Science" talk series, which has included Jane Goodall and about a dozen Nobel prize winners.

42. "A survey of set-theoretic geology," Notre Dame Logic Seminar, January 2023

43. "Pointwise definable and Leibnizian extensions of models of arithmetic and set theory," MOPA seminar CUNY, November 2022

44. "Pointwise definable and Leibnizian models of arithmetic and set theory, realized in end extensions of a given model," Notre Dame Logic Seminar, October 2022

45. "Fregean abstraction in set theory–a deflationary account," Italian Philosophy of Mathematics conference, Pavia, Italy, September 2022

46. "The math tea argument–must there be numbers we cannot describe or define?" Pavia Logic Seminar, IUSS, September 2022.

47. "Masterclass of The set-theoretic multiverse," Workshop on the Set-theoretic Multiverse, Konstanz, Germany, September 2022

48. "Nonlinearity and illfoundedness in the hierarchy of consistency strength and the question of naturality," Italian Association for Logic and its Applications (AILA), Caserta, Italy, September 2022

49. "Pointwise definable end-extensions of the universe," Salzburg Conference for Young Analytical Philosophy, SOPhiA, Salzburg, Austria, September 2022

50. "Set theory inside out: realizing every inner model theory in an end extension," European Set Theory Conference, Torino, Italy, September 2022

51. "The ontology of mathematics," Japan Association for the Philosophy of Science, Tokyo, Japan, June 2022

52. "Infinite Games, Frivolities of the Gods," Logic at Large Lecture, Dutch Association for Logic and Philosophy of the Exact Sciences, Amsterdam, May 2022

53. "The surprising strength of reflection in second-order set theory with abundant urelements," CUNY Set Theory seminar, New York, April 2022

54. "Pluralism in the ontology of mathematics," L'indépendance mathématique et ses limites logiques, MaMuPhi seminar (mathématiques – musique – philosophie), Paris, February 2022

55. "The model theory of set-theoretic mereology," Notre Dame Math Logic Seminar, February 2022

56. "Bi-interpretation in set theory," Oberwolfach Set Theory Conference, Germany, January 2022

57. "Frege's philosophy of mathematics," Interview with Nathan Ormond, *Digital Gnosis*, December 2021

58. "The surprising strength of reflection in second-order set theory with abundant urelements," Workshop on the Philosophy of Set Theory, University of Konstanz, Germany, 3–4 December 2021

59. "Infinite draughts and the logic of infinitary games," University of Oslo, Seminar on Mathematical Logic, 11 November 2021

60. "A deflationary account of Fregean abstraction in Zermelo-Fraenkel ZF set theory," University of Oxford, Seminar on the Philosophy of Mathematics, 1 November 2021

61. "The Tennenbaum phenomenon for computable quotient presentations of models of arithmetic and set theory," Fudan University, Conference on Model Theory and Philosophy of Mathematics, Shanghai, 21–24 August 2021

62. "Naturality in mathematics and the hierarchy of consistency strength," Logik Kolloquium at the University of Konstanz, 19 July 2021

63. "Categorical set theories," Seminar for Logic and Philosophy of Language, Munich Center for Mathematical Philosophy, 24 June 2021

64. "Potentialism and implicit actualism in the foundations of mathematics," University of Notre Dame, Philosophy Department Colloquium, 26 March 2021

65. Discussion of *Lectures on the Philosophy of Mathematics*, a presentation and discussion of my book for the Philosophy of Mathematics Reading Group at University of Amsterdam ILLC, 19 March 2021

66. "Determinacy for proper class games," Seminaire de Logique Lyon-Paris, 14 April 2021

67. "Can there be natural instances of nonlinearity in the hierarchy of consistency strength?" University of Wisconsin, Madison Logic Seminar, 25 January 2021

68. "Definability and the Math Tea argument: must there be numbers we cannot describe or define?" University of Warsaw, 22 January 2021

69. "Continuous models of arithmetic," Models of Peano Arithmetic MOPA seminar, City University of New York, 11 November 2020

70. "Set-theoretic and arithmetic potentialism: the state of current developments," Chinese Annual Conference on Mathematical Logic (CACML 2020), Nankai University, 13–15 November 2020

71. "A new proof of the Barwise extension theorem, and the universal finite sequence," Barcelona Set Theory Seminar, 28 October 2020

72. "Modal model theory as mathematical potentialism," Oslo online Potentialism Workshop, 21 September 2020

73. "Categorical cardinals," CUNY Set Theory Seminar, 26 June 2020

74. "The theory of infinite games, including infinite chess," Talk Math With Your Friends seminar, 18 June 2020

75. "Bi-interpretation of weak set theories," Oxford Set Theory Seminar, 20 May 2020

76. "Bi-interpretation of weak set theories," Oberwolfach Mathematics Institute, 5–11 April 2020. (Cancelled on account of Covid-19)

77. "Bi-interpretation in set theory," Logic and Set Theory Seminar, University of Bristol, 25 February 2020.

78. "Philosophy meets maths," Oxford Philosophy Taster, 10 January 2020.

79. "Modal model theory," Set-theory in the United Kingdom (STUK 4), Oxford, 14 December 2019.

80. "I know that you know that I know that you know. . . ," Oxford Philosophy Faculty, welcome talk for new students, 16 October 2019.

81. "Can set-theoretic mereology serve as a foundation of mathematics?" Plenary talk, 16th International Congress of Logic, Methodology and Philosophy of Science and Technology, CLMPST 2019, Prague.

82. "Alan Turing's theory of computation," Oxford and Cambridge Club, London, 6 June 2019.

83. "Computational self-reference and the universal algorithm," Theory Seminar, research group in Theoretic Computer Science, Queen Mary University of London, 4 June 2019.

84. "Is there just one mathematical universe?" Wijsgerig Festival *Ontology*, DRIFT 2019, Amsterdam, 11 May 2019.

85. "The modal logic of potentialism," Institute of Logic, Language and Computation, University of Amsterdam, 11 May 2019.

86. "Kelley-Morse set theory does not prove the class Fodor Principle," CUNY Set Theory Seminar, 22 March 2019.

87. "Forcing as a computational process," Set Theory in the United Kingdom (STUK 1), Cambridge, 16 February 2019.

88. "Potentialism and implicit actualism in the foundations of mathematics," Jowett Society lecture, Oxford Faculty of Philosophy, 8 February 2019.

89. "An infinitary-logic-free proof of the Barwise end-extension theorem, with new applications," Logic Oberseminar, Logic Institute, University of Münster, 11 January 2019.

90. "A new proof of the Barwise extension theorem, without infinitary logic," CUNY Logic Workshop, 15 December 2018.

91. Faculty respondent to paper of Ethan Jerzak on Paradoxical Desires, Oxford Graduate Philosophy Conference, 10 November 2018, University of Oxford.

92. "On set-theoretic mereology as a foundation of mathematics," Oxford Phil Math seminar, 29 October 2018, University of Oxford.

93. "The rearrangement number: how many rearrangements of a series suffice to validate absolute convergence?" Warwick Mathematics Colloquium, 19 October 2018, University of Warwick.

94. "Parallels in universality between the universal algorithm and the universal finite set," Oxford Math Logic Seminar, 9 October 2018, University of Oxford.

95. "Set-theoretic potentialism and the universal finite set," Scandinavian Logic Symposium SLS 2018, June 11-13, 2018, University of Gothenburg, Sweden.

96. "Determinacy for open class games is preserved by forcing," CUNY Set Theory Seminar, April 27, 2018, CUNY Graduate Center, New York.

97. "The universal finite set," Rutgers Logic Seminar, April 2, 2018, Rutgers University, New Jersey.

98. "Nonamalgamation in the Cohen generic multiverse," CUNY Logic Workshop, March 23, 2018, CUNY Graduate Center, New York.

99. "Self reference in computability theory and the universal algorithm," Ouroboros: Formal Criteria of Self-Reference in Mathematics and Philosophy, February 16-18, 2018, Universität Bonn, Germany.

100. "Modal principles of potentialism," Faculty of Philosophy, January 29, 2018, Oxford University, Oxford, U.K.

101. "Set-theoretic potentialism," Invited lecture series at Winter School in Abstract Analysis, January 27-February 3, 2018, Hejnice, Czech Republic.

102. "The universal algorithm and the universal finite set," Prague Gathering of Logicians & The Beauty of Logic conference, January 25-27, 2018, Prague, Czech Republic.

103. "On the strengths of the class forcing theorem and clopen class game determinacy," Prague set theory seminar, January 2018, Prague Academy of Sciences, Czech Republic.

Conference and seminar organizing

Chair of the Program Committee for the ASL plenary talks at the 2026 APA Central Division meeting, held in Chicago, 18–21 February 2026.

Founded the Infinite Games Workshop, Fall 2023 at Notre Dame, a seminar series exploring topics in the theory of infinite games. Talks are available on YouTube.

Founded the Oxford Set Theory Seminar, University of Oxford, from 2020 during the Covid times, hosting distinguished speakers in set theory and the philosophy of set theory, with participants joining online from all around the world.

Principal organizer for the Set Theory in the UK, conference held in Oxford in December, 2019.

Extensive conference and seminar organizing at the City University of New York, for over twenty years. Founding co-organizer of the CUNY Logic Workshop and key organizer for over 20 years, bringing many distinguished speakers to CUNY and helping to establish

the CUNY Graduate Center as a vibrant center of research in logic. Founding organizer of the CUNY Set Theory Seminar, running now for over twenty years with many distinguished speakers. Organizer of numerous conferences at CUNY, including the NYC Logic Conference series, several MAMLS meetings and conferences on the Effective Mathematics of the Uncountable. Faculty advisor for several New York Graduate Student Logic Conferences.

Graduate student supervision

PhD dissertation supervisor for the following students:

- Yuanshan (Tom) Li, Philosophy, University of Notre Dame
- Clara Elizabeth List, Mathematics, University of Hamburg (co-supervisor)
- Emma Palmer, Mathematics, Oxford University
- Wojciech Aleksander Wołoszyn, Mathematics, Oxford University
- Nuno Felipe Maia, D Phil 2023, Philosophy, Oxford University
- Sam Adam-Day, D Phil 2023, Mathematics, Oxford University
- Bokai Yao, Ph.D. 2023, Philosophy, University of Notre Dame
- Corey Bacal Switzer, Ph.D. 2020, Mathematics, CUNY Graduate Center
- Kameryn Williams, Ph.D. 2018, Mathematics, CUNY Graduate Center
- Miha Habič, Ph.D. 2017, Mathematics, CUNY Graduate Center
- Erin Carmody, Ph.D. 2015, Mathematics, CUNY Graduate Center
- Norman Perlmutter, Ph.D. 2013, Mathematics, CUNY Graduate Center
- Brent Cody, Ph.D. 2012, Mathematics, CUNY Graduate Center
- Jason Schanker, Ph.D. 2011, Mathematics, CUNY Graduate Center
- Thomas Johnstone, Ph.D. 2007, Mathematics, CUNY Graduate Center
- Victoria Gitman, Ph.D. 2007, Mathematics, CUNY Graduate Center
- Jonas Reitz, Ph.D. 2006, Mathematics, CUNY Graduate Center
- George Liebman, Ph.D. 2004, Mathematics, CUNY Graduate Center

Master's Thesis Supervisor of:

- Quincy Montgomery Crawford Iv, Philosophy BPhil 2023, Oxford University
- Davide Leonessi, MSc 2021, MFoCS, Oxford University
- Clara List, MSc 2020, MFoCS, Oxford University
- Ansten Morch-Klev, M.S. 2007, Universiteit van Amsterdam, Institute for Logic, Language and Computation

Thesis Committee member for:

- Leo Cromwell, M.S. 2024, Acadia University
- Paul Gorbow, Ph.D. 2018, University of Gothenburg, Sweden
- Kaethe Minden, Ph.D. 2017, CUNY Graduate Center
- Regula Krapf, Ph.D. 2017, University of Bonn

- Giorgio Audrito, Ph.D. 2016, University of Torino (I was president of the thesis committee)
- Kostas Tsaprounis, Ph.D. 2012, University of Barcelona
- Shoshana Friedman, Ph.D. 2010, CUNY Graduate Center
- Paul Ellis, Ph.D. 2009, Rutgers University
- Scott Schneider, Ph.D. 2009, Rutgers University
- Sam Coskey, Ph.D. 2008, Rutgers University
- Joost Winter, M.S. 2007, Universiteit van Amsterdam
- Can Baskent, M.S. 2007, Universiteit van Amsterdam
- Yurii Khomskii, M.S. 2007, Universiteit van Amsterdam
- Erez Shochat, Ph.D. 2006, CUNY Graduate Center
- Ivan Welty, Ph.D. 2006, Philosophy, Columbia University
- Sidney Raffer, Ph.D. 1999, CUNY Graduate Center

Recent teaching, at Notre Dame since 2022

1. Infinity, undergraduate 2nd philosophy
2. Modal Logic and Potentialism, graduate philosophy seminar
3. Core Seminar in Philosophy, Science, and Mathematics, undergraduate seminar
4. Philosophy and Logic of Games, undergraduate 2nd philosophy
5. The Gödel Incompleteness Phenomenon, graduate philosophy seminar
6. Philosophy of Computability and AI, undergraduate philosophy majors course
7. Philosophy of Mathematics, undergraduate philosophy majors course
8. Philosophy of Set Theory, graduate philosophy lecture series, Peking University, Beijing.