

Joshua W. Buckholtz, Ph.D.

Department of Psychology
Center for Open and Reproducible Science
Stanford University

Research Interests

- Using multi-modality brain imaging and non-invasive brain stimulation to identify brain circuit mechanisms that drive individual differences in self-control
- Characterizing circuit-level pathomechanisms underlying self-control failure in impulse control disorders (e.g. psychopathy, antisocial personality disorder, substance use disorders)
- Parsing the latent cognitive and genetic structure of psychiatric disorders using machine learning approaches in large-scale samples
- Linking genetic signatures for distinct facets of cognition to variation in traits, symptoms, and brain structure, function and connectivity
- Exploring implications of the cognitive neuroscience and genetic architecture of self-control for legal policy
- Meta-Science: Empirical measurement of individual and disciplinary benefits of engaging in open and reproducible science; Using Open Science to promote DEI in STEM

Academic Appointments and Related Employment

2022 – Present	Research Fellow Department of Psychology Stanford University
2022 – Present	Director of Operations Center for Open and Reproducible Science Stanford University
2017 – Present	Instructor in Investigation Department of Psychiatry Massachusetts General Hospital
2016 – 2021	Associate Professor Department of Psychology Harvard University

- 2011 – 2016 Assistant Professor
Department of Psychology
Harvard University
- 2011 – 2017 Assistant in Research
Department of Psychiatry
Massachusetts General Hospital

Other Employment

- 2021-2022 Head of Research
For Goodness Sake, LLC

Academic Affiliations

- 2011 – 2021 Core Faculty, Program in Neuroscience. Harvard University
- 2011 – 2021 Core Faculty, Center for Brain Science. Harvard University
- 2011 – Present Core Faculty, Center for Law, Brain and Behavior. Massachusetts
General Hospital
- 2015 – Present Faculty, Center for Bioethics. Harvard Medical School

Education and Training

- 2006 – 2011 **Ph.D., Neuroscience**
Vanderbilt University
- 2010 – 2011 NIMH Predoctoral Trainee in Developmental Psychopathology
Vanderbilt University
- 2003 – 2006 NIMH Post-Baccalaureate Intramural Research Training Fellow
National Institutes of Health
- 1995 – 2003 **Bachelor of Science, Psychology**
University of Wisconsin-Madison

Awards and Honors

Scientific

- 2017 **Susan Nolen-Hoeksema Early Career Award**, Society for the Science of Clinical
Psychology
- 2016 **Fellow**, Association for Psychological Science
- 2016 **Janet Spence Award for Transformational Early Career Contributions**, Association
for Psychological Science
- 2015 **Rising Star Award**, Association for Psychological Science
- 2015 **Loan Repayment Award**, National Institutes of Health
- 2013 **Network Scholar**, The MacArthur Foundation Research Network on Law and

Neuroscience

- 2013 **Young Investigator Award**, Brain and Behavior Research Foundation (NARSAD)
- 2013 **Alfred P. Sloan Research Fellow (Neuroscience)**, Alfred P. Sloan Foundation
- 2011 **Founders Medal**, Vanderbilt University
- 2010 **Travel Grant Award**, Motivational Neuronal Network
- 2009 **Dissertation Enhancement Award**, Vanderbilt University
- 2009 **Elaine Sanders-Bush Neuroscience Research Prize**; Vanderbilt Brain Institute, Vanderbilt University
- 2009 **Eli Lilly & Co. Graduate Student Travel Award**, Society for Neuroscience
- 2008 **Vanderbilt Law and Neuroscience Research Prize**, Vanderbilt University
- 2007 **Early Researcher Award**, American Psychological Association
- 2007 **Graduate Student Prize in Neuroeconomics**; Center for Neuroeconomic Studies, Claremont Graduate University
- 2007 **Neuroscience Research Forum Speaker Award**; Vanderbilt Brain Institute, Vanderbilt University
- 2007 **Student Merit Award**, Research Society on Alcoholism
- 2005 **Wisconsin HealthEmotions Research Institute Scholar**

Teaching and Advising

Named a Harvard College Favorite Professor, 2013-2022, by Graduating Class

- 2017 Named one of Harvard's "**15 Professors of the Year**", Harvard Crimson
- 2013 **Certificate of Distinction**, Star Family Prizes for Excellence in Advising

Publications

ResearcherID: E-7299-2010

ORCID: 0000-0002-9418-8686

Total Citation Count: **7990**; h-index: **32**; i10-index: **42** (a/o 11/01/22)

(*Denotes equal contributions and shared first/senior authorship)

(^Indicates student or trainee)

1. Rosati AR[^], Emery-Thompson, Atencia R, **Buckholtz JW**. Distinct developmental trajectories for risk-taking and impulsivity in chimpanzees. (*Accepted, Journal of Experimental Psychology: General*)
2. Franz PJ, Fortgang RG, Millner AJ, Jaroszewski AC, Wittler EM, Alpert JE, **Buckholtz JW**, Nock MK. Examining tradeoffs between cognitive effort and relief among adults with self-injurious behavior. (*In Press, Journal of Affective Disorders; <https://doi.org/10.1016/j.jad.2022.10.029>*)
3. **Buckholtz JW**. Handmaiden or Bedfellow? Policy Models for Law and the Brain and Behavioral Sciences. *Policy Insights from The Brain and Behavioral Sciences*. (Invited Opinion; In Revision)
4. Cantwell A, Atencia R, **Buckholtz JW**, Rosati AR[^]. The origin of cognitive flexibility in chimpanzees. (*In Press, Developmental Science; e13266.*)

5. Dalby M, Vitezic M, Plath N, Hammer-Helmich L, Jiang Y, Tian C, Dhamija D, Wilson C, Hinds D, 23&Me Research Team, Sullivan P, Smoller JW*, **Buckholtz JW***. The Affect Study: Phenotypic and Genetic Characteristics of Mood Disorders in a Large, Phenotypically Rich Online Genetic Cohort Study.(2022) *Translational Psychiatry* (2022)12:12
6. Stuppy-Sullivan A, **Buckholtz JW***, Baskin-Sommers A*. Aberrant cost-benefit integration during effort-based decision-making relates to severity of Substance Use Disorders. (2020) *Clinical Psychological Science*. Vol. 8(1) 155–168
7. Millner AJ, Lee MD, Hoyt K, **Buckholtz JW**, Auerbach RP, Nock MK. Are Suicide Attempters More Impulsive than Suicide Ideators? (2020) *General Hospital Psychiatry*. 63, 103-110
8. Rosati, AR*, DiNicola L[^], **Buckholtz JW***. Cooperation is Fast in Chimpanzees, and Independent from Self-Control.(2018) *Psychological Science*. 29(11): 1832-1845
9. Poldrack RA, Monahan J, Imrey P, Reyna V, Raichle M, Faigman D, **Buckholtz JW**. Predicting Violent Behavior: What Can Neuroscience Add? (2018). *Trends in Cognitive Science*. Feb;22(2):111-123.
10. Hosking JG[^], Kastman EK, Dorfman HM[^], Baskin-Sommers A, Kiehl KK, Newman JP, **Buckholtz JW** (2017). Disrupted Prefrontal Regulation of Striatal Subjective Value Signals in Psychopathy. *Neuron*. 95(1): 221-231.
11. Smith CT, Dang LC, **Buckholtz JW**, Tetreault AM, Cowan RL, Kessler RM Zald DH (2017). The impact of common dopamine D2 receptor gene polymorphisms on D2/3 receptor availability: C957T as a key determinant in putamen and ventral striatum. *Translational Psychiatry*. 7(4): e1091.
12. **Buckholtz JW***, Karmarkar U, Ye S[^], Brennan G, Baskin-Sommers A* (2017). Blunted ambiguity aversion during cost-benefit decisions in antisocial individuals. *Scientific Reports*. 7(2030): 1-9.
13. Baskin-Sommers A*, Stuppy-Sullivan A, **Buckholtz JW***. (2016) Psychopathic Individuals Exhibit But Don't Avoid Regret During Counterfactual Decision-Making. *Proceedings of the National Academy of Sciences*. 113,50: 14438–14443.
14. Tielbeek JJ, Al-Itejawi Z, Zijlmans J, Polderman TJ, **Buckholtz JW**, Popma A (2018). The impact of chronic stress during adolescence on the development of aggressive behavior. A systematic review on the role of the dopaminergic system in rodents. *Neuroscience and Biobehavioral Reviews*. 91:187-197.
15. Rodman AM[^], Kastman E, Dorfman HM[^], Baskin-Sommers A, Kiehl KK, Newman JP, **Buckholtz JW** (2016). Selective Mapping of Psychopathy and Externalizing to Dissociable Circuits for Inhibitory Self-Control. *Clinical Psychological Science*. 4: 559-571.
16. **Buckholtz JW**, Reyna V, Slobogin C. (2016) A Neuro-Legal Lingua Franca: Bridging Law and Neuroscience on the Issue of Self-Control. *Mental Health Law and Policy*. 5: 1-36.
13. Dorfman HM[^], **Buckholtz JW**. (2016) Imaging Genetics in Antisocial Behavior and Psychopathy. Handbook of Neuroimaging Genetics. Kristi Bigos, Ahmad Hariri and Daniel Weinberger (eds.). Oxford University Press.

14. **Buckholtz JW**, Martin J[^], Treadway MT, Jan K, Jones OD, Zald DH, Marois R. (2015) From Blame to Punishment: Disrupting Prefrontal Cortex Activity Reveals Norm Enforcement Mechanisms. *Neuron*. 97: 1-12.
15. Dorfman HM[^], **Buckholtz JW** (2015). Social Behavior: A Penny for Your Shocks. *Current Biology*. 25 (11) R600-R620.
16. **Buckholtz JW**. Social Norms, Self-Control, and the Value of Antisocial Behavior (2015). *Current Opinion in Behavioral Sciences*. 3:122-129.
17. Dorfman HM[^], **Buckholtz JW**. Neurogenetics of Antisocial Aggression. (2015) The Routledge International Handbook of Biosocial Criminology, 115, Matt Delisi (ed.). Routledge Press.
18. **Buckholtz JW** and Faigman DL. (2014) Promises, Promises for Neuroscience and Law. *Current Biology*. 24 (18): R816-R867.
19. Treadway MT*, **Buckholtz JW***, Martin J[^], Jan K, Asplund CL, Jones OD, Marois R. (2014) Corticolimbic Gating of Emotion-Driven Punishment. *Nature Neuroscience*.17(9):1270-1275
20. Dorfman HM[^], Meyer-Lindenberg A, **Buckholtz JW** (2014). Neurobiological Mechanisms of Antisocial Behavior: The Role of MAOA. Current topics in behavioral neurosciences. Andreas Meyer-Lindenberg and Klaus Miczek (eds.). Springer.
21. **Buckholtz JW**, Meyer-Lindenberg A. (2014) MAOA and the Bioprediction of Antisocial Behavior: Science Fact and Science Fiction. In: Bioprediction of Antisocial Behavior, Illina Singh and Walter Sinnott-Armstrong (eds.). Oxford University Press.
22. **Buckholtz JW**, Meyer-Lindenberg A. (2014) Genetic Perspectives on the Neurochemistry of Human Violence and Aggression. In: The Oxford Handbook of Molecular Psychology, Turhan Canli (ed.). Oxford University Press.
23. Treadway MT, **Buckholtz JW**, Zald DH. (2013) Perceived stress predicts altered reward and loss feedback processing in medial prefrontal cortex. *Frontiers in Human Neuroscience*. 7:180
24. Samanez-Larkin GR, **Buckholtz JW**, Cowan RL, Woodward ND, Li R, Ansari MS, Arrington CM, Baldwin RM, Smith CE, Treadway MT, Kessler RM, Zald DH (2012). A Thalamocorticostriatal Dopamine Network for Psychostimulant-Enhanced Human Cognitive Flexibility. *Biological Psychiatry*. 2012 Dec 27
25. Baskin-Sommers, A.R., Wolf, R.C., **Buckholtz, J.W.**, Warren, C.M. & Newman, J.P. (2012) Exaggerated Attention Blink Response in Prisoners with Externalizing Traits. *Journal of Research in Personality*. Dec 1;46(6):688-693
26. **Buckholtz JW**, Meyer-Lindenberg A (2012). Psychopathology and the Human Connectome: Toward a Transdiagnostic Model of Risk for Mental Illness. *Neuron*. Jun 21;74(6):990-1004.
27. Treadway MT*, **Buckholtz JW***, Cowan R, Woodward ND, Li R, Ansari MS, Baldwin

- RM, Schwartzman AN, Kessler RM, Zald DH (2012). Dopaminergic Mechanisms of Individual Differences in Human Effort-Based Decision-Making. *Journal of Neuroscience*. May 2; 32(18): 6170-6
28. **Buckholtz JW**, Marois R (2012). The Roots of Modern Justice: Cognitive and Neural Foundations for Social Norms and their Enforcement. *Nature Neuroscience*. May; 15(5):655-61.
29. Treadway, MT*, **Buckholtz JW*** (2011). On the Use and Misuse of Genomic and Neuroimaging Science in Forensic Psychiatry: Current Roles and Future Directions. *Child and Adolescent Psychiatric Clinics of North America*. Jul;20(3):533-46.
30. **Buckholtz JW***, Treadway MT*, Cowan R, Woodward ND, Li R, Ansari MS, Baldwin RM, Schwartzman AN, Shelby ES, Smith CE, Kessler RM, Zald DH (2010). Dopaminergic Network Differences in Human Impulsivity. *Science*. Jul 30;329(5991):532
31. **Buckholtz JW**, Treadway MT, Cowan R, Benning SD, Li R, Ansari MS, Baldwin RM, Schwartzman AN, Shelby ES, Smith CE, Cole D, Kessler RM, Zald DH (2010). Mesolimbic Dopamine Reward System Hypersensitivity in Individuals with Psychopathic Traits. *Nature Neuroscience*. Apr;13(4):419-21
32. Jones OD*, **Buckholtz JW***, Schall JD, Marois, R. (2009). Brain Imaging for Legal Thinkers: A Guide for the Perplexed. *Stanford Technology Law Review*. 5.
33. Blackford, JU, **Buckholtz JW**, Avery S, and Zald DH (2010). A unique role for the human amygdala in novelty detection. *Neuroimage*. Apr 15;50(3):1188-93.
34. Treadway MT, **Buckholtz JW**, Lambert W, Schwartzman AN, Zald DH (2009). Worth the 'EEfRT'? The Effort Expenditure for Rewards Task as an objective measure of motivation and anhedonia. *PLoS ONE* 4(8): e6598.
35. **Buckholtz JW**, Meyer-Lindenberg A. (2009) Gene-brain associations: The example of MAOA. In: Persistent Violent Offenders: Neuroscience and Rehabilitation, Sheilagh Hodgins and Essi Viding (eds.). Oxford University Press.
36. **Buckholtz JW**, Asplund CL, Dux PE, Zald DH, Gore JC, Jones OD, Marois R (2008). The Neural Correlates of Third-Party Punishment. *Neuron*. 60(5) 930-935 (reprinted in *Current Legal Issues: Law and Neuroscience*, Professor Michael Freeman, Editor. Oxford University Press. 2011).
37. Montag C, **Buckholtz JW**, Hartmann P, Merz M, Hennig J, Reuter M (2008). COMT genetic variation impacts fear processing: Psychophysiological evidence. *Behavioral Neuroscience*. 124(4) 901-909.
38. **Buckholtz JW**, Meyer-Lindenberg A (2008). MAOA and the Neurogenetic Architecture of Human Aggression. *Trends in Neurosciences*. March; 31(3): 120-129.
39. **Buckholtz JW**, Callicott JH, Kolachana BK, Hariri AR, Goldberg TE, Genderson M,

Mattay VS, Weinberger DR, Meyer-Lindenberg A (2008). Genetic variation in MAOA modulates ventromedial prefrontal circuitry mediating individual differences in human personality. *Molecular Psychiatry*. March; 13(3): 313-324.

40. **Buckholtz JW**, Sust S, Tan HY, Straub RS, Mattay VS, Meyer-Lindenberg A, Weinberger DR, Callicott JH (2007) fMRI evidence for functional epistasis between COMT and RGS4. *Molecular Psychiatry*. Oct; 12(10): 893-895 (Special *Image* section. "Imaging Epistasis *in vivo*: COMT and RGS4", page 885).
41. **Buckholtz JW**, Meyer-Lindenberg A, Honea RA, Egan MF, Pezawas L, Goldberg TE, Straub RE, Verchinski BA, Mattay VS, Weinberger DR, Callicott JH (2007) Allelic variation in *RGS4* alters functional and structural connectivity in the human brain. *Journal of Neuroscience*. Feb 14;27(7):1584-93.
42. Meyer-Lindenberg A, **Buckholtz JW**, Kolachana B, Hariri A, Pezawas L, Blasi G, Wabnitz A, Honea R, Verchinski B, Callicott J, Egan M, Mattay V, Weinberger D (2006). Neural mechanisms of genetic risk for violence and impulsivity in humans. *Proceedings of the National Academy of Science*. Apr 18;103(16):6269-74.
43. Tan HY, Chen Q, Sust S, **Buckholtz JW**, Meyers J, Egan MF, Mattay VS, Meyer-Lindenberg A, Weinberger DR, Callicott JH (2007). Epistasis between catechol-O-methyltransferase and type II metabotropic glutamate receptor 3 genes on working memory brain function. *Proceedings of the National Academy of Science*. 2007 Jul 24;104(30):12536-41.
44. Tan HY, Sust S, Buckholtz **JW**, Egan MF, Mattay V.S., Weinberger D.R., Callicott J.H (2006) Dysfunctional prefrontal regional specialization and its compensation in patients with schizophrenia. *American Journal of Psychiatry*. Nov; 163(11):1969-77
45. Meyer-Lindenberg A, Nichols T, Callicott J, Ding J, Kolachana B, **Buckholtz J**, Mattay VS, Egan M, Weinberger DR (2006) Impact of complex genetic variation in COMT on human brain function. *Molecular Psychiatry*. Sep;11(9):867-77 (Image, page 797).
46. Bonson KR, **Buckholtz JW**, Murphy DL (1996) Chronic administration of serotonergic antidepressants attenuates the subjective effects of LSD in humans. *Neuropsychopharmacology*. 14(6):425-436.

Manuscripts Under Review

1. **Buckholtz JW**. Reconsidering Antisocial Behavior: From Emotion to Decision-Making. *Nature Reviews Neuroscience*. (Commissioned Review)
2. Franz PJ, Millner, AJ, **Buckholtz JW**, Nock MK. Effort and delay costs influence decisions about relief.

Manuscripts In Preparation

1. Mallard T, Dalby M, Vitezic M, Plath N, Hammer-Helmich L, Jiang Y, Tian C, Dhamija D, Wilson C, Hinds D, 23&Me Research Team, Sullivan P, Smoller JW*, **Buckholtz JW***. Genetic, Genomic and Neural Architectures of Multidimensional Cognition in Health and in Affective

Psychopathology.

2. Lee H, Mallard T, Choi K, Dalby M, Plath N, Hammer-Helmich L, Jiang Y, Tian C, Dhamija D, Wilson C, Hinds D, 23&Me Research Team, Sullivan P, Smoller JW*, **Buckholtz JW***. Identifying Transdiagnostic Symptom Clusters in Mood Disorders: Phenotypic and Genetic Links to Cognitive, Biological, and Health Outcomes.
3. Morris A[^], Kastman E, Dorfman HM[^], Baskin-Sommers A, Kiehl KK, Newman JP, **Buckholtz JW**. Dissociable Components of Value-Based Decision-Making Parse the Heterogeneity of Antisocial Behavior.
4. Ramirez F[^], Karmarkar U, Baskin-Sommers A, **Buckholtz JW**. Exposure to Violence Predisposes Antisocial Behavior by Attenuating Sensitivity to Multiple Costs During Value-Based Decision-Making.
5. **Buckholtz JW**, Carroll AM[^], Kastman EK, Dorfman HM[^]. Cortical Regulation of Cortico-Striatal Value Modulation Comprises a Circuit Mechanism for Temporal Self-Control.
6. Karmarkar U, Ye S[^], Kastman EK, Rimeikytė V[^], Peysakhovich A, **Buckholtz JW**. Cortico-Striatal Representation of Information Value During Decision-Making Under Ambiguity.

Funding as Principal Investigator

Current

2014-Present

23&Me, Inc; Lundbeck Pharmaceuticals; Milken Institute

The AFFECT Study: Investigating the Genetic and Genomic Architecture of Symptoms, Cognition and Behavior in Mood Disorders
(Co-PI: Buckholtz)

\$7,000,000 (Aggregate funding from industry and foundation sponsors to 23&Me, which contracted with Co-PI's to design the study, generate analysis plans, perform analyses, and write papers).

My role as Co-PI (with Jordan Smoller, MGH) involved developing the scientific vision for this study and then working with stakeholders to achieve milestones at each study stage. My responsibilities encompassed managing all aspects of the study design, data acquisition and data analysis: from determining inclusion/exclusion criteria and deciding how and when to measure which symptoms, to selecting and supervising the development and validation of web-based cognitive tasks, to devising the overall analysis plan and conceptualizing the structure of each manuscript to come out of this study.

2017-2021

National Institute of Diabetes and Digestive and Kidney Diseases

Psychological, cognitive, and genetic factors in a behavioral intervention to prevent weight gain

(Co-Investigator; PI: Thorndike)

\$1,695,941 (Direct Costs, 10% effort)

<i>Pending Resubmission</i>	<p>1R01DA045117-A1 National Institute on Drug Abuse <i>Dissecting causal circuitry for self-control to reduce impulsive behavior</i> (PI: Buckholtz) \$1,741,698 (Direct Costs; 50% effort)</p>
<i>In Preparation</i>	<p>National Institute of Mental Health (R01) <i>Mapping Genetic Signals for Empirically Derived Cognitive Domains to Brain Structure, Function and Connectivity</i> (PI: Buckholtz) \$600,025 (Direct Costs; 30% effort)</p> <p>National Institute of Mental Health (R01) <i>Computational Phenotyping and Target Identification for Internalizing Psychopathology</i> (Co-PI: Buckholtz; Co-PI: Treadway) \$2,106,887 (Direct Costs; 50% effort)</p>
<i>Completed</i>	
2018-2020	<p>The Avielle Foundation <i>Discovering Brain Circuit Mechanisms for Modulating the Value of Aggression</i> (PI: Buckholtz) \$100,000</p>
2015-2016	<p>Fund for Foundations of Human Behavior, Harvard University. <i>Brain Circuit Mechanisms for Adaptive and Impulsive Choice Behavior</i> \$41,000</p>
2015-2017	<p>Mind, Brain, and Behavior Faculty Award, Harvard University <i>Manipulating Corticostriatal Circuitry to Improve Intergroup Relations</i> (With Co-PI M. Cikara) \$43,000</p>
2014-2016	<p>Brain and Behavior Research Foundation <i>Dissecting the Circuit-Level Regulation of Striatal Dopamine Signaling to Improve Impulsive Psychiatric Symptoms</i> \$60,000</p>
2013-2014	<p>Alfred P. Sloan Foundation. <i>Neural Mechanisms of Adaptive Reward Decision-Making</i> \$50,000</p>
2012-2014	<p>National Institute on Drug Abuse R03: <i>Presynaptic Mechanisms for Individual Variation in Dopamine and Impulsivity</i> \$253,500</p>
2012-2013	<p>Mind, Brain, and Behavior Faculty Award, Harvard University</p>

Reward Processing and Genetic Risk for Aggression: the Role of HTR1B
 (With Co-PI J. Smoller)
 \$44,186

2012 William F. Milton Fund, Harvard Medical School
 Reward Processing and Genetic Risk for Aggression: the Role of HTR1B
 Harvard Medical School
 \$39,529

Funding as Mentor/Collaborator

Current

2020-2024 5K24AA022136-07
 National Institute on Alcohol Abuse and Alcoholism
Mentoring in Patient-Oriented Addiction Research
 Role: Collaborator (J.F. Kelly, PI)
 Direct Costs: \$697,404

Completed

2016-2019 7F32MH110135-04
 National Institute of Mental Health
The influence of stress on the intrinsic cost of self-control
 Role: Co-Mentor (C. Raio, PI; P. Glimcher, Mentor)
 Direct Costs: \$174,434

2015-2018 Canadian Institutes of Health Research, CIHR Fellowship
Elucidating the individual differences and underlying neurobiology of delay-based decision making, via magnetic resonance spectroscopy (MRS) and imaging (fMRI)
 Role: Mentor (J. Hosking, PI)
 Direct Costs: \$132,750

Scientific Service

2017-Present Media Expert Panel, *Coalition for the Advancement and Application of Psychological Science (CAAPS)*.

2017-2018 Study Population Advisory Board, *The HUMAN Project* (Director: Paul Glimcher).

2014-Present Research Community Advisory Board, *23&Me*.

2014-2015 Scientific Consultant, *Office of the Undersecretary of Defense for Personnel and Readiness*, U.S. Department of Defense.

2014-2016 Program Committee, *Social and Affective Neuroscience Annual Meeting*.

2012-2013 Scientific Consultant, *NOVA ScienceNow*.

2012 Working Group Member, *Macarthur Foundation Research Network on Law and Neuroscience: Committee on Self-Regulation Capacity*.

- 2012 Co-Chair, *Social Brain Sciences Symposium* (New England Area Meeting on Social Neuroscience, with L. Somerville, J. Mitchell).
- 2011-2014 Steering Committee Member, *Macarthur Foundation Research Network on Law and Neuroscience: Committee on Group to Individual Reasoning*

Public Outreach

Popular Science Articles

- 2012 Neuroprediction and Crime. *NOVA scienceNOW* (Online)
- 2010 Inside the mind of a psychopath. *Scientific American Mind* (With K. Kiehl)

Television Appearances

- 2019 *The Violence Paradox*
PBS, Documentary Feature
- 2013 *Brains on Trial*
PBS, Documentary Feature
- 2013 *Mind of a Rampage Killer*
PBS, [NOVA](#), [NewsHour](#), and [Greater Boston](#)
- 2012 After Newtown: The Neuroscience of Violence
PBS, Special Report
- 2012 *Criminal Minds: Born or Made?*
PBS, [NOVA scienceNOW](#)
- 2012 *Can Science Stop Crime?*
PBS, [NOVA scienceNOW](#)

Radio and Podcast Interviews

- 2018 *Creating Conscience*
Canadian Broadcasting Company, [Ideas](#)
- 2017 *Better Understanding the Brains of Psychopaths*
WBUR, [Radio Boston](#)
- 2014 *Are Our Moral Decisions Based Solely On Biology?*
WBUR, [Radio Boston](#)
- 2014 *Beyond Good And Evil: New Science Casts Light On Morality In The Brain*
National Public Radio, [Morning Edition](#)
- 2013 *The Case Against Brain Scans as Evidence in Courts*
National Public Radio, [Morning Edition](#)

- 2012 *Order! Order! The Roots of Our Justice System in Our Brains*
Nature Magazine, [Neuropod](#)
- 2010 *Just Buy It: Impulsiveness Tied to Brain Chemical*
National Public Radio, [Morning Edition](#)
- 2010 Science Magazine, [Podcast](#)
- 2010 *Psychopaths' Brains Wired to Seek Reward*
National Public Radio, [All Things Considered](#)

Editorial Service

- 2019-Present Action Editor (*Ad Hoc*), Proceedings of the National Academy of Sciences
- 2018-Present Consulting Editor, *Journal of Abnormal Psychology*
- 2018-Present Consulting Editor, *Clinical Psychological Science*
- 2016-Present Editorial Board, *Personality Neuroscience*
- 2014-Present Associate Editor, *Royal Society Open Science*
- 2014-2017 Associate Editor, *Journal of Experimental Psychology: General*
- 2011-2014 Consulting Editor, *Journal of Experimental Psychology: General*

Memberships in Professional Societies

- 2016-Present Society for the Science of Clinical Psychology
- 2015-Present Society for Neuroeconomics
- 2014-Present Society for Affective Science
- 2011-Present Social and Affective Neuroscience Society
- 2011-Present Society for Research in Psychopathology
- 2007-Present American Psychological Association
- 2006-Present Association for Psychological Science
- 2004-Present Cognitive Neuroscience Society
- 2004-Present Organization for Human Brain
- 2003-Present Society for Neuroscience

Ad-Hoc Reviewer (Selected Recent)

Journals

Funding Bodies

Archives of General Psychiatry
 Biological Psychiatry
 Clinical Psychological Science
 Frontiers in Behavioral Neuroscience
 Nature
 Nature Neuroscience
 Neuron
 Proceedings of the National Academy of Sciences
 Psychological Science
 Psychological Science in the Public Interest
 Science
 Social Cognitive and Affective Neuroscience

Special Emphasis Panel, *NIDA CEBRA R21 Award* (2012, 2013)
 Ad Hoc Member, *NIH Cognition and Perception Study Section* (2014, 2015, 2017)
 Parkinson's Disease Society (UK)
 Leverhulme Trust (UK)
 European Research Council

Institutional Service (Harvard University)

University

2012-2021 Committee on the Use of Human Subjects (IRB)
 2014-2016 Ad-Hoc Task Force on Clinical Research & Clinical Trials
 2012-13;15-16;18 Sackler Scholar Program Oversight Committee

Faculty of Arts and Sciences

2018,2019 Selection Committee, Herchel Smith-Harvard Summer Undergraduate Science Research Program
 2016-2018 Faculty Council, Harvard University Faculty of Arts and Sciences
 2014 Facilitator, Conversations on the Liberal Arts, *Opening Days* Event
 2012-2019 Hoopes Prize Committee
 2011-2012 Standing Committee on Neurobiology

Departmental

2018-2021 Committee on Diversity, Inclusion and Belonging
 2017-2021 Restricted Funds Committee
 2015-2016 Committee on Higher Degrees
 2012-13; 15-16;18-19 Coordinator: Research Seminar in Clinical Psychology
 2012-2013 Ad-hoc Committee on Systems Neuroscience
 2011-2015 Colloquium Committee

Instruction

Course Head

Spring 2021 PSY2684 *Bad Genes, Bad Parents, Bad Brains*

Fall 2020	PSY18 <i>Abnormal Psychology</i>
Spring 2020	PSY-E1660 <i>Mind, Brain and Illness</i>
Spring 2020	PSY2684 <i>Bad Genes, Bad Parents, Bad Brains</i>
Fall 2019	PSY18 <i>Abnormal Psychology</i>
Spring 2019	PSY18 <i>Abnormal Psychology</i>
Fall 2018	PSY-E1660 <i>Mind, Brain and Illness</i>
Fall 2018	PSY2684 <i>Bad Genes, Bad Parents, Bad Brains</i>
Spring 2018	PSY2684 <i>Bad Genes, Bad Parents, Bad Brains</i>
Spring 2018	PSY-E1660 <i>Mind, Brain and Illness</i>
Fall 2017	PSY18 <i>Abnormal Psychology</i>
Spring 2017	PSY-E1660 <i>Mind, Brain and Illness</i>
Spring 2016	PSY-E1660 <i>Mind, Brain and Illness</i>
Spring 2016	PSY2684 <i>Bad Genes, Bad Parents, Bad Brains</i>
Fall 2015	PSY18 <i>Abnormal Psychology</i>
Spring 2015	PSY1251 <i>Circuits and Symptoms</i>
Fall 2014	PSY18 <i>Abnormal Psychology</i>
Fall 2014	PSY-E1660 <i>Mind, Brain and Illness</i>
Spring 2014	PSY2060 <i>Reward and Self-Control</i>
Fall 2012	PSY18 <i>Abnormal Psychology</i>
Spring 2012	PSY18 <i>Abnormal Psychology</i>

Median Instructor Rating (Lectures): 4.7/5

Median Instructor Rating (Seminars): 4.9/5

Co-Instruction

Every Semester	Lab Course, PSY2475r <i>Laboratory for the Systems Neuroscience of Psychopathology</i>
Every Year	Lecturer, <i>Contemporary Issues in Psychological Research (Departmental Proseminar)</i>
Spring 2015-16	Co-Instructor, PSY2020 <i>Cognition, Brain, & Behavior Graduate Proseminar</i>
Spring 2015	Lecturer, PSY2560, <i>Professional Development Seminar</i>

Advising

Psychology Ph.D. Students

2019-2021	Grant Jones
2019	Andrea Luppi
2017-2021	Franchesca Ramirez
2014-2016	Hayley Dorfman
2013-2016	Edward Patzelt
2012-2014	Alexandra Rodman

Post-Doctoral Fellows

2015-2017	Amy Dent, PhD, <i>College Fellow</i>
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2014-2017 Jay Hosking, PhD, *CIHR Fellow*

PhD Dissertation Committee Member (Dissertation Advisory and/or Thesis Defense)

2019-2022 Adam Morris (FAS Psychology)
 2019-2022 Peter Franz (FAS Psychology)
 2014-2015 Phil Enock (FAS Psychology)
 2013 Eun Yong Choi (HMS Neuroscience)
 2012-2015 Alex Millner (FAS Psychology)
 2012-2013 Fenna Krienen (FAS Psychology)
 2012-2015 Vidette Asher (HMS Biological and Biomedical Sciences)
 2012-2014 Neir Eschel (HMS MSTP/Neuroscience)
 2011-2012 Amitai Shenhav (FAS Psychology)

Psychology Graduate Program Second-Year Thesis Reader

2015 James Bursley
 2014 Gabriel Hammond
 2013 Regan Bernhard
 2012 David Dodell-Federer

Psychology Undergraduate Senior Theses

2018-2020 Danny Ragheb (Mentor)
 2018-2020 Enosa Ogbeide (Mentor)
 2017 Justin Giallorenzo (Reader)
 2017 Aiden Campbell (Reader)
 2016 Claire Leibowitz (Reader)*
 2015 Kristen Osborne (Reader)
 2014 Margaret Crane (Reader)
 2013-2014 Valeriya Tsitron (Mentor)
 2013-2014 Lauren DiNicola (Mentor)
 2012-2013 Anne Carroll (Mentor)
 2013 Mathew Yung (Reader)#

Neurobiology Undergraduate Senior Theses

2019 Tyler LeComer (Reader)
 2019 Sarah Chun (Reader)
 2018-Present Danny Ragheb (Mentor)
 2018 Harry Newman-Plotnick (Reader)
 2015-2017 Layla Stahr (Mentor)
 2014-2015 Jeffrey Edwards (Mentor)
 2014-2015 Malte Zopfs (Mentor)
 2014 Cherish Connolly (Reader)#

*Gordon Allport Prize Winner

#Faculty Prize Winner

Undergraduate Research Assistants (Harvard student, unless otherwise noted)

* *Harvard College Research Project Grant Awardee*

^ *Harvard Program for Research in Science and Engineering Awardee*

% *BLISS fellow*

2019

Daniel Ragheb*
Enosa Ogbeide
Talya Horenstein
Carolyn Kadish
Claire Dickson
Julia London
Maha Al-Suwaidi
Mathew Hawes
Ryan Chappell

2018

Katherine Venturo-Conely
Akash Wasil
Jenny Kronish
Beatrice Farb
Emma Potvin
Enosa Ogbeide
Talya Horenstein

2017

Brett David
Ellen Rothschild
Mia Bladin
Jayant Suni
Layla Stahr
Nayiri Ayanian
Katherine Venturo-Conely
Akash Wasil
Anthony Horta

2016

Anthony Horta
Jake Stepanski
Elizabeth Jacobson
Daniela Feingold
Jackson Whang

2015

Allison Bolles
Jeffery Edwards*
Alex Hassen*
Vibav Mouli
Sarabeth Spitzer*
Layla Stahr
Alison Stein*
Viet Tran*
Malte Zopfs^

2014

Jeffrey Edwards*
Malte Zopfs^

Richard Nguyen%
Andre Souffrant
Valeria Tsitron*
Sarabeth Spitzer*

2013

Anne Carroll*
Ari Brenner
Emily Gusse
Eva Harvey
Kyle Krueger
Lucas Lin
Claire Motyl
Rachel Orol
Vaida Rimeikyte*
Tania Rivers-Moore
Sofia Tancredi*
David Wang
Emilie Wigdor
Valeriya Tsitron*
Jeffrey Edwards*
Lauren DiNicola*
Heidi Viletich
Sarabeth Spitzer*

2012

Anne Carroll*
Alexander Dagi
Lauren Dinicola*
Kristina Garrido
Nikki Kubicki*
Nicholas Maffey*
Patricia Mathelier
Pamela Rosario- Perez
Emily Greene-Colozzi (B.U.)
Jennifer Grimes (B.C.)
Esra Stefik (Tufts)
Nick Vissicchio (Tufts)

2011

Anne Carroll*
Nicholas Maffey*

Invited Academic and Conference Talks (as Faculty)

2022 November Invited Speaker
 Friends and Fellows of NIH
 National Institutes of Health

2021 July	Plenary Speaker European Behavioral Pharmacology Society Maastricht, The Netherlands
2020 March	Brains on Trial: What Brain Science Tells about the Origins and Limits of Responsibility FAU Brain Institute Florida Atlantic University, Boca Raton Florida
2020 February	MGH/McLean Psychiatry Residency Seminar McLean Hospital, Belmont Massachusetts
2019 March	Faculty, <i>Treating the Addictions</i> Harvard Medical School, Boston Massachusetts
2019 February	MGH/McLean Psychiatry Residency Seminar McLean Hospital, Belmont Massachusetts
2018 December	Neuroscience and Public Policy Seminar University of Wisconsin-Madison, Madison Wisconsin
2018 September	McLean Imaging Center Seminar McLean Hospital, Belmont Massachusetts
2018 June	Translational Neuroscience Seminar Friedman Brain Institute, Icahn School of Medicine at Mt. Sinai, New York
2018 May	Moderator, Clinical Neuroscience Preconference Social Affective Neuroscience Society Annual Meeting, Brooklyn New York
2018 April	Guest Lecturer, <i>Law and Neuroscience</i> Harvard Law School (Instructor: Judge Nancy Gertner, ret.)
2018 March	<i>Neuroforensics: Exploring the Legal Implications of Emerging Neurotechnologies</i> National Academies of Science, Medicine and Engineering, Washington D.C.
2018 February	Current Work in Clinical Psychology Seminar Yale University; New Haven, Connecticut
2017 April	Commentator, <i>How Emotions are Made</i> Boston Society for Neurology and Psychiatry
2017 April	Guest Lecturer, <i>Law and Neuroscience</i> Harvard Law School (Instructor: Judge Nancy Gertner, ret.)
2017 February	Moderator, <i>Using Data to Predict Fate: Future Insight or Folly?</i> Harvard University, Mind Brain Behavior Program
2016 December	Symposium Speaker, <i>fMRI: 25 years later</i> Athinoula Martinos Center, Massachusetts General Hospital

2016 October	Khodad Lecture on the Neurobiology of Aggression Tufts University; Medford Massachusetts
2016 June	Dusseldorf Decision-Making Symposium Heinrich Heine University Düsseldorf, Germany
2016 May	Judicial Conference, <i>United States Court of Appeals for the Fourth Circuit</i> White Sulphur Springs, West Virginia
2016 May	Symposium Speaker, <i>Association for Psychological Science Annual Meeting</i> Chicago, IL
2016 March	Neuroeconomics Seminar, Department of Economics University of Zurich, Switzerland
2016 March	Keynote Speaker, <i>Biological Aspects of Antisocial Behavior</i> Virje University, The Netherlands
2016 March	Colloquium Speaker Center for Neurogenomics and Cognitive Research, The Netherlands
2016 March	Neuroscience Seminar Neuroscience Campus Amsterdam, The Netherlands
2015 December	Speaker, <i>Symposium on Social Neuroscience</i> Central Institute for Mental Health and The University of Heidelberg, Germany
2015 November	Seminar, Center for Research on Ethical/Legal/Social Implications of Psychiatric, Neurologic & Behavioral Genetics Columbia University
2015 November	Neuroeconomics Colloquium New York University
2015 October	Judicial Education Seminar, <i>Emerging Issues in Neuroscience</i> AAAS and The Dana Foundation, Washington, DC.
2015 October	Symposium Chair & Speaker <i>Society for Research in Psychopathology Annual Meeting</i> New Orleans, LA.
2015 September	Behavioral Neuroscience Colloquium University of Massachusetts-Amherst
2015 September	Speaker, <i>Society for Neuroeconomics Annual Meeting</i> Miami, FL.
2015 June	Seminar, Department of Psychology University College London
2015 June	Oxford Morality Group Colloquium at Jesus College Oxford University

- 2015 May Speaker, *Interdisciplinary Symposium on Decision Neuroscience*
Massachusetts Institute of Technology
- 2015, May Symposium, *Association for Psychological Science* Annual Meeting
New York, NY.
- 2015, April Clinical Science Colloquium
Emory University
- 2015, April Behavior, Genetics, and Neuroscience Colloquium
Yale University
- 2015, April Flash Talk, *Society for Affective Science* Annual Meeting
San Francisco, CA.
- 2015 April Grand Rounds
Montreal Neurological Institute
- 2015 March Killam Research Lecture
Montreal Neurological Institute and McGill University
- 2015 March Symposium, *Inevitable, Indispensable Agency? Neuroscience and its Implications for Ethics*
The Hastings Center for Bioethics, Harvard Medical School
- 2015 March Panelist, *The Policeman at the Elbow: The Neuroscience of Addiction, Self-Control, and Criminal Responsibility*
Petrie-Flom Center, Harvard Law School
- 2015 February Guest lecturer, “Law and Neuroscience”
Harvard Law School (Instructor: Judge Nancy Gertner, ret.)
- 2014 November Seminar, Center for Law, Brain and Behavior.
Massachusetts General Hospital
- 2014 October Dennis McLaughlin Lecture
Merrimack College
- 2014 October Judicial Education Seminar, *The Criminal Mind: The Impact of Neuroscience on Culpability and Sentencing*
Court of Special Appeals, State of Maryland
- 2014 April Panelist, *Brainwashed? What Neuroscience Can – and Can’t – Tell Us About Ourselves*
WBUR and MGH Center for Law, Brain and Behavior
- 2014 April Cognition and Cognitive Neuroscience Colloquium
Brown University

- 2014 April James McGill Distinguished Speaker, Dept. of Educational and Counseling Psychology
McGill University
- 2014 March Seminar, *Hurting Brains: Conflict, Mental Illness, and Self-Control*
Boston Museum of Science (part of the *On Being Human* lecture series)
- 2014 March Symposium, *American Psychology-Law Society Annual Meeting*
New Orleans, LA.
- 2013 December Science of Adversity and Resilience Colloquium
Center on the Developing Child, Harvard University
- 2013 November Symposium, *Before the Shooting Starts: Predicting and Preventing Rampage Killings* (with former US Supreme Court Justice Sandra Day O'Connor)
Arizona State University Law School
- 2013 November Guest Lecturer, *Law and Forensic Evidence*
Harvard Law School (Judge N. Gertner, Instructor)
- 2013 November Instructor, Trichotillomania Learning Center Precision Medicine Initiative
Massachusetts General Hospital
- 2013 July Symposium, *Wiring the Brain 2013*
Cold Spring Harbor Laboratories
- 2013 May Seminar, Center for Depression and Stress Research
McLean Hospital
- 2013 May Seminar, Department of Radiology
Massachusetts General Hospital
- 2013 May Speaker, Center for Brain Science Annual Retreat
Harvard University
- 2013 May Keynote Speaker, Annual Board of Directors Meeting
MGH Center for Law, Brain and Behavior
- 2013 May Speaker, Mind, Brain and Behavior Retreat
Harvard University
- 2013 April Symposium, *Genes, Environments & Traits Annual Conference*
Boston, MA.
- 2013 March Seminar, Department of Psychology
Norwegian University of Science and Technology, Trondheim, Norway.
- 2013 March Guest Lecturer, *Human Emotion*
Yale University

- 2013 February Saxe Lab Meeting, Dept. of Brain and Cognitive Sciences
Massachusetts Institute of Technology
- 2013 February Symposium, *From Bench to Society: Law and Policy at the Frontier of Genomic Technology*
University of California, San Francisco & Hastings Consortium on Law, Science, And Health Policy
- 2012 December Seminar, Macarthur Foundation Research Network on Law and Neuroscience.
Tampa, FL.
- 2012 December Speaker and Co-Organizer *Social Brain Sciences Symposium*
Harvard University
- 2012 December Social Brain Colloquium
Dartmouth College
- 2012 November Social/Personality Brown Bag
Northeastern University
- 2012 November Speaker, *Student Association for Law and Mind Sciences*
Harvard Law School
- 2012 November Symposium, *Neuroethics: from Lab to Law. A Scientific Scrutiny of Sociability, Responsibility and Criminality*
International Center for Scientific Debate - Barcelona (B-Debate)
- 2012 September Seminar, Center for Addiction Medicine
Massachusetts General Hospital
- 2012 July Instructor, *Workshop on the Biology of Social Cognition*
Cold Spring Harbor Laboratories
- 2012 May Seminar, Neuroimaging Center
Boston VA Hospital
- 2012 April Brown Bag
Center for Brain Science. Cambridge, MA.
- 2012 April Current Work in Clinical Psychology Seminar
Yale University
- 2012 April Uchida Lab Meeting, Department of Molecular & Cellular Biology
Harvard University
- 2011 December Brain and Cognition Seminar
MGH/HST Martinos Center for Biomedical Imaging
- 2011 November Psychiatric Genetic and Translational Research Seminar
Massachusetts General Hospital, Department of Psychiatry

- 2011 September Grand Rounds, Department of Psychiatry
Massachusetts General Hospital
- 2011 September Symposium, *Society for Research in Psychopathology* Annual Meeting
Boston, MA.
- 2011 June Seminar, Neuroscience Consortium and Comorbidity Interest Group
National Institute on Drug Abuse