

Dr Mary Catherine Leng

Curriculum Vitae

Contact Information

Address: Department of Philosophy
University of Liverpool
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AOS Metaphysics, Philosophy of Mathematics, Philosophy of Science
AOC Epistemology, Mathematical Logic, Philosophical Logic

Current Position Lecturer in Philosophy, Department of Philosophy, University of Liverpool (since 2006). Maternity Leave: November 2008-May 2009

Previous Positions

2002-2006 Research Fellow in Philosophy
St John's College, Cambridge University

2001-2002 Post-doctoral Fellow in the Humanities
Department of Philosophy, University of Toronto
A half-research/half-teaching position. Research portion was spent at UC Irvine

Autumn 2001 Visiting Fellow
Department of Logic and Philosophy of Science, University of California, Irvine
Working with Professors Penelope Maddy and Mark Colyvan (also in Irvine as a Visiting Fellow) on the philosophy of applied mathematics

Education

1996-2001 Ph.D., University of Toronto, Department of Philosophy
Thesis Topic: "Proof, Practice and Progress"
Co-supervisors: Professor James R. Brown, Professor Ian Hacking
Reader: Professor Alasdair Urquhart
External Examiner: Professor Jody Azzouni (Tufts University)

1993-1996 M.A. (Oxon), Balliol College, Oxford: Mathematics and Philosophy

Honours

July 2003 Visiting Junior Scholar in Residence
Peter Wall Institute for Advanced Studies, University of British Columbia
One of 12 junior academics from different disciplines invited to spend a month in interdisciplinary discussion at the Institute for Advanced Studies

2001-2002 University of Toronto Post-doctoral Fellowship in the Humanities

1998-2001 Ontario Graduate Scholarship (one year award, renewed each year)

1996-1998 Canadian Rhodes Scholars' Foundation Scholarship (two year award)

1994 Ernest Walker Philosophy Essay Prize, Balliol College, Oxford

Publications

(a) Books

Mathematics and Reality (Oxford: OUP, April 2010)
Monograph.

Mathematical Knowledge (co-edited with Alexander Paseau and Michael Potter)
(Oxford: OUP, 2007)
Proceedings of the 2004 conference on Mathematical Knowledge, held at Fitzwilliam College, Cambridge.

(b) Articles

‘Nominalistic Adequacy’, to appear in Furhmann, Kasa and Kumpfner, eds., *Trends in Philosophy of Mathematics* (publisher tbc, 2011) (*Article in preparation*)

‘Creation and Discovery in Mathematics’, to appear in Polkinghorne, ed., *Mathematics and its Significance* (publisher tbc, 2010)

‘Structuralism, Fictionalism, and Applied Mathematics’, to appear in Glymour, Wang, and Westerståhl, eds., *Proceedings of the 13th International Congress in Logic, Methodology, and Philosophy of Science* (King’s College Publication: London, 2010)

‘Pre-Axiomatic Mathematical Reasoning: An Algebraic Perspective’, in Hanna, Jahnke and Pulte, eds., *Explanation and Proof in Mathematics*. (Springer, 2009): 47-58

‘Algebraic’ Approaches to Mathematics’, in Bueno and Linnebo, eds., *New Waves in Philosophy of Mathematics* (Palgrave Macmillan, 2009): 117-134

‘Introduction’, and ‘What’s There to Know? A Fictionalist Account of Mathematical Knowledge’, both in Leng, Paseau and Potter, eds., *Mathematical Knowledge* (Oxford: OUP, 2007)

‘Revolutionary Fictionalism: A Call to Arms’, *Philosophia Mathematica* 13, no. 3 (2005): 277-293

‘Mathematical Explanation’, in Cellucci and Gillies, eds., *Mathematical Reasoning and Heuristics*, (King’s College Publications: London, 2005): 167-189

‘Platonism and Anti-Platonism: Why Worry?’, *International Studies in the Philosophy of Science* 19, no. 1 (March 2005): 65-84

‘Mathematical Practice as a Guide to Ontology’, *Logique et Analyse* 45, no. 179-180 (2002): 235-248

‘What’s Wrong with Indispensability? (Or, The Case for Recreational Mathematics)’, *Synthese* 131, no. 3 (June 2002): 395-417

‘Phenomenology and Mathematical Practice’, *Philosophia Mathematica* 10, no. 1 (Jan. 2002): 3-25

(c) Book Reviews

Review of Emily Grosholz, ‘Representation and Productive Ambiguity in Mathematics and the Sciences’, *Mathematical Intelligencer* (31 October, 2009) DOI: 10.1007/s00283-009-9099-x

Review of Yemima Ben-Menahem, ‘Conventionalism’, *Mind* (27 October, 2009) DOI: 10.1093/mind/fzp113

Review of Peter Pesic, ‘Abel’s Proof’, *Metascience* 15 (2006): 155-158

Review of Dmitri Nikulin, ‘Matter, Imagination and Geometry’, *Metascience* 12, no. 2 (July 2003): 227-230

Review of Mark Balaguer, ‘Platonism and Anti-Platonism in Mathematics’, *Bulletin of Symbolic Logic* 8, no. 4 (December 2002): 516-518

Review of Claire Ortiz Hill and Guillermo Rosado Haddock, ‘Husserl or Frege?’, *Philosophy in Review* 22, no. 5 (October 2002): 325-327

Review of Reviel Netz, ‘The Shaping of Deduction in Greek Mathematics’ (with J. R. Brown), *Philosophia Mathematica* 9, no. 2 (June 2001): 248-252

Review of Imre Lakatos and Paul Feyerabend, ‘For and Against Method’, *Philosophy in Review* 20, no.2 (April 2000): 115-17

Review of Brendan Larvor, ‘Lakatos: An Introduction’, *Philosophy in Review* 19, no. 3 (June 1999): 198-200

Review of Penelope Maddy, ‘Naturalism in Mathematics’, *International Studies in the Philosophy of Science* 13, no. 2 (1999): 195-197

Review of Reuben Hersh, ‘What is Mathematics, Really?’, *International Studies in the Philosophy of Science* 12, no. 2 (1998): 197-200

Papers Delivered (Selected)

“Commentary on ‘Why is there “Philosophy of Mathematics?””, invited commentary on Ian Hacking’s first René Descartes lecture, Tilburg Centre for Logic and Philosophy of Science, Tilburg, The Netherlands: October 6th-8th, 2010

Title TBA, invited workshop paper, *What does it mean to do the history, philosophy and sociology of mathematics in the 21st century?*, UCL: July 30th, 2010

“Why do Philosophers Worry about Mathematical Knowledge?”, invited public lecture, Centre for Philosophy of Science and Science Studies, Faculty of Science, University of Copenhagen, Denmark: September 24th, 2009

Also presented as an invited lecture at a conference celebrating 40 years of the Mathematics and Philosophy degree at the University of Oxford, July 5th, 2009

“Mathematical Fictionalism and Constructive Empiricism”, invited conference paper, *Fictionalism*, University of Manchester: September 15th-18th, 2009

“Nominalistic Adequacy”, invited conference paper, *Trends in Philosophy of Mathematics*, Goethe-University Frankfurt, Germany: September 5th, 2009

“‘Algebraic’ approaches to mathematics”, invited conference paper, *New Waves in Philosophy of Mathematics*, University of Miami, USA: April 25th, 2008

Also presented as an invited talk to the Centre for Logic and Analytical Philosophy, Catholic University of Leuven, Belgium: March 23rd, 2009

“Mathematical Apriority and Immunity from Revision”, invited workshop paper, *The A Priori*, University of Aberdeen: April 11th, 2008

“What can philosophers learn from mathematical practice?”, invited conference paper, *Mind and Society*, Manchester University: September 8th, 2007

“Structuralism and Applied Mathematics”, invited conference paper, *13th International Congress of Logic, Methodology, and Philosophy of Science*, Tsinghua University, Beijing, China: August 13th, 2007

“Creation and Discovery in Mathematics”, invited symposium paper, *Mathematics and Its Significance*, Vatican Observatory, Castel Gandolfo, Italy: June 21st-23rd, 2007
Also presented as an invited talk at the New Directions in Philosophy of Mathematics workshop, Department of Mathematics, University of Manchester: October 4th, 2008

“Trading Ontology for Modality”, invited conference paper, *Abstract Objects*, Centre for Philosophy, University of Manchester: December 2nd, 2006

“Mathematical Proof: An Algebraic Perspective”, invited conference paper, *Explanation and Proof in Mathematics*, University of Duisberg-Essen, Germany: November 2006

“The Nature of Mathematics: Some Recent Debates”, Invited Lecture Series, Research Centre for the Philosophy of Science and Technology, Shanxi University, China: May 22nd-26th, 2006

“Four (?) Recent ‘Isms’ in the Philosophy of Mathematics”, conference paper, *Annual Conference of the British Society for the Philosophy of Science*, Manchester: July 8th, 2005

“Mathematical Explanation and Scientific Realism”, conference paper, *32nd Annual Philosophy of Science Conference*, Inter-University Centre, Dubrovnik, Croatia: April 13th, 2005
Also presented as an invited paper at the UNAM Colloquium on Mathematical Practice, Institute for Philosophical Research, Universidad Nacional Autónoma de México, Mexico, June 6th 2005

“Mathematical Explanation”, invited conference paper, *Mathematical Reasoning, Heuristics and the Development of Mathematics*, University of Rome, La Sapienza, Italy: September 10th 2004

“What’s There to Know? A Fictionalist Account of Mathematical Knowledge”, conference paper, *Mathematical Knowledge*, Fitzwilliam College, Cambridge: July 1st, 2004

“Platonism and Anti-Platonism: Why Worry?”, conference paper, *31st Annual Philosophy of Science Conference*, Inter-University Centre, Dubrovnik, Croatia: April 22nd, 2004

“Naturalism and Linguistic Frameworks: Mathematical Ontology in a Post-Quinean Setting”, conference paper, *12th International Congress of Logic, Methodology and Philosophy of Science*, University of Oviedo, Spain: August 9th, 2003
Also presented to departmental seminars at Oxford, University of British Columbia, Leeds and Sheffield, and to the Cambridge Moral Sciences Club

“Philosophical Modesty”, invited public lecture, Peter Wall Institute for Advanced Studies, University of British Columbia, Canada: July 4th, 2003

“Mathematics as a Guide to Ontology”, invited conference paper, *Perspectives on Mathematical Practice*, Brussels University (VUB), Belgium: October 24th-26th, 2002

“Maddy’s Naturalism in Mathematics”, invited symposium paper, *Canadian Philosophical Association*, Laval University, Quebec, Canada: May 24th-27th, 2001

“Must Indispensability Lead to Realism?”, workshop paper, *Midwest Philosophy of Mathematics Workshop*, Carnegie Mellon University, U.S.A.: December 9th-10th, 2000

“The Woman Mathematician”, conference paper, *Canadian Society for Women in Philosophy*, University of British Columbia, Canada: October 7th, 2000

“What’s Wrong with Indispensability? (Or, The Case for Recreational Mathematics)”, conference paper, *Graduate Conference in Logic, Mathematics and Physics*, University of Western Ontario, Canada: April 2nd, 2000

“C*-Algebras: A Case Study in the Philosophy of Mathematics”, workshop paper, *Programmes in Mathematics*, University of Hertfordshire: July 1999

Professional and Administrative Work

(a) Reviewing and Refereeing

Journals refereed for include: *Australasian Journal of Philosophy*; *British Journal for the Philosophy of Science*; *Canadian Journal of Philosophy*; *Croatian Journal of Philosophy*; *Dialectica*; *Erkenntnis*; *Foundations of Science*; *Journal of Philosophical Research*; *International Studies in the Philosophy of Science*; *Mind*; *Philosophia Mathematica*; *Philosophical Studies*; *Synthese*. Book proposals refereed for Cambridge University Press and Oxford University Press. Grant proposals refereed for the AHRC.

Regular reviewer, *Mathematical Reviews*

(b) Conferences and Lectures Organized

Convener, ‘Thinking about Mathematics and Science’ lecture series, University of Liverpool (2007-08) (£3,000 grant from the University’s Interdisciplinary Fund)

Joint organizer, ‘Mathematical Knowledge’ conference, Cambridge University (held June 30th-July 2nd, 2004) (£5,000 grant from the Jesus College Science and Human Dimension Project, and £500 from the Analysis Trust)

Joint organizer, ‘Reason and Nature’, University of Toronto Graduate Student Conference in Philosophy (held May 4th-6th, 2001)

(c) Committees and Administrative Roles at the University of Liverpool (selected)

Information Officer, Dept. of Philosophy, University of Liverpool (2009-present)
Responsibility for staff IT support, maintaining departmental website, library liaison

Member, RAPID (Recruitment, Admissions, Progression, and Destination) committee, Dept. of Philosophy, University of Liverpool (2006-2009)

Academic Representative on the University of Liverpool’s Management Information and Benchmarking Committee (2008-present)

Departmental Representative on Faculty Board (2007-present)

Coordinator, GV15 (Mathematics and Philosophy) (2006-present)

Academic Organizer for Continuing Education programme in Philosophy and Religion (2006-2007)

Teaching

(a) Courses designed and/or lectured for (at the University of Liverpool)

- Symbolic Logic 1 (2008)
- Symbolic Logic 2 (2008)
- Symbolic Logic 3 (2007, 2008)
- Philosophy of Mathematics (2007, 2008, 2009)
- MA Main Seminar (2006, 2007, 2009)

(b) Courses supervised/tutored for (at University of Liverpool)

- Analysing Philosophical Texts 1 and 2 (2006, 2007, 2009)
- 3rd year Dissertation (2007, 2008)

(c) Graduate Supervision

- Claudio Ternullo, Ph.D, Philosophy (2008-2011, University of Liverpool) “Set Theoretic Platonism and Indeterminacy”
- John Butterworth, Ph.D, Philosophy (2008-2011, University of Liverpool) “The Concept of Argument” (Second Supervisor)
- Lucas Brainerd, MA, Philosophy (2007, University of Liverpool) “Logic, Language, and Dialetheism: A Case For True Contradiction”
- Paul Dicken, M.Phil., HPS (2003, Cambridge University) “Primitive Modality and Expressive Adequacy in Field’s Anti-Realist Philosophy of Mathematics”

(d) External Examining

- Ph.D. Examiner, “Linguistic Realism in Mathematical Epistemology”, UCL (2008)
- MA Examiner, “The Implications of a General Principle of Equivalence upon Ontologically Possible Mathematical Entities”, Central Queensland University (2006)

Professional Affiliations

British Philosophical Association
British Society for the Philosophy of Science

References

Professor Mark Colyvan
Professor of Philosophy
Director, Sydney Centre for
Foundations of Science

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