Joel David Hamkins

University of Notre Dame
Department of Philosophy
100 Malloy Hall, Notre Dame, IN 46556

Academic appointments

University of Notre Dame, 2022–
O'Hara Professor of Philosophy and Mathematics

University of Oxford, 2018–2022–
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
Affiliated Faculty, 2018–, Mathematical Institute, University of Oxford
Associate Faculty Member, 2022–, University of Oxford

The City University of New York, 1995–2021, with various leaves
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
The Graduate Center of CUNY
Doctoral Faculty in Philosophy since 2013
Doctoral Faculty in Computer Science since 2002
Doctoral Faculty in Mathematics since 1997

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 G¨odel 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

Universit¨at M¨unster, Institut f¨ur 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 philosophical and mathematical logic, modal logic, mereology, potentialism, categoricity, definability, set theory and the philosophy of set theory, strong axioms of infinity, infinitary computability, the logic of games and infinitary game theory, and infinitary utilitarianism.

Distinguished grants, fellowships and awards

2016–2017	PSC-CUNY Research Award
2014–2015	PSC-CUNY Enhanced Research Award
2013–2014	CUNY Collaborative Incentive Research Grant
2013–2014	PSC-CUNY Research Award
2011–2016	Simons Foundation research grant ($35,000)
2008–2011	National Science Foundation research grant ($210,000)
2011–2012	PSC-CUNY Enhanced Research Award
2010	PSC-CUNY Research Award
2008–2009	Templeton Foundation grant ($100,000 with 3 co-PIs)
2007	CUNY Fellowship Leave Award (sabbatical)
2006–2007	NWO Bezoekersbeurs Visiting Researcher grant (funded by the Dutch government
1996–2008	PSC-CUNY Research Awards, won annually
2006	CSI Presidential Research Award
2005	NWO Bezoekersbeurs Visiting Researcher grant (funded by the Dutch government
2005–2007	CUNY Research Foundation Collaborative Incentive Grant award
2004	DFG Mercator-Gastprofessor (funded by the German government)
1999–2002	National Science Foundation (NSF) Research Grant ($74,000)
1999–2001	NATO Joint Research Grant
1999–2001	CUNY Collaborative Incentive Research Grant
2000	CUNY Performance Excellence Award
1997–2000	CUNY Faculty Development Grant (for the CUNY Logic Workshop)
1998	Japan Society for the Promotion of Science Research Fellowship
1998	CUNY Scholar Incentive Award
1996–1998	CUNY Research Foundation Collaborative Incentive Grant
1997–1998	CSI Presidential Research Award
1996	CSI Summer Research Stipend
1995–1996	CSI Research Released-time Award
1993–1994	UC Berkeley Graduate Research Fellowship
1991–1992	USDE Graduate Fellowship
1988–1991	NSF Graduate Fellowship
1988	Caltech Ryser Scholar

Books

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

[2] 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.

[3] Joel David Hamkins. *Proof and the Art of Mathematics*. MIT Press, 2020. isbn: 978-0-262-53979-1. https://mitpress.mit.edu/books/proof-and-art-mathematics.

[4] Joel David Hamkins. *A Mathematician's Year in Japan*. 156 pages. Amazon Kindle Direct Publishing, 2015. http://www.amazon.com/dp/B00U618LM2.

[5] Joel David Hamkins. *Tutor On Paper*. 93 pages. Berkeley, CA: Vargon Publishers, 1992.

Edited volume

[6] 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.

Book in preparation

[7] Joel David Hamkins. *Topics in Logic for Philosophers*. Book manuscript, 358 pages, in preparation. 2021.

Published articles

[8] Ali Enayat, Joel David Hamkins, and Bartosz Wcis l o. "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.

[9] 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.

[10] 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.

[11] 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.

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

[13] Neil Barton, Andr´es 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.

[14] 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. arXiv:1905.13123. https://wp.me/p5M0LV-1Tg.

[15] Andreas Blass, J¨org 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.

[16] 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.

[17] J¨org 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.

[18] Fran¸cois 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.

[19] 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.

[20] Miha E. Habiˇc, 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.

[21] 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.

[22] 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.

[23] Victoria Gitman and Joel David Hamkins. "A model of the generic Vopˇenka 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.

[24] 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. arXiv:1510.08155. http://wp.me/p5M0LV-1c5.

[25] 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.

[26] 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. arXiv:1702 . 08350. http://wp.me/p5M0LV-1tW.

[27] 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.

[28] 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/.

[29] 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.

[30] 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.

[31] 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.

[32] 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.

[33] 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.

[34] 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.

[35] 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.

[36] 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.

[37] 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.

[38] Joel David Hamkins, George Leibman, and Benedikt L¨owe. "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 .

[39] Ali Sadegh Daghighi, Mohammad Golshani, Joel David Hamkins, and Emil Jeˇr´abek. "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. L¨owe, 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/.

[40] C. D. A. Evans and Joel David Hamkins. "Transfinite game values in infinite chess". *Integers* 14 (2014), Paper No.G2, 36. issn: 1553-1732. arXiv:1302.4377. http://jdh.hamkins.org/game-values-in-infinite-chess.

[41] 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.

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

[43] Arthur W. Apter, James Cummings, and Joel David Hamkins. "Singular cardinals and strong extenders". *Central European Journal of Mathematics* 11.9 (2013), pp. 1628–1634. issn: 1895-1074. doi: 10.2478/s11533- 013- 0265-1. arXiv:1206.3703. http://jdh.hamkins.org/singular-cardinals-strong-extenders/.

[44] 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/.

[45] Joel David Hamkins. "Every countable model of set theory embeds into its own constructible universe". *Journal of Mathematical Logic* 13.2 (2013), pp. 1350006, 27. issn: 0219-0613. doi: 10.1142/S0219061313500062. arXiv:1207.0963. http://wp.me/p5M0LV-jn.

[46] Joel David Hamkins, David Linetsky, and Jonas Reitz. "Pointwise definable models of set theory". *Journal of Symbolic Logic* 78.1 (2013), pp. 139–156. issn: 0022-4812. doi: 10.2178/jsl.7801090 arXiv:1105 4597. http://jdh.hamkins.org/pointwisedefinablemodelsofsettheory/.

[47] Joel David Hamkins and Benedikt Löwe. "Moving up and down in the generic multiverse". *Logic and its Applications, ICLA 2013 LNCS* 7750 (2013). Ed. by Kamal Lodaya, pp. 139–147. doi: 10.1007/978-3-642-36039-8 13. arXiv:1208.5061. http://wp.me/p5M0LV-od.

[48] Arthur W. Apter, Victoria Gitman, and Joel David Hamkins. "Inner models with large cardinal features usually obtained by forcing". *Archive for Math. Logic* 51 (3 2012), pp. 257–283. issn: 0933-5846. doi: 10.1007/s00153-011-0264-5 arXiv:1111.0856. http://jdh.hamkins.org/innermodels.

[49] Dan Brumleve, Joel David Hamkins, and Philipp Schlicht. "The Mate-in-n Problem of Infinite Chess Is Decidable". In: *How the World Computes*. Ed. by S. Barry Cooper, Anuj Dawar, and Benedikt Löwe. Vol. 7318. Lecture Notes in Computer Science. Springer, 2012, pp. 78–88. isbn: 978-3-642-30869-7 doi: 10.1007/978-3-642-30870-3 9 arXiv:1201.5597. http://wp.me/p5M0LV-f8.

[50] Samuel Coskey, Joel David Hamkins, and Russell Miller. "The hierarchy of equivalence relations on the natural numbers under computable reducibility". *Computability* 1.1 (2012), pp. 15–38. doi: 10.3233/COM-2012-004 arXiv:1109.3375 http://jdh.hamkins.org/equivalence-relations-on-naturals/.

[51] Joel David Hamkins. "The set-theoretic multiverse". *Review of Symbolic Logic* 5 (2012), pp. 416–449. doi: 10.1017/S1755020311000359 arXiv:1108.4223 http://jdh.hamkins.org/themultiverse.

[52] Joel David Hamkins, Greg Kirmayer, and Norman Lewis Perlmutter. "Generalizations of the Kunen inconsistency". *Annals of Pure and Applied Logic* 163.12 (2012), pp. 1872–1890. issn: 0168-0072. doi: 10.1016/j.apal.2012.06.001. arXiv:1106.1951. http://jdh.hamkins.org/generalizationsofkuneninconsistency.

[53] 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/.

[54] Samuel Coskey and Joel David Hamkins. "Infinite time decidable equivalence relation theory". *Notre Dame Journal of Formal Logic* 52.2 (2011), pp. 203–228. issn: 0029-4527. doi: 10.1215/00294527-1306199. arXiv:0910.4616. http://wp.me/p5M0LV-3M.

[55] Joel David Hamkins. "Pointwise definable models of set theory, extended abstract". *Mathematisches Forschungsinstitut Oberwolfach Report* 8.1, 02/2011 (2011), pp. 128–131. doi: 10.4171/OWR/2011/02. http://wp.me/p5M0LV-4n.

[56] Joel David Hamkins. "The Set-theoretic Multiverse: A Natural Context for Set Theory". *Annals of the Japan Association for Philosophy of Science* 19 (2011), pp. 37–55. issn: 0453-0691. doi: 10.4288/jafpos.19.0 37. http://jdh.hamkins.org/themultiverseanaturalcontext.

[57] Victoria Gitman and Joel David Hamkins. "A natural model of the multiverse axioms". *Notre Dame Journal of Formal Logic* 51.4 (2010), pp. 475–484. issn: 0029-4527. doi: 10.1215/00294527-2010-030. arXiv:1104.4450. http://wp.me/p5M0LV-3I.

[58] Joel David Hamkins and Thomas A. Johnstone. "Indestructible strong unfoldability". *Notre Dame Journal of Formal Logic* 51.3 (2010), pp. 291–321. issn: 0029-4527. doi: 10.1215/00294527-2010-018. http://jdh.hamkins.org/indestructiblestrongunfoldability/.

[59] Gunter Fuchs and Joel David Hamkins. "Degrees of rigidity for Souslin trees". *Journal of Symbolic Logic* 74.2 (2009), pp. 423–454. issn: 0022-4812. doi: 10.2178/jsl/1243948321. arXiv:math/0602482. http://wp.me/p5M0LV-3A.

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[63] Joel David Hamkins and Russell G. Miller. "Post's problem for ordinal register machines: an explicit approach". *Ann. Pure Appl. Logic* 160.3 (2009), pp. 302–309. issn: 0168-0072. doi: 10.1016/j.apal.2009.01.004. http://wp.me/p5M0LV-3C.

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[123] Joel David Hamkins and Wojciech Aleksander Wołoszyn. "Modal model theory". *Mathematics ArXiv* (2020). Under review. arXiv:2009.09394.

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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 essentially all parts of mathematical and philosophical logic and beyond. I have drawn together researchers from distant research areas and forged collaborations 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: 2814
H-Index: 27
i10 Index: 72

Philosophical interviews

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

2. 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.

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

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

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

Micropublishing and other online content

1. 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 1700 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 3.9 million people.

2. 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.

3. My YouTube channel. I post videos of lectures and talks and other philosophical and mathematical content, 1750 subscribers. My recent lecture series on the philosophy of mathematics had over 7000 total hours of viewing time, with 50,000 views.

4. 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.

5. 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

6. I co-wrote the lyrics to "Ode to Hippasus," (with Barbara Montero and Hypatia Hamkins) a song providing a proof of the irrationality of $\sqrt{2}$, made into a music video by Hannah Hoffman, available at https://youtu.be/DGIA2U2iPCk. In a followup project with Hoffman, I wrote the lyrics to "Plenitudinous Primes," a song giving the Euclidean proof of the infinitude of primes, https://youtu.be/WEyEpwAeaaI.

7. My work on infinite chess was the basis for the PBS Infinite Series video "Infinite Chess," March 2017, with over 300,000 views and over 1000 lively mathematical/chess comments posted on this particular video, https://youtu.be/PN-I6u-AxMg

8. See also my popular logic, math and philosophy posts on Twitter, @JDHamkins, 11,000 followers.

Selected recent invited conference and colloquia talks

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

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

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

4. "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

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

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

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

8. 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

24. "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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

42. "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.

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

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

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

46. "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.

47. "A universal finite set," CUNY Logic Workshop, November 17, 2017, CUNY Graduate Center, New York.

48. "The modal principles of potentialism in mathematics," Logic and Metaphysics Workshop, November 6, 2017, CUNY Graduate Center, New York.

49. "Arithmetic potentialism and the universal algorithm," CUNY Logic Workshop, September 8, 2017, CUNY Graduate Center, New York.

50. "The inner-model and ground-model reflection principles," CUNY Set Theory seminar, September 1, 2017, CUNY Graduate Center, New York.

51. "Open and clopen determinacy for proper class games," Mid-Atlantic Mathematical Logic Symposium, April 1–2, 2017, Virginia Commonwealth University, Richmond, Virginia.

52. "Set-theoretic geology and the downward directed grounds hypothesis," Logic Seminar, January 13, 2017, Hausdorff Center for Mathematics, Universität Bonn, Germany.

53. "Transfinite game values in infinite chess, including new progress," Basic Notions Seminar, January 10, 2017, Universität Bonn, Germany.

54. "Set-theoretic mereology as a foundation of mathematics," Logic and Metaphysics Workshop, October 24, 2016, CUNY Graduate Center, New York.

55. "Recent advances in set-theoretic geology," Harvard Logic Colloquium, October 20, 2016, Harvard University.

56. "The modal logic of set-theoretic potentialism," Mathematical Logic and Its Applications, workshop conference, September 26–29, 2016, Research Institute for Mathematical Sciences, Kyoto University, Japan.

57. "Set-theoretic potentialism," CUNY Logic Workshop, September 16, 2016, CUNY Graduate Center, New York.

58. "The rearrangement number: how many rearrangements of a series suffice to verify absolute convergence?" Mathematics Colloquium, September 14, 2016, University of Pennsylvania, Philadelphia.

59. "Set-theoretic geology and the downward-directed grounds hypothesis," CUNY Set Theory seminar, September 2 and 9, 2016 (two talks), CUNY Graduate Center, New York.

60. "Pluralism-inspired mathematics, including a recent breakthrough in set-theoretic geology," Set-theoretic Pluralism Symposium, July 12–17, 2016, University of Aberdeen, Scotland.

61. "Freiling's axiom of symmetry, or throwing darts at the real line," CUNY Graduate Student Math Colloquium, April 11, 2016, CUNY Graduate Center, New York.

62. "Open determinacy for games on the ordinals," Torino Logic Seminar, March 3, 2016, University of Torino, Italy.

63. "The hypnagogic digraph, with applications to embeddings of the set-theoretic universe," AMS-ASL Special Session on Surreal Numbers, Joint Mathematics Meetings, January 6–9, 2016, Seattle, Washington.

64. "The rearrangement number: how many rearrangements of a series suffice to verify absolute convergence?" Vassar Mathematics Colloquium, November 10, 2015, Vassar College, Poughkeepsie, New York.

65. "Open determinacy for games on the ordinals is stronger than ZFC," CUNY Logic Workshop, October 2, 2015, CUNY Graduate Center, New York.

66. "Upward closure in the generic multiverse of a countable model of set theory," Recent Developments in Axiomatic Set Theory, September 16–18, 2015, Research Institute for Mathematical Sciences (RIMS), Kyoto University, Kyoto, Japan.

67. "Universality and embeddability amongst the models of set theory," Computability Theory and Foundations of Mathematics (CTFM 2015), September 7–11, 2015, Tokyo Institute of Technology, Tokyo, Japan.

68. "The absolute truth about non-absolute truth," Journ´ees sur les Arithm´etiques Faibles–Weak Arithmetics Days, July 7–9, 2015, CUNY Graduate Center, New York.

69. "The weakly compact embedding property," Mid-Atlantic Mathematical Logic Symposium, Apter-Gitik celebration, May 30-31, 2015, Carnegie Mellon University, Pittsburgh, Pennsylvania.

70. "I know that you know that I know that you know...," Plenary talk at the CSI Undergraduate Conference on Research, Scholarship, and Performance, April 30, 2015, College of Staten Island of CUNY, New York.

71. "The continuum hypothesis and other set-theoretic ideas for non-set-theorists," CUNY Einstein Chair Seminar (two talks), April 27, 2015, CUNY Graduate Center, New York.

72. "Embeddings of the universe into the constructible universe, current state of knowledge," CUNY Set Theory Seminar, March 6, 2015, CUNY Graduate Center, New York.

73. "Tutorial on Boolean ultrapowers," BLAST 2015, January 5–9, 2015, University of New Mexico, Las Cruces, New Mexico.

74. "An introduction to the theory of infinite games, with examples from infinite chess," University of Connecticut, December 5, 2014, Storrs, Connecticut.

75. "The theory of infinite games, how to play infinite chess and win," VCU Math Colloquium, November 21, 2014, Virginia Commonwealth University, Richmond, Virginia.

76. "Does definiteness-of-truth follow from definiteness-of-objects?" NY Philosophical Logic Group, November 10, 2014, New York University, New York.

77. "The span of infinity," panelist at roundtable discussion at The Helix Center, October 25, 2014, New York Psychoanalytic Society & Institute, New York.

78. "The pluralist perspective on the axiom of constructibility," MidWest PhilMath Workshop, Notre Dame, October 18–19, 2014, University of Notre Dame, South Bend, Indiana.

79. "When does every definable set have a definable member?" CUNY Set Theory Seminar, October 10, 2014, CUNY Graduate Center, New York.

80. "Large cardinals need not be large in HOD," International Workshop on Set Theory, September 29–October 3, 2014, Centre International de Rencontres Math´ematiques (CIRM), Luminy, France.

81. "A meeting at the crossroads — science, performance and the art of possibility," panel discussion, Underground Zero Festival, Intrinsic Value Project, July 9–10, 2014, New York.

82. "Higher infinity and the foundations of mathematics," plenary General Public Lecture, AAAS 2014, American Association for the Advancement of Science (Pacific Division) annual meeting, June 17–20, 2014, University of California at Riverside, California.

83. "Boldface resurrection and the strongly uplifting cardinals, the superstrongly unfoldable cardinals and the almost-hugely unfoldable cardinals," BEST 2014, June 18–20, 2014, held in conjunction with AAAS 2014, University of California at Riverside, California.

84. "Transfinite game values in infinite chess and other infinite games," colloquium and workshop, Infinity, computability, and metamathematics, May 23–25, 2014, Hausdorff Center for Mathematics, Universit¨at Bonn, Germany.

85. "Superstrong and other large cardinals are never Laver indestructible," ASL 2014 North American Annual Meeting, May 19-22, 2014, Boulder, Colorado.

86. "Large cardinals need not be large in HOD," Rutgers logic seminar, April 21, 2014, Rutgers University, New Jersey.

87. "Universal structures," GC MathFest, February 4, 2014, CUNY Graduate Center, New York.

88. "Large cardinals need not be large in HOD," CUNY Set Theory Seminar, January 31, 2014, CUNY Graduate Center, New York.

89. "Infinite chess and the theory of infinite games," Dartmouth Mathematics Colloquium, January 23, 2014, Dartmouth College, Hanover, New Hampshire.

90. "Satisfaction is not absolute," Dartmouth Logic Seminar, January 23, 2014, Dartmouth College, Hanover, New Hampshire.

91. "Embeddability amongst the countable models of set theory," plenary talk for ASL / Joint Math Meetings in Baltimore, January 18, 2014, Baltimore, Maryland.

Graduate student supervision

I have served or am serving as PhD dissertation supervisor for the following students:

- Emma Palmer, Oxford University
- Nuno Felipe Maia, Oxford University
- Hans Robin Solberg, Oxford University (co-supervisor)
- Wojciech Aleksander Wołoszyn, Oxford University
- Sam Adam-Day, Oxford University
- Corey Bacal Switzer, Ph.D. 2020, CUNY Graduate Center
- Kameryn Williams, Ph.D. 2018, CUNY Graduate Center
- Miha Habič, Ph.D. 2017, CUNY Graduate Center
- Erin Carmody, Ph.D. 2015, CUNY Graduate Center
- Norman Perlmutter, Ph.D. 2013, CUNY Graduate Center
- Brent Cody, Ph.D. 2012, CUNY Graduate Center
- Jason Schanker, Ph.D. 2011, CUNY Graduate Center
- Thomas Johnstone, Ph.D. 2007, CUNY Graduate Center
- Victoria Gitman, Ph.D. 2007, CUNY Graduate Center
- Jonas Reitz, Ph.D. 2006, CUNY Graduate Center
- George Liebman, Ph.D. 2004, CUNY Graduate Center

Master's Thesis Supervisor of:

- Quincy Montgomery Crawford Iv, Philosophy BPhil 2023 (expected), Oxford University
- Davide Leonessi, MSc 2021, MFoCS, Oxford University

- ⑧ Clara List, MSc 2020, MFoCS, Oxford University
- ⑧ Ansten Morch-Klev, M.S. 2007, Universiteit van Amsterdam, Institute for Logic, Language and Computation

Thesis Committee member for:

- ⑧ Paul Gorbow, Ph.D. 2018, University of Gothenburg, Sweden
- ⑧ Kaethe Minden, Ph.D. 2017, CUNY Graduate Center
- ⑧ Regula Krapf, Ph.D. 2017, University of Bonn
- ⑧ Giorgio Audrito, Ph.D. 2016, University of Torino (I was president of the thesis committee)
- ⑧ Kostas Tsaprounis, Ph.D. 2012, University of Barcelona
- ⑧ Shoshana Friedman, Ph.D. 2010, CUNY Graduate Center
- ⑧ Paul Ellis, Ph.D. 2009, Rutgers University
- ⑧ Scott Schneider, Ph.D. 2009, Rutgers University
- ⑧ Sam Coskey, Ph.D. 2008, Rutgers University
- ⑧ Joost Winter, M.S. 2007, Universiteit van Amsterdam
- ⑧ Can Baskent, M.S. 2007, Universiteit van Amsterdam
- ⑧ Yurii Khomskii, M.S. 2007, Universiteit van Amsterdam
- ⑧ Erez Shochat, Ph.D. 2006, CUNY Graduate Center
- ⑧ Ivan Welty, Ph.D. 2006, Philosophy, Columbia University
- ⑧ Sidney Raffer, Ph.D. 1999, CUNY Graduate Center

Teaching awards and recognition

I have been recognized for my teaching and have regularly earned high teaching evaluations.

- ⑧ RateMyProfessor.com rates me as "awesome" along with the tags: Inspirational, Accessible outside class, Amazing lectures, 91% would take again.
- ⑧ Departmental nomination for CSI Presidential Teaching Award, 2006.
- ⑧ Distinguished Undergraduate Teaching Award ("Teacher of the Year"), UC Berkeley Mathematics, 1995.
- ⑧ Nikki Kose Memorial Teaching Award, UC Berkeley Mathematics, 1994.

My teaching experience is broad, and includes teaching courses at different institutions (both in the US and in Europe) and at all levels of instruction, including lower and upper division undergraduate courses, introductory and advanced graduate courses, seminars, undergraduate independent study, Honors theses, graduate independent study and dissertation supervision.

Conference and seminar organizing

In Oxford, I founded the Oxford Set Theory Seminar, running since Trinity Term 2020, in which we hosted distinguished speakers in set theory and the philosophy of set theory, with participants joining online from all around the world. I was the principal organizer for the Set Theory in the UK conference held in Oxford in December, 2019.

In New York, I was a principal force behind various research activities that had helped to establish the City University of New York as a vibrant center of research in logic. I was a founding co-organizer of the weekly CUNY Logic Workshop, which has run continuously for over twenty years and has become a focal point for researchers in mathematical logic in New York City, with a long list of distinguished speakers. I also founded the CUNY Set Theory Seminar, running now for nearly twenty years, also with many distinguished speakers. In addition, I have organized or co-organized numerous conferences at CUNY, including the NYC Logic Conference series, several MAMLS meetings and conferences on the Effective Mathematics of the Uncountable. I have also served as advisor for the several New York Graduate Student Logic Conferences.