April 5, 2022

# *Curriculum Vitae*

**Michael Weisberg**
Bess W. Heyman President's Distinguished Professor and Chair of Philosophy
University of Pennsylvania
433 Cohen Hall
Philadelphia, PA 19104-6304
(215) 898-0417 (o)
(267) 738-0676 (c)
weisberg@phil.upenn.edu

## EDUCATION

**Leland Stanford Junior University**
Ph.D. in Philosophy, 2003
M.A. in Philosophy, 2002
National Science Foundation Pre-doctoral Fellow

**University of California, San Diego**
B.S. Chemistry, B.A. Philosophy, 1999
Honors with Highest Distinction in Philosophy

## ACADEMIC APPOINTMENTS

2003–present **University of Pennsylvania**
Bess W. Heyman President's Distinguished Professor of Philosophy (July 2021 – )
Department Chair of Philosophy (July 2015 – )
Professor of Philosophy (July 2015 – June 2021)
Senior Faculty Fellow and Director of Postgraduate Programs, Perry World House (2020 – )
Inaugural Perry World House Faculty Fellow (2019 – 2020)
Associate Professor of Philosophy (July 2009 – June 2015)
Chair, Graduate Group in Philosophy (July 2011 – June 2015)
Assistant Professor of Philosophy (July 2003 – June 2009)

2003–present **University of Pennsylvania**
Distinguished Research Fellow, Annenberg Public Policy Center (2015 – )
Member of the Graduate Group, History and Sociology of Science
Affiliate Faculty, Institute for Research in Cognitive Science
Affiliate Faculty, Center for Cognitive Neuroscience
Consulting Scholar, Physical Anthropology Section, Penn Museum
Faculty Fellow, Fisher-Hassenfeld College House (2005-2009)

2017–2021 **East China Normal University**
Visiting Professor

2006–present **Center for Philosophy of Science, University of Pittsburgh**
Associate

2006–present **Australia National University, Research School of Social Sciences**
Philosophy Program Visitor (2006, 2009, 2012)
Philosophy Fellow (2010)

2006–2007 **Chemical Heritage Foundation**
Visiting Scholar

## POLICY AND SCIENCE DIPLOMACY

2014 – **Galápagos Education and Resarch Alliance**
Co-Director

2019 – 2022 **Intergovernmental Panel on Climate Change, Working Group II**
Contributing Author and Reviewer, Sixth Assessment Report

2020 – **Perry World House**
Global Climate Policy Lead

2020 – **UN Climate Change**
Advisor to the Nairobi Work Progamme and Resilience Frontiers Initiative

2021 – **International Peace Institute**
Non-resident Senior Advisor

2021 – **Republic of Maldives**
Climate Advisor

## GRANTS AND AWARDS

National Science Foundation STS-1557138 (2020-2022, $463,254)
National Science Foundation STS-1557138 (2016-2019, $313,337)
National Science Foundation STS-1455425 (2015-2017, $310,112)
National Science Foundation SES-0957189 (2010-2013, $173,205)
National Science Foundation SES-0620887 (2006-2008, $115,376)
Stanford University Centennial Teaching Award (2002)
National Science Foundation Pre-Doctoral Fellowship (1999-2003)

## PUBLICATIONS

(* indicated peer reviewed publication)

**Books**

1. Kovac, J. and M. Weisberg, ed. (2012), *Roald Hoffmann on the Art, Science, and Philosophy of Chemistry*, Oxford University Press.
2. Weisberg, M. (2013), *Simulation and Similarity: Using Models to Understand the World*, Oxford University Press.*
3. Boyer-Kassem, T., C. Mayo-Wilson, and M. Weisberg, eds. (2017), *Scientific Collaboration and Collective Knowledge*, Oxford University Press.*
4. Perez, W. and M. Weisberg (2018), *Galapagos: Life in Motion*, Princeton University Press.
5. Weisberg, M., *Philosophy of Natural Science*, under contract with Princeton University Press.*

**Journal Articles**

1. Kawahata, N. H., M. Weisberg, and M. Goodman (1999). "Synthesis of beta, beta-Dimethylated Amino Acids Utilizing the 9-Phenylfluorenyl Protecting Group." *Journal of Organic Chemistry*, 64, 4362–4369.*
2. Weisberg, M. and R. Wood (2003). "Richard Rufus's Theory of Mixture." *Chemical Explanations: Characteristics, Development, Autonomy*, volume 988, *Annals of the York Academy of Sciences*, 282–292.*
3. Weisberg, M (2004). "Qualitative Theory and Chemical Explanation." *Philosophy of Science*, 71, 1071–1081.*

4. Wood, R. and M. Weisberg (2004). "Interpreting Aristotle on Mixture: Problems of Elemental Composition from Philoponus to Cooper." *Studies in the History and Philosophy of Science*, 35, 681–706.* [joint responsibility for research; secondary responsibility for writing]

5. Weisberg, M (2006). "Robustness Analysis," *Philosophy of Science*, 73, 730–742.*

6. Lombrozo, T., A. Shtulman, and M. Weisberg (2006). "The Intelligent Design Controversy: Lessons from Psychology and Education." *Trends in Cognitive Sciences*, 10, 56–57.*

7. Weisberg, M (2006). "Forty Years of 'The Strategy': Levins on Model Building and Idealization," *Biology and Philosophy*, 21(5), 623–645.*

8. Weisberg, M (2007). "Who is a Modeler?", *British Journal for Philosophy of Science*, 58, 207–233.*

9. Weisberg, M. (2007) "Three Kinds of Idealization," *The Journal of Philosophy*, 104 (12) 639–59.*

10. Weisberg, M. and K. Reisman (2008). "The Robust Volterra Principle," *Philosophy of Science*, 75, 106–131.*

11. Weisberg, M. (2008) "Challenges to the Structural Conception of Bonding,"*Philosophy of Science*, 75, 932–946.*

12. Lombrozo, T., A. Thanukos, and M. Weisberg (2008). "The Importance of Understanding the Nature of Science for Accepting Evolution," *Evolution: Education and Outreach*, 1(3), 290-298.*

13. Mathewson, J. and M. Weisberg (2009), "The Structure of Tradeoffs in Scientific Modeling,"*Synthese*, 170.*

14. Weisberg, M. and R. Muldoon (2009). "Epistemic Landscapes and the Division of Cognitive Labor," *Philosophy of Science*, 76, 225-252*

15. Leiter, B. and M. Weisberg (2010). "Why Evolutionary Biology is (so far) Irrelevant to Legal Regulation,"*Law and Philosophy*, 29, 31â74.*

16. Muldoon, R. and M. Weisberg (2010). "Robustness and Idealization in Models of Cognitive Labor," *Synthese*, 183, 161–174.*

17. Weisberg, M. and P. Needham (2010), "Matter, Structure, and Change: Aspects of Philosophy of Chemistry in the 21st Century," *Philosophy Compass*, 5, 927–937.*

18. Weisberg, M. (2010), "Target-directed Modeling," *The Modern Schoolman*, 87, 251–266.*

19. Muldoon, R., T. Smith, and M. Weisberg (2012). "Segregation That No One Seeks," *Philosophy of Science*, 79, 38–62.*

20. Weisberg, M. (2012), "Getting Serious about Similarity," *Philosophy of Science* 79, 785–794.*

21. Weisberg, M. (2013), "Modeling Herding Behavior and Its Risks," *Journal of Economic Methodology*, 20, 6–18.*

22. Evans, M., V. Grimm, K. Johst, T. Knuuttila, R. de Langhe, C. Lessells, M. Merz; M. O'Malley, S. Orzack, M. Weisberg, D. Wilkinson, O. Wolkenhauer, and T. Benton (2013), "Do simple models lead to generality in ecology?" *Trends in Ecology and Evolution*, 28, 578–583.*

23. Elliott-Graves, A. and M. Weisberg (2014) "Idealization," *Philosophy Compass*, 9, 176–185.*

24. Santana, C. and M. Weisberg (2014) "Group-level Traits are Not Units of Selection," *Behavioral and Brain Sciences*, 37: 271-272.

25. Weisberg, M. (2014) "Remeasuring Man," *Evolution and Development*, 6: 166â178, 10.1111/ede.12077.*

26. Weisberg, M. (2014) "Understanding the Emergence of Population Behavior in Individual-Based Models," *Philosophy of Science*, 81(5), 785–797, 10.1086/677405.*

27. Evans, M. Benton, T., Grimm, V., Lessells, C., Oâ Malley, M., Moustakas, A., and Weisberg, M. (2014) "Data availability and model complexity, generality, and utility: a reply to Lonergan," *Trends in Ecology & Evolution*, 29(6), 302-303, 10.1016/j.tree.2014.03.004.*

28. Weisberg, M. (2015) "Book Symposium on *Simulation and Similarity*: Response to Critics," *Biology and Philosophy*, 30(2), 299-310, 10.1007/s10539-015-9475-1.

29. Santana, C., R. Patel, S. Chang, and M. Weisberg, "When is the spread of a cultural trait due to cultural group selection? The case of religious syncretism," *Behavioral and Brain Sciences*, 39. doi:10.1017/S0140525X15000229

30. Kovaka, K., Santana, C., Patel, R., AkÃ§ay, E., Weisberg, M. (2016) "Agriculture increases individual fitness," *The Behavioral and Brain Sciences*, 39. doi:10.1017/S0140525X15001090*

31. Weisberg, M., Paul, DB (2016) Morton, Gould, and Bias: A Comment on "The Mismeasure of Science." *PLoS Biology* 14(4): e1002444. doi:10.1371/journal.pbio.1002444

32. Metz, S. Emlen, D. Weisberg, M. Weisberg (2018) "Non-Scientific Criteria for Belief Sustain Counter-Scientific Beliefs." *Cognitive Science*, 10.1111/cogs.12584

33. Weisberg, D., Landrum, A. R., Metz, S. E., Weisberg, M. (2018), "No Missing Link: Knowledge Predicts Acceptance of Evolution in the United States." *Bioscience*, BioScience, 68 (3), 212–222, https://doi.org/10.1093/biosci/bix161

34. Weisberg, M., M. Jaquart, M. Seidel, B. Madore (2018), "The Dark Galaxy Hypothesis". *Philosophy of Science* 85:5, 1204-1215

35. Zhang, M., Zhu, J., and M. Weisberg (2020), "Why does the Chinese Public Accept Evolution?" *Studies in History and Philosophy of Science Part A*, 81, 116-124.

36. Justin T. Walsh, Karen Kovaka, Ernesto Vaca, Deena Skolnick Weisberg, Michael Weisberg (2020), "The effects of human exposure on Galápagos sea lion behavior." *Wildlife Biology*, 2020(4), wlb.00778.

37. Weisberg DS, Landrum AR, Hamilton J, Weisberg M. (2021) "Knowledge about the nature of science increases public acceptance of science regardless of identity factors." *Public Understanding of Science*. 30(2):120-138. doi:10.1177/0963662520977700

38. Zhang, M, Weisberg, D.S., Zhu, J., Weisberg, M. (forthcoming) "A comparative study of the acceptance and understanding of evolution between China and the US"

**Filmography**

1. *Darwinian Thoughts* (2016), Producer and Director
2. *Variation with Our Naked Eyes* (2016), Producer and Director
3. *Too Many Things Left to Do (the story of naturalist Ernesto Vaca)* (in production), Producer
4. *The Galapagos Paradox* (in production), Producer
5. *Observing the Invisible* (in production), Producer and Director
6. *Essequibo: River of Gold* (in production), Executive Producer

**Museum Exhibits**

1. Monge, J., S. Cox, M. Weisberg, and M. Yudell, "Year of Proof: The Making and Unmaking of Race." University of Pennsylvania Museum of Archeology and Anthropology, September 2012–August 2013.

**Book Chapters and Encyclopedia Articles**

1. Weisberg, M (2005). "Water is Not $H_2O$." *Philosophy of Chemistry: Synthesis of a New Discipline*. Eds. D. Baird, et al. New York: Springer, 337-345.*
2. Weisberg, M (2005). "The Key to Electricity." *The Autobiography of Benjamin Franklin.* Penn Reading Project Edition. Ed. Peter Conn. Philadelphia: University of Pennsylvania Press, 159-162.
3. Weisberg, M (2009). "New Approaches to the Division of Cognitive Labor." *New Waves in Philosophy of Science*," Ed. P.D. Magnus and Jacob Busch. New York: Palgrave Macmillan.*
4. Weisberg, M., P. Needham, and R. Hendry (2011), "Philosophy of Chemistry,"*The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), Edward N. Zalta (ed.), <http://plato.stanford.edu/archives/spr2011/entries/chemistry/>.*
5. Weisberg, M. (2012) "Chemical Modeling," *Handbook for Philosophy of Chemistry* (pp. 355–363), R. Hendry, P. Needham, and A. Woody (eds.). Amsterdam: Elsevier.*
6. Weisberg, M., "Validating Idealized Models," forthcoming in *The Experimental Side of Modeling*, I. Peschard and B. van Fraasseen (eds.).*

7. "Modeling," forthcoming in *The Oxford Handbook of Philosophical Methodology*, J. Hawthorne and T. Gendler (eds.)., 26pp.*
8. "Abstraction and Representational Capacity in Computational Modeling," forthcoming in *The Scientific Imagination*.*

**Policy Briefs**

1. "Conceptualizing and Assessing Progress Toward the Global Goal on Adaptation," submission to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
2. "Performance and Effectiveness of the Nairobi Work Programme," submission to the Subsidiary Body for Scientific and Technological Advice of the United Nations Framework Convention on Climate Change

**Essays and Book Reviews**

1. "Why Not a Philosophy of Chemistry?" Review of *Of Minds and Molecules*, *American Scientist*, 89 (6), November 2001.
2. Review of *Science, Truth, and Democracy*, by Philip Kitcher. *Angewandte Chemie* 2000, 114 (16), 3189-3190 (German) and *Angewandte Chemie International Edition in English* 2002, 41 (16) 3064-3066.
3. "Chemistry and the Scientific Method" Review of *Chemical Discovery and the Logicians' Program* by Jerome A. Berson. *Chemical and Engineering News*, 82 (12), 2004.
4. Review of *In Mendel's Mirror*, by Philip Kitcher, *The Philosophical Review*, 119, 2005, 419–423.
5. "Darwin's Bash." *The Philadelphia Inquirer*, February 12, 2006.
6. "Richard Levins' Philosophy of Science [editor's introduction]," *Biology and Philosophy*, 21(5) 2006, 603–605.
7. "Do you only have a brain?" Review of Thomas Nagel's *Mind and Cosmos*, in *The Nation*, October 22, 2012, with Brian Leiter.
8. Weisberg, D., M. Weisberg, and A. Mertz, "Community Science is a Powerful Tool for Conservation." https://www.aspeninstitute.org/blog-posts/community-science-a-powerful-tool-for-conservation

**Under Review**

1. Weisberg, D.S., Kovaka, K., Vaca, E. Weisberg, M. "LAVA-Lobos: Raising environmental awareness through community science in the Galápagos Islands," under review.

2. Restrepo-Mieth, A., J. Perry, J. Garnick, and M. Weisberg "Community-based Participatory Climate Action"

3. Bodansky, D. and M. Weisberg, "Are Climate Change and Climate Intervention Commensurate?"

## TEACHING

**University of Pennsylvania, 2003-present**

**Table of course titles and enrollments at end of document.**

**Ph.D. Thesis Supervisor**
Matthew Bateman (defended 2012)
Alkistis Elliott-Graves (defended 2014)
Emily Parke (defended 2015)
Carlos Santana (defended 2016)
Karen Kovaka (defended 2018)
Steve Esser (defended 2019)
Shereen Chang (defended 2019)
Mingjung Zhang (defended 2021)
Daniel Swaim
Hanyu Ma
Kate Nicole Hoffmann
Eugene Vaynberg
Vanessa Schpani
Jacqi Wallis

**Ph.D. Committee Member**
Matthew Katz)
Scott Edgar
Veronica Muriel
Rob Willison
Lindsey Fiorelli
Devin Curry

Jordan Taylor )
Gabe Dupre (UCLA)
Clarissa Busch

**M.A. Thesis Supervisor**
Paul Mitchell (AY 2014)

**Undergraduate Research and/or Thesis Advisor**
Shivana Naidoo (AY 2004)
Rosemary McKenna (AY 2005)
Samuel Bookler (AY 2006)
Eric King (AY 2006)
Jack Cohen (AY 2006)
Jaclyn Link (AY 2006)
Anna Tuchman (AY2007)
Daniel Singer (AY2007, AY2008)
Joshua Matz (AY 2008)
Martin Bouda (AY 2008)
Benjamin Naecker (AY2009)
Marc Werner (AY2009)
Varun Balan (AY2009)
Jennifer Marsh (AY2009)
Jonathan Packer (AY2010)
Alaina Pirraglia (AY2010)
Kevin Huntington (AY2011)
Jeffrey Ho (AY2011)
Kory Johnson (AY2011)
Jonathan Iwry (AY2014)

**MLA Thesis Advisor**
Max Kimbrough
Cole Carter (2014-2015)

## COLLOQUIA AND PRESENTATIONS

1. "Jean Perrin and Molecular Reality"
   UCSD History of Chemistry Summer Colloquium July, 1998
   Stanford Undergraduate Philosophy Association, Winter 2001

2. "Water is Not $H_2O$"
   International Society for Philosophy of Chemistry, August, 1999

UCSD History of Chemistry Summer Colloquium July, 1999
Berkeley–Stanford Graduate Philosophy Conference, June 2001

3. "Can Quine 'Quine' Similarity?"
   International Society for the Philosophy of Chemistry, August 2001
   Berkeley–Stanford Graduate Philosophy Conference, May 2000

4. "Reaction Mechanisms and Underdetermination"
   American Chemical Society, August 2001

5. "Has Neurath's Raft Sprung a Leak? An Assessment of Friedman's Challenge to Epistemological Holism"
   Berkeley–Stanford Graduate Philosophy Conference, May 2002

6. "Richard Rufus' Theory of Mixture"
   International Society for Philosophy of Chemistry, August 2002

7. "Qualitative Theory and Chemical Explanation"
   Philosophy of Science Association, November 2002

8. "Tradeoffs in Biological Modelling"
   International Society for History, Philosophy, and Social Study of Biology, July 2003

9. "Modeling in Chemistry"
   International Society for Philosophy of Chemistry, August 2004

10. "Who is a Modeler?"
    Institute for Research in Cognitive Science, September 2004
    Indiana University HPS Department, October 2004
    Center for Philosophy of Science (Pittsburgh), November 2004

11. "Darwin's Theories of Evolution"
    Ursinus College, March 2005
    Washington and Lee University, April 2006

12. Evolution and Intelligent Design (varia)
    Anti-Defamation League Civil Rights Committee, Spring 2005
    Spruce College House, Spring 2005
    Penn Science Cafe, September 2005
    Fisher-Hasenfeld College House, October 2005
    Philomethean Society, October 2005
    Penn ACLU, November 2005

King's Court College House, November 2005
BBC World Service TV, December 2005
BBC Channel 4 TV News, December 2005
BBC World Service Radio, December 2005
BBC "Up All Night" Radio Program, December 2005

13. "Robustness Analysis"
Department of Biology, University of Pennsylvania, November 2004
Philosophy of Science Association Meeting, November 2004
ISHPSSB, Guelph, Ontario, July 2005
Sage School of Philosophy, Cornell University, March 2006

14. Comments on "Mereological and Modal Features of Substance Properties"
International Society for Philosophy of Chemistry, August 2005

15. "Idealization and the Ends of Science"
University of Pennsylvania, September 2005
Washington and Lee University, April 2006

16. "A Rift in Quantum Chemistry?"
Department of History and Sociology of Science, University of Pennsylvania, October 2005

17. "Evolution, Intelligent Design, and Public Misconceptions about Science"
Program on Ethics and Public Life, Cornell University, March 2006
Washington and Lee University, April 2006
Penn School of Arts and Sciences Alumni event, May 2006
Pre-performance talk at "Great Tennessee Monkey Trial," Annenberg Center, April 2007
Free Thought Society, May 2007

18. "Tradeoffs and Idealization in Biological Model Building"
Instituto de Investigaciones Filosóficas, Universidad Nacional Autónoma de México, June 2006

19. "Robust Properties of Chemical Bonds"
Stockohlm University, May 2006
Philosophy of Science Association, November 2006

20. "Robustness Analysis and the Volterra Principle"
Australasian Association of Philosophy, Canberra, Australia, July 2006
London School of Economics, March 2007
University of Bristol, March 2007

21. "Are Chemical Bonds Real?"
    Research School of Social Sciences, Australia National University, August 2006
    Center for Philosophy of Science (Pittsburgh), February 2007
    Duke University, January 2012

22. "Science, Faith, and Darwin" panel
    Co-panelists: The Honorable John E. Jones III, Michael Shermer, Eric Rothchild, Stephen Harvey
    The Franklin Institute, December 2006

23. Commentary on Philip Kitcher's Prometheus Lecture "Darwin and Democracy"
    Eastern APA, December 2006

24. "Three Kinds of Idealization"
    University of Durham, February 2007
    Minnesota Center for Philosophy of Science, October 2007

25. "Simplicity and Generality in Biological Modeling"
    ISHPSSB, Exeter, UK, July 2007
    Models and Simulations 2, Tilburg University, October 2007

26. "Three Challenges to the Structural Conception of Bonding"
    International Society for the Philosophy of Chemistry, San Francisco, August 2007

27. "Distinctly Chemical Explanations"
    American Chemical Society Presidential Symposium
    Honoring Roald Hoffmann, August 2007

28. "Representational Ideals"
    Tilburg University, October 2007

29. "Models for Modeling Matter"
    Durham University, March 2008

30. "Epistemic Landscapes and the Division of Cognitive Labor"
    Tufts University, April 2008 Penn Workshop on Formal Methods in Philosophy, May 2008

31. "The Death of Similarity?" with Deena Skolnick Weisberg
    Society for Philosophy and Psychology, June 2008

32. "Deploying Highly Idealized Models"
    Universidad Autónoma Metropolitana–Iztapalapa, Mexico, July 2008
    University of Alabama at Huntsville, October 2008
    APA Central Division, February 2009
    Franklin and Marshall College, April 2009

33. "Value and Significance on Epistemic Landscapes"
    PSA 2008, Pittsburgh, PA, November 2008

34. "Explaining with (Possibly) Non-referring Bonds"
    EPSA 2009, Amsterdam, November 2009

35. "Maths and Fictions"
    University of London, Institute for Philosophy, March 2009

36. "Models for Modeling"
    London School of Economics, March 2008
    San Francisco State University, March 2009
    Australia National University, August 2009
    University of Missouri, February 2010

37. "Three Sex Biology and Other Models Without Targets"
    University of Helsinki, May 2009
    ISHPSSB, Brisbane Australia, July 2009
    Southern Methodist University, November 2009
    St. Louis University, March 2010
    University Paris 1 Pantheon-Sorbonne, March 2010

38. "Evolution at 150"
    Society for Philosophy and Psychology, June 2009

39. "Ecological Models of Cognitive Labor"
    University of Pennsylvania Biology Department, November 2009
    Society for Philosophy and Psychology, June 2010
    Sydney University, August 2010
    University of Nevada, Reno, April 2014

40. "Getting Serious about Similarity"
    Thought Experiments and Simulations Workshop, IHPST, Paris, March 2010
    Australia National University, August 2010
    University of California, San Diego, October 2010
    Philosophy of Science Association, November 2010
    Duke University, December 2010

University of Utah, February 2011
University of Chicago, June 2011
CU Boulder, April 2014

41. "Prebiotic Epistemology"
Philosophy of Biology at Dolphin Beach, August 2010

42. "Homochirality Before the Origin of Life"
International Society for the History, Philosophy, and Social Studies of Biology, July 2011

43. "Why is There So Little Chemistry in Our Culture?"
Presidential Symposium, International Union for Pure and Applied Chemistry, July 2011

44. "Understanding Population Behavior in Individual-Based Models"
Van Leer Jerusalem Institute, March 2012
Philosophy of Science Association, November 2012

45. "Empirical and Theoretical Conceptions of the Covalent Bond"
Durham University, Institute of Advanced Study, July 2012

46. "Without Water There is No Life"
History of Science Society, November 2012 Stanford University, March 2014

47. "Remeasuring Man"
Philosophy of Biology at Dolphin Beach 6, July 2012
Department of Biology, University of Pennsylvania, September 2012

48. "The Stanford School"
Stanford University, October 2013

49. "Abstraction and Imagination in Computational Modeling"
Van Leer Jerusalem Institute, June 2014

50. "Evolution, Darwin, and the Galàpagos"
MS National Geographic Endeavour

51. "Modeling in the Life Sciences"
Tsinghua University, Beijing, October 2014

52. "Structure, Functional Groups, and Idealization"
Philosophy of Science Association 2014, Chicago

53. "Confirmation Theory for Agent Based Models"
    Center for Advanced Study, Ludwig-Maximilians-UniversitÃ€t, MÃŒnchen

54. "Finding the Truth at the Intersection of Independent Lies"
    Harvard University, May 2015

55. "Confirmation Theory for Idealized Models"
    International Congress on Logic, Methodology, and Philosophy of Science (plenary lecture), Helsinki, August, 2015
    University of Sydney, August, 2015

56. "Understanding and Accepting Evolutionary Theory"
    Annenberg Public Policy Center, March 2016
    University of Pennsylvania, October 2016
    American Association for the Advancement of Science, February 2017
    University of Cincinnati, April 2017
    Bryn Mawr College, April 2017

57. "Observing the Invisible"
    Philosophy of Science Association Meeting, October 2016

## SERVICE AND PROFESSIONAL ACTIVITIES

**Service to the University and the School of Arts and Sciences**

1. Chair, SCSEP (AY16)
2. Member, Presidential Professorship Committee (AY15, AY16)
3. Chair, Social Responsibility Advisory Committee (AY14 - AY15 )
4. SAS Strategic Planning Working Group (AY14)
5. Ad hoc Committee on Tobacco Investment (AY13 - AY14)
6. Committee on Undergraduate and Academic Standing (AY14)
7. Senate Committee on Students and the Educational Policy (AY 13 - AY 14)
8. Penn Social Responsibiltiy Advisory Committee (AY 12 - AY 13)
9. Faculty Grievance Commission (AY 10 - 12)
10. Member, Integrated Studies Planning Committee (AY10 - AY11)

11. Member, SP2 Dean Re-appointment Committee (AY09)
12. Faculty Fellow, Fisher-Hassenfeld College House (2005 - 2009 )
13. Co-chair, Penn's Year of Evolution (2005 - 2009)
14. Chair, The Evolution Project at Penn Museum (2005 - 2009 )
15. Pre-major advisor, College of Arts and Sciences (AY05 - )
16. Member, Penn Reading Project selection committee (AY07) and committee chair (AY08)
17. Member, SP2 Dean Re-appointment Committee (AY09)

**Service to the Department of Philosophy**

1. Search Committee Chair (AY12, AY13)
2. Search Committee (AY05, AY06, AY14)
3. Admissions Committee (AY04, AY05, AY08, AY14, AY15)
4. Library Committee (AY08, AY09)
5. Colloquium Committee (AY05, AY06, AY10)

**Service to the Profession**

1. Editor-in-Chief, *Biology and Philosophy* (2017 - present)
2. Associate editor, *Episteme* (2010 - 2016).
3. Member of the Editorial Board, *Philosophy and Theory in Biology* (2012 - ).
4. Member of the advisory Committee, *Understanding Science*, UC Museum of Paleontology (2006 - ).
5. Member of the editorial board, *Foundations of Chemistry* (2005 - )
6. Member of the executive committee, International Society for the Philosophy of Chemistry (2005 - 2008)
7. Member of the program committee, *Philosophy of Science Association Meeting 2006*

8. Organizer, "New Models of the Social Structure of Science," PSA 2008
9. Co-organizer "Strategies of Modeling in Biology and Chemistry," PSA 2004
10. Co-organizer "Causation and Explanation in Chemistry," PSA 2002
11. Organizer, "The Strategy of Model Building: 1966-2005," Greater Philadelphia Philosophy Consortium, April 2005.
12. Member of American Philosophical Association, International Society for History, Philosophy, and Social Study of Biology, International Society for the Philosophy of Chemistry, and the Society for Philosophy and Psychology.
13. Ad hoc referee for *Philosophy of Science*, *British Journal for the Philosophy of Science*, *Biology and Philosophy*, *International Studies in the Philosophy of Science*, *Foundations of Chemistry, Annals of the New York Academy of Sciences*, *Philosophy of the Social Sciences*, *Critica*, *Synthese*, Acumen Press, Princeton University Press, Oxford University Press, and the National Science Foundation.