

Joseph T. McGuire

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Lab website: <https://sites.bu.edu/cdlab>

Positions

Boston University, 2015–present
Department of Psychological & Brain Sciences
Associate Professor, 2023–present
Assistant Professor, 2015–2023

University of Pennsylvania, 2010–2015
Postdoctoral Fellow, Department of Psychology
Supervisor: Joseph W. Kable

Princeton University, 2007–2010
Graduate Student, Department of Psychology
Supervisor: Matthew M. Botvinick

University of Pennsylvania, 2005–2007
Graduate Student, Department of Psychology
Supervisor: Matthew M. Botvinick

Yale University, 2003–2005
Research Assistant, Department of Psychology
Supervisor: Marcia K. Johnson

Education

Ph.D., Psychology, January 2011
Princeton University, Princeton, NJ

B.A., Cognitive Science, May 2003
Yale University, New Haven, CT

Current research support

National Institutes of Health R01-MH130374, 2023–2028

The role of medial prefrontal cortex in context-dependent valuation and decision processes

Role: PI

This project investigates the role of human ventromedial prefrontal cortex in flexibly estimating the value of novel prospects on the basis of temporal contextual information retrieved from memory.

National Institutes of Health R21-MH124095, 2021–2024

Modeling dimensions of individual variation in adaptive foraging decisions

Role: PI (PIs: Daniel Fulford, Joseph McGuire)

The goal of this project is to develop computational models of adaptive persistence toward delayed outcomes amid uncertainty, and to test the usefulness of individual-specific model parameter estimates as indices of impulsivity.

National Institutes of Health R01-MH126971, 2022–2027

Representational dynamics for flexible learning in complex environments

Role: Co-Investigator (PI: Matthew Nassar)

The goal of this project is to use brain imaging and computational modeling to understand how beliefs about environmental state transition structure regulate learning from unexpected events.

National Institutes of Health R01-MH100095, 2020–2025

Reward learning in late-life suicidal behavior

Role: Co-Investigator (PI: Alexandre Dombrovski)

This project uses computational models, behavioral experiments, and fMRI to examine how older adults at risk for suicide make decisions under varying cognitive and motivational demands.

Simons Foundation Autism Research Initiative 874568, 2021–2024

Investigating mechanisms underlying perceptual integration in autism

Role: Co-Investigator (PI: Benjamin Scott)

This project uses computational models to characterize parameters of perceptual evidence integration in adolescents with and without autism spectrum conditions.

Boston University Kilachand Fund, 2021–2024

How we think: Dynamics of brain circuits for problem solving

Role: Co-Investigator (PI: Michael Hasselmo)

The goal of this internally funded project is to understand the functional dynamics of cortical circuits that support abstract reasoning, through a large-scale collaboration among investigators specializing in computational modeling, cellular-level systems neuroscience, and human neuroimaging.

Completed research support

National Institutes of Health F32-EY029134, 2019–2022

Eye movements and the dynamics of adaptive learning

Role: Sponsor (PI: Leah Bakst)

The goal of this postdoctoral NRSA fellowship was to examine the roles of reward and predictive uncertainty in adaptive learning, and for the Fellow to gain training in human fMRI, eye tracking, and computational modeling.

National Science Foundation BCS-1755757, 2018–2021

Cortical representations for value-based decision making

Role: PI

The goal of this project was to test whether valuation-related responses in ventromedial prefrontal cortex are topographically segregable from the default network at the individual participant level.

National Science Foundation SMA-1809071, 2018–2019

Eye movements and the dynamics of adaptive learning

Role: Sponsor (PI: Leah Bakst)

The goal of this SBE Postdoctoral Research Fellowship was to examine the roles of reward and predictive uncertainty in adaptive learning, and for the Fellow to gain training in human fMRI, eye tracking, and computational modeling.

National Institutes of Health F32-DA030870, 2011–2014

Temporal dynamics and neural mechanisms of preference reversal

Role: PI

The goal of this postdoctoral NRSA fellowship was to test decision makers' ability to infer whether persistence toward delayed rewards was advantageous or disadvantageous in a given environment, and to measure associated valuation signals in the brain.

Peer-reviewed publications

Lempert, K.M.*, Schaefer, L.*, Breslow, D., Peterson, T.D., Kable, J.W., & McGuire, J.T. (2023). Statistical information about reward timing is insufficient for promoting optimal persistence decisions. *Cognition*, *237*, 105468.

Bakst, L., & McGuire, J.T. (2023). Experience-driven recalibration of learning from surprising events. *Cognition*, *232*, 105343.

Do, Q., Li, Y., Kane, G.A., McGuire, J.T., & Scott, B.B. (2023). Assessing evidence accumulation and rule learning in humans with an online game. *Journal of Neurophysiology*, *129*, 131-143.

Pan, J., Klimova, M., McGuire, J.T., & Ling, S. (2022). Arousal-based pupil modulation is dictated by luminance. *Scientific Reports*, *12*, 1390.

Toro-Serey, C., Kane, G.A., & McGuire, J.T. (2022). Choices favoring cognitive effort in a foraging environment decrease when multiple forms of effort and delay are interleaved. *Cognitive, Affective, & Behavioral Neuroscience*, *22*, 509–532.

Morin, T.M., Chang, A.E., Ma, W., McGuire, J.T., & Stern, C.E. (2021). Dynamic network analysis demonstrates the formation of stable functional networks during rule learning. *Cerebral Cortex*, *31*, 5511–5525.

Bakst, L., & McGuire, J.T. (2021). Eye movements reflect adaptive predictions and predictive precision. *Journal of Experimental Psychology: General*, *150*, 915–929.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F., Dreber, A., Huber, J., Johannesson, M., ... & Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*, *582*, 84–88.

Babcock, S.W., Howard, M.W., & McGuire, J.T. (2020). Time-conjunctive representations of future events. *Memory & Cognition*, *48*, 672–682.

Kao, C.-H., Khambhati, A.N., Bassett, D.S., Nassar, M.R., McGuire, J.T., Gold, J.I., & Kable, J.W. (2020). Functional brain network reconfiguration during learning in a dynamic environment. *Nature Communications*, *11*, 1682.

Toro-Serey, C., Tobyne, S.M., & McGuire, J.T. (2020). Spectral partitioning identifies individual heterogeneity in the functional network topography of ventral and anterior medial prefrontal cortex. *NeuroImage*, *205*, 116305.

Nassar, M.R., McGuire, J.T., Ritz, H., & Kable, J.W. (2019). Dissociable forms of uncertainty-driven representational change across the human brain. *Journal of Neuroscience*, *39*, 1688–1698.

Lempert, K.M., McGuire, J.T., Hazeltine, D.B., Phelps, E.A., & Kable, J.W. (2018). The effects of acute stress on the calibration of persistence. *Neurobiology of Stress*, *8*, 1–9.

Krastev, S., McGuire, J.T., McNeney, D., Kable, J.W., Stolle, D., Gidengil, E., Fellows, L.K. (2016). Do political and economic choices rely on common neural substrates? A systematic review of the emerging neuropolitics literature. *Frontiers in Psychology*, *7*, 264.

McGuire, J.T. & Kable, J.W. (2015). Medial prefrontal cortical activity reflects dynamic re-evaluation during voluntary persistence. *Nature Neuroscience*, *18*, 760–766.

McGuire, J.T.*, Nassar, M.R.*, Gold, J.I., & Kable, J.W. (2014). Functionally dissociable influences on learning rate in a dynamic environment. *Neuron*, *84*, 870–881.

Kool, W., McGuire, J.T., Wang, G.J., & Botvinick, M.M. (2013). Neural and behavioral evidence for an intrinsic cost of self-control. *PLoS ONE*, *8*, e72626.

Bartra, O.*, McGuire, J.T.*, & Kable, J.W.* (2013). The valuation system: A coordinate-based meta-analysis of BOLD fMRI experiments examining neural correlates of subjective value. *NeuroImage*, *76*, 412–427.

McGuire, J.T. & Kable, J.W. (2013). Rational temporal predictions can underlie apparent failures to delay gratification. *Psychological Review*, *120*, 395–410.

McGuire, J.T. & Kable, J.W. (2012). Decision makers calibrate behavioral persistence on the basis of time-interval experience. *Cognition*, *124*, 216–226.

Ribas-Fernandes, J.J.F., Solway, A., Diuk, C., McGuire, J.T., Barto, A.G., Niv, Y., & Botvinick, M.M. (2011). A neural signature of hierarchical reinforcement learning. *Neuron*, *71*, 370–379.

Kool, W.*, McGuire, J.T.*, Rosen, Z.B., & Botvinick, M.M. (2010). Decision making and the avoidance of cognitive demand. *Journal of Experimental Psychology: General*, *139*, 665–682.

McGuire, J.T. & Botvinick, M.M. (2010). Prefrontal cortex, cognitive control, and the registration of decision costs. *Proceedings of the National Academy of Sciences, USA*, *107*, 7922-7926.

Botvinick, M.M., Huffstetler, S., & McGuire, J.T. (2009). Effort discounting in human nucleus accumbens. *Cognitive, Affective & Behavioral Neuroscience*, *9*, 16-27.

Mitchell, K.J., Raye, C.L., McGuire, J.T., Frankel, H., Greene, E.J., & Johnson, M.K. (2008). Neuroimaging evidence for agenda-dependent monitoring of different features during short-term source memory tests. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *34*, 780-790.

Johnson, M.K., Mitchell, K.J., Raye, C.L., McGuire, J.T., & Sanislow, C.A. (2006). Mental rubbernecking to negative information depends on task context. *Psychonomic Bulletin & Review*, *13*, 614-618.

* equal contribution

Chapters and commentaries

McGuire, J.T. & Kable, J.W. (2016). Deciding to curtail persistence. In K.D. Vohs and R.F. Baumeister (Eds.) *Handbook of Self-Regulation: Research, Theory, and Applications*. Guilford.

McGuire, J.T. & Kable, J.W. (2014). Go means green. *Nature Neuroscience*, *17*, 489-490. News & Views commentary.

McGuire, J.T., Cohen, J.D., & Botvinick, M.M. (2013). Mental effort. In H. Pashler (Ed.): *Encyclopedia of the Mind* (pp. 502–506). Thousand Oaks, CA: SAGE Publications.

McGuire, J.T. & Botvinick, M.M. (2010). The impact of anticipated cognitive demand on attention and behavioral choice. In B. Bruya (Ed.), *Effortless attention: A new perspective in the cognitive science of attention and action* (pp. 103–120). Cambridge, MA: MIT Press.

Conference presentations

Schaefer, L., Chen, Y., Fulford, D., & McGuire, J.T. (2023, October). *Validating a behavioral measure of individual differences in willingness to wait for delayed rewards*. Poster to be

presented at the annual meeting of the Society for Neuroeconomics, Oct. 13–15, Vancouver, Canada.

*Chen, Y., *Li, Y., Onipede, Y., & McGuire, J.T. (2023, October). *Behavioral evidence for flexible recency-dependent valuation*. Poster to be presented at the annual meeting of the Society for Neuroeconomics, Oct. 13–15, Vancouver, Canada.

Isenburg, K., Guo, J., Liapis, S.S.P., Brown, T.I., McGuire, J.T., & Stern, C.E. (2023, July). *The geometry of prefrontal representations in the disambiguation of navigational alternatives*. Poster at the annual meeting of the Organization for Human Brain Mapping, July 22–26, Montreal, Canada.

Liapis, S.S.P., Brown, T.I., McGuire, J.T., & Stern, C.E. (2023, July). *Disambiguation triggers shifts in the geometry of medial temporal lobe representations*. Poster at the annual meeting of the Organization for Human Brain Mapping, July 22–26, Montreal, Canada.

Sussman, L., Onipede, Y., & McGuire, J.T. (2022, November). *Contextually adaptive decisions to engage in precommitment*. Poster at the annual meeting of the Society for Judgment and Decision Making, November 10–13, San Diego, CA.

Chen Y., Fulford, D., & McGuire, J.T. (2022, July). *Test-retest reliability of task-based measures of voluntary persistence*. Flash Talk at the annual meeting of the Cognitive Science Society, July 27–30, Toronto, Canada.

Chen, Y. & McGuire, J.T. (2022, June). *RL with temporal representations captures phenotypes of adaptive persistence behavior*. Poster at the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making, June 8–11, Providence, RI.

van Geen, C., Chen, Y., Kazinka, R., Vaidya, A., Kable, J.W., & McGuire, J.T. (2022, June). *Lesions to value-responsive brain regions lead to impairments in voluntary persistence*. Poster at the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making, June 8–11, Providence, RI.

Do, Q., Kane, G., McGuire, J.T., & Scott, B.B. (2021, November). *An online game to assess evidence accumulation and rule learning in humans*. Poster at the annual meeting of the Society for Neuroscience, Nov. 8–11 (meeting held virtually).

Liapis, S.S.P., Chang, A.E., McGuire, J.T., & Stern, C. (2021, November). *Successful context-dependent associative rule learning involves tuning the dimensionality of representational spaces*. Poster at the annual meeting of the Society for Neuroscience, Nov. 8–11 (meeting held virtually).

Moore, K.N., Yi, C., Dunne, M.F., Stern, C., & McGuire, J.T. (2021, November). *Virtual human foraging behavior follows predictions for heavy-tailed search*. Poster at the annual meeting of the Society for Neuroscience, Nov. 8–11 (meeting held virtually).

Bakst, L., Schaefer, L., Nassar, M.R., & McGuire, J.T. (2021, September). *Theoretical models of context-appropriate adaptive learning*. Poster at the annual meeting of the Society for Neuroeconomics, Sep. 29–Oct. 1 (meeting held virtually).

Liapis, S.S.P., Morin, T.M., McGuire, J.T., & Stern, C.E. (2021, June). *The dimensionality of representational space calibrates to abstract reasoning complexity*. Poster at the annual meeting of the Organization for Human Brain Mapping, June 21–25 (meeting held virtually).

Esfand, S.M., McGuire, J.T., & Kibbe, M.M. (2021, April). *Children calibrate their willingness to wait for rewards on the basis of time-interval experience*. Poster at the annual meeting of the Society for Research in Child Development, April 7–9 (meeting held virtually).

- Liapis, S.S.P., Brown, T.I., McGuire, J.T., & Stern, C.E. (2021, January). *Medial temporal lobe subfields balance representational dimensionality during prospective planning*. Poster at the SfN Global Connectome, Jan. 11–13 (meeting held virtually).
- Sussman, L., & McGuire, J.T. (2020, October). *Adaptive self-control: Environmental volatility and precommitment decisions*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 7–9 (meeting held virtually).
- Toro-Serey, C., Chen, Y., Sussman, L., & McGuire, J.T. (2020, June). *Individual-specific functional architecture and activation patterns in medial prefrontal cortex*. Poster at the annual meeting of the Organization for Human Brain Mapping, June 23–July 3 (meeting held virtually).
- Bakst, L., Bloem, I., McGuire, J.T., & Ling, S. (2020, June). *Dynamic spotlight model recovers the position but not the width of covert spatial attention*. Talk at the annual meeting of the Vision Sciences Society, June 19–24 (meeting held virtually).
- Bakst, L., & McGuire, J.T. (2019, October). *Implicit meta-learning of noise and volatility*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 4–6, Dublin, Ireland.
- Chen, Y., Li, T., Lynch, J., & McGuire, J.T. (2019, October). *Learning and individual differences in adaptive persistence*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 4–6, Dublin, Ireland.
- Toro-Serey, C., & McGuire, J.T. (2019, October). *Apparent preferences for cognitive effort fade when multiple forms of effort and delay are interleaved in a foraging environment*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 4–6, Dublin, Ireland.
- Toro-Serey, C., Tobyne, S.M., & McGuire, J.T. (2019, June). *Individual heterogeneity in the functional topography of the DMN in medial prefrontal cortex*. Poster at the annual meeting of the Organization for Human Brain Mapping, Jun. 9–13, Rome, Italy.
- Babcock, S., Howard, M.W., & McGuire, J.T. (2018, October). *Assessing temporal relationships on an internally simulated timeline of the future*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 5–7, Philadelphia, PA.
- Dombrovski, A.Y., Hallquist, M., Szanto, K., & McGuire, J.T. (2018, October). *Voluntary temporal persistence in depression and attempted suicide*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 5–7, Philadelphia, PA.
- Toro-Serey, C. & McGuire, J.T. (2018, October). *Parsing medial prefrontal cortex: A joint meta-analytic and graph-theoretic approach*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 5–7, Philadelphia, PA.
- Bakst, L., & McGuire, J.T. (2017, October). *Eye movements as a readout of implicit spatial prediction*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 6–8, Toronto, Canada.
- Lynch, J.D. & McGuire, J.T. (2017, October). *Time-driven reassessment of anticipated reward magnitude*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 6–8, Toronto, Canada.
- Toro-Serey, C. & McGuire, J.T. (2017, October). *Effort and delay discounting in a foraging environment*. Poster at the annual meeting of the Society for Neuroeconomics, Oct. 6–8, Toronto, Canada.

- McGuire, J.T., Breslow, D., Peterson, T., & Kable, J.W. (2016, November). *Representing the temporal structure of complex decision environments*. Poster at the annual meeting of the Psychonomic Society, Nov. 17–20, Boston, MA.
- Kable, J.W., Nassar, M., & McGuire, J. (2016, November). *Dissociable explanations for uncertainty driven changes in neural representation across the brain*. Poster at the annual meeting of the Society for Neuroscience, Nov. 12–16, San Diego, CA.
- Lempert, K.M., McGuire, J.T., Hazeltine, D.B., Kable, J.W., & Phelps, E.A. (2016, November). *Cortisol response to acute stress predicts more optimal persistence behavior*. Talk at the annual meeting of the Society for Neuroscience, Nov. 12–16, San Diego, CA.
- Ternes, K., Kable, J., McGuire, J., Rascovsky, K., McMillan, C., & Grossman, M. (2016, November). *Reversal learning deficits in behavioral variant frontotemporal degeneration*. Poster at the annual meeting of the Society for Neuroscience, Nov. 12–16, San Diego, CA.
- McGuire, J.T., Mukherjee, D., Kazinka, R., Vaidya, A.R., & Kable, J.W. (2014, September). *Altered willingness to wait for delayed rewards in the context of psychopathology or focal brain injury*. Talk at the annual meeting of the Society for Neuroeconomics, Sep. 26–28, Miami, FL.
- McGuire, J.T. & Kable, J.W. (2013, November). *Delay-of-gratification decisions emerge from rational predictions: Behavioral and neural evidence*. Talk at the annual meeting of the Society for Judgment and Decision Making, Nov. 15–18, Toronto, Canada.
- McGuire, J.T. & Kable, J.W. (2013, October). *Calibrating behavioral persistence*. Poster at the Multidisciplinary Symposium on Reinforcement Learning and Decision Making, Oct. 25–27, Princeton, NJ.
- Nassar, M.R., McGuire, J.T., Gold, J.I., & Kable, J.W. (2013, October). *Dissociating components of learning rate in the fMRI BOLD response*. Poster at the Multidisciplinary Symposium on Reinforcement Learning and Decision Making, Oct. 25–27, Princeton, NJ.
- McGuire, J.T. & Kable, J.W. (2013, September). *A learning model of time-varying expectations while waiting for delayed rewards*. Poster at the annual meeting of the Society for Neuroeconomics, Sep. 27–29, Lausanne, Switzerland.
- McGuire, J.T., Bartra, O., & Kable, J.W. (2013, June). *The valuation system: A coordinate-based meta-analysis examining BOLD correlates of subjective value*. Poster at the annual meeting of the Organization for Human Brain Mapping, Jun. 16–20, Seattle, WA.
- McGuire, J.T., Nassar, M.R., Heasly, B., Gold, J.I., & Kable, J.W. (2012, November). *Dorsal anterior cingulate reflects multiple influences on learning rate in a dynamic environment*. Poster at the annual meeting of the Society for Neuroscience, Nov. 13–17, New Orleans, LA.
- McGuire, J.T. & Kable, J.W. (2012, September). *Ventromedial prefrontal cortex and decisions to sustain delay of gratification*. Talk at the annual meeting of the Society for Neuroeconomics, Sep. 28–30, Key Biscayne, FL.
- McGuire, J.T. & Kable, J.W. (2011, November). *Evaluative neural mechanisms and delay of gratification*. Poster at the annual meeting of the Society for Neuroscience, Nov. 12–16, Washington, DC.
- Senecal, N., McGuire, J.T., & Kable, J.W. (2011, November). *Individual differences in value-responsive cortical topography*. Poster at the annual meeting of the Society for Neuroscience, Nov. 12–16, Washington, DC.

McGuire, J.T. & Kable, J.W. (2011, September). *Temporal expectations and limited willingness to wait for delayed outcomes*. Poster at the annual meeting of the Society for Neuroeconomics, Sept. 30–Oct. 2, Evanston, IL.

McGuire, J.T. & Kable, J.W. (2011, July). *Time-interval statistics adaptively modulate decision makers' willingness to wait for delayed outcomes*. Talk at the annual meeting of Cognitive Science Society, July 20–23, Boston, MA.

McGuire, J.T. & Botvinick, M.M. (2010, April). *Perceptual ambiguity drives subjective decision costs: A test of neural mediation*. Poster at the annual meeting of the Cognitive Neuroscience Society, April 17–20, 2010, Montreal, Canada.

McGuire, J.T. & Botvinick, M.M. (2009, October). *Cortical responses during interference from competing task sets*. Talk at the annual meeting of the Society for Neuroscience, October 17–21, 2009, Chicago, IL.

Fernandes, J., McGuire, J.T., Niv, Y., & Botvinick, M.M. (2009, October). *Neural correlates of hierarchical reinforcement learning: An fMRI study*. Poster at the annual meeting of the Society for Neuroscience, October 17–21, 2009, Chicago, IL.

McGuire, J.T. & Botvinick, M.M. (2009, June). *Intrinsically aversive characteristics of controlled cognition correlate with BOLD signal in left inferior frontal gyrus*. Poster at the annual meeting of the Society for Human Brain Mapping, June 18–23, 2009, San Francisco, CA.

Rosen, Z.B., McGuire, J.T., & Botvinick, M.M. (2007, May). *Is mental effort aversive? Some behavioral and psychophysiological evidence*. Poster at the annual meeting of the Cognitive Neuroscience Society, May 5–8, 2007, New York, NY.

Sanislow, C.A., Mitchell, K.J., Raye, C.L., Greene, E.J., Cunningham, W.A., McGuire, J.T., & Johnson, M.K. (2004, April). *Orbitofrontal cortex is active when a salient stimulus must be ignored during refreshing*. Poster at the annual meeting of the Cognitive Neuroscience Society, April 18–20, 2004, San Francisco, CA.

Symposium talks

Contending with temporal uncertainty. Annual meeting of the Eastern Psychological Association, Mar. 16–18, 2017, Boston, MA.

Reassessing the value of high-control strategies. Control Processes Meeting, Nov. 10–11, 2016, La Jolla, CA.

Dynamically re-evaluating future prospects. Foundations of Utility and Risk Conference, June 27–30, 2016, Coventry, UK.

Cortical and subcortical encoding of prospective reward value. Annual meeting of the American College of Neuropsychopharmacology, Dec. 7–11, 2014, Phoenix, AZ.

Rational preference reversals in real time. Interdisciplinary Symposium on Decision Neuroscience, Temple University, May 3–5, 2013, Philadelphia, PA.

Invited presentations

Cognitive Brown Bag Series, Dartmouth College, Nov. 21, 2022.

Cognition, Brain, & Behavior Seminar, Harvard University, Sep. 23, 2021.

Neuropsychology and Neuroimaging Lecture Series, VA Boston, Jan. 17, 2019.

Current Work in Behavior, Genetics and Neuroscience, Yale University, Feb. 9, 2018.
Imaging Center Speaker Series, McLean Hospital, Oct. 18, 2017.
University of Chicago Booth School of Business, Jun. 1, 2017.
Psychology and Economics Working Group, Harvard University, Mar. 8, 2017.
BU Undergraduate Economics Association, Boston University, Oct. 25, 2016.
Behavioral Science Summer School, University of Warwick, June 30, 2016.
Cognition, Brain, & Behavior Seminar, Harvard University, Mar. 3, 2016.
Affective Brain Lab, Massachusetts Institute of Technology, Oct. 29, 2015.
Laboratory of Neural Computation and Cognition, Brown University, Oct. 15, 2015.
Sackler Institute, Weill Cornell Medical College, Mar. 5, 2015.
Department of Cognitive Science, UC San Diego, Feb. 23, 2015.
Department of Psychology, UC Berkeley, Feb. 2, 2015.
Department of Psychological & Brain Sciences, Boston University, Jan. 29, 2015.
Center for Neuromodulation in Depression and Stress, Department of Psychiatry, University of Pennsylvania, Dec. 17, 2014.
Department of Psychology, University at Albany, SUNY, Dec. 3, 2014.
Brain & Cognitive Sciences Seminar, Temple University, Nov. 10, 2014.
Department of Psychiatry, University of Pittsburgh, May 14, 2014.
Department of Psychology, University of Nevada, Reno, Jan. 30, 2014.
Marketing Workshop, University of Chicago Booth School of Business, Oct. 29, 2013.
Department of Psychology, University of Texas at Austin, Jan. 7, 2013.
Cognitive & Behavioral Neuroscience Retreat, Univ. of Pennsylvania, Dec. 14, 2012.

Popular media

Michael S. Goldberg. "How decisions work." *BU Today*. Feb. 6, 2018.
Maria Konnikova. "You're so self-controlling." *The New York Times*. Nov. 16, 2013.

Teaching

Undergraduate and graduate courses at Boston University

CAS PS/NE 528, *Human Brain Mapping*, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Spring 2020, Fall 2020, Fall 2021, Fall 2022

CAS PS 336, *Introduction to Cognitive Psychology*, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2019, Spring 2021, Spring 2022, Spring 2023

Guest lectures at Boston University

GRS PS 704, *Contemporary Trends in Psychology*, 2016–2022

GRS PS 831, *Neuropsychology*, 2016

GRS NE 501, *Frontiers of Neuroscience*, 2016, 2019

GRS NE 742, *Neural Systems: Cognition & Behavior*, 2016–2018

University of Pennsylvania, 2011–2014

Mentor, undergraduate independent research: *Department of Psychology, Biological Basis of Behavior Program, Cognitive Science Program*.

University of Pennsylvania and Princeton University, 2006–2010

Teaching assistant or laboratory instructor: *Cognitive Neuroscience, Decision Making and Judgment, Psychology of Music, Human Memory, Introduction to Cognitive Science.*

Administrative service at Boston University

Interdisciplinary center & program affiliations

Joint programmatic appointment, Undergraduate Program in Neuroscience
Training faculty, Graduate Program for Neuroscience
Affiliated faculty, Center for Systems Neuroscience
Affiliated faculty, Cognitive Neuroimaging Center
Affiliated faculty, Hariri Institute for Computing

Department of Psychological & Brain Sciences

Clara Mayo award committee, 2016–present
Diversity, Equity, & Inclusion committee, 2020–present
Brain, Behavior, & Cognition graduate admissions committee, 2016–18, 2021–22
Faculty merit committee, 2020
Faculty search committee, 2018–2019
Website development committee, 2017–2018

College of Arts & Sciences

Natural sciences curriculum committee, 2017–2020

Graduate Program for Neuroscience

JSTPN T32 training grant advisory committee, 2023
Diversity, Equity, Inclusion, & Justice committee, 2020–present
Tools of the Trade workshop leader, 2016–2018

RISE Program

Mentor, 2016–2019

Professional activities

Professional affiliations

Cognitive Science Society
Organization for Human Brain Mapping
Psychonomic Society
Society for Judgment and Decision Making
Society for Neuroeconomics
Society for Neuroscience

Ad hoc manuscript reviewing

Behavioural Brain Research, Brain Research, Cell Press Community, Cerebral Cortex, Cognition, Cognitive Affective & Behavioral Neuroscience, Cognitive Science, Current Directions in Psychological Science, Developmental Psychology, eLife, eNeuro, Journal of Cognitive Neuroscience, Journal of Cognitive Psychology, Journal of the Experimental Analysis of Behavior, JEP: General, JEP: Learning Memory & Cognition, Journal of Neuroscience, Journal of Psychopathology and Clinical Science, Journal of Sleep Research, Management Science, Nature, Nature Communications, NeuroImage, Neuron, Neuropsychologia, Neuropsychopharmacology, PLoS Computational Biology, PLoS ONE, PNAS, Psychological

Bulletin, Psychological Review, Psychological Science, Psychonomic Bulletin & Review, Social Cognitive and Affective Neuroscience, Trends in Cognitive Sciences

Conference abstract reviewing

Cognitive Science Society, COSYNE, Organization for Human Brain Mapping, Reinforcement Learning and Decision Making, Society for Judgment and Decision Making

Grant reviewing

National Science Foundation panelist (2018, 2020, 2022, 2022, 2023) and ad hoc reviewer (2018–2022)