

# Angela Potochnik

Associate Professor  
Department of Philosophy  
University of Cincinnati

angelapotochnik.com  
UCengagingscience.org  
angela.potochnik@uc.edu

## AREAS OF SPECIALIZATION

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Philosophy of Science, Philosophy of Biology, History of Logical Empiricism

## AREAS OF COMPETENCE

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History of Analytic Philosophy, Logic, Metaphysics, Epistemology

## ACADEMIC APPOINTMENTS

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### University of Cincinnati

Associate Professor of Philosophy, 2013 – present  
Inaugural Director of Center for Public Engagement with Science, 2017 – present  
Affiliated Faculty, Women's, Gender, and Sexuality Studies, 2012 – present  
Assistant Professor of Philosophy, 2010 – 2013

### Oklahoma State University

Assistant Professor of Philosophy, 2008 – 2010  
Affiliated Faculty, Gender and Women's Studies, 2009 – 2010

## EDUCATION

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### Stanford University: Philosophy, MA 2004, PhD 2007

Dissertation: *Evolution, Explanation, and Unity of Science*  
Advisors: Elliott Sober and Michael Friedman  
Committee Members: Helen Longino and Peter Godfrey-Smith  
University Chair: Marcus Feldman (Biology)

### Hendrix College: Philosophy, BA 2002

Honors in Philosophy, *Summa cum Laude*

## GRANTS, FELLOWSHIPS, AND AWARDS

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Center for Public Engagement with Science: College Structures award to fund curricular developments, \$5,000, 2019

"Public Engagement with Science," University Honors Program undergraduate summer intern and mentoring compensation, 2019

"Ownership of Science," University Honors Program undergraduate summer intern and mentoring compensation, 2018

'Rising Star' Award, University of Cincinnati College of Arts and Sciences, 2017

Runner Up for the Dean's Award for Teaching Excellence, UC College of Arts and Sciences, 2017

Planning Committee, NEH Next Generation PhD Planning Grant, to enhance pathways from humanities PhDs to non-academic professions, University of Cincinnati, 2016-2017

Research Fellowship, Charles Taft Research Center, University of Cincinnati, 2013-2014

Taft Award to partially fund a three-day conference, University of Cincinnati, 2012

University Research Council Summer Research Fellowship, University of Cincinnati, 2012

Marjorie Grene Prize, biannual award for the best graduate student manuscript from a meeting of the International Society for History, Philosophy and Social Studies of Biology, 2011-2013

Taft Summer Research Grant, University of Cincinnati, 2011

Visiting Research Fellowship, Michelle R. Clayman Institute for Gender Research, Stanford University, Autumn and Winter Quarters, 2010 - 2011

Postdoctoral Fellowship, Center for Philosophy of Science, University of Pittsburgh 2010-2011 (declined for Clayman Institute Research Fellowship)

Dean's Incentive Grant, Oklahoma State University, 2009

Fae Rawdon Norris Grant to organize a visiting lecture, Oklahoma State University, 2009

President's Medal, for the senior "best exemplifying the highest ideals of the college," Hendrix College, 2002

R.G. Shoemaker Award, for the outstanding graduating senior in philosophy, Hendrix College, 2002

**BOOKS**

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*Idealization and the Aims of Science*, University of Chicago Press, 2017.

*Recipes for Science: An Introduction to Scientific Methods and Reasoning*, with Matteo Colombo and Cory Wright, Routledge, 2018. Equal authorship.

**OTHER PUBLICATIONS**

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"Our World Isn't Organized into Levels," forthcoming in a collection on the Altenberg Workshop on Hierarchy and Levels of Organization, KLI, under contract with *MIT Press*.

Review of Catherine Elgin's *True Enough*, *Philosophical Review*, forthcoming.

"Eight Other Questions about Explanation," in *Explanation Beyond Causation*, Alexander Reutlinger and Juha Saatsi (Eds.), Oxford University Press, 2018.

"Mechanisms Are Causes, Not Components: A Response to Connolly, et al." with Brian J. McGill, *Trends in Ecology and Evolution*, 2018, 33: 304-305. Second author.

"Scientific Explanation: Putting Communication First," *Philosophy of Science*, Symposium Proceedings PSA2014, 2016, 83: 721-732.

"The Diverse Aims of Science," in a special issue of *Studies in History and Philosophy of Science*, 2015, 53: 71-80.

"Causal Patterns and Adequate Explanations," *Philosophical Studies*, 2015, 172(5): 1163-1182.

"Toward Philosophy of Science's Social Engagement," with Francis Cartieri, in a special issue of *Erkenntnis* on socially engaged philosophy of science, 2014, 79(5): 901-916.

Editor, Socially Engaged Philosophy of Science, special issue of *Erkenntnis*, 2014, 79(5): 901-1017.

"Biological Explanation," 2013, in K. Kampourakis (Ed.), *The Philosophy of Biology: A Companion for Educators*, vol. 1 of History, Philosophy and Theory of the Life Sciences, chapter 4, pages 49-65, Springer.

Review of Helen Longino, *Studying Human Behavior: How Scientists Investigate Aggression and Sexuality* (University of Chicago Press, 2013), *Notre Dame Philosophical Reviews*, 2013.

"Defusing Ideological Defenses in Biology," *BioScience*, 2013, 63(2): 118-123.

"Feminist Implications of Model-Based Science," *Studies in History and Philosophy of Science*, 2012, 43(2): 383-389.

"Modeling Social and Evolutionary Games," *Studies in History and Philosophy of Biological and Biomedical Sciences*, 2012, 43(1): 202-208.

"The Limitations of Hierarchical Thinking," with Brian McGill, *Philosophy of Science*, 2012, 79(1): 120-140. Primary authorship.

Essay Review of Roughgarden's *The Genial Gene*, in "Sex and Sensibility: The Role of Social Selection," Erika Milam, Roberta Millstein, Angela Potochnik, and Joan Roughgarden, *Metascience*, 2011, 20(2), 253-277.

"A Neurathian Conception of the Unity of Science," *Erkenntnis*, 2011, 34(3): 305-319.

"Explanation and Understanding: An Alternative to Strevens' *Depth*," *The European Journal for the Philosophy of Science*, 2011, 1(1): 29-38.

"Explanatory Independence and Epistemic Interdependence: A Case Study of the Optimality Approach," *The British Journal for the Philosophy of Science*, 2010, 61(1): 213-233.

"Levels of Explanation Reconceived," *Philosophy of Science*, 2010, 77(1): 59-72.

"Optimality Modeling in a Suboptimal World," in a special issue of *Biology and Philosophy*, edited by Patrick Forber, 2009, 24(2): 183-197.

"Optimality Modeling and Explanatory Generality," *Philosophy of Science*, 2007, 74(5): 680-691.

"Revisiting Galison's 'Aufbau/Bauhaus' in Light of Neurath's Philosophical Projects," with Audrey Yap, *Studies in History and Philosophy of Science*, 2006, 37(3): 469-488. Equal authorship.

## WORK IN PROGRESS

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"What Constitutes an Explanation in Biology?," invited and under review for K. Kampourakis and T. Uller (Eds.), *Philosophy of Science for Biologists*, under contract with Cambridge University Press (draft available).

"Patterns in Cognitive Phenomena and Pluralism of Explanatory Styles," with Guilherme Sanches de Oliveira, invited and under review for a special issue of *TopiCS* (draft available).

"Idealization and Many Aims," under review (draft available).

## SELECTED INVITED PRESENTATIONS

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Department of Philosophy, University of Kentucky, February 2020 (upcoming)

Plenary lecture, Fundamentals of Modeling Workshop, Center for Interdisciplinary Research, University of Bielefeld, November 2019 (upcoming)

Workshop on compositional explanation in biology and the neurosciences, Rutgers, October 2019 (upcoming)

Department of Philosophy, University of Pennsylvania, September 2019 (upcoming)

Interdisciplinary workshop on teaching scientific strategies for critical thinking, Lawrence Berkeley National Labs, July 2019 (upcoming)

"Why It Matters that Idealizations are False," Workshop on idealization across the sciences, Prague, June 2019

"Idealization and Many Aims," Center for Philosophy of Science, University of Minnesota, April 2019

"What We're Talking About When We Talk About Levels," Committee on History and Philosophy in Science Distinguished Speaker, University of Colorado, Boulder, April 2019

"Causal Patterns and How Our Theories Change," Philosophy & Biology Series, University of Bordeaux, April 2019

"Causal Patterns and How Our Theories Change," keynote address, *Evolution Evolving* conference, Cambridge University, April 2019

"Explaining with Idealizations," Seminar on Epistemic Norms of Explanation, University of Bordeaux, January 2019 (delivered remotely)

"What We're Talking About When We Talk About Levels," Department of History and Philosophy of Science, University of Pittsburgh, September 2018

"Idealization and Understanding," Orange Beach Epistemology Workshop, May 2018

Author-meets-critics session on *Idealization and the Aims of Science*, with Catherine Elgin, Bradley Skow, and Michael Strevens, American Philosophical Association, Pacific Division Meeting, San Diego, March 2018

"Prizing Apart Levels Concepts," Altenberg Workshop on Hierarchy and Levels of Organization, Konrad Lorenz Institute for Evolution and Cognition Research, Vienna, March 2018

"Causal Patterns and Idealization in Biology," Department of Biology, University of Cincinnati, November 2017

"Idealization and the Aims of Science," Bryn Mawr, November 2017

"Idealization and the Aims of Science," Wake Forest University, November 2017

"Explaining with Idealizations," University of Notre Dame, October 2017

"Idealization and the Aims of Physics?," Department of Physics, University of Cincinnati, September 2017

"Explaining with Idealizations," University of California Davis, May 2017

"Explaining with Idealizations," University of Maryland, February 2017

"How Idealizations Represent and Explain," University of Kansas, December 2016

Author-meets-critics session on James Tabery's *Beyond Versus: The Struggle to Understand the Interaction of Nature and Nurture*, American Philosophical Association, Pacific Division Meeting, Vancouver, April 2015

"How Scientific Explanations Generate Understanding," Case Western Reserve, February 2015

"Explaining with Idealizations," Modeling and Scientific Explanation Workshop, Jerusalem, June 2014

"Causal Patterns and Adequate Explanations," Indiana University, April 2014

"Causal Patterns and Adequate Explanations," Philosophy Club, Saint Louis University, February 2014

"Science Isn't After the Truth," Missouri Philosophy of Science Workshop, University of Missouri, October, 2013

"Increasing Realism Without Getting Real," invited paper at the American Philosophical Association, Pacific Division Meeting, San Francisco, March 2013

"Modeling Social and Evolutionary Games," Department of Biology, University of Cincinnati, April 2012

"Idealizing the Realizers," American Philosophical Association, Pacific Division Meeting, Group Program, April 2011

"Feminist Implications of Model-Based Science," Philosophy of Biology Lab Group, University of California, Davis, Feb. 2011

"The Limitations of Hierarchical Thinking," Department of Philosophy, Stanford University, Nov. 2010

"Modeling Social and Evolutionary Games," Philosophical Pizza Munch, California Academy of the Sciences, Oct. 2010

"Cooperation, Competition, and the Evolution of Sex," Undergraduate Philosophy Club, Oklahoma State University, Feb. 2010

"Explanation and Understanding," University of Cincinnati, Jan. 2010

"Explanation and Understanding," University of Kentucky, Feb. 2010

"Science in a Complex World: Lessons from Biology," Steel Center Lecture, Hendrix College, March 2009

"Cooperation, Competition and the Evolution of Sex," Department of Philosophy, Hendrix College, March 2009

"Evolution and Contextual Explanation," University of Washington, Jan. 2009

"Philosophical Lessons from the Historical Sciences," School of Geology, Oklahoma State University, Sept. 2008

"Situating the Optimality Approach in Population Biology," Department of Zoology, Oklahoma State University, Sept. 2008

"Philosophical Lessons from the Historical Sciences," Undergraduate Philosophy Club, Oklahoma State University, Sept. 2008

"The Unity of Science in a Disordered, Dappled World," Departments of Philosophy at Syracuse University; University of California, Davis; University of Western Ontario; Florida State University; Oklahoma State University; and California State University, Long Beach; Jan. and Feb. 2008

"Evolution and the Unity of Science," Undergraduate Philosophy Association, Stanford University, Nov. 2005

"Another Kind of Unity: The Case of Evolutionary Modeling," Philosophical Pizza Munch, California Academy of the Sciences, Oct. 2005

"Otto Neurath's Philosophy and Politics," with Audrey Yap, Undergraduate Philosophy Association, Stanford University, Oct. 2004

### **SELECTED REFEREED PRESENTATIONS**

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"Idealization and Many Aims," in a Symposium on "Understanding and the Aims of Science," Philosophy of Science Association Biennial Meeting, Seattle, November 2018

"Causal Patterns and Actual Causes," in a session on "Modeling Real Patterns in Biology," International Society for the History, Philosophy, and Social Studies of Biology, University of Montreal, July 2015

"Putting Communication First," in a Symposium on Scientific Explanation: Communication, Representation, Objectivity, Philosophy of Science Association Biennial Meeting, Chicago, November 2014

"Idealization and the Limits of Science," Models and Simulations in the Sciences: Perspectives from Philosophy, History, and Policy, University of Notre Dame, May 2014

"Science Isn't After the Truth," American Philosophical Association, Pacific Division Meeting, San Diego, April 2014

"Non-Causal Features of Causal Explanations," A Conference in Honor of Elliott Sober, University of Wisconsin, Madison, May 2013

"Defusing Ideological Defenses in Biology," Philosophy of Science Association Biennial Meeting, San Diego, Nov. 2012

"A Dispute over the Basics of Nature," part of a critical discussion of Roughgarden's *The Genial Gene*, International Society for the History, Philosophy, and Social Studies of Biology, University of Sydney, July 2009

"Optimality Explanation as Anti-Reductionism," International Society for the History, Philosophy, and Social Studies of Biology, University of Exeter, July 2007

"Generality, Complexity, and Approaches to Explanation," American Philosophical Association, Pacific Division Meeting, San Francisco, April 2007

"Optimality Modeling and Explanatory Generality," Philosophy of Science Association Biennial Meeting, University of British Columbia, Nov. 2006

"Optimality Modeling and Explanatory Generality," Southwest Colloquium in History and Philosophy of the Life Sciences, University of California, Davis, April 2006

"Another Kind of Unity: The Case of Evolutionary Modeling," International Society for the History, Philosophy, and Social Studies of Biology, University of Guelph, July 2005

"Another Kind of Unity: The Case of Evolutionary Modeling," Philosophy of Biology Workshop, Stirling University, May 2005

"A Shift in Wittgenstein's Position on Syntax," The International Society for the History of Philosophy of Science, University of San Francisco, June 2004

## SELECTED PUBLIC-FACING ACTIVITIES

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Co-organized "Climate Change/Cincinnati" event series at the Mercantile Library, Cincinnati, August-October 2019

"A philosophical journey with some startling detours," A review of Paul Dicken's *Getting Science Wrong: Why the Philosophy of Science Matters* in *Physics Today*, 2018, 71(11):52.

"How philosophy of science relates to scientific practices," invited post for the BJPS blog *Auxiliary Hypotheses*, 2018

Participant in the Beyond the Ivory Tower writing workshop, facilitated by James Ryerson, Editor, New York Times (competitive selection process), May 2018

"Idealization and the Aims of Science," book event at the Mercantile Library, Cincinnati, April 2018

"Why Philosophy is a Good Introduction to Science," invited post for the APA blog *The Teaching Workshop*, 2017

## TEACHING AND ADVISING

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### Graduate Courses

NSci/Hum 7000: Public Engagement with Science	2020
Phil 8060: Complexity	2018

Phil 7021: History of Logical Empiricism	2012, 2017
Phil 6041: Graduate Logic	2015, 2018
Phil 8060: Idealization in Science	2014
Phil 8060: Socially Engaged Philosophy of Science	2012
Phil 740: Philosophy and Evolutionary Biology	2011
Phil 239: Teaching Methods (Stanford University)	2007, 2008

### Undergraduate Courses

Phil 1089/WGSS 1089: Sex and Death (online)	2019
Phil 1032: How Science Works	2012, 2015, 2019
Phil 2010: Symbolic Logic	2014 - 2018
Hist 3096/Phil 3096: Vienna and the Birth of Modern Culture (with Katherine Sorrels)	2017
Phil 123: Introduction to Logic	2011, 2012
Phil 336: Gender and Science	2011
Phil 212: Twentieth Century Philosophy	2011
Phil 1313: Logic and Critical Thinking (Oklahoma State University)	2008 - 2010
Phil 4990: History of Analytic Philosophy (Oklahoma State University)	2010
Phil 4733: Philosophy of Biology (Oklahoma State University)	2009
Phil 4983: Metaphysics and Epistemology (Oklahoma State University)	2009
Phil 4713: Philosophy of Science (Oklahoma State University)	2008
Phil 195A: Unity of Science (Stanford University)	2008
Phil 50: Introductory Logic (Stanford University)	2008

### PhD Dissertation Chair

Amanda Corris (Co-Chair with Tony Chemero)  
 Guilherme Sanches de Oliveira: *Scientific Modeling Without Representationalism*  
 Richard Stephenson

### PhD Committees

Alex Huffman: <i>The Metaphysics and Semantics of Natural Kinds: A Case for Kind Nominalism</i>	
Matthew Baxendale (Central European University): <i>Levels of Organisation in Scientific Practice</i>	PhD 2018
Frank Faries: <i>Big Data and the Integrated Sciences of the Mind</i>	
Eric Rogers: <i>Building a Better Invasion Biology: A Normative Approach to the Problem of Terminological Disunity</i>	
Francis Cartieri: <i>Is Evolutionary Biology Possible?</i>	
Maurice Lamb: <i>Characteristics of Non-Reductive Explanations in Complex Dynamical Systems Research</i>	PhD 2015
Vanessa Bentley: <i>Building a Feminist Philosophy of Cognitive Neuroscience</i>	PhD 2015
Hayden Thornburg: <i>New Work for a Theory of Emergence</i>	
Nina Atanasova: <i>Animal Models and the Unity of Neuroscience</i>	PhD 2014

### Other Graduate Mentoring

Teaching mentor, Introduction to Logic	2018, 2019
PhD Qualifying Exam Committees, Philosophy of Science (2)	2017
Philosophical writing mentoring	2015, 2017
Vanessa Bentley, MA Thesis Co-advisor, Women's, Gender, and Sexuality Studies: <i>Establishing the case for discipline-specific feminist philosophy of science</i>	MA 2013
Independent study on Feminist Philosophy of Science, WGSS 811	2012

**Pedagogical Training**

Participant in STEM Teaching and Learning Workshop: Hidden inequities in active learning	2017
Presentation on combatting implicit bias and stereotype threat in the classroom with Vanessa Carbonell, at a university-wide professional training workshop	2015
with Vanessa Carbonell, at UC's Annual Diversity Conference	2014
Participant in CET&L Showcasing Your Teaching workshop, University of Cincinnati	2012
Participant in CET&L Teaching Large Classes workshop, University of Cincinnati	2011

**PROFESSIONAL AND SERVICE ACTIVITIES****Service to the Profession**

Program Chair, Philosophy of Science Association Biennial Meeting 2020	2019 - 2023
Associate Editor, <i>Biology and Philosophy</i>	2017 - present
Editorial Board, <i>Stanford Encyclopedia of Philosophy</i>	2018 - present
Consulting Editor, <i>Theoria</i>	2018 - present
Steering Committee, Scientific Understanding and Representation workshop series	2019 - present
Steering Committee and Member, PhilInBioMed Network	2019 - present
Category Editor for PhilPapers (Models and Idealization)	2017 - present
Leaf Editor for PhilPapers (Unity of Science)	2010 - present
Member of the PSA2018 Program Committee	2017 - 2019
Member of the MS8 (Models and Simulations Conference) Program Committee	2017 - 2018
Invited speaker at the Early Career Development Workshop, ISHPSSB conference in Montreal	2015
Invited Comments on Woodward's talk at a conference in honor of Hausman, UW Madison	2015
Organizer of "Explanation: Communication, Representation, Objectivity," Symposium, Philosophy of Science Association Biennial Meeting	2014
Comments on Joel Velasco's "Species, Genes, and the Tree of Life," Pacific APA	2010
Comments on Robert Northcott's "Genetic Drift," Eastern APA	2009
Organizer of "The Genial Gene: Author Meets Critics," ISHPSSB Conference	2009
Reviewer for <i>Australasian Journal of Philosophy</i> , <i>Biology and Philosophy</i> (2), <i>BioScience</i> (2), <i>The British Journal for the Philosophy of Science</i> (3), <i>Ergo</i> , <i>Erkenntnis</i> (3), <i>European Journal of Philosophy of Science</i> (2), <i>Hypatia</i> , <i>The International Journal of Philosophy of Science</i> , <i>The Journal of Aesthetics and Art Criticism</i> , <i>Perspectives on Science</i> , <i>Philosophers' Imprint</i> , <i>Philosophical Studies</i> (2), <i>Philosophy and Phenomenological Research</i> (2), <i>Philosophy and Theory in Biology</i> , <i>Philosophy of Science</i> (12), <i>Science and Education</i> , <i>The Southern Journal of Philosophy</i> , <i>Studies in the History and Philosophy of Biological and Biomedical Sciences</i> (3), <i>Studies in the History and Philosophy of Science</i> , <i>Synthese</i> (8), <i>Theoria</i> (2), Elsevier Press, the Estonian Research Council, Oxford University Press (2), Minnesota Studies in Philosophy of Science book series, Routledge (3), Springer, the Central States Philosophical Association, and the Konrad Lorenz Institute and Michelle R. Clayman Institute Postdoctoral Fellowship Programs.	

**Professional Development**

Participant in UC Women Lead Executive Leadership program, sponsored by the Office of the Provost (competitive selection process)	2016 - 2017
Participant in the FORTE workshops: Pathways to Leadership, University of Cincinnati	2015
Participant in The Op Ed Project (sessions held at UC; competitive selection process)	2014 - 2015
Participant in the Function and Evolution Working Group at the National Institute for	2009 - 2010

Mathematical and Biological Synthesis, University of Tennessee  
 Participant in the Ecology and Evolution Reading Group, Oklahoma State University 2009 - 2010  
 Participant in the Roughgarden Lab meetings, Stanford University 2007 - 2008  
 Member of Science and Technology Studies Writing Group 2006 - 2008  
 Coordinator of interdisciplinary reading group on feminist philosophy of science, Stanford 2006  
 Presenter, Participant in Logical Methods in the Humanities discussion series, Stanford 2002 - 2006  
 Participant in interdisciplinary reading group on biology and feminism 2004

### University of Cincinnati: Philosophy Department

Director of Graduate Studies for the Philosophy Department 2014 - 2019  
 Member of the Diversity Task Force 2011 - 2016  
 Member of the Department Head Search Committee 2015  
 Member of Merit Review Committee 2014 - 2015  
 Member of the Graduate Studies Committee 2011 - 2013  
 Organizer of 49th Annual UC Philosophy Colloquium (three-day conference) 2012  
 Member of Taft Undergraduate Fellowship application review committee 2011

### University of Cincinnati: College- and University-Level

Inaugural Director of Center for Public Engagement with Science 2017 - present  
 Advisory Committee Member, Taft Research Center 2019 - present  
 College Structures Committee Member, College of Arts & Sciences 2019  
 Mentor in the A&S women-to-women mentoring project 2016 - 2018  
 Representative (A&S Humanities) on the University Graduate Council 2015 - 2019  
 Member of the Graduate Council of the College of Arts and Sciences 2014 - 2019  
 Co-Chair of the Graduate School Decanal Review Committee 2017 - 2018  
 Member of Executive Committee, Graduate Council of the College of Arts and Sciences 2017 - 2018  
 Assembled Head's Guide to Managing Adjunct Faculty, presented at Provost Senior 2016- 2017  
 Staff Meeting, New Heads Orientation, influenced HR adjunct on-boarding (with two other faculty)  
 Member of the Taft Faculty Fellowship Committee 2016 - 2017  
 Member of the Classics Department Head Search Committee 2014 - 2015  
 Member of the Diversity Task Force for the College of Arts and Sciences 2013 - 2014  
 Member of University Research Council's Review Committee for Undergrad. Fellowships 2012 - 2013