

CURRICULUM VITAE

**John Bickle**

April 2022

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**CURRENT ACADEMIC POSITIONS**

Professor (Tenured) of Philosophy  
Shackouls Honors College Faculty  
Mississippi State University

Affiliate Faculty  
Department of Neurobiology and Anatomical Sciences  
University of Mississippi Medical Center

**EDUCATION**

B.A. University of California, Los Angeles, June 1983  
M.A., Ph.D. University of California, Irvine, June 1989 Field: Philosophy;  
Scientific Concentration: Neurobiology. Doctoral Dissertation: *Toward a  
Scientific Reformulation of the Mind-Body Problem*

**AREAS OF SPECIALIZATION**

Philosophy of Neuroscience, Philosophy of Science (especially Scientific Reductionism),  
Cellular and Molecular Mechanisms of Cognition and Consciousness

**AREAS OF COMPETENCE**

The Philosophy of Rudolph Carnap), Libertarian Political Philosophy

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**PROFESSIONAL PUBLICATIONS (101)**

**BOOKS (4)**  
2014

*Engineering the Next Revolution in Neuroscience*. (Co-authors: Alcino J. Silva and Anthony Landreth). Oxford University Press, 2014.

2006

*Understanding Scientific Reasoning*, 5<sup>th</sup> Ed. (co-authors Ronald Giere and Robert Mauldin). Thomson Publishing, 2006.

2003

*Philosophy and Neuroscience: A Ruthlessly Reductive Approach*. Dordrecht: Kluwer (now Springer) Academic Publishers, 2003.

1998

*Psychoneural Reduction: The New Wave*. Cambridge, MA: MIT Press/Bradford Books, 1998.

EDITED VOLUMES (2)

2021

*The Tools of Neuroscience Experiment: Philosophical and Scientific Perspectives* (co-editors Carl F. Craver and Ann-Sophie Barwich) (Oxfordshire, UK: Routledge)

2009 (Paperback Ed. 2012)

*Oxford Handbook of Philosophy and Neuroscience*. New York: Oxford University Press, 2009. Paperback edition 2012.

JOURNAL ARTICLES, BOOK CHAPTERS, REVIEWS, AND RELATED, IN PRINT AND FORTHCOMING (95)

Forthcoming

“New research tools, new research possibilities for ruthlessly reductive neuroscience” (co-author Alcino J. Silva). Forthcoming 2022 in *Frontiers in Psychology*, Research Topic: Evidence for Reductionist or Anti-Reductionist Approaches to Mental Processes. Guest Editors: Mark Couch, Francesca Strappini and Antonino Carcione

“Metascience, not metaphysics, of science.” Forthcoming 2022 as part of an Author-Meets-Critics series on Gualtiero Piccinini’s *Neurocognitive Mechanisms*, Oxford University Press, 2020, in *Journal of Consciousness Studies*.

“Revolutions in “wet” neuroscience” (co-author Daid Parker). Forthcoming 2021 in Gregory Boyle (Ed.), *The SAGE Handbook of Cognitive and Systems Neuroscience*,

2022

“When two (levels of) explanations collide.” Forthcoming 2021 in *From Electrons to elephants and Elections: Saga of Content and Context*, Shyam Wuppuluri and Ian Stewart (Eds.), The Frontiers Collection, Springer, 653-672.

“Molecularizing the mind: An introduction to molecular and cellular cognition” (co-author Ann Sophie Barwich). In B.D. Young and C. Dicey-Jennings (eds.), *Mind, Cognition, and Neuroscience: A Philosophical Introduction*. New York: Routledge, 32-50.

## 2021

“Tinkering in the lab.” In John Bickle, Carl F. Craver and Ann-Sophie Barwich (eds.), *The Tools of Neuroscience Experiment: Philosophical and Scientific Perspectives* (Oxfordshire, UK: Routledge).

“Editor’s Introduction.” In J. Bickle, C.F. Craver and A.-S. Barwich (eds.), *The Tools of Neuroscience Research: Philosophical and Scientific Perspectives* (Oxfordshire, U.K.: Routledge), 1-9.

“Don’t throw away the tin-foil hats just yet: A libertarian defense of promulgating unwarranted conspiracy theories,” (Co-author Marica Bernstein.) In Huemer, M., Borland, T., and Hillman, T.A. (eds.), *Dissident Philosophers: Voices Against the Political Current of the Academy*. New York: Rowman and Littlefield, 51-64.

“The first two decades of CREB-memory research: Data for philosophy of neuroscience,” in *AIMS Neuroscience* 8(3): 322-339, published open access at <https://www.aimspress.com/article/doi/10.3934/Neuroscience.2021017>

## 2020

“Laser lights and designer drugs: New techniques for descending levels of mechanisms “in a single bound”?” *Topics in Cognitive Sciences (TopiCS)* 12/4: 1241-1256. Online first: DOI: 10.1111/tops.12452

"Multiple realizability" (fully revised and updated, last previous revision/update March 2013) In E. Zalta (ed.), *Stanford Encyclopedia of Philosophy*, <http://plato.stanford.edu/entries/multiple-realizability/>.

“Philosophy of neuroscience” (co-authored with Gualtiero Piccinini). In *Oxford Bibliographies in Philosophy*, D. Prichard (Ed.), New York: Oxford University Press, forthcoming.

## 2019

“Linking mind to molecular pathways: The role of experiment tools.” *Axiomathes: Where Science Meets Philosophy* 29(6): 577-597.

“Memory linking and creativity: The search for underlying molecular, cellular, and circuit mechanisms” (co-author Alcino J.Silva). In S. Nalbantian and P. Matthews (Eds.), *Secrets of Creativity: What Neuroscience, the Arts, and Our Minds Reveal*. New York: Oxford University Press, 187-202.

"Philosophy of Neuroscience" (co-author Peter Mandik and Anthony Landreth). In E. Zalta (ed.), *Stanford Encyclopedia of Philosophy*, <http://plato.stanford.edu/entries/neuroscience/>. Fall 2019 edition.

"Reduction." in Hedrey, R.F., Gibb, S., and Lancaster, T. (Eds.), *Routledge Handbook of the Philosophy of Emergence*. New York: Routledge, 65-76.

Review of Carl Gillet, *Reduction and Emergence in the Sciences*. *Philosophy of Science* 86 (1) (January 2019), 199-201.

"Lessons for experimental philosophy from the rise and "fall" of neurophilosophy." *Philosophical Psychology* 32 (1) (January 2019), 1-22, <https://doi.org/10.1080/09515089.2018.1512705>

## 2018

"The value of Duane Rumbaugh's comparative perspective—in neurobiology." *International Journal of Comparative Psychology* 31 (December 2018): <https://escholarship.org/uc/item/5qp0n54c>.

"Connection experiments in neurobiology" (co-author Aaron Kostko). *Synthese* 195 (12), (2018), 5271-5295, <https://doi.org/10.1007/s11229-018-1838-0>

"From microscopes to optogenetics: Ian Hacking vindicated." *Philosophy of Science* 85/5: 1065-1077, 2018

## 2017

"Memory and Levels of Scientific Explanation." In Bernecker, S. and Michaelian, K. (eds.), *The Routledge Handbook of Philosophy of Memory*, New York: Routledge, 2017, 34-47.

"Sounding the call for external validity in decision neuroscience," (co-author A. Bollhagen), *Science and Education* 26 (3-4) (Summer 2017): 429-433.

"Personalized psychiatry and scientific causal explanation: Two models." (Co-author Aaron Kostko). In Serife Teken and Jeffrey Poland (eds.), *Extraordinary Science*. Cambridge, MA: MIT Press, 2017, 137-162.

## 2016

"Revolutions in Neuroscience: Tool Development." *Frontiers in Systems Neuroscience* (March 2016): <http://journal.frontiersin.org/article/10.3389/fnsys.2016.00024/full>

## 2015

“Marr and Reductionism” *TopiCS (Topics in Cognitive Sciences)* 7 (2015): 299-311.

#### 2014

“Little-e eliminativism in current molecular neuroscience: Tensions for neuro-normativity.” In Charles Wolf (ed.), *Brain Theory*, Pelgrave-Macmillan, New York, 2014, 134-148.

#### 2013

“Integration of Nanoscale Science and Technology into Undergraduate Curricula.” (Co-authors V.N. Shanov, M. Schulz, T.D. Mantei, F.J. Boerio, L. Smith, S. Iyer, I. Papautsky, D.D. Dionysiou, D. Shi, and J. Bickle, *Journal of Nanoscience Education* 5, 164-171 (2013).

“What’s Old is New Again: Kemeny-Oppenheim Reduction in Current Molecular Neuroscience.” (Co-author Kari Theurer.) *Philosophia Scientia* 17/2 (special issue on “The mind-body problem in cognitive neuroscience”), 2013, 89-113.

“The Neurophilosophies of Paul and Pat Churchland.” In Andrew Bailey (ed.), *Key Thinkers: Philosophy of Mind*. New York: Continuum Press, 2013, 237-257.

#### 2012

“Structuralist Contributions—and Limitations?—to Work on Scientific Reductionism.” *Metatheoria: Revista de Filosofía e Historia de la Ciencia (Metatheory: Journal of Philosophy and History of Science)*, 2/2, 2012, 1-23.\

“Philosophy of Neuroscience.” (C-author Valerie Hardcastle) *Elsevier Life Sciences Reviews (els)*. John Wiley and Sons. Ltd. Chichester, UK DOI: 10.1002/9780470015902.a0024144 (2012)

“Finding the Mechanisms of Affect.” In P. Zacher and R. Ellis (eds.), *Categorical and Dimensional Models of Affect: Panksepp and Russell*. Amsterdam: John Benjamins, 2012, 175-187

“A Brief History of Neurosciences’s Actual Influences on Mind-Brain Reductionism.” In S. Gozzano and C. Hill (eds.), *New Perspectives on Type Identity Theory*. Cambridge: Cambridge University Press, 2012, 88-109.

#### 2010

“Has the Last Decade of Multiple Realization Criticisms Aided Psychoneural Reductionists?” *Synthese* 177 (December 2010): 247-260.

“Mapping the Mind to the Body—A Little Too Easily.” Review of Damasio’s *Self Comes to Mind*. *New Scientist* 2788: 27 November 2010: 50.

“Storytelling 2.0: When New Narratives Meet Old Brains.” (co-authored with Sean Keating). *New Scientist* 2786, 13 November 2010: 53-56.

“Memory and Neurophilosophy.” In S. Nalbantian, P. Matthews, and J.L. McClelland (eds.), *The Memory Process: Neuroscientific and Humanistic Perspective*. Cambridge, MA: MIT Press, 2010: 195-216.

## 2009

“Science of Research and the Search for the Molecular Mechanisms of Cognitive Functions.” (Co-author: Alcino Silva). In J. Bickle (ed.), *Oxford Handbook of Philosophy and Neuroscience*. Oxford: Oxford University Press, 2009, 71-126.

“Cognitive Behaviors and Molecular Neurobiology: Explanations ‘In a Single Bound’.” In J. Burgos and E. Ribes-Iñesta (Eds.), *The Brain-Behavior Nexus: Conceptual Issues: Proceedings of the 10th Biannual Symposium on the Science of Behavior*. Guadalajara, Mexico: University of Guadalajara, 2009, 1-13.

“Vous avez dit réalisation multiple? Je réponds neurosciences moléculaires”. In Pierre Poirier et Luc Faucher (eds), *Des neurosciences à la philosophie: Neurophilosophie et philosophie des neurosciences*. Paris: Éditions Syllepse, 2009, 181-204.

“Reductionism.” In P. Wilken and T. Bayne (Eds.), *Oxford Companion to Consciousness*, Oxford University Press, 2009, 553-556.

“There’s a New Kid in Town: Computational Cognitive Science, Meet Molecular and Cellular Cognition.” In D. Dedrick and L. Trick (eds) *Cognition, Computation, and Pylyshyn*. Cambridge, MA: MIT Press, 2009, 139-156.

“Cellular and Subcellular Neuroscience.” In J. Symons and F. Calvo (eds.), *Routledge Companion to Philosophy of Psychology*. London: Routledge, 2009, 400-415.

## 2008

“Neuroeconomics, Neurophysiology and the Common Currency Hypothesis” (co-author Anthony Landreth). *Economics and Philosophy* 24 (2008), 419-429.

“The Molecules of Social Recognition Memory: Implications for Neuroethics and Extended Mind.” *Consciousness and Cognition* 17 (2008): 468-474.

“Reductionism.” In W. Darity (Editor-in-Chief), *International Encyclopedia of the Social Sciences*, 2<sup>nd</sup> Ed. Macmillan Reference USA, 2008.

Review of Rockwell’s *Neither Brain nor Ghost. Mind* (2008).

“Real Reduction in Real Neuroscience: Metascience, Not Philosophy of Science (and Certainly

Not Metaphysics!).” In J. Hohwy and J. Kallestrup (eds.), *Being Reduced*. Oxford: Oxford University Press, 2008: 34-51.

#### 2007

“Ruthless Reductionism and Social Cognition.” *Journal of Physiology (Paris)* 101 (2007): 230-235.

“The Changing Faces and Scientific Bases of Mind-Brain Reductionism.” Forthcoming in *Reti, saperi, linguaggi* (Journal of the Department of Cognitive Science, University of Messina, Italy), Volume 2 (2007).

“Reduction(ism).” In J. Prinz (ed.), *Handbook of Philosophy of Psychology*. Oxford: Oxford University Press, 2007.

“Hodgkin, Alan.” (Co-author Sean Keating.) In Noretta Koertge (Editor-in-Chief), *New Dictionary of Science Biography*, Charles Scribner, 2007.

“Euler, Ulf von.” In Noretta Koertge (Editor-in-Chief), *New Dictionary of Science Biography*, Charles Scribner, 2007.

“Review of Melnyk’s *A Physicalist Manifesto*.” *Philosophy and Phenomenological Research* 74/1 (2007): 262-264.

“Who Says You Can’t Do a Molecular Biology of Consciousness?” In M.K.D. Schouten and H. de Jong (eds.), *The Matter of the Mind*. London: Blackwell, 2007, 275-297.

#### 2006

“Social Behaviors and Brain Interventions.” (co-author Aaron Kostko) In M. De Caro, F. Ferretti, and M. Marraffa (eds.), *A Cartography of the Mind*. Dordrecht: Springer, 2006.

“Ruthless Reductionism in Recent Neuroscience.” *IEEE Transactions on Systems, Man, and Cybernetics* 36 (2006), 134-140.

“Reducing Mind to Molecular Pathways: Explicating the Reductionism Implicit in Current Mainstream Neuroscience.” *Synthese* 152 (2006): 411-434..

#### 2005

“Precis of *Philosophy and Neuroscience: A Ruthlessly Reductive Account*. *Phenomenology and The Cognitive Sciences* 3 (2005).

“Replies to Bayne and Fernández, Gottschling, Jacobson, Legrand and Grammont, and Neisser.” *Phenomenology and the Cognitive Sciences* 3 (2005).

“Neuroscience.” In Donald M. Borchert (Editor-in-Chief), *Encyclopedia of Philosophy*, 2<sup>nd</sup> Edition. Macmillan Reference USA (2005).

“Molecular Neuroscience to My Rescue (Again): A Reply to de Jong and Schouten.” *Philosophical Psychology* **18/4** (2005): 487-493.

“Review of Hirstein’s *Brain Fiction*.” *Journal of Consciousness Studies*, **12** (2005): 87-89

“Phenomenology and Cortical Microstimulation” (co-author Ralph Ellis). In D.W. Smith and A. Thomasson (eds). *Phenomenology and the Philosophy of Mind*. Oxford: Oxford University Press, 2005, 140-164.

#### 2004

“Re-examining Logical Positivism: Testability and Meaning in Contemporary Neuroscience” (co-author Arthur Morton). *The Journal of Contemporary Philosophy* **XXV**: 3-11.

#### 2003

“Empirical Evidence for a Narrative Concept of Self.” In G. Fireman, T. McVay, and O. Flanagan (eds.), *Narrative and Consciousness: Literature, Psychology, and the Brain*. New York: Oxford University Press, 2003: 195-208.

“Bridging the Cognitive-Cellular Neuroscience Gap Empirically: A Study Combining Physiology, Computational Modeling, and fMRI” (co-authors M. Avison, V. Schmithorst, A. Landreth, and S. Holland). *Journal of Experimental and Theoretical Artificial Intelligence* **15** (2003): 161-175.

"Philosophy of Mind and the Neurosciences." In S. Stich and T. Warfield (eds.), *A Blackwell Guide to Philosophy of Mind*. New York: Blackwell, 2003: 322-351.

#### 2002

“Concepts “Structured Through Reduction”: A Structuralist Resource Illuminates the Consolidation—Long-Term Potentiation (LTP) Link.” *Synthese* **130** (2002): 123-133.

- Reprinted in S. Rahman, J. Symons, D.M. Gabbay, and J.P. van Bendegem (Eds.) (2004), *Logic, Epistemology, and the Unity of Science*, Dordrecht: Springer.

"Multiple Realizability." *Encyclopedia of Cognitive Science*. New York: Macmillan, 2002, 110-115.

#### 2001

"Precis of *Psychoneural Reduction*." *Grazer Philosophische Studien* **61** (2001): 247-253. (Part of a Book Symposium with Ansgar Beckerman, Achim Stephens, and J. Christopher Maloney).



"New Wave Metascience: Replies to Beckerman, Maloney, and Stephens." *Grazer Philosophische Studien* **61** (2001): 285-293. (Part of a Book Symposium with Angswar Beckerman, Achim Stephens, and J. Christopher Maloney)

"Concepts of Intertheoretic Reduction in Current Philosophy of Mind." *A Field Guide to Philosophy of Mind* (Societa Italiana Filosofia Analitica)  
<http://host.uniroma3.it/progetti/kant/field/cir.htm>

"Understanding Neural Complexity: A Role for Reduction." *Minds and Machines* **11** (2001): 467-481.

### 2000

"The Effect of Motivation on the Stream of Consciousness: Generalizing from a Neurocomputational Model of Cingulo-Frontal Circuits Controlling Saccadic Eye Movements" (co-authors Marica Bernstein and Samantha Stiehl). In R. Ellis and N. Newton (eds.), *The Cauldron of Consciousness*. New York: John Benjamins, 2000: 135-162.

"Vector Subtraction Implemented Neurally: A Neurocomputational Model of Some Cognitive and Conscious Processes." *Consciousness and Cognition* **9** (2000): 117-144.

"Editors' Introduction" (co-authors Valerie Hardcastle and Gillian Einstein). *Brain and Mind*. **1/1** (April 2000): 1-5.

### 1999

"A Functional Hypothesis for LGN-V1-TRN Connectivities Revealed by Computer Simulation" (co-authors M. Bernstein, M. Heatley, C. Worley, and S. Stiehl). *Journal of Computational Neuroscience* **8/3**, June 1999, 251-261.

"Review of Gazzaniga's *Conversations in the Cognitive Neurosciences*." *Philosophical Psychology* **12/2**, June 1999, 221-223.

### 1997

"From Sensory Neuroscience to Neurophilosophy: Reflections on Llinas and Churchland's *The Mind-Brain Continuum*" *Philosophical Psychology* **10/4**, December 1997, 523-530.

"Why Reduction?" *Dialectik* 1997/3, Fall 1997, 23-35.

"Review of Lyons, *Approaches to Intentionality*." *Philosophical Books* **38/1**, January 1997, 53-55.

### 1996

"New Wave Psychophysical Reduction and the Methodological Caveats." *Philosophy and*

*Phenomenological Research* **56/1**, March 1996, 57-78.

1995

"Psychoneural Reduction of the Genuinely Cognitive: Some Accomplished Results."

*Philosophical Psychology* **8/3**, December 1995, 265-285.

"Connectionism, Reduction, and Multiple Realizability." *Behavior and Philosophy* **23/2**, Fall 1995, 29-39.

1994

"Biologically Plausible Learning in Neural Nets." *Advances in Artificial Intelligence in Economics, Finance and Management* **1**, 1994, 193-202.

1993

"Connectionism, Eliminativism, and the Semantic View of Theories." *Erkenntnis* **39/5**, November 1993, 359-382.

"Philosophy Neuralized: A Critical Notice of P.M. Churchland's *Neurocomputational Perspective*." *Behavior and Philosophy* **20/2** and **21/1** (double issue), 1993, 75-88.

1992

"Revisionary Physicalism." *Biology and Philosophy* **7/4**, October 1992, 411-430

"Multiple Realizability and Psychophysical Reduction." *Behavior and Philosophy* **20/1**, Spring/Summer 1992, 47-58.

"Mental Anomaly and the New Mind-Brain Reductionism." *Philosophy of Science* **59/2**, June 1992, 217-230.

"The Impact of the Cognitive and Brain Sciences on Recent Philosophy" and Guest Editor. *Topoi* **11/1**, March 1992, 1-4.

1991

"Contemporary Reflections on the Mind-Body Problem." In L. Pojman (ed.), *Introduction to Philosophy: Classical and Contemporary Readings*. Belmont, CA: Wadsworth, 1991, 333-342.

RECENT MEDIA APPEARANCES

Podcast, *Honorable Mentions*, Mississippi State University Shackouls Honors College, "The philosophy of neuroscience," <https://open.spotify.com/episode/3LChpr5XM5oK5GmZPXgmZf>

Zoom lecture, "Computational modeling limits in neuroscience," Brains Blog, <https://www.youtube.com/watch?v=g85bgHul7Ns>

Podcast, “Dr. John Bickle and Dr. Antonella Tramacere,” Vision Podcast, Mississippi State University College of Arts and Sciences,” hosted by Karyn Brown, John Burrow and Sam Kealhofer,  
<https://open.spotify.com/episode/2Z3iALHggPyZQlgPAu3B26?si=Mvv8IlnZS9mMj589guAFoQ&nd=1>

Article, “MSU Philosophy Faculty Researching New Ways to Understand the Human Mind,” by Sam Kealhofer, Mississippi State University College of Arts and Sciences *Learning Through Discovery*, <https://www.cas.msstate.edu/media/newsandaccomplishments/msu-philosophy-faculty-researching-new-ways-understand-human-mind/>

#### EDITORSHIPS

Review Editor, *Frontiers in Ecology and Evolution*, 2014-present

Editorial Board Member, *Synthese*, 2003-present; Field Editor, Cognitive Science and Neuroscience, 2006-2010

Editor of an annual special issue of *Synthese* on “Neuroscience and Its Philosophy,” 2004-2010, published annually each September by Kluwer Academic Publishers, now Springer.

Founding Editor-in-Chief, *Brain and Mind: A Transdisciplinary Journal of Neuroscience and Neurophilosophy*. Published in three issues per annual volume by Kluwer Academic Publishers. (Discontinued after volume 4, issue 3, December 2003)

#### RESEARCH PRESENTATIONS (304)

#### PROFESSIONAL CONFERENCES (186)

“New research tools—new findings on the neurobiology of morality?” Invited commentary on Patricia Churchland’s presentation to *Neural Mechanisms On-Line* <https://www.neuralmechanisms.org/> (talk available at accompanying YouTube site), February 25, 2022

“Metascience, not metaphysics, of neuroscience.” Deep South Philosophy and Neuroscience Workgroup Group Session, *American Philosophical Association Central Division Meeting*, Chicago, IL, February 24, 2022

“Tinkering in the lab.” *The Yale Consciousness Collo*

“Identity experiments in neurobiology: The discovery of the N-methyl-D-aspartate receptor.” *Philosophy and Neuroscience at the Gulf IV, Fourth Annual Meeting of the Deep South Philosophy and Neuroscience Workgroup*, Pensacola Beach, FL. September 23-25, 2021

“Identity experiments in neurobiology: The discovery of the N-methyl-D-aspartate receptor.” *Mississippi Academy of Sciences Annual Meeting*, Biloxi, Mississippi, August 5-6, 2021

“I agree with Ross! (But I also see a big problem about neuroscience lurking in her latest work)” *American Philosophical Association Pacific Division Meeting, Group Session, Deep South Philosophy and Neuroscience Workgroup*, held on line April 7, 2021

“Intervene molecularly, measure behavior, conclude (molecular) mechanisms: Experiments in Molecular and Cellular Cognition.” *American Philosophical Association Central Division Meetings, Group Session, Deep South Philosophy and Neuroscience Workgroup*, held on line February 25, 2021

“Identity experiments in neurobiology.” *Philosophy of Science Association On-Line Poster Session*, January 29, 2021

“Advertisement for Philosophers’ Attention to Neuroepigenetics,” (co-presented with Antonella Tramacere), *Philosophy of Science Association On-Line Poster Session*, January 29, 2021.

“Molecular and cellular cognition (MCC): A neuroscientific field driven by its research tools.” Part of a symposium on “Neural Tools,” *Southern Society for Philosophy and Psychology* (on line), December 3-5, 2020

“The causal pathways concept: On the emerging role of case studies from neuroepigenetics” (with Aaron Kostko). *Philosophy and Neuroscience at the Gulf Workshop III*, held on line October 9-11, 2020

“On the limits of quantitative modeling in neurobiology: A historical perspective.” *Guyton History of Medicine Conference*, September 11, 2020.

“1952 (and all that): What Hodgkin and Huxley actually did.” *Mississippi Academy of Sciences Annual Meeting*, Biloxi, MS, February 20-21, 2020.

“The experiment artifact-new research tool problem and a solution-in-practice.” (Co-presenter Carl Craver.) Keynote address, *Neurotech: An Early Career Workshop, Center for Philosophy of Science*, University of Pittsburgh, Pittsburgh, PA, January 24-25, 2020.

“Philosophers in wet labs, doing metascience.” *Overcoming the Challenges of Interdisciplinarity: Lessons Learned from Contributing to Secrets of Creativity*, City University of New York, October 24, 2019

“Theory has had only a modest amount to do with the building of these ingenious devices ... It is engineering that counts.” *Tool Development in Neuroscience: A Science-in-Practice Workshop*, Pensacola Beach, FL, September 27-28, 2019

“Tool development in neurobiology: The case of the patch clamp.” *Neuroscience Research and Innovation Day*, University of Mississippi Medical Center, Jackson, MS, April 11, 2019.

“Laser lights and designer drugs: The new face of ruthlessly reductive neuroscience.” *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, March 22-23, 2019

“Why is psychiatry mired in folk concepts? Comments on Theruer.” *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, March 22-23, 2019.

“Metascience, not metaphysics: Describe scientific practices accurately, and get what you need.” Part of a symposium on Metaphysics of Science and Philosophy of Experiment, with Carl Gillet and Robert Richardson, *Southern Society for Philosophy and Psychology Annual Meeting*, Cincinnati, OH, March 7-9, 2019.

“Laser lights and designer drugs: The new face of ruthlessly reductive neuroscience.” *Southern Society for Philosophy and Psychology Annual Meeting*, Cincinnati, OH, March 7-9, 2019.

“A fresh look at Kemeny-Oppenheim reduction (with new cases from neuroscience).” *American Philosophical Association Central Division Meeting, Metaphysics of Science Group Meeting*, Denver, CO, February 20-23, 2019

“Might the metascientific use of history of science serve as a model for the use of philosophy’s history?” *Mississippi Philosophical Association Annual Meeting*, Starkville, MS, February 9-10, 2019

“Tool development drive progress in neurobiology, and engineering concerns drive tool development: The case of the patch clamp.” *Philosophy of Science Association Biennial Meeting Poster Session*, Seattle, WA, November 1-4, 2018

“In praise of ... engineering??” *Philosophy of Science Association Biennial Meeting Contributed Paper Session, “Neuroscience,”* Seattle, WA, November 1-4, 2018

“Tool development drives progress in neurobiology, and engineering concerns (not theory) drive tool development: The case of the patch clamp.” *Society for the History of Technology Annual Meeting*, St. Louis, MO, October 11-14, 2018

“Tool development drives theory, and engineering concerns drive tool development: The case of the patch clamp.” *Deep South Philosophy and Neuroscience Workgroup Meeting, Alabama Philosophical Association Annual Meeting*, Pensacola Beach, FL. September 28-29, 2018

“Tool development drives progress in neurobiology, and engineering concerns (not theory) drive tool development: The case of the patch clamp.” Invited session, “Does neuroscience need theory?” *American Philosophical Association Pacific Division Meeting*, San Diego, CA, March 28-March 31, 2018

“In praise of ... engineering??” *Southern Society for Philosophy and Psychology Annual Meeting*, San Antonio, TX, March 15-17, 2018

“The value of Rumbaugh’s “comparative perspective” ...in neurobiology.” Invited session in Memory of Duane Rumbaugh, *Southern Society for Philosophy and Psychology Annual Meeting*, San Antonio, TX, March 15-17, 2018

“Laser lights and designer drugs: The new face of ruthlessly reductive neuroscience.” *American Philosophical Association Eastern Division Meeting*, Savannah, GA, January 3-6, 2018

“In praise of ... engineering??” *Alabama Philosophical Society Annual Meeting*, Pensacola Beach, FL, September 29-30, 2017

“Tool development: How experiment-driven sciences progress.” *Deep South Philosophy of Biology Workshop*, University of Alabama, Birmingham, Birmingham, AL, March 31-April 1, 2017.

“From microscopes to optogenetics: Ian Hacking vindicated.” *Southern Society for Philosophy and Psychology Annual Meeting*, Savannah, GA, March 22-24, 2017

“From microscopes to optogenetics: Ian Hacking vindicated.” *American Philosophical Association Central Division Meeting*, St. Louis, MO, March 1-4, 2017

“Nostalgia for a past American civic icon” Philosophy, film studies, history, science.” *Mississippi Philosophical Association Annual Meeting*, Mississippi State University, Starkville, MS, February 3-4, 2017

“Tool development: How experiment-driven sciences progress.” *Philosophy of Science Association Meetings*, Atlanta, GA, November 1-5, 2016

“On the rise and “fall” of neurophilosophy.” *Alabama Philosophical Society Annual Meeting*, Pensacola Beach, FL, September 30-October 1, 2016

“Insights about attention from neurobiology (not cognitive science).” *Mississippi Philosophical Association Annual Meeting*, Mississippi State University and University of Mississippi, March 18-19, 2016

“Where multiple realizability comes to die.” *Southern Society for Philosophy and Psychology*, Louisville, KY, March 10-12, 2016.

“Real revolutions in neuroscience: Tool development.” *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, February 19-20, 2016

“In scorn of the superempirical virtues: Comments on Todd.” *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, February 19-20, 2016

“Laser lights and designer drugs: The new face of ruthlessly reductive neuroscience.” *Alabama Philosophical Society Annual Meeting*, Pensacola, FL, October 2-3, 2015

“Causal explanation in social neuroscience: Two accounts” (co-presenter: Aaron Kostko). *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, LA, April 2-4, 2015.

“Causal explanations in cellular/molecular neuroscience” Comments on Woodward.” *Workshop in Honor of James Bogan, Center for the Philosophy of Science, University of Pittsburgh*, Pittsburgh, PA, March 28, 2015.

“What might contemporary empirical moral epistemology learn from 1970s epistemology? Comments on Schwan.” *Mid-South Philosophy Conference, Rhodes College*, Memphis, TN, March 13-14, 2015.

“Causal explanation in social neuroscience: Two accounts.” (co-presenter: Aaron Kostko). *Mid-South Philosophy Conference, Rhodes College*, Memphis, TN, March 13-14, 2015.

“Are Creative Humans Poor Recallers? A Functional Hypothesis Suggested by “Ruthless Reductionistic” Molecular Neuroscience,” invited lecture, *Interdisciplinary International Symposium on Creativity, Banbury Center, Cold Spring Harbor Laboratory*, Long Island, NY, October 21-24, 2014

“Psychopathologies Common among Experts,” invited presentation and panel discussion on Easterley’s *The Tyranny of Experts*, *Association for Politics and the Life Sciences*

*Annual Meeting*, Emory University, Atlanta, GA, October 17-18.

“Contemporary Neuroscience and Autonomy,” submitted presentation to *Association for Politics and the Life Sciences Annual Meeting*, Emory University, Atlanta, GA, October 17-18

“What if we treat consciousness like any other phenomenon for bench neuroscience?”  
*Invited Lecture, Conference on Conscious Thought and Thought about Consciousness*,  
*University of Mississippi*, Oxford, MS, April 27-30, 2014

Invited Participant, *Workshop on New Tools for Neuroscience Discovery*, University of California, Los Angeles Medical Center, Los Angeles, CA, March 11-12, 2014

Participant, Discussant, *Invited Panel* (with Michael Bishop, Philosophy, Florida State University, and Diane Lebesque, Neurobiology and Anatomical Sciences, University of Mississippi Medical Center) on *Silva, Landreth, and Bickle’s Engineering the Next Revolution in Neuroscience*, *Mississippi Academy of Science Annual Meeting*, Hattiesburg, MS, March 6-7, 2014

“Marr and Reductionism” *Submitted Presentation, Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, February 21-22, 2014

“Back to the ‘80s on MR?” *Invited Commentary, Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, February 21-22, 2014

“Engineering Revolutions in Neuroscience, Step 2.” *Invited Keynote Lecture, Neuroscience and Behavioral Research Day*, University of Mississippi Medical Center, Jackson, MS, January 17, 2014

“Libertarian Cooperation.” *Association for Politics and the Life Sciences*, Texas Tech University, Lubbock, TX, October 25-26, 2013.

“Neurobiology and the Gun Debate.” *Association for Politics and the Life Sciences*. Texas Tech University, Lubbock, TX, October 25-26, 2013

“Comments on Kästner.” *Society for Philosophy and Psychology Annual Meeting*, Invited commentary, Brown University, Providence, RI, June 13-15, 2013.

“Debates: Naturalism” (with Marco Di Caro, University of Rome). Invited talk, *International Neuroethics Conference*, University of Padua, Padua, Italy, May 8-11 2013

“Don’t Put Away the Tin-Foil Hats Just Yet: Libertarian Remarks on Keeley’s “Of



Conspiracy Theories”.” (co-presenter Marica Bernstein) *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, February 15-16, 2013.

“Ruthless reductionism ass standard scientific modus operandi.” Invited talk, *Complexity Network*, University of Chicago, November 30-December 1, 2012.

“Comments on Thereur.” *Society for Philosophy and Psychology Annual Meeting*, Invited commentary, University of Colorado, Boulder, CO, June 21-23, 2012

“Manipulating Brain Genes and Proteins to Affect Social Memory.” *Interdisciplinary Conference on Neuroscience and Literature*, Banbury Center, Cold Spring Harbor National Laboratory, April 19-21, 2012

“Lessons for Experimental Philosophers from the Rise and Fall of Neurophilosophy.” *Mid-South Philosophy Conference*, Rhodes College, Memphis, TN, March 5-6, 2012.

“Libertarian Political Philosophy, Virtue Ethics, vmPFC, and Leadership.” Invited Lecture, Panel on Libertarian Perspectives on Leadership, *Association for Politics and Life Sciences Annual Meeting*, Cincinnati, OH, October 13-15, 2011

“Universal Learning Mechanisms ... and the Shift from Evolutionary Ethics to Neuroethics.” Invited Participant on Scott James, *Introduction to Evolutionary Ethics*, *Association for Politics and the Life Sciences Annual Meeting*, Cincinnati, OH, October 13-15, 2011

“Still Room for Political Libertarianism Despite Recent Gains in Biology—Even Neuroscience.” Invited Participant, Session on Biology, Individualism and Collectivism, *Association for Politics and the Life Sciences Annual Meeting*, Cincinnati, OH, October 13-15, 2011

“Lessons for Experimental Philosophers from the Rise and Fall of Neurophilosophy.” Presidential Address, *Mississippi Philosophical Association Annual Meeting*, Mississippi State University, Starkville, MS, October 7-8, 2011.

“A Virtue Ethics Foundation for Libertarian Political Philosophy.” *Mississippi Philosophical Association Annual Meeting*, Mississippi State University, Mississippi State, MS, March 24-26, 2011.

“Aristotle in the Magnet: Courage.” *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, Louisiana, March 10-12, 2011.

“Aristotle in the Magnet: An Old Moral Virtue Gets New Neuroscientific Treatment.”

*Invited Keynote Lecture, Mid South Philosophy Conference, University of Memphis, Memphis, Tennessee, March 4-5, 2011*

“Keynote Lecture III: Ruthless Reduction in Control: A Reply to New Mechanists Bechtel and Craver.” *Invited Keynote Lecturer, Third European Graduate School: Philosophy of Mind, Reduction, Neuroscience, University of Lausanne, Lausanne, Switzerland, October 12-16, 2010.*

“Keynote Lecture II: A Closer Look at the Experimental Details: The Convergent Four.” *Invited Keynote Lecturer, Third European Graduate School: Philosophy of Mind, Reduction, Neuroscience, University of Lausanne, Lausanne, Switzerland, October 12-16, 2010.*

“Keynote Lecture I: A Tale of Two (Memory) Molecules: Ruthless Reduction Vindicated.” *Invited Keynote Lecturer, Third European Graduate School: Philosophy of Mind, Reduction, Neuroscience, University of Lausanne, Lausanne, Switzerland, October 12-16, 2010.*

“Commentary on Barret’s Invited Presidential Address,” *Invited Commentary, Southern Society for Philosophy and Psychology Annual Meeting, Atlanta, GA., April 15-17, 2010.*

“Virtue Ethics as a Novel Foundation for Conservationist Environmental Policies.” *Mid-South Philosophy Conference, University of Memphis, Memphis, TN March 5-6, 2010*

“Has the Past Decade of Multiple Realization Critiques Aided Psychoneural Reductionists?” *Realization, Multiplicity, and Experimentation in Biology, Psychology, and Neuroscience Workshop, University of Alabama Birmingham, February 26-27, 2010*

“Intervening into Brain Genes and Proteins to Affect Social Cognition.” *Mississippi Academy of Sciences Annual Meeting, Division of Cellular and Molecular Biology, Hattiesburg, MS, February 11, 2010*

“Virtue Ethics Provides a Novel Foundation for Conservationist Environmental Policies.” *Contributed Paper. Mississippi Philosophical Association Annual Meeting, Mississippi State University, Mississippi State, MS, February 5-6, 2010*

“From Psychological Generalizations to Neuromolecular Mechanisms: Explanations ‘In a Single Bound’”. *Invited Address, Interdisciplinary Conference on Philosophy and Psychology, University of South Alabama, Mobile, AL, September 25-26, 2009*

“Comments on Bateman.” *Invited Commentary, society for Philosophy and Psychology Annual Meeting, Indiana University, Bloomington, IN, June 13-16, 2009*

“Still Room For Political Liberties Despite Recent Gains Toward a Neuroscience of Human Behavior. *Contributed Paper*, Southern Society for Philosophy and Psychology Annual Meeting, Savannah, GA, April 7-9, 2009.

“Molecular Genetics of Learning and Memory.” *Invited Lecture*, ISHPSSB Summer Workshop, Washington University in St. Louis, August 7-10, 2008.

“Comments on Anderson.” *Invited Commentary*, Society for Philosophy and Psychology Annual Meeting, University of Pennsylvania, Philadelphia, PA, June 26-29, 2008.

“Molecular Neuroscience and Cognitive Phenomena: Explanations ‘in a Single Bound.’” *Invited Address*. 10<sup>th</sup> Biannual Conference on the Brain-Behavior Nexus, University of Guadalajara, Guadalajara, Mexico, February 25-27, 2008.

“A Scientific Case Against Extended Mind.” *Invited talk*, session on Extended Cognition, Mid-South Philosophy Conference, Memphis, TN, February 23-24, 2008.

“How are Responsibility Ascriptions Justifiable in Light of the New Neuroscientific Determinism?” *Invited Address*. Revising the Frontiers of Responsibility and Blame: How Neuroscience is Reshaping Philosophy and the Criminal Law. College of Law, University of Cincinnati, Cincinnati, OH, October 11, 2007.

“Can Political Libertarianism be Justified in Light of the New Neuroscientific Determinism?” *Invited Plenary Address*, Association for Politics and the Life Sciences, Cincinnati, OH, October 11-13, 2007.

“Ruthless Reductionism In Control: A Reply to New Mechanists Bechtel and Craver.” *Conference on Neural Mechanisms*, Centre for the Study of Mind in Nature, University of Oslo, Oslo, Norway, September 24-25, 2007.

“Mind-to-Molecules Reduction and Social Cognition.” *Symposium: Philosophy and Neuroscience: Cognitive and Moral Mechanisms*. American Philosophical Association Central Division Meetings, Chicago, IL, April 18-21, 2007.

“Ruthless Reductionism and Extended Mind Arguments.” *Society for Philosophy in the Contemporary World*. American Philosophical Association Central Division Meetings, Chicago, IL, April 18-21, 2007.

“The Molecules of Social Cognition: Implications for Neuroethics and “Extended Mind”.” *Conference on Neuroethics and Empirical Moral Psychology*. Center for the Study of Mind in Culture, University of Oslo, Oslo, Norway, March 14-16, 2007.

“The Molecules of Social Recognition Memory.” *Conference on Social Cognition, Emotions, and Self-Consciousness*, Hanse Wissenschaftskolleg, Delmenhorst, Germany, March 8-10, 2007.

“Reductionism versus Enactivism in the Philosophy of Mind, Part I: A Challenge for Enactivists.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN, February 23-24, 2007.

“An Alternative to Functional Reduction.” *Conference on Emergence versus Reduction in the Explanation of Complex Systems*, Zentrum fuer interdisziplinäre Forschung (ZiF), Universität Bielefeld, Bielefeld, Germany, January 24-26, 2007.

“Who Says You Can’t Do a Molecular Biology of Consciousness?” *Society for Philosophy and Psychology Annual Meeting*, Washington University, St. Louis, MO, June 1-4, 2006

“Real Reduction in Real Neuroscience—Contrasted with Philosophers’ Accounts.” *Workshop on Human Cognition and Neuroscience*, Les Treilles, France, May 16-21, 2006.

“Ruthlessly Reductive Neuroscience . . . and the Rest of Cognitive Science.” *Southern Society for Philosophy and Psychology Annual Meeting*, Charleston, SC, April 13-15, 2006

“Comments on Jay McClelland,” President’s Invited Speaker Session, *Southern Society for Philosophy and Psychology Annual Meeting*, Charleston, SC, April 13-15, 2006

“Comments on Bill Faw.” *Southern Society for Philosophy and Psychology Annual Meeting*, Charleston, SC, April 13-15, 2006

“Has Ruthless Reductionism Been Empirically Refuted?” *Mid-South Philosophy Conference*, Memphis, TN, February 24-25, 2006

“Comments on Ronald Endicott.” *Mid-South Philosophy Conference*, Memphis, TN, February 24-25, 2006.

“Memory Reconsolidation: The (Cognitivist) Empire Strikes Back?” *Central States Philosophy Conference*, Lexington, KY, October 6-7, 2005

“Reducing Visual Attention to Cell Physiology.” *ZenCon 2005, Conference in Honor of the 20<sup>th</sup> Anniversary of the Publication of Zenon Pylyshyn’s Content and Cognition*.

Invited Speaker. University of Guelph, Guelph, Ontario, Canada, April 29-May 1, 2005.

“Ruthless Reductionism: Cognition *and* Consciousness.” Presidential Address, *Southern Society for Philosophy and Psychology Annual Meeting*, Durham, NC, March 24-26, 2005

“A (Very!) Brief Metascience of Biochemistry and Molecular Neuroscience: A Reply to Aizawa.” *Central States Philosophical Association Annual Meeting*, University of Iowa, Iowa City, IA, October 22-23, 2004.

Also presented at *Southern Society for Philosophy and Psychology Annual Meeting*, Durham, NC, March 24-26.

“Elimination of Metaphysics Remains a Viable Philosophical Option.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN, February 18-19, 2005.

“Comments on Bernstein.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN, February 18-19, 2005.

“How Structuralism Advanced the Study of Intertheoretic Reduction,” *Structuralist World Congress*, Xalapa, Mexico, July 2004.

“Beyond ‘Reductionism’: The View from ‘Ruthlessly Reductive Molecular and Cellular Cognition.’” *Society for Philosophy and Psychology Annual Meeting*, Barcelona, Spain, July 2004.

“Comments on Stephen Kosslyn’s Presidential Invited Address,” *Southern Society for Philosophy and Psychology Annual Meeting*, April 2004.

“Comments on Mark Couch.” *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, LA, April 2004.

“What Real Cortical Microstimulation Teaches.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN. February 2004.

“Reducing Mind to Molecular Pathways.” Invited presentation at the *International Workshop on Reduction and Emergence*, Jean Nicod Institute, Paris, France, November 12-15, 2003

Invited Keynote Address, “Philosophy and Neuroscience: Ruthless Reductionism.” *International Conference on Cognitive Informatics 3*, South Bank University, London, U.K., August 18-20, 2003.

“Cellular Mechanisms of Sequential Processing: A Transdisciplinary Research Project Integrating Physiology, Computer Simulation, and fMRI.” *International Conference on Cognitive Informatics 3*, South Bank University, London, U.K., August 18-20, 2003.

“Multiple Realization, Meet Molecular Neuroscience.” *Society for Philosophy and Psychology*, California Institute of Technology, Pasadena, CA, June 19-21, 2003.

“Yet Another Consciousness Myth Falls to Empirical Data.” *Southern Society for Philosophy and Psychology*, Atlanta, GA, April 17-19, 2003.

“Dissociating Activity in Two Frontal Working Memory Regions During a Saccade Sequencing Task : A BOLD-fMRI Study.” *Southern Society for Philosophy and Psychology*, Atlanta, GA, April 17-19, 2003.

“Biological Computational Modeling Meets Functional Neuroimaging . . . And Both Progress.” Invited Plenary Lecture, *Fourteenth Midwest Artificial Intelligence and Cognitive Science Conference*, University of Cincinnati, Cincinnati, OH, April 12-13, 2003.

“Another Consciousness Myth Falls to Empirical Data.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN, February 21-22, 2003

“Predictions Derived from a Neurocomputational Model of Saccade Sequencing in Frontal Regions Tested Using fMRI” (co-presenter Anthony Landreth). *Society for Neuroscience Annual Meeting*, Orlando, FL, November 2-7, 2002.

“Saccade Sequencing Tasks of Varying Difficulty Invoke Patterend Activations in Frontal eye Fields, Frontal Working Memory Regions, and Anterior Cingulate Cortex: A Human BOLD-fMRI Study.” *Sixth Annual Neuroscience Research Symposium*, East Carolina University Brody College of Medicine, Greenville, NC, October 23, 2002.

“Neural Causation (Circa 2002) vs. Mental Causation: Explanatory vs. Not.” Invited Lecture, *International Conference on Mental Causation*, Zentrum fuer interdisziplinare Forschung, Universitaet Bielefeld, Bielefeld, Germany, July 22-24, 2002.

“Bridging the Cognitive-Cellular Neuroscience Gap Empirically: A Study Combining Physiology, Modeling, and fMRI.” Invited Symposium, *Society for Philosophy and Psychology Annual Meeting*, University of Alberta, Edmonton, Alberta, Canada, June 20-23, 2002.

“Lessons for Methodology from a Combined Neurocomputational Modeling-fMRI Project.” *Cognitive Science at the Millennium*, California State University, Long Beach,

Long Beach, CA, April 7-10, 2002.

“Predictions Derived from a Neurocomputational Model Tested Using fMRI.” *Southern Society for Philosophy and Psychology Annual Meeting*, Psychology Program, Nashville, TN, March 28-30, 2002.

“Multiple Realization, Meet Molecular Neuroscience.” *Southern Society for Philosophy and Psychology Annual Meeting*, Philosophy Program, Nashville, TN, March 28-30, 2002.

“Neural Causation Circa 2002 versus Mental Causation: Explanatory versus Not.” *Mid-South Philosophy Conference*, University of Memphis, Memphis, TN, February 24-25, 2002.

“Cellular Mechanisms of Sequential Processing in Frontal Circuits Revealed Using a Combined Neurocomputational-fMRI Method.” *World Congress for Neuroinformatics*. Technical University Wien, Vienna, Austria, September 24-29, 2001.

“Molecular Mechanisms of Memory Consolidation,” part of an invited symposium on Memory and Molecules. *International Society for the History, Philosophy, and Social Studies of Science*, Quinnipiac College, Hamden, CT, July 19-22, 2001.

“Motivational Influences on Attention” (with Marica Bernstein). Invited Joint Philosophy and Psychology Symposium on Consciousness and Emotion, *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, LA, April 10-12, 2001.

“Empirical Evidence for a Narrative Concept of Self.” *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, LA, April 10-12, 2001.

“Comparing the Effects of Excitatory and Inhibitory Synapses on Spiking Rates in Single Neurons Using Compartmental Modeling Techniques” (with Doua Lee). *Southern Society for Philosophy and Psychology Annual Meeting*, New Orleans, LA, April 10-12, 2001.

“Empirical Evidence for a Narrative Concept of Self.” *Mid South Philosophy Conference*, University of Memphis, Memphis, TN, February 24-25, 2001.

“Experiments with a Multi-Compartmental Model of a Thalamic Relay Neuron Reveals the Relative Effects of Cortical Excitatory and Intrathalamic Inhibitory Synapses on Membrane Potential. *Society for Neuroscience*, November 4-9, 2000, New Orleans, LA.

“Understanding Neural Complexity.” *Budapest-Cincinnati Conference on Brains, Minds, and Computers*, Hungarian Academy of Sciences, Budapest, Hungary, August 25, 2000.

"Horgan on the Physicalist Agenda." *Austro-Slovene Philosophy Congress, Horgan Focus Symposium*, Celje, Slovenia, August 19-23, 2000.

"Modeling Cortical Excitatory and Intrathalamic Inhibitory Synapses on LGN Relay Neurons." *International Conference on Cognitive and Neural Systems*, Boston University, Boston, MA, May 25-27, 2000.

"Understanding Neural Complexity: A Role for Reduction." Invited symposium on Philosophy of the Mind/Brain, *International Conference on Complex Systems*, Nashua, NH, May 21-25, 2000

"Investigating the Effects of Explicit Conscious Attention at the Level of the Single Neuron." Invited symposium on Treating Consciousness as an Experimental Variable in Psychology and Neuroscience, *Southern Society for Philosophy and Psychology*, Atlanta, GA, April 20-22, 2000.

"Empirical Evidence for a Narrative Concept of Self." *North Carolina Philosophical Society/South Carolina Society for Philosophy Joint Meeting*, Duke University, Durham, NC, February 25, 2000

"Modeling Corticothalamic Excitatory and Intrathalamic Inhibitory Synapses on Thalamic Relay Neurons" *Society for Neuroscience*, October 22-28, 1999, Miami Beach, FL.

"A Neurocomputational Model of Cingulo-Parieto-Frontal Circuits Controlling Saccadic Eye Movements" *Society for Neuroscience*, October 22-28, 1999, Miami Beach, FL.

"Limbic Connectivities With Parieto-Frontal Cortex: A Model System for Developing a Computational Neuroscience of Sequential Cognitive Processes and Affective Effects?"

*International Society for the History, Philosophy, and Social Studies of Biology*, July 7-10, 1999, Oaxaca, Mexico.

"Comments on Bernard Baar's "Criteria for Consciousness in the Brain"." *Society for Philosophy and Psychology*, June 17-20, Stanford CA.

"A Functional Hypothesis of LGN-V1-TRN Connectivities Suggested by Computer Simulation." *3rd Annual Vision Research Conference*, May 6-7, Fort Lauderdale, FL.

"Vector Subtraction Implemented Neurally: How the Brain Computes Sequential Processes?" *American Philosophical Association Pacific Division Meeting*, special



special session on Philosophical Implications of Neurocomputing, sponsored by the APA Philosophy and Computers Group, March 31-April 2, 1999, Berkeley, CA

"New Wave Psychoneural Reduction: Expanding on Some Themes." *Symposium on Psychoneural Reduction*, February 26-27, 1999, University of Mississippi, Oxford, MS  
"Comments on Bill Lycan's "The Case for Phenomenal Externalism"." *North Carolina Philosophical Society Annual Meeting*, February 12, 1999, Wake Forest University, Winston-Salem, NC.

"A Neural Network Model of Vector Subtraction and Variable 'Redirect' Mechanisms for Selective Visual Attention in Area LIP and FEF" (co-presenter M. Bernstein). *Society for Neuroscience Annual Meeting*, November 8-14, 1998, Los Angeles Convention Center, Los Angeles, CA.

"Responses of Simulated LGN Relay Neurons and V1 Cortical Columns in a Biologically Plausible Neural Net" (co-presenter M. Bernstein). *Society for Neuroscience Annual Meeting*, November 8-14, 1998, Los Angeles Convention Center, Los Angeles, CA.

"Computational Neuroscience: Thalamocortical Circuits." *North Carolina Society for Neuroscience Presidential Symposium*, October 22, 1998, Research Triangle Park, NC.

"Comments on Keeley, "Shocking data from electric fish"." To be presented at *Society for Philosophy and Psychology Annual Meeting*, June 11-14, 1998, University of Minnesota, Minneapolis, MN.

"Modeling stimulus-driven selective visual attention using thalamocortical and intrathalamic cell properties and connectivities" and "Modeling a 'voluntary' selective visual attention mechanism using parieto-frontal cell properties and connectivities." Presented with Marica Bernstein in oral and poster form at *Tucson III: Toward a Science of Consciousness 1998*, April 27-May 2, 1998, Tucson, AZ.

"Structuralist Models of Intertheoretic Reduction: Lessons for Anglo-American Philosophers of Science." Presented as part of an invited symposium on "The Structuralist Program in Philosophy of Science" at *Southern Society for Philosophy and Psychology Annual Meeting*, April 8-10, 1998, New Orleans, LA.

Participant on an invited symposium on "Explanatory Pluralism in Biology" at a joint meeting of the North Carolina Philosophical Society/South Carolina Society for Philosophy, University of South Carolina, Columbia, SC, February 20-21, 1998

"Modeling stimulus-driven selective visual attention using thalamocortical and intrathalamic cell properties and connectivities" and "Modeling a 'voluntary' selective

visual attention mechanism using parieto-frontal cell properties and connectivities." Posters presented with Marica Bernstein at *Society for Neuroscience 1997 Annual Meeting*, New Orleans, LA, October 25-30, 1997

"Neurobiology and Maternal Love: Grounding Ethical Considerations on Real Science" (with Marica Bernstein) and participant in a symposium on Mind, Emotion, and Self-Organizing Processes, *Intermountain Philosophy Conference*, East Tennessee State University, Johnson City, TN, October 10-11.

"Modeling stimulus-driven selective visual attention using thalamocortical and intrathalamic cell properties and connectivities" (with Marica Bernstein, Greg Boyd, and Cindy Worley) and "Modeling a 'voluntary' selective visual attention mechanism using parieto-frontal cell properties and connectivities" (with Marica Bernstein). Posters presented at the *North Carolina Society for Neuroscience 1997 Spring Meeting*, Duke University Medical School, Durham, NC, May 20, 1997

"Modeling visual selective attention in a parallel network using thalamocortical and intrathalamic connectivities: The FRPCN basic model." "Modeling visual selective attention in a parallel network: The moving fovea." "Modeling visual selective attention in a parallel network: Higher order processes and "voluntary" attention" (with Marica Bernstein and Greg Boyd). Presented on a special session of the Psychology program on Computational Neuroscience at the *Southern Society for Philosophy and Psychology*, Atlanta, GA, March 27-29, 1997

"Modeling visual selective attention in a parallel network using thalamocortical and parieto frontal connectivities: The FRPCN models." University of Piraeus Conference on Neurobiology and Neural Networks, Department of Informatics, Piraeus, Greece, March 21, 1997.

"Selective Attention and Computational Neuroscience." Paper to be presented as part of an invited session on Consciousness and the Brain. *Intermountain Philosophy Conference*, Western Carolina University, Cullowhee, NC, October 18-19, 1996.

Invited Philosophy Discussant for Psychology Program Keynote Address by John Anderson, "A Simple Theory of Complex Behavior," *Southern Society for Philosophy and Psychology*, Nashville, TN, April 4-6, 1996.

"Mental-Physical Property Nonidentity Conjoined with Token Physicalism is Incoherent," as part of an invited symposium on The Requirements of (Psycho-)Physicalism with John Post and Valerie Hardcastle at *Southern Society for Philosophy and Psychology*, Nashville, TN, April 4-6, 1996.

"Mental-Physical Property Nonidentity Conjoined with Token Physicalism is Incoherent," *North Carolina Philosophical Society*, University of North Carolina at Charlotte, Charlotte, NC, February 23-24, 1996.

Invited Commentator on Joseph Cruz, "Connectionists Don't Have to Pretend that They Can't," *Society for Philosophy and Psychology*, State University of New York at Stony Brook, Stony Brook, NY, June 8-11, 1995.

Invited Philosophy Discussant, Psychology Program Keynote Address by Karl Pribram, "Brain and the Varieties of Conscious Experience," *Southern Society for Philosophy and Psychology*, Virginia Beach, VA, April 13-15, 1995.

Invited Commentator on Teed Rockwell, "Can Reductionism be Eliminated?" *American Philosophical Association Pacific Division Meeting*, San Francisco, CA, March 31-April 2, 1995.

"Why Reduction? And Why a New Wave Version?" *North Carolina Philosophical Society*, St. Andrews University, Laurinburg, NC, March 3-4, 1995.

"Connectionism, Reduction, and Multiple Realizability," *Central States Philosophy Association*, Vanderbilt University, Nashville, TN, October 28-30, 1994.

"Connectionism, Reduction, and Multiple Realizability," *Intermountain Philosophy Conference*, Western Carolina University, Cullowhee, NC, September 23-24, 1994.

"New Wave Reductionism, Special Sciences, and the Methodological Caveats," *Society for Philosophy and Psychology*, Memphis, TN, June 1-4, 1994.

"Psychoneural Reduction of the Genuinely Cognitive: Some Accomplished Facts," *Southern Society for Philosophy and Psychology*, Atlanta, GA, March 31-April 2, 1994.

"Connectionism, Reduction, and Multiple Realizability," *Mid-South Philosophy Conference*, Memphis State University, Memphis, TN, February 25-26, 1994.

"Wilfrid Sellars' 'Unknown' Argument for Scientific Realism," *Intermountain Philosophy Conference*, Appalachian State University, Boone, NC, November 19-20, 1993.

"Cognitivism Qua Scientific Revolution: Lessons for Anti-Reductionists," *Society for Philosophy and Psychology*, Simon Fraser University, Vancouver, British Columbia, June 2-5, 1993.

"In Further Defense of New Wave Reductionism: The Methodological Caveats," *Intermountain Philosophy Conference*, Appalachian State University, Boone, NC, April 24-25, 1993.

"In Further Defense of New Wave Reductionism: The Methodological Caveats," *Southern Society for Philosophy and Psychology*, New Orleans, LA, April 8-10, 1993.

"In Further Defense of New Wave Reductionism: The Methodological Caveats," *Mid-South Philosophy Conference*, Memphis State University, Memphis, TN, February 26-27, 1993

"Connectionism, Eliminativism, and the Semantic View of Theories," *Alabama Philosophical Society*, Gulfport, AL, November 13-14, 1992.

"Revisionary Physicalism," as part of an invited symposium on The Current Status of Folk Psychology with Terence Horgan and William Ramsey, *Mid-South Philosophy Conference*, Memphis State University, Memphis, TN, March 1-2, 1991.

"Wilfrid Sellars' "Unknown" Argument for Scientific Realism," *Mississippi Philosophy Association*, Millsaps College, Jackson, MS, April 4, 1990.

"Dismantling the Davidsonian Objection to Neurophilosophy," *Mid-South Philosophy Conference*, Memphis State University, Memphis, TN, March 2-3, 1990.

#### PRESENTATIONS, COLLOQUIA (118)

"Tinkering in the lab." *Invited Ziegler Lecture*, St. Xavier's University, Chicago, IL, February 25, 2022

"Identity experiments in neurobiology: The discovery of the N-methyl-D-aspartate receptor." *Ole Miss Philosophy Forum*, Department of Philosophy and Religion, University of Mississippi, October 1, 2021

"On some limits on computational models in mechanistic neurobiology: An illuminating historical case." *Philosophy and the Life Sciences on line "Chats"*, Department of Philosophy and Religion, Mississippi State University, November 12, 2020

"What's the big deal about tool development in wet-lab neurobiology?" *Mississippi State University Department of Biological Sciences Seminar Series*, August 28, 2020.

"The Churchlands versus Fodor." *Indiana University History and Philosophy of Science Graduate Student Workshop*, April 20, 2020.

“Tinkering in the lab.” *Kent State University, co-sponsored by the Department of Philosophy and the Brain Health Research Institute, Kent, OH, January 22, 2020.*

“Philosophy of neuroscience: Some basic themes from the past 33 years.” Invited lecture, *University of Vienna Cognitive Sciences Ph.D. Program, Konrad Lorenz Institute, Klosterneuberg, Austria, December 12, 2019.*

“Tinkering in the lab.” Invited lecture, *Konrad Lorenz Institute, Klosterneuberg, Austria, December 10, 2019*

“Tinkering in the lab.” Invited lecture, Department of Theoretical Philosophy, University of Bucharest, Bucharest, Rumania, December 2, 2019

“Philosophers in wet labs, doing metascience.” Invited keynote address, *Learning through Empirical Approaches to Philosophy of Science (LEAPS) Conference, Center for the Philosophy of Science, University of Pittsburgh, April 6-7, 2018.*

“Tool development in neurobiology: Against theory-centrism.” *Department of Philosophy Annual DEX Conference, University of California, Davis, March 26-27, 2018*

“In Praise of ... Engineering??” *Philosophy Department Visiting Speaker Series, University of Nevada at Las Vegas, March 22, 2018*

“Tool development: How experiment-driven sciences progress.” *Bar-Hillel Colloquium for the History, Philosophy, and Sociology of Science Annual Lecture Series, Hebrew University in Jerusalem, Jerusalem, Israel, January 18, 2017*

“Little-e eliminativism in cellular and molecular cognition,” *Bar-Hillel Colloquium for the History, Philosophy, and Sociology of Science Annual Lecture Series, Tel Aviv University, Tel Aviv, Israel, January 16, 2017*

“Optogenetics and biomedical engineering.” *Theta Talks, Bagley College of Engineering, Mississippi State University, Starkville, MS, October 26, 2016*

Invited Panelist, “The Future of the Humanities,” *Institute for Humanities 10<sup>th</sup> Anniversary Celebration, Mississippi State University, Mississippi State, MS, October 15-16, 2015.*

“Molecules, mechanisms, and (aspects of) consciousness.” Invited lecture, Interdisciplinary Approaches to Consciousness Program, *Center for the Explanation of Consciousness, Stanford University, Palo Alto, CA, January 22, 2015.*

“The Silva-Landreth-Bickle approach: What’s in it for your research program?” Invited presentation, *Department of Neurobiology and Anatomical Sciences Seminar Series, University of Mississippi Medical Center*, Jackson, MS, September 7, 2014

“Marr and the Reductionists.” *ACCESS Cognitive Science Seminar*, Department of Psychology, Mississippi State University, November 22, 2013

“Ho agathos in the Magnet: In Search of Neural Activity When Virtuous People Behave Virtuously.” *Department of Philosophy Visiting Speakers Series*, Vanderbilt University, Nashville, TN, September 28, 2012

“How to Supercharge a Brain.” *Annual Dunbar Lecture*, Millsaps College, Jackson, MS, February 16, 2012

“Aristotle in the Magnet: An Old Moral Virtue Gets New Neuroscientific Treatment.” *Philosophy Department Visiting Speakers Series, University of Cincinnati*, Cincinnati, OH, Oct. 14, 2011.

“Aristotle in the Magnet: An Old Moral Virtue Gets New Neuroscientific Treatment.” *Connections Program: Brain-Mind Studies, Hendrix College*, Conway, Arkansas, October 3, 2011

“Aristotle in the Magnet: An Old Moral Virtue Gets New Neuroscientific Treatment.” *Cognitive Science Program Seminar, Department of Psychology, Mississippi State University*, Mississippi State, MS, February 27, 2011.

“Other Minds in Molecular and Cellular Cognition.” *Invited Lecture, Cognitive Science Fall Seminar, University of Memphis*, Memphis, TN. October 29, 2010

“Manipulating Brain Genes and Proteins to Affect Social Cognition.” *Invited Speaker, Laboratory of Integrative Neuroscience Fall Seminar Series, University of Illinois at Chicago*, Chicago, IL, September 29, 2010

“A New, Scientifically-Derived Account of Sufficient Evidence for Causal-Mechanical Hypotheses.” *Invited Keynote Speaker, Research Day, Northwestern University of Louisiana*, Natchitoches, LA, April 15, 2010.

“Manipulating Brain Genes and Proteins to Affect Social Cognition.” *Invited Lecturer, Café Scientifique, Mississippi State University*, Starkville, MS, January 26, 2010.

“Ruthless Reductionism and Social Cognition.” *Contributed Presentation, Arts and Sciences Faculty Showcase, Mississippi State University*, Mississippi State, MS, October

22, 2009.

“The Convergent Four Hypothesis in ‘Molecular and Cellular Cognition’.” *Invited Speaker*, Department of Biology Seminar Series, Mississippi State University, Mississippi State, MS, October 16, 2009

“The Convergent Four Hypothesis in ‘Molecular and Cellular Cognition’.” *Invited Speaker*, Mellon Seminar on Reduction and Reduictionism, University of Rochester, Rochester, NY, October 2, 2009

“From Psychological Generalizations to Neuromolecular Mechanisms: Explanations ‘in a Single Bound’.” *Invited Speaker*, Applied Cognitive Sciences Seminar Series, Mississippi State University, Mississippi State, MS, September 11, 2009

“Still Room for Political Liberties in the New Neuroscience-Inspired Causal Determinism.” *Invited Speaker*, Ole Miss Philosophy Forum, March 3, 2009

*Invited Panel Discussant*, Neuroscience and Philosophy (with Rodolfo Llinas), Department of Philosophy, University of Toledo, February 19, 2009

“Manipulating the Molecules of Memory Consolidation in a Social Interaction Task.” *Invited Speaker*. Psychology Department Colloquium, Southern Illinois University, Carbondale, IL, April 25, 2008.

“What If Philosophy of Neuroscience was Informed by Carnap’s Pragmatism (Rather than Quine’s)?” *Invited Speaker*, Philosophy Department Colloquium, Southern Illinois University, Carbondale, IL, April 24, 2008.

“The Convergent Four Hypothesis in Molecular and Cellular Cognition . . . And Beyond.” *Invited Speaker*, Philosophy Department Colloquium, Carnegie Mellon University, Pittsburgh, PA, April 10, 2008.

“Explanation ‘In a Single Bound’: From Psychological Generalization to Neuromolecular Mechanisms.” *Invited Speaker*, Workshop on Neurophilosophy, Munich Center for Neuroscience, Ludwig-Maximilians-Universitaet, Munich, Germany, February 14, 2008.

“eliminative Materialism—With a Little ‘e’ and Little Clamor.” Department of Philosophy Visiting Speakers Series, University of Toledo, Toledo, OH, October 19, 2007.

“Four Conditions on Sufficient Evidence for Establishing a Molecular Mechanism for a Cognitive Phenomenon.” Bodien Seminar, Kreiger Mind-Brain Institute, Johns Hopkins

University, Baltimore, MD, April 2, 2007.

“An Alternative to Intertheoretic and Functional Reduction.” Department of Philosophy Brown Bag Lunch Meetings, George Washington University, Washington, DC, March 30, 2007.

“Ruthless Psychoneural Reductionism and Social Cognition.” Cognitive Sciences Program Visiting Speaker Series, North Carolina State University, Raleigh, NC, March 23, 2007.

“An Alternative to Intertheoretic and Functional Reduction.” Department of Philosophy Colloquium, University of North Carolina at Chapel Hill, Chapel Hill, NC, March 22, 2007.

“Real Reductionism in a Hot New Field of Neuroscience.” Science Studies Seminar, University of Oslo, Oslo, Norway, March 13, 2007

“Real Reductionism in Really Reductionistic Neuroscience.” Psychology Department Colloquium, Franklin and Marshall College, Lancaster, PA, February 6, 2007

“Cellular and Molecular Interventions as an Experimental Strategy in Cognitive Neuroscience.” Cognitive Neuroscience Group, Franklin and Marshall College, Lancaster, PA, February 6, 2007.

“Who Says You Can’t Do a Molecular Biology of Consciousness?” Instituto de Filosofia da Linguagem, Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa (Lisbon, Portugal), January 29, 2007

“Ruthless Psychoneural Reduction and Social Cognition.” Philosophy Department Colloquium, James Madison University, Harrisonburg, VA, December 1, 2006

“The Ruthlessly Reductive Core of Molecular and Cellular Cognition.” Philosophy-Neuroscience-Psychology Visiting Speaker Series, Washington University in St. Louis, St. Louis, MO, November 17, 2006

“Ruthless Psychoneural Reduction and Social Cognition.” Philosophy Department Colloquium, Washington University in St. Louis, St. Louis, MO, November 16, 2006.

“Real Reduction in Real Neuroscience: Metascience, Not Philosophy of Science.” Philosophy Department Colloquium, University of Virginia, Charlottesville, VA, November 10, 2006.



“The Molecules of Social Recognition Memory.” University of Utah 12<sup>th</sup> Annual Philosophy Department Colloquium, “Neuroscience and Moral Psychology,” Salt Lake City, UT, February 9-11, 2006

“Motivation, Learning, Memory, and Systems-Level Brain Modeling: The View from Molecular and Cellular Cognition.” *Workshop on Motivation, Learning, and Memory: A Systems-Level Brain Modeling Approach*, Department of Cognitive Science, University of Lund, Lund, Sweden, December 5-6, 2005

“Who Says You Can’t Do a Molecular Biology of Consciousness?” Invited lecture, School of Philosophy, University of Bucharest, Bucharest, Romania, November 30, 2005.

“Ruthless Reductionism in Recent Neuroscience.” Invited lecture, School of Philosophy, University of Bucharest, Bucharest, Romania, November 29, 2005

“Ruthless Reductionism: Cognition *and* Consciousness.” *Theory of Science Seminar*, University of Oslo, Oslo, Norway, December 7, 2005.

“Relating Levels of Neuroscientific Investigation: The View from Molecular and Cellular Cognition.” *Workshop on Motivation, Learning, and Memory: A Systems-Level Brain Modeling Approach*, Lund University, Lund, Sweden, December 5-6, 2005.

“Who Says That You Can’t Do a Molecular Biology of Consciousness?” *Invited Lecture*, Bucharest University, Bucharest, Romania, December 1, 2005.

“Ruthless Reductionism: in Current Molecular and Cellular Cognition.” *Invited Lecture*, Bucharest University, Bucharest, Romania, November 29, 2005.

“Who Says That You Can’t Do a Molecular Biology of Consciousness?” *University of Quebec at Montreal Philosophy Colloquium*, Montreal, Quebec, Canada, November 11, 2004.

Also presented at *University of Notre Dame History and Philosophy of Science Colloquium*, Notre Dame, IN, March 17, 2005.

“Ruthless Mind-Brain Reductionism: Alive and Thriving.” *Xavier University Philosophy Colloquium*, Cincinnati, OH, September 16, 2004

“Ruthless Reductionism in ‘Molecular and Cellular Cognition’.” *Cognitive Science Invited Speaker Series*, Rice University, Houston, TX, April 2004.

“Cortical Microstimulation; Not Science Fiction Anymore.” Department of Philosophy Spring Colloquium, Arkansas State University, Jonesboro, AR, March 2004.

Invited participant, Workshop on Neuroscience and Emotions, Department of History And Philosophy of Science and Center for Philosophy of Science, University of Pittsburgh, Pittsburgh, PA, December 6, 2003.

“Reducing Mind to Molecules: A Condition on Explanation Implicit in Current Cellular and Molecular Neuroscience.” *Spring Seminar Series*, Institute for Cognitive Science, University of Louisiana, Lafayette, Lafayette, LA, March 29, 2003.

“Visual Scanpath Abnormalities in Schizophrenics and a New Saccade Sequencing-fMRI

Paradigm to Investigate Their Neural Basis. *Brainstorming Seminar*, Department of Neurosurgery, University of Cincinnati College of Medicine, Cincinnati, OH, February 26, 2003.

“Visual Scanpath Abnormalities in Schizophrenics and a Novel fMRI-Saccade Sequencing Paradigm to Investigate Their Neural Basis.” *Cognition, Action, Perception, and Performance Seminar*, Department of Psychology, University of Cincinnati, Cincinnati, OH, February 3, 2003.

“Ruthless Reductionism in Current Mainstream Neuroscience.” *Arts and Sciences Lecture*, Kalamazoo College, Kalamazoo, MI, October 6, 2002.

“Neural Causation (Circa 2002) vs. Mental Causation: Explanatory vs. Not.” *Theoretical Psychology Institute, Vrije University*, Amsterdam, The Netherlands, July 19, 2002.

“Neural Causation Circa 2002 versus Mental Causation: Explanatory versus Not.” *Concordia University Philosophy Colloquium*, Montreal, Canada, April 18, 2002.

“Cellular Mechanisms of Sequential Processing in Frontal Circuits Revealed Using a Combined Computational-fMRI Methodology,” *University of Quebec, Montreal, Cognitive Neuroscience Seminar*, Montreal, Canada, April 17, 2002.

“Cellular Mechanisms of Sequential Processing in Frontal Circuits Revealed Using a Combined Computational—fMRI Methodology.” *KFKI Institute, Hungarian Academy of Sciences, Department of Biophysics*, Budapest, Hungary, October 3, 2001.

“Multiple Realization, Meet Molecular Neuroscience.” *Department of History and Philosophy of Science Colloquium, ELTE University*, Budapest, Hungary, October 1, 2001.

“Cellular Mechanisms of Sequential Processing in Frontal Circuits Revealed Using a Combined Computational—fMRI Methodology. *Metroplex Institute for Neural*

*Dynamics*, University of Texas at Dallas. Richardson, TX, August 9, 2001.

“Empirical Evidence for a Narrative Concept of Self.” *Philosophy Department Colloquium, University of Kentucky*, Lexington, KY, March 9, 2001.

”How the Brain Generates the Sequential Features of Higher Cognition.” *Department of Neurology Grand Rounds, University of Kentucky Medical Center*, Lexington, KY, March 8, 2001

“Empirical Evidence for a Narrative Concept of Self.” *Invited Lecture, Thomas More College, Newport, KY*, October 24, 2000.

"Philosophy of Mind and the Neurosciences," *Neuroscience and Philosophy Workshop*, Boston University, May 24, 2000

"Modeling Corticothalamic Excitatory and Intrathalamic Inhibitory Synapses on Thalamic Sensory Relay Cells." *Neuroscience Program, University of Cincinnati*, Cincinnati, OH, March 16, 2000.

"The Physicalist Agenda: Lessons We Should Have Learned from Carnap." *Philosophy Department, University of Cincinnati*, January 14, 2000.

"Implications for the Philosophy of Consciousness from Single-Cell Neurophysiology." *Science and Technology Studies, Virginia Polytechnic Institute and State University*, Blacksburg, VA, October 1, 1999.

"The Physicalist Agenda: Lessons We Should Have Learned from Carnap." *Philosophy Department Colloquium, Virginia Polytechnic Institute and State University*, Blacksburg, VA, September 30, 1999.

"Vector Subtraction Implemented Neurally and the Jamesian Stream of Consciousness." *Philosophy Department Colloquium, University of California, San Diego*, La Jolla, CA, March 30, 1999.

"A Functional Hypothesis for LGN-V1-TRN Connectivities Suggested by Computer Simulation." *Psychology Department Colloquium, University of Mississippi*, Oxford, MS, February 25, 1999.

"A Functional Hypothesis for LGN-V1-TRN Connectivities Suggested by Computer Simulation." *Cognitive Science Institute, University of Memphis*, Memphis, TN, February 24, 1999

"How to Think About Consciousness Neuroscientifically." *Philosophy Department Colloquium, University of Cincinnati*, November 20, 1998, Cincinnati, OH

"How to Think About Consciousness Neuroscientifically." *Philosophy Department Colloquium, University of California, Irvine*, November 11, 1998, Irvine, CA.

"Naturalism in Recent Philosophy of Mind From an (Updated) Carnapian Perspective." Presented at *ELTE University Department of History and Philosophy of Science*, Budapest, Hungary, May 14, 1998.

"Modeling Neural Mechanisms of Selective Visual Attention Using Biologically Plausible Computer Simulations." Presented with Marica Bernstein to *Neural Networks Laboratory, Hungarian Academy of Sciences*, Budapest, Hungary, May 13, 1998

"Vector Subtraction and a Redirect Attentional Mechanism Simulated in a Biologically Plausible Neural Network." Presented with Marica Bernstein at the *Institut fuer Medische Psychologie, Ludwig-Maximilians-Universitaet Muenchen*, Munich, Germany, May 5, 1998.

"Interactions Between Philosophers and Neuroscientists" (with Owen Flanagan). Presentation at the *Duke University Department of Neurobiology Retreat*, Atlantic Beach, NC, September 26-28, 1997.

"Modeling stimulus-driven selective visual attention using thalamocortical and intrathalamic cell properties and connectivities" and "Modeling a 'voluntary' selective visual attention mechanism using parieto-frontal cell properties and connectivities." Presented at a *Minisymposium on Neuroscience Research at East Carolina University: Present and Future*, Greenville, NC, May 27, 1997.

"Modeling Visual Selective Attention in a Parallel Network Using Thalamocortical and Parieto-Frontal Connectivities: The FRPCN Models." *Spring Seminar, Institute of Computer Science, Neural Networks Division, Czech Republic Academy of Sciences*, Prague, Czech Republic, March 17, 1997.

"Modeling Selective Visual Attention in a Parallel Network Using Thalamocortical and Parieto-Frontal Connectivities: The FRPCN Models." *Institut fuer Sensorimotorik Colloquium, Klinikum Grosshadern, Ludwig-Maximilians-Universitaet Muenchen*, Munich, Germany, March 6, 1997

"Modeling Selective Visual Attention in a Parallel Network Using Thalamocortical and Parieto-Frontal Connectivities: The FRPCN Models." *Cognition Group, Institut fuer Informatik, Technisches Universitaet Muenchen*, Munich, Germany, February 20, 1997

"Why Reduction? And Why a New Wave Version?" *Institut fuer Logik und Wissenschaftstheorie Colloquium*, Universitaet Leipzig, Leipzig, Germany, February 6, 1997

"Why Reduction? And Why a New Wave Version?" *Institut fuer Philosophie, Logik, und Wissenschaftstheorie Colloquium*, Ludwig-Maximilians-Universitaet Muenchen, Munich, Germany, January 29, 1997

"Conjoining Hooker's Insights With a Structuralist Reduction Concept." *Institut fuer Philosophie, Logik, und Wissenschaftstheorie Colloquium*, Ludwig-Maximilians-Universitaet Muenchen, Munich, Germany, January 22, 1997.

"Why Reduction? And Why a New Wave Version?" *Fachgruppe Philosophie Colloquium*, Universitaet Konstanz, Konstanz, Germany, January 16, 1997.

"Modeling Selective Attention Using Interactive Activation and Competition Network Architectures Mimicking Thalamocortical Circuitries," *Metroplex Institute for Neural Dynamics*, University of Texas at Dallas, Richardson, TX, August 10, 1996.

"Why Reduction? And Why a New Wave Version?" *Ole Miss Philosophy Forum*, University of Mississippi, University, MS, October 4, 1995.

"Prospects for Reduction in the Brain and Behavioral Sciences" and "The Appeal of Parallel Distributed Processing," *Oakland University Philosophy Colloquium* and *Oakland University Cybernetics Club*, Oakland University, Rochester, MI, March 14-15, 1995.

"Multinets as a Solution to Two Problems with Supervised Learning in Neural Nets," *Metroplex Institute for Neural Dynamics*, University of Texas at Dallas, Richardson, TX, August 14, 1994.

"Pragmatics and Science," *Ole Miss Philosophy Forum*, University of Mississippi, University, MS, February 24, 1994.

"New Wave Reductionism in Philosophy of Mind," *Ole Miss Philosophy Forum*, University of Mississippi, University, MS, February 25, 1993.

"Connectionism, Eliminativism, and Structuralist Philosophy of Science," *Kent State University Philosophy Department Colloquium*, Kent, OH, March 1992.

"Connectionism, Eliminativism, and Structuralist Philosophy of Science," *University of*

*Delaware Philosophy Department Colloquium*, Newark, DE, March 1992.

"Connectionism, Eliminativism, and Structuralist Philosophy of Science," *Trenton State College Philosophy Colloquium*, Trenton, NJ, October 1991.

"Cortical Learning. I: Neurobiological Foundations of the Lynch-Granger Learning Algorithm. II: Results from the Lynch-Granger Models. III: Potential of the Lynch-Granger Algorithm as a General Network Learning Algorithm." With Kirk Burrows. *Department of Mathematics Complex Systems Research Seminar*, Memphis State University, September-October 1990.

"Liberation Biology," *Ole Miss Philosophy Forum*, University of Mississippi, University, MS, September 1990.

"Introspective Evidence in Theoretical Psychology," *Psychology Department Colloquium Series*, University of Mississippi, University, MS, March 1990.

"A Neurophilosophical Inquiry: Unsupervised Learning in a Neural Net," *Biology Department Spring Seminar Series*, University of Mississippi, University, MS, February 1990.

"On the Scientific Status of the Intentional," *Philosophy Department Colloquium*, Rice University, Houston, TX, January 1989.

"On the Scientific Status of the Intentional," *Philosophy Department Colloquium*, University of California, Irvine, Irvine, CA, December 1988.

"On the Scientific Status of the Intentional," *Philosophische Gesellschaft*, Universitaet Salzburg, Salzburg, Austria, March 1988.

"Amnesic Learning: A Refutation of Folk Psychological Causal Explanation?" *Philosophy Department Colloquium*, University of California, Irvine, Irvine, CA, September 1987.

**PREVIOUS ACADEMIC AND RESEARCH APPOINTMENTS, TEACHING EXPERIENCE**

**KONRAD LORENZ INSTITUTE**

Visiting Research Fellow  
December 2019

**NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH/NIH)**

Special Visitor  
Office of the Scientific Director  
September 2006-December 2006

#### UNIVERSITY OF CINCINNATI

Professor (Tenured) and Head, Department of Philosophy, September 2002-August 2009

Professor, Neuroscience Graduate Program, September 2002-August 2009

Director, Undergraduate Neuroscience Program and Major, College of Arts and Sciences, Spring 2008-August 2009.

Associate Professor (Tenured) and Head, Department of Philosophy, September 2000-August 2002

Associate Professor, Neuroscience Graduate Program, September 2000-August 2002

#### EAST CAROLINA UNIVERSITY

Associate Professor (Tenured), Department of Philosophy and Program in Neuroscience, Summer 1998-present

Adjunct Associate Professor, Department of Psychology, Summer 1998-present

Assistant Professor, Tenure-Track, Department of Philosophy, Fall 1992-Spring 1998.

Adjunct Assistant Professor, Department of Psychology, Fall 1997-Spring 1998

#### DUKE UNIVERSITY

Visiting Associate Professor, Department of Philosophy, Fall semester 1997

#### LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN

Guest Researcher, Institut fuer Philosophie, Logik und Wissenschaftstheorie, Winter 1997.

#### TRENTON STATE COLLEGE

Assistant Professor, one year appointment, Department of Philosophy and Religion, 1991-1992.

#### UNIVERSITY OF MISSISSIPPI

Visiting Assistant Professor, Department of Philosophy and Religions, 1989-1991.

#### IRVINE VALLEY COLLEGE

Associate Instructor, School of Humanities, Arts, and Languages, Spring 1989

#### UNIVERSITAET SALZBURG

Visiting Lecturer, Institut fuer Philosophie, 1987-1988

#### UNIVERSITY OF CALIFORNIA, IRVINE

Department of Philosophy, Teaching Associate 1985-1986, Summer 1988, Winter 1989; Teaching Assistant Fall 1983. 1984-1985, Spring 1989

**GRADUATE STUDENTS, POST-DOCS MENTORED**  
**MISSISSIPPI STATE UNIVESITY**

Department of Philosophy and Religion

Post-doctoral Fellows in Philosophy and Neuroscience

Antonella Tramacere, Ph.D. (Neuroscience, University of Parma, Italy, 2016), Fall semester 2020. Project: "Increasing attention of philosophers of science to recent work in neuroepigenetics"

David Colaço, Ph.D. (History and Philosophy of Science, University of Pittsburgh, 2019), August 2019-July 2020. Project: "Tool development in neuroscience"

Pre-Doctoral Fellows in Philosophy and Neuroscience

Mara McGuire, M.A. (Georgia State University). August 2018-July 2019. Currently a student in the University of Pittsburgh History and Philosophy of Science Ph.D. program

Jonathan Kanzelmeyer, M.A. (University of Nevada, Reno), August 2017-June 2018, Currently a student in the Philosophy Ph.D. program at University of Cincinnati

Andrew Bollhagen, MA.. (California State University, Long Beach), August 2016-May 2018. Currently a student in the Philosophy Ph.D. program at the University of California, San Diego

Nedah Namati, M.S. (Neuroscience, University of Mississippi Medical Center), August 2015-July 2016. Currently a student in the History and Philosophy of Science program at University of Pittsburgh

Sara Mosteller, M.S. (Experimental Psychology, University of Tennessee), August 2014-July 2015. Currently a Ph. D. candidate in Developmental Science, School of Psychology, University of East Anglia (U.K.)

**UNIVERSITY OF CINCINNATI**

Department of Philosophy

Theses Directed: Anthony Landreth (completed Fall 2007), *Far Beyond Driven: On the Neural Basis of Motivation*; Dan Hartner (completed Spring 2011, directed until leaving the University in Spring 2009), *Towards a Genuinely Naturalistic Ethics*; Aaron Kostko (in progress, directed until leaving University in Fall 2009); Sean Keating (in progress, directed until leaving University in Fall 2009)

Thesis Committee Member: Cate Sherron (completed 2002); Michael Cundall (completed 2002); Kimberly Lockwood (completed 2004); Arthur Morton (completed 2005); Greg Johnson (completed 2006); Neal Hogan (in progress);

Neuroscience Graduate Program

Thesis Committee Member: John Flannery (completed 2005)



**GRANTS, AWARDS, FELLOWSHIPS**

*College of Arts and Sciences Annual Research Award*, academic year 2014-2015 (awarded April 2015), Office of Research and Economic Development, Mississippi State University

*Participant, Centre for the Study of Mind in Nature*, University of Oslo, Oslo, Norway. Appointed August 2007.

*Fellow of the Graduate School*, University of Cincinnati, elected June 2005.

*Associate of the Center for Philosophy of Science*, University of Pittsburgh. Appointed January 1, 2004, reappointed January 1, 2007 to December 31, 2009.

Co-PI, National Science Foundation Nanoscience in Undergraduate Education Program (PI Thomas Mantei, College of Engineering, University of Cincinnati, \$175,000 awarded, 2005-2007)

Co-PI, National Institutes of Health, NINDS T32, "Predoctoral Training Program in the Neurosciences," (PI James Herman, College of Medicine, University of Cincinnati, (NS007453-08) (09/30/97 - 06/30/08)

*The Research & Development Division of the Ministry of Education and the U.S.-Hungarian Science & Technology Joint Fund* PIs George Kampis, History and Philosophy of Science, ELTE University, Budapest, Hungary, and John Bickle, Philosophy and Neuroscience, University of Cincinnati. Awarded 2001-2002 (\$3000 awarded to support the mobility of PIs between Hungary and the U.S to develop new R and D projects.)

*SGI Origin 2000 Project*, Computer and Information Systems, East Carolina University, academic year 1999-2000 (Awarded 1000 programming hours on the ECU SGI Origin 2000 multi-processor computer in a competitive application process)

Co-Principal Investigator, "Neuroscience Research and Education at East Carolina University," Multi-Disciplinary Program Development Initiative, University of North Carolina, December 1998 (Awarded \$20,000 start-up money for the ECU Program in Neuroscience)

*College Research Award*, College of Arts and Sciences, East Carolina University, 1996-1997.

*Nominee, Distinguished Professor for Teaching Award*, from the College of Arts and Sciences, East Carolina University, 1994-1995.

*IBM Laptop Package*, Faculty Computer Committee, East Carolina University, December 1993.

*Summer Research Fellowship/Faculty Development Support*, School of Liberal Arts, University of Mississippi, Summer 1990. (Project funded: The Realist-Eliminativist Controversy in Recent Philosophy of Mind)

*Milton Phillips Dissertation Fellowship*, University of California, Irvine, Fall Quarter 1988.

*Salzburg Exchange Fellowship*, Department of Philosophy, University of California, Irvine, 1987-1988.

*Machette Award for Excellence in Teaching*, Department of Philosophy, University of California, Irvine, 1985-1986.

*Humanities Core Course Teaching Award*, Department of Philosophy, University of California, Irvine, 1985-1986.

*Regents Fellowship*, Graduate School, University of California, Irvine, 1983-1984.

#### ACADEMIC SERVICE, OTHER

American Philosophical Association (APA), Representative to the American Association for the Advancement of Science, section on Neuroscience, March 2016-present

External Program Reviewer, Philosophy B.A. Program, Department of English and Philosophy, Arkansas State University, Spring 2014 (site visit February 24-25, 2014)  
Program Committee, American Philosophical Association Central Division Meetings, New Orleans, LA, February 21-23, 2013

Budapest Semester in Cognitive Science, U.S. Director (Department of History and Philosophy of Science, ELTE University, Budapest, Hungary)

Organizer, 2007-2008 Philosophy Department Taft Lectures and 44<sup>th</sup> University of Cincinnati Philosophy Colloquium. Topic: Neuroepistemology and Neurethics.

(Participants: Paul Churchland, Patricia Churchland, Jacqueline Sullivan, Peter Mandik, William Casebeer, Adina Roskies, and Peggy Des Autels)

Local Arrangements Co-Chair, 27<sup>th</sup> Annual Meeting, *Society for Philosophy and Psychology*, June 14-17, 2001.

Co-Organizer, 2000-2001 Philosophy Department Taft Lectures and 37<sup>th</sup> University of Cincinnati Philosophy Colloquium. Topic: (How) Do Levels in Science Relate?

(Participants: Paul Churchland, Philosophy and Cognitive Science, UCSD, James Shapiro, Microbiology, University of Chicago, Michael Dietrich, Biology, Dartmouth College, C. Kenneth Waters, Philosophy, University of Minnesota, Patricia Goldman-Rakic, Neurobiology, Yale University, Kenneth Schaffner, University Professor, George Washington University, and Robert McCauley, Philosophy, Emory University).

University Internet2 Steering Committee, University of Cincinnati, Spring 2001-present.  
 University Research Council, Division of Research and Graduate Studies, University of Cincinnati, Fall 2000-present  
 Department Head, Department of Philosophy, University of Cincinnati, September 2000-present.  
 Executive Committee, *Society for Philosophy and Psychology*, June 2000-June 2003  
 Program Co-Chair, *Society for Philosophy and Psychology*, Annual Meeting 2000.  
 President, *Southern Society for Philosophy and Psychology*, 2004-2005.  
 Recruitment Chair, *Southern Society for Philosophy and Psychology*, 1999-2001.  
 Steering Committee, East Carolina University Neuroscience Program, Office of the Vice Chancellor for Research and Graduate Studies, East Carolina University, 1998-present  
 Chair, Department of Philosophy Personnel Committee, East Carolina University, 1998-present.  
 Chair, Department of Philosophy Tenure and Promotions Committee, East Carolina University, 1998-2000  
 Chair, Philosophy Recruitment Committee, *Southern Society for Philosophy and Psychology*, 1997-1998  
 Organizer, Down East Philosophy Conference, "Representations, Qualitative and Linguistic, November 8-9, 1996. Speakers: William Lycan (UNC-Chapel Hill), Ruth Millikan (University of Connecticut) and John Post (Vanderbilt University).  
 Council for Philosophy, *Southern Society for Philosophy and Psychology*, 1995-1998.  
 Philosophy Program Committee, *Southern Society for Philosophy and Psychology*, 1997 and 1998 Annual Meetings  
 Secretary-Treasurer, *Society for Philosophy and Psychology*, 1994-1998.  
 Coordinator, Cognitive Science Discussion Group, East Carolina University, 1992-1996  
 Admissions and Recruitment Committee, Faculty Senate, East Carolina University, 1997-1998.  
 Honors Program Committee, Faculty Senate, East Carolina University, 1994-1997.  
 Chair, Department of Philosophy Code Committee, East Carolina University, 1994-1996.  
 Teaching Grants Committee, Faculty Senate, East Carolina University, 1993-1994.  
 Department of Philosophy Curriculum Committee, East Carolina University, 1993-1994.  
 Visiting Speakers Coordinator, Department of Philosophy, East Carolina University, 1992-1996.  
 M.A. Program Coordinator, Department of Philosophy and Religions, University of Mississippi, 1990-1991.  
 Vice President, Mississippi Philosophical Association, 1990-1991.

**CURRENT MEMBERSHIP IN AND OFFICES HELD, PROFESSIONAL ORGANIZATIONS**

American Philosophical Association

Representative to the American Association for the Advancement of Science (AAAS), section on Neuroscience, March 2016-present

Program Committee, Central Division Meeting, New Orleans, LA, February 21-23, 2013

Society for Neuroscience  
 University of Mississippi Medical Center chapter  
 American Association for the Advancement of Science  
 Society for Philosophy and Psychology  
 Secretary-Treasurer, 1994-1998  
 Program Co-Chair, 26<sup>th</sup> Annual Meeting, 1999-2000  
 Executive Committee, 2000-2003  
 Local Arrangements C-Coordinator, 27<sup>th</sup> Annual Meeting, 2000-2001  
 Southern Society for Philosophy and Psychology  
 Past President, 2005-2006  
 President, 2004-2005  
 President-Elect, 2003-2004  
 Recruitment Co-Chair, 1999-present  
 Council for Philosophy, 1995-1998  
 Membership Committee Chair, 1997-1998  
 Philosophy Program Committee, Annual Meetings 1997 and 1998

#### ACADEMIC REFERENCES

(Listed alphabetically, letters of recommendation available upon request)

Professor Colin Allen, Distinguished Professor of History and Philosophy of Science, University of Pittsburgh  
 Professor Edouard Machery, Distinguished Professor of History and Philosophy of Science, University of Pittsburgh  
 Professor Patricia Churchland, Emeritus President's Professor of Philosophy and Cognitive Science, University of California, San Diego  
 Professor Carl Craver, Professor of Philosophy and Philosophy-Neuroscience-Psychology Program (PNP), Washington University in St. Louis  
 Professor Michael Lehman, Professor of Biology and Director, Brain Sciences Health Institute, Kent State University  
 Professor emeritus C. Ulises Moulines, Institut fuer Philosophie, Logik, und Wissenschaftstheorie, Ludwig-Maximilians-Universitaet Muenchen (Munich, Germany)  
 Professor Jesse Prinz, Distinguished Professor of Philosophy, City University of New York (CUNY) Graduate Center  
 Professor Robert Richardson, University Distinguished Research Professor and Charles P. Taft Professor of Philosophy of Science, University of Cincinnati  
 Professor Alcino J. Silva, Neurobiology, Psychiatry, and Psychology, and Brain Institute, University of California, Los Angeles