

CV: Carl Hofer

Address and Phone:

Departament de Filosofia
Universitat de Barcelona
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08001 Barcelona, Spain
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Research Fields:

Philosophy of Physics
Philosophy of Science
Metaphysics of Nature

Education:

May 1986 BA Philosophy and BA Mathematics, Rice University, Houston, USA

March 1992 PhD Philosophy, Stanford University, California, USA
Dissertation title: *General Relativity and Spacetime Relationism*

Employment and Fellowships:

Sept 1986 - June 1989 Mellon Fellow in the Humanities

Sept 1988 - June 1991 University Fellowship/Teaching Assistantship, Stanford University

July 1991 – Jan 1998 Assistant Professor, Philosophy Department, University of California at Riverside

Sept 1995 - Sept 1996 Sabbatical Research Fellowship, General Directorate of Scientific and Technical Investigation (DGICYT), Government of Spain

Feb 1998 – Jul 1998 Associate Professor (tenured), Philosophy Department, University of California at Riverside

Aug 1998 – Dec 2000 Lecturer, Department of Philosophy, Logic and Scientific Method, London School of Economics

Jan 2001 – Sept 2003 Senior Lecturer, Department of Philosophy, Logic and Scientific Method, London School of Economics

Sept 2001 – Sept 2003 Director, *Centre for Philosophy of Natural and Social Science* (CPNSS), London School of Economics

Sept 2002 – July 2013 ICREA Research Professor (Catalan Institute for Research and Advanced Study), Barcelona, Spain.

Apr 2003 – Sept 2012 Adjunct Professor, Philosophy Department, Autonomous University of Barcelona

Jan 2008 – Apr 2008 Marshall Weinberg Distinguished Visitor, Philosophy Department, University of Michigan

July 2013 - Feb 2015 Director, Rotman Institute of Philosophy, UWO

July 2013 – present Professor of Philosophy, University of Western Ontario (on leave)

June 2015 – present ICREA Research Professor at Universitat de Barcelona, Spain

Funded Research Projects (last 7 years):

- *Spacetime as Background*. Spanish government-financed research project with the aim of studying the role or roles of spacetime structures in the context of General Relativity and Quantum Gravity; head of research group. 2009-2011.
- *Causality and Classical Concepts in Physics* Joint research group with Dr. Mauricio Suárez, Universidad Complutense de Madrid, Dr. Henrik Zinkernagel, U. of Granada, and others. (*Spacetime as Background* project is the Barcelona-based branch of this coordinated project). 2009–2011.
- *PERSP: Philosophy of Perspectival Thought and Facts*. Spanish MICINN ministry funded large research project (“Consolider-Ingenio”), 2010 - 2015. Participant & Adjunct coordinator. €2,000,000.
- *Space and Time: from the Manifest to the Scientific Image*. Spanish ministry funded project with the aim of studying possible ways of reconciling space and time as we experience them with the account(s) of them extractable from our best physical theories; head of research group. 2012-2014. €59,290.
- *Grup de Recerca/Investigació en Epistemologia i Ciències Cognitives*, Consolidated Research group of the Catalan government; head of research group. 2010-2014. €26,000

Publications:

Articles

- “Substantivalism and the Hole Argument”, co-authored with Nancy Cartwright, *Philosophical Problems of the Internal and External Worlds (Festschrift for Adolf Grünbaum)*, John Earman, Al Janis, Gerald Massey and Nicholas Rescher (eds), Pittsburgh: University of Pittsburgh Press, 1994.
- “Einstein’s Struggle for a Machian Gravitation Theory”, *Studies in History and Philosophy of Science* vol 25 no 3, 1994.
- “Empirical Equivalence, Underdetermination and Systems of the World” co-authored with Alex Rosenberg, *Philosophy of Science* vol 61 no 4, 1994.
- “Einstein’s Formulations of Mach’s Principle” in *Einstein Studies vol 6: Mach’s Principle: From Newton’s Bucket to Quantum Gravity* (volume dedicated to the international conference ‘Mach’s Principle: From Newton’s Bucket to Quantum Gravity’, 26 July - 1 August 1993, Tübingen, Germany), Julian Barbour and Herbert Pfister (eds), 1995.
- “The Metaphysics of Spacetime Substantivalism”, *The Journal of Philosophy* vol 113 no 1, 1996.
- “On Lewis’ Objective Chance: Humean Supervenience Debugged”, *Mind* vol 106 no 422, 1997.
- “Absolute vs Relational Spacetime; For Better or Worse, the Debate Goes On”, *British Journal for the Philosophy of Science* vol 49, 1998.
- “Energy Conservation in GTR”, *Studies in History and Philosophy of Modern Physics* vol 31 no 2, 2000.

- “Kant’s Hands and Earman’s Pions: Chirality Arguments for Substantival Space”, *International Studies in Philosophy of Science* vol 14 no 3, 2000.
- “Philosophy of Space-time Physics” co-authored with Craig Callender, *The Blackwell Guide to the Philosophy of Science*, ed. P. Machamer and M. Silberstein (Blackwell Publishers, 2002).
- “Freedom from the Inside Out”, in Craig Callender (ed.), *Time, Reality and Experience* (Cambridge University Press, 2002).
- “For Fundamentalism”, *Philosophy of Science* v. 70, no. 5 (PSA 2002 Proceedings), pp. 1401 - 1412.
- “Humean Effective Strategies”, in *Logic, Methodology and Philosophy of Science: Proceedings of the 12th International Congress* (ed. Petr Hajek, Luis Valdes-Villanueva and Dag Westerstaahl). London: KCL Press, 2005
- “Causality and Determinism: Tension, or Outright Conflict?” *Revista de Filosofia* (Madrid) v. 29 no. 2 (2004), pp. 99 – 115. Manuscript available at philsci-archiv.pitt.edu
- “Probability in GRW Theory”, co-authored with Roman Frigg; *Studies in History and Philosophy of Modern Physics* v. 38, 2007, pp. 371-389.
- “The Third Way on Objective Probability: A Skeptic’s Guide to Objective Chance”, *MIND* 116 (2007): 549-596.
- “Causation in Space-time Theories”, in *Oxford Handbook of Causation* (ed. Christopher Hitchcock, Helen Beebe & Peter Menzies). Oxford: OUP, 2009.
- “Probability: 5 questions”, article commissioned for *Probability and Statistics: 5 Questions*, ed. Vincent Hendricks and Alan Hájek, Automatic Press/VIP, 2009.
- “Determinism and Chance from a Humean Perspective”, co-authored with Roman Frigg, in Dieks, González & Hartmann (eds.), *The Present Situation in the Philosophy of Science (The Philosophy of Science in a European Perspective v. 1)*, Springer, 2010. Pp. 351-372.
- “Time and Chance Propensities”, article commissioned for *The Oxford Handbook of Time* (ed. Craig Callender), Oxford University Press, 2011.
- “Physics and the Humean Approach to Probability”, article commissioned for *Probabilities in Physics* (ed. Stephan Hartmann & Claus Beisbart), Oxford University Press, 2011.
- “Calibration: Being In Tune with Frequencies”, Special issue of *Dialectica*, edited by Philip Ebert & Martin Smith. v. 66, no. 3 (2012), pp. 435 – 452.
- “The Best Humean System for Statistical Mechanics”, co-authored with Roman Frigg. *Erkenntnis*. Special issue edited by J. Berkovitz & P. Huneman. Online Oct. 16, 2013. DOI: 10.1007/s10670-013-9541-5.
- “Mach's Principle as action-at-a-distance in GR: the causality question”, *Studies in History and Philosophy of Modern Physics*. Online First Oct. 2014.

- “Consistency and Admissibility: Reply to Meacham”, in *Chance and Temporal Asymmetry* (ed. Alastair Wilson), Oxford University Press, 2014.
- “Introduction: Space–time and the wave function”, co-authored with Albert Solé, intro to special issue of *Synthese* (eds. A. Solé & C. Hofer), *Synthese* 192:10 (2015), pp. 3055-3070. DOI: 10.1007/s11229-015-0826-x.
- “Philosophy of Physical Sciences”, co-authored with Chris Smeenk, in Paul Humphreys (ed.), *The Oxford Handbook of Philosophy of Science*. Forthcoming, Oxford University Press, 2016.

Encyclopedia articles

- “Causal Determinism”, encyclopædia article for the Stanford Encyclopedia of Philosophy (online, Jan. 2003, revised & updated January 2016: see plato.stanford.edu)
- “The Hole Argument”, in Donald Borchert (ed.), *Macmillan’s Encyclopedia of Philosophy*, 2nd edition. Detroit:Macmillan Reference, 2006.
- “Conventionalism”, in Donald Borchert (ed.), *Macmillan’s Encyclopedia of Philosophy*, 2nd edition. Detroit:Macmillan Reference, 2006.
- “Chance” co-authored with Alan Hájek, in Donald Borchert (ed.), *Macmillan’s Encyclopedia of Philosophy*, 2nd edition. Detroit:Macmillan Reference, 2006.
- “Absolute and Relational Theories of Space, Time and Motion”, co-authored with Nick Huggett, Stanford Encyclopedia of Philosophy (online, July 2006; revised/expanded January 2015).

Books

- *Causality and Explanation: Essays in Honor of W. Salmon*, Special issue of journal *Enrahonar*. UAB Press, Barcelona 2006. Co-edited with Jose Diez.
- *Nancy Cartwright’s Philosophy of Science* edited by Hartmann, S., Bovens, L. and Hofer, C. “Introduction to the Philosophy of Nancy Cartwright” by C. Hofer. Routledge publishers, 2008; paperback edition, 2011.

Reviews

- “Review of John Earman’s *World Enough and Space-Time*”, Canadian Philosophical Reviews vol 11, pp 178-181.
- “Review of John Earman’s *World Enough and Space-Time*”, co-authored with Christopher Ray, *British Journal for the Philosophy of Science* vol 43, pp 573-580, 1992.
- “Review of Bas C van Fraassen’s *Quantum Mechanics*”, *Mind* vol 102, pp 539-542, 1993.
- “Review of Einstein Studies vol 3: Studies in the History of General Relativity” *Annals of Science*, 1995.
- “Review of *Understanding Space-time* by Robert DiSalle”, *Notre Dame Philosophical Reviews*, 2008.

In Progress

- *Chance In the World*, a monograph developing a metaphysically neutral, Humean/actualist account of objective probabilities. Chapter drafts available.

Public Presentations (recent years):

- Feb 2009 “Humean Chance and Statistical Mechanics”, invited talk at IHPST conference, Paris.
- Jul 2009 “Time, Chance and Causation: a Moderately Anti-Realist Perspective”, invited talk at conference *The Metaphysics of Science*, Melbourne, Australia.
- Jul 2009 “Humean Objective Chance: Can It Handle Quantum Mechanics?”, invited plenary talk at *BSPS 2009*, East Anglia, UK.
- Oct 2009 “Can Boltzmannian Statistical Mechanical Probabilities Be Objective?”, invited talk at ESF Workshop *Physical and Philosophical Perspectives on Probability, Explanation and Time*, Utrecht, Netherlands.
- Oct 2009 “The Best Humean System for Statistical Mechanics”, symposium talk at *EPSA '09*, Amsterdam, Netherlands.
- Nov 2009 Short course on Philosophy of Probability, University of Rome 3 (6 lectures over 2 weeks).
- Mar 2010 “How Probability and Causation are Related”, invited talk at IHPST-Konstanz Workshop ‘Multi-level Causation’, IHPST, Paris.
- May 2010 “Connecting Objective and Subjective probability: How to Justify the Principal Principle”, invited talk, Stirling University workshop “Formal and Traditional Epistemology”, Stirling, Scotland.
- Oct 2010 “How Chance Constrains Credence: Justifying the Principal Principle”, contributed talk, 6th Congress of the Spanish Society for Analytic Philosophy (SEFA), Tenerife, Spain.
- Dec 2010 “How Chance Constrains Credence: Justifying the Principal Principle”, Invited talk, Uppsala University, Uppsala Sweden.
- Jan 2011 “Can There Be Probabilistic, Primitive Fundamental Laws?”, invited colloquium, University of Aberdeen, UK.
- Feb 2011 “On the Notion of a Probabilistic Law”, Philosophy of Physics Seminar invited talk, Oxford University, UK
- Sep 2011 “Time and the Unfolding of Events”, Workshop on Time and Explanation, University of Geneva, Switzerland.
- Oct 2011 “How to Live with Humean Oddities: Replies to Critics” EPSA11: European Philosophy of Science Association biannual conference, Athens, Greece.

- Nov 2011 “Azar o pseudo-azar: ¿Cuál es la diferencia?”, invited talk, workshop *Quo Vadis Ciencia?*, Universitat Politècnica de Catalunya, Terrassa, Spain.
- Dec 2011 “A Humean Looks at Quantum Probability”, Workshop in honor of Jeffrey Barrett, University of Konstanz, Germany.
- Jan 2012 “Nancy Cartwright: A la Caza de las Causas”, talk for secondary school philosophy teachers, *Institut d’Estudis Catalans*, Barcelona.
- Apr 2012 “Philosophy of GR: Methods and Morals”, 39th Annual Philosophy of Science Conference, IUC, Dubrovnik, Croatia.
- Jun 2012 “Humean Objective Chance, Time, and Newcomb Problems”, invited colloquium, Dept. of Philosophy, University of Western Ontario, Canada.
- Sep 2012 “Causal Explanations of Inertia in General Relativity”, invited talk at workshop *Causation in Physics*, UMB, Norway.
- Sep 2012 “Philosophy of GR: Methods and Morals”, SIFA ’12, Tenth National Conference of the Italian Society for Analytic Philosophy, Alghero, Italy.
- Oct 2012 “Interpreting the Wavefunction” (joint with Albert Solé), invited talk at Xth International Ontology Congress, San Sebastian, Spain.
- Nov 2012 “Time and Free Agency in a Deterministic World”, 1st Urbino-Barcelona Workshop on Science & Metaphysics, Urbino, Italy.
- Dec 2012 “Pragmatic Humeanism, Consistency and the Principal Principle”, invited talk at workshop *Laws of Nature*, Technical U. of Munich, Germany.
- Feb 2013 “Fundamentalism: Still True”, invited talk at UCSD *Law & Order Conference*, 2-3 Feb.
- Mar 2013 “Relativity Theories & the ‘Dynamical Approach’ to Spacetime”, invited talk at U. Belgrade workshop on Philosophy of Physics, Belgrade, Serbia.
- April 2013 “How Probability and Causation are Related”, U. Toronto IHPST colloquium, Toronto, Canada.
- April 2013 “How Probability and Causation are Related”, invited talk, Oberlin College Philosophy Dept., Oberlin, Ohio.
- Nov 2013 “Comments on Stefano Bordononi “*When Historiography met Epistemology. Duhem’s early philosophy of science in context.*”, 2nd Urbino-Barcelona Workshop, Barcelona, Spain.
- May 2014 “Chance and Determinism in Physical Theories”, invited talk at Bar-Hillel Colloquium, Hebrew University, Israel.
- June 2014 “The Metaphysics of Objective Chance: Not Propensity, Maybe Determinism”, invited plenary session, SPS 2014, Lille, France.
- Nov 2014 “Symposium on the Principal Principle: Comments on co-Symposiasts”, *PSA 2014*, Chicago, IL.
- Dec 2014 “On the ‘Dynamical Approach’ to spacetime structure”, invited colloquium, Perimeter Institute.

- Apr 2015 “Scientific Realism & Reference to Kinds”, with Genoveva Marti, invited talk at 41st Annual Philosophy of Science Conference, IUC, Dubrovnik.
- May 2015 “Chance Laws and Quantum Randomness”, invited talk at *ICFO* (Institut de Ciències Fotòniques, Barcelona) conference *Randomness in Quantum Physics and Beyond*, Barcelona, Spain.
- Sep 2015 “Scientific Realism & Fundamental Physics”, contributed talk at *EPSA '15*, Dusseldorf, Germany.
- Oct 2015 “Chance Laws and Quantum Randomness”, invited talk at Wallenberg Research Centre, *Workshop on the Foundations of Randomness*, Cape Town, South Africa.
- Nov 2015 “El Filósofo ante la Teoría General de la Relatividad”, public outreach talk in *Barcelona Pensa* festival, Barcelona, Spain.
- Feb 2016 “Time and the Humean Approach to Chance”, invited talk at U. of Arizona Workshop on philosophy & metaphysics of physics.

Service and Responsibilities:

Doctoral Theses Supervised

- 2001 Cynthia Ma, LSE, “*Process Causation and Quantum Physics*”
- 2002 Antigone Nounou, LSE, “*Gauge Theories: A Case Study of How Theories Relate to the World*”
- 2002 Michela Massimi, LSE, “*Pauli's Exclusion Principle: a philosophical perspective*”
- 2003 Roman Frigg, LSE, “*Re-presenting Scientific Representation*”
- 2005 Davide Vecchi, LSE, “*Epistemological Prospects of Evolutionary Models of the Growth of Knowledge*”
- 2006 Emiliano Boccardi, LSE, “*The Naturalization of Computation*”
- 2006 Favio Calá Vitery, UAB, “*De la Relatividad de la Inercia a la Geometrodinámica Intrínseca: Una Interpretación Relacional del Espacio-Tiempo*”
- 2008 Adán Sus Durán, UAB, “*General Relativity and the Physical Content of General Covariance*”
- 2012 Eduardo Ruiz Sosa, UAB, “*La Observación en la Palabra. La Función de los Experimentos Imaginarios en el Desarrollo de la Física Cuántica. 1927-1936.*”
- 2014 Aldo Filomeno, UAB, “*On the Possibility of Stable Regularities Without Fundamental Laws.*”

Department

1992 - 1998	University of California at Riverside	Undergraduate Advisor
1998 - 2002	London School of Economics	Director of Graduate Studies

University

1996 - 1998	University of California at Riverside	Faculty representative, Chancellor's Registration Fees Advisory Committee
1998 - 2002	London School of Economics	Departmental representative, Graduate School Committee

CPNSS

1998 - 2002	LSE Centre for Philosophy of Natural and Social Science (CPNSS)	Steering Committee
Mar – Sept 2001	Centre for Philosophy of Natural and Social Science (CPNSS)	Co-director
2001 (Sept) - 2002 (Sept)	Centre for Philosophy of Natural and Social Science (CPNSS)	Director

Rotman Institute of Philosophy

2013 – 2015 Member & Director

Professional

Editor in Chief, *European Journal for Philosophy of Science*, 2009 -

Section editor for Philosophy of Science, *Blackwell's Philosophy Compass* (2007-2010)

Conferences Organized (recent years):

- *Causation & Explanation in Physics, Biology and Economics*, Feb. 2010, co-organized with Jose Diez (UB)
- *PERSP/GRECC Workshop on Mathematical and Geometrical Explanations in Physics*, March 2011, co-organized with Laura Fellingine (UAB)
- *PERSP Workshop on Space-time and the Wave Function*, April 19-20 2013, Barcelona, co-organized with Albert Solé (UAB/PERSP).
- *Gravity and Geometry: Centenary Perspectives on General Relativity*, May 2015. UWO Annual Phil. Physics Conference. Co-organized with Robert Disalle (UWO).

External Examiner for PhD thesis:

- Oliver Pooley, Oxford University, UK: 2002
- Dean Rickles, Leeds University, UK: 2004
- Rogerio Severo, U. of Chicago, USA: 2006
- Kyoung-Eun Yang, LSE, UK: 2007
- Iñaki San Pedro, U. Complutense de Madrid: 2008
- Aidan Lyon, Australian National University: 2009

- Albert Solé, Universidad Complutense de Madrid: 2009
- Luis Carlos Medina Ruiz, Universidad del País Vasco: 2009
- Dennis Lehmkuhl, Oxford University: 2009
- George Masterton, Uppsala University (Sweden): 2010
- Daniele Molinini, Université Paris 7 Denis Diderot: 2011
- Fernanda Samaniego, Universidad Complutense de Madrid: 2011
- Mario Bacelar Valente, Universidad de Granada: 2011
- Oscar Castro García, Universitat Autònoma de Barcelona: 2016

Referee for: *Erkenntnis*
Philosophy of Science
British Journal for the Philosophy of Science
Studies in History and Philosophy of Modern Physics
Mind
Nôus
Foundations of Physics
Oxford University Press
Critica
Theoria
Dialectica
Synthese
Canadian Journal of Philosophy

References available from:

Prof. Barry Loewer
 Dept. of Philosophy
 Rutgers University
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Prof. Nancy Cartwright
 CPNSS
 London School of Economics
 London WC2A 2AE, UK

Prof. Craig Callender
 Dept. of Philosophy
 UC San Diego
ccallender@ucsd.edu

Prof. Nicholas Huggett
 Dept. of Philosophy
 U. of Illinois, Chicago
huggett@uic.edu

Prof. Alex Rosenberg
 Dept. of Philosophy
 Duke University
alexrose@duke.edu