

## Curriculum vitæ---Howard Stein

## Education:

B.A. Columbia University 6/47  
 Ph.D. The University of Chicago 6/58 (Philosophy)  
 M.S. University of Michigan 6/59 (Mathematics)

## Memberships:

American Philosophical Association  
 Philosophy of Science Association  
 American Mathematical Society  
 Fellow, American Academy of Arts and Sciences

## Professional career:

The University of Chicago, 1949-60:  
 Assistant in the Natural Sciences in the College 1949-51  
 Instructor ditto 1951-53  
 Assistant Professor ditto (on leave of absence, 1958-60) 1953-60

National Science Foundation Science Faculty Fellow 1958-59

Brandeis University: Instructor in Mathematics 1959-62

Honeywell Inc., 1962-67:  
 Senior Mathematician, Systems Analysis Dept., EDP Division 5/62-8/66  
 (on leave of absence, 7/65-6/66)  
 Senior Engineer, Computer Products, Computer Control Division 9/66-3/67

National Science Foundation Senior Postdoctoral Fellow 7/65-6/66

Visitor, The Rockefeller University (auspices of Professor Hao Wang) 4/67-5/67

Case Western Reserve University: Professor of Philosophy 1967-73

Columbia University: Professor of Philosophy 1973-80  
 Chairman, University Seminar on the History and  
 Philosophy of Science, 1976-77

John Simon Guggenheim Memorial Foundation Fellow, 1974-75

Member, NSF Advisory Committee on History and Philosophy of Science, 1977-79

The University of Chicago: 1980-  
 Professor in the Department of Philosophy and the Committee  
 on the Conceptual Foundations of Science 1980-2000  
 Professor emeritus 2000-  
 Acting Chairman, Committee on the Conceptual Foundations  
 of Science, Fall, 1982

Member, Program Committee, Philosophy of Science Association, 1983-84

## Invited Lectures:

Departments of Philosophy and Mathematics, University of Rochester, 10/66  
International Conference on tercentenary of Newton's "Annus mirabilis"; University of Texas (Austin), 11/66  
Department of Philosophy, University of Minnesota, 1/67  
Departments of Philosophy and Mathematics, The Rockefeller University, 2/67  
Department of Philosophy, University of Pennsylvania, 2/67  
Department of Philosophy, Columbia University, spring '68  
Department of Philosophy, The University of Chicago, spring '68  
University of Pittsburgh Lecture Series (Center for the Philosophy of Science), 4/69  
Boston Colloquium for the Philosophy of Science, 5/69  
Department of Philosophy, Massachusetts Institute of Technology, 5/69  
Conference on the History and Philosophy of Science; University of Minnesota, 9/69  
Department of Philosophy, Princeton University, 11/69  
Ohio Academy of Sciences, 3/70  
Symposium on the Theory of Measurement; Departments of Physics and Philosophy, University of North Carolina (Chapel Hill), 4/70  
American Philosophical Association, Western Division: Symposium on Quantum Mechanics, 5/70  
Department of Philosophy, State University of New York (Buffalo), 5/71  
Department of Mathematics, State University of New York (Buffalo), 5/71  
Boston Colloquium for the Philosophy of Science, 1/72  
Mathematics-Physics Colloquium, The Rockefeller University, 1/72  
American Philosophical Association, Eastern Division: Symposium on General relativity, 12/72  
University Seminar on the History and Philosophy of Science, Columbia University, 9/73  
Conferences on Relativity Theory and Space-Time; University of Minnesota (5/74) and Boston University (6/74)  
Department of Philosophy, Princeton University, 10/74  
Department of Philosophy, Case Western Reserve University, spring '75  
Departments of Philosophy and of the History of Science, Yale University, 1/76  
History of Science Society, Symposium on Field Theories, 12/76  
Departments of Philosophy and of the History of Science, Johns Hopkins University, 4/78  
University of Colorado (Boulder): one public lecture, one colloquium talk to the Department of History and Philosophy of Science, 10/78  
Colorado State University at Fort Collins, History and Philosophy of Science, 10/78  
Aesthetics Society of America: Symposium on the Aesthetics of Science, 10/78  
Department of Philosophy, Princeton University, 2/79  
Einstein Centennial lecture, University of Texas (Austin), 3/79  
Einstein Centennial lecture, University of Minnesota (Duluth), 5/79  
University of California (Davis): one public lecture, one colloquium talk to the Department of Philosophy, 10/80  
Department of Philosophy, Rice University, Symposium on Realism and Anti-realism, 10/81  
Department of the History and Philosophy of Science, Indiana University (Bloomington), 4/82  
Center for the Interdisciplinary Study of Science and Technology, Northwestern University, 5/82  
Philosophy of Science Association, Biennial Meeting: Address on the current situation in the philosophy of quantum mechanics, 10/82  
Department of Philosophy, University of Wisconsin (Milwaukee), 3/84  
Center for the History and Philosophy of Science, The Johns Hopkins University: Lecture in a series commemorating the centenary of Kelvin's Baltimore Lectures; 11/84  
Conference on the History and Philosophy of Mathematics, University of Minnesota, 5/85  
Department of Philosophy, University of Western Ontario, 3/86  
  
American Physical Society: Session on History and Philosophy of Science, 5/86  
American Philosophical Association, Eastern Division: Workshop on Bell's Theorem, 12/86  
Department of Philosophy, University of Colorado (Boulder), 4/87  
Boston Colloquium for the Philosophy of Science, 4/87

## Invited Lectures (continued):

- Department of Philosophy, Tufts University, 5/87  
 Committee on the Conceptual Foundations of Science and Fishbein Center for the History of Science, The University of Chicago (joint colloquium, followed by special evening seminar), 5/87  
 Department of Physics, The University of Chicago, 6/87  
 Conference on the tercentenary of Newton's *Principia*; Yale University, 11/87  
 Trinity College, Hartford, Connecticut, 11/87  
 Department of Philosophy, University of Wisconsin (Milwaukee), 11/87  
 Renaissance Seminar, The University of Chicago, 1/88  
 International Symposium, "Realism Today"; Université de Neuchâtel (Switzerland), 5/88  
 Department of Philosophy, University of Pennsylvania, 10/88  
 Symposium, "How Theories are Constructed: The Methodology of Scientific Creativity"; University of North Carolina (Greensboro), 3/89  
 Departments of Philosophy and History of Science (joint seminar), University of Western Ontario, 10/89  
 Conference on Logical Empiricism, its Antecedents and Consequences for Philosophy of Science, Northwestern University, 3/90  
 Philosophy of Science Association: Symposium on Reasoning from Phenomena, 10/90  
 Departments of Philosophy and of History of Science, University of Western Ontario: Conference on Reasoning from Phenomena, 11/90  
 American Philosophical Association, Central Division: Symposium on History of Science and History of Philosophy, 4/91  
 International Union of History and Philosophy of Science: Ninth International Congress of Logic, Methodology and Philosophy of Science (Uppsala, Sweden), 8/91  
 Department of Philosophy, University of Wisconsin, Madison, 10/91  
 Boston Colloquium for the Philosophy of Science, Symposium on the Work of Rudolf Carnap, 10/91  
 Departments of Philosophy and History of Science (joint seminar), University of Western Ontario, 2/92  
 Department of Philosophy, University of Illinois, Urbana, 9/93  
 Symposium on Foundations of Quantum Mechanics (in honor of Abner Shimony), Boston University, 9/94  
 Department of Philosophy, The University of Chicago, Faculty Colloquium, 11/95  
 Departments of Philosophy and History of Science (joint seminar), University of Western Ontario, 12/94  
 Workshop on Quantum Theory of Measurement, University of Minnesota, 5/95  
 APA Pacific Division, Comment on paper of Michael Tooley, 4/96  
 Ernest Nagel Memorial Lecture, Columbia University, 4/96  
 Department of Philosophy, Carnegie Mellon University, 9/96  
 Conference on Foundations of Physics, University of Western Ontario, 4/97  
 Department of Philosophy, University of Illinois at Chicago, 10/97  
 Coffa Memorial Lecture, Department of the History and Philosophy of Science, University of Indiana, Bloomington, 10/97  
 University of California at Irvine, 10/99  
 Conference in Honor of Isaac Levi, Columbia University, 10/01  
 APA Central Division: Symposium on Newton, 4/04  
 PSA meeting, Symposium on "Newtonian Relativity," commentator on 3 papers, 11/7/14

## Bibliography:

- Thesis: *An Examination of some Aspects of Natural Science* (Department of Philosophy, The University of Chicago, 1958).
- "Newtonian Space-Time," *The Texas Quarterly* **10** (Autumn, 1967), 174-200; also in *The Annus Mirabilis of Sir Isaac Newton*, ed. Robert Palter (Cambridge, Mass.: MIT Press, 1970), pp. 258-284.
- "Limitations on Measurement" and "Alternative Schemes of Measurement," jointly with Abner Shimony; two papers presented to the American Physical Society, meeting of 11/16/67-11/18/67. Abstracts in *Bulletin of the American Physical Society*, ser. 2, **12** (1967), 1056.
- "On Einstein-Minkowski Space-Time," *Journal of Philosophy* **65** (1968), 5-23.
- "Comments on 'The Thesis of Parmenides'," *Review of Metaphysics* **22** (1969), 725-734.
- "Is There a Problem of Interpreting Quantum Mechanics?," *Noûs* **4** (1970), 93-103.
- "A Note on Time and Relativity Theory," *Journal of Philosophy* **67** (1970), 93-103.
- "On the Paradoxical Time-Structures of Gödel," *Philosophy of Science* **37** (1970), 289-294.
- "On the Notion of Field in Newton, Maxwell, and Beyond," in *Historical and Philosophical Perspectives of Science*, ed. Roger B. Stuewer (Minnesota Studies in the Philosophy of Science, vol. V; University of Minnesota Press, 1970), pp. 264-287 (followed by comments, pp. 287-299, and replies, pp. 299-310).
- "Limitations on Measurement" (jointly with Abner Shimony), in *Foundations of Quantum Mechanics*, ed. B. d'Espagnat (Proceedings of the International School of Physics «Enrico Fermi», Course II; New York: Academic Press, 1971), pp. 56-76.
- "On the Conceptual Structure of Quantum Mechanics," in *Paradigms and Paradoxes: the Philosophical Challenge of the Quantum Domain*, ed. Robert Colodny (University of Pittsburgh Series in the Philosophy of Science, vol. V; Pittsburgh, Pa.: University of Pittsburgh Press, 1972), pp. 367-438.
- "Graves on the Philosophy of Physics," *Journal of Philosophy* **69** (1972), 621-634.
- "Maurice Clavelin on Galileo's Natural Philosophy," *British Journal for the Philosophy of Science* **25** (1974), 375-397.
- "Some Philosophical Prehistory of General Relativity," in *Foundations of Space-Time Theories*, ed. John Earman, Clark Glymour, and John Stachel (Minnesota Studies in the Philosophy of Science, vol. VIII; University of Minnesota Press, 1977), pp. 3-49.
- "On Space-Time and Ontology: Extract from a Letter to Adolf Grünbaum," *ibid.*, pp. 374-402.
- "On Newton and Einstein," *The Library Chronicle of the University of Texas at Austin*, New Series, **12** (1979), 63-78.
- "A Problem in Hilbert Space Theory Arising from the Quantum Theory of Measurement" (jointly with Abner Shimony), *American Mathematical Monthly* **86** (1979), 292-293.
- "'Subtler Forms of Matter' in the Period Following Maxwell," in *conceptions of Ether: Studies in the History of Ether Theories, 1740-1900*, ed. G. N. Cantor and M. J. S. Hodge (Cambridge University Press, 1981), pp. 309-340.
- "On the Present State of the Philosophy of Quantum Mechanics," *PSA* 1982, vol. 2, pp. 563-581.
- "The Everett Interpretation of Quantum Mechanics: Many Worlds or None?," *Noûs* **18** (1984), 635-652.
- Introductory Note to the paper of Kurt Gödel, "A Remark about the Relationship between Relativity Theory and Idealistic Philosophy," in Kurt Gödel, *Collected Works*, vol. II, ed. Solomon Feferman *et al.* (New York: Oxford University Press, 1990), pp. 199-201.
- "After the Baltimore Lectures: Some Philosophical Remarks on the Subsequent Development of Physics," in *Kelvin's Baltimore Lectures and Modern Theoretical Physics*, ed. Robert Kargon and Peter Achinstein (Cambridge, Mass.: MIT Press, 1987), pp. 375-398.
- "Logos, Logic, and Logistiké: Some Philosophical Remarks on the 19th-century Transformation of Mathematics," in *History and Philosophy of Modern Mathematics*, ed. William Aspray and Philip Kitcher (Minnesota Studies in the Philosophy of Science, vol. XI; University of Minnesota Press, 1988), pp. 238-259.
- "Yes, but ... : Some Skeptical Reflections on Realism and Anti-realism," *Dialectica* **43** (1989), 47-65.
- "On Locke, 'the Great Huygenius, and the incomparable Mr. Newton'," in *Philosophical Perspectives on Newtonian Science*, ed. Phillip Bricker and R.I.G. Hughes (Cambridge, Mass.: MIT Press, 1990), pp. 17-47.

## Bibliography (continued):

- "Eudoxos and Dedekind: On the Ancient Greek Theory of Ratios and its Relation to Modern Mathematics," *Synthese* **84** (1990), 163-211. (Reprinted in part in William Demopoulos, ed., *Frege's Philosophy of Mathematics* [Cambridge, Mass.: Harvard University Press, 1995], pp. 334-357.)
- "On Relativity Theory and Openness of the Future," *Philosophy of Science* **58** (1991), 147-167.
- "From the Phenomena of Motions to the Forces of Nature': Hypothesis or Deduction?" *PSA 1990*, vol. 2, 209-222.
- "Was Carnap Entirely Wrong, After All?" *Synthese* **93** (1992), 275-295.
- "On Philosophy and Natural Philosophy in the Seventeenth Century," *Midwest Studies in Philosophy* **18** (1993), 177-201.
- "Newton," *A Companion to Metaphysics*, ed. J. Kim and E. Sosa (Oxford: Blackwell, 1995), pp. 353-355.
- "Some Reflections on the Structure of our Knowledge in Physics," in *Logic, Methodology and Philosophy of Science* **9** (Proceedings of the Ninth International Congress of Logic, Methodology and Philosophy of Science), ed. D. Prawitz, B. Skyrms, and D. Westerståhl (New York: Elsevier Science B.V., 1994), pp. 633-655.
- "Logicism," *Routledge Encyclopedia of Philosophy* (London: Routledge, forthcoming).
- "Dedekind, Julius Wilhelm Richard," *Routledge Encyclopedia of Philosophy* (London: Routledge, forthcoming).
- Introductory note to Kurt Gödel, "Some observations about the relationship between theory of relativity and Kantian philosophy," in Kurt Gödel, *Collected Works*, vol. 3 (Oxford University Press, 1995), pp. 202-229.
- "Maximal Extension of an Impossibility Theorem Concerning Quantum Measurement," in *Potentiality, Entanglement and Passion-at-a-Distance*, (Quantum Mechanical Studies for Abner Shimony, Volume Two; Boston Studies in the Philosophy of Science, vol. 194), ed. R. S. Cohen *et al.* (Kluwer Academic Publishers, 1997), pp. 231-243.
- "Newton's Metaphysics," in *The Cambridge Companion to Newton*, ed. I. Bernard Cohen and George E. Smith (Cambridge University Press, 2002), pp. 256-307.
- "On Quantum Non-locality, Special Relativity, and Counterfactual Reasoning," jointly with Abner Shimony, in *Revisiting the Foundations of Relativistic Physics* (Festschrift in Honor of John Stachel), ed. Abhay Ashtekar *et al.* (Kluwer Academic Publishers, 2003), pp. 499-521.
- "Comment on 'Nonlocal character of quantum theory,' by Henry P. Stapp," jointly with Abner Shimony, *American Journal of Physics* **69** (2001), 848-853.
- "The Enterprise of Understanding and the Enterprise of Knowledge—for Isaac Levi's seventieth birthday," *Synthese* **140** (2004), 135-176.
- "Definability, 'Conventionality,' and Simultaneity in Einstein-Minkowski Space-Time," in *Quantum Reality, Relativistic Causality, and Closing the Epistemic Circle* (Essays in Honor of Abner Shimony), ed. Wayne C. Myrvold and Joy Christian (Springer, 2009), pp. 403-442.

Unpublished (accessible online at <http://strangebeautiful.com/other-minds.html#stein>):

"Nevvtonus ab quibusdam nævibus vindicatus."

"On Metaphysics and Method in Newton."

"Further Considerations on Newton's Methods."

"Physics and Philosophy Meet: the Strange Case of Poincaré."

"How does physics bear upon metaphysics; and why did Plato hold that philosophy cannot be written down?"

"Newton: Philosophy of Inquiry and Metaphysics of Nature."

## Book reviews:

of M. Whiteman, *Philosophy of Space and Time--Journal of philosophy*, **66** (1969), 58-62.

of R. M. Gale, *The Language of Time--ibid.*, 350-355.

of J. L. Heilbron, *Electricity in the 17<sup>th</sup> and 18<sup>th</sup> Centuries—Philosophy of Science* **61** (1984).