

# Aaron David Redish

---

Department of Neuroscience  
University of Minnesota  
Minneapolis MN 55455

**Phone:** (612) 626-3738  
**Fax:** (612) 626-5009

**Email:** [redish@umn.edu](mailto:redish@umn.edu)

**Lab Website:** <http://redishlab.umn.edu>

**Mastodon:** [@adredish@neuromatch.social](https://mastodon.social/@adredish)

## Education

BA 1991	The Johns Hopkins University Baltimore MD 21218	Double major: Computer Science (honors) The Writing Seminars (honors) Computer Science
MS 1995	Carnegie Mellon University Pittsburgh PA 15213	
PhD 1997	Carnegie Mellon University Pittsburgh PA 15213	Computer Science, Advisor: Dr. D. S. Touretzky
Oct 1997 - Jul 2000	University of Arizona Tucson AZ 85724	Post-doctoral research associate with Dr. C. A. Barnes

## Employment history

2016-present	J. B. Johnston Land Grant Endowed Professor of Neuroscience, Univ Minnesota
2014-present	Distinguished McKnight University Professor,
2012-present	Professor with Tenure, Dept Neuroscience, Univ Minnesota
2006-2012	Associate Professor with Tenure, Dept Neuroscience, Univ Minnesota
2000-2006	Assistant Professor, Dept Neuroscience, Univ Minnesota

## Current Status

Distinguished McKnight University Professor,  
J. B. Johnston Land Grant Endowed Professor of Neuroscience,  
Department of Neuroscience  
University of Minnesota.

Full member, Neuroscience Graduate Training Faculty  
Full member, Biomedical Engineering Training Faculty  
Full member, Psychology Graduate Training Faculty  
Full Member, Center for Cognitive Science  
Core Member, Center for Neuroengineering  
Member, Biomedical Engineering Institute  
Member, Workgroup on Reproducibility  
Adjunct professor, Department of Psychology  
Member, NIDA Training Grant Training Faculty  
Member, MIDB

2014-2019      Director of Graduate Studies, Graduate Program in Neuroscience, Univ Minnesota

Co-director **NeuroPRMSH (NeuroPlasticity Research in Support of Mental Health) Center**  
with Dr. Sophia Vinogradov.

## Awards and Fellowships

2024 American Psychiatry Association Nasrallah Award for Psychiatric Neuroscience  
2023 Spence lecture, University of Iowa  
2021 Academy of Excellence, University of Minnesota  
2018 Visiting Scholar, Dept of Finance (Brain, Minds, Markets group), University of Melbourne, Melbourne Australia.  
2018 Dean's Distinguished Research Lectureship, University of Minnesota  
2018 Roger Loucks Lecture, University of Washington  
2016 J. B. Johnston Chair in Neuroscience  
2015 Hebb Lecturer, McGill University  
2014 Distinguished McKnight University Professorship  
2011 Outstanding Postdoctoral Mentor Award (UMN)  
2010-2013 Human Frontiers Science Program Project Award  
2005-2007 TTURC [Transdisciplinary Tobacco Use Research Center] Career Development Award  
2004-2006 McKnight Land-Grant Professorship  
2003-2005 Alfred P. Sloan Fellow  
2002-2004 McKnight Technology Innovation in Neuroscience Award  
2002 Young investigator award, Spring Brain Conference

1997-2000 NIH National Research Service Award (NRSA)  
1998 Distinguished Thesis Award: Computer Science Department, Carnegie Mellon University  
1994 Participated in NSF Telluride Workshop  
1991-1993 National Science Foundation Fellowship,  
1991 IBM Outstanding Achievement award: Computer Science Department, Johns Hopkins University

## Technical Publications

### Books

- A. D. Redish (2022) *Changing how we choose: the new science of morality*, MIT Press.
- A. D. Redish, J. A. Gordon [eds] (2016) *Computational Psychiatry: New Perspectives on Mental Illness. A Strüngmann Forum Report.* MIT Press.
- A. D. Redish (2013) *The Mind within the Brain: How we make decisions and how those decisions go wrong*, Oxford University Press.
- A.D. Redish (1999) *Beyond the Cognitive Map: From Place Cells to Episodic Memory*, MIT Press.

### Peer Reviewed Journal Articles

- M. H. Hagenauer, A. D. Redish, D. Schiller, K. L. Bigos, S. Flagel, A. Rodriguez, Z. Parker, A. O'Connor, X. Ortiz-Gonzalez, D. Murphy, R. Leeson, Community for Rigor (in press) Promoting open discussions of scientific failure within the annual Society for Neuroscience conference *eNeuro*.
- O. L. Cavin, M. T. Erickson, C. J. Walters, A. D. Redish (in press) Dorsal hippocampus represents locations to avoid as well as locations to approach during approach-avoidance conflict. *PLoS Biology*.
- A. D. Redish (2025) Mental time travel: A retrospective. *Hippocampus*. 35: e23661.  
<http://dx.doi.org/10.1002/hipo.23661>
- R. M. Davidson, H. K. Traxler, A. DeFulio, A. D. Redish, J. A. Royle, H. P. Gass (2024) Contingency management for mono-substance use disorders: Systematic review and assessment of predicted versus obtained effects. *Journal of Applied Behavior Analysis*.  
<https://doi.org/10.1002/jaba.2922>
- U. Mugan, S. L. Hoffman, A. D. Redish (2024) Environmental complexity modulates information processing and the balance between decision-making systems. *Neuron*.  
[https://www.cell.com/neuron/abstract/S0896-6273\(24\)00698-6](https://www.cell.com/neuron/abstract/S0896-6273(24)00698-6)
- C. Yan, V. Mercaldo, A.D. Jacob, E. Kramer, A. Mocle, A.I. Ramsaran, L. Tran, A. J. Rashid, S. Park, N. Insel, A. D. Redish, P. W. Frankland, S. A. Josselyn. (2024) Higher-order interactions between hippocampal CA1 neurons are disrupted in amnesic mice. *Nature Neuroscience*. <https://www.nature.com/articles/s41593-024-01713-4>
- C. Shen, O. L. Calvin, E. Rawls, A. D. Redish, S. R. Sponheim (2024) Clarifying Cognitive Control Deficits in Psychosis via Drift Diffusion Modeling. *Schizophrenia Bulletin*  
<https://www.medrxiv.org/content/10.1101/2023.08.14.23293891v1>

- S. Kalhan, M. I. Garrido, R. Hester, A. D. Redish (2023). Reward prediction-errors weighted by cue salience produces addictive behaviors in simulations, with asymmetrical learning and steeper delay discounting. *Neural Networks* 168:631-651.  
<https://www.sciencedirect.com/science/article/pii/S0893608023005282>
- C. F. Runge, J. A. Johnson, E. A. Nelson, A. D. Redish (2023) A neuroscience-based analysis of impacts of disaster memory on economic valuation. *Journal of Neuroscience, Psychology, and Economics* 16(1):24-49. <https://psycnet.apa.org/record/2023-28159-001>
- A. E. McLaughlin, A. D. Redish (2023) Optogenetic Disruption of the Prelimbic Cortex Alters Long-Term Decision Strategy but Not Valuation on a Spatial Delay Discounting Task. *Neurobiology of Learning and Memory*: 200: 107734  
<https://doi.org/10.1016/j.nlm.2023.107734>
- W. W. Pettine, D. V. Raman, A. D. Redish, J. D. Murray (2023) Human generalization of internal representations through prototype learning with goal-directed attention. *Nature Human Behavior*. <https://doi.org/10.1038/s41562-023-01543-7>
- D. Levenstein, V. A. Alvarez, A. Amarasingham, H. Azab, Z. S. Chen, R. C. Gerkin, A. Hasenstaub, R. Iyer, R. B. Jolivet, S. Marzen, J. D. Monaco, A. A. Prinz, S. Quraishi, F. Santamaria, S. Shivkumar, M. F. Singh, R. Traub, H. G. Rotstein, F. Nadim, A. D. Redish (2023) On the role of theory and modeling in neuroscience. *Journal of Neuroscience* 43.7 (2023): 1074-1088.  
<https://www.jneurosci.org/content/43/7/1074>
- E.B. Lind, B.M. Sweis, A.J. Asp, M. Esgeurra, K.A. Silvis, A.D. Redish, M.J. Thomas (2023) A quadruple dissociation of reward-related behavior across excitatory inputs to the nucleus Accumbens shell. *Communications Biology*. 6:119 <https://www.nature.com/articles/s42003-023-04429-6>
- G. W. Diehl, A. D. Redish (2023) Differential processing of decision information in subregions of rodent medial prefrontal cortex. *eLife* 12:e82833. <https://doi.org/10.7554/eLife.82833>
- A.D. Redish, S.V. Abram, P.J. Cunningham, A.A. Duin, R. Durand-de Cuttoli, R. Kazinka, A. Kocharian, A.W. MacDonald III, B. Schmidt. N. Schmitzer-Torbert, M.J. Thomas, B.M. Sweis (2022) Sunk cost sensitivity during change-of-mind decisions is informed by both the spent and remaining costs. *Communications Biology* 5:1337.  
<https://www.nature.com/articles/s42003-022-04235-6>
- S. Vinogradov, A. A. Hamid, A. D. Redish (2022) Etiopathogenic models of psychosis spectrum illnesses must resolve four key features. *Biological Psychiatry* 92(6):514-522.  
<https://www.sciencedirect.com/science/article/abs/pii/S0006322322013737>
- A.F. Haynos, A.S. Widge, L.M. Anderson, A. D. Redish (2022) Beyond Description and Deficits: How Computational Psychiatry Can Enhance an Understanding of Decision-Making in Anorexia Nervosa. *Current Psychiatry Reports*. <https://doi.org/10.1007/s11920-022-01320-9>

- A.D. Redish, A. Kepecs, L. M. Anderson, O. Calvin, N. Grissom, A.F. Haynos, S. R. Heilbronner, A.B. Herman, S. Jacob, S. Ma, I. Vilares, S. Vinogradov, C.J. Walters, A.S. Widge, J.L. Zick, A. Zilverstand (2022) "Computational Validity: Using Computation to translate behaviors across species". *Philosophical Transactions of the Royal Society B* 377:20200525.
- P.J. Cunningham, P.S. Regier, A.D. Redish (2021) "Dorsolateral striatal task-initiation bursts represent past experiences more than future action plans" *Journal of Neuroscience* 41(38):8051-8064.
- L. T. Hunt, N. D. Daw, P. Kaanders, M. A. MacIver, U. Mugan, E. Procyk, A. D. Redish, E. Russo, J. Scholl, K. Stachenfeld, C. R. E. Wilson, N. Kolling (2021) "Formalising planning and information search in naturalistic decision-making" *Nature Neuroscience*.
- B. Schmidt, A. D. Redish (2021) "Disrupting the medial prefrontal cortex with DREADDs alters hippocampal sharp-wave ripples and their associated cognitive processes" *Hippocampus*. 31(10):1051-1067.
- O. L. Calvin, A. D. Redish (2021) "Global Disruption in Excitation-Inhibition Balance Can Cause Localized Network Dysfunction and Schizophrenia-Like Context-Integration Deficits" *PLoS Computational Biology* 17(5): e1008985. <https://doi.org/10.1371/journal.pcbi.1008985>.
- C. Conelea, S. Jacob, A. D. Redish, I. S. Ramsay (2021) "Considerations for pairing Cognitive Behavioral Therapies and Noninvasive Brain Stimulation: Ignore at your own risk" *Frontiers in Psychiatry* 12:660180. <https://doi.org/10.3389/fpsy.2021.660180>.
- S. Kalhan, A. D. Redish, R. Hester, M. I. Garrido (2021) "A salience misattribution model for addictive-like behaviors" *Neuroscience and Biobehavioral Reviews* 125:466-477.
- A. A. Duin, L. Aman, B. Schmidt, A. D. Redish (2021) "Certainty and uncertainty of the future changes planning and sunk costs" *Behavioral Neuroscience*. 135(4):469-486. <https://doi.org/10.1037/bne0000460>
- R. Kazinka, A. W. MacDonald III, A. D. Redish (2021) "Sensitivity to sunk costs depends on attention to the delay" *Frontiers in Psychology* 12:373. DOI: 10.3389/fpsyg.2021.604843.
- A.E. McLaughlin, G.W. Diehl, A.D. Redish (2021) Potential roles of the rodent medial prefrontal cortex in conflict resolution between multiple decision-making systems. *International Review of Neurobiology* 158:249-281.
- C.S.J. Chen, R.B. Ebitz, S. Bindas, A.D. Redish, B. Hayden, N.M. Grissom. (2021) Divergent strategies for learning in males and females. *Current Biology* 31:1-12
- B. M. Hasz, A. D. Redish (2020) Spatial encoding in dorsomedial prefrontal cortex and hippocampus is related during deliberation. *Hippocampus* 30:1194-1208.

- E. Kummerfeld, S. Ma, R. K. Blackman, A. L. DeNicola, [A. D. Redish](#), S. Vinogradov, D. A. Crowe, M. V. Chafee (2020) Cognitive control errors in nonhuman primates resembling those in schizophrenia reflect opposing effects of NMDAR blockade on causal interactions between cells and circuits in prefrontal and parietal cortex. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* 5(7):705-714.
- B. M. Hasz, [A. D. Redish](#) (2020) Dorsomedial prefrontal cortex and hippocampus represent strategic context even while simultaneously changing representation throughout a task session. *Neurobiology of Learning and Memory* 171:107215.
- [A. D. Redish](#) (2020) Beyond Replay: Introduction to the special issue on hippocampal replay *Hippocampus* 30(1):3-5.
- S. V. Abram, M. Hanke, [A. D. Redish](#), A. W. MacDonald (2019) Neural signatures underlying deliberation in human foraging decisions. *Cognitive, Affective, & Behavioral Neuroscience*, 19(6):1492-1508.
- S. V. Abram, [A. D. Redish](#), A. W. MacDonald (2019) "Learning from loss after risk: Dissociating reward pursuit and reward valuation in a naturalistic foraging task" *Frontiers in Psychiatry* 10.3389/fpsyt.2019.00359.
- B. Schmidt, A. A. Duin, [A. D. Redish](#) (2019) "Disrupting the medial prefrontal cortex alters hippocampal sequences during deliberative decision making" *Journal of Neurophysiology* 121(6):1981-2000.
- [A. D. Redish](#), R. Kazinka, A. B. Herman (2019) "Taking an engineer's view: Implications of network analysis for computational psychiatry", *Behavioral and Brain Sciences* 42:36-47. Commentary on Borsboom et al. "Brain disorders? Not really: why network structures block reductionism in psychopathology research" *Behavioral and Brain Sciences* 42:1-11.
- C. J. Walters, J. Jubran, A. Sheehan, M. T. Erickson, [A. D. Redish](#) (2019) "Avoid-approach conflict behaviors differentially affected by anxiolytics: implications for a computational model of risky decision-making" *Psychopharmacology* 236(8):2513-2525.
- B. M. Sweis, M. J. Thomas, [A. D. Redish](#) (2018) "Beyond simple tests of value: Measuring addiction as a heterogeneous disease of computation-specific valuation processes" *Learning and Memory* 25:501-512.
- B. M. Sweis, S. V. Abram, B. J. Schmidt, K. D. Seeland, A. W. MacDonald, M. J. Thomas, [A. D. Redish](#) (2018) "Sensitivity to 'sunk costs' in mice, rats, and humans" *Science* 361:178-181.
- B. M. Hasz, [A. D. Redish](#) (2018) "Deliberation and Procedural Automation on a Two-Step Task for Rats" *Frontiers in Integrative Neuroscience* doi: 10.3389/fnint.2018.00030.
- B. M. Sweis, [A. D. Redish](#), M. J. Thomas (2018) "Prolonged abstinence from cocaine or morphine disrupts separable valuations during decision conflict" *Nature Communications* 9(1):2521.

- A. D. Redish, E. Kummerfeld, R. L. Morris, A. Love (2018) "Opinion: Reproducibility failures are essential to scientific inquiry" *PNAS* 115(20):5042-5046.
- B. M. Sweis, E. B. Larson, A. D. Redish, M. J. Thomas (2018) "Altering gain of the infralimbic to accumbens shell circuit alters economically dissociable decision-making algorithms" *PNAS* 115(27):E6347-6355.
- L. K. McLoon, A. D. Redish (2018) "Demystifying graduate school: Navigating a PhD in neuroscience and beyond" *Journal of Undergraduate Neuroscience Education* 16(3):A203-A209.
- B. Sweis, M. J. Thomas, A. D. Redish (2018) "Mice learn to avoid regret" *PLoS Biology* 16(6): e2005853.
- A. D. Redish, M. W. Howard (2018) "The legacy of Adam Johnson". *Hippocampus* 28(6):453-454.
- M. Ferrante, A. D. Redish, M. Oquendo, B. Averbeck, M. Kinnane, J. Gordon (2017) "Computational Psychiatry: A report from the 2017 NIMH Workshop on opportunities and challenges". *Molecular Psychiatry*.
- S. Amemiya, A. D. Redish (2018) "Hippocampal theta-gamma coupling reflects state-dependent information processing in decision making". *Cell Reports* 22(12):3328-3338.
- J. Lisman, G. Buzsáki, H. Eichenbaum, L. Nadel, C. Ranganath, A. D. Redish (2017) "Viewpoints: how the hippocampus contributes to memory, navigation and cognition" *Nature Neuroscience* 20:1434-1447.
- K. J. Friston, A. D. Redish, J. A. Gordon (2017) "Computational Nosology and Precision Psychiatry" *Computational Psychiatry*. doi: 10.1162/CPSY\_a\_00001.
- Z. Kurth-Nelson, A. D. Redish (2017) "Precommitment: A way around temptation" *Frontiers for Young Minds* 5:26. doi:10.3389/frym.2017.00026.
- A. E. Papale, M. C. Zielinski, L. Frank, S. Jadhav, A. D. Redish (2016) "Interplay between hippocampal sharp wave ripple events and vicarious trial and error behaviors in decision making" *Neuron* 92(5):975-982.
- N. J. Powell, A. D. Redish (2016) "Representational changes of latent strategies in rat medial prefrontal cortex precede changes in behavior" *Nature Communications* 7:12830.
- E. C. Carter, A. D. Redish (2016) "Rats value time differently on equivalent foraging and delay-discounting tasks" *Journal of Experimental Psychology: General* 145(9):1093-1101.
- S. V. Abram, Y. A. Breton, B. Schmidt, A. D. Redish, A. W. MacDonald III (2016) "The Web-Surf Task: A translational model of human decision-making" *Cognitive, Affective, and Behavioral Neuroscience* 16(1):37-50.
- A. D. Redish (2016) "Vicarious Trial and Error" *Nature Reviews Neuroscience* 17:147-159.

- S. Amemiya, [A. D. Redish](#) (2016) "Manipulating Decisiveness in Decision Making - Effects of Clonidine on Hippocampal Search Strategies" *The Journal of Neuroscience* 36(3):814-827.
- P. S. Regier, S. Amemiya, [A. D. Redish](#) (2015) "Hippocampus and subregions of the dorsal striatum respond differently to a behavioral strategy change on a spatial navigation task" *Journal of Neurophysiology* 114(3):1399-1416.
- [A. D. Redish](#), N. W. Schultheiss, E. C. Carter (2015) "The computational complexity of valuation and motivational forces in decision-making processes", *Current Topics in Behavioral Neuroscience*.
- J. J. Stott, [A. D. Redish](#) (2015) "Representations of value in the brain: an embarrassment of riches?" *PLOS Biology* 13(6):e1002174.
- P. S. Regier, [A. D. Redish](#) (2015) "Contingency Management and deliberative decision-making processes" *Frontiers in Psychiatry* 6:0076 doi:10.3389/fpsyt.2015.00076
- N. W. Schultheiss, [A. D. Redish](#) (2015) "The compass within" *Nature Neuroscience*, 18:482-483. [Commentary on Peyrache & Buzsaki 2015 *NNsci*.]
- Y. A. Breton, K. D. Seeland, [A. D. Redish](#) (2015) "Aging impairs deliberation and behavioral flexibility in inter-temporal choice" *Frontiers in Aging Neuroscience* 10.3389/fnagi.2015.00041.
- A. M. Wikenheiser, [A. D. Redish](#) (2015) "Hippocampal theta sequences reflect current goals" *Nature Neuroscience* 18:289-294.
- [A. D. Redish](#), S. J. Y. Mizumori (2015) "Memory and Decision Making" *Neurobiology of Learning and Memory* 117:1-3. (Introductory article to special issue on Memory and Decision Making, edited by SJYM and ADR.)
- T. T. Hills, P. M. Todd, D. Lazer, [A. D. Redish](#), I. D. Couzin, and the Cognitive Search Research Group\* (\*M. Bateson, R. Cools, R. Dukas, L. Giraldeau, M. W. Macy, S. E. Page, R. M. Shiffrin, D. W. Stephens, B. Uzzi, J. W. Wolfe) (2015) "Exploration versus Exploitation in Space, Mind, and Society" *Trends in Cognitive Sciences*. 19(1):46-54.
- A. M. Wikenheiser, [A. D. Redish](#) (2015) "Decoding the cognitive map: ensemble hippocampal sequences and decision making" *Current Opinion in Neurobiology* 32:8-15.
- W. Bickel, R. D. Landes, Z. Kurth-Nelson, [A. D. Redish](#) (2014) "A Quantitative Signature Of Self-Control Repair: Rate-Dependent Effects Of Successful Addiction Treatment" *Clinical Psychological Science* 2(6):685-695.
- J. J. Stott, [A. D. Redish](#) (2014) "A functional difference in information processing between orbitofrontal cortex and ventral striatum during decision-making behavior" *Philosophical Transactions of the Royal Society B* 2013.0472.



- M. Takahashi, H. Nishida, [A. D. Redish](#), J. Lauwereyns (2014) "Theta Phase Shift in Spike Timing and Modulation of Gamma Oscillation: A Dynamic Code for Spatial Alternation during Fixation in Rat Hippocampal Area CA1" *J. Neurophysiology* 111:1601-1614.
- A. P. Steiner, [A. D. Redish](#) (2014) "Behavioral and neurophysiological correlates of regret in rat decision-making on a neuroeconomic task" *Nature Neuroscience* 17:995-1002.
- N. J. Powell, [A. D. Redish](#) (2014) "Complex neural codes in rat prelimbic cortex are stable across days on a spatial decision task" *Frontiers in Behavioral Neuroscience* 8:00120.
- [A. D. Redish](#) (2013) "The Dangers of Dualism: Implications of the multiple decision-making system theory for Free Will and Responsibility" *Cognitive Critique* 7:1-28.
- B. J. Schmidt, [A. D. Redish](#) (2013) "Navigation with a cognitive map" *Nature* 497:42-43. [Commentary on Pfeiffer & Foster 2013 *Nature*.]
- A. M. Wikenheiser, D. W. Stephens, [A. D. Redish](#) (2013) "Subjective costs drive overly-patient foraging strategies in rats on an intertemporal foraging task" *PNAS* 110(20):8308-8313.
- B. J. Schmidt, A. E. Papale, [A. D. Redish](#), E. J. Markus (2013) "Conflict between Place and Response Navigation Strategies: Effects on Vicarious Trial and Error (VTE) Behaviors" *Learning and Memory* 20:130-138.
- A. M. Wikenheiser, [A. D. Redish](#) (2013) "The balance of forward and backward hippocampal sequences shifts across behavioral states" *Hippocampus* 23:22-29.
- Z. Kurth-Nelson and [A. D. Redish](#) (2012) "Don't let me do that! – models of precommitment" *Frontiers in Neuroscience* 6:138. doi: 10.3389/fnins.2012.00138.
- A. P. Steiner, [A. D. Redish](#) (2012) "The road not taken: neural correlates of decision making in orbitofrontal cortex" *Frontiers in Decision Neuroscience* 6:131 doi:10.3389/fnins.2012.00131.
- A.E. Papale, J. J. Stott, N. J. Powell, P. S. Regier, [A. D. Redish](#) (2012) "Interactions between Deliberation and Delay-Discounting in Rats" *Cognitive, Affective, and Behavioral Neuroscience* 12(3):513-526.
- M. A. A. van der Meer, Z. Kurth-Nelson, [A. D. Redish](#) (2012) "Information processing in decision-making systems" *The Neuroscientist* 18(4):342-359.
- Z. Kurth-Nelson, W. K. Bickel, [A. D. Redish](#) (2012) "A theoretical account of cognitive effects in delay discounting" *European Journal of Neuroscience* 35:1052-1064,
- A.S. Gupta, M.A.A. van der Meer, D.S.Touretzky, A.D. Redish (2012) "Segmentation of spatial experience by hippocampal theta sequences" *Nature Neuroscience* 15:1032-1039.
- J. E. Ferguson, C. Boldt, J. G. Puhl, T. W. Stigen, J. C. Jackson, K. M. Crisp, K. A. Mesce, T. I. Netoff, [A. D. Redish](#) (2012) "Nanowires precisely grown on the ends of microwire electrodes permit the recording of intracellular action potentials within deeper neural structures" *Nanomedicine* 7(6):847-854.

- A. M. Wikenheiser, A. D. Redish (2012) "Hippocampal sequences link past, present and future" *TICS* (Spotlight).
- A. M. Wikenheiser, A. D. Redish (2011) "Changes in reward contingency modulate the trial to trial variability of hippocampal place cells" *J Neurophysiology* 106(2):589-598.
- J. E. Ferguson, A. D. Redish (2011) "Wireless communication with implanted medical devices using the conductive properties of the body" *Expert Reviews of Medical Devices* 8(4):427-33.
- W. Bickel, R. Landes, D. Christensen, L. Jackson, B. Jones, Z. Kurth-Nelson, A. D. Redish (2011) "Single- and Cross-Commodity Discounting Among Cocaine Addicts: The Commodity and Its Temporal Location Determine Discounting Rate" *Psychopharmacology* 217(2):177-187.
- M. A. A. van der Meer, A. D. Redish (2011) "Ventral striatum: a critical look at models of learning and evaluation" *Current Opinion in Neurobiology* 21(3):387-392
- J. E. Ferguson, J. C. Jackson, A. D. Redish (2011) "An inside look at hippocampal silent cells" *Neuron* 70:3-5.
- A. Blumenthal, A. P. Steiner, K. D. Seeland, A. D. Redish (2011) "Effects of pharmacological manipulations of NMDA-receptors on deliberation in the Multiple-T task" *Neurobiology of Learning and Memory* 95:376-384.
- M. A. A. van der Meer, A. D. Redish (2011) "Theta phase precession in rat ventral striatum links place and reward information" *Journal of Neuroscience* 31(8):2843-2854.
- Z. Kurth-Nelson, A. D. Redish (2010) "A Reinforcement Learning Model of Precommitment in Decision Making" *Frontiers in Behavioral Neuroscience* 4:184. doi: 10.3389/fnbeh.2010.00184
- M. A. A. van der Meer, T. Kalensher, C. S. Lansink, C. M. A. Pennartz, J. Berke, A. D. Redish (2010) "Integrating early results on ventral striatal gamma oscillations in the rat" *Frontiers in Neuroscience* 4(28):1-12.
- M. A. A. van der Meer, A. Johnson, N. C. Schmitzer-Torbert, A. D. Redish (2010) "Triple dissociation of information processing in dorsal striatum, ventral striatum, and hippocampus on a learned spatial decision task" *Neuron* 67:25-32.
- M. A. A. van der Meer, A. D. Redish (2010) "Expectancies in decision making, reinforcement learning, and ventral striatum" *Frontiers in Neuroscience* doi:10.3389/neuro.01.006.2010.
- A. S. Gupta, M. A. A. van der Meer, D. S. Touretzky, A. D. Redish (2010) "Hippocampal replay is not a simple function of experience" *Neuron* 65(5):695-705.
- J. E. Ferguson, C. Boldt, A. D. Redish (2009) "Creating low-impedance tetrodes by electroplating with additives" *Sensors and Actuators: A. Physical* 156:338-393.
- C. Pennartz, J. D. Berke, A. Graybiel, R. Ito, C. Lansink, M. van der Meer, A. D. Redish, K. Smith, and P. Voorn (2009) "Cortico-striatal Interactions during Learning, Memory Processing, and Decision Making." *Journal of Neuroscience*. 29(41):12831-12838.

- Z. Kurth-Nelson, A. D. Redish (2009) "Temporal-difference reinforcement learning with distributed representations" *PLoS ONE* 4(10): e7362.
- A. D. Redish (2009) "Implications of the multiple-vulnerabilities theory of addiction for craving and relapse" *Addiction*. 104:1940-1941.
- M. A. A. van der Meer, A. D. Redish (2009) "Low and high gamma oscillations in rat ventral striatum have distinct relationships to behavior, reward, and spiking activity on a learned spatial decision task" *Frontiers in Integrative Neuroscience* 3:9. doi:10.3389/neuro.07.009.2009.
- J. Lisman, A. D. Redish (2009) "Prediction, sequences, and the hippocampus" *Philosophical Transactions of the Royal Society B* 364:1193-1201.
- M. A. A. van der Meer, A. D. Redish (2009) "Covert expectation-of-reward in rat ventral striatum at decision points" *Frontiers in Integrative Neuroscience* 3(1):1-15.
- A. Johnson, A. Fenton, C. Kentros, A. D. Redish (2009) "Looking for cognition in the structure in the noise" *Trends in Cognitive Sciences* 13(2):55-64.
- A. D. Redish, S. Jensen, A. Johnson (2008) "A unified framework for addiction: vulnerabilities in the decision process" *Behavioral and Brain Sciences* 31:415-437 with discussion pp. 437-487.
- N. C. Schmitzer-Torbert, A. D. Redish (2008) "Task-dependent encoding of space and events by striatal neurons is dependent on neural subtype" *Neuroscience* 153(2):349-360.
- A. Johnson, M. A. A. van der Meer, A. D. Redish (2007) "Integrating hippocampus and striatum in decision making" *Current Opinion in Neurobiology* 17(6):692-697.
- A. Johnson, A. D. Redish (2007) "Neural ensembles in CA3 transiently encode paths forward of the animal at a decision point" *Journal of Neuroscience* 27(45):12176-12189.
- J. C. Jackson, A. D. Redish (2007) "Network dynamics of hippocampal cell-assemblies resemble multiple spatial maps within single tasks" *Hippocampus* 17:1209-1229.
- A. D. Redish, S. Jensen, A. Johnson, Z. Kurth-Nelson (2007) "Reconciling reinforcement learning models with behavioral extinction and renewal: implications for addiction, relapse, and problem gambling." *Psychological Review* 114(3): 784-805.
- A. D. Redish, A. Johnson (2007) "A computational model of craving and obsession" *Annals of the New York Academy of Sciences* 1104: 324-339. doi:10.1196/annals.1390.014
- A. D. Redish (2007) "A window on cognition" *Scientific American Mind*. (Originally published as the part of the initial ScienceBlog on the Scientific American website, as "Through the Grid, a Window on Cognition" 23 January 2007, *Scientific American Mind*. <http://blog.sciam.com/>)
- J.C. Jackson, A. Johnson, A.D. Redish (2006) "Hippocampal sharp waves and reactivation during awake states depend on repeated sequential experience" *Journal of Neuroscience* 26:12415-12426.

- B. Masimore, N.C. Schmitzer-Torbert, J. Kakalios, A.D. Redish (2005) "Striatal local field potentials signal initiation of movement in rats" *NeuroReport* 16(18):2021-2024.
- R. Venkateswaran, C. Boldt, J. Parthasarathy, B. Ziaie, A. G. Erdman, A. D. Redish (2005) "A motorized microdrive for recording of neural ensembles in awake behaving rats" *Journal of Biomechanical Engineering* 127:1035-1040
- A. Johnson, A.D. Redish (2005) "Hippocampal replay contributes to within session learning in a temporal difference reinforcement learning model" *Neural Networks* 18(9):1163-1171.
- N.C. Schmitzer-Torbert, J.C. Jackson, D. Henze, K.D. Harris, A.D. Redish (2005) "Quantitative measures of cluster quality for use in extracellular recordings" *Neuroscience* 131:1-11.
- A. Johnson, K. D. Seeland, A. D. Redish (2005) "Reconstruction of the postsubiculum head direction signal from neural ensembles" *Hippocampus* 15:86-96.
- A.D. Redish (2004) "The addiction compulsion: a computational process gone awry" *Science* 306:1944-1947.
- B. Masimore, J. Kakalios, A.D. Redish (2004) "Measuring fundamental frequencies in local field potentials" *Journal of Neuroscience Methods* 138(1-2):97-105.
- N. C. Schmitzer-Torbert and A. D. Redish (2004) "Neuronal activity in the rodent dorsal striatum on a sequential navigation task: Separation of responses to sequence and reward on the multiple T task", *Journal of Neurophysiology* 91(5):2259-2272.
- J. C. Jackson, A.D. Redish (2004) "Measuring ensemble consistency without measuring tuning curves", *Neurocomputing* 58-60C: 91-99.
- J.C. Jackson, A.D. Redish (2003) "Detecting dynamical changes within a simulated neural ensemble using a measure of representational quality" *Network: Computation in Neural Systems*, 14:629-645.
- E. S. Rosenzweig, A. D. Redish, B. L. McNaughton, C. A. Barnes (2003) "Hippocampal map realignment and spatial learning", *Nature Neuroscience*, 6(6):609-615.
- N.C. Schmitzer-Torbert, A.D. Redish (2002) "Development of path-stereotypy in a single day in rats on a multiple-T maze" *Archives Italiennes Biologie* 140:295-301.
- A.D. Redish (2001) "The hippocampal debate: Are we asking the right questions?" *Behavioural Brain Research* 127:81-98.
- A.D. Redish, F.P. Battaglia, M.K. Chawla, A.D. Ekstrom, J.L. Gerrard, P. Lipa, E.S. Rosenzweig, P.F. Worley, J.F. Guzowski, B.L. McNaughton, C.A. Barnes (2001) "Hippocampal pyramidal cells located near each other anatomically do not show related spatial firing correlates", *Journal of Neuroscience* 21(RC134):1-6.
- A. D. Redish, E. S. Rosenzweig, J. D. Bohanick, B. L. McNaughton, C. A. Barnes (2000) "Hippocampal ensemble activity realignment: Time vs. space", *Journal of Neuroscience*, 20(24):9289-9309.

- A. D. Redish, B. L. McNaughton, C. A. Barnes (2000) "Place cell firing shows an inertia-like process", *Neurocomputing*, 32–33: 235–241.
- J. P. Goodridge, A. D. Redish, and D. S. Touretzky (1999) "A model of the rodent head direction system that accounts for unique properties of anterior thalamic head direction cells", *Neurocomputing* 26–27(1–3):705-711.
- A. D. Redish, B. L. McNaughton, and C. A. Barnes (1998) "Reconciling Barnes et al. (1997) and Tanila et al. (1997a, 1997b)", *Hippocampus* 8(5): 438-443.
- A.D. Redish and D.S. Touretzky (1998) "The Role of the Hippocampus in Solving the Morris Water Maze", *Neural Computation* 10(1): 73-112.
- A.D. Redish and D.S. Touretzky (1997) "Cognitive Maps beyond the Hippocampus", *Hippocampus*. 7(1): 15-35.
- A.D. Redish, A.N. Elga, and D.S. Touretzky (1996) "A Coupled Attractor Model of the Rodent Head Direction System", *Network: computation in neural systems*. 7(4):671-685.
- D.S. Touretzky and A.D. Redish (1996) "A Theory of Rodent Navigation Based on Interacting Representations of Space", *Hippocampus* 6(3): 247-270.
- A.D. Redish and D.S. Touretzky (1994) "The Reaching Task: Evidence for vector subtraction in the motor system" *Biological Cybernetics* 71(4): 307-317.
- D.S. Touretzky, A.D. Redish, and H.S. Wan (1993) "Neural Representation of Space Using Sinusoidal Arrays", *Neural Computation*, 5(6): 869-884.

## PhD Dissertation

- A.D. Redish (1997) Beyond the Cognitive Map: Contributions to a Computational Theory of Rodent Navigation, Computer Science Department, Carnegie Mellon University.

## Book Chapters and Conference Articles

- A.D. Redish, H.S. Chastain, C.F. Runge, B.M. Sweis, S.E. Allen, A. Haldar (in press) Policy consequences of the new neuroeconomic framework. In *Neuroeconomics: Core Topics and Current Directions*, D. V. Smith, D. Fareri, P. Lockwood, eds. Springer Nature. Also available as arXiv unreviewed preprint. <https://arxiv.org/abs/2409.07373>
- U. Mugan, S. Amemiya, PS Regier, AD Redish (2024) "Navigation through the complex world – the neurophysiology of decision-making processes" to be published in *Habits: Their definition, neurobiology, and role in addiction*, Y. Vandaele et. Spring Nature. pp 109-139.
- CJ Walters, S Vinogradov, AD Redish (2023) "Computational Modeling in Psychiatry" to be published in *Cambridge Handbook of Computational Sciences*, Ron Sun ed. Cambridge University Press. Chapter 26.

- A. D. Redish (2020) “Addiction from a Computational Perspective” in *Computational Psychiatry: A Primer* P. Series, ed. Chapter 9, pgs. 185-204.
- Zick JL, Camchong J, Redish AD, Vinogradov S (2019) “Circuit Psychiatry: Non-Drug Therapeutic Interventions for Impaired Neural System Functioning” to be published in AB Niculescu III, J Licinio (Eds.), *Translational Neuroscience in Psychiatry*. Oxford University Press.
- B. Schmidt, A. M. Wikenheiser, A. D. Redish (2018) “Goal-directed sequences in the hippocampus” in *Goal-Directed Decision Making: Computations and Neural Circuits* R. Morris, A. Bornstein, A. Shenhav (eds), Academic Press, Elsevier, Chapter 6, pgs. 125-151.
- C. J. Walters, A. D. Redish (2018) “A case study in computational psychiatry: addiction as failure modes of the decision-making system” in *Computational Psychiatry: Mathematical modeling of mental illness*, (A. Anticevic and J. Murray, eds). Elsevier.
- J. A. Gordon, A. D. Redish (2016) “On the cusp: Current Challenges and Promises in Psychiatry” in *Computational Psychiatry: New Perspectives on Mental Illness* Redish and Gordon (eds), Strüngmann Forum Reports, vol. 20, series ed. J. Lupp. Cambridge MA: MIT Press, Chapter 1, pages 3-14.
- A. D. Redish, J. A. Gordon (2016) “Breakdowns and failure modes: An Engineer’s View” in *Computational Psychiatry: New Perspectives on Mental Illness* Redish and Gordon (eds), Strüngmann Forum Reports, vol. 20, series ed. J. Lupp. Cambridge MA: MIT Press, Chapter 2, pages 15-29.
- S. B. Flagel, D. S. Pine, S. E. Ahmari, M. B. First, K. J. Friston, C. Mathys, A. D. Redish, K. Schmack, J. W. Smoller, A. Thapar (2016) “A Novel Framework for Improving Psychiatric Diagnostic Nosology” in *Computational Psychiatry: New Perspectives on Mental Illness* Redish and Gordon (eds), Strüngmann Forum Reports, vol. 20, series ed. J. Lupp. Cambridge MA: MIT Press, Chapter 10, pages 169-199.
- A. D. Redish, J. A. Gordon (2016) “From Psychiatry to Computation and Back Again” in *Computational Psychiatry: New Perspectives on Mental Illness* Redish and Gordon (eds), Strüngmann Forum Reports, vol. 20, series ed. J. Lupp. Cambridge MA: MIT Press, Chapter 17, pages 319-329.
- A. D. Redish (2015) “Addiction as a symptom of failure modes in the machineries of decision-making” (Book chapter for *The Wiley Handbook on the Cognitive Neuroscience of Addiction*, S. J. Wilson, ed.) Wiley. Chapter 7, pages 151-172.
- A. M. Wikenheiser, A. D. Redish (2015) “Hippocampal sequences and the cognitive map” In *Analysis and Modeling of Coordinated Multi-neuronal Activity*, Springer Series in Computational Neuroscience 12, M. Tatsuno, ed. Springer, Chapter 5, pages 105-129.
- A. D. Redish, A. D. Ekstrom (2012) “Hippocampus and related areas: What the place cell literature tells us about cognitive maps in rats and humans” In *Handbook of Spatial Cognition*, D. Waller and L. Nadel, eds. APA. Chapter 1, pages 13-34.

- A. E. Papale, R. Mork, C. Boldt, J. C. Jackson, J. E. Ferguson, A. D. Redish (2012) "Wireless Galvanic transmission through neural tissue via modulation of a carrier signal by a passive probe" *Journal of Medical Devices* 6(1):017509.
- C. A. Winstanley, T. W. Robbins, B. W. Balleine, J. W. Brown, C. Büchel, R. Cools, D. Durstewitz, J. P. O'Doherty, C. M. A. Pennartz, A. D. Redish, J. K. Seamans (2012) in *Cognitive Search: Evolution, Algorithms, and the Brain*, P. M. Todd, T. T. Hills, T. W. Robbins (eds). Strüngmann Forum Reports, MIT Press. Chapter 9, pages 125-156.
- A.D. Redish (2012) "Search processes and hippocampus" in *Cognitive Search: Evolution, Algorithms, and the Brain*, P. M. Todd, T. T. Hills, T. W. Robbins (eds). Strüngmann Forum Reports, MIT Press. Chapter 6, pages 81-95.
- Z. Kurth-Nelson and A. D. Redish (2012) "Modeling decision-making systems in addiction" in *Computational Neuroscience of Drug Addiction*. B. Gutkin, S. Ahmed (eds). Springer. Chapter 6, pages 163-188.
- A. D. Redish (2010) "Addiction as a breakdown in the machinery of decision-making" in *what is addiction?* D. Ross, H. Kincaid, D. Spurrett, P. Collins (eds). MIT Press. Chapter 4 Pages 99-130.
- A. D. Redish and Z. Kurth-Nelson (2010) "Neural models of temporal discounting" in *Impulsivity: Theory, Science, and Neuroscience of Discounting*. G. Madden and W. Bickel (eds). APA books. Chapter 5. Pages 123-158.
- A. Johnson, J. Jackson, A. D. Redish (2009) "Measuring distributed properties of neural representations beyond the decoding of local variables – implications for cognition" in *Mechanisms of information processing in the Brain: Encoding of information in neural populations and networks*. Holscher and Munk (Eds), Cambridge University Press, Cambridge UK. Chapter 5. Pages 95-119.
- KM Al-Ashmouny, C Boldt, JE Ferguson, AG Erdman, AD Redish, E Yoon (2009) "IBCOM (Intra-Brain Communication) Microsystem: Wireless Transmission of Neural Signal within The Brain", (366) *31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'09)* .
- JE Ferguson, C Boldt, AD Redish (2009) "Creating low-impedance coatings for neural recording electrodes using electroplating inhibitors" *J. Med. Devices* June 2009. 3(2):027523 (1 pages). DOI:10.1115/1.3147086
- KM Al-Ashmouny, C Boldt, JE Ferguson, AG Erdman, AD Redish, E Yoon (2009) "The neural nanoprobe: Physically decoupling the neural recording site from the headstage" *J. Med. Devices* June 2009. 3(2):027524 (1 pages) DOI:10.1115/1.3147087
- J. Parthasarathy, J. Hogenson, A.G. Erdman, A.D. Redish, B. Ziaie (2006) "Battery-operated High-bandwidth Multi-channel Wireless Neural Recording System using 802.11b" *28th IEEE EMBS Annual International Conference*. 1:5989-5992.

- J. Parthasarathy, A.G. Erdman, A.D. Redish, B. Ziaie (2006) "An Integrated CMOS Bio-potential Amplifier with a Feed-Forward DC Cancellation topology" *28th IEEE EMBS Annual International Conference*. 1:2974-2977.
- B. Masimore, J. Kakalios and A. D. Redish (2003) "Measuring neural coupling from non-Gaussian power spectra of voltage traces taken from awake, behaving animals", *Proceedings of SPIE* vol. 5110, *Fluctuations and Noise in Biological, Biophysical, and Biomedical Systems*, edited by Sergey M. Bezrukov, Hans Frauenfelder and Frank Moss. (SPIE, Bellingham, WA), pages 224-234.
- A.D. Redish and D.S. Touretzky (1999) "Separating Hippocampal Maps", *Spatial Functions of the Hippocampal Formation and the Parietal Cortex*, edited by N. Burgess, K. Jeffery, and J. O'Keefe, Oxford University Press, Chapter 11, pages 203-219
- M.C. Fuhs, A.D. Redish, and D.S. Touretzky (1998) "A Visually Driven Hippocampal Model", *Computational Neuroscience: Trends in Research*, edited by J. M. Bower, Kluwer Academic Press.
- A.D. Redish and D.S. Touretzky (1998) "The Role of the Hippocampus in Solving the Morris Water Maze", *Computational Neuroscience: Trends in Research*, edited by J. M. Bower, Kluwer Academic Press.
- A.N. Elga, A.D. Redish, and D.S. Touretzky (1997) "A Model of the Rodent Head Direction System", *Computational Neuroscience: Trends in Research*, edited by J. M. Bower, Kluwer Academic Press
- A.D. Redish and D.S. Touretzky (1997) "Computing Goal Locations from Place Codes", in *Symbolic Visual Learning*, Katsu Ikeuchi and Manuela Veloso eds., Oxford University Press, Chapter 12 , pages 325-351.
- A.D. Redish and D.S. Touretzky (1996) "Modeling Interactions of the Rat's Place and Head Direction Systems", *Advances in Neural Information Processing Systems 8*, D. S. Touretzky, M. C.. Mozer and M. E.. Hasselmo, eds., MIT Press, pages 61-67.
- D. S. Touretzky and A. D. Redish (1995) "Landmark Arrays and the Hippocampal Cognitive Map", *Current trends in connectionism - Proceedings of the 1995 Swedish Conference on Connectionism*, L. Niklasson and M. Boden eds., pp 1-13, Lawrence Erlbaum.
- A. D. Redish, D. S. Touretzky, and H. S. Wan (1994) "The Sinusoidal Array: A Theory of Representation for Spatial Vectors", *Computation in Neurons and Neural Systems*, F. H. Eeckman, ed., pp. 269-275, Kluwer Academic Publishers.
- D. S. Touretzky, H. S. Wan, and A. D. Redish (1994) "Neural representations of space in rats and robots", *Computational Intelligence: Imitating Life*, J. M. Zurada, R. J. Marks II, and C. J. Robinson eds., pp. 57-68, IEEE Press.



H. S. Wan, D. S. Touretzky, and [A. D. Redish](#) (1994) "Computing Goal Locations from Place Codes", *Proceedings of the 16th annual conference of the Cognitive Science society*, pp 922-927, Lawrence Earlbaum Associates.

H. S. Wan, D. S. Touretzky, and [A. D. Redish](#) (1994) "Towards a Computational Theory of Rat Navigation", *Proceedings of the 1993 Connectionist Models Summer School*, M. Mozer, P. Smolensky, D. Touretzky, J. Elman, and A. Weigerd, eds., pp 11-19, Lawrence Earlbaum Associates.

## Unreviewed preprints (without corresponding publications yet)

A. Kocharian, A.D. Redish, P.E. Rothwell (2024) Individual differences in decision-making shape how mesolimbic dopamine regulates choice confidence and change-of-mind. bioRxiv unreviewed preprint. <https://www.biorxiv.org/content/10.1101/2024.09.16.613237v1>

P. J. Cunningham, A. D. Redish (2024) A triple dissociation across the medial, ventral, and lateral orbitofrontal cortex in rats making sequential foraging decisions. bioRxiv unreviewed preprint. <https://www.biorxiv.org/content/10.1101/2024.08.17.608409v1>

W. W. Pettine, A. Tseng, A. Yang, A. Docherty, A. D. Redish, J. D. Murray, S. Jacob. (2024) Attention and Learning Strategies Reveal Distinct Profiles of Psychiatric Traits. PsyArXiv unreviewed preprint. <https://osf.io/preprints/psyarxiv/52mkw>.

G. W. Diehl, A. D. Redish (2024) Measuring excitation-inhibition balance through spectral components of local field potentials. bioRxiv unreviewed preprint. <https://www.biorxiv.org/content/10.1101/2024.01.24.577086v1>

S. E. Allen, R. F. Kizilcec, A. D. Redish (2024) A new model of trust based on neural information processing. arXiv unreviewed preprint. <https://arxiv.org/abs/2401.08064>

D. Surinach, M.L Rynes, K. Saxena, E. Ko, A. D. Redish, S. B. Kodandaramaiah (2023) Distinct mesoscale cortical dynamics encode search strategies during spatial navigation. bioRxiv 2023.03.27.534480; doi: <https://doi.org/10.1101/2023.03.27.534480>

## Abstracts

A. D. Redish, A. DeFulio, P. S. Regier, R. M. Davidson, H. K. Traxler, J. A. Royle, H. P. Gass (2024) A neuroeconomic analysis of contingency management. SNE P2-E-95.

A. Chatterjee, A. J. Sederberg, A. D. Redish (2024) Computational strategies of rats navigating spatial environments under changing reward conditions. SFN 2024 PSTR094.11.

P. J. Cunningham, A. D. Redish (2024) A triple dissociation across the medial, ventral, and lateral orbitofrontal cortex in rats making sequential foraging decisions. SFN 2024 PSTR133.12.

D. Mueller, E. Knep, A. Velosa, U. Mugan, A. Yang, B. Ebitz, A. D. Redish, N. M. Grissom (2024) Medial prefrontal neuronal dynamics during explore and exploit behavior in a mouse bandit decision making task. SFN 2024 PSTR246.01.

- U. Mugan, S. Hoffman, A. D. Redish (2024) Examining multiple moments of decision-making through prefrontal, hippocampal, and dorsolateral striatal interactions in a complex spatial task. SFN 2024 PSTR250.05.
- R. Durand-de Cutolli, A. Fink, A. Baggetta, G. Coricelli, H. S. Mayber, A. D. Redish, J. Murrouhg, X. Gu, I Saez, L. Morris, J. Depierro, B. M. Sweis (2024) Developing a neuroeconomically informed and biologically constrained regret inventory. SFN 2024 PSTR416.16.
- C. S. Chen, C. Demro, S. Sponheim, N. M. Grissom, B. R. Ebitz, A. D. Redish, S. Vinogradov, A. W. MacDonald III (2024) Computational indices of state-based learning predict symptom severity in early psychosis. SFN 2024 PSTR488.30.
- M. K. Feldkamp, J. Hope, R. Peters, T. Beckerle, A. D. Redish, S. B. Kodandaramaiah (2024) Distributed encoding of space in neural populations across the dorsal cortex. SFN 2024 PSTR491.05.
- U. Mugan, S. Hoffman, A. D. Redish (2024) Information processing in hippocampus, prefrontal cortex, and striatum is modulated by environmental complexity. CRCNS PI Meeting.
- O. L. Calvin, E. Rawls, C. Shen, A. D. Redish, S. Sponheim (2024). Subtyping psychosis by computational parameters of cognitive control. Computational Psychiatry 2024.
- C. Chen, C. Demro, E. Knep, N. Grissom, B. Ebitz, A. D. Redish, S. Vinogradov, A. MacDonald III (2024) Computational indices of state-based learning predict symptom severity in early psychosis. Computational Psychiatry 2024.
- S. E. Allen, A. D. Redish (2024). Actionable implications of 21st century neuroscience, skeptics welcome. *Physics Education Research Conference (PERC) 2024*, Ithaca, NY.
- U. Mugan, S. Hoffman, A. D. Redish (2024) Hippocampal, dorsal striatal, and medial prefrontal cortical computations depend on maze complexity. Forum for European Neuroscience FENS 2024.
- P. J. Cunningham, A. D. Redish (accepted [2024]) Distinct Information Processing Across the Medial-to-Lateral Orbitofrontal Cortex During Economic Decision-Making in Rats. Paris conference on Orbitofrontal Cortex. 2024.
- G. W. Diehl, A. D. Redish (2024) Local field potentials, excitation-inhibition balance, and network communication in rodent mPFC. CoSyne 2024.
- O. L. Calvin, C. Shen, E. Rawls, A. D. Redish, S. R. Sponheim (2023) Clarifying proactive and reactive cognitive control deficits in psychosis via drift diffusion modeling. Society for Neuroscience 2023.
- C. C. Damphouse, O. L. Calvin, M. T. Erickson, A. D. Redish (2023) Hippocampal representation in rats worried about being attacked by a threatening robot in the "robogator" approach-avoidance task. Society for Neuroscience 2023.

- G. W. Diehl, A. D. Redish (2023) Network physiology metrics reveal a dynamic balance between excitatory and inhibitory functional connections in rodent prefrontal cortex during decision making. Society for Neuroscience 2023
- U. Mugan, S. L. Hoffman, A. D. Redish (2023) Probing the role of prefrontal cortex, hippocampus, and dorsolateral striatum on decision-making in complex spatial environments. Society for Neuroscience 2023.
- W.W. Pettine, J.D. Murray, A.D. Redish, D.V. Raman; Diversity in human use of prototype learning and discriminative attention during latent-state generalization. Society for Neuroscience 159.15. 2022
- O. L. Calvin, A. D. Redish, A. F. Haynos; Hierarchical Drift Diffusion Modeling of Reaction Times of Individuals with Anorexia Nervosa on a Video Foraging Task (WebSurf). Society for Neuroscience 319.06. 2022.
- S. L. Hoffman, U. Mugan, A. D. Redish Decision-making strategies are modulated by environmental complexity and mediated by prelimbic cortex. Society for Neuroscience 565.09. 2022.
- M. Rynes, D. Surinach, K. Saxena, E. Ko, A. D. Redish, S. B. Kodandaramaiah; Mesoscale calcium dynamics observed across the cortex in freely moving mice identify brain states during spatial navigation and learning. Society for Neuroscience 661.06. 2022.
- G. Diehl, A. D. Redish (2022) The rodent medial prefrontal cortex is composed of functionally distinct subregions. CoSyne.
- U. Mugan, S. Hoffman, P. J. Cunningham, P. S. Regier, S. Amemiya, A. D. Redish (2022) Environmental complexity modulates the arbitration between deliberative and habitual decision-making. CoSyne.
- A. Kocharian, P. E. Rothwell, A. D. Redish (2021) Dopamine dynamics during evaluation and reevaluation of neuroeconomic decisions, SFN 50th.
- G. W. Diehl, A. D. Redish (2021) Identification of functional subdivisions within the rodent medial prefrontal cortex during decision making, SFN 50th.
- A. E. McLaughlin, K. Seeland, A. Sheehan, A. D. Redish (2021) Optogenetic manipulation of the rodent medial prefrontal cortex disrupts the transition from deliberative to procedural decision processes on a delay discounting task, SFN 50th.
- P. J. Cunningham, G. W. Diehl, A. D. Redish (2021) Distinct representations across the medial-to-lateral rodent orbitofrontal cortex in an economic decision-making task, SFN 50th.
- U. Mugan, P. J. Cunningham, P. S. Regier, S. Amemiya, A. D. Redish (2021) The effect of topology on adaptive strategies that arise from a conflict between deliberative and procedural decision-making, SFN 50th.

- R. Kazinka, A. D. Redish, A. W. MacDonald (2020, October) *Computational model of Minnesota Trust Game explains suspiciousness towards partner*, Society for Neuroeconomics.
- AF Haynos, SV Abram, AW MacDonald 3rd, AD Redish, SJ Crow (2020, November). Parsing Decision-Making Systems in Anorexia Nervosa Using a Computationally-Informed Translational Neuroeconomic Paradigm. Association for Behavioral and Cognitive Therapies, Philadelphia, PA.
- Haynos, A. F., Abram, S. V., MacDonald, A. W. 3rd, Redish, A. D., Crow, S. J. (2020, October). *Novel decision-making mechanisms of anorexia nervosa emerging from a computationally-informed translational approach*. Poster to be presented at the annual meeting for the Eating Disorder Research Society.
- B. Schmidt, AD Redish (2019) Disrupting medial prefrontal cortex with DREADDs alters hippocampal place cell firing in sharp wave ripples in rats. SFN 335.01.
- GW Diehl, B Schmidt, YA Breton, AD Redish (2019) Representation of choice and value in the ventral striatum during the restaurant row task. SFN 335.02.
- B. Hasz, AD Redish (2019) Goal encoding in prelimbic cortex and CA1 on a contingency-switching task for rats. SFN 335.03.
- BM Sweis, J Camchong, SV Abram, S Specker, AW MacDonald, MJ Thomas, AD Redish, KO Lim (2019) Human cocaine users, like cocaine-treated mice, display unique disruptions on a neuroeconomic task. SFN 335.04.
- RM Anderson, BM Sweis, D Hart, M Sherman, SE Lesne, MJ Thomas, AD Redish (2019) Neuroeconomic decision-making in J20 mice. SFN 335.05.
- R. Kazinka, AW MacDonald, A. D. Redish (2019) "The WebSurf Task in an Amazon Mechanical Turk Sample". Society for Neuroeconomics.
- BM Sweis, JY Camchong, SV Abram, S Specker, K Lim, A MacDonald, M Thomas, A. D. Redish (2019) "Translational neuroeconomics in addiction: Species-specific similarities and differences in dysfunction between wanting vs liking among humans and mice" Society for Neuroeconomics.
- Haynos, A. F., Abram, S. V., Sweis, B. M., MacDonald, A. W. 3rd, Redish, A. D., Crow, S. J. (2019). "Identifying Valuation Disturbances in Anorexia Nervosa Using a Translational Decision-Making Paradigm". Society of Biological Psychiatry Annual Scientific Program and Convention, Chicago, IL.
- R. Kazinka, D. Pratt, A. Kwashie, S. Ameri, A. D. Redish, A. MacDonald (2018) "Persuatory decision-making in psychosis patients playing the Minnesota Trust Game" Society for Neuroeconomics 3-F-23.
- B. Hasz, A. D. Redish (2017) "Behavioral correlates of deliberation and habit on a contingency switching task for rats" SFN 709.01

- C. J. Walters, A. D. Redish (2017) "Hesitation behavior during avoid-approach conflict differentially affected by anxiolytics" SFN 709.02.
- B. Schmidt, A. D. Redish (2017) "DREADD disruption of mPFC alters hippocampal economic decision-making processes" SFN 2017 709.03.
- B. M. Sweis, S. V. Abram, B. J. Schmidt, Y. A. Breton, A. E. McLaughlin, C. E. E. Hutchinson, D. M. Macebo, M. A. H. Jones, A. R. Thompson, A. W. MacDonald, M. J. Thomas, A. D. Redish "Sunk costs and intertemporal choices in a neuroeconomic foraging task in mice, rats, and humans" SFN 2017 709.04.
- B. Sweis, S. Abram, B. Schmidt, Y-A. Breton, A. MacDonald, M. Thomas, A. D. Redish (2017) "Sunk cost effects appear similar in parallel neuroeconomic foraging tasks in mice, rats, and humans". Society for Neuroeconomics 2017. 2-I-26.
- S. Amemiya, A. D. Redish (2016) "Systemic injection of clonidine, an alpha2-adrenergic auto-receptor agonist, interferes with state-dependent modulation of hippocampal theta-gamma coupling during a spatial decision-making task" SFN 2016 638.04.
- B. Sweis, A. J. Asp, C. Zheng, S. R. K. Brancel, M. J. Thomas, A. D. Redish (2016) "Using a novel neuroeconomic decision-making foraging task to test mouse models of addiction" SFN 2016 638.05.
- B. Schmidt, A. D. Redish (2016) "DREADDs disruption of prelimbic cortex alters hippocampal SWR dynamics during rest after a foraging task in rats" SFN 2016 638.06.
- S. V. Abram, A. D. Redish, A. W. MacDonald III (2016) "The neural correlates of experiential foraging in humans" SFN 2016 638.07.
- B. M. Hasz, A. D. Redish (2016) "A two-step decision-task for rats reveals behavioral correlates of model-based and model-free decisions" SFN 2016 638.08.
- Y. A. Breton, B. J. Schmidt, A. D. Redish (2015) "Ventral striatum represents rewards before the orbitofrontal cortex in the restaurant row task" SFN 2015 086.02.
- S. Amemiya, A. D. Redish (2015) "Systemic injection of clonidine,  $\alpha$ 2-adrenergic receptor agonist, differentiates prospective spatial representation between options in hippocampal neural ensemble activity" SFN 2015 086.03.
- A. E. Papale, M. C. Zielinski, L. M. Frank, S. P. Jadhav, A. D. Redish "Sequential activity during theta and sharp wave ripples supports flexible decision making" SFN 2015 086.04.
- J. J. Stott, A. D. Redish "Functional coupling between ventral striatum and orbitofrontal cortex in rats running a decision task" SFN 2015 086.05.
- E. C. Carter, D. W. Stephens, A. D. Redish "Rats titrate to different adjusted delays on parallel foraging and decision-making (delay discounting) tasks" SFN 2015 086.06.
- M. C. Zielinski, A. E. Papale, A. D. Redish, L. M. Frank, S. P. Jadhav "Disrupting awake sharp-wave ripples increases vicarious trial and error behavior" SFN 20156 086.07.

- P. S. Regier, A. D. Redish (2014) "Implications of decision-making processes for improving contingency management", CPDD 2014.
- A. M. Wikenheiser, A. D. Redish (2014) "Hippocampal theta sequences reflect rats' spatial goals". SFN 2014
- S. Amemiya, A. D. Redish (2014) "Systemic stimulation of  $\alpha 2$  adrenergic receptors with clonidine affects oscillatory activity in the rat hippocampus during a spatial decision-making task". SFN 2014.
- J. J. Stott, A. P. Steiner, Y. A. Breton, A. D. Redish (2014) "Task-dependent changes in local field potential (LFP) coordination between orbitofrontal cortex and ventral striatum on contrasting decision-making tasks". SFN 2014.
- Y. A. Breton, B. J. Schmidt, A. D. Redish (2014) "Orbitofrontal inactivation blunts flavor preferences in the Restaurant Row task. SFN 2014.
- B. J. Schmidt, Y. A. Breton, A. D. Redish (2014) "Silencing the rat prefrontal cortex decreases hesitation and impairs vicarious trial and error (VTE) behavior on the Restaurant Row task". SFN 2014.
- S. V. Abram, A. MacDonald III, A. D. Redish (2014) "Translating from rats to humans: A human foraging model of decision making". SFN 2014.
- Y. A. Breton, K. D. Seeland, A. D. Redish (2013) "Delay-discounting, aging, and vicarious trial and error (VTE) behaviors". SFN 2013.
- N. J. Powell, A. D. Redish (2013) "Spatial and strategic representations in the medial prefrontal cortex of the rat on an intertemporal choice task". SFN 2013.
- P. S. Regier, A. D. Redish (2013) "Representational changes in anterior dorsolateral and posterior dorsomedial striatum on an automating decision-making task". SFN 2013.
- J. J. Stott, A. D. Redish (2013) "Differences in the covert representation of reward in ventral striatum and orbitofrontal cortex". SFN 2013.
- A. M. Wikenheiser, A. D. Redish (2013) "Hippocampal theta sequences transiently represent goal locations as rats perform an intertemporal foraging task". SFN 2013.
- A. P. Steiner, A. D. Redish (2012) "The road not taken: Neural correlates of decision-making in orbitofrontal cortex". SFN 2012.
- N. J. Powell, A. D. Redish (2012) "Rat medial prefrontal cortical responses on a spatial decision-making task". SFN 2012.
- A. S. Gupta, M. A. A. van der Meer, D. S. Touretzky, A. D. Redish (2012) "Hippocampal theta sequences segment spatial experience on a decision-making task". SFN 2012.
- A. M. Wikenheiser, A. D. Redish (2012) "The balance of forward and backward hippocampal sequences shifts across behavioral states". SFN 2012.

- A. D. Redish, A. P. Steiner (2012) "Revealed preferences in the rat: Restaurant Row". *SFN 2012*.
- A. E. Papale, P. S. Regier, J. J. Stott, N. J. Powell, A.D. Redish (2012) "Vicarious trial and error (VTE) behaviors on a spatial delay-discounting task". *SFN 2012*.
- B. J. Schmidt, A. E. Papale, E. J. Markus, A. D. Redish (2012) "Vicarious trial and error (VTE) behaviors on a task that puts place and response strategies into conflict. *SFN 2012*.
- P. S. Regier, A. D. Redish (2012) "What is the role of decision-making systems in contingency management?" *SFN 2012*
- A. Blumenthal, A. Steiner, K. Seeland, A. D. Redish (2010) "Involvement of NMDA-receptors in vicarious-trial-and-error behaviors on a spatial task". *SFN 2010*.
- M. A. van der Meer, A. D. Redish (2010) "Ventral striatal anticipatory "ramp" cells phase precess relative to the hippocampal theta rhythm" *SFN 2010*.
- A. S. Gupta, A. D. Redish, D. S. Touretzky (2010) "Exploiting the hippocampal theta phase gradient to learn cognitive maps" *SFN 2010*.
- A. Steiner, A. D. Redish (2010) "Orbitofrontal cortical ensembles during deliberation and learning on a spatial decision-making task" *SFN 2010*.
- Z. Kurth-Nelson, A. D. Redish (2010) "A reinforcement-learning model of pre-commitment to decisions" *SFN 2010*.
- A. Papale. J. E. Ferguson, C. Boldt, A. D. Redish (2010) "Steps toward decoupling ensemble recording sites from the headstage" *SFN 2010*.
- J. E. Ferguson, C. Boldt, A. D. Redish (2010) " Nanoelectrodes for intracellular recordings" *SFN 2010*.
- A. S. Gupta, M. van der Meer, D. S. Touretzky, A. D. Redish (2009) Cognitive influences on sequence replay and construction in the rodent hippocampus. *SFN 2009*.
- J. E. Ferguson, C. Boldt, A. D. Redish (2009) Creating low-impedance tetrodes by electroplating with additives. *SFN 2009*.
- M van der Meer, A Johnson, N. Schmitzer-Torbert, A D Redish (2009) "Dissociations in ensemble dynamics between rat dorsal striatum, ventral striatum, and hippocampus" *CoSyne, 2009*.
- AD Redish, NC Schmitzer-Torbert, A Johnson, MAA van der Meer (2008) "Lost in thought? Pausing behavior at the high-cost choice point on the multiple-T task" *SFN 2008*.
- A Johnson, AA Fenton, C Kentros, AD Redish (2008) "Identifying structure in the noise - covert variables and cognition" *SFN 2008* 684.3.
- MAA van der Meer, AD Redish (2008) "Non-local reward processing in rat ventral striatum" *SFN 2008* 684.2

- AD Redish, A Johnson, M van der Meer (2008) "Search and expectancies on the Multiple-T task" ICCNS 2008.
- A. D. Redish (2007) A novel framework for addiction: Vulnerabilities in the decision-making system *Society for Neuroscience* 610.1.
- A. Johnson, P. Schrater, A. D. Redish (2007) Use of multiple generative models for identifying and decoding spatial memory in the hippocampus *CoSyne* 2007.
- S. L. Jutila, A. D. Redish (2006) "The NMDA-receptor antagonist CPP, given systemically, impairs exploration but not ability to complete a modified Hebb-Williams Maze" *Society for Neuroscience Abstracts* 31.
- A. Johnson, A. D. Redish (2006) "Neural ensembles in CA3 transiently encode paths forward of the animal at a decision point: a possible mechanism for the consideration of alternatives" *Society for Neuroscience Abstracts* 31.
- A. D. Redish (2005) "Implications of the Temporal Difference Reinforcement Learning Model for Addiction and Relapse" *Neuropsychopharmacology* 30(Suppl 1):S27-28.
- G.P. Cortese, M. Little, A. Johnson, A.D. Redish (2005) "Opposite effects of inactivations of dorsal hippocampus or dorsal striatum on maze learning" *Society for Neuroscience Abstracts* 30.
- N.C. Schmitzer-Torbert, A.D. Redish (2005) "Identification and behavioral correlates of putative striatal interneurons in rodents" *Society for Neuroscience Abstracts* 30.
- A.D. Redish, S. Jensen, A. Johnson, Z. Kurth-Nelson (2005) "Reward loss does not produce unlearning: Implications for TDRL" *Society for Neuroscience Abstracts* 30.
- A. Johnson, N.C. Schmitzer-Torbert, J.C. Jackson, A.D. Redish (2005) "Differential changes in neural activity in the dorsal hippocampus and dorsal striatum during performance of a Multiple-T task" *Society for Neuroscience Abstracts* 30.
- J.C. Jackson, A. Johnson, A.D. Redish (2005) "Sharp-wave events and correlated neuronal activity increase during behavior" *Society for Neuroscience Abstracts* 30.
- A.D. Redish, A. Johnson, S. Jensen, J. Jackson (2005) "Latent Learning requires multiple value functions within TDRL" *Computational Neural Systems\*2005*.
- A. Johnson, A.D. Redish (2005) "Hippocampal replay contributes to within session learning in a temporal difference reinforcement learning model" *Computational Neural Systems\*2005*.
- J.C. Jackson, A. Johnson, A.D. Redish (2005) "Hippocampal sharp wave events increase during behavior with experience within session" *Computational Neural Systems\*2005*.
- N.C. Schmitzer-Torbert, A.D. Redish (2004) "Task-dependent spatial encoding in the dorsal striatum" *Society for Neuroscience Abstracts* 30.



- B. Masimore, N.C. Schmitzer-Torbert, J.C. Jackson, J. Kakalios, A.D. Redish (2004) "Synchronous oscillations in striatal local field potentials correlate with movement initiation" *Society for Neuroscience Abstracts* 30.
- A.D. Redish (2004) "The addiction process: a computational process gone awry" *Society for Neuroscience Abstracts* 30.
- Z. Kurth-Nelson, A.D. Redish (2004) "uAgents: Action-selection in temporally-dependent phenomena using temporal difference learning over a collective belief structure" *Society for Neuroscience Abstracts* 30.
- A. Johnson, K.D. Seeland, A.D. Redish (2003) "Head-direction ensembles recorded from awake, behaving rats in an open field under cue-conflict situations" *Society for Neuroscience Abstracts* 29.
- N.C. Schmitzer-Torbert, S. Rao, J.C. Jackson, A.D. Redish (2003) "Changes in patterns of neural firing in the rodent dorsal striatum precede development of a regular route" *Society for Neuroscience Abstracts* 29.
- B. Masimore, J. Kakalios, A.D. Redish (2003) "Correlations between frequencies of local field potential oscillations indicate specific components in the theta, gamma, and high frequency (hfo) ranges in dorsocentral striatum" *Society for Neuroscience Abstracts* 29.
- J.C. Jackson, N.C. Schmitzer-Torbert, K.D. Harris, A.D. Redish (2003) "Quantitative assessment of extracellular multichannel recording quality using measures of cluster separation" *Society for Neuroscience Abstracts* 29.
- A. D. Redish, N. C. Schmitzer-Torbert, and J. C. Jackson (2002) "Classification of dorsal striatal neurons from extracellular recordings in awake behaving rats" *Society for Neuroscience Abstracts* 28.
- N. C. Schmitzer-Torbert, J. C. Jackson, A. D. Redish (2002) "Behavioral correlates of neuronal activity in the rodent dorsal striatum: The Multiple-T task" *Society for Neuroscience Abstracts* 28.
- J. C. Jackson, N. C. Schmitzer-Torbert, A. D. Redish (2002) "Behavioral correlates of neuronal ensemble in dorsal striatum on a conditioned response task" *Society for Neuroscience Abstracts* 28.
- E.S. Rosenzweig, A.D. Redish, B.L. McNaughton, and C.A. Barnes (2002) "Age-related changes in hippocampal map realignment" *Society for Neuroscience Abstracts* 28.
- J.L. Gerrard, H.K. Kudrimoti, S.L. Cowen, A.D. Redish, E.S. Rosenzweig, C.A. Barnes, and B.L. McNaughton (2002) "Dissociation of pattern and sequence reactivation efficiency in the aged rat hippocampus" *Society for Neuroscience Abstracts* 28.

- A. D. Redish, F. P. Battaglia, A. D. Ekstrom, J. L. Gerrard, P. Lipa, E. S. Rosenzweig, B. L. McNaughton, C. A. Barnes (2000) "Hippocampal pyramidal cells located near each other anatomically do not show related spatial firing correlates", *Society for Neuroscience Abstracts* 26:982
- E. S. Rosenzweig, A. D. Ekstrom, A. D. Redish, B. L. McNaughton, C. A. Barnes (2000) "Phase precession as an experience-independent process: Hippocampal pyramidal cell phase precession in a novel environment and under NMDA-receptor blockade", *Society for Neuroscience Abstracts* 26:982.
- J. L. Gerrard, S. L. Cowen, H. S. Kudrimoti, E. S. Rosenzweig, A. D. Redish, B. L. McNaughton, C. A. Barnes (2000) "Equivalent reactivation of hippocampal memory traces for a novel experience in young adult and aged rats", *Society for Neuroscience Abstracts* 26:981.
- A.D. Redish, E.S. Rosenzweig, J.D. Bohanick, B.L. McNaughton, and C.A. Barnes (1999) "Dynamics of Hippocampal Map Realignment", *Society for Neuroscience Abstracts* 25:2165.
- E.S. Rosenzweig, A.D. Redish, J.D. Bohanick, B.L. McNaughton, and C.A. Barnes (1999) "Behavioral Correlates of Hippocampal Map Realignment", *Society for Neuroscience Abstracts* 25:2165.
- M.C. Fuhs, A.D. Redish, and D.S. Touretzky (1997) "Place Cell-like Location Specific Activity may be Generated without Complex Landmark Identification Processes", *Society for Neuroscience Abstracts*, 23:502.
- J.P. Goodridge, A.D. Redish, H.T. Blair, P.E. Sharp, and D.S. Touretzky (1997) "Lateral Mamillary Input Explains Distortions in Tuning Curve Shapes of Anterior Thalamic Head Direction Cells", *Society for Neuroscience Abstracts*, 23:503
- A.D. Redish and D.S. Touretzky (1997) "Implications of Attractor Networks for Cue Conflict Situations", *Society for Neuroscience Abstracts*, 23:1601
- A.D. Redish and D.S. Touretzky (1996) "Details of a comprehensive theory of rodent navigation", *Society for Neuroscience Abstracts* 22:678.
- D.S. Touretzky, S.J.C. Gaulin, and A.D. Redish (1996) "Gerbils regularly return to their entry point when exploring a novel environment", *Society for Neuroscience Abstracts* 22:449.
- A.D. Redish and D.S. Touretzky (1995) "Revisiting the Papez Circuit: The Role of Hippocampus and its Afferent and Efferent Structures in Rodent Navigation", *Society for Neuroscience Abstracts* 21:942.
- L.M. Saksida, A.D. Redish, C.R. Milberg, S.J.C. Gaulin, and D.S. Touretzky (1995) "Landmark-based Navigation in Gerbils Supports Vector Voting", *Society for Neuroscience Abstracts* 21:1939.

H.S. Wan, D.S. Touretzky, and A.D. Redish (1994) “A Rodent Navigation Model that Combines Place Code, Head Direction, and Path Integration Information”, *Society for Neuroscience Abstracts* 20:1205.

D.S. Touretzky, A.D. Redish, H.S. Wan, and B.L. McNaughton (1993) “Sinusoidal Arrays: A theory of representation in parietal and motor cortices”, *Society for Neuroscience Abstracts* 19:794.

## Products

A. D. Redish (version 2.0, 2000; version 3.0, 2002, version 3.2–3.4, 2003, version 3.5, 2008; version 4.0, 2013, **still maintained**) “MClust: A spike-sorting toolbox”, available from <http://umn.edu/~redish/MClust>, available on github as of 12 October 2019.

## Ongoing blogs

### Brain and the Poetic Mind (Psychology Today)

- A new blog 31 Oct 2013
- Putting the Neuro into Economics 5 Nov 2013
- Morality and Tribalism: The Problem with Utilitarianism 12 Dec 2013
- We are all Commander Data, now 11 April 2014
- Post-modern anthropomorphism 9 June 2014
- The Neuroscience of Football 14 Aug 2014
- The Action on the Field 14 Aug 2014
- The Perceptual Arms Race 21 Aug 2014
- Separating Strategy from the Execution on the Field 28 Aug 2014
- Learning the Playbook and Learning from Tape 4 Sept 2014
- Peacemaking among Primates 11 Sept 2014
- Process and Normative 30 July 2015
- Morality and Community 9 November 2019

### Watching out for ol' Doc Murphy (Scientopia)

- Ol' doc who now? 28 October 2019
- Peer review is not commentary. 2 November 2019
- Who pays for the paper? 9 November 2019
- Papers should move up, not down. 23 November 2019
- Why I won't publish in bioRxiv 3 December 2019

## Grants

### Pending

S. Vinogradov, A. D. Redish (co-PIs) 2025-2030 Dysfunctional State Representations in Psychosis: From Neurophysiology to Neuroplasticity-based Treatment (\$2M/yr). P50 MH119569. (Impact score = 23)

### In Progress

A. D. Redish (PI) 2024 Computational Psychiatry Conference R01-MH138076

A. D. Redish (PI) 2022-2027 Testing hybrid theories of action-selection R01-MH112688 (\$377,000/yr direct).

S. Vinogradov, A. D. Redish (co-PIs) 2020-2025 Dysfunctional State Representations in Psychosis: From Neurophysiology to Neuroplasticity-based Treatment (\$2M/yr). P50 MH119569.

S. Vinogradov, A. D. Redish (co-PIs) 2020-2025 *Center support for NeuroPRSMH* Internal AIRP/AHC grant, \$300,000/yr.

A. D. Redish (PI) 2018-2028 *Predocctoral Training of Neuroscientists* T32 NS105604. (\$353,5994/yr 8 GS).

A. F. Haynos (PI), ... A. D. Redish (co-I) 2022-2027 Rule-based decision-making: A novel neuroeconomic mechanism of Anorexia Nervosa. R01 MH1126978. (\$347,000/yr direct).

A. D. Redish (award) 2016-present *J. B. Johnston Chair in Neuroscience* (varies, but approximately \$100k/year)

### Completed

A. Widge (PI), N. Grissom, A. D. Redish (co-I) 2021-2024 Circuit and Cognitive Mechanisms of Striatal Deep Brain Stimulation (\$581/yr, R01 NS120851).

A. D. Redish (PI) 2018-2023 *Using Computation to Achieve Breakthroughs in Neuroscience* T32 MH115688. \$348,910 yr2-5 (5 GS + 2 PD).

A. D. Redish (PI) 2016-2021 "Relating episodic memory and episodic future thinking in hippocampus" *R01-MH080318* (\$289,000/year direct). In NCE 2021-2022.

A. D. Redish (PI) 2017-2022 "Resolving conflicts between decision-making algorithms" R01-MH112688 (\$292,000/year direct).

A. Widge, AW MacDonald, A. D. Redish (co-PIs) 2019-2021 *Parametrically Detailed Computational Analyses of Human Foraging Behavior* (\$231k/yr)

A. Araque (PI), A. D. Redish (Co-I) 2016-2021 "Astrocyte-neuron interaction in behavior driven by striatal information processing" *R01-NS097312* (\$305,990/year direct)

A. D. Redish (award) 2014-2019 *Distinguished McKnight Professorship* (\$20,000/year).

- K. Cullen (PI), A. D. Redish (Co-I) 2017-2018 A Longitudinal Study Examining Three RDoC Constructs in Adolescents with Non-Suicidal Self-Injury *R01-MH107394-02S1* (\$92,823 direct)
- A. D. Redish (PI) 2012-2017 "The covert expectation of reward during deliberation" *R01-DA030672* (\$225,000/year direct)
- A. D. Redish (PI) 2014-2016 "Relating episodic memory and episodic future thinking in hippocampus" *R01/R56-MH080318* (\$250,000/year direct).
- A. D. Redish (PI), Mark Masino [UMN], Kevin Crisp [St. Olaf] 2012-2015 "Decoupling the recording site from the headstage" *NSF/IOS-1146243* (\$200,000/year total)
- A. D. Redish (PI) 2012-2014 "Temporal discounting and decision-making in aged rats" *R03-AG041734* (\$50,000/year direct)
- A. D. Redish (PI) 2008-2013 "A hippocampal mechanism for considering possibilities" *R01-MH080318* (\$180,000/year direct).
- A. D. Redish (PI), Ichiro Tsuda (Japan), Jan Lauwereyens (New Zealand), Emma Wood (UK), Paul Dudchenko (UK) "Deliberative decision-making in rats" 2010-2013 *HFSP (Human Frontiers Science Program)* (\$400,000/year, my share is \$105,500)
- W. Bickel (PI), A. D. Redish 2008-2013 "Executive Function Therapy for Stimulant Addiction" *R01 DA024080* (subcontract worth \$92,000/year direct)
- A. D. Redish (PI) 2011-2012 "Nanowire Tetrodes" *Wallin Fund* (\$90,000)
- A. D. Redish (PI), B. Ziaie, A. G. Erdman, "Wireless recordings in awake, behaving rodents". 2002-2005 *McKnight Foundation* (\$200,000 total).
- A. D. Redish (PI), "CRCNS: Coherency --- measuring representational quality" 2002-2005 *NIMH 1-R01-MH68029-01* (\$519,713 total).
- A. D. Redish (award), 2003-2005 *Sloan Fellowship* (\$40,000 total).
- A. D. Redish (award), 2004-2006 *McKnight Land-Grant Professorship*. (\$75,000 total)
- J. Kakalios (PI), A. D. Redish "Transient oscillations in Local Field Potentials" 2005-2006 *Grant-in-aid of Research, Artistry, and Scholarship*. (\$22,238 total)
- B. Ziaie (PI), A. D. Redish "Electronically Reconfigurable Microfabricated Tetrodes" 2005-2007 *NIBIB R21-EB005019*. (subcontract worth \$50,000 direct costs)
- A. D. Redish (PI) "Rodent footprint tracking in runways and large mazes" 2005 *MMF* (\$25,000 total).
- A. D. Redish (PI) "Implications of the TDRL computational model of addiction on smoking" 2005-2007 *TTURC Faculty Career Development Award*. (\$45,000 total)
- G. Havey (PI), A. D. Redish "Wireless System-On-A-Chip EEG IC for Animal Studies" 2007-2009 *NIBIB R44-NS052066* (subcontract worth \$25,000 direct costs)

- H. Jacobs, B. Ziaie, A. D. Redish “3D neural recording system: self-assembly tools and test” 2006-2008 *NIBIB R21-EB005351* (subcontract worth \$25,000 direct costs)
- E. Yoon (PI), A. D. Redish, A. G. Erdman “Individual research support” 2006 *Biomedical Engineering Institute, University of Minnesota* (\$50,000 total).
- A. D. Redish (PI) “A hippocampal mechanism for considering possibilities” 2007-2008 *Grant-in-aid of Research, Artistry, and Scholarship*. (\$19,017 total).
- A. D. Redish, E. Yoon, A. G. Erdman (PI) “Steps toward the neural nanoprobe: Ensembles without the wires” 2007-2010 *IEM (Institute for Engineering in Medicine (formerly, Biomedical Engineering Institute), University of Minnesota* (\$280,000 total).
- J. Grant, M. Kushner, K. Winters, R. Stinchfield, A. D. Redish, S. W. Kim 2008-2011 “Center for Excellence” *Institute for Research on Pathological Gambling and Related Disorders*.
- A. D. Redish (PI) “Purchasing a 128-channel neural ensemble recording system” 2010 *Equipment grant (ARRA Supplement request for MH080318)* (\$100,000 total).

## Invited talks, presentations, and participations in conferences

### External

- 2024 University of Zurich, Neuroecon group (Zurich, SWITZERLAND)
- 2024 Neurobiology of Mental Health [Lake Conferences] (Thun, SWITZERLAND)
- 2024 Stanford (2x: MCBT one day, Neurochoice the next)
- 2024 Syracuse University (Keynote, 10<sup>th</sup> annual Research Day)
- 2024 Lethbridge Canada (Harley Hotchkiss Memorial Lecture, ONLINE)
- 2024 Mount Sinai School of Medicine
- 2023 Zucker Hillside Northwell Hospital (New York NY)
- 2023 NYU
- 2023 Cornell University
- 2023 Philosophy and Neuroscience in the Gulf VI, Pensacola FL (invited nsci keynote)
- 2023 Methods in Computational Neuroscience, MBL, Woods Hole MA
- 2023 Spence Lecture, University of Iowa
- 2023 APPA (NYC)
- 2022 Keynote Cognitive Computational Neuroscience Conference (San Francisco)
- 2022 Methods in Computational Neuroscience, MBL, Woods Hole MA
- 2022 APA (Psychology) [Minneapolis MN] – Organized symposium]
- 2022 Freiburg GERMANY [ONLINE]
- 2022 Purdue [ONLINE]
- 2022 U Maryland School of Medicine [P50 group presentation w/ Sophia Vinogradov, ONLINE]
- 2021 iSCAN [invited presenter], Magdeburg GERMANY, ONLINE]
- 2021 Special StoryTelling Session presenter [50th Society for Neuroscience conference, ONLINE]
- 2021 Minisymposium presenter [50th Society for Neuroscience conference, ONLINE]
- 2021 IU Bloomington [Bloomington IN, ONLINE]
- 2021 Methods in Computational Neuroscience, MBL, Woods Hole MA
- 2021 UIUC [Urbana-Champaign, ONLINE]

2020 Northwestern [Chicago IL, ONLINE]  
2020 IU School of Medicine [Indianapolis IN, ONLINE]  
2020 Mayo Clinic [Rochester MN, ONLINE]  
2020 IPAM / UCLA, Los Angeles CA  
2019 ACNP, Orlando FL  
2019 Columbia University, NYC  
2019 Brandeis, Waltham MA  
2019 External Keynote, Eating Disorders Research Society, Chicago IL  
2019 Lisman Memorial Workshop, Woods Hole MA  
2019 Methods in Computational Neuroscience, MBL, Woods Hole MA  
2019 Dartmouth MIND Summer Workshop, Dartmouth College, Hanover NH  
2019 Sloan-Nomis Meeting on Attention (Neuroeconomics), Vitznau SWITZERLAND  
2019 External Keynote, Fetal Alcohol Syndrome Disorders Annual Meeting, Minneapolis MN  
2019 Dusseldorf decision making symposium, Dusseldorf GERMANY  
2019 Society for Quantitative Analysis of Behavior, Chicago IL  
2019 Conference on learning and memory, UT Austin, Austin TX  
2019 NYU, NY NY  
2019 Loyola, Chicago IL  
2019 CSHL, New York NY  
2019 UCSF, San Francisco CA  
2019 Cosyne Workshop on foraging, Lisbon PORTUGAL  
2019 Marquette University, Milwaukee WI  
2018 Dept Psychology, UniMelbourne, Melbourne AUSTRALIA  
2018 Dept Finance, UniMelbourne, Melbourne AUSTRALIA  
2018 LSU Health Sciences Center, New Orleans LA  
2018 Hamline University, St. Paul MN  
2018 Macalester, St. Paul MN  
2018 NIH ACD BRAIN Initiative Working Group 2.0 Workshop #2, Chicago IL  
2018 Neuroeconomics department, ETH, Zurich SWITZERLAND  
2018 Computational Psychiatry Summer School, ETH, Zurich SWITZERLAND  
2018 Methods in Computational Neuroscience, Woods Hole MBL  
2018 EBPS Workshop: Using Computational approaches to build a two-way bridge, Downing College, Cambridge, UK  
2018 Keynote talk for Computational Psychiatry Summer Course, University College London, London UK  
2018 DeepMind, London, UK  
2018 Sloan-Nomis Meeting on Attention (Neuroeconomics), Vitznau SWITZERLAND  
2018 Keynote talk for NeuroFutures Conference, University of Washington, Seattle WA  
2018 Roger Loucks Lecture, University of Washington, Seattle WA  
2018 UCLA, LA CA  
2018 University of MD School of Medicine, Baltimore MD  
2018 Bodian seminar, Johns Hopkins Univ, Baltimore MD  
2018 Sloan-Nomis Meeting on Attention (Neuroeconomics), NYU, New York NY.  
2018 LMU, Munich GERMANY  
2017 Washington University, St. Louis MO  
2017 Howard University, Washington DC  
2017 Faculty for Undergraduate Neuroscience Workshop, Dominican University Chicago IL

2017 UTSA Symposium on Neural Codes for Navigation (gave 30 minute intro + 50 minute full talk), University of Texas San Antonio, San Antonio TX.  
2017 OIST Okinawa, JAPAN  
2017 University of Alabama MSTP Retreat Keynote speaker  
2017 Ruhr-Universität Bochum, GERMANY  
2017 MetroState University, St. Paul MN  
2017 University of MD for the EFRedish Symposium and Celebration  
2017 UCSD, San Diego CA  
2017 University of Toronto, Toronto CANADA  
2017 NIMH  
2016 Arrowhead + 10 years, Workshop on Decision-Making, Sydney AUSTRALIA  
2016 Invited Speaker, Workshop on Internally Generated Sequences in Hippocampus, Ariccia ITALY  
2016 Invited Speaker, EBPS Workshop on Computing with Neural Ensembles, Amsterdam NETHERLANDS  
2016 Invited Kavli Workshop Speaker, Society for Neuroeconomics 2016 Meeting, Berlin GERMANY  
2016 BCNI, Downing College, University of Cambridge, Cambridge UK  
2016 “Addiction, In Theory” Meeting, University College London, London UK  
2016 38th GRSNC, Université de Montréal, Montreal QB CANADA  
2016 NYU, New York NY  
2016 Cornell University, Ithaca NY  
2016 UChicago, Chicago, IL  
2015 Rutgers-Newark, Newark NJ.  
2015 International Symposium on Prediction and Decision Making, Tokyo JAPAN.  
2015 NIMH RDOC Unit, NIMH, NIH, Bethesda MD  
2015 George Mason University, Fairfax VA  
2015 Dresden Symposium on Cognitive Control (invited speaker), Dresden GERMANY  
2015 UCDavis, Davis CA  
2015 Baylor College of Medicine, Houston TX  
2015 Hebb Lecture, McGill University, Montreal Canada  
2014 CNBC 20th anniversary celebration (alumni speaker)  
2014 PFC conference, Whistler Canada  
2014 Hamline University, St. Paul MN  
2014 Behavior, Cognition, Computation, and Technology Course, Barcelona Spain  
2014 Methods in Computational Neuroscience Course, Woods Hole MA  
2014 Emory University, Atlanta GA  
2014 Neurobiology of Learning and Memory Conference, Park City UT  
2013 Institute Champalimaud, Lisbon, Portugal  
2013 HFSP Meeting, Strasbourg, France.  
2013 University of Washington Addiction Symposium, Seattle WA  
2013 University of Washington (Psychology Department), Seattle WA  
2013 Caltech, Pasadena CA  
2013 Eastern Psychological Association, New York NY  
2013 Georgia Regents University, Augusta GA  
2012 University of St. Thomas, Minneapolis MN.  
2012 Gordon Research Conference, Il Ciocco, Lucca, Italy.



2012 Symposium on Biology of Decision-Making, Institut du Cerveau et de la Moelle Epiniere (ICM), Hopital Pitie-Salpetriere, Paris, France.  
2012 Ecole Normale Superieure, Paris France  
2012 College de France, Paris France  
2012 Northwestern, Chicago IL  
2012 CEAR, Georgia State University, Atlanta GA  
2012 University of British Columbia, Vancouver CA  
2012 Boston University  
2012 Brandeis University  
2011 International Symposium on Learning, Memory and Cognitive Function. Mechanisms, Pathology and Therapeutics, Valencia Spain  
2011 Dynamic Brain Forum (Part of ICCNN, Hokkaido, Japan)  
2011 Summer School in Computational & Cognitive Neuroscience, China  
2011 Concordia University, Montreal Canada [Keynote speaker for workshop on the interpretation of electrophysiological data as a function of behavior]  
2011 Janelia Farm workshop: Neural Circuits and Decision-Making in Rodents II  
2011 Ernst Struengmann Forum, Frankfurt Germany  
2010 Yale University Schwartz Symposium, New Haven CT  
2010 APA meeting, New Orleans LA  
2010, Janelia Farm workshop: Challenges in Extracellular Electrophysiology: Data Extraction, Janelia Farm VA  
2010, Midbrains, Northfield MN  
2009, Goal-Directed Decision Making: Behavior, Neuroscience and Computation (Princeton NJ).  
2009, ICARUS project, Intelligence Advanced Research Projects Agency (IARPA).  
2009 Okinawa Computational Neuroscience Course (Okinawa Japan).  
2009 Princeton University, Princeton NJ.  
2009 Dynamic Brain Forum (Atami, Japan)  
2009 University of Pennsylvania, Philadelphia PA  
2008 University of Michigan, Ann Arbor MI  
2008 University of Arkansas, Little Rock AR  
2008 MBL, WoodsHole MA. [Neural Systems & Behavior, Scholar in Residence]  
2008 Conference on Learning and Memory, Spitsbergen Norway [Session chair]  
2008 Brandeis University, Waltham MA  
2008 Conference on Cognitive and Neural Systems [Invited Speaker]  
2008 University of Waterloo, Waterloo Canada  
2008 Janelia Farm, Washington DC.  
2008 Yale  
2008 NIDA Conference on Addiction  
2007 Okinawa Institute of Science and Technology, Okinawa Japan  
2007 Mechanism of Mind and Brain Workshop, Sapporo Hokkaido Japan [Invited speaker, Special English section, Annual Meeting of Japanese Physiology Society,]  
2007 Columbia University  
2007 Mind and World Conference on Addiction  
2007 MidBrains Conferences  
2007 NYAS Symposium on Orbitofrontal Function [Session chair]  
2007 University of Chicago  
2007 Baylor College of Medicine

2006 Center for the Neural Basis of Cognition, Carnegie Mellon University & Univ Pittsburgh, Alumni Lecture  
2006 University of Texas, San Antonio  
2006 Conference on Decision Making Systems, Lake Arrowhead, UCLA  
2006 University of Edinburgh, Edinburgh UK  
2006 Mathematical Biosciences Institute, Ohio State Univ, Columbus OH  
2006 Knox college, Galesburg IL  
2006 Macalaster college, St. Paul MN  
2005 (ACNP) American College of Neuropsychopharmacology, Waikoloa, HI  
2005 University of Oregon, Eugene OR  
2005 McKnight Endowment Fund for Neuroscience annual meeting, Aspen CO  
2005 Cold Spring Harbor, NY  
2005 CRCNS PI meeting, NSF, Washington DC  
2004 Methods in Computational Neuroscience (MCN) @ Marine Biological Laboratory (MBL)  
2004 Minnesota State University, Mankato.  
2003 Design of Medical Devices conference, Minneapolis MN [Session chair]  
2003 Joint UMN-Karolinska conference, Karolinska, Stockholm, Sweden  
2002 UCSD, San Diego CA  
2002 Spring Brain, Sedona AZ [Session chair]  
2002 NSMA, Univ AZ  
2001 Conference in memory of Carlo Terzuolo, Brainerd MN  
2001 Joint Karolinska-UMN conference, Minnesuing acres MN  
2000 University of Illinois, Urbana-Champaign IL  
2000 Univeristy of Wisconsin, Madison WI  
2000 Brandeis University, Boston MA  
2000 Brown Univeristy, Providence RI  
2000 University of Minnesota, Minneapolis MN  
1999 University of Iowa, Iowa City IA  
1999 Memory Disorders Research Symposium, Tucson AZ  
1999 Computational Neural Systems conference, Pittsburgh PA  
1999 Carnegie Mellon University (Distinguished dissertation award talk), Pittsburgh PA  
1998 University of New Mexico, Albuquerque NM  
1997 Dartmouth, Hannover NH  
1997 NSMA, University of Arizona, Tucson AZ  
1996 NIPS Workshop, Snowmass CO  
1994 NSF Telluride Workshop, Telluride CO  
1994 NSMA, University of Arizona, Tucson AZ  
1992 ConnectFest, Bloomington IN

## Internal

2024 Minnesota Applied Economic APEC group (UMN)  
2023 Minnesota Center for the Philosophy of Science: Annual Science Symposium (UMN)  
2021 EEB Behavior Group (Univ Minnesota)  
2019 CCS Symposium (Univ Minnesota)  
2019 Applied Economics Department (Univ Minnesota)  
2017 Psychiatry Review CME (Univ Minnesota)  
2017 MINDS (Univ Minnesota)

2016 CCS Fall Symposium (Univ Minnesota)  
2016 Psychiatry Grand Rounds (Univ Minnesota)  
2014 UMN MD/PhD Students (Univ Minnesota)  
2014 Library BootCamp (Univ Minnesota)  
2014 TEDx UMN (Univ Minnesota)  
2014 Institute for Advanced Study (Univ Minnesota)  
2012 Consortium on Law and Values in the Health, Environment, and Life Sciences (Univ Minnesota)  
2012 Medical Device Center (Univ Minnesota)  
2012 Center for Cognitive Sciences (Univ Minnesota)  
2011 Center for Neuroengineering Symposium (Univ Minnesota)  
2009 Center for Cognitive Sciences (Univ Minnesota)  
2009 Center for Neuroengineering Symposium (Univ Minnesota)  
2009 UMN MD/PhD program noon seminars (Univ Minnesota)  
2006 Neurosci Graduate Program (Univ Minnesota)  
2005 TTURC (Univ Minnesota)  
2005 Pharmaceuticals (Univ Minnesota)  
2005 NIDA Training Grant Retreat (Univ Minnesota)  
2004 Graduate Program in Neuroscience (Univ Minnesota)  
2003 Center for NeuroBehavioral Development (Univ Minnesota)  
2002 Graduate Program in Neuroscience (Univ Minnesota)  
2002 Center for Cognitive Science (Univ Minnesota)  
2002 Mathematics Department (Univ Minnesota)  
2002 Neuroscience Graduate Retreat (Univ Minnesota)  
2001 BME lecture series (Univ Minnesota)  
2001 Itasca summer program (Univ Minnesota)  
2001 EEB (Univ. Minnesota)  
2001 Psychology Dept (Univ. Minnesota)  
2000 Itasca summer program (Univ. Minnesota)

## Professional Activities

2024-2029 Member, Board of Scientific Counselors, NIMH  
2024 Member, Society for Neuroeconomics Awards Committee  
2024 Member, Society for Neuroscience Trainee Professional Development Committee  
2023-2024 Co-host *Computational Psychiatry 2024* conference (to be held in July 2024)  
2019 Edited special issue, *Hippocampus* on Sharp-Wave-Ripples, published 2020  
2018-2021 Member, Executive Board of the Society for Neuroeconomics  
2017-present Co-director **NeuroPRMSH (NeuroPlasticity Research in Support of Mental Health) Center** with Dr. Sophia Vinogradov.  
2017-2019 Member, NIH NST-2 study section (K99)  
2014-present, Editorial Board, *Neural Computation*  
2014-present, Review Editor, *Frontiers in Neuropharmacology*  
2014-present, Editorial Board, *Neurobiology of Learning and Memory*  
2014 Edited special issue, *Neurobiology of Learning and Memory* on Memory and Decision Making with SJYM.  
2012-present, Editorial Board, *JEAB (Journal of the Experimental Analysis of Behavior)*

2012-present, Member, Canadian College of Reviewers  
 2012-2013, 2019-2022 Member Program Committee, *Society for Neuroeconomics*  
 2012-present, Editorial Board, *Frontiers in Decision Neuroscience* (Review Editor)  
 2011-2021, Editorial Board, *Network: Computation in Neural Systems*  
 2011-2015 Member, NIH LAM study section (R01/R21)  
 2011 Ad-hoc Member, NIH LAM study section (R01/R21)  
 2011 Member, NIDA BSTART SEP study section (R03)  
 2010 Member, NIDA CEBRA study section (R21)  
 2010 Ad-hoc Member, NIH LAM study section (R01/R21).  
 2008, 2009, 2010 Ad-hoc Member, NIH ZRG01 F02A study section (NRSA)  
 2009 Mail-in Reviewer, NIH ZRG1 ETTN-A study section (RC1)  
 2008 Ad-hoc Member, NIH SEP study section ZRG1 IFCN-L  
 2007- *Frontiers in Integrative Neuroscience*, (Review Editor)  
 2007- *Frontiers in Behavioral Neuroscience*, Review Board (identified referee)  
 2005-2008 Member, board of directors, *Computational Neural Systems (CNS)* conference  
 2003-present Editorial board, *Hippocampus* (reviewing editor).  
 2006 Member, NSF Computational Neuroscience Panel  
 2005-2006 Ad-hoc member, NIH ZRG1 F02B NIH Study Section  
 2004 Ad-hoc member, SEP ZMH1 ERB-S 03S NIH Study Section  
 2003 Member, NASA review panel for NRA 03-OBPR-04

2020-2022 Member, Executive Committee, Society for Neuroeconomics  
 2020-2021 Program co-chair, 2022 Program chair  
 2017 Organized NIMH Meeting on *Computational Psychiatry: Opportunities and Challenges*  
 2015 Organized Strüngmann Forum on *Computational Psychiatry*  
 2014-2019 Director of Graduate Studies (DGS), Graduate Program in Neuroscience (GPN)  
 2014-2019 Member, Basic Sciences Graduate Research Council (BSGC, UMN)  
 2010-2012 Member, Executive Committee, Center for Cognitive Sciences, UMN  
 2008-2013 Chair, Admissions committee, Graduate Training Program in Neuroscience, UMN  
 2006 Member, Ford Foundation lecture series selection committee  
 2006 Admissions committee, Graduate Training Program in Biomedical Engineering, UMN  
 2005-2006 Member, Presidential Symposium on Neuroscience planning committee  
 2004- Admissions committee, Graduate Training Program in Neuroscience, UMN  
 2002 UMN Academic Health Center Seed Grant review committee

2007- Member, MIMTeC, Minimally Invasive Medical Technologies Center (U MN & U Cincinnati)  
 2007- Member, Spatial Intelligence and Learning Center, wider network

2021- Member, American Psychological Association  
 2010- Member, Society for Neuroeconomics  
 2006- Member, American Physiological Society  
 2006- Member, Sigma Xi  
 2006- Member, Faculty for Undergraduate Neuroscience  
 1994- member Society for Neuroscience  
 1992-1997 Center for the Neural Basis of Cognition (CNBC) Graduate Training Program  
 (originally Neural Processes in Cognition Graduate Training Program (NPC))  
 WebMaster, NPC 1993-1995 CNBC 1994-1997

1994-1997 Maintainer, Cognitive Neuroscience sites on the Internet  
1996 Neural Information Processing Systems (NIPS) Organizing Committee  
1994-1997 WebMaster, NIPS  
1992-1994 Co-Maintainer, Connectionists Mailing List

Journal and other reviews (1 in 1995, 3 in 1998, 3 in 1999, 6 in 2000, 8 in 2001, 14 in 2002, 7 in 2003, 21 in 2004, 15 in 2005, 33 in 2006, 24 in 2007, 27 in 2008, 48 in 2009, 28 in 2010, 22 in 2011, 21 in 2012, 20 in 2013, 16 in 2014, 19 in 2015, 20 in 2016, 22 in 2017, 20 in 2018, 26 in 2019, 12 in 2020, 5 in 2021, 7 in 2022, 6 in 2023).

Ad-hoc and study section grant reviews (1 in 1997, 3 in 1998, 2 in 2000, 8 in 2003, 5 in 2004, 12 in 2005, 24 in 2006, 4 in 2007, 11 in 2008 [attended 2 study sections], 20 in 2009 [attended 3 study sections], 29 in 2010 [attended 3 study sections], 18 in 2011 [attended 3 study sections], 22 in 2012 [attended 3 study sections], 25 in 2013 [attended 2 study sections], 20 in 2014 [attended 2 study sections], 33 in 2015 [attended 2 study sections], 20 in 2016 [attended 3 study sections], 19 in 2017 [attended 3 study sections] 18 in 2018 [attended 2 study sections], 19 in 2019 [attended 1 study section], 2021 [attended 2 study sections], 2022 [attended 1 study section], 2023 [attended 2 study sections])

## TEACHING AND MENTORING ACTIVITIES

### Teaching

2021- Itasca Computational Week (Module director [2021 2022])

2014-2018, 2020- Mind and Brain (Nsci 3100 / Nsci 3505, writing-intensive as of 2021)

2004-2005 Supervisor, Advanced design (ME 4054)

2001-2013 Theoretical Neuroscience (Nsc 5202, course-director)

2001-present Lectures in

Learning and Memory (Psychiatry Residents, ADPY7975)

Behavioral Neuroscience Journal Club

Behavioral Neuroscience (Nsc 5661)

Principles of Drug Abuse (Nsci 5461)

Neurostatistics (Nsci 8320)

2001-2006,2020 Itasca Sensorimotor Neurobiology Laboratory (Nsc 5551)

### Mentoring (directly advised students)

#### Post-doc

**2024-present Celia Gagliardi (post-doc)**

**2023-present Cathy Chen (post-doc, co-mentored with Sophia Vinogradov)**

2022-2024 Avishek Chatterjee (post-doc, co-mentored with Audrey Sederberg)

**2022-present Chelsey Damphousse (post-doc)**

**2020-present Ugurcan Mugan (post-doc)**

**2019-present Olivia Calvin (post-doc)**

**[Current position: researcher 5, University of Minnesota]**

2020-2024 Paul Cunningham (post-doc)

[Current position: postdoc, Alex Herman lab, UMN]

2018-2019 Rachel Anderson (post-doc, co-mentored with Mark Thomas)

[Current position: associate professor, Bethel University]

2018-2024 Geoffrey Diehl (Post-doc)

[Current position: postdoc, Alik Widge laboratory, University of Minnesota]

2013-2016 Evan C. Carter (Post-doc, co-advised with David Stephens)

[Current position: Research Psychologist, Army Research Laboratory, Aberdeen MD]

2013-2015 Nathan Schultheiss (Post-doc)

[Current position: Research Scientist, Florida International University]

2012-2016 Yannick Breton (Post-doc)

[Current position: Senior Advisor, Metrics and Reporting for the Healthy Brains, Healthy Lives initiative, McGill.]

2012-2016 Seiichiro Amemiya (Post-doc)

[Current position: Research Scientist, Lab for Circuit and Behavioral Physiology, RIKEN CBS (Center for Brain Science)]

**2012-present Brandy Schmidt (Post-doc)**

**[Current position: researcher 6, University of Minnesota]**

2010-2011 Jadin Jackson (Post-doc)

[Current position: Principal Algorithm Scientist, Medtronic]

2009-2011 Zeb Kurth-Nelson (Post-doc)

[Current position: Senior Research Scientist, DeepMind]

2007-2010 Matthijs van der Meer PhD (Post-doc)

[Current position: Associate Professor, Dartmouth]

2001 Pratibha Aia MD (Health Informatics, postdoc)

[Current position: Assistant Professor of Neurology, Emory University Hospital]

## PhD Students

2022-2024 Dana Mueller (Psychology, co-advised with Nicola Grissom)

**2019-2024 Adrina Kocharian (Graduate Program in Neuroscience, co-advised with Patrick Rothwell)**

- 2017-2018 Megan Monko (Graduate Program in Neuroscience)
- 2017-2021 Rebecca Kazinka (Psychology, co-advised with Angus MacDonald)
- 2016-2021 Cody Walters (Graduate Program in Neuroscience)  
[Current Position: Associate Editor, Nature Communications]
- 2014-2020 Brendan Hasz (Graduate Program in Neuroscience)  
[Current Position: Data Scientist, C. H. Richardson Company]
- 2014-2019 Caitlin Durkee (Graduate Program in Neuroscience, co-advised with Alfonso Araque)  
[Current position, Postdoc, UCSF]
- 2014-2018 Brian Sweis (MD/PhD, Neuroscience, co-advised with Mark Thomas)  
[Current position, Assistant Professor, Icahn School of Medicine, Mount Sinai Hospital, NYC]
- 2012-2017 Samantha Abram (Psychology [CCS], co-advised with Angus MacDonald)  
[Current position: Assistant Professor, UCSF]
- 2010-2015 Paul Regier (Graduate Program in Neuroscience)  
[Current position: Assistant Professor, UPenn]
- 2009-2014 Andrew Wikenheiser (Graduate Program in Neuroscience)  
[Current position: Assistant Professor, UCLA]
- 2009-2015 Andrew Papale (Graduate Program in Neuroscience)  
[Current position: postdoc with Alex Dombrovski, University of Pittsburgh]
- 2009-2015 Nate Powell (Graduate Program in Neuroscience)  
[Current position: Visiting professor, St. Olaf]
- 2009-2010 Adam Vogel (Graduate Program in Neuroscience)
- 2008-2015 Adam Steiner (Graduate Program in Neuroscience)  
[Current position: postdoc with Francis Shen, UMN law school]
- 2008-2011 Anoopum Gupta (Robotics, PhD, Carnegie Mellon University,  
primary advisor: David Touretzky)  
[Current position: Physician Investigator, Neurology, Massachusetts General Hospital;  
Assistant Professor of Neurology, Harvard Medical School]
- 2007, 2009-2015 Jeffrey Stott (Graduate Program in Neuroscience)  
[Current position: postdoc with Kyle Smith, Dartmouth College, Hanover NH]
- 2006-2011 John Ferguson (BME, PhD)  
[Current position: Research Associate, Minnesota VA]
- 2003-2008 Beth Masimore (Physics, primary advisor: Jim Kakalios, PhD)  
[current position, Investigative Scientist, Office of the Inspector General, NSF]

- 2002-2005 Jayant Parthasarathy (ECE, PhD, primary advisor: Babak Ziaie)  
[current position, Director, Innovation and R&D, United Health Group]
- 2002-2008 Adam Johnson (Graduate Program in Neuroscience, PhD)  
[current position, Professor with Tenure, Bethel University]
- 2001-2006 Jadin Jackson (Graduate Program in Neuroscience, PhD)
- 2000-2005 Neil Schmitzer-Torbert (Graduate Program in Neuroscience, PhD)  
[Current position, Associate Professor with Tenure (Chair), Wabash College, Crawford IN]

### Masters Students

- 2002-2005 Rahul Venkateswaran (MechE, Masters student, primary advisor: Art Erdman)  
[current position, researcher, Hutchinson Technical Institute]
- 2002-2004 Saumya Rao (ECE, Masters student)  
[Current position.]

### Post-bac students

#### **2022-present Henri Chastain (Undergraduate, Postbac)**

- 2019-2022 Samantha Hoffman (Undergraduate, Postbac)  
[Current position: MD/PhD graduate student U Wisconsin MSTP program]
- 2019-2022 Amber McLaughlin  
[Current position: graduate student, Mt Sinai]
- 2017, 2018, 2019-2021 Matthew Erickson (Undergraduate, postbac)
- 2017-2021 Anneke Duin (Undergraduate, postbac)
- 2017-2019 Michael Adkins (Undergraduate, post-bac)
- 2017-2018 Carrie Bell (Undergraduate, post-bac)

### Rotation students

- 2024 Haowei Zhang (GPN, rotation)
- 2024 Kyle Feldman (MPAT, rotation)
- 2023 Michael Hochstein (GPN, rotation)
- 2021 Ross Armand (GPN, rotation)
- 2021 Chris Apgar (GPN, rotation)
- 2020 Amelia Schneider (GPN, rotation)
- 2020 Madison Merfeld (GPN, rotation)
- 2019 David Maisson (GPN, rotation)
- 2018 Adrina Kocharian (GPN, rotation)



2017 Emily Semaya (GPN, rotation)  
2017 Roberto Lopez-Cervera (MD/PhD rotation)  
2013 Chris Cline (BME, rotation)  
2013 Vadim Petruk (GPN, rotation)  
2011 Brittni Peterson (GPN, rotation)  
2011 Vivek Nagaraj (GPN, rotation)  
2010 Abbey Holt (GPN, rotation)  
2009 Katrina Schrode (GPN, rotation)  
2009 Nancy Staffend (GPN, rotation)  
2005 Josh Puhl (GPN, rotation)  
2005 Patrick Rothwell (GPN, rotation)  
2004 Zeb Kurth-Nelson (GPN, rotation)  
2002 Chris Baker (BME, rotation)  
2002 Jon Waataja (GPN, rotation)

### **Undergraduate**

2023-2024 Aarya Bomidi (undergraduate)  
2023 Ashlynn Reid (undergraduate)  
2023 Nyomi Charleston (undergraduate)  
2023-2024 Poorvi Singh Ghai (undergraduate)  
**2023-present Jen Peterson (undergraduate)**  
2022, 2023 Ian Acheson (undergraduate)  
2022-2023 Tori Lawrence (undergraduate)  
**2022-present Killian Macias (full-time technician)**  
2022-2023 Noah Zimmerman (undergraduate)  
2021-2023 Olivia Patterson (undergraduate).  
2021 Jonathan Williams (LSSURP, undergraduate)  
2021, 2022 Georgia Cannan (Macalester, undergraduate)  
2019-2022 Kevin Singh (Undergraduate)  
2019-2021 Grant Noble (Undergraduate)  
2019-2021 Samantha Hoffman (Undergraduate)

2019 Sabra Sisler (LSSURP, Undergraduate)

2018-2021 London Aman (Undergraduate, Summa Cum Laude Thesis)

2017-2018 Onni Rauhala (Undergraduate)

2017-2018 Matthew Cortese (Undergraduate)

2017-2019 Elizabeth Dean (Undergraduate)

2017-2020 Daniel Min (Undergraduate)

2016-2017 Sophie Sampson (Undergraduate)

2015-2017 Jerrius Jubran (Undergraduate)

**2013-present Ayaka Sheehan (Undergraduate, Macalaster, currently full-time technician)**

2013 Joseph Griffin (Undergraduate)

2013-2014 Patrick Crowe (Undergraduate)

2012 Nate Pasmarter (CCS REU)

2012 Soren Knutson (undergraduate, St. Olaf)

2012 Christopher Weeks (undergraduate, St. Olaf)

2009 Anna Blumenthal (CCS REU, from Drew University)

2006-2007 Meghan Masrud (undergraduate, directed study 2006)

2006 Kristin Bohnhorst (undergraduate)

2006 Seth Mastous (undergraduate)

2005 Daniel Smith (undergraduate, LSSURP 2005, UROP 2006)

2005-2006 Morgan Little (undergraduate, UROP 2005, 2006)

2005 Alex Colvin (undergraduate)

2005 Maniezheh Firouzi (undergraduate)

2005-2006 Mandy Huber (undergraduate)

2005-2006 Sarah Jutila (undergraduate)

2004-2006 Giuseppe Cortese (undergraduate, UROP 2005)

2004-2005 Monica Kumar (undergraduate)

2003-2004 Susan Nwoke (undergraduate)

2000-2004 Mallika Arudi (undergraduate, UROP 2004)

2000-2005 Deborah Bang (undergraduate, MFA Music)

2000-2006 Dan Bernal (undergraduate, directed research 2003)

**2000-present Chris Boldt (ug 2000-2005, directed research 2003,  
currently full-time technician)**

2000-2003, 2009-2022 Kelsey Seeland (ug 2000-2003, full-time technician 2009-2022)

## Community Outreach and Engagement

2001 Written up in Palmer, K. "Meeting of the Minds", *Minnesota Medicine*, 84(5):20ff.  
2003 Showed lab to Governor Pawlenty.  
2001 BrainU: 24 Middle School Teachers shown lab.  
2003 Showed lab to 24 eighth graders.  
2003 Showed lab to Public-Relations companies (for D. Zorn, AHC Dean's office) (Colle & McVoy, Padilla Speer Beardsley, Weber-Shandwick).  
2003 Showed lab to State Senators (for AHC Dean's office).  
2004 "Cracking the neural code", to venture capitalists through Venture-Med.\

2004 BrainU tours.  
2004 Discussion and demo to Fairview-University Marketing group (for AHC Dean's office).  
2004 Showed lab and tour Julie Philp, aide to Congressman Gil Gutknecht.  
2004 Discussion and demo to Fairview-University Executive group (including CEO David Page [Dan Anderson, Mark Larson, Loie Lenarz, David Page, Heather Swenson, Carol Bouillard]) (for AHC Dean's office).  
2004 Presented lab tour to State Senators (Sen. Wes Skoglund, Sen. Geoff Michel, Sen. Cal Larson, Sen. Michelle Fischbach, Alicia Spencer, staffer for Sen. Koering).  
2004 Interviewed by CBS radio (WCCO AM 830, also sent to CBS radio in NY).  
2004 Presented lab tour to Lobbyists (for AHC Dean's office).  
2004 Presented lab tour to PR office (for AHC Dean's office).  
2005 Written up in *Pictures of Health* "Triggering addiction".  
2005 Presented lab tour to Members of Mark Dayton's staff .  
2005 BrainU tours.  
2005 Written up in *Discovery: The Graduate School Magazine* (U of M) article by Kate Tyler.  
2006 Did interview/video for Wes Thomsen doing a project on memory and scrapbooking. Included in his documentary movie *Scrapped* (2006).  
2007 Presented first grade class (Falcon Heights Elem School, Ms. Nelson and Ms. Plath).  
2007 "Through the Grid, a Window on Cognition" Redish, 23 January 2007, *Scientific American Mind* <http://blog.sciam.com/>  
2008 Participated in Steve Kelley/Elizabeth Wilson Outreach Course, including visiting Legislature, encounters with TV, Radio, and News reporters.  
2008 Presented to second grade class (Falcon Heights Elem School, Ms. Kakaloris).  
2008 Presented lab tour to Andover High School seniors.  
2008 Presented lab tour to Augsburg College Biopsychology class.  
2009 Continuing Education (150 local doctors, addiction social workers) "Addictions and Co-occurring Disorders: Recent Advances in Research and Practice" *U of M College of Continuing Education and the Addiction Studies Certificate Program*.  
2009 ADR presented lab tour to students from St. Olaf  
2009 BrainU tours  
2010 ADR presented outreach talk to Ms. Kakalouris' 2<sup>nd</sup> grade class  
2010 ADR written up in Center for Neuroengineering newsletter ("Of Rats and Math")

2010 Presented talk with brains and demos to ISD #271 Dimensions Academy from Ridgeview Elementary in Bloomington

2010 BrainU tours

2010 Interviewed for "Found in Space" episode of "Are we alone?" [NPR, podcast]

presented talk ("Vulnerabilities in the decision-making machinery... understanding addiction and problem gambling" 1 hr) plus answered questions (+2 hrs) to 40 people at *Gambler's Relief*

2010 Interviewed for "Found in Space" episode of "Are we alone?" [NPR, podcast]

2010 BrainU remote presentation to Duluth

2011 presented as part of the Science Museum of Minnesota's Beaker and Brush program titled "Creative Memory" w/ Chris Faust (photographer). At the Black Dog Cafe, St. Paul MN

2012 Written up as part of article on the Wallin Fund (Jim Walsh, *Star Tribune*)

2012 Presented talk, brains, and demos to ISD #271 Dimensions Academy from Ridgeview Elementary in Bloomington

2012 Presented lab tours and presentations to BrainU program

2012 Participated in MMF Discovery Showcase

2013 Interviewed by BBC 2 for *Science Club*

2013 Written up in discussion in *Science*, "Can animals envision the future? Scientists spar over new data" (Michael Balter, *Science*)

2013 Presented talk to Oak Grove Middle School students

2013 Interviewed for AHC Health Talk Blog Post  
<http://www.health.umn.edu/healthtalk/2013/07/15/new-book-peers-deep-into-the-brain-to-understand-how-we-make-decisions/>

2013 Presented lab tour to BrainU

2013 Joined art/science roster of "The Gymnasium"

2013 Book Reading/Discussion/Signing at UMN Bookstore

2014 Presented TEDx talk as part of University of Minnesota's TEDx symposium

2014 TEDx talk is available at <https://www.youtube.com/watch?v=0luc5ufbirM>

2014 Interviewed by Sports Illustrated for article on why playbooks are so hard to memorize: "Your Brain on Playbooks: The neuroscience of bringing X's and O's to life" by Dan Treadway.

2014 Presented talk to BehaviorMN Meetup group

2015 Interviewed for University of Minnesota Medical School video "Exploring Mental Time Travel". Won 2nd place AAMC Basic Science Research Video Awards.  
<https://youtu.be/WYkdX5qoy84>

2015 Skype discussion with students at St. Nicholas International School, Sao Paulo, Brazil.

2016 Camp Neuro ("Meet a neuroscientist")

2016 CBS Undergraduate tours

2017 LearningLifeSampler [https://www.youtube.com/watch?v=CJFI7Sm2P\\_s](https://www.youtube.com/watch?v=CJFI7Sm2P_s)

2017 LearningLife [UMN]

2017 McKnight Foundation

2017 MetroState Neuroscience

2017 Medical Bulletin, University of Minnesota "A well-balanced brain" by Kristine Mortensen  
<https://www.med.umn.edu/news-events/medical-bulletin/well-balanced-brain>

2017 Neuroscience News, University of Minnesota "Neuroscientist-playwright"  
<https://give.umn.edu/stories/neuroscientist-playwright>

2017 Dimensions Academy kids and teachers

2017 Minneapolis Federal Reserve

2017 Minneapolis Psychoanalytic Initiative working group

2018 Loucks Lecture, University of Washington  
2018 GSN podcast released: <https://itunes.apple.com/nl/podcast/state-of-minds-podcast/id1373595195?l=en>  
2018 UMN Inquiry: No Simple Decisions <https://research.umn.edu/inquiry/post/no-simple-decisions>  
2018 Inside Science quoted and interviewed <https://www.insidescience.org/news/why-making-decisions-game-speed-can-lead-penalties-nfl-players>  
2019 Behavioral Grooves Lecture, Q/A, and Discussion  
2019 Interviewed for *The upgrade podcast* <https://podcasts.apple.com/us/podcast/how-to-be-better-decision-maker-neuroscientist-david/id508117781?i=1000449929703>  
2021 UMN Legacy: *Meeting of the Minds* <https://legacy.umn.edu/stories/meeting-of-the-minds>  
2021 UMN Building a large center: NeuroPRSMH  
<https://www.youtube.com/watch?v=PN9kjWZJ6j8>  
<https://www.youtube.com/watch?v=JUWyMM5eagl>  
2021 Interviewed by Amy Day for Clarity4Action ([Interview](#))  
2021 Participated in Diversifying CNS (PMermelstein & RMeisel)  
2022 Anselm house: Are we really free? A discussion on free will and moral responsibility with Bill Newsome and David Redish.  
2023 NAMI, Minneapolis: The new field of computational psychiatry  
2024 [Brainland podcast](#).  
2024 [The One You Feed: Changing How We Choose](#)

## Non-technical publications, awards, etc.

### Poetry

untitled poem ("Our relationship is stretched thin...")  
published 1989 *Late Knocking*.

Standing on an unsafe balcony, night and morning  
published 1991 *Baltimore City Paper*.

### Plays

*Beth* (one-act)

1988 (full production), produced by E. Albee, directed by M. Kupritz.

*Kalypso* (one-act)

1989 (full production), produced and directed by E. Albee.

1992 (reading), directed by A. Eaves.

*In the Balance* (full-length)

1994 (reading), directed by T. Bannister.

1998 (full production), *Changing Scene Theater*, Denver CO

produced by A. Brooks, directed by T. Oakley.

2001 (reading), *Playwright's Roundtable*.

2016 (full production), *Collaborative Artists Ensemble*, Los Angeles CA

directed by Steve Jarrard

*The Pilate Dialogues* (full-length)

1995 (reading), produced by S. Sickles.

*Medea* (full-length)

1998 (reading), directed by V. Baugh.

*The Stone at the Heart* (full-length)

1999 (reading), directed by K. Kellner.

2000 (staged reading), directed by D. Sewell

*Modern Art* (short work)

1999 (staged reading), *GOCAIA*, Tucson AZ

Produced by the Old Pueblo Playwrights, directed by L. Andresano.

## Professional Activities

Member, Dramatists Guild, (New York NY) 1996-2002

Member, Old Pueblo Playwrights, (Tucson AZ) 1998-2000

Member, Playwright's Center, (Minneapolis MN) 2000-2005