

References

- Aspect, A., Grangier, P. and Roger, G. (1981), Experimental tests of realistic local theories via Bell's theorem, *Phys. Rev. Lett.* 47, 460, reprinted in Wheeler and Zurek (1983).
- Belinfante, F.J. (1973), *A Survey of Hidden-Variable Theories*, Pergamon, Oxford.
- Bell, E.T. (1973), *Men of Mathematics*, Simon and Schuster, New York.
- Bell, J.S. (1964), On the Einstein-Podolsky-Rosen paradox, *Physics* 1, 195.
- Beltrametti, E.G. and van Fraassen, B.C. (1981) eds., *Current Issues in Quantum Logic*, Plenum, New York.
- Birkhoff, G. and von Neumann, J. (1936), The logic of quantum mechanics, *Ann. Math.* 37, 823.
- Black, M. (1967), Probability, *Encyclopedia of Philosophy*, Macmillan, New York.

-
- Bohm, D. (1951), *Quantum Theory*, Prentic-Hall, Englewood Cliffs, NJ.
- Bohm, D. (1952), A suggested interpretation of quantum theory in terms of "hidden variables", *Phys. Rev.* 85, 180, reprinted in Wheeler and Zurek (1983).
- Bohm, D. (1981), *Wholeness and the Implicate Order*, Rutledge and Kegan, London.
- Bohr, N. (1949), Discussions with Einstein on epistemological problems in atomic physics, in P.A. Schlipp ed., *Albert Einstein Philosopher-Scientist*, The Library of Living Philosophers, Evanston, reprinted in Wheeler and Zurek (1983).
- Bonferroni, C.E. (1936a), Teorie statistica delle classi e calcolo delle probabilita, *Public Inst. Sup. Sc. Ec. e Comm. di Firenze* 8, 1.
- Bonferroni, C.E. (1936b), Il calcolo delle assicurazioni su grappi di teste, *Studi in Onore del Prof. S.O. Carboni*, Roma.
- Bub, J. (1977), *The Interpretation of Quantum Mechanics*, Reidel, Dordrecht

-
- Bub, J. and Pitowsky, I. (1985), Critical notice on K.R. Popper's postscript to the logic of scientific discovery, *Can. J. of Phil.* 15, 539.
- Capra, F. (1975), *The Tau of Physics*, Shambahala, Berkeley, CA.
- Carnap, R. (1950), *Logical Foundations of Probability*, U. of Chicago Press, Chicago, IL.
- Clauser, J.F. and Horne, M.A. (1974), Experimental consequences of objective local theories, *Phys. Rev. D.* 10, 526.
- Clauser, J.F. and Shimony, A. (1978), Bell's theorem. Experimental tests and implications, *Rep. Prog. Phys.* 41, 1881.
- Clauser, J.F., Horne, M.A., Shimony, A. and Holt, R.A. (1969), Proposed experiment to test local hidden-variable theories, *Phys. Rev. Lett.* 23, 880, reprinted in Wheeler and Zurek (1983).
- Cohen, P. (1966), *Set Theory and the Continuum Hypothesis*, Benjamin, New York.
- Cooke, R., Keane, M. and Moran, W. (1985), An elementary proof of Gleason's theorem, *Math. Proc. Camb. Phil. Soc.* 98, 117.

d'Espangant, B. (1971), *Conceptual Foundations of Quantum Mechanics*,

W.A. Benjamin, Menlo Park, CA.

De Finetti, B. (1972), *Probability Induction and Statistics*, Wiley.

Dummett, M. (1978), Is logic empirical?, in *Truth and Other Enigmas*,

Harvard University Press, Cambridge, MA.

Einstein, A., Podolsky, B. and Rosen, W. (1935), Can quantum mechanical

description of physical reality be considered complete?, *Phys. Rev.*

47 777, reprinted in Wheeler and Zurek (1983).

Fine, A. (1982a), Hidden variables, joint probability and Bell inequalities,

Phys. Rev. Lett. 48, 291.

Fine, A. (1982b), Reply to Garg A. and Mermin N.D., *Phys. Rev. Lett.*

49, 243.

Finkelstein, D. (1962), The logic of quantum physics, *Trans. New York*

Acad. of Sci. 25, 621.

-
- Finkelstein, D. (1968), Matter, space and logic, in R. Cohen and M. Wartofsky, eds., *Boston Studies in the Philosophy of Science 5*, 199, Reidel, Dordrecht.
- Fréchet, M. (1940), *Les Probabilités Associées a un Système D'Événements Compatibles et Dépendants*, Hermann, Paris.
- Garey, M.R. and Johnson, D.S. (1979), *Computers and Intractability, A Guide to the Theory of NP-Completeness*, W.H. Freeman, New York.
- Garg, A. and Mermin, N.D. (1982a), Bell inequalities with range of violation that does not diminish as the spin becomes arbitrarily large, *Phys. Rev. Lett.* *49*, 901.
- Garg, A. and Mermin, N.D. (1982b), Comment on "Hidden variables, joint probability and Bell inequalities", *Phys. Rev. Lett.* *49*, 242.
- Garg, A. and Mermin, N.D. (1983), Local realism and measured correlations in the spin s Einstein-Podolsky-Rosen experiment, *Phys. Rev. D.* *27*, 339.

Garg, A. and Mermin, N.D. (1984), Farkas's lemma and the nature of reality:

Statistical implications of quantum correlations, *Found. of Phys.*

14, 1.

Gauss, K.F. (1831), Letters to Olbers, *Collected Works vol. II*, 177.

Gleason, A.M. (1957), Measures on the closed subspaces of a Hilbert space,

J. Math. and Mech. 6, 885.

Gödel, K. (1940), The consistency of the axiom of choice and the generalized

continuum hypothesis, *Annals of Math 3*, Princeton U. Press,

Princeton, NJ.

Gudder, S.P. (1970), On hidden variable theories, *J. Math. Phys.* 11,

481.

Gudder, S.P. (1984a), Probability manifolds, *J. Math. Phys.* 25, 2397.

Gudder, S.P. (1984b), Reality, locality and probability, *Found. of Phys.*

14, 997.

Gudder, S.P. (1985), Amplitude phase space model for quantum mechanics,

Int. J. of Theor. Phys. 24, 343.

-
- Gudder, S.P. (1988), *Quantum Probability*, Academic Press, Orlando, FL.
- Hewitt, E. and Ross, K.A. (1979), *Abstract Harmonic Analysis*,
Springer, Berlin.
- Hume, D. (1739), *A Treatise of Human Nature*, modern edition: D.G.L.
Macnabb ed., Fontana/Collins, Glasgow.
- Jech, T.J. (1973), *The Axiom of Choice*, North Holland, Amsterdam.
- Jauch, J.M. (1968), *Foundations of Quantum Mechanics*, Addison-Wesley,
Reading, MA.
- Karp, R.M. and Papadimitriou, C.H. (1980), On linear characterizations of
combinatorial optimization problems, *Proc. of the 21 Symp. Found.
Comput. Sci.*, 1.
- Keynes, J.M. (1943), *A Treatise on Probability*, McMillan, London
(originally published in 1923).
- Kochen, S. and Specker, E.P. (1967), The problem of hidden variables in
quantum mechanics, *J. Math. and Mech.* 17, 59.

Macdonald, A.L. (1982), Comment on "Resolution of the Einstein-Podolsky-Rosen and Bell paradoxes", *Phys. Rev. Lett.* 49, 1214.

Mandelbrot, B. (1977), *Fractals - Form, Chance and Dimension*, W.H. Freeman, San Francisco.

Mermin, N.D. (1982), Comment on "Resolution of the Einstein-Podolsky-Rosen and Bell paradoxes", *Phys. Rev. Lett.* 49, 1215.

Mermin, N.D. and Schwarz, G. (1982), Joint distributions and local realism in the higher spin Einstein-Podolsky-Rosen experiment, *Found. of Phys.* 12, 101.

Messiah, A. (1963), *Quantum Mechanics*, North Holland, Amsterdam.

Mott, N.F. and Massey, H.S.W. (1965), *The Theory of Atomic Collisions*, Clarendon Press, Oxford.

Pitowsky, I. (1982a), Substitution and truth in quantum logic, *Philos. of Sci.* 49, 380.

-
- Pitowsky, I. (1982b), Resolution of the Einstein–Podolsky–Rosen and Bell paradoxes, *Phys. Rev. Lett.* *48*, 1299.
- Pitowsky, I. (1983), Deterministic model of spin and statistics, *Phys. Rev. D.* *27*, 2316.
- Pitowsky, I. (1985a), On the status of statistical inferences, *Synthese* *63*, 233.
- Pitowsky, I. (1985b), Discussion: Quantum mechanics and value definiteness, *Philos. of Sci.* *52*, 154.
- Pitowsky, I. (1985c), A phase space model of quantum mechanics in which all operators commute, in L.M. Roth and A. Inomata, eds., *Fundamental Questions in Quantum Mechanics*, Gordon and Breach, New York.
- Pitowsky, I. (1986), The range of quantum probability, *J. Math of Phys.* *27*, 1556.
- Pitowsky, I. (1988), Correlation polytopes, their geometry and complexity, forthcoming.

-
- Popper, K.R. (1959), *The Logic of Scientific Discovery*, Basic Books, New York (German original 1934).
- Putnam, H. (1968), Is logic empirical? in R. Cohen and M. Wartofsky, eds., *Boston Studies in the Philosophy of Science, Vol. 5*, Reidel, Dordrecht.
- Putnam, H. (1976), How to think quantum logically, in P. Suppes, ed., *Logic and Probability in Quantum Mechanics*, Reidel, Dordrecht.
- Putnam, H. (1983), Models and reality, in *Realism and Reason*, Cambridge U. Press, Cambridge.
- Quine, W.V.O. (1953), Two dogmas of empiricism, in *From a Logical Point of View*, Harper and Row, New York.
- Quine, W.V.O. (1975), On empirically equivalent systems of the world, *Erkenntnis IX*, 313.
- Ramsey, F.P. (1926), Truth and probability, in R.B. Brathwaite, ed., *The Foundations of Mathematics*, Routledge and Kegan, London.

-
- Reichenbach, H. (1944), *Philosophical Foundations of Quantum Mechanics*, University of California Press, Berkeley.
- Rockafeller, R.T. (1970), *Convex Analysis*, Princeton University Press, Princeton.
- Shaeffer, T.J. (1978), The complexity of satisfiability problem, *Proc. 10th. Ann. Symp. on Theory of Computing*, 216, Association for Computing Machinery, New York.
- Shelah, S. (1984), Can you take Solovay's inaccessible away? *Israel J. of Math.* 48, 1.
- Shimony, A. (1984), Contextual hidden variable theories and Bell inequalities, *Brit. J. Phil. Sci.* 35, 25.
- Solovay, R.M. (1970), A model of set theory in which every set of reals is Lebesgue measurable, *Ann. of Math.* 92, 1.
- Stairs, A. (1983), Quantum logic, realism and value definiteness, *Phil. of Sc.* 50, 578.

-
- van Fraassen, B.C. (1980), *The Scientific Image*, Oxford U. Press, oxford.
- van Fraassen, B.C. (1982), The Charidbis or realism: Epistemological implications of Bell's inequality, *Synthese* 52, 885.
- Varadarajan, V. (1962), *Geometry of Quantum Theory, Vol. I, II*, van Nostrand, Princeton, NJ.
- von Mises, R. (1957), *Probability Statistics and Truth*, Dover, New York (original German edition, 1928).
- von Neumann, J. (1955), *Mathematical Foundations of Quantum Mechanics*, Princeton University Press, Princeton (original German edition, 1933).
- Wheeler, J.A. and Zurek, W.H. (1983), eds., *Quantum Theory and Measurement*, Princeton University Press, Princeton.
- Wigner, E.P. (1961), Remarks on the mind-body question in *Symmetries and Reflections*, Indiana University Press, Bloomington, reprinted in Wheeler and Zurek, 1983.

Wigner, E.P. (1970), On hidden variables and quantum mechanical probabilities, *Amer. Jour. Phys.* 38, 1005.

Wigner, E.P. (1976), Interpretation of quantum mechanics, mimeographed note, reprinted in Wheeler and Zurek, 1983.

Wittgenstein, L. (1939), *On Certainty*, eds.: E.M. Enscomb and G.H. von Wright, Blackwell, Oxford.

Yemlichev, A.V., Kovalev, M.M. and Kravtsov, M.K. (1984), *Polytopes, Graphs and Optimizations*, Cambridge University Press, Cambridge (Russian original, 1981).

Lecture Notes in Mathematics

- Vol. 1236: Stochastic Partial Differential Equations and Applications. Proceedings, 1985. Edited by G. Da Prato and L. Tubaro. V, 257 pages. 1987.
- Vol. 1237: Rational Approximation and its Applications in Mathematics and Physics. Proceedings, 1985. Edited by J. Gilewicz, M. Pindor and W. Siemaszko. XII, 350 pages. 1987.
- Vol. 1250: Stochastic Processes – Mathematics and Physics II. Proceedings 1985. Edited by S. Albeverio, Ph. Blanchard and L. Streit. VI, 359 pages. 1987.
- Vol. 1251: Differential Geometric Methods in Mathematical Physics. Proceedings, 1985. Edited by P.L. García and A. Pérez-Rendón. VII, 300 pages. 1987.
- Vol. 1255: Differential Geometry and Differential Equations. Proceedings, 1985. Edited by C. Gu, M. Berger and R.L. Bryant. XII, 243 pages. 1987.
- Vol. 1256: Pseudo-Differential Operators. Proceedings, 1986. Edited by H.O. Cordes, B. Gramsch and H. Widom. X, 479 pages. 1987.
- Vol. 1258: J. Weidmann, Spectral Theory of Ordinary Differential Operators. VI, 303 pages. 1987.
- Vol. 1260: N.H. Pavel, Nonlinear Evolution Operators and Semigroups. VI, 285 pages. 1987.
- Vol. 1263: V.L. Hansen (Ed.), Differential Geometry. Proceedings, 1985. XI, 288 pages. 1987.
- Vol. 1265: W. Van Assche, Asymptotics for Orthogonal Polynomials. VI, 201 pages. 1987.
- Vol. 1267: J. Lindenstrauss, V.D. Milman (Eds.), Geometrical Aspects of Functional Analysis. Seminar. VII, 212 pages. 1987.
- Vol. 1269: M. Shiota, Nash Manifolds. VI, 223 pages. 1987.
- Vol. 1270: C. Carasso, P.-A. Raviart, D. Serre (Eds.), Nonlinear Hyperbolic Problems. Proceedings, 1986. XV, 341 pages. 1987.
- Vol. 1272: M.S. Livšic, L.L. Waksman, Commuting Nonselfadjoint Operators in Hilbert Space. III, 115 pages. 1987.
- Vol. 1273: G.-M. Greuel, G. Trautmann (Eds.), Singularities, Representation of Algebras, and Vector Bundles. Proceedings, 1985. XIV, 383 pages. 1987.
- Vol. 1275: C.A. Berenstein (Ed.), Complex Analysis I. Proceedings, 1985–86. XV, 331 pages. 1987.
- Vol. 1276: C.A. Berenstein (Ed.), Complex Analysis II. Proceedings, 1985–86. IX, 320 pages. 1987.
- Vol. 1277: C.A. Berenstein (Ed.), Complex Analysis III. Proceedings, 1985–86. X, 350 pages. 1987.
- Vol. 1283: S. Mardešić, J. Segal (Eds.), Geometric Topology and Shape Theory. Proceedings, 1986. V, 261 pages. 1987.
- Vol. 1285: I.W. Knowles, Y. Saitō (Eds.), Differential Equations and Mathematical Physics. Proceedings, 1986. XVI, 499 pages. 1987.
- Vol. 1287: E.B. Saff (Ed.), Approximation Theory, Tampa. Proceedings, 1985–1986. V, 228 pages. 1987.
- Vol. 1288: Yu. L. Rodin, Generalized Analytic Functions on Riemann Surfaces. V, 128 pages. 1987.
- Vol. 1294: M. Queffélec, Substitution Dynamical Systems – Spectral Analysis. XIII, 240 pages. 1987.
- Vol. 1299: S. Watanabe, Yu.V. Prokhorov (Eds.), Probability Theory and Mathematical Statistics. Proceedings, 1986. VIII, 589 pages. 1988.
- Vol. 1300: G.B. Seligman, Constructions of Lie Algebras and their Modules. VI, 190 pages. 1988.
- Vol. 1302: M. Cwikel, J. Peetre, Y. Sagher, H. Wallin (Eds.), Function Spaces and Applications. Proceedings, 1986. VI, 445 pages. 1988.
- Vol. 1303: L. Accardi, W. von Waldenfels (Eds.), Quantum Probability and Applications III. Proceedings, 1987. VI, 373 pages. 1988.

Lecture Notes in Physics

- Vol. 299: J.D. Buckmaster, T. Takeno (Eds.), Mathematical Modeling in Combustion Science. Proceedings, 1987. VI, 168 pages. 1988.
- Vol. 300: B.-G. Englert, Semiclassical Theory of Atoms. VII, 401 pages. 1988.
- Vol. 301: G. Ferenczi, F. Beleznyai (Eds.), New Developments in Semiconductor Physics. Proceedings, 1987. VI, 302 pages. 1988.
- Vol. 302: F. Gieres, Geometry of Supersymmetric Gauge Theories. VIII, 189 pages. 1988.
- Vol. 303: P. Breitenlohner, D. Maison, K. Sibold (Eds.), Renormalization of Quantum Field Theories with Non-linear Field Transformations. Proceedings, 1987. VI, 239 pages. 1988.
- Vol. 304: R. Prud'homme, Fluides hétérogènes et réactifs: écoulements et transferts. VIII, 239 pages. 1988.
- Vol. 305: K. Nomoto (Ed.), Atmospheric Diagnostics of Stellar Evolution: Chemical Peculiarity, Mass Loss, and Explosion. Proceedings, 1987. XIV, 468 pages. 1988.
- Vol. 306: L. Blitz, F.J. Lockman (Eds.), The Outer Galaxy. Proceedings, 1987. IX, 291 pages. 1988.
- Vol. 307: H.R. Miller, P.J. Wiita (Eds.), Active Galactic Nuclei. Proceedings, 1987. XI, 438 pages. 1988.
- Vol. 308: H. Bacry, Localizability and Space in Quantum Physics. VII, 81 pages. 1988.
- Vol. 309: P.E. Wagner, G. Vali (Eds.), Atmospheric Aerosols and Nucleation. Proceedings, 1988. XVIII, 729 pages. 1988.
- Vol. 310: W.C. Seitter, H.W. Duerbeck, M. Tacke (Eds.), Large-Scale Structures in the Universe – Observational and Analytical Methods. Proceedings, 1987. II, 335 pages. 1988.
- Vol. 311: P.J.M. Bongaarts, R. Martini (Eds.), Complex Differential Geometry and Supermanifolds in Strings and Fields. Proceedings, 1987. V, 252 pages. 1988.
- Vol. 312: J.S. Feldman, Th.R. Hurd, L. Rosen, "QED: A Proof of Renormalizability." VII, 176 pages. 1988.
- Vol. 313: H.-D. Doebner, T.D. Palev, J.D. Hennig (Eds.), Group Theoretical Methods in Physics. Proceedings, 1987. XI, 599 pages. 1988.
- Vol. 314: L. Peliti, A. Vulpiani (Eds.), Measures of Complexity. Proceedings, 1987. VII, 150 pages. 1988.
- Vol. 315: R.L. Dickman, R.L. Snell, J.S. Young (Eds.), Molecular Clouds in the Milky Way and External Galaxies. Proceedings, 1987. XVI, 475 pages. 1988.
- Vol. 316: W. Kundt (Ed.), Supernova Shells and Their Birth Events. Proceedings, 1988. VIII, 253 pages. 1988.
- Vol. 317: C. Signorini, S. Skorka, P. Spolaore, A. Vitturi (Eds.), Heavy Ion Interactions Around the Coulomb Barrier. Proceedings, 1988. X, 329 pages. 1988.
- Vol. 319: L. Garrido (Ed.), Far from Equilibrium Phase Transitions. Proceedings, 1988. VIII, 340 pages. 1988.
- Vol. 320: D. Coles (Ed.), Perspectives in Fluid Mechanics. Proceedings, 1985. VII, 207 pages. 1988.
- Vol. 321: I. Pitowsky, Quantum Probability – Quantum Logic. IX, 209 pages. 1989.