

SHORTER CURRICULUM VITAE

AKIHIRO KANAMORI

DESCRIPTION: Born 23 October 1948 in Tokyo, Japan;
now a United States citizen.

DEGREES:

1966-1970 California Institute of Technology, Bachelor of Science.
1970-1975 University of Cambridge (King's College), Doctor of Philosophy.
Subject: Set Theory, Mathematics.
Thesis: *Ultrafilters over Uncountable Cardinals*.
Advisor: A.R.D. Mathias.
This involved one year of research at:
1972-1973 University of Wisconsin, Madison.
Advisor: K. Kunen.

PROFESSIONAL EXPERIENCE:

1975-1977 Lectureship at the University of California, Berkeley.
1977-1981 Benjamin Pierce Assistant Professorship at Harvard University.
1981-1982 Assistant Professorship at Baruch College of the City
University of New York.
1982-1983 Visiting Associate Professorship at Boston University.
1983-1992 Associate Professorship at Boston University.
1988-1989 Berman Visiting Professorship, Institute of Mathematics,
Hebrew University of Jerusalem.
1992- Professorship at Boston University.
1995 Visiting Professorship, Institute of Mathematics,
Hebrew University of Jerusalem.
2002-2003 Senior Fellow of the Dibner Institute for the History of Science
and Technology. Visiting Scholar at the Department of the
History of Science at Harvard University.

2009-2010 Senior Fellow of the Lichtenberg-Kolleg,
Institute for Advanced Study, Göttingen, Germany.

Lecture Course on Set Theory, Mathematische Institut,
Göttingen, Germany, June-July 2010.

FELLOWSHIPS AND AWARDS:

Marshall Scholarship (British Government), 1970-1972.
Danforth Foundation Fellowship, 1970-1975.
Woodrow Wilson Foundation Fellowship, 1970.

1984 New England Open Co-Champion of Chess.
Equal First 1986 Greater Boston Chess Open.
Equal Second, 1987 Massachusetts Chess Open Championship.
Equal Sixth, 1989 Israel Open.
Class Prize, 1992 New England Open Championship.

2002-2003 Senior Fellowship, Dibner Institute
for the History of Science and Technology.

2005 Metcalf Award for Excellence in Teaching, Boston University.

2009-2010 Senior Fellowship, Lichtenberg-Kolleg,
Institute for Advanced Study, Göttingen, Germany.

ORGANIZATIONS AND ACTIVITIES:

Association for Symbolic Logic.

Member of the Executive Council (1981-1990).

Editor for set theory reviews for *The Journal of Symbolic Logic*, 1981-1990.

Representative to the American Association for the Advancement of Science,
1995-8.

Program Committee for:

1998 Winter Meeting, Baltimore, Maryland

2000 Annual Meeting, Urbana, Illinois

2000 Summer European Meeting, Paris, France

2005 Winter Meeting, Atlanta, Georgia (Program Chair)

2013 Annual Meeting, Ontario, Canada

2014 Annual Meeting, Boulder, Colorado

Member of the Executive Council, 1999-2002.

Sole editor for all articles for *The Bulletin of Symbolic Logic*, 2001-2006.

American Mathematical Society.

United States Chess Federation.

INVITED ADDRESSES AT CONFERENCES since 1995:

- Colloquium on La théorie des ensembles dans les mathématiques du XXème siècle
Institut Henri Poincaré; Paris, France; December 1995.
- Boise Extravaganza in Set Theory; Boise State University; March 1997.
- Annual Meeting of the American Mathematical Society, Special Session on
on History of Mathematical Logic, Baltimore, Maryland; January 1998.
- Erdős Memorial Conference, Budapest, Hungary; July 1999.
- Symposium on Analytic Philosophy, A Tribute to Burton Dreben, Boston University;
Boston Massachusetts; October 2000.
- International Congress for Logic, Methodology and Philosophy of Science at
Oviedo Spain; August 2003.
- International Conference on Mathematical Knowledge, Cambridge University,
Cambridge England, June-July 2004.
- Memorial Conference for Stanley Tennenbaum, Graduate Center
of the City University of New York, New York City, April 2006
- Annual Meeting of the Association for Symbolic Logic; Plenary Speaker,
Montreal, Canada, May 2006.
- Annual Meeting of the American Mathematical Society, Joint AMS-ASL-MAA
Panel Discussion on Contemporary Perspectives on Hilbert's Second Problem
and Gödel's Incompleteness Theorems; New Orleans, January 2007.
- Annual Meeting of the Association for Symbolic Logic; Plenary Speaker,
University of California at Irvine, March 2008.
- Summer Meeting of the Association for Symbolic Logic; Plenary Speaker,
Bern, Switzerland, July 2008.
- VIII International Ontology Congress; Plenary Speaker, San Sebastian, Spain,
September - October 2008.
- Mathematics Between the Natural Sciences and the Humanities; Plenary Speaker,
Göttingen, Germany, October 2008.
- Bernaysfest. Carnegie Mellon University, Pittsburgh, Pennsylvania, November 2008.
- A Meeting at the Intersection of Logic and Mathematics,
MAMLS at Harvard, Cambridge, Massachusetts, May 2009.
- Diverse Views of Mathematics Workshop, Göttingen, Germany, November 2009.
- Workshop on Aspects of Infinity, Keio University, Tokyo, June 2010.

Annual Meeting of the Japanese Association for the Philosophy of Science,
Shenshu University, Tokyo, June 2010.

Workshop on Set Theory and the Philosophy of Mathematics,
University of Pennsylvania, Philadelphia, October 2010.

International Conference ANR 2013: Kurt Gödel, Philosopher: From Logic
to Cosmology, Aix-en-Provence, France, July 2013.

Fifth European Set Theory Conference (5ESTC), Issac Newton Institute,
Cambridge UK, August 2015.

Historical and Philosophical Perspectives on the Continuum, Hebrew University,
Jerusalem, May 2018.

Conference on Kreisel, Georg Kreisel Institut für Wissenschaftstheorie, August 2018.
Celebrating 90 Years of Gödel's Incompleteness Theorems, July 2021.

INVITED COLLOQUIUM TALKS since 2009

Ideals of Proof Fellows' Seminar, Paris, France, May 2009.

Göttingen Mathematisches Institut Colloquium, Göttingen Germany, February 2010.

Lichtenberg-Kolleg Tuesday Colloquium, Göttingen Germany, May 2010.

University of Paderborn Mathematical Colloquium, Paderborn Germany, July 2010.

Carnegie Mellon University Philosophy Colloquium, Pittsburgh, May 2013.

Helsinki University Mathematics Colloquium, Helsinki Finland, May 2013.

PhilMath Intersem 7, Université de Paris 7, Paris, June 2016.

University of Connecticut Logic Group, Storrs, November 2016.

Harvard Logic Colloquium, Harvard University, January 2018.

Mathematical Colloquium, University of Freiburg, May 2018.

BOOKS:

The Higher Infinite, Perspectives in Mathematical Logic
(Springer-Verlag), 536 pp, November 1994.

Corrected second printing, May 1997.

Japanese translation appeared in late 1998.

Second edition, April 2003.

Second edition, Corrected second printing, March 2005.

Softcover edition, November 2008.

New reprinting, Beijing World Publishing Corporation, 2012.

ISBN 978-3-540-88866-6 e-ISBN 978-3-540-88867-3

- (editor) *Analytic Philosophy and Logic, The Proceedings of the Twentieth World Congress of Philosophy, Volume 6*, 303pp, Philosophy Documentation Center, Bowling Green, 2000). ISBN 1-889680-10-9 (Volume 6)
- (set theory editor) *International Directory of Logicians*, managing editors Dov M. Gabbay and John H. Woods. College Publications, London, 2009.
- (editor with Matthew Foreman) *Handbook of Set Theory*, 2197pp in 3 volumes, Springer, Berlin, 2010. ISBN 978-1-4020-4843-2, e-ISBN 978-1-4020-5764-9
- (editor with Heinz-Dieter Ebbinghaus) *Collected Works of Ernst Zermelo*, Volume I, 654pp, Springer, Berlin 2010. ISBN 978-3-540-79383-0, e-ISBN 978-3-540-79384-7
- (editor) *Sets and Extensions in the Twentieth Century*, 865pp, managing editors Dov M. Gabbay and John H. Woods, Volume 6 of the *Handbook for the History of Logic*. Cambridge University Press, Cambridge, 2012. ISBN 978-0-444-51621-3
- (editor with Heinz-Dieter Ebbinghaus) *Collected Works of Ernst Zermelo*, Volume II, 781pp, Springer, Berlin, 2013. ISBN 978-3-540-70855-1 e-ISBN 978-3-540-70856-8
- Essays on Set Theory*, Studies in Logic, Mathematical Logic and Foundations, vol. 89, College Publications, London, 2021. ISBN 978-1-84890-357-9

PUBLICATIONS:

- [1] The siege of Chitral as an imperial factor, *Journal of Indian History* 46(3)(1968), 387-404.
- [2] Weakly normal filters and irregular ultrafilters, *Transactions of the American Mathematical Society* 220(1976), 393-399.
- [3] Ultrafilters over a measurable cardinal, *Annals of Mathematical Logic* 11(1976), 315-356.
- [4] Some combinatorics involving ultrafilters, *Fundamenta Mathematicae* 100(1978), 145-155.
- [5] Strong axioms of infinity and elementary embeddings, with William N. Reinhardt and Robert M. Solovay, *Annals of Mathematical Logic* 13(1978), 73-116.
- [6] The evolution of large cardinal axioms in set theory, with Menachem Magidor, in: Gert H. Müller and Dana S. Scott, editors, *Higher Set Theory (Proceedings, Oberwolfach, Germany 1977)*, Lecture Notes in Mathematics 669, 99-275. Springer-Verlag, Berlin, 1978.
- [7] On Vopěnka's and related principles, in: Angus MacIntyre, Leszek Pacholski, and Jeffrey Paris, editors, *Logic Colloquium '77*, Studies in Logic and the Foundations of Mathematics 96, 145-153. North-Holland, Amsterdam, 1978.

- [8] On p -points over a measurable cardinal, *The Journal of Symbolic Logic* 46(1981), 59-65.
- [9] Perfect-set forcing for uncountable cardinals, *Annals of Mathematical Logic* 19(1980), 97-114.
- [10] Morass-level combinatorial principles, in: George Metakides, editor, *Patras Logic Symposium*, Studies in Logic and the Foundations of Mathematics 109, 339-358. North-Holland, Amsterdam, 1982.
- [11] On Silver's and related principles, in: Dirk van Dalen, Daniel Lascar, and Timothy Smiley, editors, *Logic Colloquium '80*, Studies in Logic and the Foundations of Mathematics vol. 87, 153-172. North-Holland, Amsterdam, 1982.
- [12] Morasses in combinatorial set theory, in: A.R.D. Mathias, editor, *Surveys in Set Theory*, London Mathematical Society Lecture Note Series 87, 167-196. Cambridge University Press, Cambridge, 1983.
- [13] Filters for square-bracket partition relations, with James M. Henle and Eugene M. Kleinberg, *Zeitschrift für Mathematische Logik und Grundlagen der Mathematik* 30(1984), 183-192.
- [14] Separating ultrafilters on uncountable cardinals, with Alan D. Taylor, *Israel Journal of Mathematics* 47(1984), 131-138.
- [15] Negative partition relations for ultrafilters on uncountable cardinals, with Alan D. Taylor, *Proceedings of the American Mathematical Society* 92(1984), 83-93.
- [16] Partition relations for successor cardinals, *Advances in Mathematics* 59(1986), 152-169.
- [17] Finest partitions for ultrafilters, *The Journal of Symbolic Logic* 51(1986), 327-332.
- [18] A proposal for deciding chess matches, with Leonid Levin, *Players' Chess News, Games and Events* #56, 26 August 1985.
- [19] On Gödel incompleteness and finite combinatorics, with Kenneth McAloon, *Annals of Pure and Applied Logic* 33(1987), 23-41.
- [20] Diamonds, large cardinals, and ultrafilters, in: Walter A. Carnielli and L.P. de Alcantara, editors, *Methods and Applications of Mathematical Logic*, Contemporary Mathematics 69, 35-42. American Mathematical Society, Providence, 1988.
- [21] Regressive partition relations for infinite cardinals, with András Hajnal and Saharon Shelah, *Transactions of the American Mathematical Society* 299(1987), 145-154.
- [22] Regressive partitions and Borel diagonalization, *The Journal of Symbolic Logic* 54(1989), 540-552.
- [23] The complete 0^\dagger , with Tamara Awerbuch-Friedlander, *Zeitschrift für Mathematische Logik und Grundlagen der Mathematik* 36(1990), 133-141.

- [24] Regressive partitions, Borel diagonalization, and n -subtle cardinals, *Annals of Pure and Applied Logic* 52(1991), 65-77.
- [25] Complete quotient Boolean algebras, with Saharon Shelah, *Transactions of the American Mathematical Society*, 347(1995), 1963-1979.
- [26] The emergence of descriptive set theory, in: Jaakko Hintikka, editor, *From Dedekind to Gödel: Essays on the Development of the Foundations of Mathematics*, Synthèse Library 251, 241–262. Kluwer, Dordrecht, 1995.
- [27] The mathematical development of set theory from Cantor to Cohen, *The Bulletin of Symbolic Logic* 2(1996), 1–71.
- [28] Hilbert and set theory, with Burton Dreben, *Synthese* 110(1997), 77–125.
- [29] The mathematical import of Zermelo’s Well-Ordering Theorem, *The Bulletin of Symbolic Logic* 3(1997), 281–311.
- [30] Introduction to: Akihiro Kanamori, editor, *Analytic Philosophy and Logic, The Proceedings of the Twentieth World Congress of Philosophy, Volume 6*, xiii-vli. Philosophy Documentation Center, Bowling Green, 2000.
- [31] Does GCH imply AC locally?, with David Pincus, in: Gábor Halász, László Lovász, Miklós Simonivits and Vera T. Sós, editors, *Paul Erdős and His Mathematics*, vol. II, Bolyai Society Mathematical Studies, 413-426. Springer, Berlin, 2002.
- [32] The empty set, the singleton, and the ordered pair, *The Bulletin for Symbolic Logic* 9(2003), 273–298.
- [33] Introductory note to the Gödel–Ulam correspondence, in: Solomon Feferman and John W. Dawson, Jr., editors-in-chief, *Kurt Gödel Collected Works, Volume V, Correspondence H–Z*, 281-288. Clarendon Press, Oxford, 2003.
- [34] Zermelo and set theory, *The Bulletin of Symbolic Logic* 10(2004), 487–553.
- [35] Levy and set theory, *Annals of Pure and Applied Logic* 140(2006), 233-252.
- [36] How Gödel transformed set theory, with Juliet Floyd, *Notices of the American Mathematical Society* 53(2006), 417–425.
- [37] Gödel and set theory, *The Bulletin of Symbolic Logic* 13(2007), 153–188. Reprinted in Solomon Feferman, Charles Parsons, and Stephen G. Simpson, editors, *Kurt Gödel: Essays for his Centennial*, Lecture Notes in Logic 33, 145-180. Association of Symbolic Logic, 2010.
- [38] Cohen and set theory, *The Bulletin of Symbolic Logic* 14(2008), 351–378.
- [39] L’ipotesi del continuo, in: Claudio Bartocci and Piergiorgio Odifreddi, editors, *Mathematics and Culture*, vol. 2, 461–514. Giulio Einaudi, Torino, 2008.
- [40] Set theory from Cantor to Cohen, a book chapter in: Andrew Irvine, editor, *Philosophy of Mathematics*, volume 4 of *Handbook of the Philosophy of Science*, 395-460. Cambridge University Press, Cambridge, 2009. Revised version of [27]. Reprinted

- with minor emendations in Dov M. Gabbay, Akihiro Kanamori, and John H. Woods, editors, *Sets and Extensions in the Twentieth Century*, 1-71. Cambridge University Press, Cambridge, 2012.
- [41] Bernays and set theory, *The Bulletin of Symbolic Logic* 15(2009), 43-60.
 - [42] The infinite as method in set theory and mathematics, *Ontology Studies* 9(2009), 31-41.
 - [43] Introduction to: Matthew Foreman and Akihiro Kanamori, editors, *Handbook of Set theory*, 2197 pages in three volumes, 1-92. Springer, Berlin, 2010.
 - [44] Introductory note to 1930a, Zermelo’s article “Über Grenzzahlen und Mengenbereiche”, in : Heinz-Dieter Ebbinghaus and Akihiro Kanamori, editors, *Collected Works of Ernst Zermelo, Volume I*, 390-399. Springer, Berlin, 2010.
 - [45] Introductory note to s1930d, Zermelo’s report to the Notgemeinschaft der Deutschen Wissenschaft, in: Heinz-Dieter Ebbinghaus and Akihiro Kanamori, editors, *Collected Works of Ernst Zermelo, Volume I*, 432-433. Springer, Berlin, 2010.
 - [46] Introductory note to s1930e, Zermelo’s note on the cumulative hierarchy conception of sets, in: Heinz-Dieter Ebbinghaus and Akihiro Kanamori, editors, *Collected Works of Ernst Zermelo, Volume I*, 444-447. Springer, Berlin, 2010.
 - [47] Introductory note to s1931e and s1933b, Zermelo’s notes on ordinal numbers and large cardinals, in: Heinz-Dieter Ebbinghaus and Akihiro Kanamori, editors, *Collected Works of Ernst Zermelo, Volume I*, 502-503. Springer, Berlin, 2010.
 - [48] Historical Remarks on Suslin’s Problem, in Juliette Kennedy and Roman Kossak, editors, *Set Theory, Arithmetic and Foundations of Mathematics: Theorems, Philosophies*, Lecture Notes in Logic 36, 1-12. Association of Symbolic Logic, 2010.
 - [49] Kunen and set theory, *Topology and its Applications* 158(2011), 43-60.
 - [50] In praise of Replacement, *The Bulletin of Symbolic Logic* 18(2012), 45-90.
 - [51] Large cardinals with forcing, a book chapter in: Dov M. Gabbay, Akihiro Kanamori, and John H. Woods, editors, *Sets and Extensions in the Twentieth Century*, Volume 6 of the *Handbook for the History of Logic*, 359-413. Cambridge University Press, Cambridge, 2012.
 - [52] The mathematical infinite as a matter of method, *The Annals of the Japan Association for Philosophy of Science* 20(2012), 3-15.
 - [53] Mathematical knowledge: motley and complexity of proof, *The Annals of the Japan Association for Philosophy of Science* 21(2013), 21-35.
 - [54] Erdős and set theory, *The Bulletin of Symbolic Logic* 20(2014), 449-496.
 - [55] Gödel vis-à-vis Russell: From logic and set theory to philosophy, with Juliet Floyd, in: Gabriella Crocco and Eva-Maria Engelen, editors, *Kurt Gödel: Philosopher-Scientist*, 243-326. Presses Universitaires de Provence, Aix-en-Provence, 2016.

- [56] Laver and set theory, *Archive for Mathematical Logic* 55(2016), 133-164.
- [57] Mathias and set theory, *Mathematical Logic Quarterly* 20(2016), 278-294.
- [58] Aspect-perception and the history of mathematics, in: Dominic Shaw, Brendan Harrington and Michael Beaney, editors, *Aspect Perception after Wittgenstein: Seeing-as and Novelty*, 109-130. Routledge, Abingdon, 2018.
- [59] Putnam's constructivization argument, in: Geoffrey Hellman and Roy Cook, editors, *Putnam on Logic and Mathematics*, Springer, Berlin, 2018, pp. 236-247.
- [60] Cantor and continuity, to appear in a philosophical volume on the concept of continuity edited by Stewart Shapiro, Cambridge University Press, 2019.
- [61] Kreisel and Wittgenstein, in: Paul Weingartner and Hans-Peter Leeb, eds., *Kreisel's Interests, On the Foundations of Logic and Mathematics*, College Publications, London, 2020, 1-32.
- [62] Kunen the expositor, to appear in *Annals of Pure and Applied Logic*, 2022.
- [63] The set theory in Gödel's Resultate Grundlagen, to appear, 2022.

EDITED JOURNAL ISSUES:

Fundamenta Mathematicae 154(1997), number 2, guest editor.

This issue was devoted to the set theory papers presented at the Summer Association of Symbolic Logic Meeting, Haifa Israel 1995.

Synthese 110(1997), number 1, guest editor with Alfred Tauber.

This issue was devoted to the papers presented at a symposium on Hilbert's Philosophy of Mathematics, November 1993, part of the Boston Colloquium for Philosophy of Science.

Synthese 111(1997), number 2, guest editor.

This issue was devoted to the papers presented at a symposium on Proof and Progress in Mathematics, February 1996, part of the Boston Colloquium for Philosophy of Science.