

# Integrated History *and* Philosophy of Science: *the second conference*



March 12–15, 2009  
University of Notre Dame  
McKenna Hall



# Integrated History *and* Philosophy of Science:

*the second international conference*

University of Notre Dame

## Program Schedule

Good history and philosophy of science is not just history of science into which some philosophy of science may enter—or philosophy of science into which some history of science may enter.

The founding insight of the modern discipline of HPS is that history and philosophy have a special affinity, and one can effectively advance both simultaneously.

All conference sessions will take place in McKenna Hall, the Center for Continuing Education, which is directly across the street from the Morris Inn on the Notre Dame campus.

## Thursday, March 12

1:15–1:30 p.m.      **Welcome**

1:30–3:45 p.m.      **Alan Chalmers**  
“Experimental Science Versus Philosophical Matter Theory in the Work of Robert Boyle”

**William Newman**  
“The Mechanical Philosophy and Robert Boyle”

**Peter Anstey**  
“Theory and Experiment in Early Modern Chymistry”

**Chair: Jed Buchwald**

4:15–6:30 p.m.      **Hasok Chang**  
“Bringing History, Philosophy and Science Together in the Lab”

**Brendan Clarke**  
“Cervical Cancer Risk Factors 1966–2006: Causation or Correlation?”

**Robert Rynasiewicz**  
“&HPS as a Branch of Natural Philosophy, Beginning With Induction, Supposition, Meaning, Reference, and the ‘Discovery’ of Hypothetical Entities”

**Chair: Jessica Weaver**

6:30–7:30 p.m.      **Reception**  
McKenna Hall

## Friday, March 13

9–10:30 a.m.      **Michael Silberstein**  
“When Super-Theories Collide: A Brief History of the Emergence/Reduction Battles Between Particle Physics and Condensed Matter Theory”

**Marilena Di Bucchianico**  
“Double Standards, Multiple Dissenters: Evidence, Theories, and the Superconductivity Case”

**Chair: Elise Crull**

11 a.m.–12:30 p.m.      **Lydia Patton**  
“Models of Interactive Effects”

**Brad Wilson**  
“From Laws to Models and Mechanisms: Ecology in the 20th Century”

**Chair: Sean Boocock**

12:30–1:30 p.m.      **Lunch**

1:30–3:45 p.m.      **Peter Distelzweig**  
“De Artificio Mechanico Muscularum: Teleological and Mechanical Reasoning in William Harvey’s *De motu locali animalium*”

**Lynn Joy**  
“Radical Changes in the Dispositions of Matter in Boyle, Newton, and Hume”

**Samuel Schindler**  
“The Epistemic Value of Dalton’s Theory of Atoms”

**Chair: Richard Oosterhoff**

4:15–6:30 p.m.      **Claus Beisbart**  
“How to Argue Concerning Theoretic Principles: Lessons from the History of Cosmology”

**Brian Pitts**  
“Einstein’s Physical Strategy in Pursuit of General Relativity, Particle Physicists’ Approach to Gravitation, and Physical Relativity”

**Amit Hagar**  
“Length Matters (II): Minimal Length in (Loop) Quantum Gravity and the Fate of Lorentz Invariance—A Methodological Dilemma”

**Chair: John Norton**

**7–9 p.m.**            **Banquet**  
Jordan Hall of Science

## **Saturday, March 14**

**9–10:30 a.m.**    **Koray Karaca**  
“The Higher Dimensional Unification Program in Physics”

**Dean Rickles**  
“Quantum Gravity: History, Historiography, and Philosophy”

**Chair: Alex Skiles**

**11 a.m.–12:30 p.m.** **Katherine Brading**  
“Hilbert and Einstein’s General Theory of Relativity: Two Communications on the Foundations of Physics”

**Robert DiSalle**  
“Minkowski’s Space-time and the Interpretation of Physical Theory”

**Chair: Michela Massimi**

**12:30–2 p.m.**    **&HPS Steering Committee Lunch**  
Morris Inn Donors Room

**2–4:15 p.m.**    **Kyle Stanford.**  
“Getting Real: The Hypothesis of Organic Fossil Origins”

**Scott Crothers**  
“Crystals and Natural Kinds”

**Robert Hudson**  
“Realism and the Bullet Cluster”

**Chair: Alan Shapiro**

**4:45–7 p.m.**    **Monica Aufrecht**  
“On Reichenbach’s Context Distinction”

**Wolfgang Pietsch**  
“Underdetermination or Why &HPS Makes a Difference”

**Alex Klein**  
“On the Rationality of Metaphysical Commitments in Immature Science”

**Chair: Kelly Hamilton**

## **Sunday, March 15**

**9–10:30 a.m.**    **Elise Crull**  
“A (So-So) Novel No-Go: Heisenberg on Hidden Variables (1927-1935)”

**Sorin Bangu**  
“Mathematical and Causal Reasoning in Dirac’s Prediction of the Positron”

**Chair: Hasok Chang**

**11 a.m.–12:30 p.m.** **Zvi Biener**  
“Two Dogmas about Newton and Space”

**Edward Slowik**  
“Newton on the Structure and Parts of Space”

**Chair: Joseph Zepeda**

## **Conveners**

Don Howard, University of Notre Dame

John Norton, University of Pittsburgh

## **Steering Committee**

John Beatty, University of British Columbia

Bernadette Bensaude-Vincent, Université Paris X

Jed Buchwald, California Institute of Technology

Alan Chalmers, Flinders University

Hasok Chang, University College, London

Motti Feingold, California Institute of Technology

Steven French, University of Leeds

Jim Griesemer, University of California at Davis

Jane Maienschein, Arizona State University

Michela Massimi, University College, London

William Newman, Indiana University

Robert Rynasiewicz, Johns Hopkins University

Jutta Schickore, Indiana University

Alan Shapiro, University of Minnesota

George E. Smith, Tufts University

Friedrich Steinle, Universität Wuppertal

## **Hosts and Supporting Entities**

National Science Foundation

Reilly Center for Science, Technology, and Values

([www.nd.edu/~reilly/](http://www.nd.edu/~reilly/))

History and Philosophy of Science Graduate Program

([www.nd.edu/~andhps/](http://www.nd.edu/~andhps/))

## **Mark Your Calendar**

&HPS3 will be hosted by the HPS Department at  
Indiana University Bloomington on Sept 23–26, 2010.



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