

- DAVID BADRE
Professor and Chair
Department of Cognitive and Psychological Sciences
Brown University
- WORK ADDRESS
Box 1870
190 Thayer St.
Providence, RI 02912
- EDUCATION

1996 – 2000	University of Michigan, Ann Arbor, MI BS in Biopsychology and Cognitive Science (High Distinction & Highest Honors)
2000 – 2005	Massachusetts Institute of Technology, Cambridge, MA Ph.D. Cognitive Science, Concentration in Cognitive Neuroscience <i>Dissertation:</i> Controlling memory and resolving interference: Prefrontal contributions to flexible behavior. Advisor: Anthony D. Wagner
- PROFESSIONAL APPOINTMENTS

2022 – 2028	Department Chair Brown University Department of Cognitive and Psychological Sciences	Providence, RI
2019 - present	Professor Brown University Department of Cognitive and Psychological Sciences	Providence, RI
2014 – 2019	Associate Professor Brown University Department of Cognitive, Linguistic, and Psychological Sciences	Providence, RI
2012	Visiting Scholar Harvard University Department of Psychology	Cambridge, MA
2008 – 2014	Assistant Professor Brown University Department of Cognitive, Linguistic, and Psychological Sciences	Providence, RI
2005 – 2007	Postdoctoral Fellow University of California, Berkeley Helen Wills Neuroscience Institute	Berkeley, CA

2004 – 2005

Visiting Scholar
Stanford University
Department of Psychology

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5. PUBLICATIONS

Books

Badre, D. *To Err is Human: The Neuroscience of Human Error*. Princeton, NJ: Princeton University Press. Forthcoming.

Badre, D. (2020). *On Task: How Our Brain Gets Things Done*. Princeton, NJ: Princeton University Press.

Scholarly Book Reviews

Husain, M. (2021). On Task. *Brain*, <https://doi.org/10.1093/brain/awab053>

Kaldy, Z. (2021). Coffee with the executive. *Current Biology*, 31(6), R270-R271.

Articles under review and preprints

Liu, S., Kikumoto, A., Badre, D., and Gershman, S. J. (2025). Neural and behavioral signatures of policy compression in cognitive control. bioRxiv DOI. <https://doi.org/10.1101/2025.05.06.652533>. Revision Under Review.

Refereed Journal Articles

Bhandari, A.*, Keglovits, H.*, Chicklis, E., and Badre, D. (2025). Task structure tailors the geometry of neural representations in human lateral prefrontal cortex. *eLife*. DOI. <https://doi.org/10.1101/2024.03.06.583429>. [Accepted as Reviewed Preprint.]

Kikumoto, A., Shibata, K., Nishio, T., and Badre, D. (2025). Practice reshapes the geometry and dynamics of task-tailored representations. *Cerebral Cortex*. In Press.

Vaidya, A. R., Castillo, J., Torres, A., and Badre, D. (2025). Influences of familiarity and recollection on value-based decision-making. *Plos ONE*, 20(5), e0322632. doi: 10.1371/journal.pone.0322632.

Badre, D. (2024) Cognitive Control. *Annual Reviews of Psychology*, 76, 167-195. DOI: [10.1146/annurev-psych-022024-103901](https://doi.org/10.1146/annurev-psych-022024-103901).

Kikumoto, A., Bhandari, A., Shibata, K., and Badre, D. (2024). A transient high-dimensional geometry affords stable conjunctive subspaces for efficient action selection. *Nature Communications*, 15(1), 8513. doi: 10.1038/s41467-024-52777-6.

Sayali, C., Rubin-McGregor, J., and Badre, D. (2023). Policy abstraction as a predictor of cognitive effort. *Journal of Experimental Psychology: General*, 152(12), 3440-3458. PMID: 37616076.

Johnson, E. L., Lin, J. J., King-Stephens, D., Weber, P. B., Laxer, K. D., Saez, I., Girgis, F., D'Esposito, M., Knight, M., and Badre, D. (2023). Dynamic theta networks support flexible information encoding in humans. *Nature Communications*, 14(1), 2872. doi: 10.1038/s41467-023-38574-7.

Levin, E., Brissenden, J. A., Fengler, A., and Badre, D. (2023). Predicted utility modulates working memory fidelity in the brain. *Cortex*, 160, 115-133.

Kikumoto, A., Mayr, U., and Badre, D. (2022). The role of conjunctive representations in prioritizing and selecting planned actions. *eLife*. DOI: <https://doi.org/10.1101/2022.05.09.491164>.

Vaidya, A. R., and Badre, D. (2022). Abstract task representations for inference and control. *Trends in Cognitive Science*, 26(6), 484-498.

Kassel, M.T., Lositsky, O., Vaidya, A.R., Badre, D., Malloy, P.F., Greenberg, B.D., Marsland, R., Noren, G., Sherman, A., Rasmussen, S.A., McLaughlin, N.C.R. (2022). Differential assessment of frontally-mediated behaviors between self- and informant-report in patients with Obsessive-Compulsive Disorder following gamma ventral capsulotomy. *Neuropsychologia*, doi: 10.1016/j.neuropsychologia.2022.108211.

Vaidya, A. R., Jones, H. M., Castillo J., and Badre, D. (2021). Neural representation of abstract task structure during generalization. *eLife*. 10:e63226.doi: 10.7554/eLife.63226.

Sayali, C. and Badre, D. (2021). Neural systems underlying the learning of cognitive effort costs. *Cognitive, Affective, and Behavioral Neuroscience*, 21(4), 698-716.

Badre, D., Bhandari, A., Keglovits, H., and Kikumoto, A. (2021). The dimensionality of neural representations for control. *Current Opinion in Behavioral Sciences*, 38, 20-28

Freier, L., Gupta, P., Badre, D., and Amso, D. (2021). The value of proactive goal-setting and choice in 3- to 7-year-olds' use of working memory gating strategies in a naturalistic task. *Developmental Science*, 24(1): e13017

Furman, D. J., Zhang, Z., Chatham, C. H., Maxwell, G., Badre, D., Hsu, M., and Kayser, A. S. (2020). Augmenting frontal dopamine tone enhances maintenance over gating processes in working memory. *Journal of Cognitive Neuroscience*, 33(9), 1753-65

Vaidya, A. R. and Badre, D. (2020). Neural systems for memory-based value judgment and decision-making. *Journal of Cognitive Neuroscience*, 32(10), 1896-1923.

Yang, F., Qian, J., Novotny, J., Badre, D., Jackson, C. and Laidlaw, D. (2020). A Virtual Reality "Memory Palace" Improves Knowledge Retrieval from Scholarly Articles. *Transaction on Visualization and Computer Graphics*. In Press.

Desrochers, T.M., Collins, A.G.E., and Badre, D. (2019). Sequential control underlies robust ramping dynamics in the rostrolateral prefrontal cortex. *Journal of Neuroscience*, 39(8), 1471-1483

Zhou, M., Badre, D., and Kang, H. (2019). Double-wavelet transform for multi-subject task-induced functional magnetic resonance imaging data. *Biometrics*, 75(3), 1029-1040. PMID: 30985916.

Amso, D., Salhi, C., and Badre, D. (2019). Cognitive enrichment shapes cognitive control: A systematic resolution to competing influences on development through socioeconomic status. *Developmental Psychobiology*, 61(2), 159-178.

Sayalı, C. and Badre, D. (2019). Neural systems of cognitive demand avoidance. *Neuropsychologia*, 123, 41-54.

Bhandari, A., Gagne, C., and Badre, D. (2018). Just above chance: Is it harder to decode information from prefrontal cortex BOLD signals? *Journal of Cognitive Neuroscience*, 30(10), 1473-1498.

Choi, E. Y., Drayna, G. K., and Badre, D. (2018). Evidence for a functional hierarchy of association networks. *Journal of Cognitive Neuroscience*, 30(5), 722-736.

Bhandari, A., and Badre, D. (2018). Learning and transfer of working memory gating policies. *Cognition*, 172, 89-100.

Badre, D., and Nee, D. E. (2018). Frontal cortex and the hierarchical control of behavior. *Trends in Cognitive Science*, 22(2), 170-188.

Collins, A.G.E., Ciullo, B., Frank, M.J., and Badre, D. (2017). Working memory load strengthens reward prediction errors. *Journal of Neuroscience*, 37(16), 4332-4342.

Scimeca, J. M., Katzman, P. L., and Badre, D. (2016). Striatal prediction errors support dynamic control of declarative memory decisions. *Nature Communications*, 7:13061

Bhandari, A., and Badre, D. (2016). A nimble working memory. *Neuron*, 91(3), 503-5.

Barredo, J., Verstynen, T. D., and Badre, D. (2016). Organization of cortico-cortical pathways supporting memory retrieval across subregions of the left ventrolateral prefrontal cortex. *Journal of Neurophysiology*, 116(3), 920-37.

Unger, K., Ackerman, L., Chatham, C. H., Amso*, D., and Badre*, D. (2016). Working memory gating mechanisms explain developmental change in rule-guided behavior. *Cognition*, 155, 8-22.

Desrochers, T.M., Burk, D. C., Badre, D., and Sheinberg, D. L. (2016). The monitoring and control of task sequences in human and non-human primates. *Frontiers in Systems Neuroscience*, Jan 21, 9:185.

Yeh, F-C, Badre, D., and Verstynen, T. (2016). Connectometry: A statistical approach harnessing the analytical potential of the local connectome. *NeuroImage*, 125, 162-171.

Badre, D., Frank, M. J., and Moore, C. I. (2015). Interactionist Neuroscience. *Neuron*, 88, 855-860.

Desrochers, T.M., Chatham, C. H. and Badre, D. (2015). The necessity of rostralateral prefrontal cortex for higher-level sequential behavior. *Neuron*, 87, 1357-1368.

Voytek, B. Kayser, A. S., Badre, D., Fegen, D, Chang, E. F., Crone, N. E., Parvizi, J., Knight, R. T., and D'Esposito, M. (2015). Oscillatory dynamics coordinating human frontal networks in support of goal maintenance. *Nature Neuroscience*, 18(9), 1318-24.

Kang, H., Blume, J., Ombao, H., and Badre, D. (2015). Simultaneous control of error rates in fMRI data analysis. *NeuroImage*, 123, 102-13.

Aron, A. R., Cai, W., Badre, D., and Robbins, T. W. (2015). Evidence supports specific breaking function for inferior PFC. *Trends in Cognitive Science*. In Press.

Frank, M. J., Gagne, C., Nyhus, E., Masters, S. Wiecki, T.V., Cavanagh, J. F., and Badre, D. (2015). fMRI and EEG predictors of dynamic decision parameters during human reinforcement learning. *Journal of Neuroscience*, 35(2), 485-94.

Ranti, C., Chatham, C. H., and Badre, D. (2015). Parallel temporal dynamics in hierarchical cognitive control. *Cognition*, 142, 205-229.

Chatham, C. H., and Badre, D. (2015). Multiple gates on working memory. *Current Opinion in Behavioral Sciences*, 1, 23-31.

Frank, M. J., and Badre, D. (2015). How cognitive theory guides neuroscience. *Cognition*, 135, 14-20.

Barredo, J., Öztekin, I., and Badre, D. (2015). Ventral fronto-temporal pathway supporting cognitive control of episodic memory retrieval. *Cerebral Cortex*, 25(4), 1004-19.

Amso, D., Haas, S., McShane, L., and Badre, D. (2014). Working memory updating and the development of rule-guided behavior. *Cognition*, 133(1), 201-10.

Badre, D., Lebrecht, S., Pagliaccio, D., Long, N. M., and Scimeca, J. M. (2014). Ventral striatum and the evaluation of memory retrieval strategies. *Journal of Cognitive Neuroscience*, 26(9), 1928-48.

Chatham, C. H., Frank, M. J., and Badre, D. (2014). Cortico-striatal systems supporting output gating of working memory. *Neuron*, 81, 930-942.

Satpute, A. B., Badre, D., and Ochsner, K. N. (2014). Controlled retrieval and selection of social information. *Cerebral Cortex*, 24(5), 1269-77.

Chatham, C. H. and Badre, D. (2013). Working memory management and predicted utility. *Frontiers in Behavioral Neuroscience*, 7(83), 1-12.

Schwarze, U., Bingel, U., Badre, D., and Sommer, T. (2013). Ventral striatal activity correlates with memory confidence for old- and new-responses in a difficult recognition task. *PLoS ONE*, 8(3), 1-7.

Scimeca, J. M. and Badre, D. (2012). Striatal contributions to declarative memory retrieval. *Neuron*, 73, 380-392.

Badre, D. Opening the gate to working memory. (2012). *Proceedings of the National Academy of Sciences, USA*, 109(49), 19878-79.

Öztekin, I., Gungor, Z., and Badre, D. (2012). Impact of aging on the dynamics of memory retrieval: A time-course analysis. *Journal of Memory & Language*, 67, 285-294.

Badre, D., Doll, B. B., Long, N. M., and Frank, M. J. (2012). Rostrolateral prefrontal cortex and individual differences in uncertainty-driven exploration. *Neuron*, 73, 595-607.

Verstynen, T., Badre, D., Jarbo, K., and Schneider, W. (2012). Microstructural organizational patterns in the human corticostriatal system. *Journal of Neurophysiology*, 107, 2984-2995.

Chatham, C. H. and Badre, D. (2012). Parts to principles: Anatomical origins of prefrontal organization. *Cortex*, 48, 1373-1375.

Desrochers, T.M., and Badre, D. (2012). Finding parallels in fronto-striatal organization. *Trends in Cognitive Science*, 16(8), 407-408.

Kang, H., Ombao, H., Linkletter, C., Long, N., and Badre, D. (2012). Spatio-spectral mixed effects model for fMRI data. *Journal of the American Statistical Association*, 107(498), 568-577.

Badre, D. and Frank, M. J. (2012). Mechanisms of hierarchical reinforcement learning in cortico-striatal circuits 2: Evidence from fMRI. *Cerebral Cortex*, 22(3), 527-536.

Frank, M. J., and Badre, D. (2012). Mechanisms of hierarchical reinforcement learning in corticostriatal circuits 1: Computational analysis. *Cerebral Cortex*, 22(3), 509-526.

Öztekin, I. and Badre, D. (2011). Distributed patterns of brain activity that lead to forgetting. *Frontiers in Human Neuroscience*, 5, 1-8.

Badre, D. (2011). Defining an ontology of cognitive control requires attention to component interactions. *Topics in Cognitive Science*, 3(2), 217-221.

Long, N. M., Öztekin, I., and Badre, D. (2010). Separable prefrontal contributions to free recall. *Journal of Neuroscience*, 30(33), 10967-10976.

Badre, D., Kayser, A. S., and D'Esposito, M. (2010). Frontal cortex and the discovery of abstract action rules. *Neuron*, 66, 315-326.

Badre, D. (2010). Is prefrontal cortex necessary for the storage and acquisition of relational concepts? *Cognitive Neuroscience*, 1(2), 140-141.

Öztekin, I., Long, N. M., and Badre, D. (2010). Optimizing design efficiency of free recall events for fMRI. *Journal of Cognitive Neuroscience*, 22(10), 2238-50.

Race, L. Badre, D., and Wagner, A. D. (2010). Multiple forms of learning yield temporally distinct electrophysiological repetition effects. *Cerebral Cortex*, 20(7), 1726-38.

Badre, D. and D'Esposito, M. Is the rostro-caudal axis of the frontal lobe hierarchical? (2009). *Nature Reviews Neuroscience*, 10, 659-669.

Badre, D., Hoffman, J., Cooney, J.W., and D'Esposito, M. (2009). Hierarchical cognitive control deficits following damage to the human frontal lobe. *Nature Neuroscience*, 12(4), 515-522.

Badre, D. (2008). Cognitive control, hierarchy, and the rostro-caudal axis of the prefrontal cortex. *Trends in Cognitive Science*, 12(5), 193-200.

Lebrecht, S. and Badre, D. (2008). Emotional regulation, or: How I learned to stop worrying and love the nucleus accumbens. *Neuron*, 59, 841-843.

Badre, D. and D'Esposito, M. (2007). FMRI evidence for a hierarchical organization of the prefrontal cortex. *Journal of Cognitive Neuroscience*, 19(12), 2082-2099.

Badre D., and Wagner, A. D. (2007). Left ventrolateral prefrontal cortex and the cognitive control of memory. *Neuropsychologia*. 45, 2883-2901.

Badre, D. and Wagner, A. D. (2006). Cognitive and neurobiological mechanisms underlying cognitive flexibility. *Proceedings of the National Academy of Sciences, USA*, 103(18), 7186-7191.

Badre, D., Poldrack, R. A., Paré-Blagoev, E. J., Insler, R., and Wagner, A. D. (2005). Dissociable controlled retrieval and generalized selection mechanisms in ventrolateral prefrontal cortex. *Neuron*, 47, 907-918.

Badre, D. and Wagner, A. D. (2005). Frontal lobe mechanisms that resolve proactive interference. *Cerebral Cortex*, 15(12), 2003-2012.

Bunge, S. A., Wendelken, C., Badre, D., and Wagner, A. D. (2005). Analogical reasoning and prefrontal cortex: Evidence for separable retrieval and integration mechanisms. *Cerebral Cortex*, 15(3), 239-249.

Badre, D., and Wagner, A. D. (2004). Selection, integration, and conflict monitoring: Assessing the nature and generality of prefrontal cognitive control mechanisms. *Neuron*, 41, 473-487.

Gehring, W.J., Bryck, R.L., Jonides, J., Albin, R.L., and Badre, D. (2003). The mind's eye, looking inward? In search of executive control in internal attention shifting. *Psychophysiology*, 40(4), 572-585.

Badre, D. and Wagner, A. D. (2002). Semantic retrieval, mnemonic control, and prefrontal cortex. *Behavioral and Cognitive Neuroscience Reviews*, 1(3), 206-218.

Hernandez, L., Badre, D., Noll, D. C., and Jonides, J. (2002). Temporal sensitivity of event related fMRI. *Neuroimage*, 17(2), 1018-1026.

Chapters in Books

Badre, D. (2025). Working memory and Cognitive Control. In M. D'Esposito (Ed), *The Neural Architecture of Working Memory*. New York, NY: Oxford University Press. Accepted for publication.

Vaidya, A. R., and Badre, D. (2024). Interactions between memory and control systems. In M. Rugg (Ed.), *Contributions to Learning and Memory: A Comprehensive Reference, Third Edition*. Philadelphia, PA: Elsevier. In Press.

Badre, D. (2024). What is the nature of the hierarchical organization of lateral prefrontal cortex. In: *The Frontal Cortex: Organization, Networks, and Function*, edited by M. T. Banich, S. N. Haber, and T. W. Robbins. Strüngmann Forum Reports, vol. 35, J. R. Lupp, series editor. Cambridge, MA: MIT Press, In Press.

Murray, E. A., D'Esposito, M., Averbeck, B. B., Badre, D., Constantinidis, C., Cools, R., Curtis, C. E., Fellows, L. K., Mitchell, A. S., Murray, J. D., Rich, E. L. (2024). Functional fractionation and integration: Physiology, networks, and behaviors. In: *The Frontal Cortex: Organization, Networks, and Function*, edited by M. T. Banich, S. N. Haber, and T. W. Robbins. Strüngmann Forum Reports, vol. 35, J. R. Lupp, series editor. Cambridge, MA: MIT Press, In Press.

Badre, D. (2020). Brain networks for cognitive control: Four unresolved questions. In P. W. Kalivas and M. P. Paulus (Eds.), *Intrusive Thinking across Neuropsychiatric Disorders: From Molecules to Free Will. Strüngmann Forum Reports, vol. 30*, J. R. Lupp, series editor. Cambridge, MA: MIT Press.

Roberts, A. C., Goldstein, R. Z., Badre, D., Balleine, B. W., Critchley, H. D., Fotopoulou, K., Frangou, S., Friston, K. J., Maia, T. V., and Stein, E. A. (2020). Systems approach to intrusive experiences. In P. W. Kalivas and M. P. Paulus (Eds.), *Intrusive Thinking across Neuropsychiatric Disorders: From Molecules to Free Will. Strüngmann Forum Reports, vol. 30*, J. R. Lupp, series editor. Cambridge, MA: MIT Press.

Chatham, C. H., and Badre, D. (2020) How to test cognitive theory with fMRI. In D. Spieler and E. Schumacher (Eds), *New Methods in Cognitive Psychology*. New York, NY: Routledge.

Badre, D. and Desrochers, T.M. (2019). Hierarchical cognitive control and the frontal lobes. In M. D'Esposito and J. Grafman (Eds.), *Handbook of Clinical Neurology: The Frontal Lobes, vol 163*. Elsevier.

Bhandari, A., Badre, D., & Frank, M.J. (2017). Learning Cognitive Control. In T. Egner (Ed.), *The Wiley Handbook of Cognitive Control*. Oxford: John Wiley & Sons.

Unger, K. and Badre, D. Hierarchical Reinforcement Learning. (2015). In A. Toga and R. Poldrack (Eds), *Brain Mapping: An Encyclopedic Reference*. Philadelphia, PA: Elsevier.

Nyhus, E. and Badre, D. Memory retrieval and the functional organization of frontal cortex. (2015). In D. R. Addis, M. D. Barense, and A. Duarte (Eds.), *The Wiley Handbook on the Cognitive Neuroscience of Human Memory*. New York: Wiley-Blackwell.

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D'Esposito, M. and Badre, D. (2011). Combining the insights derived from lesion and fMRI studies to understand the function of prefrontal cortex. In B. Levine and F.I.M. Craik (Eds.), *Mind and the Frontal Lobes: Cognition, Behavior, and Brain Imaging*. New York, NY: Oxford University Press. 93-108.

Satpute, A. B., Badre, D., and Ochsner, K. N. (2011). The neuroscience of goal directed behavior. In H. Aarts and A. Elliot (Eds.), *Goal Directed Behavior (Frontiers of Social Psychology)*. London, UK: Psychology Press.

Race, E.A., Kuhl, B.A., Badre, D., and Wagner, A.D. (2009). Cognitive control and memory: Contributions from prefrontal cortex. In M. S. Gazzaniga (Ed.), *The Cognitive Neurosciences (4th Edition)*. Cambridge, MA: MIT Press.

Badre D. (2007). Ventrolateral prefrontal cortex and controlling memory to inform action. In S. A. Bunge and J. D. Wallis (Eds.), *Neuroscience of Rule-Guided Behavior*. New York: Oxford University Press. 365-389.

Wagner, A. D., Bunge, S. A., and Badre, D. (2004). Cognitive control, semantic memory, and priming: Contributions from prefrontal cortex. In M. S. Gazzaniga (Ed.), *The New Cognitive Neurosciences (3rd Edition)*. Cambridge, MA: MIT Press.

Jonides, J. Badre, D., Curtis, C., Thompson-Schill, S. L., and Smith, E. E. (2002). Mechanisms of conflict resolution in prefrontal cortex. In D. T. Stuss and R.T Knight (Eds), *Principles of Frontal Lobe Function*. New York: Oxford Univ Press, 233-245.

Jonides, J., Wager, T. D., and Badre, D. (2002). Neuroimaging of memory. In V. S. Ramachandran (Ed.), *The Encyclopedia of the Human Brain*. San Diego: Academic Press.

* Authors contributed equally to work.

Refereed Abstracts

Freund, M. C. and Badre, D. (November 2025). Probing the dynamics of rule switching in humans. Poster to be presented at the Society for Neuroscience Annual Meeting.

Lageman, J., Kikumoto, A., Badre, D., Fahrenfort, J. J., and Slagter, H. A. (August 2025). Tracking of dynamic neural representations during goal-directed action. Extended Abstract accepted for Conference on Cognitive and Computational Neuroscience.

Keglovits, H. Zielinski, R., Bhandari, A., and Badre, D. (March 2025). The functional organization of task-tailored neural representations for control in human neocortex. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Palsamudram, T., Keglovits, H., and Badre, D. (March 2025). How does task structure impact metacognitive judgment? Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Freund, M. C. and Badre, D. (November 2024). Shapes of rule structures learned under different gating policies. Poster presented at the Society for Neuroscience Annual Meeting.

Rangel, B., Badre, D. (November 2024). Completely Task-Irrelevant Images as Retrieval Cues in Task-Switching. Poster presented at the Psychonomic Society Annual Meeting.

Bhandari, A., Buyukyazgan, D., Keglovits, H. and Badre, D. (November 2024). Practice-dependent effects of dorsolateral prefrontal cortex representational geometry on context-dependent behavior. Talk presented at the Psychonomic Society Annual Meeting.

Bhandari, A., Buyukyazgan, D., Keglovits, H. and Badre, D. (May 2024). Task-tailored representations in the human lateral prefrontal cortex. Talk presented at the Control Processes Annual Meeting.

Badre, D. and Kikumoto, A. (May 2024). Context-integrated action representations in error monitoring. Symposium talk presented at the Control Processes Conference. Birmingham, UK.

Doss, E., Keglovits, H., Bhandari, A., Badre, D. (April 2024) “Evaluating RETROICOR & aCompCor-based denoising for improving multi-voxel pattern analysis.” Poster presented at the Cognitive Neuroscience Society Annual meeting.

Buyukyazgan, D., Keglovits, H., Bhandari, A., and Badre D. (November 2023). Practice-dependent effects of dorsolateral prefrontal cortex representational geometry on context-dependent behavior. Poster presented at the Society for Neuroscience Annual Meeting.

Kikumoto, A., Bhandari, A., Shibata, K., and Badre D. (November 2023). A transient high-dimensional geometry affords stable conjunctive subspaces for efficient action selection. Talk given at the Society for Neuroscience Annual Meeting.

Kikumoto, A., Buyukyazgan, D., Poellnitz, S., Alio, A. P., Cruz, M., Takahiro, N., Kawamura, N., Kaminokado, M., Kaneko, Y., Shibata, K., Badre, D. (November 2023). Error Monitoring is Modulated by Retrieval of Conjunctive Representation of Uncommitted Correct Actions. Poster presented at the Society for Neuroscience Annual Meeting.

Vaidya, A. R., Moussa, N., Badre, D., and Kahnt, T. (November 2023). Formation of abstract task representations for generalization. Poster presented at the Society for Neuroscience Annual Meeting.

Keglovits, H., Bhandari, A., Chicklis, E., and Badre, D. (March 2023). Task structure shapes the geometry of control representations in PFC. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Kikumoto, A., Bhandari, A., Shibata, K., Nishio, T., Matsui, S., Homma, S., and Badre, D. (March 2023). Conjunctive control representations expressed in a stable and high-dimensional representational geometry lead to efficient action selection. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Zhao, Z., Ratz-Lubashevsky, R., Frank, M., and Badre, D. (March 2023). Neural systems supporting selective gating in working memory. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Vaidya A.R., and Badre D. (August 2022). Investigating individual differences in structure learning. Poster presented at Conference on Cognitive and Computational Neuroscience.

Vaidya A.R., Castillo J., Torres A. & Badre D. (June 2022). Influences of recall and familiarity on risky decision-making. Poster presented at the Multi-disciplinary Conference on Reinforcement Learning and Decision-Making.

Kikumoto, A., Bhandari, A., Mayr, U., Shibata, K., & Badre, D. (May 2022). “Stability and dimensionality of action representations during selection”. Virtual talk presentation at Control Processes.

Vaidya A.R., Castillo J., Torres A. & Badre D. (May 2022). Influences of recall and familiarity on risky decision-making. Poster presented at the Context and Episodic Memory Symposium.

Vaidya A.R. & Badre. D. (November 2021). Neural representations supporting valuation based on schemas and experience, Presented at the 51st annual meeting of the Society for Neuroscience.

Keglovits, H., Bhandari, A., Chicklis, E., & Badre, D. (November 2022). The relationship between task demands and the dimensionality of control representations. Neuroscience 2022, San Diego, CA, United States.

Johnson, E. L., Lin, J. J., King-Stephens, D., Weber, P. B., Laxer, K. D., Saez, I., Girgis, F., Knight, R. T., and Badre, D. (March 2021). Dynamic theta network synchrony gates working memory. Virtual poster presented at the Cognitive Neuroscience Society Annual Meeting. Winner of a Postdoc Award.

Keglovits, H., Bhandari, A., Chicklis, E., & Badre, D. (January 2021). Evaluating methods for estimating geometry of neural representations. Virtual poster presented at the Society for Neuroscience Global Connectome.

Lositsky, O., Badre, D. (2020, June). Effects of gradual and abrupt changes on segmentation of task-set memories. Brown Unconference, Providence, RI.

Castillo J., Vaidya A.R. and Badre. D. (August 2020). Memory matters: Its impact on value-based decisions. Virtual poster presented at the Annual Convention of the Association for Psychological Sciences.

Furman, D.J., Zhang, Z., Chatham, C.H., Good, M., Badre, D., Hsu, M., Kayser, A.S. (May 2020) Augmenting frontal dopamine tone enhances maintenance over gating processes in working memory. Virtual Dopamine Conference.

Vaidya A.R., Castillo J., Badre D. (November 2019). Testing orbitofrontal state and value representations during generalization. Poster presented at the Fourth Quadrennial meeting on Orbitofrontal Cortex Function, Paris, France.

Bhandari, A., Benna, M., Rigotti, M., Fusi, S., Badre, D. (November 2019) “fMRI Adaptation vs pattern analysis: evaluating methods for measuring human representational geometry and dimensionality.” *Annual Society for Neuroscience meeting*, Chicago, USA.

Vaidya A.R., Jones H. and Badre D. (October 2019). Testing neural representations of value and task space. Poster presented at the Annual Society for Neuroscience Meeting, Chicago, IL, USA.

Lositsky, O., Badre, D. (October 2019). Overlap in stimulus-response rules is insufficient for retrieval of task set memories. Poster presented at the Society for Neuroscience Annual Meeting, Chicago, IL, USA.

Levin, E.J., Badre, D. (October 2019). Information dynamics of input gating and output gating in visual working memory. Poster presented at the Annual Society for Neuroscience meeting, Chicago, IL, USA.

Bhandari, A., Benna, M., Rigotti, M., Fusi, S., Badre, D. (September 2019) “Measuring PFC representational geometry: fMRI Adaptation vs pattern analysis.” *3rd Cognitive and Computational Neuroscience*, Berlin, Germany.

Vaidya A.R. and Badre D. (July 2019). Neural systems for memory-based value judgment and decision-making. Poster presented at the Multidisciplinary Conference on Reinforcement Learning and Decision-Making, Montreal, QC, Canada.

Lositsky, O., Nassar, M.R., Badre, D. (July 2019). Gradual changes promote the generalization of behavioral rules across temporal contexts. Poster presented at the Reinforcement Learning and Decision Making Conference, Montreal, QC, Canada.

Lositsky, O., Badre, D. (May 2019). The role of awareness in task set encoding and retrieval. Talk given at the Control Processes Conference, Providence, RI, USA.

Lositsky, O., Badre, D. (May 2019). Gradual changes promote the generalization of behavioral rules across temporal contexts. Poster presented at the Context and Episodic Memory Symposium, Philadelphia, PA, USA.

Levin, E.J., and Badre, D. (May 2019). Neural networks supporting input gating and output gating in visual working memory. Poster to be presented at the Annual Vision Sciences Society Meeting, St. Pete Beach, FL.

Bhandari, A., Badre, D. (November 2018). Two distinct processes underlie control policy learning. Poster presented at the Annual Society for Neuroscience meeting, San Diego DC, USA.

Spiro, A.R., McKim, T.H., Badre, D., and Desrochers, T.M, (November 2018). Testing the necessity of the rostrolateral prefrontal cortex for sequence monitoring with continuous theta burst stimulation (cTBS). Poster presented at the Society for Neuroscience meeting.

McKim, T.H., Spiro, A.R., Badre, D., and Desrochers, T.M, (May 2018). Testing the necessity of the rostrolateral prefrontal cortex for sequence monitoring with continuous theta burst stimulation (cTBS). Poster presented at the Carolina Neurostimulation Conference.

Vaidya, A., and Badre, D. (April 2018). Mechanisms for sampling distinct memory stores during decision-making. Poster presented at the Cognitive Neuroscience Society meeting.

Sayali, C. Z., Spiro, A., and Badre, D. (April 2018). Investigating the cost of cognitive effort. Poster presented at the Cognitive Neuroscience Society meeting.

Blackman, R.K., Philip, N.S., and Badre, D. (April 2018) Disruption in Working Memory Gating Observed in Schizophrenia. Presented at the 6th Biennial Schizophrenia International Research Society Conference.

Bhandari, A., Rigotti, M., Gagne, C., Fusi, S., and Badre, D. (November 2017). Characterizing human prefrontal cortex representations with fMRI. Poster presented at the Society for Neuroscience meeting.

Frick, B. J., Hoy, C. W., Lin, J., Knight, R. T., D'Esposito, M., and Badre, D. (November 2017). Neurodynamic mechanisms of working memory gating. Poster presented at the Society for Neuroscience meeting.

McKim, T.H., Spiro, A.R., Badre, D., & Desrochers, T.M. (November 2017) Using cTBS to test the necessity of the rostrolateral prefrontal cortex for sequence monitoring. Poster presented at UNM Clinical Neurostimulation Conference, Albuquerque, NM.

Sayali, C. Z., Spiro, A., and Badre, D. (November 2017). Investigating the cost of cognitive effort. Poster presented at the Society for Neuroscience meeting.

Salhi, C., Badre, D., and Amso, D. (April 2017). The unique role of cognitive enrichment in the development of rule-guided behavior. Paper presented at the Society for Research in Child Development meeting.

Freier, L., Gunther, K., Gupta, P., Silver, B., Badre, D., and Amso, D. (April 2017). 3- to 7-year-olds' use of working memory gating strategies in a naturalistic task. Poster presented at the Society for Research in Child Development meeting.

Sayali, C. Z., Hamzah, N., Ciullo, B., and Badre, D. (November 2016). Neural systems supporting demand avoidance. Poster presented at the Society for Neuroscience meeting.

Bhandari, A., Badre, D. (November 2016). Learning working memory gating thresholds via reinforcement learning. Poster presentation at the Annual Society for Neuroscience Meeting, San Diego, CA, USA.

Desrochers, T.M. and Badre, D. (November 2016). Sequence monitoring in the frontal cortex. Poster presented at the annual Society for Neuroscience meeting.

Badre, D. (May 2016). Cortico-striatal interactions and representation of hierarchical task structure. Talk presented at the International Meeting of the Psychonomic Society.

Bhandari, A., Badre, D. (April 2016) Discovering gating policies in the absence of reinforcement. Poster presentation at the 23rd Annual Cognitive Neuroscience Society Meeting, New York, NY, USA.

Bhandari, A., Fugate, R. K., and Badre, D. (November 2015). Sampling improves short-term, but not long-term, memory of exceptions to rules during the learning of abstract rule structures. Poster presented at the Annual Meeting of the Psychonomic Society.

Desrochers, T.M., Collins, A. GE., and Badre, D. (October 2015). Feature-based attention during sequential tasks. Poster to be presented at the Society for Neuroscience meeting.

Collins, A., Ciullo, B., Frank, M.J., and Badre, D. (October 2015). Working memory contributions to reinforcement learning: an fMRI study. Poster to be presented at the Annual Meeting of the Society for Neuroscience.

Sayali, C., Ciullo, B., and Badre, D. (October 2015). Neural mechanisms of demand avoidance. Poster to be presented at the Annual Meeting of the Society for Neuroscience.

Shih, P. and Badre, D. (March 2015). The representational capacity of the human prefrontal cortex: A high-resolution fMRI study. Data Blitz talk and Poster presented at the 22nd Cognitive Neuroscience Society meeting.

Badre, D. (March 2015). Separable ventral and dorsal frontal pathways supporting cognitive control during retrieval. Minisymposium talk given at the 22nd Cognitive Neuroscience Society meeting.

Bhandari, A., Fugate, R., and Badre, D. (March 2015). Early practice effects in instructed tasks reflect learning of the dynamic structure of a task. Poster presented at the 22nd Cognitive Neuroscience Society meeting.

Desrochers, T. M., Collins, A. G. E., and Badre, D. (March 2015). Prefrontal cortex and uncertainty during sequential tasks. Poster presented at the 22nd Cognitive Neuroscience Society meeting.

Unger, K., Amso, D., Ackerman, L., Chatham, C., Delgado Luna, J. C., & Badre, D. (March, 2015). Working memory gating mechanisms provide a key to understanding developmental change in rule-guided behavior. Poster presented at the Biennial Meeting of the Society for Research in Child Development.

Chatham, C., and Badre, D. (November 2014). Dissociable effects of frontal cortex stimulation during selection from working memory. Nanosymposium presentation at the annual meeting of the Society for Neuroscience.

Nyhus, E., and Badre, D. (November 2014). Comparison of cardioballistic artifact removal methods for simultaneously recorded EEG and fMRI. Poster presented at the annual meeting of the Society for Neuroscience.

Unger, K., Amso, D., Ackerman, L., and Badre, D. (November 2014). The development of hierarchical cognitive control and rule guided behavior. Poster presented at the annual meeting of the Society for Neuroscience.

Nyhus, E., Gagne, C., and Badre, D. (June 2014). Brain Networks Related to Beta Oscillatory Activity During Episodic Memory Retrieval. Poster presented at the Organization for Human Brain Mapping meeting.

Desrochers, T. M., Chatham, C. H., and Badre, D. (April 2014). Stimulation of frontal polar cortex disrupts hierarchical control of task sequences. Poster presented at the 21st Cognitive Neuroscience Society meeting.

Gagne, C., and Badre, D. (April 2014). The magic number 57 plus or minus 3%: Why is multi-voxel pattern classification success so low in the lateral prefrontal cortex? Poster presented at the 20th Cognitive Neuroscience Society meeting.

Shih, P., Nyhus, E., Masters, S., Duan, L. H., & Badre, D. (April 2014). EEG evidence of sequential dynamics during hierarchical cognitive control. Poster presented at the 21st Cognitive Neuroscience Society meeting.

Chatham, C. and Badre, D. (November 2013). Frontostriatal correlates of predicted utility in working memory. Poster to be presented at the annual meeting of the Society for Neuroscience.

Scimeca, J. M., Katzman, P. L., and Badre, D. (November 2013). Evaluating and updating control processes in recognition memory. Poster to be presented at the annual meeting of the Society for Neuroscience.

Desrochers, T. M., and Badre, D. (November 2013). Differential control of task switching at the local and sequence level in the frontal cortex. Poster to be presented at the annual meeting of the Society for Neuroscience.

Ranti, C., Chatham, C. H., and Badre, D. (November 2013). Characterizing the temporal dynamics of hierarchical cognitive control. Poster to be presented at the annual meeting of the Society for Neuroscience.

Frank, M. J., Gagne, C., Cavanagh, J., Masters, S., Nyhus, E., and Badre, D. (November 2013) EEG and fMRI correlates of dynamic decision parameters during reinforcement learning. Nanosymposium presentation at the annual meeting of the Society for Neuroscience.

Badre, D. (October 2013). Frontostriatal correlates of working memory management. Open paper presented at the Memory Disorders Research Society meeting.

Chatham, C. H., and Badre, D. (April 2013). Generalization of learned categories is supported by top-down control and working memory capacity. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Desrochers, T. and Badre, D. (April 2013). Frontal systems supporting the hierarchical control of task sequences. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Scimeca, J. M., Katzman, P. L., and Badre, D. (April 2013). The role of prediction errors in control of recognition memory decisions. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Barredo, J.L. and Badre, D. (April 2013). Diffusion spectrum imaging evidence of distinct white matter pathways in ventrolateral prefrontal cortex. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Nyhus, E. and Badre, D. (April 2013). Brain networks related to theta oscillatory activity during episodic memory retrieval. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Kayser, A. S., Mitchell, J., Badre, D., and Frank, M. J. (April 2013). Corticostriatal connectivity, dopamine, and individual differences in exploration and exploitation. Poster presented at the 20th Cognitive Neuroscience Society meeting.

Chatham, C. H. and Badre, D. (October 2012). Multiple gates on working memory: An fMRI study of input gating and output gating. Talk presented in the “Working Memory: Representations and Mechanisms” Nanosymposium at the annual meeting of the Society for Neuroscience.

Choi, E.-Y., and Badre, D. (October 2012). Resting-state functional connectivity evidence for asymmetric rostro-to-caudal prefronto-striatal connectivity. Poster presented at the annual meeting of the Society for Neuroscience.

Voytek, B., Badre, D., Kayser, A. S., Fegen, D., Change, E. F., Crone, N. E., Parvisi, J., Knight, R.T., and D’Esposito, M. (October 2012). Phase/Amplitude coupling supports network organization in human frontal cortex. Poster presented at the annual meeting of the Society for Neuroscience.

Kang, H., Badre, D., Blume, J., and Ombao, H. (June 2012). Controlling Global Error Rates in fMRI Data Analysis. Poster presented at the Organization for Human Brain Mapping meeting.

Badre, D., Doll, B., Long, N., and Frank, M. (June 2012). Rostrolateral prefrontal cortex and uncertainty-driven exploration. Poster presented at the Organization for Human Brain Mapping meeting.

Brew, J., Frank, M. J., and Badre, D. (April 2012). Transfer of abstract action rules during reinforcement learning. Poster presented at the 19th Cognitive Neuroscience Society meeting.

Nyhus, E., Worden, M. S., and Badre, D. (April 2012). Simultaneously recorded EEG and fMRI identifies brain networks related to visually-evoked gamma oscillatory activity. Poster presented at the 19th Cognitive Neuroscience Society meeting.

Scimeca, J. M., McShane, L. M., Brew, J. A., and Badre, D. (November 2011). Acquisition and adaptation of rule-guided retrieval strategies in memory. Poster presented at the 41th meeting of the Society for Neuroscience.

McShane, L. M., Ranti, C. V., and Badre, D. (November 2011). Divide and conquer: Reducing response competition through hierarchical cognitive control. Poster presented at the 41th meeting of the Society for Neuroscience.

Barredo, J.L., Averill, W.R., Oztekin, I., and Badre, D. (November 2011). Network dynamics supporting the cognitive control of memory retrieval. Poster presented at the 41th meeting of the Society for Neuroscience.

Öztekin, I., Gungor, Z., and Badre, D. (November 2011). Impact of aging on the dynamics of short-term memory retrieval: A time-course analysis. Poster presented at the 52nd annual meeting of the Psychonomics Society.

Haas, S., McShane, L. M., Badre, D., and Amso, D. (October 2011). The development of cognitive control: Evidence from responses to simple relative to embedded rule structures. Poster presented at the meeting of the Cognitive Development Society.

McShane, L. M., Haas, S., Amso, D. and Badre, D. (April 2011). Developmental differences in hierarchical cognitive control. Poster presented at the 18th Cognitive Neuroscience Society Meeting.

Öztekin, I., McShane, L. M., and Badre, D. (April 2011). Evaluation and adjustment of control strategies during proactive interference resolution. Poster presented at the 18th Cognitive Neuroscience Society Meeting.

Badre, D. and Pagliaccio, D. (Nov 2010) Distributed representations of task-relevant contextual information in lateral prefrontal cortex. Poster presented at the 40th meeting of the Society for Neuroscience.

Barredo, J., Öztekin, I., and Badre, D. (Nov 2010) Prefrontal-medial temporal lobe interactions supporting the cognitive control of episodic retrieval. Poster presented at the 40th meeting of the Society for Neuroscience.

Hersman, S., Figueroa, C., Badre, D., and Frank, M. J. (Nov 2010). Dopaminergic modulation of working memory pathways: Influence of contextual cues on the discovery of hierarchical relationships. Poster presented at the 40th meeting of the Society for Neuroscience.

Kayser, A., Badre, D., and D'Esposito, M. (Nov 2010). Effects of prefrontal lesions on the acquisition of abstract action rules. Poster presented at the 40th meeting of the Society for Neuroscience.

Badre, D. (October 2010). The role of the striatum in evaluating memory retrieval strategies. Talk at the Memory Disorders Research Society meeting.

Solomon, M., Frank, M. J., Smith, A., Badre, D., Kayser, A., and Carter, C. S. (May 2010). Cognitive control mechanisms underlying impaired learning in adults with autism spectrum disorders. Poster presented at the International Society for Autism Research meeting.

Pagliaccio, D., Lebrecht, S., and Badre, D. (April 2010). Distributed patterns of activation in the prefrontal cortex reflect task-relevant visual dimensions of a stimulus. Poster presented at the 17th Cognitive Neuroscience Society meeting.

Öztekin, I. and Badre, D. (April 2010). Changes in distributed patterns of activation associated with proactive interference resolution in working memory. Talk presented at the 17th Cognitive Neuroscience Society meeting.

Long, N. M., Doll, B. D., Badre, D., and Frank, M. J. (April 2010). The neural mechanisms of exploratory and exploitive behavior. Poster presented at the 17th Cognitive Neuroscience Society meeting.

Lebrecht, S., Long, N. M., and Badre, D. (October 2009). Ventrolateral prefrontal cortex contributions to rule-guided memory retrieval. Poster presented at the 39th meeting of the Society for Neuroscience.

Öztekin, I., and Badre, D. (October 2009). Distinct contributions of the medial temporal lobe and the left ventrolateral prefrontal cortex to memory retrieval. Poster presented at the 39th meeting of the Society for Neuroscience.

Frank, M. J., and Badre, D. (October 2009). Hierarchical reinforcement learning in prefrontal-basal ganglia circuits: neurocomputational and imaging studies. Poster presented at the 39th meeting of the Society for Neuroscience.

Long, N. M., Öztekin, I., and Badre, D. (October 2009). An fMRI study of the neural mechanisms supporting free recall. Poster presented at the 39th meeting of the Society for Neuroscience.

Öztekin, I., Long, N. M., and Badre, D. (March 2009). Distinguishing events during free recall with fMRI. Poster presented at the 16th Cognitive Neuroscience Society meeting.

Long, N. M., and Badre, D. (March 2009). Testing hierarchical interactions in frontal cortex during cognitive control. Poster presented at the 16th Cognitive Neuroscience Society meeting.

Brozinsky, C., Badre, D., and D'Esposito, M. (March, 2009). The effects of medial temporal lobe damage on proactive interference. Poster presented at the 16th Cognitive Neuroscience Society meeting.

Barredo, J. L., Badre, D., and Burwell, R. D. (November, 2008). A novel task-shifting paradigm for rats to be used for the comparative analysis of executive function in rodents and humans. Poster presented at the 38th meeting of the Society for Neuroscience.

Kayser, A. S., Badre, D., Sakanaka, K., Erickson, D., and D'Esposito, M. (November, 2008). The rostro-caudal axis of the frontal lobe and learning of hierarchical rules. Talk presented at the 38th meeting of the Society for Neuroscience.

Badre, D. (September 2008). Building and breaking hierarchical control: Studies of learning and dysfunction along the rostro-caudal axis of the frontal lobes. Talk at the Memory Disorders Research Society meeting.

Koralek, A., Badre, D., D'Esposito, M. (April, 2008). Benefiting from hierarchy: Interactions between levels of control in the prefrontal cortex. Poster presented at the 15th Cognitive Neuroscience Society meeting.

Badre, D., Krienen, F., and D'Esposito, M. (Nov, 2007). Cognitive control in frontal polar cortex: Abstractness versus the temporal organization of behavior. Talk presented at the 37th meeting of the Society for Neuroscience.

Koralek, A., Badre, D., Miller, B. T., Konkel, A., Cohen, N. J., and D'Esposito, M. (Nov, 2007). Prefrontal and Hippocampal contributions to relational versus item memory: Short-term and long-term effects. Poster presented at the 37th meeting of the Society for Neuroscience.

Bressler, D., Badre, D. and D'Esposito, M. (Nov, 2007). A new technique for analyzing the informational content of activity patterns in the brain. Poster presented at the 37th meeting of the Society for Neuroscience.

Badre, D., and D'Esposito, M. (May, 2007). Temporal dynamics and representational selection in frontal polar cortex. Poster presented at the 14th Cognitive Neuroscience Society meeting.

Hoffman, J., Badre, D., Berg-Kirkpatrick, T., Krienen, F., Cooney, J.W., and D'Esposito, M. (May, 2007). Dissociating levels of cognitive control in frontal cortex hierarchy: Evidence from patients with focal lesions. Poster presented at the 14th Cognitive Neuroscience Society meeting.

Krienen, F., Badre, D., and D'Esposito, M. (May, 2007). Hold your horses! Testing the race model of response inhibition. Poster presented at the 14th Cognitive Neuroscience Society meeting.

Miller, B.T., Badre, D., Konkel, A., Cohen, N. J., and D'Esposito, M. (May, 2007). Prefrontal and hippocampal contributions to the active maintenance of item and relational representations in working memory. Poster presented at the 14th Cognitive Neuroscience Society meeting.

Badre, D., and D'Esposito, M. (October 16, 2006). FMRI evidence for a hierarchical organization of control in prefrontal cortex. Talk presented at the 36th meeting of the Society for Neuroscience.

Race, E., Badre, D., Jones, C., and Wagner, A. D. (October 16, 2006). Electrophysiological correlates of stimulus-response learning: Effects of response repetition and response conflict. Poster presented at the 36th meeting of the Society for Neuroscience.

Badre, D. (August 26, 2006). FMRI evidence for a hierarchical organization of control in prefrontal cortex. Talk presented at the third annual Bay Area Memory Meeting.

Krienen, F., Badre, D., and D'Esposito, M. (August 26, 2006). Hold your horses! Manual stopping does not predict verbal stopping. Talk presented at the third annual Bay Area Memory Meeting.

Race, E. A., Badre, D., Jones, C., Bruich, S., Wagner, A. D. (April 9, 2005). Event-related potentials associated with perceptual, conceptual, and response priming. Poster presented at the 13th annual meeting of the Cognitive Neuroscience Society.

Badre, D. and Wagner, AD. (November 12, 2005). Computational modeling and fMRI support for interference in task switching. Talk presented at the 35th meeting of the Society for Neuroscience.

Badre, D. (August 27, 2005). Computational modeling and fMRI support for interference in task switching. Talk presented at the second annual Bay Area Memory Meeting.

Badre, D. (August 21, 2004). Frontal lobe mechanisms that resolve proactive interference. Talk presented at the first annual Bay Area Memory Meeting.

Sala, J. B., Badre, D., and Wagner, A. D. (August 21, 2004). Investigating effective connectivity of prefrontal cortex and cognitive control using dynamic causal modeling. Poster presented at the first annual Bay Area Memory Meeting.

Badre, D., and Wagner, A. D. (November 11, 2003). Prefrontal mechanisms in task switching: Distinguishing interference and task-set retrieval. Talk presented at the 33rd meeting of the Society for Neuroscience.

Insler, R. Z., Badre, D., Wagner, A. D. (November 9, 2003). Retrieving and selecting semantic knowledge: evidence for a common left prefrontal control mechanism. Poster presented at the 33rd meeting of the Society for Neuroscience.

Wraga, M., Shephard, J., Badre, D., Church, J., and Kosslyn, S. M. (March 31, 2003). An fMRI study of individual differences in visuo-spatial imagery. Poster presented at the 10th annual meeting of the Cognitive Neuroscience Society.

Badre, D. and Wagner, A. D. (March 30, 2003). Prefrontal cortex and domain-dependent resolution of proactive interference in working memory. Poster presented at the 10th annual meeting of the Cognitive Neuroscience Society.

Jonides, J., Sylvester, C. C., Christensen, J. C., Thomas, A. A., Wager, T. D., Kroger, J. K., Salthouse, T. A., Badre, D., and Smith, E. E. (November 4, 2002). Brain activations in the trail making test measured by fMRI. Talk presented at the 32nd meeting of the Society for Neuroscience.

Wagner, A.D. and Badre D. (November 4, 2002). Age-related decline in the control of memory: Evidence for dysfunctional medial temporal and frontal lobe interactions. Talk presented at the 32nd meeting of the Society for Neuroscience.

Badre, D. and Wagner A. D. (November 4, 2002). Selection within working memory and resolution of expectancy violations: Contributions from prefrontal cortex. Poster presented at the 32nd meeting of the Society for Neuroscience.

Wraga, M., Church, J., and Badre D. (April 16, 2002). Event-related fMRI study of imaginal self and object rotations. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Badre, D., and Wagner, A. D. (April 14, 2002). Prefrontal and medial temporal contributions to controlled semantic retrieval in cognitive aging. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Badre, D., and Wagner, A. D. (April 11, 2002). Prefrontal and medial temporal contributions to controlled semantic retrieval in cognitive aging. Poster presented at Fifteenth Annual American Federation for Aging Research Grantee Conference.

O'Kane, G. C., Badre*, D, Paré-Blagoev, R. A., Poldrack, R. A., and Wagner, A. D. (November 11, 2001). Left prefrontal processes subserving mnemonic control during semantic retrieval. Talk presented at the 31st annual meeting of the Society for Neuroscience. * Presenting author.

Wagner, A. D., Paré-Blagoev, J., Badre*, D., Clark, J., and Poldrack, R. A. (March 25, 2001). Functional contributions of left inferior prefrontal cortex: fMRI support for the controlled semantic retrieval hypothesis. Poster presented at the Cognitive Neuroscience Society Annual Meeting. * Presenting author

Badre, D., Jonides, J., Hernandez, L., Noll, D. C., Smith, E. E., Chenevert, T. L. (April 11, 2000). Behavioral and neuroimaging evidence of dissociable switching mechanisms in executive functioning. Poster presented at the Cognitive Neuroscience Society Annual Meeting.

Select Op-Eds, Blog posts, and Other Public Scholarship

Badre, D. (2021). Navigating the recurrent perplexity of prefrontal function. *Brain*, November 11, 2021. <https://doi.org/10.1093/brain/awab414>

Badre, D. (2021). Tips from neuroscience to keep you focused on hard tasks. *Nature* March 15, 2021. <https://www.nature.com/articles/d41586-021-00606-x>

Badre, D. (2021). How we can deal with pandemic fatigue. *Scientific American* January 24, 2021. Cover Story for *Scientific American Mind* on March 1, 2021. <https://www.scientificamerican.com/article/how-we-can-deal-with-pandemic-fatigue/>

Badre, D. (2021). A Series about *On Task* at The Brains Blog. <https://philosophyofbrains.com/2021/01/25/12139.aspx>

Badre, D. (2020). Multitasking and the Pandemic Parent. Princeton University Press Ideas. <https://press.princeton.edu/ideas/multitasking-and-the-pandemic-parent>

Select Podcasts and Other Media

Academic Minute (March 1, 2016) <https://academicminute.org/2016/03/david-badre-brown-university-executive-functions/>

Bridging the Gaps (February 9th, 2021) <https://www.bridgingthegaps.ie/2021/02/on-task-how-our-brain-gets-things-done-with-professor-david-badre/>

New Books in Psychology (February 17th, 2021) <https://podcasts.apple.com/us/podcast/david-badre-on-task-how-our-brain-gets-things-done/id436024959?i=1000509507779>

BBC Science Focus (February 18th, 2021) <https://www.sciencefocus.com/the-human-body/why-you-cant-multitask-and-why-thats-a-good-thing/>

Futureproof (July 20, 2021) <https://www.newstalk.com/podcasts/futureproof-with-jonathan-mccrea/futureproof-extra-how-does-our-brain-get-things-done>

Brain Science Podcast (November 24, 2021) <https://brainsciencepodcast.com/bsp/2021/190-badre>

In All Fairness (December 9, 2021) <https://ciaj-icaj.ca/en/podcasts/how-do-our-brains-get-things-done/>

Invited Lectures

July 2025	Invited Speaker. 2025 Multidisciplinary University Research Initiative Program Review. Office of the Secretary of Defense.
June 2025	Invited Speaker. 2025 Prepared Warfighter Program Review. Office of Naval Research.
May 2025	Invited Address. American Psychological Society Annual Convention, Washington, D.C.
Jan 2025	Invited Speaker. Colloquium. Cognitive Psychology Section. Vrije Universiteit, Amsterdam.
June 2024	Invited Speaker. Festschrift in recognition of the contributions of John Jonides. University of Michigan, Ann Arbor, MI.
May 2024	Invited Speaker. Dresden Symposium on Volition and Cognitive Control. Dresden, Germany.
April 2024	Invited Speaker. Workshop on Cognitive Control. University of Copenhagen. Denmark.
Feb 2024	Invited Public Lecture. Learning and the Brain Conference. San Francisco, CA.
Jan 2024	Invited Speaker. Grand Rounds. Psychiatry and Human Behavior. Brown University.
Dec 2023	Invited Speaker. Colloquium. Rutgers, University.
July 2023	Invited Participant. Ernst Strüngmann Forum on “Organization of Frontal Lobe Networks and Function” Frankfurt, Germany.
June 2023	Invited Speaker. Computational Neuroscience Review. Office of Naval Research.
April 2023	Invited Speaker. Institute of Neuroscience, Chinese Academy of Sciences, Shanghai.
April 2023	Invited Speaker. Campus Public Lecture. Bowdoin College.
Jan 2022	Invited Speaker. Rhode Island Consortium for Coastal Assessment, Innovation, and Modeling, University of Rhode Island
Dec 2021	Swartz Seminar on Computational and Theoretical Neuroscience, New York University
Nov 2021	Jean and Bill Booziotis Distinguished Lecture, University of Texas, Dallas
Nov 2021	Colloquium, Center for Vital Longevity. University of Texas, Dallas
July 2021	NASA Sigma Lecture, National Aeronautics and Space Administration (NASA), Langley Research Center
July 2021	NASA Colloquium, NASA, Langley Research Center
April 2021	Keynote. Cognitive Control Collaborative Showcase. University of Iowa.
March 2020	Invited talk. BIRC Speaker Series. University of Connecticut.
Feb 2020	Invited talk. NIDA IRP Lecture Series Seminar, NIH
January 2020	Invited talk. VA Boston Neuroimaging and Neuropsychology Lecture Series. Boston VA.
Sept 2019	Colloquium. Neuroscience and Cognitive Science Program. University of Maryland.
June 2019	Grand Rounds. Departments of Neurology, Psychiatry, and Internal Medicine. American University of Beirut. Beirut, Lebanon.
June 2019	Invited participant. Ernst Strüngmann Forum on “Intrusive Thinking across Neuropsychiatric Disorders: From Molecules to Free Will” Frankfurt, Germany.
March 2019	Invited speaker. “Decisions: Optimality, approximations or heuristics.” Symposium at the Cognitive Neuroscience Society.

February 2019	Colloquium. Psychology Department. Vanderbilt University. Nashville, TN.
October 2018	Colloquium. Cognitive Science Program. Indiana University. Bloomington, Indiana.
October 2018	Speaker. "Systems supporting memory-based sampling during decision-making" Symposium at MDRS. Toronto, Canada.
May 2018	Invited speaker. Seventh Symposium on Biology of Decision-Making. Paris, France.
March 2018	Invited speaker. Dresden Spring School on Cognitive-Affective Neuroscience. Dresden, Germany
February 2018	Colloquium. Department of Psychology. University of California, San Diego.
November, 2017	Invited talk. Cognition, Brain, and Behavior Series. Psychology Department. Harvard University. Cambridge, MA.
October 2017	Debate speaker. "Control with or without controllers: Is control a module or an emergent property?" Control Processes Conference. Amsterdam, Netherlands.
October 2017	Colloquium. Department of Psychological and Brain Science. Dartmouth University. Hanover, NH.
September 2017	Invited talk. Center for Vital Longevity. University of Texas, Dallas
September 2017	Invited talk. Swartz Seminar for Computational and Theoretical Neuroscience, New York University. New York, NY.
September 2016	Invited talk. Boston University Center for Systems Neurosciences. Boston, MA.
May 2016	Invited talk. Rounds in Neuropsychology. Butler Hospital. Providence, RI.
May 2016	Speaker. "The role of task representation in response selection." Symposium at the International Meeting of the Psychonomic Society. Granada, Spain.
Feb 2016	Invited talk. FMRI Speaker Series. Yale Magnetic Resonance Research Center. Yale University.
Feb 2016	Invited talk. George Washington Institute for Neuroscience/ Children's National-Center for Neuroscience Research. George Washington University, Washington, DC.
Jan 2016	Invited lecture. Brown NSGP Neuropracticum. Woods Hole, MA.
Nov 2015	Invited talk. School of Psychology. Georgia Tech University. Atlanta, GA.
Sept 2015	Invited talk. MRC Cognition and Brain Sciences Unit. Cambridge, UK
Sept 2015	Speaker. "Attention and memory: A two-way street." Symposium at MDRS. Cambridge, UK
April 2015	Colloquium in "Distinguished Speakers in Behavioral and Brain Sciences" series. Department of Psychology. Cornell University.
March 2015	Speaker. "Interactions Between the Prefrontal Cortex and the Medial-Temporal Lobes Supporting the Control of Memory Retrieval". Mini-Symposium at the Cognitive Neuroscience Society meeting. San Francisco, CA.
February 2015	Neurology Grand Rounds. Rhode Island Hospital. Brown University.
January 2015	Invited speaker. "Progress towards a systems analysis of the cognitive control of memory" Symposium at Neurobiology of Learning and Memory. Park City, Utah.

September 2014	Speaker. "Fronto-MTL Interactions Supporting the Control of Memory Retrieval" Symposium at MDRS. Austin, TX.
March 2014	Colloquium in Cognitive Neuroscience Talk Series. Center for Cognitive Neuroscience. Duke University
February 2014	Invited Lecture. Department of Psychology. UC Berkeley.
August 2013	National Academies of Science and Kavli Foundation Frontiers of Science Symposium. Beckman Center, Irvine, CA.
June 2013	McDonnell Foundation Scholars meeting. Cambridge, UK.
April 2013	Invited speaker. "How can we apply learning and cognitive control theories to neurorehabilitation?" Contributing to the Science of Neurorehabilitation meeting, Washington University
January 2013	Invited speaker. "Executive function or executive functions? Theoretical insights from the empirical landscape" Symposium at the 2013 European Workshop in Cognitive Neuroscience, Bressanone, Italy.
December 2012	Keynote speaker, 2012 Neuroscience and Cognition Conference (Neurocog), Brussels, Belgium.
June 2012	Invited Lectures. Zhejiang University, Hangzhou, China
April 2012	Brain Aging Neuroimaging Group Talk Series. Martinos Center for Biomedical Imaging, MGH, Charlestown, MA.
March 2012	Invited Lecture. Department of Psychology, Koç University, Istanbul, Turkey.
March 2012	Invited Lecture. Department of Psychology, Bogazici University, Istanbul, Turkey
March 2012	Psychological and Brain Sciences Department Colloquium Series, Johns Hopkins University.
Feb. 2012	Cognitive Lunch Talk series, Yale University
June 2011	"Integrating fMRI with computational models of cognition" Advanced fMRI Educational Course, Organization for Human Brain Mapping Annual Meeting, Quebec City, Canada.
May 2010	Cognitive Neuroscience Lecture Series, NINDS, NIH
May 2010	Rotman Rounds, Rotman Research Institute, Toronto, Canada
December 2009	Keynote lecture, Annual meeting of the Charles River Association for Memory.
March 2009	"Prefrontal cortex and learning of abstract action rules" GPP-NIH retreat. Woods Hole, MA
February 2009	"Prefrontal cortex and hierarchical control of behavior" Cognitive Brown Bag Series, Harvard University
February 2009	"Prefrontal cortex and hierarchical control of behavior" Brain and Language Series, University of Pennsylvania
January 2009	"Prefrontal cortex and hierarchical control of behavior" Cognition & Perception seminar series, New York University
January 2009	"Prefrontal cortex and hierarchical control of behavior" Invited lecture. Ecole Normale Supérieure, Paris, France
October 2008	"Cognitive control and the functional organization of lateral frontal cortex." Brown Institute for Brain Sciences Lunch.
December 2007	"Cognitive control, hierarchy, and the rostro-caudal axis of the prefrontal cortex." Invited lecture at "Hierarchical organization of behavior: Computational, psychological, and neural perspectives" NIPS satellite workshop, Vancouver, Canada
April, 2007	"Cognitive control of memory and action: Contributions of the prefrontal cortex." Special symposium, McGovern Institute, MIT

February, 2007	“Cognitive control of memory and action: Contributions of the prefrontal cortex” Invited lecture, Brown University
February, 2007	“Cognitive control of memory and action: Contributions of the prefrontal cortex” Invited lecture, Duke University
January, 2007	“Cognitive control of memory and action: Contributions of the prefrontal cortex” Invited lecture, Columbia University
November, 2006	“Placing behavior in context: Cognitive control of memory and action” Cognition, Brain, and Behavior Colloquium, UC Berkeley

6. RESEARCH GRANTS

Current Support

Extramural

David Badre, PI

R01 MH125497 (Badre)

The organization of neural representations for flexible behavior in the human brain

NIH/NIMH

8/1/2021 – 7/31/26

\$3,674,638 (Direct: \$2,314,437)

David Badre, Subcontract Co-PI

MURI N00014-23-2792 (Braver)

A computational cognitive neuroscience framework for attentional control traits and states.

Office of Naval Research

8/2023-7/2028

\$2,496,839

David Badre, Co-PI

2T32 MH115895 (Badre/Frank/Moore/Jones)

Training Program for Interactionist Cognitive Neuroscience (ICoN)

NIH/NIMH

07/01/2019-06/30/2029

David Badre, Co-PI

R21 EY033182-01A1 (Domini/Badre)

Encoding of probability distributions of 3D estimates in mind and brain

NIH/NEI

09/30/2022-08/31/2025

\$438,498 (Direct: \$275,000)

David Badre, Co-I

R01 AG069265 (Heindel/Buka)

Mechanisms of Risk and Resilience to Age-Related Cognitive Decline: A 60-Year Prospective Prenatal Cohort

07/01/20 – 06/30/26

Pending Research Support

David Badre, PI

R21 MH143031 (Badre)
Testing the necessity of cognitive control representations using closed-loop stimulation
NIH/NIMH
12/01/25-11/30/27

Completed Research Support

David Badre, Mentor
P20 GM103645 (Sanes)
COBRE Center for Central Nervous System Function
NIH/NIGMS
08/01/13-07/31/23
\$218,827

David Badre, Subcontract PI
MURI N00014-16-1-2832 (Hasselmo)
Neural Circuits Underlying Symbolic Processing In Primate Cortex And Basal Ganglia
Office of Naval Research
7/1/16-5/31/22
\$900,000

David Badre, Subcontract PI
R01 MH111737 (D'Esposito)
Neural dynamics of human working memory networks
NIH/NIMH
9/26/2016-7/31/2022
\$2,609,329

David Badre, PI
James S. McDonnell Scholar Award in Understanding Human Cognition
James S. McDonnell Foundation
10/1/12-9/30/20
\$600,000

David Badre, PI
R21 NS108380 (Badre)
Mapping representational format across the human brain
NIH/NINDS
8/01/18-7/31/21
\$280,000

David Badre, PI
Alfred P. Sloan Research Fellowship in Neuroscience
Alfred P. Sloan Foundation
9/15/2011 – 9/15/2015
\$50,000

David Badre, PI
R01 NS065046
Cognitive control and the functional organization of frontal cortex
National Institute of Neurological Disorders and Stroke (NINDS), National Institutes of Health

2/15/2010 – 1/31/2016
\$1,728,019 (Direct: \$1,093,750)

David Badre, PI (Co-PI Dima Amso, Brown University)
R01 MH099078
Role of experience in development of cognitive control and frontal cortex
National Institute of Mental Health, National Institutes of Health
9/12/2012-12/31/2017
\$2,030,000 (Direct: \$1,250,000)

David Badre (Post-Doctoral Fellowship)
F32 NS053337
Studies of hierarchical organization in prefrontal cortex
National Institute of Neurological Disorders and Stroke (NINDS), National Research Service
Award
9/1/2005-12/31/2007

7. SERVICE

Extramural Service

Conference Organization

2011-2012	Cognitive Neuroscience Society Slide Session Committee
2012-2014	Cognitive Neuroscience Society Mini-Symposium Committee
2013-2014	Cognitive Neuroscience Society Mini-Symposium Committee (Chair)
2016-2022	Co-Organizer & Co-Founder of the Control Processes Conference
	November, 2016 – University of California, San Diego, CA
	October, 2017 – Amsterdam, Netherlands
	May, 2019 – Brown University, Providence, RI (Meeting Host)
	May, 2022 – Virtual Meeting

2022 – present Control Processes Conference Executive Committee
2022 – present Cognitive Neuroscience Society Program Committee

Session Chairperson/Organizer:

July 2024	“Brain Dynamics Underlying Maps and Memories.” Neurobiology of Cognition, Gordon Research Conference. (Discussion Leader).
July 2024	“Motor Control.” Neurobiology of Cognition, Gordon Research Conference. (Discussion Leader).
May 2019	“The geometry of mental and neural representations for control” Symposium at the 3 rd Control Processes Conference. Providence, RI. (Chair)
March 2019	“Making decisions in a structured world.” Symposium at the Cognitive Neuroscience Society. San Francisco, CA (Invited Organizer).
October 2016	“Gating mechanisms for cognitive control”, Symposium at the Control Processes meeting. San Diego, CA (Co-Chair).
March 2015	“Interactions Between the Prefrontal Cortex and the Medial-Temporal Lobes Supporting the Control of Memory Retrieval”, Mini-Symposium at the Cognitive Neuroscience Society meeting, San Francisco, CA (Co-Chair)

September 2014	“Fronto-MTL Interactions Supporting the Control of Memory Retrieval”, Symposium at the Memory Disorders Research Society, Austin, TX (Co-Chair/Organizer)
April 2014	“A New Look at Neural Representation in the Prefrontal Cortex” Mini-symposium, Cognitive Neuroscience Society, Boston MA. (Co-Organizer).
April 2012	“Attention, Working memory, and Executive Processes” slide session. Cognitive Neuroscience Society Meeting, Chicago, IL (Organizer)
March 2012	“Tractography on high angular resolution diffusion imaging data” Brown Institute for Brain Sciences workshop, Providence, RI. (Organizer)
October 2010	“When Stroop and Ebbinghaus meet: The dynamic interaction of cognitive control and memory retrieval” Symposium at the Memory Disorders Research Society, Evanston, IL (Chair/Organizer)
September 2008	“Hierarchical models of cognitive control and frontal lobe function” Symposium at the Memory Disorders Research Society, St. Louis, MO (Chair/Organizer)
November 2007	“Working Memory” slide session. Annual Meeting of the Society for Neuroscience, San Diego, CA (Chair)

Editorial:

Board of Reviewing Editors, *eLife*, 2017-2024
 Section Editor, *Neuropsychologia* (Exec Func & Cog Control), 2015-2017
 Editorial Board, *Neuropsychologia*, 2018-present
 Editorial Board, *Psychological Science*, 2012-present
 Editorial Board, *Behavioral Neuroscience*, 2014-present
 Board of Reviewers, *Cognitive Science*, 2015-present
 Editorial Board, *Oxford Open Neuroscience*, 2021-present
 Editorial Board, *Cognitive Neuroscience*, 2009-2014

Ad Hoc/Guest Editor

Proceedings of the National Academy of Sciences, USA
Journal of Experimental Psychology: General

Grant Panels:

Standing Member, Cognition and Perception (CP) Study Section, NIH, 2016-2020
 - Substitute Chair (February, 2019)
 Chair, Cognition and Perception (CP) Study Section, NIH, 2020
 Chair, Human Complex Mental Function (HCMP) Study Section, NIH, 2021-2022
 Editorial Board Member, NIH Director’s New Innovator Award Program (DP2), 2024-25
 Co-Chair, Editorial Board, NIH Director’s New Innovator Award Program (DP2), 2025

Ad Hoc Referee:

Grants

US Federal

Cognition and Perception (CP) Study Section, NIH
 Special Emphasis Panel, LCOM/BBBP, NIH
 Cognitive Neuroscience, NSF
 Perception, Action, and Cognitive Sciences, NSF
 Natick Soldier Research, Development, and Engineering Center, US Army

International

Neurosciences and Mental Health Board, MRC (UK)
 Neuroscience and Mental Health, Wellcome Trust (UK)
 Biotechnology and Biological Sciences Research Council (UK)
 Leaders Opportunity Fund, CFI (Canada)
 Natural Sciences and Engineering Research Council (Canada)
 Swiss National Science Foundation (Switzerland)
 Netherlands Organisation for Scientific Research (Netherlands)

Private

Alzheimer's Association

Journals

Archives of General Psychiatry; Biology Letters; Biological Psychiatry; Brain and Language; Brain Research; Brain Sciences; Cerebral Cortex; Cognition; Cognitive, Affective, and Behavioral Neuroscience; Cognitive Neuropsychology; Cognitive Neuroscience; Cognitive Psychology; Cognitive Science; Current Biology; Developmental Neuropsychology; Experimental Brain Research; European Journal of Neuroscience; Hippocampus; Human Brain Mapping; JAMA Psychiatry; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition; Journal of the International Neuropsychological Society; Journal of Neurophysiology; Journal of Neuropsychology; Journal of Neuroscience; Nature Communications; Nature Human Behavior; Nature Neuroscience; Neurobiology of Aging; NeuroImage; Neuron; Neuropsychologia; Neuroscience; Neuroscience Letters; Neuroscience & Biobehavioral Reviews; Perspectives on Psychological Science; PLoS ONE; Proceedings of the National Academy of Sciences, USA; Psychological Science; Psychological Bulletin; Psychonomic Bulletin & Review; Quarterly Journal of Experimental Psychology; Social, Cognitive, and Affective Neuroscience; Scandinavian Journal of Psychology; Science; Scientific Reports; Topics in Cognitive Science; Trends in Cognitive Sciences, Trends in Neurosciences, eLife

University Service

2022-present	Department Chair, Cognitive and Psychological Sciences
2024-present	Advisory Board, John Nicholas Brown Center for Advanced Study
2025-present	Dean of Faculty Research Resilience Committee
2014-present	Brown Magnetic Resonance Facility Executive Committee
2024-2025	IMSD Internal Advisory Board
2024-2025	Working group on faculty performance review best practices
2023-2025	Chairs and Directors Meeting Agenda Committee
2012-2024	MRF Scientific Advisory Council
2023-2024	AD Center Faculty Steering Committee
2022-2025	Graduate School Advisory Board
2019-2022	CLPS Director of Graduate Studies
2009-2021	NSGP Seminar Series Committee
2020-2021	CLPS External Review Preparation Committee
2019-2020	CLPS Mid-Cycle Review Committee
2014-2018	Brown Carney Brain Stimulation Facility (Co-Director)
2017-2018	CLPS Psycholinguistics Faculty Search
2014-2016	Cognitive Science Graduate Program Advisor

2013-2018	Randall Sophomore Advisor
2011-2022	NSGP Steering Committee
2014-2015	BIBS/CLPS Cognitive Neuroscience Faculty Search (Chair)
2009-2014	CLPS Colloquium Committee
2008-2014	CLPS Website & Publicity Committee (Chair)
2013, 2014	BIBS/NPNI New Frontiers Review Panel
2010-2011	Human Cognition Faculty Search Committee
2011	UTRA program selection committee
2008-2009	Memory and Attention Faculty Search Committee
2008-2009	Neuroscience Graduate Admissions Committee
2008, 2009, 2011	Psychology Department Honors Awards Committee
2008	Whalen Award Committee
2008	Neuro Postdoctoral Training Grant Award Committee

8. ACADEMIC HONORS

Awards and Honors

2022	Brown Midcareer Research Achievement Award (inaugural award), Brown University
2021	Fellow, Association for Psychological Science
2020	Finalist for the PROSE Award in Popular Science and Mathematics for <i>On Task</i> , Association of American Publishers
2012-2018	James S. McDonnell Scholar Award in Understanding Human Cognition
2014	Young Investigator Award, Cognitive Neuroscience Society
2011-2013	Alfred P. Sloan Research Fellowship in Neuroscience
2013	National Academic of Sciences Korean-American Kavli Frontiers of Science Symposium Invitee
2012	National Academy of Sciences Keck Futures Initiatives Fellow ^[11] _{SEP}
2008	Elected to the Memory Disorders Research Society
2005-2007	National Research Service Award, National Institute of Neurological Disorders and Stroke, NIH
2004	Walle Nauta Award for Excellence in Graduate Teaching
2003-2005	NIH Institutional Predoctoral Fellowship in Visual Cognition
2002	McDonnell Summer Institute in Cognitive Neuroscience Fellowship
2001	Glenn Foundation/AFAR Scholarship for Research in the Biology of Aging
2000-2003	National Defense Science and Engineering Fellowship
2000	Recipient of National Science Foundation Graduate Fellowship (Awarded; did not accept in lieu of former)
2000	Tanner Memorial Award for Meritorious Undergraduate Research in Psychology

Memberships

American Association for the Advancement of Science
 Memory Disorders Research Society
 American Psychological Association
 American Psychological Society
 American Physiological Society
 Society for Neuroscience
 Cognitive Neuroscience Society
 Cognitive Science Society

9. TEACHING

Courses

CLPS 0400	Cognitive Neuroscience
CLPS 1490	Functional Magnetic Resonance Imaging: Theory and Practice
CLPS 1480C	Cognitive Control Functions of the Prefrontal Cortex
CLPS 1480F	Cognitive Neuroscience of Memory
CLPS 1480G	Working Memory
CLPS 2001	Core Concepts in Cognitive and Psychological Sciences I

Mentoring

Postdoctoral Fellows

Ladan Shahshahani, Ph.D. (2023-)

Ben Rangel, PhD (2023-)

Michael Freund, PhD (2023-)

Atsushi Kikumoto, PhD (2020; 2022-2026)

Olga Lositsky, PhD (2017-2020)

Avinash Vaidya, PhD (2016-2022)

Apoorva Bhandari, PhD (2013-2018)

Livia Freier, PhD. (2015-2017)

Theresa Desrochers, PhD (2012-2016)

Carmel Salhi, PhD (2015)

Kerstin Unger, PhD (2013-2015)

Justin Cox, PhD (2014-2015)

Christopher Chatham, PhD (2011-2014)

Erika Nyhus, PhD (2010-2013)

Ilke Öztekin, PhD (2008-2010)

Latest Achievements

Asst. Prof., Univ. of Maryland (2026)

Postdoc (Princeton)

Staff Scientist, NIH

Asst Prof. (Research), Brown University

Clinical Psychologist

Associate Prof., Brown University

Associate Prof., Northeastern U.

Associate Prof., CUNY

Senior Data Scientist, Amazon

Senior Director of Research, Shionogi

Associate Prof., Bowdoin College

Senior Scientist, Exponent

Medical Research Fellows and Clinical Interns

Michelle Kassel, PhD (2019-2020)

Clinical Neuropsychologist, SFVA

Rachael Blackman, MD PhD (2016-2019)

Physician, Division Psychiatry, US FDA

Graduate Students

Ziqi Zhao (2021-)

Haley Keglovitz (2019-2025) PhD, Cog Sci (2025) Postdoctoral Fellow, Harvard

Emily Levin (2016-2021) PhD, Cog Sci (2021) Medical Student, U. of Pitt

Ceyda Sayali (2013-2018) PhD, Cog Sci (2018) Instructor, Johns Hopkins

Jason Scimeca (2010-2015) PhD, Cog Sci (2015) Asst. Prof., LSU

Patti Shih (2011-2016) MS, Neuro (2016) Technical Specialist, Waze

Jennifer Barredo (2009-2013) PhD, Neuro (2013) Asst. Prof. (Research), Brown

Research Assistants

Joemari Pulido (2024-)

Ashwin Srinivasan (2024-)

Defne Buyukyazgan (2022-2024)

Sarah Mughal (2022-2023)

Emily Chicklis (2019-2022)

Adriane Spiro (2016-2019)

Brendan Frick (2016-2018)

Brittany Ciullo (2014-2016)

PhD Student, Brown University

Lab Manager (NYU)

Research Assistant (Quality Metric)

Medical Resident, U. Rochester

Snr. Engineering Manager (Gum Gum)

PhD Student, U. Mass Amherst

Chris Gagne (2012-2014)
Lauren McShane (2010-2012)
Nicole Long (2008-2010)

VP Research, Hume AI
Cellist, Portland, OR
Associate Professor, UVA

Honors Thesis Advisees

Tanvi Palsamudram (2021-2025)
Camille Aquino (2022-2024)
Roshan Parikh (2022-2024)
Yael Braverman (2018-2020)
Emily Waters (2018-2020)
Jordan Rubin-McGregor (2018-2019)
Henry Jones (2017-2019)
Louise Stolz (2016-2018)
Celia Ford (2014-2017)
Sarah Master (2014-2017)
Amanda Ruggieri (2013-2016)
Kirsten Colwell (2016)
Jonathan Nicholas (2014-2015)
Kathryn Graves (2013-2015)
Perri Katzman (2011-2014)
Carolyn Ranti (2010-2013)
Kieran Alessi (2012-2013)
Jamie Brew (2010-2012)
Zack Bornstein (2010-2012)
David Pagliaccio (2008-2010)
Matthew Scult (2008-2010)
Monica Rosenberg (2008-2010)
Sarah Hersman (2010)
Priscilla Mok (2008-09)
Karina Sakanaka (2007-08)
Fenna Krienen (2005-07)

Latest Achievements

Honors in Neuroscience
Honors in Cognitive Neuroscience
Honors in Applied Math
Research Data Manager
Medical School, U. South Carolina
Graduate student (Miami)
Graduate student (UChicago)
Graduate student (UCSD)
PhD (UC Berkeley)
Graduate Student (NYU)
Honors in Cognitive Neuroscience
Principal, Clayton Dubilier & Rice
PhD (Columbia)
PhD (Yale)
PhD (NYU)
Engineering manager (Thyme Care)
Program Director at The Common Good
Editor at *The Onion*
Writer/Director/Producer
Associate Prof. Psychiatry (Columbia)
Licensed Psychologist
Associate Prof. (U Chicago)
PhD (UCLA)
Lead designer, Mem Labs
R.J. Glushko Prize for best honors thesis
Assistant Prof. (Princeton)

UROP Undergraduates

Sarah Laszlo (2002-03)
Ivana Sturdivant (2002-03)

Senior Director, Visa
MD (UNC in 2010)

Leadership Alliance Program

Nyia Jones (2024)
Ramses Ngachoko (2020)
Aja Evans (2015)
Ariel Meilich (2011)

PREP Program

Johanny Castillo (2019-2020)

Pierce College Internship Program

Nahrin Ebrahimi (Summer 2006)

Minority Access to Research Careers (MARC) Program

Jacinta Tibbs (Summer 2002)

*Sophomore Advisees**

4 sophomore advisees 2008-2013
12 sophomore advisees 2013-2014
18 sophomore advisees 2014-2015
18 sophomore and transfer 1st year advisees 2016-2017
12 sophomore and transfer 1st year advisees 2017-2018
1 sophomore advisee in 2018-2019
*Randall Sophomore Advisor 2013-2018

Graduate Committees

Ziqi Zhao, Cassandra Engstrom, Wen Jian, Giulia Righi, Adrian Nestor, Bradley Doll, Elizabeth Chrastil, Adam Darlow, Sophie Lebrecht, Brendon Kent, Arjun Bansal (Neuro), Hakmook Kang (Biostats), Heida Sigurdardottir (Neuro), Jeff Cockburn, Denise Werchan, Christine Gamble, Megan Reilly, Christopher Erb, Jennifer Barredo (Advisor), Jason Scimeca (Advisor), Nicholas Franklin, Ceyda Sayali (Advisor), Lesley Lai, Fumeng Yang (Comp Sci), Adam Nitenson (Neuro), Jazlyn Nketia, Daniel Scott, Leslie Lai, Kim Boyoung, Harrison Ritz, Emily Levin (Advisor), Xiamin (Jason) Leng, Lakshmi Govindarajan, Xiangyuan Peng, Haley Keglovits, Alana Jaskir

External Dissertation Committees

Savannah Cookson (Georgia Tech), Stefon Jan Ross van Noordt (Brock University), Adam Bromage (Victoria University), Thomas Morin (Boston University), Rina Blomberg (Linköping University)