# CURRICULUM VITAE

## OF

# AKIHIRO KANAMORI

DESCRIPTION:	Born 23 October 1948 in Tokyo, Japan; now a United States citizen.
DEGREES:	
1966-1970 1970-1975	<ul> <li>California Institute of Technology, Bachelor of Science.</li> <li>University of Cambridge (King's College), Doctor of Philosophy.</li> <li>Subject: Set Theory, Mathematics.</li> <li>Thesis: Ultrafilters over Uncountable Cardinals.</li> <li>Advisor: A.R.D. Mathias.</li> <li>This involved one user of research et:</li> </ul>
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. Editor for articles for *The Bulletin of Symbolic Logic*, 2001–2006.
American Mathematical Society.

United States Chess Federation.

Reviewer for Mathematical Reviews (Over 200 articles thus far reviewed).

Referee for the following journals:

Advances in Mathematics

Annals of Mathematics Annals of Mathematical Logic Annals of Pure and Applied Logic Archiv für Logic (and later Archive for Mathematical Logic) Fundamenta Mathematicae Israel Journal of Mathematics Journal of the Australian Mathematical Society Journal of Symbolic Logic Notre Dame Journal of Formal Logic Proceedings of the American Mathematical Society Synthese Transactions of the American Mathematical Society

Referee for National Science Foundation grants and Natural Sciences and Engineering Research Council of Canada grants.

Organizer, New England Set Theory Seminar (NESTS); monthly meetings held at Smith College, Northampton (1982-1993).

Organizer, Second Biennial Cambridge (Boston) Logic Conference, April 22-24, 1983;
Third Biennial Greater Boston Logic Conference, April 19-21, 1985;
Fourth Biennial Greater Boston Logic Conference, April 10-12, 1987;
Sacks Symposium, May 13-16, 1993, and
Greater Boston Logic Conference, May 27-30, 1995.
Greater Boston Logic Meeting, May 14-16, 1999.
Greater Boston Logic Conference, May 11-13, 2001.
Greater Boston Logic Conference, May 12-14, 2006.

Organizer, Symposium on Proof and Progress in Mathematics, February 1995, Boston Colloquium for Philosophy of Science.

### INVITED ADDRESSES AT CONFERENCES:

Conference on Definability in Set Theory; Oberwolfach, Germany; April 1977.

Summer European Meeting of the Association for Symbolic Logic; Wroclaw, Poland; August 1977.

Cambridge Summer School in Mathematical Logic; Cambridge, England; July-August 1978.

Regional Meeting of the American Mathematical Society; Providence, Rhode Island; August 1978.

Union College Set Theory Conference; Schnectady, New York; June 1979.

Annual Meeting of the Association for Symbolic Logic (held in conjunction with the annual meeting of the American Philosophical Association); New York, New York; December 1979. Logic Symposion and Omega Group Meeting; Patras, Greece; August 1980.

- Regional Meeting of the American Mathematical Society; Amherst, Mass.; October 1981.
- Annual Meeting of the Association for Symbolic Logic (held in conjunction with the annual meeting of the American Philosophical Association, Eastern Division); Boston, Massachusetts; December 1983.
- Annual Meeting of the Latin American Society of Logic; Campinas, Brazil; July 1985.
- American Mathematical Society Summer 1985 Research Conference Series, Logic and Finite Combinatorics; Humboldt State University, Arcata, California; August 1985.
- Spring Meeting of the American Mathematical Society; Honolulu, Hawaii; March 1987.
- Conference on Mathematical Logic and its Applications; Nagoya University, Nagoya, Japan; November 1988.
- Conference on Set Theory; Oberwolfach, Germany; November 1991.
- Symposium on the Foundations of Mathematics 1850-1930, Boston Colloquium for Philosophy of Science, Boston University; Boston, Massachusetts; April 1992.
- Symposium on Hilbert's Philosophy of Mathematics, Boston Colloquium for Philosophy of Science, Boston University; Boston, Massachusetts; November 1993.
- 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.
- Erdös 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.
- Ideals of Proof Fellows' Seminar, Paris, France, 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.

#### INVITATIONS TO CONFERENCES NOT ATTENDED:

- Special Session on Set theory at the 1998 Fall Eastern Sectional Meeting of the American Mathematical Society, State College, Pennsylvania; October 1998.
- International Conference on Topology and its Applications, Kanagawa University; Yokohama, Japan; August 1999.
- Special Session on Set Theory, at the 2001 Spring Western Sectional Meeting of the American Mathematical Society, University of Las Vegas, Las Vegas, Nevada; April, 2001.

Foundational Theories of Mathematics, Trento, Italy; September 2001.

- Symposium on Tarski and Truth, Boston Colloquium for Philosophy of Science, Boston University; Boston, Massachusetts; October 2001.
- The International Conference "Topology in Matsue" joined with the Second Mexico-Japan Topology Symposium, Matsue-City, Japan; June 2002.
- Conference Commemorating the 70th Birthday of Jan Mycielski, University of Colorado at Boulder; June 2002.
- Sixth Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, Florida; July 2002.
- Third Congress of Logic Applied to Technology, LAPTEC 2002, Sao Paulo Brazil; November 2002.
- Mid-Atlantic Mathematical Logic Seminar, American University, Washington DC, April 2004.
- Logic and its Relationship with Other Disciplines, Indian Institute of Technology, Bombay, India, January 2005.
- Advances in Set-Theoretic Topology, Erice, Sicily, June 2008.
- Friedman Fest, commemorating Harvey Friedman's 60th Birthday, University of Ohio, Colombus, Ohio, May 2009.
- Summer School in Set Theory, Dae Jeon, Korea May, 2009.
- Eleventh Asian Logic Conference, Singapore, June 22-27, 2009.
- Workshop on Reflection Principles, Oxford, United Kingdom, March 2012.
- Colloquium Logicum 2012 of the German Association for Logic (DVMLG), September 2012

## INVITED PARTICIPANT AT CONFERENCES:

- American Matematical Society Summer Institute in Recursion Theory, Cornell University, Ithaca, New York; June-July 1982.
- American Mathematical Society 1983 Summer Research Conference Series, University of Colorado, Boulder, Colorado; June 1983.
- Conference on Set Theory and Boolean Algebra; Oberwolfach, Germany; January 1985.
- Conference on Set Theory; Oberwolfach, Germany; January 1989.
- Workshop on Set Theory and the Continuum; Mathematical Sciences Research Institute, Berkeley, California, October 1989.
- International Congress of Mathematicians; Kyoto Japan; August 1990. Chaired invited speaker session.

International Workshop in Set Theory; CIRM, Marseille,

France; September 1990.

- International Workshop in Set Theory; CIRM, Marseille, France; September 1992.
- Conference on Set Theory; Oberwolfach, Germany; October 1993.
- International Workshop in Set Theory; CIRM, Marseille, France; September 1994.
- Conference on Set Theory; Oberwolfach, Germany; January 1996.
- International Workshop in Set Theory; CIRM, Marseille, France; September 1996.
- Research-in-Pairs, with Thomas Jech, Mathematical Research Institute, Oberwolfach, Germany; June 1997.
- International Workshop in Set Theory; CIRM, Marseille, France; September 1998.
- Conference on Set Theory, Oberwolfach, Germany; December, 1999.
- European Meeting of the Association for Symbolic Logic, Paris, France; July 2000. (All expenses paid.)
- International Workshop in Set Theory; CIRM, Marseille, France; September 2000.
- Conference on Set Theory, Oberwolfach, Germany; January 2002.
- International Workshop in Set Theory; CIRM, Marseille, France; September 2002.
- 10th Year Reunion Conference for Dibner Fellows, Endicott House, Massachusetts Institute of Technology; May 2003.
- EFI Workshop on Infinity, Harvard University; September 2013.

#### OTHER COLLOQUIA AND SEMINARS (from 1985 onwards):

- New England Set Theory Seminar, Smith College, May 1985.
- Mathematics Colloquium, Dartmouth College, May 1985.
- Set Theory Seminar, Hebrew University of Jerusalem, July 1985.

New England Set Theory Seminar, Smith College,

September 1985.

- M.I.T. Logic Seminar, November 1985.
- Computer Science Colloquium, Boston College, October 1986.
- Mathematics Colloquium, Baruch College, City University of New York, November 1986.
- New England Set Theory Seminar, Smith College, February 1987.
- M.I.T. Logic Seminar, April 1987.
- Set Theory Seminar, Hebrew University of Jerusalem, Jerusalem, Israel, August 1987.
- New England Set Theory Seminar, Smith College, November 1987.
- M.I.T. Logic Seminar, December 1987.
- Set Theory Seminar, Cambridge University, Cambridge, England, March 1988.
- M.I.T. Logic Seminar, March & April 1988.
- Mathematics Colloquium, Hebrew University of Jerusalem, Jerusalem, Israel, October 1988.
- New England Set Theory Seminar, Smith College, November 1989.
- M.I.T. Logic Seminar, December 1989.
- Mathematics Colloquium, Southeastern Massachusetts University, February 1990.
- M.I.T. Logic Seminar, April 1990.
- New England Set Theory Seminar, Smith College, November 1990.
- Mathematics Colloquium, Baruch College, City University of New York, November 1990.
- M.I.T. Logic Seminar, November 1991.
- Mathematics Colloquium, Boston University, October 1991.
- M.I.T. Logic Seminar, March 1992.
- M.I.T. Logic Seminar, November 1992.
- M.I.T. Logic Seminar, March 1993.
- M.I.T. Logic Seminar, December 1994.
- M.I.T. Logic Seminar, November 1995.
- Logic Seminar, Université de Paris VII, Paris, France; December 1995.

- Set Theory Seminar, Université de Caen, Caen, France; December 1995.
- M.I.T. Logic Seminar, March 1996.
- M.I.T. Logic Seminar, November 1996.
- M.I.T. Logic Seminar, April 1997.
- Set Theory Seminar, Hebrew University of Jersualem, August 1997.
- M.I.T. Logic Seminar, September 1997.
- M.I.T. Logic Seminar, March 1998.
- M.I.T. Logic Seminar, December 1998.
- M.I.T. Logic Seminar, May 1999.
- City University of New York Logic Workshop, May 1999.
- M.I.T. Logic Seminar, December 1999.
- M.I.T. Logic Seminar, April 2000.
- M.I.T. Logic Seminar, September 2000.
- M.I.T. Logic Seminar, April 2001.
- M.I.T. Logic Seminar, November 2001.
- Dibner Institute Lunchtime Colloquia, Boston, October 2002.
- M.I.T. Logic Seminar, November 2002.
- M.I.T. Logic Seminar, April 2003.
- M.I.T. Logic Seminar, December 2003.
- M.I.T. Logic Seminar, April 2004.
- Institute für Formale Logik, Vienna, January 2004.
- Combined History of Science and Mathematical Logic Seminar, New York City, April 2004.
- M.I.T. Logic Seminar, October 2004.
- M.I.T. Logic Seminar, May 2005.
- M.I.T. Logic Seminar, December 2005.
- M.I.T. Logic Seminar, May 2006.
- M.I.T. Logic Seminar, April 2008.
- M.I.T. Logic Seminar, December 2008.
- M.I.T. Logic Seminar, April 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

### **DOCTORAL STUDENTS:**

```
Greg Kirmayer (M.I.T.)
1978: his final year, through to his thesis.
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Peter Dordal (Harvard) 1978-1979: his first two years; he completed his thesis with Jim Baumgartner of Dartmouth. Currently Professor at Loyola University.

#### Marcia Groszek (Harvard)

1978-1981: four years through to her thesis; she was a Moore Instructor at M.I.T. (1981-83), an Assistant Professor at U.C.L.A. (1983-84), and from 1984 on at Dartmouth College, Full Professor since 1994.

#### Colin Bailey (Harvard)

1980-82: his first two years; he completed his thesis with Gerald Sacks of M.I.T., was a Moore Instructor at M.I.T. 1983-85, and is currently Reader at Victoria University of Wellington, New Zealand.

Claude Sureson (Graduate Center of the City University of New York) 1981-83: three years through to her thesis; she was an Instructor at Dartmouth College (1984-85), and is currently an attaché de recherche de C.N.R.S. (France).

Elizabeth Brown (Boston University), awarded her Ph.D. June 2001; John Wesley Young Instructor at Dartmouth College, 2001–2003. From 2003, Assistant Professor, James Madison University, Harrisonburg, Virginia.

Peter Barendse (Boston University), awarded his Ph.D. April 2010.

Ivan Zaigralin (Boston University), awarded his Ph.D. April 2013.

### **PUBLICATIONS:**

- 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] On Vopenka's and Related Principles, in: A. MacIntyre, L. Pacholski, and J. Paris (eds.) Logic Colloquium '77 (Amsterdam: North-Holland Publishing Company, 1978), 145-153.
- [7] On p-points over a Measurable Cardinal, Journal of Symbolic Logic 46(1981), 59-65.
- [8] Perfect-Set Forcing for Uncountable Cardinals, Annals of Mathematical Logic 19(1980), 97-114.
- [9] Morass-level Combinatorial Principles, in: G. Metakides (ed.) *Patras Logic Symposion* (Amsterdam: North-Holland Publishing Company, 1982), 339-358.
- [10] On Silver's and Related Principles, in: D. van Dalen, D. Lascar, and T. Smiley (eds.) Logic Colloquium '80 (Amsterdam: North-Holland Publishing Company, 1982), 153-172.
- [11] Morasses in Combinatorial Set Theory, in: A.R.D. Mathias (ed.) Surveys in Set Theory (Cambridge: Cambridge University Press, 1983), 167-196.
- [12] Filters for Square-Bracket Partition Relations, with James M. Henle and Eugene M. Kleinberg, Zeitschrift für Mathematische Logic und Grundlagen der Mathematik 30(1984), 183-192.
- [13] Separating Ultrafilters on Uncountable Cardinals, with Alan D. Taylor, Israel Journal of Mathematics 47(1984), 131-138.
- [14] Negative Partition Relations for Ultrafilters on Uncountable Cardinals, with Alan D. Taylor, Proceedings of the American Mathematical Society 92(1984), 83-93.
- [15] Partition Relations for Successor Cardinals, Advances in Mathematics 59(1986), 152-169.
- [16] Finest Partitions for Ultrafilters The Journal of Symbolic Logic 51(1986), 327-332.
- [17] A Proposal for Deciding Chess Matches, with Leonid Levin, Players' Chess News, Games and Events #56, 26 August 1985.
- [18] On Gödel Incompleteness and Finite Combinatorics, with Kenneth McAloon, Annals of Pure and Applied Logic 33(1987), 23-41.
- [19] Diamonds, Large Cardinals, and Ultrafilters, in: W.A. Carnielli and L.P. de Alcantara (eds.) Methods and Applications of Mathematical Logic, Contemporary Matheamtics vol. 69 (Providence: American Mathematical Society, 1988), 35-42.
- [20] Regressive Partition Relations for Infinite Cardinals, with Andras Hajnal and Saharon Shelah, Transactions of the American Mathematical Society 299(1987), 145-154.
- [21] Regressive Partitions and Borel Diagonalization, *The Journal of Symbolic Logic* 54(1989), 540-552.

- [22] The Compleat 0<sup>†</sup>, with Tamara Awerbuch-Friedlander, Zeitschrift für Mathematische Logik und Grundlagen der Mathematik 36(1990), 133-141.
- [23] Regressive Partitions, Borel Diagonalization, and n-subtle cardinals, Annals of Pure and Applied Logic 52(1991), 65-77.
- [24] Complete Quotient Boolean Algebras, with Saharon Shelah, Transactions of the American Mathematical Society, 347(1995), 1963-1979.
- [25] The Emergence of Descriptive Set Theory, in: Jaakko Hintikka (editor), From Dedekind to Gödel: Essays on the Development of the Foundations of Mathematics, Synthese Library volume 251 (Dordrecht: Kluwer 1995), 241–262.
- [26] The Mathematical Development of Set Theory from Cantor to Cohen, *The Bulletin of Symbolic Logic* 2(1996), 1–71.
- [27] Hilbert and Set Theory, with Burton Dreben, Synthese 110(1997), 77–125.
- [28] The Mathematical Import of Zermelo's Well-Ordering Theorem, The Bulletin of Symbolic Logic 3(1997), 281–311.
- [29] Volume Introduction to Volume 6, Analytic Philosophy and Logic, *The Proceedings* of the Twentieth World Congress of Philosophy held at Boston University 1998 (Philosophy Documentation Center: Bowling Green State University 2000), xiii–xli.
- [30] Does GCH imply AC locally? with David Pincus, in: Gábor Halász, László Lovász, Miklós Simonivits and Vera T. Sós (editors), Paul Erdös and His Mathematics, Bolyai Society Mathematical Studies, (Berlin: Springer 2002), volume II, 413–426.
- [31] The Empty Set, the Singleton, and the Ordered Pair, *The Bulletin for Symbolic Logic* 9(2003), 273–298.
- [32] 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 Clarendon Press, Oxford 2003, 281–288.
- [33] Zermelo and Set Theory, The Bulletin for Symbolic Logic 10(2004), 487–553.
- [34] Levy and Set Theory, Annals of Pure and Applied Logic 140(2006), 233-252.
- [35] How Gödel Transformed Set Theory, with Juliet Floyd, Notices of the American Mathematical Society, 53(2006), 417–425.
- [36] 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 vol. 33, Association of Symbolic Logic, 2010, 145–180.
- [37] Cohen and Set Theory, The Bulletin of Symbolic Logic 14(2008), 351–378.
- [38] L'ipotesi del continuo, book chapter in: Claudio Bartocci and Piergiorggio Odifreddi (editors), Mathematics and Culture, volume two, 461–514, Einaudi 2008.

- [39] Set Theory from Cantor to Cohen, book chapter in: Andrew D. Irvine (editor), Philosophy of Mathematics, volume 4 of the Handbook of the Philosophy of Science, 395-460, Cambridge University Press 2009.
- [40] Bernays and Set Theory, The Bulletin of Symbolic Logic, 15(2009), 43–60.
- [41] The Infinite as Method in Set Theory and Mathematics, *Ontology Studies* 9(2009), 31-41.
- [42] Introduction and Chapter 0, 92pp, to: Matthew Foreman and Akihiro Kanamori (editors), Handbook of Set Theory, 2197 pages in three volumes, Springer, Berlin 2010.
- [43] 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 vol. 36, Association of Symbolic Logic, 2011, 1-12.
- [44] Kunen and Set Theory, Topology and its Applications 158(2011), 2446-2459.
- [45] Set Theory from Cantor to Cohen, essentially the same as item [39] above, a book chapter in: Dov Gabbay, Akihiro Kanamori, and John Woods (editors), Sets and Extensions in the Twentieth Century, volume 6 of the Handbook for the History of Logic, Cambridge University Press, 2012, 1-71.
- [46] Large Cardinals with Forcing, a book chapter in: Dov Gabbay, Akihiro Kanamori, and John Woods (editors), *Sets and Extensions in the Twentieth Century*, volume 6 of the *Handbook for the History of Logic*, Cambridge University Press, 2012, 359-413.
- [47] The Mathematical Infinite as a Matter of Method, Annals of the Japan Association for Philosophy of Science 20(2012), 3-15.
- [48] In Praise of Replacement, The Bulletin of Symbolic Logic 18(2012), 45-90.
- [49] Mathematical Knowledge: Motley and Complexity of Proof, Annals of the Japan Association for Philosophy of Science, 21(2013).
- [50] Gödel vis-à-vis Russell: From Logic and Set Theory to Philosophy, with Juliet Floyd, to appear in the volume for the ANR July 2013 conference.
- [51] Aspect-Perception and the History of Mathematics, to appear in the volume on Aspects and Novelty, edited by Michael Beaney et al.
- [52] Laver and Set theory, to appear in the Archive for Mathematic Logic.

### **MONOGRAPH:**

The Evolution of Large Cardinal Axioms in Set Theory, with Menachem Magidor, in: G.H. Müller and D.S. Scott (eds.)
Higher Set Theory (Proceedings, Oberwolfach, Germany 1977), Lecture Notes in Mathematics #669 (Springer-Verlag, 1978), pp.99-275.

### BOOK:

The Higher Infinite, Perspectives in Mathematical Logic (Springer-Verlag), 536 pages, 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, December 2008.
New reprinting, Beijing World Publishing Corporation, 2012
ISBN 978-3-540-88866-6 e-ISBN 978-3-540-88867-3

### 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.

### **EDITED BOOKS:**

- Volume 6, Analytic Philosophy and Logic, The Proceedings of the Twentieth World Congress of Philosophy held at Boston University 1998.
  (Philosophy Documentation Center: Bowling Green State University 2000).
- International Directory of Logicians: Who's Who in Logic, set theory editor, with managing editors Dov M. Gabbay and John H. Woods, College Publications, 2009.
- Handbook of Set Theory, with Matthew Foreman, 2197 pages in three volumes, Springer, Berlin, 2010. ISBN 978-1-4020-4843-2 e-ISBN 978-4020-5764-9
- Collected Works of Ernst Zermelo, Volume I, with Heinz-Dieter Ebbinghaus, supported by the Heidelberger Akademie, Springer, Berlin 2010. ISBN 978-3-540-79383-0 e-ISBN 978-3-540-79384-7
- Sets and Extensions in the Twentieth Century, with Dov Gabbay and John Woods, volume 6 of the Handbook for the History of Logic, Cambridge University Press, Cambridge, 2012. ISBN 978-0-444-51621-3

Collected Works of Ernst Zermelo, Volume II, with Heinz-Dieter Ebbinghaus, supported by the Heidelberger Akademie, Springer, Berlin 2013.