JEFFREY BUB
CURRICULUM VITAE
February 2016

Philosophy Department
Institute for Physical Science and Technology
Joint Center for Quantum Information and Computer Science
University of Maryland

EDUCATION

Ph.D. (Mathematical Physics), University of London, 1966. Advisor: David Bohm.

B.Sc. (Hons.) (Applied Mathematics), University of Cape Town, 1962. First Class.

B.Sc. (Pure Science), University of Cape Town, 1961. With distinction in pure mathematics and physics.

ACADEMIC CAREER

Templeton Research Fellow, Institute for Quantum Optics and Quantum Information, Austrian Academy of Sciences, Vienna, Fall, 2011.

Distinguished University Professor, University of Maryland, 2007.

Institute for Physical Science and Technology, University of Maryland. Appointed 2007.

Visiting Professor, Perimeter Institute of Theoretical Physics, Waterloo, Canada, February 1– May 15, September 1– December 31, 2006.

Visiting Professor, Philosophy Department, University of California at San Diego, September – December, 1999.

Visiting Professor, Center for the Philosophy of the Natural and Social Sciences at the London School of Economics, October – December, 1997.

Distinguished Visiting Professor, University of California at Irvine, January – March, 1994.

Visiting Professor, Yale University, January – June, 1993.

Visiting Professor, Princeton University, January – June, 1989.

Full Professor, Department of Philosophy, University of Maryland, 1986 – to date.

Full Professor, Department of Philosophy, University of Western Ontario, 1975 – 1986.

Visiting Associate Professor, Institute for History and Philosophy of Science, University of Tel Aviv, 1972 – 73, January – June, 1974, January – June, 1975.

Associate Professor with tenure, Department of Philosophy, University of Western Ontario, 1971 – 1975.

Visiting Assistant Professor, Department of Philosophy, University of Western Ontario, January – June, 1971.

Assistant Professor, Departments of Physics and Philosophy, Yale University, 1969 1971.

Research Associate, Center for Philosophy of Science, University of Minnesota, 1967 – 1969.

Research Specialist, Department of Chemistry, University of Minnesota, 1966 – 1967.

RESEARCH INTERESTS

Philosophy of physics, especially conceptual foundations of quantum theory; Quantum information, quantum cryptography, quantum computation

HONORS AND AWARDS

Foundations of Physics **40**, number 4, April 2010. Festschrift issue for Jeffrey Bub.

Distinguished University Professor, University of Maryland, 2007.

Physical Theory and its Interpretation: Essays in Honor of Jeffrey Bub, W. Demopoulos and I. Pitowsky (eds.) (Dordrecht: Springer, 2006).

Kirwan Faculty Research and Scholarship Prize, 2005. The Kirwan Prize is a University of Maryland award for 'a highly significant work of research, scholarship, or artistic creativity completed within the last three years.'

Lakatos Award, 1998, for *Interpreting the Quantum World* (Cambridge: Cambridge University Press, 1997). The Lakatos Award is 'for an outstanding contribution to the philosophy of science, widely interpreted, in the form of a book published in English during the previous six years.'

RESEARCH GRANTS (since 1990)

University of Maryland RASA Semester Award, Fall 2014.

'The Information-Theoretic Turn in Quantum Foundations,' John Templeton Foundations, 1/01/2012 – 12/31/2013, Amount of award: $140,300.

'New Directions in the Foundations of Physics,' Foundational Questions Institute, 2/01/2011 — 3/31/2012, Amount of award: 2,500.

University of Maryland RASA Semester Award, Fall 2010.

National Science Foundation Research Grant, 2006 – 2008. Project title: 'Quantum Foundations in the Light of Quantum Information.' Amount of award: $177,288.

General Research Board, University of Maryland, Semester Research Award, 2001. Project title: 'Quantum Information and Quantum Computation.'

General Research Board, University of Maryland, Semester Research Award, 1997. Project title: 'Quantum Computers and Quantum Cryptology.'

General Research Board, University of Maryland, Research Support Award, 1997. Project title: 'Quantum Computers and Quantum Cryptology.'

General Research Board, University of Maryland, Semester Research Award, 1991. Project title: 'Theory and Evidence in Cognitive Neuropsychology.'

National Science Foundation, 1990 - 1993. Project title: 'On the Logic of Testing Models of Cognition Through the Analysis of Brain-Damaged Performance.' Amount of award: $35,000.

EDITORIAL BOARDS

Studies in History and Philosophy of Modern Physics
Foundations of Physics
Western Ontario Series in Philosophy of Science

PUBLICATIONS

Books

Bananaworld: Quantum Mechanics for Primates (Oxford University Press, February 2016).

Interpreting the Quantum World (Cambridge: Cambridge University Press, 1997; revisedpaperback edition, 1999). Winner of the Lakatos Award, 1998.

The Interpretation of Quantum Mechanics (Dordrecht: Reidel, 1974).

Articles

'*Whose* Information? Information About *What*?' Forthcoming in Anton Zeilinger and Reinhold Bertlmann (eds.), *Quantum [Un]Speakables II: 50 Years of Bell's Theorem* (Springer Frontiers Collection, 2016).

'The Measurement Problem from the Perspective of an Information-Theoretic Interpretation of Quantum Mechanics,' *Entropy* **17**, 7374—7386 (2015).

'Quantum Entanglement and Information,' *Stanford Encyclopedia of Philosophy* (Summer 2015 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2015/entries/qt-entangle/>.

'Einstein and Bohr Meet Alice and Bob,' in P. Schroeder-Heister, G. Heinzmann, W. Hodges, and P. E. Bour (eds.), *Logic and Science Facing the New Technologies* (Logic, Methodology and Philosophy of Science: Proceedings of the 14th International Congress (Nancy)), pp. 65 – 77 (College Publications, London, 2014).

'Quantum Interactions with Closed Timelike Curves and Superluminal Signaling,' *Physical Review A* **89**, 022311-1—022311-7 (2014). (Co-authored with Allen Stairs.) Selected by the editors of *Physical Review A* as an Editors' Suggestion.

'Quantum Correlations and the Measurement Problem,' *International Journal of Theoretical Physics* **53**, 3346-3369 (2014).

'Correlations, Contextuality, and Quantum Logic,' *Journal of Philosophical Logic* **42,** 483—499 (2013.) (Co-authored with Allen Stairs.)

'Poincaré's "Les Conceptions Nouvelles de la Matière",' *Studies in History and Philosophy of Modern Physics* **41**, 221—225 (2012). (Co-authored with W. Demopoulos and M. Frappier.)

'Is Information the Key?' in Melanie Frappier, Derek Brown, and Rob DiSalle (eds.), *Analysis and Interpretation in the Exact Sciences*, pp. 219—233 (Springer, 2012).

'Why the Tsirelson Bound?' in Meir Hemmo and Yemima Ben-Menahem (eds.), *The Probable and the Improbable: The Meaning and Role of Probability in Physics*, pp. 167—185 (Springer, 2012).

Interview in *Elegance and Enigma: The Quantum Mechanics Interviews*, edited by Maximilian Schlosshauer (Springer, 2011). This is a book of responses to various foundational questions about quantum mechanics, posed to a group of selected researchers in interviews by the editor. The responses of each author are grouped under the relevant questions.

'Is von Neumann's "No Hidden Variables Proof" Proof Silly?' In H. Halvorson (ed.), *Deep Beauty,* pp. 393—407 (Cambridge University Press, New York, 2011).

'Quantum Probabilities: An Information-Theoretic Interpretation,' in Stephan Hartmann and Claus Beisbart (eds.), *Probabilities in Physics*, pp. 231—262 (Oxford University Press, 2011).

'Von Neumann's "No Hidden Variables" Proof: A Re-Appraisal,' *Foundations of Physics* **40**, 1333—1340 (2010).

'Two Dogmas About Quantum Mechanics,' in S. Saunders, J. Barrett, A. Kent, and D. Wallace (eds.), *Many Worlds? Everett, Quantum Theory, and Reality*, pp. 431—456 (Oxford: Oxford University Press, 2010). (Co-authored with Itamar Pitowsky.)

'Quantum Computation: Where Does the Speed-Up Come from?' in A. Bokulich and G. Jaeger (eds.), *Philosophy of Quantum Information and Entanglement,* pp. 231—246 (Cambridge: Cambridge University Press, 2010).

'The Entangled World: How Can It Be Like That?' in John Polkinghorne (ed.), *The Trinity and an Entangled World: Relationality in Physical Science and Theology*, pp. 15—31 (Grand Rapids: Wm. B. Eerdmans, 2010).

'Contextuality and Nonlocality in 'No Signaling' Theories,' *Foundations of Physics* **39**, 690—711 (2009). (Co-authored with Allen Stairs.)

'The Bub-Clifton Theorem,' in *Compendium of Quantum Physics*, D. Greenberger, K. Hentschel, F. Weinert (eds.), Spinger (2009).

'Quantum Computation and Pseudotelepathic Games,' *Philosophy of Science* **75**, 458—472 (2008).

'Quantum Probabilities as Degrees of Belief,' *Studies in History and Philosophy of Modern Physics* **38**, 232—254, 2007 (special issue on 'Probabilities in Quantum Mechanics,' edited by Roman Frigg and Stephan Hartmann).

'On Local Realism and Commutativity,' *Studies in History and Philosophy of Modern Physics* 38, 863—878 (2007). (Co-authored with Allen Stairs.)

'Quantum Computation from a Quantum Logical Perspective,' *Quantum Information and Computation* **7**, 281—296 (2007).

'Local Realism and Conditional Probability,' Foundations of Physics **36**, 585—601 (2006). (Co-authored with Allen Stairs.)

'Quantum Information and Quantum Computing,' in John Earman and Jeremy Butterfield (eds.), *Philosophy of Physics (Handbook of Philosophy of Science)* (North-Holland, 2006), pp. 555—660.

'Quantum Computing and Teleportation,' in D. Borchert (ed.) *Encyclopedia of Philosoophy*, 2nd edition. (Detroit: Macmillan Reference USA, 2006).

'Copenhagen Interpretation,' in D. Borchert (ed.) *Encyclopedia of Philosoophy*, 2nd edition. (Detroit: Macmillan Reference USA, 2006).

'Can Cryptography Imply Quantum Mechanics? Reply to Smolin.' (Co-authored with Hans Halvorson.) *Quantum Information and Computation* **5**, 170—175 (2005).

'Quantum Mechanics is About Quantum Information,' *Foundations of Physics* **35**, 541—560 (2005).

'Why the Quantum?' *Studies in History and Philosophy of Modern Physics* **35**, 241—266 (2004).

Introduction to Special Issue of *Studies in the History and Philosophy of Modern Physics* in honor of Rob Clifton, **35B**, 143—149 (2004).

Introduction (co-authored with Chris Fuchs) to special issue of *Studies in History and Philosophy of Modern Physics* on quantum information and computation (guest edited by J. Bub and Chris Fuchs), **34B**, 339—341 (2003).

'Characterizing Quantum Theory in Terms of Information-Theoretic Constraints,' *Foundations of Physics* **33**, 1561—1591 (2003). (Co-authored with Rob Clifton and Hans Halvorson.)

'Maxwell's Demon and the Thermodynamics of Computation,' *Studies in History and Philosophy of Modern Physics* **32**, 569—579 (2001).

'The Quantum Bit Commitment Theorem,' *Foundations of Physics,* **31**, 735—756 (2001).

'Secure Key Distribution via Pre- and Postselected Quantum States,' *Physical Review A* **63**, 032309—032311 (2001).

'Von Neumann's Theory of Quantum Measurement,' in M. Redei and M. Stötlzner (eds.), *John von Neumann and the Foundations of Quantum Physics* (Dordrecht: Kluwer, 2001), pp. 63—74.

'Indeterminacy and Entanglement: The Challenge of Quantum Mechanics,' *British Journal for the Philosophy of Science* **51**, 597—615, 2000. Reprinted in Peter Clark and Katherine Hawley (eds.), *Philosophy of Science Today* (Oxford: Oxford University Press, 2003).

'Revised Proof of the Uniqueness Theorem for "No Collapse" Interpretations of Quantum Mechanics,' *Studies in the History and Philosophy of Modern Physics* **31**, 95—98 (2000). (Co-authored with R. Clifton and S. Goldstein.)

'Quantum Mechanics as a Principle Theory,' *Studies in the History and Philosophy of Modern Physics* **31**, 75—94 (2000).

'Decoherence in Bohmian Modal Interpretations,' in D. Dieks and P. Vermaas (eds.), *The Modal Interpretation of Quantum Mechanics* (Dordrecht: Kluwer, 1998), pp. 241—252.

'Quantum Measurement Problem,' in E. Craig (ed.), *Encyclopedia of Philosophy* (London: Routledge, 1998).

'The Bare Theory Has No Clothes,' in G. Hellman and R. Healey (eds.), *Quantum Measurement: Beyond Paradox,* Minnesota Studies in Philosophy of Science Vol. XVII (Minneapolis: University of Minnesota Press, 1998), pp. 32—51. (Co-authored with R. Clifton and B. Monton.)

'Schrodinger's Cat and Other Entanglements of Quantum Mechanics,' in J. Earman and J. Norton (eds.), *The Cosmos of Science,* University of Pittsburgh Series in Philosophy of Science (Pittsburgh: University of Pittsburgh Press, 1997), pp. 274—298.

'Modal Interpretations and Bohmian Mechanics,' in J. Cushing, A. Fine, and S. Goldstein (eds.), *Bohmian Mechanics and Quantum Theory: An Appraisal* (Dordrecht: Kluwer, 1996), pp. 331—341.

'Schütte's Tautology and the Kochen-Specker Theorem,' *Foundations of Physics* **26**, 787—806 (1996). Festschrift issue for Max Jammer's 80th birthday.

'A Uniqueness Theorem for Interpretations of Quantum Mechanics,' *Studies in the History and Philosophy of Physics* **26**, 181—219 (1996). (Co-authored with R. Clifton.)

'Quantum Measurements,' in G.L. Trigg (ed.), *Encyclopedia of Applied Physics* (VCH Publishers, New York, in collaboration with the American Society of Physics, the German Society of Physics, the Japan Society of Applied Physics, and the Physical Society of Japan, 1996); pp. 257—273. (Co-authored with D. Greenberger.)

'Complementarity and the Orthodox (Dirac-von Neumann) Interpretation of Quantum Mechanics,' in R. Clifton (ed.), *Perspectives on Quantum Reality: Non-Relativistic, Relativistic, and Field-Theoretic*, University of Western Ontario Series in Philosophy of Science (Dordrecht: Kluwer, 1995), pp. 211—226.

'Quantum Logic,' in R. Audi (ed.), *The Cambridge Dictionary of Philosophy* (Cambridge: Cambridge University Press, 1995), p. 669.

'Maximal Structures of Determinate Propositions in Quantum Mechanics,' *International Journal of Theoretical Physics* **34**, 1—10 (1995).

'Why Not Take All Observables As Beables?' in *Fundamental Problems in Quantum Theory,* D.M. Greenberger and A. Zeilinger (eds). *Annals of the New York Academy of Sciences* **755**, 761—767 (1995).

'Fundamental Problems of Quantum Physics,' *Apeiron* **2**, 98—100 (1995).

'Interference, Noncommutativity, and Determinateness in Quantum Mechanics,' *Topoi* **14**, 39—43 (1995).

'How to Interpret Quantum Mechanics,' *Erkenntnis* **41**, 253—273 (1994).

'The Measurement Problem,' in L. Accardi (ed.), *The Interpretation of Quantum Theory: Where Do We Stand?* (Rome: Instituto della Enciclopedia Italiana, 1994), pp. 15—24.

'On the Structure of Quantal Proposition Systems,' *Foundations of Physics* **24**, 1261—1279 (1994).

'Is Neuropsychology Possible?' in M. Forbes and D. Hull (eds.), *PSA 1994, Vol. 1,* pp. 417—427 (East Lansing: Philosophy of Science Association, 1994).

'Testing Models of Cognition Through the Analysis of Brain-Damaged Performance,' *British Journal for the Philosophy of Science* **45**, 837—855 (1994).

'Triorthogonal Uniqueness Theorem and its Relevance to the Interpretation of Quantum Mechanics,' *Physical Review A* **49**, 4213—4216 (1994). (Co-authored with A. Elby.)

'Non-Ideal Measurements,' in P. Busch, P. Lahti, and P. Mittelstaedt (eds.), *Symposium on the Foundations of Modern Physics 1993* (Singapore: World Scientific, 1993), pp. 125—136.

'Measurement: It Ain't Over Till It's Over,' *Foundations of Physics Letters* **6**, 21—35 (1993).

'Measurement and Objectivity in Quantum Mechanics,' in H.D. Doebner, W. Scherer, F. Schroeck, Jr. (eds.), *Classical and Quantum Systems - Foundations and Symmetries,* Proceedings of the II. International Wigner Symposium, Goslar, Germany (Singapore: World Scientific, 1993), p. 9—18.

'Quantum Mechanics as a Theory of "Beables,"' in A. van der Merwe, F. Selleri, and G. Tarozzi (eds.), *Bell's Theorem and the Foundations of Modern Physics* (Singapore: World Scientific, 1992), pp. 117—124.

'Quantum Mechanics Without the Projection Postulate,' *Foundations of Physics* **22,** 737—754 (1992).

'EPR,' *Foundations of Physics* **22**, 313—332, (1992). (Co-authored with A. Hajek.)

'A Quantum Logical Solution to the Measurement Problem of Quantum Mechanics,' *International Journal of Theoretical Physics* **31**, 1857—1871 (1992).

'On States and Probabilities in Quantum Mechanics,' Proceedings of the Joint Concordia-Sherbrooke Seminar Series on Functional Integration Methods in Stochastic Quantum Mechanics, *Supplemento ai Rendiconti di Circolo Matematico di Palermo, Serie II, No. 25* (1991), pp. 109—132.

'The Problem of Properties in Quantum Mechanics,' *Topoi* **10**, 27—34 (1991).

'Measurement and "Beables" in Quantum Mechanics,' *Foundations of Physics* **21**, 25—42 (1991).

'Complementarity,' in *Encyclopedia of Physics*, Second Edition, R.G. Lerner and G.L. Trigg (eds.), VCH Publishers, New York, 1991. (Revised version.)

'Philosophia na Qvantovata Mechanica,' *Philosophia Mysal* **4**, 74—93 (1990). (Bulgarian translation of 'The Philosophy of Quantum Mechanics,' 1989)

'On Bohr's Response to EPR: II,' *Foundations of Physics* **20**, 929—941 (1990).

'On Bohr's Response to EPR: A Quantum Logical Analysis,' *Foundations of Physics* **19**, 793—805 (1989).

'On the Measurement Problem of Quantum Mechanics,' in M. Kafatos (ed), *Bell's Theorem, Quantum Theory, and Conceptions of the Universe* (Boston: Kluwer Academic Press, 1989), pp. 7—16.

'The Philosophy of Quantum Mechanics,' review-article of Michael Redhead, *Incompleteness, Nonlocality, and Realism* (Oxford: Clarendon Press, 1988); Peter Gibbins, *Particles and Paradoxes* (Cambridge: Cambridge University Press, 1988); Henry Krips, *The Metaphysics of Quantum Theory* (Oxford: Clarendon Press, Oxford), *British Journal for Philosophy of Science* **40**, 191—211 (1989).

'How to Solve the Measurement Problem of Quantum Mechanics,' *Foundations of Physics* **18**, 701—722 (1988).

'On the Methodology of Single-Case Studies in Cognitive Neuropsychology,' *Cognitive Neuropsychology* **5**, 565—582 (1988). (Co-authored with D. Bub.)

'From Micro to Macro: A Solution to the Measurement Problem of Quantum Mechanics,' *PSA 1988*, A. Fine and J. Leplin (eds.) (East Lansing, Michigan: Philosophy of Science Association, 1988), pp. 134—144.

'How To Kill Schrodinger's Cat,' in *The World View of Modern Physics: Does it Need a New Metaphysics?* R. Kitchener (ed.) (Albany: SUNY Press, 1988), 59—74.

'Curious Properties of Quantum Ensembles which have been both Pre- and Post-Selected,' *Physical Review Letters* **56**, 2337—2340 (1986). (Co-authored with H. Brown.)

'On the Non-Locality of Pre- and Post-Selected Quantum Ensembles,' in *Symposium on the Foundations of Modern Physics: 50 Years of the Einstein-Podolsky-Rosen Gedankenexperiment,* P. Lahti and P. Mittelstaedt (eds.) (Singapore: World Scientific Publishing Co., 1985), pp. 333—341.

Critical Notice of Sir Karl Popper's Postscript to *The Logic of Scientific Discovery,* in *Canadian Journal of Philosophy* **15***,* 539—552 (1985). (Co-authored with I. Pitowsky.)

'On the Nature of Randomness in Quantum Mechanics, or How to Count Quantum Logically,' in *Recent Developments in Quantum Logic*, P. Mittelstaedt and E.-W. Stachow (eds.) (Mannheim: Bibliographisches Institut, 1985), pp. 45—59.

'Quantum Logic, Conditional Probability, and Interference,' *Philosophy of Science* **49**, 402—421 (1982).

'What Does Quantum Logic Explain?' in *Current Issues in Quantum Logic*, E. Beltrametti (ed.), 'Ettore Majorana' International Science Series: Physical Sciences, Vol 8 (New York: Plenum Press, 1981), pp. 89—100.

'Hidden Variables and Quantum Logic - A Skeptical Review,' *Erkenntnis* **16**, 275—293 (1981).

'Complementarity,' in *Encyclopedia of Physics*, R.G. Lerner and G.L. Trigg (eds.) (New York: Addison-Wesley, 1981), pp. 138—139.

Comment on W. Demopoulos: 'Locality and the Algebraic Structure of Quantum Mechanics,' in *Studies in the Foundations of Quantum Mechanics*, P. Suppes (ed.) (East Lansing, Michigan: Philosophy of Science Asssociation, 1980), pp. 149—153.

'Some Reflections on Quantum Logic and Schrodinger's Cat,' *British Journal for the Philosophy of Science* **30**, 27—39 (1979).

'The Measurement Problem of Quantum Mechanics,' in *Problems in the Foundations of Physics*, G. Toraldo di Francia (ed.) (Dordrecht: Reidel, 1979), pp. 71—124. (Proceedings of the Enrico Fermi International School of Physics, Varenna, 1977, LXXII Course.)

'Conditional Probabilities in Quantum Mechanics,' in *The Logico-Algebraic Approach to Quantum Mechanics Vol. II,* C.A. Hooker (ed.) (Dordrecht: Reidel, 1978), pp. 209—226.

'Non-Local Hidden Variable Theories and Bell's Inequality,' in *PSA 1978*, *Vol. 1,* 45—53 (1978), P.D.Asquith and I. Hacking (eds.) (East Lansing, Michigan: Philosophy of Science Association, 1978). (Co-authored with V. Shiva.)

'Von Neumann's Projection Postulate as a Probability Conditionalization Rule in Quantum Mechanics,' *Journal of Philosophical Logic* **6**, 381–390 (1977).

'What is Philosophically Interesting About Quantum Mechanics?' in *Proceedings of the Fifth International Congress on Logic, Methodology, and Philosophy of Science: Part Two: Foundational Problems in the Special Sciences*, R. Butts and J. Hintikka (eds.) (Dordrecht: Reidel, 1977), pp. 69—79.

'Randomness and Locality in Quantum Mechanics,' in *Logic and Probability in Quantum Mechanics*, P. Suppes (ed.) (Dordrecht: Reidel, 1976), pp. 397—420.

'Hidden Variables and Locality,' *Foundations of Physics* **6,** 511—526 (1976).

Critical Study: *Paradigms and Paradoxes,* R.G. Colodny (ed), in *Philosophia* **6**, 511—526 (1976). (Co-authored with W. Demopoulos.)

'The Statistics of Non-Boolean Event Structures,' in *Foundations of Probability Theory, Statistical Inference, and Statistical Theories of Science*, W.L. Harper and C.A. Hooker (eds.) (Dordrecht: Reidel, 1976), pp. 1—16.

'Popper's Propensity Interpretation of Probability and Quantum Mechanics,' in *Minnesota Studies in the Philosophy of Science Vol.VI,* G. Maxwell and R.M. Andersen (eds.) (Minneapolis: University of Minnesota Press, 1975), pp. 416—429.

'The Interpretation of Quantum Mechanics,' in *Boston Studies in the Philosophy of Science Vol. XIII,* R.S. Cohen and M. Wartofsky (eds.) (Dordrecht: Reidel, 1974), pp. 92—122. (Co-authored with W. Demopoulos.)

'On the Completeness of Quantum Mechanics,' in *Contemporary Research in the Foundations and Philosophy of Quantum Theory*, C.A. Hooker (ed.) (Dordrecht: Reidel, 1974), pp. 1—65.

'Reply to Professor Causey,' in *The Structure of Scientific Theories*, F. Suppe (ed.) (Evanston: University of Illinois Press, 1974), pp. 402—408.

'On the Possibility of a Phase-Space Reconstruction of the Quantum Statistics: A Refutation of the Bell-Wigner Locality Argument,' *Foundations of Physics* **3**, 29—44 (1973).

'Under the Spell of Bohr,' *British Journal for the Philosophy of Science* **24**, 78–90 (1973).

'Comment on the Daneri-Loinger-Prosperi Quantum Theory of Measurement,' in *Quantum Theory and Beyond,* T. Bastin (ed.) (Cambridge: Cambridge University Press, 1970), pp. 65—70.

'What is a Hidden Variable Theory of Quantum Phenomena?' *International Journal of Theoretical Physics* **2**, 101—123 (1969).

'The Daneri-Loinger-Prosperi Quantum Theory of Measurement,' *Il Nuovo Cimento* **57B**, 503—520 (1968).

'Hidden Variables and the Copenhagen Interpretation - A Reconciliation,' *British Journal for the Philosophy of Science* **19**, 185—210 (1968).

'Miller's Paradox of Information,' *British Journal for the Philosophy of Science* **19**, 63—67 (1968). (Co-authored with M. Radner.)

'On Hidden Variables - A Reply to Comments by Jauch and Piron and by Gudder,' *Reviews of Modern Physics* **40**, 235—236 (1968). (Co-authored with D. Bohm.)

'A Refutation of the Proof by Jauch and Piron that Hidden Variables can be Excluded in Quantum Mechanics,' *Reviews of Modern Physics* **38**, 470—475 (1966). (Co-authored with D. Bohm.)

'A Proposed Solution of the Measurement Problem in Quantum Mechanics by a Hidden Variable Theory,' *Reviews of Modern Physics* **38**, 453—469 (1966). (Co-authored with D. Bohm.)

INVITED PRESENTATIONS SINCE 2010

'Why the Quantum?', Seminar on Quantum Mechanics, University of Utrecht, Utrecht, The Netherlands, February, February 5, 2016.

'Simulating Quantum Correlations as a Distributed Sampling Problem,' Seminar on Quantum Mechanics, University of Utrecht, Utrecht, The Netherlands, February 5, 2016.

'How to Teach Quantum Mechanics to Kids, ' Logic and Probability in Quantum Mechanics, University of Groningen, Groningen, The Netherlands, January 25, 2016.

'*Whose* Information? Information About *What*?' Workshop 'What is Quantum Information,' Faculty of Exact Sciences, University of Buenos Aires, May 18 – 22, 2015.

'Randomness and Information in Quantum Mechanics,' Conference 'Randomness in Quantum Physics and Beyond,' Institute of Photonic Sciences, Technical University of Catalonia, Barcelona, May 4 – 8, 2015.

'Bit Commitment and the Measurement Problem of Quantum Mechanics,' ITS-ETH Workshop on Quantum Foundations, October 13—17, 2014, Institute for Theoretical Studies, ETH, Zurich.

'*Whose* Information? Information About *What*?' conference 'Quantum [Un]Speakables II: 50 Years of Bell's Theorem,' University of Vienna, June 19 – 22, 2014.

'D-CTCs, P-CTCs, and Superluminal Signaling,' Philosophy of Physics Research Seminar, Oxford University, November 14, 2013.

'Bananaworld: Quantum Mechanics for Primates,' Joint Colloquium, Departments of Physics and Philosophy, Washington University, St. Louis, October 9, 2013.

'Bohr and Einstein Meet Alice and Bob,' Philosophy Club, St. Louis University, October 8, 2013.

'D-CTCs, P-CTCs, and Superluminal Signaling,' Conference on 'Quantum Mechanics Seen Through Closed Timelike Curves,' Fondation des Treiles, Tourtour, France, June 24—29, 2013.

'Bananaworld: Quantum Mechanics for Primates,' Pitowsky Memorial Lecture, Hebrew University, Jerusalem, March 13, 2013.

'Einstein and Bohr Meet Alice and Bob,' Joint Quantum Institute Quantum Foundations Symposium, University of Maryland, October 10 – 12, 2012.

‘Quantum Correlations and the Measurement Problem’, Symposium on ‘Quantum Foundations and Logical Dynamics’ at Quantum Structures 2012, Cagliari, Sardinia, July 23 – 27, 2012.

'Why the Tsirelson Bound?' George Washington University Quantum Computation, Complexity, and Information Group, February 4, 2011.

‘Einstein and Bohr Meet Alice and Bob,’ Workshop ‘Quantum Foundations in the Light of Quantum Information III" organized by Gilles Brassard (Université de Montreal) and Christopher A. Fuchs (Perimeter Institute), December 6 – 9, 2011.

‘Simulating Quantum Correlations as a Distributed Sampling Problem,’ Quantum Foundations Journal Club, Institute of Quantum Optics and Quantum Information, University of Vienna, November 23, 2011.

‘The Information-Theoretic Turn in Foundations of Physics,’ Conference ‘Quantum Physics and the Nature of Reality,’ International Academy Traunkirchen, Austria, July 3 – 7, 2011.

‘What is Really There in the Quantum World?’ Conference on Concepts of Reality in the Foundations of Quantum Mechanics, International Academy Tranunkirchen, Austria, July 1—3, 2011.

‘Einstein and Bohr Meet Alice and Bob,’ special symposium on 'Quantum Information and the New Technology' at the 14th Congress of Logic, Methodology and Philosophy of Science, Nancy, France, July 19—26, 2011.

'Closed Timelike Curves and Quantum Information,' Workshop on Quantum Physics and the Nature of Reality, Oxford, September 26 - 29, 2010.

'Is Information the Key?' Workshop on What Exists in the Quantum World? International Academy Traunkirchen, Austria, July 19 - 24, 2010.

'How Can It Be LIke That?' Meeting in honor of Anton Zeilinger, Institute for Quantum Optics and Quantum Information, Austrian Academy of Sciences, May 20, 2010.