

# ZVI BIENER

## Curriculum Vitae

Department of Philosophy  
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### ACADEMIC APPOINTMENTS

2017 – Associate Professor, Philosophy, University of Cincinnati  
2011 – Assistant Professor, Philosophy, University of Cincinnati  
2016 – Affiliate Faculty, History, University of Cincinnati  
2017 – Affiliate Faculty, Judaic Studies, University of Cincinnati  
2008 – 2011. Assistant Professor, Philosophy, Western Michigan University  
2007 – 2008. Lecturer, Western Michigan University

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### EDUCATION

2008 Ph.D. History and Philosophy of Science, University of Pittsburgh  
2005 M.A. Philosophy, University of Pittsburgh  
1995 B.A. Philosophy, Rutgers University  
1995 B.A. Physics. Rutgers University

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### EDITED BOOKS

Adams, M., Biener, Z., Feest, U., and Sullivan, J., eds. (2017). *Eppur Si Muove: Doing History and Philosophy of Science with Peter Machamer*. Springer.

Biener, Zvi and Schliesser, Eric, eds. (2014). *Newton and Empiricism*. Oxford University Press.

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### ARTICLES (\* DENOTES ANONYMOUS REVIEW)

\* Biener, Zvi (*In press*). “Newton’s *Regulae Philosophandi*,” in Chris Smeenk and Eric Schliesser (eds.), *The Oxford Handbook of Isaac Newton*. Oxford University Press.

\* Biener, Zvi (2017). “*De Gravitatione* Reconsidered: The Changing Significance of Experimental Evidence for Newton’s Metaphysics of Space.” *The Journal of the History of Philosophy* 55 (4): 583–608.

\* Biener, Zvi and Schliesser, Eric (2017). “The Certainty, Modality, and Grounding of Newton’s Laws.” *The Monist* 100 (3): 311–325. Special issue on “Laws of Nature,” edited by Angela Breitenbach and Michela Massimi. doi: 10.1093/monist/onx012.

\* Raja Galian, Vicente and Biener, Zvi and Chemero, Tony (2017). "From Kepler to Gibson." *Ecological Psychology* 29 (2): 146-160. doi: 10.1080/10407413.2017.1297186.

Adams, M., Biener, Z., Feest, U., and Sullivan J. (2017). "Introduction," In *Oppure si Mouve: Doing History and Philosophy of Science with Peter Machamer*. Springer.

\* Biener, Zvi (2016). "Newton and the Ideal of Exegetical Success." *Studies in History and Philosophy of Science, Part A* 60: 82-87. doi: 10.1016/j.shpsa.2016.07.001

\* Biener, Zvi (2016). "Hobbes on the Order of Sciences: A Programmatic Defense of the Mathematization Thesis." *The Southern Journal of Philosophy* 54 (3): 312-332. doi: 10.1111/sjp.12175

Biener, Zvi (2016). "Issac Newton (1642-1727)." *Routledge Encyclopedia of Philosophy*. Routledge. doi: 10.4324/9780415249126-Q075-2

Biener, Zvi and Schliesser, Eric (2014). "Introduction," in *Newton & Empiricism*. Oxford University Press, p. 1-15.

Biener, Zvi and Smeenk, Chris (2012). "Cotes's Queries: Newton's Empiricism and Conceptions of Matter," in Janiak, Andrew and Schliesser, Eric (eds.), *Interpreting Newton*, Cambridge University Press, 103-137.

\* Biener, Zvi (2004). "Galileo's First New Science: The Science of Matter," *Perspectives on Science* 12 (3): 262-287.

\* Biener, Zvi and Smeenk, Chris (2004). "Pendulums, Pedagogy, and Matter: Lessons from the editing of Newton's *Principia*," *Science & Education* 13 (4-5): 309-320.

Reprinted in Matthews, M.R., Gauld, C.F. & Stinner, A. (eds.) (2005). *The Pendulum: Scientific, Historical, Philosophical and Educational Perspectives*, Springer, Dordrecht.

Machamer, Peter and Biener, Zvi (2004). "Physics," in *Europe 1450 to 1789: Encyclopedia of the Early Modern World*, ed. Jonathan Dewald. New York: Charles Scribner's Sons, Vol 4: 467-473.

Biener, Zvi and Smeenk, Christopher (2003 ). "Review of I. B. Cohen and George Smith (eds.) *The Cambridge Companions to Newton*," in Gary Gutting (ed.) *Notre Dame Philosophical Reviews*.

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## WORKS IN PROGRESS

"Post-Newtonianisms" with Brian Hepburn, for *The Cambridge History of Philosophy of the Scientific Revolution*, edited by Dana Jalobeanu and David M. Miller.

Area Editing for *Encyclopedia of Early Modern Philosophy and the Sciences*, edited by Dana Jalobeanu and Charles T. Wolfe. Springer.

"On the Integration of Physical and Mathematical Considerations in Aristotle's Subordinate Sciences." (R&R)

Long term project on "Big Data" methods from a humanist perspective.

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## PRESENTATIONS (\* DENOTES INVITED TALK)

\* TBA. Workshop. *University of New Mexico*, Feb 2018.

“The Global, Local and Universal: Tensions of Scale in Newtonian Natural Philosophy (1687-1720).” *The 25th International Congress of History of Science and Technology, Rio de Janeiro*, July 2017.

“Newton on Absolute Space and Geometrical Definitions.” *British Society for Philosophy of Science, University of Edinburgh*, July 2017.

\* “Newton on Geometrical Definitions.” *Conference on the Occasion of the 50th Anniversary of Howard Stein’s “Newtonian Spacetime.”* University of Chicago, June 2017

\* “Newton on Geometrical Definitions.” UC Irvine, Department of Logic and Philosophy of Science, June 2017

“*De Gravitatione* Reconsidered: The Changing Role of Geometrical Definitions in Newton’s Metaphysics of Space.” *New York City Workshop in Early Modern Philosophy*. New York, May 2017.

\* Invited workshop participation. *Pittsburgh-Princeton Descartes Day III*, October 2016

\* “Erasing Hooke from the History of Mechanics,” *Colloquium in Honor of the 350th anniversary of Robert Hooke’s Micrographia*, University of Wisconsin-Madison, February 2016

\* “Seeing with the Eyes and ‘Seeing’ with Math,” Department of History of Science, University of Wisconsin-Madison, February 2016

\* “Organizing the Disciplines,” *Taft Research Symposium*, University of Cincinnati, April 2015

\* “Was Newton’s Commitment to Absolute Space Relevant for Physics?” Ohio State University, March 2015\*

“Newton and Galileo (and Hooke),” *The Philosophy of Science Association Bi-Annual Meeting*, Chicago, November 2014

\* “The Galilean Tradition and Newtonian Mechanics,” *Boston Colloquium for Philosophy of Science*, Center for Philosophy & History of Science, Boston University, October 2014

“Newton on the Physiology of Perception,” *48th Annual Western Michigan University Medical Humanities Conference*, Western Michigan University, September 2014

“Substance & Property, System & Relation: Metaphysical Orthodoxy in Newton’s Rational Mechanics,” *The History of Philosophy of Science Bi-Annual Conference (HOPOS)*, Belgium, July 2014

\* “Galileo on the Limits of Human Understanding,” Hendrix College, April 2014

\* “When is something a *thing*? A puzzle about Newton, substance, and space,” East Tennessee State University, April 2013

\* “‘We Cannot Say All of Nature is Not Alive’: A Physiological Context for Newton’s Search for Causes,” *49th Annual Cincinnati Philosophy Colloquium: The Life and Mathematical Sciences in Early Modernity*, University of Cincinnati, May 2012

\* “Galileo’s Scientific Engagement with Matter Theory (but Not the Matter Theory You Think),” *Experimental Knowledge and the Deep Structure of the World Conference*, Virginia Tech, April 2011

“Hobbes on Geometry and the Structure of the Sciences,” *Galileo, Descartes, Hobbes: Philosophy and Science, Politics and Religion during the Scientific Revolution*, a National Endowment for the Humanities Summer Seminar led by Daniel Garber and Roger Ariew, Princeton University, July-August 2010

“Cartesian Heterogenous Foundationalism,” *Oxford Seminar in Early Modern Philosophy*, University of Oxford, October 2009,

- \* “The Classification of Sciences and Foundationalism,” *Universidade Estadual de Campinas*, Brazil, September 2009
- “Behind the Geometrical Method,” *Bucharest-Princeton Seminar in Early-Modern Philosophy*. Romania, July 2009
- \* Invited participation in *Mapping the History and Philosophy of Science*, a workshop sponsored by the National Science Foundation and the James S. McDonnell Foundation, Indiana University, June 2009
- “Two Dogmas About Newton and Space,” *Integrating History and Philosophy of Science Second Annual Conference*. University of Notre Dame, March 2009
- \* “Newton’s Empiricism and the Changing Metaphysics of Void,” *Lunchtime Talk Series*, Western Michigan University, February 2009
- “Other sorts of bodies and another sort of vacuum’ : Isaac Newton’s Missing Theory of the Void and the Scope of Experimental Philosophy,” *Bucharest-Princeton Seminar in Early-Modern Philosophy*, Romania, July 2008.
- “Mixed-Mathematics as a Guide to Cartesian Foundationalism,” *The History of Philosophy of Science Bi-Annual Conference (HOPOS)*, Vancouver, June 2008.
- \* “The Limits of Evidential Reasoning in Newton's Argument for Universal Gravitation” (with Chris Smeenk), *Newton and/as Philosophy Conference*, University of Leiden, June 2007
- “How to Start a Revolution by Attending a University: The Importance of the Early-Modern Educational System for the Scientific Revolution,” *The Center for West European Studies*, Pittsburgh, January 2005
- \* “Commentary on Howard Stein’s ‘Newton: Philosophy of Inquiry and Metaphysics of Nature,’” (with Chris Smeenk), *The American Philosophical Association (APA) Central Division Meeting*, Chicago, April 2004
- “Galileo and the Problem of Establishing the Middle as Mixed,” *The Mid-West Seminar in the History of Early Modern Philosophy*, Madison, December 2003.
- “Galileo’s Science of Matter,” *The Fourth Athens-Pittsburgh Symposium in the History and Philosophy of Science and Technology: Proof & Demonstration in Philosophy and Science*, Greece, June 2003.
- “Does Gravity Feign?” (with Chris Smeenk), *The International Working Group on the History of Philosophy of Science (HOPOS)*, Toronto, June 2002.
- “Is Gravity at the Heart of the Matter? Mathematics and Philosophy in the Newton-Cotes Correspondence” (with Chris Smeenk), *The Canadian Society for the History and Philosophy of Science*, Canada, May 2002.

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## FELLOWSHIPS AND AWARDS

- 2017 Arts & Sciences Dean’s Award for Teaching Excellence, Runner-Up.  
Taft Travel for Research, International Travel, Domestic Travel Awards, University of Cincinnati  
Faculty Development Funds, Track A Award, University of Cincinnati
- 2016 Faculty Development Funds, Travel Award, University of Cincinnati  
University Research Council Summer Scholarship Grant, University of Cincinnati
- 2015 Third Century Faculty Research Fellowship, University of Cincinnati

- 2014 Taft Research Center Research Fellowship (year of research leave), University of Cincinnati  
Taft Research Center Faculty International Travel Award, University of Cincinnati
- 2013 Taft Research Center Summer Research Fellowship, University of Cincinnati  
Taft Research Center Publication Costs Award, University of Cincinnati
- 2012 University Research Grant Program, University of Cincinnati  
Taft Research Center Competitive Lecture Award in partial support of 49<sup>th</sup> Annual Cincinnati Philosophy Colloquium
- 2010 College of Arts and Sciences Teachings and Research Award, Western Michigan University  
National Endowment for the Humanities Summer Fellow, Princeton University - July-August 2010, for *Galileo, Descartes, Hobbes: Philosophy and Science, Politics and Religion during the Scientific Revolution*, summer seminar led by Daniel Garber and Roger Ariew  
Faculty Research and Creative Activities Award, Western Michigan University, (Award for the construction of a visual database for the history of science and philosophy)  
International Education Faculty Development Fund Award, Western Michigan University  
College of Arts and Sciences Teachings and Research Award, Western Michigan University
- 2009 Faculty Research Travel Fund Award, Western Michigan University  
College of Arts and Sciences Teachings and Research Award, Western Michigan University
- 2008 Support for Faculty Scholars Award, Western Michigan University  
Faculty Research Travel Fund Award, Western Michigan University  
The International Education Faculty Development Fund Award, Western Michigan University  
Faculty Research Travel Fund Award, Western Michigan University
- 2006 A. W. Mellon Pre-Doctoral Fellowship 2006-2007, University of Pittsburgh
- 2004 Foreign Language and Area Studies Fellowship 2004-2005, U.S. Department of Education
- 2003 Foreign Language and Area Studies Fellowship 2003-2004, U. S. Department of Education

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## TEACHING

### University of Cincinnati:

Phil 0102	Moral and Political Ideas	W12
Phil 0261	Philosophy of the Physical Sciences	F11
Phil 1032	How Science Works	F12, S13, F13 (hybrid), S14 (online)
Phil 1070/Psyc 1070	The Power of Big Data	F17
Phil 2042	Science, Magic, and the Occult	S17
Phil 3040	Philosophy of Science	F16
Phil 3062	Rationalism	F12, S17
Phil 3063	Empiricism	S16
Plan 3090	Nasty, Brutish, and Short. (Repeated guest lecturer, and study-abroad chaperone)	F14

Phil 3093	The Good Life - And How to Live It (Honors College)	F17
Phil 3097	Big Data, Bigger Questions (Honors College)	F17
Phil 0716 (grad)	Descartes	F11
Phil 7009 (grad)	Hobbes	F13
Phil 8019 (grad)	Newton	S13
Phil 8031 (grad)	Mathematics, Reality, and Philosophy	F15

Western Michigan University:

Phil 2000	Introduction to Philosophy	F09, Su10, S11
Phil 3010	Modern Philosophy	F08, S09, F09
Phil 3250	Scientific and Inductive Reasoning	S10, F10
Phil 3500	Foundation of the Modern World View	F08
Phil 3550	Philosophy of Science	S08, F08, S09, S10, Su10, S11
Phil 5980 (grad)	Newton's "De Gravitatione"	S10
Phil 6100 (grad)	Newtonianism and Empiricism	S09
Phil 6100 (grad)	Descartes' <i>Meditations</i> and Natural Philosophy	S09

University of Pittsburgh (full responsibility, TAed courses not listed):

HPS 0427	Myth and Science	S03
HPS 0515	Magic, Medicine & Science	Su97, F98, Su03
HPS 0612	Mind and Medicine	Su98
HPS 0621	Problem Solving: How Science Works	S01, F01, F02, S04

Pennsylvania Governor's School for the Sciences at Carnegie Mellon University

The Mechanization of the World-Picture: Physical Science	Su97
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## PROFESSIONAL SERVICE AND COMMUNITY OUTREACH

Panelist for "UC Bridging the Gap: Social Engagement and Public Intellectuals" (with Greg Hand, Elissa Yancey, Terry Kershaw, Elizabeth Kopras, Misty Richmond), 2014

Panelist for "The Good Talk" (A forum on urbanism and community development, with members of city government, law enforcement, and local business leaders), 2015.

Panelist (of two) for Veritas Forum Cincinnati, with Vince Vitale, 2017.

Service to Professional Organizations:

Elected to Steering Committee, term from 2015 - 2017, *International Society for the History of Philosophy of Science*

Editorial Co-Chair, *PhilSci-Archive* (<http://philsci-archive.pitt.edu/>), *University of Pittsburgh*, 2013 – 2017

Executive Board Member, *PhilSci-Archive* (<http://philsci-archive.pitt.edu/>), *University of Pittsburgh*, 2008 – 2017



Book Referee:

Oxford University Press, Minnesota Studies in the Philosophy of Science

Journal Referee:

*Philosophy of Science, Studies in History and Philosophy of Science, Erkenntnis, Synthese, HOPOS: The Journal of the International Society for the History of Philosophy of Science, Oxford Studies in Experimental Philosophy, Southern Journal of Philosophy, Perspectives on Science, Science and Education, Science & Politics.*

Conference Referee:

Southwest Seminar in Early-Modern Philosophy (x2), Newton and Empiricism.

Conference Organizer:

Local Organizing Committee Co-Chair, Ohio Philosophical Association 2017 Meeting at the University of Cincinnati.

The Life and Mathematical Sciences in Early Modernity (48th Annual Cincinnati Philosophy Colloquium). University of Cincinnati, May 2012

Newton and Empiricism, with Eric Schliesser, Center for the Philosophy of Science, University of Pittsburgh, Spring 2010

Symposium Organizer:

“Newton, Mechanics, and Mathematics”. *Philosophy of Science Association*, 2014.

“Mechanics and its Philosophical Implications in the Aristotelian Tradition,” with Andrea Falcon), *The History of Philosophy of Science Bi-Annual Conference*, Vancouver, June 2008.

Consulting:

Consultant on 2 films produced by Relativity Media (<https://relativitymedia.com>)

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## UNIVERSITY SERVICE

University of Cincinnati:

Board Member, Taft Research Center F17- S22

Mentor in the A&S Honors Scholars Program AY17-18

University Research Council Arts & Humanities Graduate Fellowship Review Committee, AY14-15, AY16-17

Member, A&S Instructional Innovation Advisory Council, F15, F16.

Taft Research Travel Support Committee (Chair), AY16-17

Authored UC faculty resources for First-Year Common Reading on Michael Sandel's *Justice: What's the Right Thing To Do?*, AY12-13

Led university-wide faculty workshop in preparation for First-Year Common Reading, AY12-13

Taft Center Research Support Committee, AT12-13, AY13-14

University Research Council Arts & Humanities Fellowship Review Committee, AY12-13, AY16-17

Western Michigan University:

Course Grade and Program Dismissal Appeal Committee, 2007 - 2011

CAS Academic Integrity Committee, 2008 - 2011

Department library liaison, 2010 - 2011

AAUP representative, 2009 - 2011

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## DEPARTMENTAL SERVICE

University of Cincinnati:

Faculty mentor to graduate-taught PHIL1004, AY15-16  
Qualifying Exam Reader, AY15-16  
Preparation for Job Market & Teaching Portfolio Workshops, 2014, 2015, 2016  
Graduate Studies Committee, AY13-14  
Organized and ran Works-In-Progress talk series, AY13-14  
Dissertation Proposal Writing Seminar, March 2014  
A&S Information Technology Philosophy Department Liaison, 2011 - present  
Departmental Library Liaison, 2012 - present  
RPT guidelines revisions committee, AY12-13, AY13-14, AY16-17  
Undergraduate Studies Committee, AY11-12, AY12-13, AY16-17  
Led Dissertation Proposal Writing Workshop, Feb, March and April 2013

Western Michigan University:

Director of Graduate Admissions, 2008 - 2011.  
Author of 83-page academic program 10-year review and plan, the result of a year-long process of information gathering and analysis, external review, and long-term trajectory planning, 2008 - 2009  
Webmaster, coding, administration, upkeep, a major reconstruction of website backend undertaken in 2007-2011  
Undergraduate Advisor, 2007 - 2009  
Job Search Committee, 2008

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## PROFESSIONAL DEVELOPMENT

UC Libraries Humanities and Technology Camp, May 1-3 2017.

UC Data Day, March 23, 2017.

Data Analytics Showcase, UC Institute for Analytics Innovation, November 2016.

Center for Enhancement of Teaching and Learning (CET&L) 6-week eLearning Institute for online course design, 2013. Resulted in fully-online course that passed the Quality Matters ([www.qualitymatters.org](http://www.qualitymatters.org)) benchmark for online course design.

Center for Enhancement of Teaching and Learning (CET&L) Year-Long New Faculty Research and Publication Workshop, AY11-12.

Participant in FDC-funded Workshops for Teachings Interdisciplinary Philosophy of Science (TIPS), Lead by Visiting Scholar: Andrea Woody (University of Washington), Jacob Beck (York University), Fiona Macpherson (University of Glasgow), Jessica Wilson (University of Toronto), 2013 - 2014.



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## LANGUAGES

Research and Instruction: English, Hebrew.

Research: Latin, French, Italian.

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## BUSINESS EXPERIENCE

2001            Head, Network Operations & Customer Service Departments, *Graphnet, Inc.*  
(Overseeing employees in Teaneck, NJ; New York, NY; London, UK; Tel Aviv, Israel;  
Hong Kong, China).

*Graphnet* is a leading provider of cloud-based Enterprise Content Management and  
Messaging solutions. It specializes in financial transactions and inter-business rapid  
communications.

2000–2001    Manager, Network Operations, Graphnet, Inc. (Overseeing employees in Teaneck, NJ;  
New York, NY; London, UK; Tel Aviv, Israel; Hong Kong, China)

1999 – 2000   Network Engineer, Graphnet, Inc. (Teaneck, NJ)

1997 – 1999   Customer Service Representative, Graphnet, Inc. (Teaneck, NJ)

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## REFERENCES

Katherine Brading, Duke University, [katherine.brading@duke.edu](mailto:katherine.brading@duke.edu)

Dennis Des Chene, Washington University at St. Louis, [ddeschen@wustl.edu](mailto:ddeschen@wustl.edu)

Lisa Downing, Ohio State University, [downing.110@osu.edu](mailto:downing.110@osu.edu)

Daniel Garber, Princeton University, [dgarber@princeton.edu](mailto:dgarber@princeton.edu)

George Smith, Tufts University, [george.smith@tufts.edu](mailto:george.smith@tufts.edu)

Eric Schliesser, University of Amsterdam, [nescio2@yahoo.com](mailto:nescio2@yahoo.com)