

Nicholas Huggett

OFFICE:
Department of Philosophy, M/C 267,
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773-818-5495/773-281-5728

EMPLOYMENT: 2015- : **LAS Distinguished Professor**, *University of Illinois at Chicago*.

2009-15: **Full Professor**, *University of Illinois at Chicago*.

2001-9: **Associate Professor**, *University of Illinois at Chicago*.

1996-2001: **Assistant Professor**, *University of Illinois at Chicago*.

1995-6: **Visiting Assistant Professor**, *Brown University*.

1994-5: **Visiting Assistant Professor**, *University of Kentucky*.

EDUCATION: **Rutgers University**: PhD, 1995. (Dissertation: **The Philosophy of Fields and Particles in Classical and Quantum Mechanics, including The Problem of Renormalization**. Supervised by Robert Weingard.)

Oxford University: BA Hons in Physics and Philosophy, 1988.

AWARDS AND

FELLOWSHIPS: **Outstanding Graduate Mentor Award**, Graduate College, University of Illinois at Chicago, 2015.

Professorial Fellow, Institute of Philosophy, School of Advanced Studies, University of London, April-May 2011.

American Council of Learned Societies **Collaborative Fellowship**, 2010-13. Grant for full-time research.

University of Illinois at Chicago **Humanities Institute Fellow**, 2005-6. Grant for full-time research.

University of Illinois at Chicago, **University Scholar**, 2002-5.

National Science Foundation **Science and Technology Studies Scholars Award**, 2001-2002. Grant for full-time research.

University of Illinois at Chicago **Humanities Institute Fellow**, 1999-2000. Grant for full-time research.

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GRANTS RECEIVED:

Project	Grant	Dates	Amount
Space and Time after Quantum Gravity	John Templeton Foundation	2015-18	\$1,104,281 (split between UIC and University of Geneva)
Time in Quantum Gravity Conference	John Templeton Foundation, through the Centre for Time, University of Sydney	2014-15	\$14,070 (100% to UCSD)
A Seminar on the Philosophical Foundations of Quantum Gravity	National Science Foundation, Standard Grant (SES 1257354)	2013-14	\$12,900
Emergent Spacetime in Quantum Theories fo Gravity	American Council of Learned Societies, Collaborative Fellowship	2010-13	\$103,500 (\$68,500 to UIC)
Absolute Quantities in Theories fo Space and Motion	National Science Foundation, Standard Grant (SES 4375)	2001-2	\$69,117
Physics Meets Philosophy at the Planck Scale	OVCR-Institute for the Humanities Grants-in-Aid	1999	\$500

OTHER

INSTITUTIONS: **Illinois Institute of Technology**, Lecturer in NSF funded course on Collaboration in Scientific Research, Fall 2011, Fall 2012.

Université de Genève, Lecturer at the Geneva Summer School in the Philosophy of Physics, July 2008.

Universitat Autònoma de Barcelona, Visiting Scholar at the Department of Philosophy, June-July 2005.

London School of Economics, Visiting Research Fellow at the Centre for the Philosophy of Natural and Social Sciences, May 1999 and April 2002.

Cambridge University: Department of History and Philosophy of Science: Visiting Scholar, Fall 1991.

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WORK IN PROGRESS:

1. **Space and Time After Quantum Gravity** – a three-year project on the philosophy of quantum gravity, with Christian Wüthrich, funded by the John Templeton Foundation. See www.beyondspacetime.net for more details.
2. **Out of Nowhere** – a book on the emergence of space and time in quantum gravity, with Christian Wüthrich. Under contract with OUP.
3. **True Motion** – a monograph reassessing the absolute-relative debate in the context of early modern physics.

BOOKS:

1. **Everywhere and Everywhen**, February 2010, OUP.
2. **Physics Meets Philosophy at the Planck Scale**, (with Callender, C), 2001, Cambridge University Press. Editor.
3. **Space from Zeno to Einstein: Classic Readings with a Contemporary Commentary**, 1999, MIT Press. Edited volume with survey text.

ESSAYS:

Most papers can be obtained by searching 'Huggett' on www.philpapers.org.

1. **Target Space \neq Space**, Studies in History and Philosophy of Modern Physics, forthcoming.
2. **Reading the Past in the Present**, written for a volume of responses to David Albert's Time and Chance, Harvard University Press. Forthcoming.
3. **Deriving General Relativity from String Theory**, (with Vistarini, T.), Philosophy of Science, 2015.
4. **Absolute and Relational Theories of Space and Motion**, (with Hofer, C.) Stanford Online Encyclopedia of Philosophy, 2006, substantial revision 2015. <http://plato.stanford.edu/entries/spacetime-theories>.
5. **Skeptical Notes on a Physics of Passage**, Annals of the New York Academy of Sciences, 2014.
6. **Emergent Spacetime and Empirical (In)coherence**, (with Wüthrich, C.), Studies in History and Philosophy of Modern Physics, 2013.
7. **Weak Discernibility of Quanta, the Right Way**, (with Norton, Joshua D.), British Journal for Philosophy of Science, 2013.
8. **Essay Review: William Harper's *Isaac Newton's Scientific Method***, Metascience, 2013.
9. **Time in Quantum Gravity**, (with Vistarini, T. and Wüthrich, C.) in A Companion to the Philosophy of Time, A.Bardon and H.Dyke (eds), 2013.
10. **What Did Newton Mean by 'Absolute Space'**, in Interpreting Newton, A.Janiak and E.Schliesser (eds), 2012.
11. **Philosophy of Physics**, in Continuum Companion to the Philosophy of Science, S.French and J.Saatsi (eds), 2011.

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12. **Answers to Six Questions**, in Foundations of Philosophy and Physics: Six Questions, J.Ferret and J.Symons (eds), 2010.
13. **Entanglement Exchange and Bohmian Mechanics**, (with Vistarini, T.), Manuscrito, 33, January-June 2010: 223-42.
14. **Indistinguishability**, (with Imbo, T.) in The Compendium of Quantum Physics: Concepts, Experiments, History and Philosophy, D.Greenberger, K.Hentschel and F.Weinert (eds), 2009.
15. **Essay Review: Harvey Brown's *Physical Relativity* and Robert DiSalle's *Understanding Spacetime***, Philosophy of Science, July 2009: 404-22.
16. **Why the Parts of Absolute Space are Immobile**, British Journal for the Philosophy of Science, 59, September 2008: 391-407.
17. **Groups in Mind**, (with Hilbert, D.) Philosophy of Science, 73, December 2006: 765-77.
18. **Particles and Fields, Space in Physical Theory, and Black Holes**, Encyclopedia of Philosophy, 2006.
19. **The Regularity Account of Relational Spacetime**, Mind, 115, January 2006: 41-73.
20. **Motion**, Routledge Electronic Encyclopedia of Philosophy, 2005.
21. **How a Skeptic Would Save A-Series Time from GTR: Response to Brian Pitts**, Chronos: The Annual Proceedings of the Philosophy of Time Society, VI, 2003-4.
22. **Quartiles and the Identity of Indiscernibles**, in Symmetries in Physics: New Reflections, K.Brading and E.Castellani (eds), 2003.
23. **Mirror Symmetry: What is it for a Relational Space to be Orientable?** in Symmetries in Physics: New Reflections, K.Brading and E.Castellani (eds), 2003.
24. **Renormalization and the Disunity of Science**, The Ontological Aspects of Quantum Field Theory, A.Wayne et al (eds), 2002.
25. **Zeno's Paradoxes**, Stanford Online Encyclopedia of Philosophy, 2002. Revised 2004. <http://plato.stanford.edu/entries/paradox-zeno>.
26. **Why Quantize Gravity (or Any Other Field for that Matter)?**, (with Callender, C) Philosophy of Science, 68, 2001: S382-94.
27. **Aristotle and Modern Cosmology**, Aristotle and Contemporary Science, Vol 2, D.Sfendoni-Mentzou et al (eds), 2001.

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28. **Philosophical Foundations of Quantum Field Theory**, British Journal for the Philosophy of Science, **51**, 2000: 617-38. Reprinted in Philosophy of Science Today, 2003, Oxford University Press. Reprinted in Deucalion (in greek), 2006.

29. **Local Philosophies of Science**, Philosophy of Science, **67**, 2000: S128-37.

30. **Reflections on Parity Non-conservation**, Philosophy of Science, **67**, 2000: 219-41.

31. **On the Significance of Permutation Symmetry**, British Journal for the Philosophy of Science, **50**, 1999: 325-47.

32. **Why Manifold Substantivalism is Probably Not a Consequence of Classical Mechanics**, International Studies in the Philosophy of Science, **13**, 1999: 17-34.

33. **Atomic Metaphysics**, Journal of Philosophy, **XCVI**, 1999: 5-24.

34. **Gauge Fields, Gravity and Bohm's Theory**, (with Weingard, R) Conceptual Foundations of Quantum Field Theory, T.Y.Cao (ed), 1999.

35. **Identity, Quantum Mechanics and Common Sense**, The Monist, **80**, 1997: 118-30.

36. **Answer to 'Can an Electron be at Rest?'**, American Journal of Physics, **65**, 1997: 1135.

37. **Exposing the Machinery of Infinite Renormalization**, (with Weingard, R) Proceedings of the 1996 PSA Conference, Vol 1, 1996: 159-67.

38. **Critical Review: Paul Teller's *Interpretive Introduction to Quantum Field Theory***, (with Weingard, R) Philosophy of Science, **63**, 1996: 302-14.

39. **The Renormalisation Group and Effective Field Theories**, (with Weingard, R) Synthese, **102**, 1995: 171-94.

40. **What are Quanta and Why Does it Matter?**, Proceedings of the 1994 PSA Conference, Vol 2, 1995: 69-78.

41. **On the Field Aspect of Quantum Fields**, (with Weingard, R) Erkenntnis, **40**, 1994: 293-301.

42. **Interpretations of Quantum Field Theory**, (with Weingard, R) Philosophy of Science, **61**, 1994: 370-88.

BOOK REVIEWS:

1. Dawid, R., **String Theory and the Scientific Method**, Notre Dame Philosophical Reviews, 2014. <http://ndpr.nd.edu/news/46160-string-theory-and-the-scientific-method/>

2. Slowik, E., **Cartesian Spacetime**, British Journal for the Philosophy of Science, **55**, 2004: 189-93.

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3. Albert, D., **Time and Chance**, *Notre Dame Philosophical Reviews*, Jan 2002. <http://ndpr.nd.edu/news/23401/?id=1261>
4. Price, H., **Time's Arrow and Archimedes' Point**, *Philosophy and Phenomenological Research*, **59**, 1999: 1093-6.
5. Papineau, D. (ed), **The Philosophy of Science**, *Teaching Philosophy*, **21**, 1998: 416-9.
6. Smith, Q. and Oaklander, N., **Time, Change and Freedom**, *Canadian Philosophical Reviews*, **16**, 1996: 314-6.
7. Sklar, L., **Philosophy of Physics**, *International Studies in Philosophy*, **XXVII**, 1995: 139-40.

TALKS

AND VIDEOS:

1. **Whence 'Where' (According to String Theory)**, *Metaphysics and Fundamental Physics Meeting, Bristol University*, June 2016.
2. **How Space Emerges in Non-Commutative Geometry**, *University of Notre Dame*, April 2016; *Foundations2016: UK and European Conference on Foundations of Physics, London School of Economics*, July 2016.
3. **Here, There and Everywhen**, *LAS Distinguished Professor of Philosophy Inaugural Address, UIC*, February 2016.
4. **An Interview with Richard Dawid**, February 2016. <https://www.youtube.com/watch?v=Olh-x6UnG4c>
5. **Non-Commutative Spacetime as Primitive Ontology**, *University of Lausanne*, December 2015.
6. **Flux Capacitors and Philosophy**, *Adler Planetarium, Chicago*, November 2015.
7. **What's Involved in Explaining Spacetime**, *Emergent Time and Emergent Space in Quantum Gravity, Albert Einstein Institute for Gravitational Physics, Potsdam*, December 2014; *Annual Philosophy of Science Conference, Inter-University Center, Dubrovnik*, April 2015; *Université de Genève*, December 2015. <https://www.youtube.com/watch?v=udS7jufkchM>
8. **Deriving General Relativity from String Theory**, *Philosophy of Science Association Conference*, November 2014.
9. **Duality**, *The Philosophical Foundations of Dualities in Physics, University of Florence*, September 2014.
10. **How Quantum Gravity (Likely) Needs Philosophy**, *Conceptual and Technical Challenges for Quantum Gravity Conference, Sapienza University of Rome*, September 2014.

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11. **Out of Nowhere: Could Spacetime be Emergent?**, *Philosophy Club*, St Louis University, January 2014; *Keynote Address, Student Philosophy Conference, Eastern Tennessee State University*, April 2013.
12. **Searching for Quantum Mechanics and for Quantum Gravity**, *Haunted Workshop: Who's Afraid of Quantum Theory*, Tepoztlan, Mexico, November 2013.
13. **String Theory for Philosophers (of Physics)**, *Seminar on the Philosophical Foundations of Quantum Gravity, UIC*, September 2013.
<https://www.youtube.com/watch?v=Wg5NvMrikIA>
14. **Why 'Philosophical' Foundations?**, (with Wüthrich, C.), *Seminar on the Philosophical Foundations of Quantum Gravity, UIC*, September 2013.
<https://www.youtube.com/watch?v=BQE11we-Dfl>
15. **Time in Quantum Gravity**, *Do We Need a Physics of Passage?*, Capetown, South Africa, December 2012.
16. **Emergent Spacetime and Empirical (In)coherence**, (with Wüthrich, C.), *PhiloSTEM 4, Indiana-Purdue University, Fort Wayne*, October 2012; *Reflections on Space, Time and their Quantum Nature, Albert Einstein Institute for Gravitational Physics, Potsdam*, November 2012.
17. **On Belot on the Regularity Account of Relational Spacetime**, *Belot-Reutsche Book Bash*, University of Western Ontario, September 2012.
18. **Reading the Past in the Present**, *Sigma Club, London School of Economics*, April 2011; *Oxford University*, April 2011; *University of Notre Dame*, March 2012.
19. **Non-Commutative Field Theory**, *Bristol University*, April 2011; *University of Barcelona*, June 2011.
20. **Zeno's Difficulty**, *Institute of Philosophy, University of London*, April 2011.
21. **I & =**, *Leeds University*, April 2011.
22. **Expanding the Horizons of Quantum Statistical Mechanics**, (with Imbo, T.) *Philosophy of Science Association Conference*, November 2010.
23. **Emergence and Dualities in String Theory**, *Philosophy of Science Association Conference*, November 2010.
24. **When Science is Not a Guide to Natural Properties**, *Metaphysics of Science Conference*, University of Melbourne, July 2009.
25. **Passing Time**, *Grand Valley State University*, November 2007; *University of California, San Diego*, March 2008; *University of Sydney*, June 2009; *European Philosophy of Science Association biannual conference*, October 2009; *University of Barcelona*, June 2011.

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26. **The Past Hypothesis and the Knowledge Asymmetry**, *Foundations of Statistical Mechanics Meeting, Rutgers University*, May 2009; *Oberlin College*, December 2010; *Purdue University*, March 2011.
27. **Are Quarticles Discernible? or Making Weak Discernibility Work**, *Philosophy of Quantum Field Theory, University of Western Ontario*, April 2009.
28. **Aristotelian Themes in Early Modern and Contemporary Physics**, *Classics Department, UIC*. February 2009.
29. **True Motion: Leibniz**, *Ohio State University*, January 2008.
30. **(Again) a Philosopher Looks at String Theory**, *Physics Meets Metaphysics on the Banks of the Raritan Conference, Rutgers University*, October 2007; *Stringtime in Pittsburgh, Pittsburgh HPS*, April 2008.
31. **Why Integrate History and Philosophy of Science?**, Invited Panelist, *&HPS1 Conference, University of Pittsburgh*, October 2007.
32. **Why the Parts of Absolute Space are Immobile**, *University of Rochester*, December 2006; *University of South Carolina, University of Toronto*, January 2007.
33. **Can Spacetime Help Settle Any Issues in Modern Philosophy?**, *Conference on Issues in Early Modern Philosophy, New York University*, November 2006.
34. **Explanation and Relativity for the Regularity Relationist**, *Philosophy of Science Association Conference*, November 2006.
35. **The Identity of Indiscernibles for Any Kind of Quarticle**, *University of Rochester*, December 2006; *Sigma Club, London School of Economics*, June 2006; *University of Maryland*, May 2006.
36. **The Regularity Account of Relational Spacetime**, *Popper Lecture, London School of Economics*, June 2006; *Oxford University*, June 2006; *Universidad Complutense de Madrid*, June 2005; *Describing the World in Physics conference, Rutgers University*, April 2005.
37. **Leibniz on the Relativity of Motion**, *Annual Philosophy of Science Conference, Inter-University Center, Dubrovnik*, April 2006.
38. **The Place of Space in the Notion of Motion**, *Humanities Institute, UIC*, October 2005.
39. **Leibniz, Clarke and True Motion**, *Department of Philosophy, Universitat Autònoma de Barcelona*, June 2005.
40. **Groups in Mind**, (with Hilbert, D) *Philosophy of Science Association Conference*, November 2004.
41. **The Regularity Account of Motion**, *International Conference on the Ontology of Spacetime, Concordia University*, May 2004.

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42. **Quartiles and the Principle of the Identity of Indiscernibles**, *Department of Physics, UIC*, April 2004.
43. **The Regularity Account of Space**, *Boston University Colloquium in the History and Philosophy of Science, Boston University*, November 2003; *Department of Philosophy, University of Wisconsin Milwaukee*, January 2003.
44. **Identity and Indiscernibility for Every Kind of Quartile**, *University of Michigan, Ann Arbor*, November 2003.
45. **Topology and the Reality of Space**, *Institute for History and Foundations of Science, Utrecht University*, June 2002; *Centre de Philosophie des Sciences, Université Catholique de Louvain*, May 2002; *Annual Philosophy of Science Conference, Inter-University Centre, Dubrovnik*, April 2002; *Department of History and Philosophy of Science, Philosophy, Indiana University Bloomington*, March 2002.
46. **Indistinguishability and Identicality**, *Departments of Physics and of Philosophy, Bristol University*, April 2002; *Department of History and Philosophy of Science, Philosophy, Indiana University Bloomington*, March 2002.
47. **Space and Motion in Descartes, Huygens and Newton**, *Department of Physics, Illinois Institute of Technology, Chicago*, October 2001.
48. **Classical Notions of Space and Time**, *Seven Pines Symposium V - The Quantum Nature of Gravitation, Space and Time, Stillwater MN*, June 2001.
49. **What is an Elementary Quartile?**, (with Imbo, T) *Oxford Workshop on Symmetry in Physics, Oxford University*, January 2001; *Conference on the Foundations of Quantum Theory, University of Western Ontario*, April 2001.
50. **Why Quantize Gravity (or Any Other Field for that Matter)?**, (with Callender, C) *History of General Relativity Conference, Amsterdam*, June 2002; *Philosophy of Science Association Conference*, November 2000.
51. **Renormalization and the Disunities of Science**, *Conference on the Ontological Aspects of Quantum Field Theory, Zentrum für Interdisziplinäre Forschung, Bielefeld*, October 1999.
52. **The Meaning of Permutation Symmetry**, *Workshop on Identity in Modern Physics, University of Notre Dame*, April 1999.
53. **Reflections on Parity Nonconservation**, *Belgian Society for Logic and Philosophy of Science, Brussels*, October 1999.

Earlier talks on request.

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PROFESSIONAL

ACTIVITIES: **Editorial Board** *Philosophy of Science*.

Editor (with Wüthrich, C.) of a special issue of *Studies in History and Philosophy of Modern Physics*, on *Emergence of Spacetime in Quantum Theories of Gravity*.

Referee for *Australasian Journal of Philosophy*, Blackwell, *British Journal for the Philosophy of Science*, Cambridge University Press, *Erkenntnis*, *European Journal of Philosophy*, *Foundations of Physics*, *International Studies in Philosophy of Science*, *Mind*, MIT Press, *Noûs*, Oxford University Press, *Perspectives on Science*, *Philosophical Quarterly*, *Philosophy and Phenomenological Research*, *Philosophy of Science*, Princeton University Press, Routledge Publishers, *Studies in History and Philosophy of Modern Physics*, *Synthese*, University of Chicago Press, University of Pittsburgh Press, Wiley International, and others.

NSF panelist - multiple occasions.

Executive Committee of Central APA 2012-15.

Executive Committee of the UIC Institute for Humanities 2012-14.

Program Committee for APA Central Division Meeting 2010.

Program Committee for Philosophy of Science Association Conference 2006, 2010.

Judging Committee for Philosophy of Science Association Graduate Essay Prize 2002 and 2005.

Judging Committee for Philosophy of Science Association Recent PhD Essay Prize 2005.

Promotion and Tenure Reader for numerous universities.

MEETINGS

ORGANIZED: **Summer Institute in the Philosophy of Quantum Gravity**, Lake Geneva, WI, June 2016.

Seminar on the Philosophical Foundations of Quantum Gravity II, University of California at San Diego, March 2015.

Seminar on the Philosophical Foundations of Quantum Gravity, UIC September 2013.

New PhDs Workshop, UIC July 2005.

Seminar on Quantum Field Theory in Curved Spacetime, UIC May 2003.

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Seminar in Quantum Gravity, UIC May 2002.

Conference in Honor of Arthur Fine, UIC April 2001.

ADMINISTRATIVE

EXPERIENCE: *University of Illinois at Chicago:*

- College of LAS Executive Committee, 2009-10, 2014-6.
- College of LAS Academic Priorities Task Force, 2010.
- Graduate College Executive Committee, 2013-.
- Director of Graduate Studies, 2013-.
- Graduate Admissions Committee Chair, 2002-3, 2009.
- Placement Officer, 2007-2013.
- Graduate Admissions Committee, 1996-9, 2006-8, 2011-13.
- Faculty Senate, 2003-5, 2006-8.
- Senate Faculty Advisory Committee, 2004-9.
- Teaching Committee Chair, 1997-8.
- Philosophy Department Executive Committee, 2002-3.
- Philosophy Department P&T Committee, 2002-4.
- Graduate Advisory Committee, 2000-01.

TEACHING: *University of Illinois at Chicago:*

- **Formal Logic**, lectures (to 180 students) on predicate logic.
- **Science and Philosophy**, philosophy of physics for non-specialists.
- **Philosophy of Science**, topical and survey courses at all levels.
- **Metaphysics**, the relation of metaphysics to science.
- **Epistemology**, foundations of deductive and inductive reasoning.
- **Graduate Seminars**, e.g., Spacetime, Newton's *Principia*, Laws, Time.
- **Entangled Identities**, interdisciplinary seminar.
- **Introduction to Formal Methods in Philosophy**, upper level course.

Brown University:

- **Philosophy of Science**, upper level/graduate course.
- **Deductive Logic**, introduction to metalogic.
- **Science, Perception and Reality**, introduction to philosophy of physics.
- **20th Century Analytic Philosophy**, upper level/graduate course.

University of Kentucky:

- **Knowledge and Reality**, introduction to Philosophy.
- **Philosophy and Classical Physics**, history of philosophy of space.
- **Symbolic Logic**.

DISSERTATIONS

- SUPERVISED:
- Matthew Lund, 2004: tenured at Rowan University.
 - David Harker, 2006: tenured at East Tennessee State University.
 - Tiziana Vistarini, 2013: lecturer at University of Colorado, Boulder.
 - Maria Balcells, 2013: lecturer at Bucknell University.
 - Burkay Ozturk, 2014: lecturer at Texas State San Marcos (*de jure* supervisor only).
 - Joshua Norton, 2015: assistant professor at American University of Beirut.

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DISSERTATION

COMMITTEES:

- Department of Philosophy, UIC.
- Department of Physics, UIC.
- Department of History and Philosophy of Science, University of Pittsburgh.
- Department of Philosophy, University of Western Ontario.
- Faculty of Philosophy, Oxford University.