

# ZVI BIENER

## Curriculum Vitae

Associate Professor  
Department of Philosophy  
University of Cincinnati

[zvi.biener@uc.edu](mailto:zvi.biener@uc.edu)  
[zbiener.github.io](https://zbiener.github.io)  
1-513-818-2984

---

**AOS**      History of Philosophy of Science  
              Newton and Newtonianism  
              Empiricism, Early-Modern Philosophy

**AOC**      Philosophy of Science  
              Aristotelianism  
              General Philosophy of Physics  
              Epistemology

---

### ACADEMIC APPOINTMENTS

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

---

### EDUCATION

2008    Ph.D. History and Philosophy of Science, University of Pittsburgh  
          (Dissertation: The Unity of Science in Early-Modernity: Subalternation, Metaphysics and the Geometrical  
          Manner in Late Scholasticism, Galileo and Descartes. Advisors: Peter Machamer and J. E. McGuire.  
          Committee Members: Dan Garber, James Lennox, and Paolo Palmieri.)  
2005    M.A. Philosophy, University of Pittsburgh  
1995    B.A. Philosophy, Rutgers University  
1995    B.A. Physics. Rutgers University

---

### EDITED BOOKS

2017      *Oppur Si Muove: Doing History and Philosophy of Science with Peter Machamer*, Springer,  
            with Marcus Adams, Uljana Feest. U., and Jacqueline Sullivan.  
2014      *Newton and Empiricism*, Oxford University Press, with Eric Schliesser.

---

## ARTICLES (\* DENOTES ANONYMOUS REVIEW)

- Forthcoming* "Newtonianism: An Introduction," for *Encyclopedia of Early Modern Philosophy and the Sciences*, edited by Dana Jalobeanu and Charles T. Wolfe. Springer.
- \* "Mechanics in Newton's Wake" with Brian Hepburn, for *The Cambridge History of Philosophy of the Scientific Revolution*, edited by Dana Jalobeanu and David M. Miller.
- Under review* \* "Definitions more Geometrarum and Newton's Evolving Views on Space." - for special issue of *Studies in History and Philosophy of Science*, edited by Jim Weatherall.
- \* "Newton on Working Hypotheses." With Mary Domki, in Eric Schliesser, Chris Smeenk, and Marius Stan (eds.), *Theory, Evidence, Data: the Philosophical Legacy of George E. Smith*. Springer, Boston Studies in the Philosophy and History of Science.
- 2018 \* "Newton's *Regulae Philosophandi*," in Chris Smeenk and Eric Schliesser (eds.), *The Oxford Handbook of Isaac Newton*. Oxford University Press. doi: 10.1093/oxfordhb/9780199930418.013.4
- 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. doi: 10.1353/hph.2017.0067.
- \* "The Certainty, Modality, and Grounding of Newton's Laws." With Eric Schliesser. *The Monist* 100 (3): 311–325. Special issue on "Laws of Nature," edited by Angela Breitenbach and Michela Massimi. doi: 10.1093/monist/onx012.
- \* "From Kepler to Gibson." With Raja Galian, Vicente and Tony Chemero. *Ecological Psychology* 29 (2): 146–160. doi: 10.1080/10407413.2017.1297186.
- "Introduction." With Adams, M., Feest, U., and Sullivan J. In *Oppur si Mouve: Doing History and Philosophy of Science with Peter Machamer*. Springer.
- 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
- \* "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
- "Issac Newton (1642–1727)." *Routledge Encyclopedia of Philosophy*. Routledge. doi:10.4324/9780415249126-Q075-2
- 2014 "Introduction." With Eric Schliesser. in *Newton & Empiricism*. Oxford University Press, p. 1–15.
- 2012 \* "Cotes's Queries: Newton's Empiricism and Conceptions of Matter." With Chris Smeenk. In Janiak, Andrew and Schliesser, Eric (eds.), *Interpreting Newton*, Cambridge University Press, 103–137.
- 2004 \* "Galileo's First New Science: The Science of Matter," *Perspectives on Science* 12 (3): 262–287.
- \* "Pendulums, Pedagogy, and Matter: Lessons from the editing of Newton's *Principia*." With Chris Smeenk. *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.

- 2003      “Physics.” With Peter Machamer. in *Europe 1450 to 1789: Encyclopedia of the Early Modern World*, ed. Jonathan Dewald. New York: Charles Scribner’s Sons, Vol 4: 467-473.
- 2003      “Review of I. B. Cohen and George Smith (eds.) *The Cambridge Companions to Newton*.” With Chris Smeenk. In Gary Gutting (ed.) *Notre Dame Philosophical Reviews*.

---

## IN PROGRESS

Long-term project on loneliness in older adults. IRB submitted, research to begin in Spring 2020.

“On the Integration of Physical and Mathematical Considerations in Aristotle’s Subordinate Sciences.” (Draft available.)

“Fitter, Stronger, More General: The Multiple Aspirations of Newtonian Induction.”

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

---

## SELECTED PRESENTATIONS (PAST DECADE ONLY, \* DENOTES INVITED TALK)

- 2019      “AI, Skill, and Human Identity.” *AI and the Future of (No) Work Colloquium and Talk Competition*. University of Cincinnati. (Winner of 1st prize).
- 2018      “Newton, Huygens, and the Non-Problematic Status of Induction in the *Principia*.” *Philosophy of Science Association Meeting*. Seattle. Poster Session.
- \* “When Physics Met Astronomy.” *Cincinnati Observatory*.
- \* “Post-Newtonian Mechanical Philosophy.” *Revolutions in the History of Early Modern Philosophy and Science Conference*. University of Iowa. Co-authored with Brian Hepburn.
- “A Deflationary Account of Newton’s Rule 3.” *HOPOS 2020*. Groningen.
- “A Deflationary Account of Newton’s Rule 3: It’s A Rebuke of Huygens and a Defense of Simple Induction.” Accepted to the Atlantic Canada Seminar, but could not attend.
- “Newton, Huygens, and the Non-Problematic Status of Induction in the *Principia*.” &HPS7, *Leibniz Universität Hannover*.
- “A Deflationary Account of Newton’s Rule 3: It’s A Rebuke of Huygens and a Defense of Simple Induction.” *Early Modern—Saint Louis (EM-STL)*. St. Louis.
- \* “The Changing Range of Geometrical Definition in Newton’s Metaphysics of Space.” Southwest Philosophy Workshop. *University of New Mexico*.
- 2017      “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.
- “Newton on Absolute Space and Geometrical Definitions.” *British Society for Philosophy of Science*, *University of Edinburgh*.
- \* “Newton on Geometrical Definitions.” *Conference on the Occasion of the 50th Anniversary of Howard Stein’s “Newtonian Spacetime”*. University of Chicago.

- \* “Newton on Geometrical Definitions.” UC Irvine, Department of Logic and Philosophy of Science.  
“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.
- 2016 \* Invited workshop participation. *Pittsburgh-Princeton Descartes Day III*.
- \* “Erasing Hooke from the History of Mechanics,” *Colloquium in Honor of the 350<sup>th</sup> anniversary of Robert Hooke’s Micrographia*, University of Wisconsin-Madison.
- \* “Seeing with the Eyes and ‘Seeing’ with Math,” Department of History of Science, University of Wisconsin-Madison.
- 2015 \* “Organizing the Disciplines,” *Taft Research Symposium*, University of Cincinnati.
- \* “Was Newton’s Commitment to Absolute Space Relevant for Physics?” Ohio State University.
- 2014 “Newton and Galileo (and Hooke),” *The Philosophy of Science Association Bi-Annual Meeting*, Chicago.
- \* “The Galilean Tradition and Newtonian Mechanics,” *Boston Colloquium for Philosophy of Science*, Center for Philosophy & History of Science, Boston University.
- “Newton on the Physiology of Perception,” *48th Annual Western Michigan University Medical Humanities Conference*, Western Michigan University.
- “Substance & Property, System & Relation: Metaphysical Orthodoxy in Newton’s Rational Mechanics,” *The History of Philosophy of Science Bi-Annual Conference (HOPOS)*, Ghent, Belgium.
- \* “Galileo on the Limits of Human Understanding,” Hendrix College.
- \* “When is something a *thing*? A puzzle about Newton, substance, and space,” East Tennessee State University.
- 2012 \* “‘We Cannot Say All of Nature is Not Alive’: A Physiological Context for Newton’s Search for Causes,” 49<sup>th</sup> Annual Cincinnati Philosophy Colloquium: The Life and Mathematical Sciences in Early Modernity, University of Cincinnati.
- 2011 \* “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.
- 2010 “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.
- 2009 “Cartesian Heterogenous Foundationalism,” *Oxford Seminar in Early Modern Philosophy*, University of Oxford.
- \* “The Classification of Sciences and Foundationalism,” *Universidade Estadual de Campinas*, Brazil.
- “Behind the Geometrical Method,” *Bucharest-Princeton Seminar in Early-Modern Philosophy*. Bran, Romania.

- \* 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.

“Two Dogmas About Newton and Space,” *Integrating History and Philosophy of Science Second Annual Conference*. University of Notre Dame.

- \* “Newton’s Empiricism and the Changing Metaphysics of Void,” *Lunchtime Talk Series*, Western Michigan University.

2008 “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*, Mălâncrav, Romania.

“Mixed-Mathematics as a Guide to Cartesian Foundationalism,” *The History of Philosophy of Science Bi-Annual Conference (HOPOS)*, Vancouver, Canada.

---

## GRANTS, FELLOWSHIPS AND AWARDS (AT UNIVERSITY OF CINCINNATI, UNLESS SPECIFIED; INTERNAL TRAVEL AWARDS ARE OMITTED)

- 2019 Co-PI, “An Interdisciplinary Approach to Loneliness in Older Adults”, Office of Research Competitive Start-up Funds, with Rebecca Lee, Joshua Gross, and Mao-Bing Tu. (\$120,000)
- "Lonliness in Older Adult" University Honors Program undergraduate summer intern and mentoring compensation.
- 2018 Taft Center Faculty Release Fellowship (semester of research leave).
- Selection for 2019-2020 Trans-Disciplinary Research Leadership Council: a year-long 5-person project for disciplinary innovation within UC.
- 2017 Arts & Sciences Dean’s Award for Teaching Excellence, Runner-Up.
- 2016 University Research Council Summer Scholarship Grant.
- 2015 Third Century Faculty Research Fellowship (semester of research leave, salary equivalent).
- 2014 Taft Research Center Fellow (year of research leave, salary equivalent).
- 2013 Taft Research Center Summer Research Fellowship.
- Taft Research Center Publication Costs Award.
- 2012 University Research Grant Program.
- Taft Research Center Competitive Lecture Award in partial support of 49<sup>th</sup> Annual Cincinnati Philosophy Colloquium.
- 2010 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, 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	College of Arts and Sciences Teachings and Research Award, Western Michigan University.
2008	Support for Faculty Scholars Award, Western Michigan University. The International Education Faculty Development 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

---

## TEACHING

### Graduate Courses:

Phil 0716	Descartes	2011
Phil 7009	Hobbes	2013
Phil 8019	Newton	2013
Phil 8031	Mathematics, Reality, and Philosophy	2015
Phil 5980	Newton's "De Gravitatione" (Western Michigan U)	2010
Phil 6100	Newtonianism and Empiricism (Western Michigan U)	2009
Phil 6100	Descartes' <i>Meditations</i> and Natural Philosophy (WMU)	2009

### Undergraduate:

Phil 0102	Moral and Political Ideas	2012
Phil 0261	Philosophy of the Physical Sciences	2011
Phil 1032	How Science Works	2012 - 2014 (4)
Phil 1070/Psyc 1070	The Power of Big Data	2017
Phil 2042	Science, Magic, and the Occult	2017
Phil 3040	Philosophy of Science	2016
Phil 3062	Rationalism	2012, 2017
Phil 3063	Empiricism	2016
Plan 3090	How Enlightenment Gave Us the Modern World (study-abroad chaperone, Honors College)	2014, 2016
Phil 3093	The Good Life - And How to Live It (Honors College)	2017
Phil 3097	Big Data, Bigger Questions (Honors College)	2017
Phil 2000	Introduction to Philosophy (WMU)	2009 - 2011 (3)
Phil 3010	Modern Philosophy (WMU)	2008 - 2009 (3)
Phil 3250	Scientific and Inductive Reasoning (WMU)	2010, 2010

Phil 3500	Foundation of the Modern World View (WMU)	2008
Phil 3550	Philosophy of Science (WMU)	2008 - 2011 (6)
HPS 0427	Myth and Science (Pittsburgh)	2003
HPS 0515	Magic, Medicine & Science (Pittsburgh)	1997, 1998, 2003
HPS 0612	Mind and Medicine (Pittsburgh)	1998
HPS 0621	Problem Solving: How Science Works (Pittsburgh)	2001 - 2004 (4)

### Other Teaching Activities

Qualifying exams author and examiner (Early Modern)	2015-2020 (5)
Teaching mentor to Introduction to Philosophy	2015-2016
Teaching mentor to World Philosophy	2017-2019
Member of Visiting Professor Search Committee	2017
Led Preparation for Job Market & Teaching Portfolio Workshops	2014-2019 (5)
Led Dissertation Proposal Writing Seminar	2013, 2014

---

### COMMUNITY OUTREACH

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 for “UC Bridging the Gap: Social Engagement and Public Intellectuals” (A forum on the public responsibility of academics)	2014

---

### PROFESSIONAL SERVICE

Steering Committee, <i>HOPOS</i> (elected)	2015 - 2017
Editorial Co-Chair, <i>PhilSci-Archive</i>	2013 – 2017
Board Member, <i>PhilSci-Archive</i>	2008 – 2017
Author of major reconstruction of HOPOS website, front- and back-end	2018
Administrator of scheduling system and paper submissions for HOPOS 2020	2019 - 2020
Conference Organizer, <i>The Life and Mathematical Sciences in Early Modernity</i> (Cincinnati)	2012
Conference Organizer, <i>Newton and Empiricism</i> , with Eric Schliesser, Center for the Philosophy of Science, University of Pittsburgh, Spring	2010
Symposium Organizer, “Newton, Mechanics, and Mathematics” <i>Philosophy of Science Association</i> .	2014
Symposium Organizer, “Mechanics and its Philosophical Implications in the Aristotelian Tradition,” with Andrea Falcon), <i>HOPOS</i> , June 2008.	2008
Local Organizing Committee Chair, Ohio Philosophical Association	2017
Conference Referee: Southwest Seminar in Early-Modern Philosophy (x2), <i>Newton and Empiricism</i> .	
Book Referee (recurring): <i>Oxford University Press, Minnesota Studies in the Philosophy of Science</i>	



Journal Referee (recurring): *Philosophy of Science*, *Studies in History and Philosophy of Science*, *Erkenntnis*, *Synthese*, *Australasian Journal of Philosophy*, *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*.

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

---

## UNIVERSITY SERVICE

Liaison to Canvas rollout	2019 - 2020
Board Member, Taft Research Center	2017 - 2020
University Research Council Graduate Fellowship Review Committee	2015 - 2017
Member, A&S Instructional Innovation Advisory Council	2015, 2016
Taft Research Travel Support Committee (Chair)	2016 - 2017
Authored UC resources for Common Reading on Michael Sandel's <i>Justice</i>	2012 - 2013
Led university-wide faculty workshop in preparation for <i>Justice</i>	2013
Taft Center Research Support Committee	2012 - 2014
University Research Council Fellowship Review Committee	2013, 2017
Course Grade and Program Dismissal Appeal Committee (WMU)	2007 - 2011
Arts & Science Academic Integrity Committee (WMU)	2008 - 2011
Department library liaison (WMU)	2010 - 2011
AAUP representative (WMU)	2009 - 2011

---

## DEPARTMENTAL SERVICE

Graduate Studies Committee	2013 - 2014
Organized and ran Works-In-Progress talk series	2013 - 2014
A&S Information Technology Philosophy Department Liaison	2011 - present
Departmental Library Liaison	2012 - present
RPT guidelines revisions committee	2012-2017
Undergraduate Studies Committee	2012-2013, 2017
Director of Graduate Admissions (WMU)	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. (WMU)	2008 - 2009
Webmaster, coding, administration, upkeep, a major reconstruction of website backend. (WMU)	2007-2011
Job Search Committee (WMU)	2008
Undergraduate Advisor (WMU)	2007 - 2009



---

## PROFESSIONAL DEVELOPMENT

Transdisciplinary Research Leadership Program (including weekly meetings)	2018 - 2019
Participant in Team Science Basics Workshop, sponsored by VP of research	2018
Participant in UC Libraries Humanities and Technology Camp	2017
Participant in UC Data Day	2017
Participant in Center for Enhancement of Teaching and Learning 6-week eLearning Institute for online course design. Resulted in Quality Matters ( <a href="http://www.qualitymatters.org">www.qualitymatters.org</a> ) compliant course	2013
Participant in Center for Enhancement of Teaching and Learning Year-Long New Faculty Research and Publication Workshop	2011 - 2012

---

## LANGUAGES

Research and Instruction: English, Hebrew.  
Research: Latin, French, Italian.

---

## BUSINESS EXPERIENCE

Head, Network Operations & Customer Service Departments, <i>Graphnet</i> (Overseeing employees in Teaneck, NJ; New York, NY; London, UK; Tel Aviv, Israel; Hong Kong, China). <i>Graphnet</i> is a provider of cloud-based Enterprise Content Management and Messaging solutions.	2001
Manager, Network Operations, <i>Graphnet</i> . (Overseeing employees in Teaneck, NJ; New York, NY; London, UK; Tel Aviv, Israel; Hong Kong, China)	2000–2001
Network Engineer, <i>Graphnet</i>	1999 – 2000
Customer Service Representative, <i>Graphnet</i>	1997 – 1999