

Laura Ruetsche
Department of Philosophy
University of Pittsburgh

EDUCATION

University of Pittsburgh (1989-1995), Ph.D. in Philosophy
Ph.D. thesis: "On the Verge of Collapse: Modal Interpretations of Quantum Mechanics" (John Earman, director)

Oxford University (1987-1989), B.Phil., with distinction, in Philosophy
B.Phil. thesis: "Time Passages: Being and Becoming in Plato's *Timeaus*"
(J.L. Ackrill, director)

Carleton College (1983-1987)
B.A. *summa cum laude* in physics and philosophy, classical Greek minor

AREAS OF SPECIALIZATION Philosophy of Physics, Philosophy of Science

AREAS OF COMPETENCE Plato, Feminist Epistemology, Logic

APPOINTMENTS

University of Pittsburgh
Associate Professor of Philosophy, with a Secondary Appointment to History and
Philosophy of Science, 2003-present
Assistant Professor of Philosophy, with a Secondary Appointment to History and
Philosophy of Science, 1996-2003

Middlebury College
Assistant Professor of Philosophy, 1995-1996

Rutgers University: Visiting Assistant Professor of Philosophy, 2000-2001
Cornell University: Visiting Assistant Professor of Philosophy, Spring 1999
Middlebury College: Instructor of Philosophy, 1994 –1995

POST-GRADUATE AWARDS AND FELLOWSHIPS

Fellow, Stanford Center for the Advanced Study of the Behavioral Sciences, 2006-2007
Charles A. Ryskamp Fellowship (administered by the American Council of Learned
Societies), 2002-2003
University of Pittsburgh Faculty Honor Roll (teaching award), 1999-2000

PUBLICATIONS

(i) Articles

(2006a). "Johnny's So Long at the Ferromagnet," *Philosophy of Science* 73
[Proceedings]: 473-486.

(2005). (with John Earman), "Relativistic Invariance and Modal Interpretations," *Philosophy of Science* 72: 557-583.

(2004a). "Intrinsically Mixed States: an Appreciation," *Studies in the History and Philosophy of Modern Physics* 35: 221-239.

(2004b). "Virtue and Contingent History: Possibilities for Feminist Epistemology," *Hypatia* 19 [Special Issue: Feminism and Science, Lynn Hankinson-Nelson and Alison Wylie, co-editors]: 73-101.

(2003a). (with Aristidis Arageorgis and John Earman), "Fulling Non-uniqueness, Rindler Quanta, and the Unruh Effect: A Primer on Some Aspects of Quantum Field Theory," *Philosophy of Science* 70: 164-202.

(2003b). "A Matter of Degree: Putting Unitary Inequivalence to Work," *Philosophy of Science* 70 [Proceedings]: 1329-1342.

(2003c). "Modal Semantics, Modal Dynamics, and the Problem of State Preparation," *International Studies in the Philosophy of Science* 17: 25-41.

(2002a). (with Rebecca Kukla), "Contingent Natures and Virtuous Knowers: Could Epistemology be 'Gendered'?" *Canadian Journal of Philosophy* 32: 389-418.

(2002b). "Interpreting Quantum Field Theory," *Philosophy of Science* 69: 348-378.

(2002c). (with Aristidis Arageorgis and John Earman), "Weyling the Time Away: the Non-Unitary Implementability of Quantum Field Dynamics on Curved Spacetime and the Algebraic Approach to QFT," *Studies in the History and Philosophy of Modern Physics* 33: 151-184.

(1999a). (with Rob Clifton), "Changing the Subject: Redei on Causal Dependence and Screening Off in Relativistic Quantum Field Theory," *Philosophy of Science* 66 [Proceedings], S156-S169.

(1999b). (with Gordon Belot and John Earman), "Anatomy of a Controversy: the Hawking Information Loss Paradox," *British Journal for the Philosophy of Science* 50: 189-229.

(1996). "Van Fraassen on Preparation and Measurement," *Philosophy of Science* 63[Proceedings]: S338-S346.

(1995). "Measurement Error and the Albert-Loewer Problem," *Foundations of Physics Letters* 8: 331-348.

(ii) Book Chapters, etc.

(forthcoming a). "Philosophy of Quantum Field Theory," in L. Sklar (ed.), *Handbook of Philosophy of Physics* (Oxford University Press).

(forthcoming b). "Microphysics and Emergence," in Stathis Psillos (ed.), *Proceedings of the First Abdera International Forum in the History and Philosophy of Physics* (Athens).

(forthcoming c). "The Maximal Beable Program in Quantum Field Theory," in C. Glymour, W. Wang, and D. Westerstahl (eds.), *Proceedings of the 13th International Congress of Logic, Methodology, and Philosophy of Science* (London: King's College).

(forthcoming d). (with John Earman), "Probabilities in Quantum Field Theory and Quantum Statistical Mechanics," in Claus Beisbart and Stephan Hartmann (eds.), *Probabilities in Physics*.

(2006b). "Philosophy of Physics," in S. Sarkar (ed.), *The Philosophy of Science: an Encyclopedia* (New York: Routledge).

(2006c). "String Theory," in D. Borchert (ed.), *Encyclopedia of Philosophy*, 2nd edition (Farmington Hills, MI: MacMillan).

(2006d). "John Earman," in D. Borchert (ed.), *Encyclopedia of Philosophy*, 2nd edition (Farmington Hills, MI: MacMillan).

(2002d). "Interpreting Quantum Theories," in *The Blackwell Guide to the Philosophy of Science*, in Peter Machamer and Michael Silberstein, eds. (Malden, MA: Blackwell), 199-226.

(2000a). "Toward the Pale: Smolin and the *Limits of Science*," in M. Carrier, G. Massey, and L. Ruetsche (eds.), *Science at the End of the Century: Prospects and Limits of Science* (University of Pittsburgh Press), 61-75.

(1998a). "How Close is Close Enough?," in D. Dieks and P. Vermaas (eds.), *The Modal Interpretation of Quantum Mechanics* (Dordrecht: Kluwer): 223-240.

(iii) Book Reviews

(2004c). Review of Meinard Kuhlman, Holger Lyre, and Andrew Wayne (eds.), *Ontological Aspects of Quantum Field Theory*, *International Studies in the Philosophy of Science* 18: 98-101.

(2004d). Review of Elizabeth Potter's *Gender and Boyle's Law of Gasses* (Bloomington: Indiana University Press, 2001), *Hypatia* 19 [Special Issue: Feminism and Science, Lynn Hankinson-Nelson and Alison Wylie, co-editors]: 297-302.

(2001). Review of Karen Knorr-Cetina, Epistemic Cultures, *Metascience* 10: 85-90.

(2000b). Review of E. Castellani (ed.), Interpreting Bodies: Classical and Quantum Objects in Modern Physics, *Studies in the History and Philosophy of Modern Physics*: 413-17.

(1998b). Review of Jeffrey Bub, Interpreting the Quantum World, *British Journal for the Philosophy of Science* 49: 637-641.

(iv) Editorial Contributions

(2006). Editorial Advisory Board, S. Sarkar (ed.), *The Philosophy of Science: an Encyclopedia* (New York: Routledge).

(2000c). Editor, with Martin Carrier and Gerald Massey, *Science at the End of the Century: Prospects and Limits of Science* (University of Pittsburgh Press).

(1993). Contributing Editor, *The Collected Papers of Albert Einstein*, vol. 5 (Princeton University Press).

(v) In Progress

“Neither Weak nor Unitary: Criteria of Equivalence for Quantum Theories” (being rewritten to make it more palatable to the audience of *the Canadian Journal of Philosophy*).

“Hempel as Feminist Epistemologist.”

“Not everything is relative: Myrvold’s ‘no-go’ result without Lorentz Invariance.”

A book about the interpretation of quantum field theory and the thermodynamic limit of quantum statistical mechanics, settings, I contend, that challenge many presuppositions framing standard discussions of the foundations of quantum mechanics and of the content of physical theories. Under contract to Oxford University Press (August 2008 delivery date).

PRESENTATIONS

“The Maximal Beable Program in Quantum Field Theory,” 13th International Congress of Logic, Methodology, and Philosophy of Science (Beijing, China, August 2007).

“Some Ado About Nothing,” Philosophy Department, University of Washington (October 2006); Philosophy Department, UCLA (April 2007).

“Artistotle, the Forgotten Feminist,” Philosophy Department, Occidental College, (LA, CA, April 2007).

“The Secret Lives of Electrons,” Seminar, Center for the Advanced Study of the Behavioral Sciences (Stanford, CA, February 2007).

“Why Quantum Mechanics Disturbed Einstein,” *Science* 2005 (Pittsburgh, October 2005), Ever Since Einstein (Pittsburgh, October 2005), Physics Department, University of Wisconsin-Whitewater (December 2005).

“Microphysics and Emergence,” the First Abdera International Forum in the History and Philosophy of Physic (Abdera, Thrace; July 2005).

“Necessity, Contingency, and the Content of Physical Theories,” Metaphysical Society of America Meeting (Pittsburgh, March 2005).

“Johnny’s So Long at the Ferromagnet,” Philosophy of Science Association Meeting (Austin, TX, November 2004).

“Realism about What?” Pittsburgh Center for the Philosophy of Science Annual Lecture Series (January 2004).

“The Unruh Effect *without* Rindler Quanta,” Conference on Foundations of Physics, University of Western Ontario (London, Ontario, May 2003).

“A rough guide to intrinsically mixed states,” Rob Clifton Memorial Conference (College Park, MD, May 2003).

“Equilibrium and its Micro-analysis,” Author Meets Critics: Sunny Auyang, Pacific APA (San Francisco, CA, March 2003).

“A Matter of Degree: Putting Unitary Inequivalence to Work,” lunchtime talk, Pittsburgh Center for the Philosophy of Science (April 2002); Conference on New Directions in the Foundations of Physics (College Park, MD, May 2002); Philosophy of Science Association Conference (Milwaukee, WI, November 2003).

“Good Science, Better Science: How Gender Might Matter,” Clarion University Celebration of Women in Science (Clarion, PA September 2002).

“Gender and the Epistemic Dimension of Scientific Inquiry,” Conference on Science and Society, Carleton University (Ottawa, Ontario, March 2001).

(with Rebecca Kukla) “Can Epistemology be Gendered?” Tamara Horowitz Memorial Session, Eastern APA (New York City, December 2000).

“In Space, No One Can Hear You Steam: Rindler Quanta, Hawking Radiation and the Interpretation of Quantum Field Theory,” University of California-Irvine and University of California-San Diego joint colloquium (October 2000); Rutgers University

Philosophy Colloquium (November 2000); Columbia University Philosophy of Science Study Group (January 2001); and Conference in Honor of Arthur Fine, Chicago (March 2001).

“Semantics and Dynamics, Preparation and Measurement,” Yale University Philosophy Department (January 2001); Barnard College Philosophy Department (January 2001).

“Interpreting Quantum Field Theory,” Bar-Hillel Colloquium for the History, Philosophy and Sociology of Science (Jerusalem, Israel, April 2000); lunchtime talk, Pittsburgh Center for the Philosophy of Science (April 2000).

“The Hawking Information Loss Paradox and Spacetime Structure,” Fifth International Conference on the History and Foundations of General Relativity (Notre Dame, IN, July 1999).

“Three Spheres for Realism,” University of Kansas Philosophy Department (October 1998); University of Bowling Green Philosophy Department (October 1998).

“Changing the Subject: Redei on Causal Dependence and Screening off in Relativistic Quantum Field Theory,” Philosophy of Science Association Conference, (Kansas City, October 1998).

“Consilliness: the Convergence of Three Crazy Ideas in Quantum Cosmology,” invited talk, conference (in honor of the retirement of David Sipfle) on Freedom, Time and Physics, Carleton College (Northfield, MN, May 1998).

Comments on Tim Maudlin’s “Descrying the World in a Wave Function,” conference on Quantum Mechanics and Metaphysics, Rutgers University (April 1998).

“Becoming Disciplinarian; Becoming Interdisciplinary,” Panelist, Society for Literature and Science Conference (Pittsburgh, November 1997).

“Smolin and Rescher on the Limits of Science,” Fourth Pittsburgh-Konstanz Colloquium on the Philosophy of Science (Pittsburgh, October 1997).

“Virtue and Contingent History: Aristotelian and Feminist Epistemologies of Science,” University of Western Ontario, London, Ontario (November 1996); University of Michigan Philosophy Department (March 1999); Cornell University Philosophy Department (April 1999).

“Explaining the Gender Gap in Science,” Colgate University Center for Women’s Studies (Hamilton, NY, November 1996).

“The Miracles Argument Meets Quantum Mechanics,” SUNY-Albany Philosophy Department (November 1996); University of Toledo Philosophy Department (February 1997).

“Van Fraassen on Preparation and Measurement,” Philosophy of Science Association Conference (Cleveland, OH, October 1996).

“How Close is Close Enough?” Modal Interpretations Conference, (Utrecht, The Netherlands, June 1996).

“When Many Minds are Not Enough,” lunchtime talk, Pittsburgh Center for the Philosophy of Science (January 1994).

TEACHING EXPERIENCE

University of Pittsburgh

Graduate Courses: Core Seminar in Philosophy of Science, Philosophy of Quantum Mechanics, Experiment and Practice, Philosophy of Physics, Logical Positivism, Feminist Science Studies, Plato’s *Timaeus* and Aristotle’s *Physics* (directed reading)

Undergraduate Courses: Philosophy of the Physical Sciences, Theory of Knowledge, Gender and Science, 20th Century Analytic Philosophy, Philosophy for Engineers, Introduction to Philosophy of Science, Introduction to Logic, Introduction to Ethics, Introduction to Philosophical Problems.

Dissertation Direction: Arthur Cunningham (Philosophy), Greg Frost-Arnold (HPS, defended 4/06)

Dissertation Committees: Karen Frost-Arnold (Philosophy), Chris Wüthrich (HPS, defended 7/06), Doreen Fraser (HPS, defended 4/06), Ari Duwell (HPS, defended 8/04), Kevin Davey (Philosophy, defended 10/03), Wendy Parker (HPS, defended 8/03), Chris Smeenk (HPS, defended 8/03), Peter Bokulich (Notre Dame, Philosophy, defended 11/02),), Chris Martin (HPS, defended 2/02), Hans Halvorson (Philosophy, defended 3/01), Elizabeth Paris (HPS, defended 4/99)

Rutgers University

Graduate Courses: Philosophy of Quantum Mechanics

Undergraduate Courses: Philosophical Issues in Feminism, Contemporary Movements in Philosophy, Introduction to Philosophy

Cornell University

Graduate/upper level undergraduate courses: Plato, Philosophy of Physics

Middlebury College

Undergraduate Courses: Intermediate Logic, Philosophy of Science, Philosophy of Quantum Mechanics, Gender & Science, Philosophy of Language, Philosophy of Mind, Modern Philosophy, Zeno's Paradoxes (First Year Seminar), Introduction to Logic

SERVICE

- (i) Philosophy Department (primary appointment)
 - Director of Graduate Studies, 2003-present
 - Special Committee on the Graduate Program, 2003-2004
 - Undergraduate advisor, 1999-2000
 - Admissions Committee, 1999-2000
 - TA/TF Supervisor, 1997-1998, 2001-2002
 - Philosophy Club Advisor, 1997-1998
 - Ad Hoc Committee on Teaching/Research Equivalents, 1997
 - Prize Committee, 1996-1998, 2001-2002
 - Graduate Committee, 1996-1997; 2003-present [chair]

- (ii) HPS Department (secondary appointment)
 - Regular participation in graduate admissions, graduate student evaluation, comprehensive examinations, hiring and curricular planning

- (iii) Pittsburgh Center for the Philosophy of Science (resident fellow)
 - Associate Director, 1997-2000, 2005-2006
 - Membership Committee, 1998
 - Annual Lecture Series Committee, 1998-1999, 2002

- (iv) University of Pittsburgh
 - Elected (by the Arts and Science faculty) to Arts and Sciences Planning and Budgeting Committee, 2003-2005
 - Elected (by the A&SPBC) to the Provost's Area Planning and Budget Committee, 2003-2005
 - Drafted (by the A&S Dean) to the Provost's Area Planning and Budget Committee, 2005-2006
 - Ad hoc committee on tenure: March 2004

- (v) Conference Organization
 - Organizer, CAMP OUT! A conference in honor of Joe Camp on the occasion of his retirement (Pittsburgh, April 2006)
 - Organizing committee, Einstein: A Centenary Celebration (Pittsburgh, February, 2005)
 - Organizing committee: Symmetry in Physics (Pittsburgh, Spring 2008)

- (vi) Philosophy of Science Association
 - Program Committee for the 2008 PSA Meetings
 - Governing Board, 2006 – present
 - Women's Caucus Steering Committee, 2006 – present

Nominations Committee, 2002-2004
Graduate Student Prize Committee, 2004

(vii) Refereeing, etc.

Book Review Committee for *The Philosophical Review*, Spring 1999

Editorial Board of *Studies in the History and Philosophy of Modern Physics*
(2003-present)

Referee for *Philosophy of Science*, *The British Journal for the Philosophy of Science*, *Studies in the History and Philosophy of Modern Physics*, *The American Journal of Physics*, *Foundations of Physics*, *Nous*, *Physical Review Letters*, the University of Minnesota Press, Cambridge University Press, Blackwell Publishers, and the National Science Foundation.

Reviewer for *Mathematical Reviews*

Member of State Selection Committees for the Rhodes Scholarship in Ohio (1990, 1992), Kentucky (1993), New Hampshire (1994, 1995), and Pennsylvania (1997-1999, 2001) and of the Selection Committee for the Great Lakes District (1992), District II (1996), and District IX (2005)