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CURRICULUM VITA

Michael B. Miller, Ph.D.

Professor
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Education

Dartmouth College, Ph.D. in Cognitive Neuroscience, June 1998.

San Francisco State University, B.A. in Psychology, June 1994.

Academic Career

Professor, University of California Santa Barbara, 2012-present.

Associate Professor, University of California Santa Barbara, 2006-2012.

Assistant Professor, University of California Santa Barbara, 2002-2006.

Assistant Professor, University of Massachusetts Boston, 1999-2002.

Research Associate, Dartmouth Brain Imaging Center, 1998-1999.

Graduate Research Assistant, Dartmouth College, 1996-1998.

Graduate Research Assistant, University of California, Davis, 1994-1996

Additional Positions

Chair, Department of Psychological & Brain Sciences, UCSB, 2018 – 2021

Editor, The Year in Cognitive Neuroscience, an annual review by the Annals of the New York Academy of Sciences, 2007 – present

Associate Editor, Frontiers in Psychology, Cognition Section, 2018 – present

Task Order Leader of the Cognitive Neuroscience Task Order, Institute for Collaborative Biotechnologies, UCSB, 2009 – 2019

Vice Director, The Sage Center for the Study of the Mind, UCSB, 2006-present.

Dissertation

Retrieval, Reconstruction, & Response Bias: A Cognitive Neuroscience Investigation of False Memories. Dartmouth College, June 1998. (Advisor: Michael Gazzaniga).

Areas of Special Interest

Human Memory & Decision-Making; Individual Differences; Split-Brain Research; Functional Neuroimaging

Grant Support

***Active**:*

Army Research Office/Institute for Collaborative Biotechnologies "Neural Indicators of Optimal and Adaptable Decision-Makers Under Uncertainty." 10/01/08 – 11/30/24, $189,000/year; Role – Principal Investigator

National Institute of Mental Health R25 "Summer Institute in Cognitive Neuroscience" 07/01/15 – 06/30/22 (NCE), $1,064,089; Role – Co-Principle Investigator (PI: G.R. Mangun).

Army Research Office/Institute for Collaborative Biotechnologies "Improving Soldier Procedural Skill Acquisition Through HD-tDCS." 01/01/20 – 12/31/21, $522,000; Role – Principal Investigator.

Army Research Office/Institute for Collaborative Biotechnologies "Improved synchronous physiologic monitoring to enhance human-autonomy teaming for situational awareness, maneuverability and decision-making." 07/01/20 – 6/30/22, $900,000; Role – Co-Principal Investigator.

National Institute of Neurological Disorders and Stroke: UO1 Brain Initiative "Neuronal Mechanisms of Human Episodic Memory," 9/01/20 – 8/30/25, $5,573,786 (UCSB contract: $817,911); Role – Site Principle Investigator.

***Completed**:*

Army Research Office/Institute for Collaborative Biotechnologies "Biomarkers of Stress States." 9/30/16 – 9/29/18, $1,700,000; Role – Principal Investigator.

Army Research Office/Institute for Collaborative Biotechnologies "Rapid, Adaptive Decisions and Recovery from Stress (RADaRS)." 9/30/17 – 9/29/18, $1,000,000; Role – Principal Investigator.

Army Research Laboratory Cognition and Neuroergonomics CTA Seedling Project; "Using Neural Biomarkers to Predict and Guide an Individual's Ability to Optimally Adapt Decision Rules" 05/26/11 – 05/25/14, $77,000/year; Role – Principal Investigator

National Institute of Health 5P41RR013642-14: "Large-Scale Analysis of Individual Diff in fMRI Activation During Cognition" 08/01/11 – 07/31/12, $10,135. Role: PI/Project Leader.

MacArthur Foundation Law & Neuroscience Project; "Parametric Characterization of Individual fMRI Data From Group Data." 11/01/09 – 12/31/11, $100,000; Role – Principle Investigator

Army Research Laboratory; "Individual Differences in Brain Structure and Function in Combat Experienced Officers" 10/01/08 – 9/30/09, $75,000; Role – Principal Investigator

National Institute of Health R01 NS 031443-11; "Neurologic and Cognitive Analysis of Callosotomy Patients" 07/01/04 – 03/31/10, $1,000,000; Role – Co-Investigator (PI: M.S. Gazzaniga)

National Science Foundation Instrumentation Grant; "A Magnetic Resonance Imaging System for the UCSB Brain Imaging Center" 07/01/07 - 06/30/09, $1,000,000; Role – Co-Investigator (PI: S. Grafton)

UCSB Academic Senate CRIP #8-586947-19900-7; "Estrogen and Cognition" 07/01/05 – 06/30/06, $8,778; Role – Principle Investigator.

National Institute of Health NINDS 5P01 NS-17778-18; "Program in Cognitive Neuroscience: Project #5 Neural Substrates of Strategic Thinking" 07/01/99 - 06/30/04, $503,000; Role – Co-Investigator (PI: M.S. Gazzaniga).

University of California Davis M.I.N.D. Institute; "Mechanisms of social attention in autism spectrum disorder: Evidence from "change blindness" tasks and fMRI" 2003-2004, $64,000; Role – Co-Principal Investigator (PI: T. German).

Awards & Honors

2017 Elected as a Fellow to the Psychonomic Society

2016 Selected member of the Defense Science Study Group

2012 IgNobel Award in Neuroscience

2012 Elected to the Memory Disorders Research Society

2012 Course Director for the Summer Institute in Cognitive Neuroscience

2009 Course Director for the Summer Institute in Cognitive Neuroscience

2009/2010 Visiting Scholar at the CiMEC, University of Trento, Italy

2003 McDonnell Summer Institute in Cognitive Neuroscience Fellowship

1997 McDonnell Summer Institute in Cognitive Neuroscience Fellowship

1996 McDonnell Summer Institute in Cognitive Neuroscience Fellowship

1995 Achievement Rewards for College Scientists, Phyllis & Stuart Moldaw Scholar

1994 Achievement Award for Academic Excellence, San Francisco State University

Peer-Reviewed Publications *(reverse chronological order)*

Bullock, T., MacLean, M.H., Santander, T., Boone, A.P., Babenko, V., Dundon, N.M., Stuber, A., Jimmons, L., Raymer, J., Okafor, G., **Miller, M.B**., Giesbrecht, B., & Grafton, S.T. (submitted). Habituation of the stress multiplex to repeated cold pressor exposure. *Pain Reports*.

Kumar, S., Iftekhar, A.S.M., Goebel, M., Bullock, T., MacLean, M.H., **Miller, M.B.**, Santander, T., Giesbrecht, B., Grafton, S.T., & Manjunath, B.S. (2021). StressNet: detecting stress in thermal videos. *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* (pp. 999-1009).

Pritschet*, L., Santander*, T., Layher, E., Taylor, C., Yu, S., **Miller, M.B**., Grafton, S.T., & Jacobs, E.G. (2020). Functional reorganization of brain networks across the human menstrual cycle. *Neuroimage*, 220, 117091.

Layher, E., Dixit, A., & **Miller, M.B**. (2020). Who gives a criterion shift? A uniquely individualistic cognitive trait. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 46(11), 2075 – 2105.

Turner, B.O., Kingstone, A., Risko, E.F., Santander, T., Li, J., & **Miller, M.B.** (2020). Recording brain activity can function as an implied social presence and alter neural connectivity. *Cognitive Neuroscience*, 11(1-2), 16 – 23. doi: 10.1080/17588928.2019.1650015.

Miller, M.B., & Kantner, J. (2020) Not all people are cut out for strategic criterion shifting. *Current Directions in Psychological Science*, 29(1), 9 – 15. doi: 10.1177/0963721419872747.

Turner, B., Paul, E.J., Barbey, A.K., & **Miller, M.B.** (2019) Reply to: fMRI replicability depends upon sufficient individual-level data. *Communications Biology*, 2(1), 1 – 3. doi: 10.1038/s42003-019-0378-6.

Layher, E., Santander, T., Volz, L., & **Miller, M.B**. (2018). Failure to affect decision criteria during recognition memory with continuous theta burst stimulation. *Frontiers in Neuroscience*, 12, 705. doi.org/10.3389/fnins.2018.00705

Burte, H., Turner, B.O., **Miller, M.B**., & Hegarty, M. (2018) The neural basis of individual differences in directional sense. *Frontiers in Human Neuroscience*, 12, 410. doi: 10.3389/fnhum.2018.00410

Turner, B., Paul, E.J., **Miller, M.B.**, & Barbey, A.K. (2018) Small sample sizes reduce the replicability of task-based fMRI studies. *Communications Biology*, 1(1), 1 – 10. doi.org/10.1101/136259.

Huskey, R., Craighead, B., **Miller, M.B**., & Weber, R. (2018) Does intrinsic reward motivate cognitive control? A naturalistic-fMRI study based on the synchronization theory of flow. *Cognitive, Affective, and Behavioral Neuroscience*, 18(5), 902 – 924. doi: 10.3758/s13415-018-0612-6.

Becker, C.O., Pequito, S., Pappas, G.J., **Miller, M.B**., Grafton, S.T., Bassett, D.S., & Preciado, V.M. (2018) Spectral mapping of brain functional connectivity from diffusion imaging. *Scientific Reports*, 8(1), 1 – 15.

Volz, L.J., Hillyard, S.A., **Miller, M.B**., & Gazzaniga, M.S. (2018) Unifying control over the body – consciousness and cross-cuing in split brain patients. *Brain*, 141(3), e15.

Frithsen, A., Kantner, J., & **Miller, M.B.** (2018) Cross-task and cross-manipulation stability in shifting decision criterion. *Memory*, 26(5), 653 – 663.

Schlesinger, K., Turner, B.O. Grafton, S.T., **Miller, M.B**., & Carlson, J.M. (2017) Improving resolution of dynamic communities in human brain networks through targeted node removal. *PLoS One*, 12(2), e0187715.

Steckler, C.M., Hamlin, K., **Miller, M.B**., King, D., & Kingstone, A. (2017) Moral judgment by the disconnected left and right hemispheres: a split-brain investigation. *Royal Society Open Science*, 4: 170172. http://dx.doi.org/10.1098/rsos.170172.

King, D.R., & **Miller, M.B**. (2017) Influence of response bias and internal/external source on lateral posterior parietal successful retrieval activity. *Cortex*, 91, 126 – 141.

Schlesinger, K., Turner, B.O. Lopez, B.A., **Miller, M.B**., & Carlson, J.M. (2017) Age-dependent changes in task-based modular organization of the human brain. *NeuroImage*, *146*, 741-762.

Davison, E.N., Turner, B.O., Schlesinger, K.J., **Miller, M.B**., Grafton, S.T., Bassett, D.S., & Carlson, J.M. (2016). Individual differences in dynamic functional connectivity structure across the lifespan. *PLOS Computational Biology*, 12(11): e1005178. doi:10.1371/journal.pcbi.1005178.

Telesford, Q.K., Lynall, M-SE., Vettel, J., **Miller, M.B**., Grafton, S.T., & Bassett, D.S. (2016) Detection of functional brain network reconfiguration duringtask-driven cognitive states. *Neuroimage*, 142, 198 – 210.

Vettel, J. M., Kantner, J., Jaswa, M., & **Miller, M**. (2016). Animated 3D Human Models for Use in Person Recognition Experiments. *arXiv preprint arXiv:1606.05006*.

Kantner, J., Vettel, J.M., & **Miller, M.B**. (2015) Dubious decision evidence and criterion flexibility in recognition memory. *Frontiers in Psychology*. 6.

Gu, S., Pasqualetti, F., Cieslak, M., Telesford, Q., Yu, A., Kahn, A., Medaglia, J.D., Vettel, J., **Miller, M.B**., Grafton, S.T., & Bassett, D.S. (2015) Controllability of structural brain networks. *Nature Communications*, 6(8414), doi:10.1038/ncomms9414.

Turner, B.O, Marinsek, N., Ryhal, E., & **Miller, M.B**. (2015). Hemispheric lateralization in reasoning. *Annals of the New York Academy of Sciences*, 1359(1), 47 – 64.

King, D.R., Schubert, M.L., & **Miller, M.B.** (2015) Lateral posterior parietal activity during reality monitoring discriminations of memories of high and low perceptual vividness. *Cognitive, Affective, and Behavioral Neuroscience*, 15(3), 662 – 679.

Turner, B.O., Lopez, B., Santander, T., & **Miller, M.B**. (2015) One dataset, many conclusions: BOLD variability's complicated relationship with age and motion artifacts. *Brain Imaging and Behavior*, 1 – 13.

Aminoff, E.M., Freeman, S., Clewett, D., Tipper, C., Frithsen, A., Johnson, A., Grafton, S.T., & **Miller, M.B.** (2015) Maintaining a cautious state of mind during a recognition test: a large-scale fMRI study. *Neuropsychologia*, 67, 132 – 147.

Davison, E.N., Schlesinger, K.J., Bassett, D.S., Lynall, M-E., **Miller, M.B**., Grafton, S.T., & Carlson, J.M. (2015) Brain network adaptability across task states. *PLOS Computational Biology*. 11(1), e1004029.

Freeman, S.M., Clewett, D.V., Bennett, C.M., Kiehl, K.A., Gazzaniga, M.S., & **Miller, M.B.** (2015). The posteromedial region of the default mode network shows attenuated task-induced deactivation in psychopathic prisoners. *Neuropsychology*, 29 (3), 493 – 500.

Marinsek, N., Turner, B. O., Gazzaniga, M., & **Miller, M. B**. (2014). Divergent hemispheric reasoning strategies: reducing uncertainty versus resolving inconsistency. *Frontiers in Human Neuroscience*, *8*, 839. doi:10.3389/fnhum.2014.00839

Frithsen, A., & **Miller, M.B.** (2014). The posterior parietal cortex: comparing remember/know and source memory tests of recollection and familiarity. *Neuropsychologia*, 61, 31 – 44.

Hermundstad, A.M., Brown, K.S., Bassett, D.S., Aminoff E.M., Clewett, D., Freeman, S., Frithsen, A., Johnson, A., Tipper, C., **Miller, M.B.**, Grafton, S.T., & Carlson, J.M. (2014). Structurally-constrained relationships between cognitive states in the human brain. *PLOS Computational Biology*, 10(5), e1003591.

King, D.R., & **Miller, M.B.** (2014) Lateral posterior parietal activity during source memory judgments of perceived and imagined events. *Neuropsychologia*, 53(1), 122 – 136.

Bennett, C.M., & **Miller, M.B**. (2013). fMRI reliability: influences of task and experimental design. *Cognitive, Affective, and Behavioral Neuroscience*, DOI 10.3758/s13415-013-0195-1.

Turner, B.O., & **Miller, M.B**. (2013). Number of events and reliability in fMRI. *Cognitive, Affective, and Behavioral Neuroscience*, 13(3), 615 – 626.

Hermundstad, A.M., Bassett, D.S., Brown, K.S., Aminoff E.M., Clewett, D., Freeman, S., Frithsen, A., Johnson, A., Tipper, C., **Miller, M.B.**, Grafton, S.T., & Carlson, J.M. (2013). Structural foundations of resting-state and task-based functional connectivity in the human brain. *Proceedings of the National Academy of Sciences*, 110(15), 6169 – 6174.

Aminoff, E.M., Clewett, D., Freeman, S., Frithsen, A., Tipper, C., Johnson, A., Grafton, S.T., & **Miller, M.B.** (2012). Individual differences in shifting decision criterion: a recognition memory study. *Memory and Cognition*, 40, 1016 – 1030.

Miller, M.B., Donovan, C.L., Bennett, C.M., Aminoff, E.M., & Mayer, R. (2012) Individual differences in cognitive style and strategy predict similarities in the patterns of brain activity between individuals. *Neuroimage*, 59(1), 83 – 93.

Miller, M.B., Guerin, S.A., & Wolford, G.L. (2011). The strategic nature of false recognition in the DRM paradgim. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 37(5), 1228 – 1235.

Guerin, S.A., & **Miller, M.B**. (2011). Parietal cortex tracks the amount of information retrieved even when it is not the basis of a memory decision. *Neuroimage*, 55(2), 801 – 807.

Bennett, C.M., Baird, A.A., **Miller, M.B.,** & Wolford, G.L. (2010). Neural correlates of interspecies perspective taking in the post-mortem Atlantic Salmon: an argument for multiple comparisons correction. *Journal of Serendipitous and Unexpected Results*, 1(1), 1 – 5.

Miller, M.B., Sinnott-Armstrong, W.A., Young, L., King, D., Paggi, A., Fabri, M., Polonara, G. & Gazzaniga, M.S. (2010). Abnormal moral reasoning in complete and partial callosotomy patients. *Neuropsychologia* 48(7), 2215 – 2220.

Bennett, C.M., & **Miller, M.B**. (2010) How reliable are the results from functional magnetic resonance imaging? *Annals of the New York Academy of Sciences*, 1191, 133 – 155.

Bennett, C.M., Wolford, G.L., & **Miller, M.B**. (2009) The principled control of false positives in neuroimaging. *Social, Cognitive, and Affective Neuroscience*, 4, 417 – 422.

Ortique, S., King, D., Gazzaniga, M., **Miller, M.B**., & Grafton, S.T. (2009). Right hemisphere dominance for understanding the intentions of others: evidence from a split-brain patient. *BMJ Case Reports*, doi: 10.1136/bcr.07.2008.0593.

Miller, M.B., Donovan, C.L., Van Horn, J.D., German, E., Sokol-Hessner, P., & Wolford, G.L. (2009). Unique and persistent individual patterns of brain activity across different remory retrieval tasks. *Neuroimage*, 48, 625 – 635.

Guerin, S.A., & **Miller, M.B.** (2009). Lateralization of the parietal old/new effect: an event-related fMRI study comparing recognition memory for words and faces. *Neuroimage*, 44(1), 232-242.

Van Horn, J.D., Grafton, S.T., & **Miller, M.B**. (2008). Individual variability in brain activity: a nuisance or an opportunity? *Brain Imaging and Behavior*, 2(4), 327-334.

Guerin, S.A., & **Miller, M.B.** (2008). Semantic organization of study materials has opposite effects on recognition and recall. *Psychonomic Bulletin & Review*, 15(2), 302-308.

Miller, M.B., & Van Horn, J.D. (2007). Individual variability in brain activations associated with episodic retrieval: a role for large-scale databases. *International Journal of Psychophysiology*, 63(2), 205-213.

Ermer, E., Guerin, S.A., Cosmides, L., Tooby, J., & **Miller, M.B.** (2006). Theory of mind broad and narrow: reasoning about social exchange engages TOM areas, precautionary reasoning does not. *Social Neuroscience*, 1(3-4), 196-219.

Keehner, M., Guerin, S.A., **Miller, M.B**., Turk, D., & Hegarty, M. (2006). Modulation of neural activity by angle of rotation during imagined spatial transformations. *Neuroimage*, 33(1), 391-398.

Miller, M.B., Valsangkar-Smyth, M., Newman, S., Dumont, H., & Wolford, G. (2005). Brain activations associated with probability matching. *Neuropsychologia*, 43(11), 1598-1608.

Miller, M.B., & Valsangkar-Smyth, M. (2005). Probability matching in the right hemisphere. *Brain & Cognition*, 57(2), 165-167.

Miller, M.B., & Kingstone, A., (2005). Taking the high road on subcortical transfer. *Brain & Cognition*, 57(2), 162-164.

German, T.P., Niehaus, J.L., Roarty, M., Giesbrecht, B., & **Miller, M.B**. (2004). Neural correlates of detecting pretense: automatic engagement of the intentional stance under covert conditions. *Journal of Cognitive Neuroscience*, 16(10), 1805-1817.

Wolford, G.L., Newman, S.E., **Miller, M.B**., & Wig, G.S. (2004). Searching for patterns in random sequences. *Canadian Journal of Experimental Psychology*, 58(4), 221-228.

Handy, T.C., **Miller, M.B**., Schott, B., Shroff, N.M., Janata, P., Van Horn, J.D., Inati, S., Grafton, S.T., & Gazzaniga, M.S. (2004). Visual imagery and memory: do retrieval strategies affect what the mind's eye sees? *European Journal of Cognitive Psychology*, 16(5), 631-652.

Wig, G., **Miller, M.B**., Kingstone, A., & Kelley, W. (2004). Separable routes to human memory formation: dissociating task and material contributions in the prefrontal cortex. *Journal of Cognitive Neuroscience*, 16(1), 139-148.

Miller, M.B., Van Horn, J., Wolford, G.L., Handy, T.C., Valsangkar-Smyth, M., Inati, S., Grafton, S., & Gazzaniga, M.S. (2002). Extensive individual differences in brain activations associated with episodic retrieval are reliable over time. *Journal of Cognitive Neuroscience*, 14(8), 1200-1214.

Miller, M.B., Kingstone, A., & Gazzaniga, M.S. (2002). Hemispheric encoding asymmetry is more apparent than real. *Journal of Cognitive Neuroscience*, 14(5), 702-708.

Miller, M.B., Handy, T.C., Cutler, J., Inati, S., & Wolford, G.L. (2001). Brain activations associated with shifts in response criterion on a recognition test. *Canadian Journal of Experimental Psychology: Special Issue: Cognitive Neuroscience*, 55(2), 164-175.

Miller, M.B. (2001). Memory and higher-order cognition. *Canadian Journal of Experimental Psychology: Special Issue: Cognitive Neuroscience*, 55(2), 152 – 153.

Wolford, G.L., **Miller, M.B**., & Gazzaniga, M.S. (2000). The left hemisphere's role in hypothesis formation. *Journal of Neuroscience*, 20:RC64; 1-4.

Henke, K., Kroll, N.A., Behniea, H., Amaral, D.G., **Miller, M.B**., Rafal, R., & Gazzaniga, M.S. (1999). Memory lost and regained following bilateral hippocampal damage. *Journal of Cognitive Neuroscience*, 11(6), 682-697.

Miller, M.B., & Wolford, G.L. (1999). Theoretical commentary: the role of criterion shift in false memory. *Psychological Review*, 106(2), 398-405.

Miller, M.B. & Gazzaniga, M.S. (1998). Creating false memories for visual scenes. *Neuropsychologia*, 36(6), 513-520.

Miller, M.B., Fendrich R., Eliassen, J. C., Demirel, S., & Gazzaniga, M.S. (1996). Transcranial magnetic stimulation: delays in visual suppression due to luminance changes. *Neuroreport*, 7, 1740-1744.

Chapters in Edited Volumes *(reverse chronological order)*

Colvin, M.K., Marinsek, N., **Miller, M.B**., & Gazzaniga, M.S. (2017) Split-brain cases. In S. Schneider & M. Velmans (Eds.) *The Blackwell Companion to Consciousness* 2nd edition, John Wiley & Sons Ltd., Hoboken, New Jersey; 634 – 647.

Marinsek, N., Gazzaniga, M.S., & **Miller, M.B**. (2016) Split-brain, split mind. In S. Laureys, G. Tononi, & O. Gosseries (Eds.) *The Neurology of Consciousness* 2nd edition, Elsevier Ltd., London; 271 – 279.

Miller, M.B. & Gazzaniga, M.S. (2015) Inequality: A Neuroscience Perspective. *Institute for New Economic Thinking.*

Miller, M.B., & Dobbins, I.G. (2014). Memory as decision-making. In M.S. Gazzaniga & G.R. Mangun (Eds.) The *Cognitive Neurosciences V*. MIT Press, Cambridge, MA; 551 – 563.

Bennett, C.M., Baird, A.A., **Miller, M.B.,** & Wolford, G.L. (2012). Neural correlates of interspecies perspective taking in the post-mortem Atlantic Salmon: an argument for multiple comparisons correction. In A.D. Smith & C. Moulin (Eds.) *Neuropsychology*. Sage Publications Ltd., London: Vol. 5, 391 – 394. [*reprint*]

Bennett, C.M., & **Miller, M.B**. (2012) How reliable are the results from functional magnetic resonance imaging? In A.D. Smith & C. Moulin (Eds.) *Neuropsychology*. Sage Publications Ltd., London: Vol. 5, 395 – 429. [*reprint*]

Miller, M.B., & Kingstone, A. (2011). Interview with Michael Gazzaniga. *Annals of the New York Academy of Sciences*, 1224, 1 – 9.

Miller, M.B., & Guerin, S.A. (2010). My dinner with Mike. In P.A. Reuter-Lorenz, K. Baynes, G.R. Mangun, & E. Phelps (Eds.) *The Cognitive Neuroscience of Mind: A Tribute to Michael S. Gazzaniga*. MIT Press, Cambridge, MA; 111 – 122.

Kingstone, A., & **Miller, M.B.** (2010). Preface to The Year in Cognitive Neuroscience 2010. *Annals of the New York Academy of Sciences*.

Miller, M.B. (2009). Individual differences in the engagement of the cortex during an episodic memory task. In M.S. Gazzaniga's (Ed.) *The Cognitive Neurosciences IV*. MIT Press, Cambridge, MA; 739 – 750.

Miller, M.B. & Kingstone, A. (2009). Preface to The Year in Cognitive Neuroscience 2009. *Annals of the New York Academy of Sciences*, 1156, vii.

Gazzaniga, M.S., & **Miller, M.B.** (2008). The left hemisphere does not miss the right hemisphere. In S. Laureys & G. Tononi (Eds.) *The Neurology of Consciousness: Cognitive Neuroscience and Neuropathology*, Elsevier Ltd., London; p. 261- 270.

Kingstone, A., & **Miller, M.B.** (2008). Preface to The Year in Cognitive Neuroscience 2008. *Annals of the New York Academy of Sciences*.

Woflord, G.L., **Miller, M.B**., & Gazzaniga, M.S. (2004). Split Decisions. In M.S. Gazzaniga's (Ed.) The *Cognitive Neurosciences III*. MIT Press, Cambridge, MA; 1189-1201.

Miller, M.B. & Gazzaniga, M.S. (2000). Recovered memory function following lateralized cortical damage. In P. Williamson, A. Siegel, D. Roberts, & M.S. Gazzaniga (Eds) *Neocortical Epilepsies: Advances in Neurology*, Vol. 84. Lippincott Williams & Wilkins, Philadelphia, PA; 15-21.

Gazzaniga, M.S., & **Miller, M.B.** (2000). Testing Tulving: the split-brain approach. In E. Tulving's (Ed.) *Memory, Consciousness, and the Brain: The Tallinn Conference*. Taylor & Francis, Philadelphia, PA; 307-318.

Presented Lectures (*reverse chronological order)*

Psychonomic Society Annual Meeting, "Who gives a criterion shift?" Held virtually, Nov 2020.

COVID-19 Virtual Seminars at the US Army Soldier Center, "Who gives a criterion shift? A uniquely individualistic cognitive trait" (Invited Talk) Natick, MA, April 2020.

Summer Institute in Cognitive Neuroscience, "Scientific Misconduct and fMRI: When is the line crossed?" Santa Barbara, Ca, July 2019.

The Eighteenth Annual Southern California Learning & Memory Symposium, "Who gives a criterion shift during recognition memory tests? (Invited Talk), UCLA, May 2019.

Psychonomic Society Annual Meeting, "Not all people are cut out for criterion shifting on a recognition test" New Orleans, Louisiana, Nov 2018.

Washington University Behavior, Brain, and Cognition Seminar, "John Dean's criterion shifting – a case study" (Invited Talk) St. Louis, Missouri, Sept 2018.

Memory Disorders Research Society, "Memory thresholds" Toronto, Canada, Sept 2018.

Mad Scientist 2018, Bio Convergence & Soldier 2050 "Enhanced reasoning through targeted neurostimulation" (Invited Talk) Palo Alto, California, March 2018

University of British Columbia Department of Psychology Colloquia, "Barrack Obama, John Dean & Other Criterion Shifters," (Invited Talk) Vancouver, Canada, Oct 2016.

Memory Disorders Research Society, "Decision Criterion & The Successful Retrieval Effect," Princeton, NJ, September 2016.

Distinguished Visiting Lecture, USC Neuroscience Graduate Retreat. "Multiple Realizability: Implications for Brain Mapping," (Invited Talk) Simi Valley, CA, Sept 2016.

Summer Institute in Cognitive Neuroscience, "Scientific Misconduct and fMRI: When is the line crossed?" Santa Barbara, CA, July 2016.

UCSB Cognition, Perception & Cognitive Neuroscience seminar series, "'False' Memories," Santa Barbara, February, 2016.

Summer Institute in Cognitive Neuroscience, "Scientific Misconduct and fMRI: When is the line crossed?" Santa Barbara, CA, July 2015.

Cognitive Science Seminar, "The dangers of group averaging" UCSB, October 2014.

Memory Disorders Research Society, "Dubious memory evidence and criterion flexibility in recognition memory," Austin, TX, September 2014.

Summer Institute in Cognitive Neuroscience, "Scientific Misconduct and fMRI: When is the line crossed?" Santa Barbara, CA, July 2014.

New Horizons in Human Brain Imaging: A Focus on the Pacific Rim, "Multiple Realizability & Individual Variability in fMRI," (Invited Talk) Oahu, Hawaii, March 2014.

UCLA Cognitive Science Forum, "Most people are not cut out for criterion shifting," Los Angeles, CA, January 17, 2014.

Summer Institute in Cognitive Neuroscience, "Memory as decision-making," (Invited Talk) Squaw Valeey, CA, July 2013.

UCSB Neuroscience & Behavior seminar series, "Adaptive biases in memory," Santa Barbara, February, 2013.

Memory Disorders Research Society, "Some people are not cut out for criterion shifting," Davis, CA, September 2012.

UCSB Orientation Program, "All memories are false, some just happen to be true," Santa Barbara, CA, July 2012.

Summer Institute in Cognitive Neuroscience, "Some people are not willing to adapt memory decisions," (Invited Talk) Santa Barbara, CA, June 2012.

Human Dimension Workshop: Planning/Preparation for Maneuver Conference, "The Neural Biomarkers of Optimal and Adaptive Decision Making," (Invited Talk) Fort Benning, Georgia, June 2012.

ICB Army-Industry Collaboration Conference, "The power of brain measures to predict decision-making ability." Santa Barbara, California, February 2012.

Society for Neuroscience conference, **"**Sources of individual variability in whole brain activity during recognition memory," Washington, D.C. November 2011.

UCSB Office of Research – Responsible Conduct of Research Seminar Series, "Neuroscience and Scientific Conduct: When Crossing the Line," Santa Barbara, CA, October 2011.

International Conference on Memory 5, "Some people are not cut out for criterion shifting," York, England, August 2011.

Summer Institute in Cognitive Neuroscience, "fMRI and Scientific Conduct: When Crossing the Line," Santa Barbara, CA, June 2011.

New Horizons in Human Brain Imaging: A Focus on the Pacific Rim, "Variability & Reliability in fMRI," (Invited Talk) Oahu, Hawaii, December 2010.

US Army IMT Research Workshop, "Individual Differences in Adaptive Decision-Making: a Cognitive Neuroscience Approach," (Invited Talk) Fort Jackson, SC, October 2010.

Macarthur Foundation Law and Neuroscience Project Group-to-Individual Meeting, "The Individual Data Point in Neuroimaging," (Invited Talk) Chicago, Il., September 2010.

CIMeC Colloquium, "Variations in Brain Activity Between Individuals," (Invited Talk) Trento, Italy, October 2009

Summer Institute in Cognitive Neuroscience, "Sources of Intra- and Inter-Individual Variability in fMRI," (Invited Talk) Santa Barbara, CA, June 2009.

New Horizons in Human Brain Imaging: A Focus on the Pacific Rim, "Individual variability in the topography of brain activity during an episodic memory task: nuisance or opportunity." (Invited Talk) Waikoloa, Hawaii, April 2009.

ICB Army-Industry Collaboration Conference, "Brainprints: unique individual characteristics embedded in brain activity." Santa Barbara, California, March 2009.

Summer Institute in Cognitive Neuroscience, "Individual differences in the engagement of the cortex during an episodic memory task," (Invited Talk) Squaw Valley, California, July 2008.

Air Force Research Laboratory Seminar: Readiness & Performance; Optimizing the 21st Century Warfighter, "Optimizing Human Performance with Neuroimaging," (Invited Talk) Mesa, Arizona, February 2008.

Concordia University Center for the Study of Behavioral Neurobiology Seminar, "Laterality Effects in Episodic Memory: Evidence from Split-Brain Patients and fMRI," (Invited Talk) Montreal, Canada, November 2007.

Concordia University Psychology Department Colloquium, "Individual Variability in Brain Activity," (Invited Talk) Montreal, Canada, November 2007.

The National Academies, Committee on Military and Intelligence Methodology for Emergent Neurophysiological and Cognitive/Neural Science Research in the Next Two Decades, "Unique Patterns of Individual Brain Activity." (Invited Talk) Irvine, CA, October 2007

University of Dundee School of Psychology Visiting Speaker Programme, "Unique Patterns of Individual Brain Activity." (Invited Talk) Dundee, Scotland, October 2007.

University of Aberdeen School of Psychology Research Seminar, "Extensive Individual Variability in Brain Activity During Episodic Memory." (Invited Talk) Aberdeen, Scotland, October 2007.

University of London Goldsmiths Department of Psychology Seminar, "Unique Individual Brain Activity during Episodic Memory." (Invited Talk) London, October 2007.

Universita Politecnica della Marche, Dipartimento di Scienze Neurologiche Mediche Seminario, “Split Decisions: insights into the mind from split-brain research.” (Invited Talk) Ancona, Italy, October 2007.

Summer Institute in Cognitive Neuroscience, “Individual variability in brain activity during memory decisions,” (Invited Talk) UCSB, July 2007.

Cognitive Science Seminar, “Biased memories: a cognitive neuroscience perspective,” UCSB, February 2007.

University of York Departmental Colloquia, “All memories are false, some just happen to be true,” (Invited Talk) York, England, March 2006.

Theoretical & Experimental Neuropsychology Conference Symposia, “Individual variability in brain activations,” Montreal, Canada, June 2005

University of British Columbia Cognitive Colloquium, “Common areas of brain activations: what do they mean?” (Invited Talk) May 2005

Quantitative Methods in the Social Sciences, “Individual variability in brain activations associated with episodic memory retrieval,” UCSB, October 2004.

Society for Neuroscience conference, **“**Longitudinal fMRI study of individual variability in activations during episodic retrieval compared to working memory and semantic retrieval,” New Orleans, LA. November 2003.

National Science Foundation review panel of The fMRI Data Center, “Pedagogical & research uses of the fMRIDC database,” Dartmouth College, October 2003.

Dartmouth College Brain and Mind seminar series, “Extensive individual differences are reliable over time,” Hanover, NH, October 2002.

University of Massachusetts Neuroscience Symposium, “Frontal lobe activity during episodic retrieval tasks,” (Invited Talk) Amherst, MA, June 2002.

Tufts Medical School, Symposium on the Mind, “The neural correlates of false memories,” (Invited Talk) Boston, MA, Dec. 2001.

Cognitive Neuroscience Colloquium Series, Dartmouth Brain Imaging Center, Dartmouth College, “Strategic processes leading to brain activations during episodic retrieval,” Oct. 2001.

Xth Magdeburg International Neurobiological Symposium: Mechanisms of Learning and Memory, "Dynamic human memory," (Invited Talk) Magdeburg, Germany, Sept. 2000.

Psychological Sciences Colloquium Series, Eunice Kennedy Shriver Center, "The reconstuctive nature of memory," (Invited Talk) Waltham, MA, Jan. 2000.

Tufts University Psychology Colloquium, "All memories are false, some just happen to be true," (Invited Talk) Medford, MA, Oct. 1999.

Eastern Psychological Association, “Investigating the source of false memories with signal detection analysis,” (Invited Talk) Providence, RI, April 1999.

1st International Dartmouth Symposium on Neocortical Epilepsies, “Hemispheric specialization and cortical dynamics,” Hanover, NH, Sept. 1998.

Professional Memberships

Cognitive Neuroscience Society

Society for Neuroscience

Psychonomic Society Fellow

New York Academy of Sciences

Memory Disorders Research Society

Reviewer for the Following Journals

Brain & Cognition; *Brain & Language*; *Brain Imaging & Behavior*; *Cerebral Cortex*; *Cognitive Neuroscience*; *Consciousness and Cognition*; *Frontiers in Human Neuroscience*; *Human Brain Mapping*; *International Journal of Psychophysiology*; *Journal of Cognitive Neuroscience*; *Journal of Experimental Psychology: Learning, Memory, & Cognition*; *Journal of Memory & Language*; *Memory & Cognition*; *Mind & Language*; *Neuroimage*; *Neuropsychologia*; *Neuroscience*; *PLOS One; Proceedings of the National Academy of Sciences*; *Pscyhonomic Bulletin & Review; Trends in Cognitive Sciences*

Other Reviewing Activities

Reviewing Editor, Proceedings for the National Academy of Sciences, 2016 - present

Tenure review, McGill University, November 2020

External reviewer, US Army Research Institute for Behavioral and Social Sciences' (ARI) basic research program, October 2020.

Panelist, National Science Foundation, Graduate Research Fellowship Program, December 2019

Scientific Reviewer, US Army NSRDEC Scientific Evaluation of Study Proposal, 2019

Panelist, National Science Foundation, Cognitive Neuroscience Program, July 2018

Panelist, National Science Foundation, Graduate Research Fellowship Program, December 2018

Tenure review, National University of Singapore, Fall 2017

Tenure review, Washington University, Summer 2017

U.S. – Israel Binational Science Foundation, March 2017

Grant proposal review, Gravitation Programme, Netherlands, 110 million Euros, September 2016

Ad-hoc reviewer, National Science Foundation, August 2016

Tenure review, Interdisciplinary Center Herzliya, Israel, January 2016

Ad-hoc reviewer, National Science Foundation, August 2015

Promotion review, University of Waterloo, Summer 2015

Tenure review, University of Nevada, Reno, Summer 2015

Tenure review, University of Hawaii, Summer 2012

National Science Foundation; Perception, Action & Cognition proposal, Spring 2012

U.S. – Israel Binational Science Foundation, Fall 2011

Tenure review, University of Waterloo, Summer 2010

Additional Professional and Educational Experience

Board member of the Mellichamp Initiative Mind and Machine Intelligence, UCSB, 2019 - present

Member of the UCSB Brain Initiative, 2019 - present

Appointed to the Board of the Quantum Brain Initiative, UCSB, 2018 - 2019

Faculty mentor for the UCSB Transfer Student Summer Program, 2015 – present

Co-Organizer, Summer Institute in Cognitive Neuroscience, UCD/UCSB, 2014 – present

Vice Chair, Department of Psychological & Brain Sciences, UCSB, 2012 – 2-18

Course director, Summer Institute in Cognitive Neuroscience, 2012, Santa Barbara, CA

Member of the International Organizing Committee of the New Horizons in Human Brain Imaging, 2009 - present

Course director, Summer Institute in Cognitive Neuroscience, 2009, Santa Barbara, CA

Editor, The Year in Cognitive Neuroscience, an annual review by the Annals of the New York Academy of Sciences, 2007 – present.

Vice Director, The Sage Center for the Study of the Mind. 2006 – present

Fellow of the Summer Institute in Cognitive Neuroscience, Summer 2003, Lake Tahoe.

Co-editor of the Canadian Journal of Experimental Psychology: Special Issue on Cognitive Neuroscience, June 2001.

Chair of Poster Committee, Cognitive Neuroscience Society, 1998 - 2001.

Chair of Graduate Students Present Colloquium, Cognitive Neuroscience Society, 1999-2001.

Fellow of the Summer Institute in Cognitive Neuroscience, Summer 1997, Dartmouth College, functional brain imaging and cognition.

Student of the fMRI satellite workshop, Cognitive Neuroscience Society Conference, March 1997, Boston, MA.

Fellow of the Summer Institute in Cognitive Neuroscience, Summer 1996, Dartmouth College, memory and the frontal lobes.

Organizer of the Perspectives in Neuroscience: Memory Seminar Series, Winter 1996, UC Davis.

Courses Taught

Human Memory & Cognitive Processes, graduate core class, UCSB

Introduction to Biopsychology, UCSB

Introduction to Research Methods, UCSB

Cognitive Neuroscience, UCSB

Neuroimaging, graduate seminar, UCSB

Cognitive Neuroscience, graduate core class, UCSB

Introduction to Psychology, Dartmouth College

Introduction to Cognitive Neuroscience, Dartmouth College

Seminar: False Memory, Consciousness, and the Brain, Dartmouth College

Introduction to Psychology, University of Massachusetts Boston

Learning and Memory, University of Massachusetts Boston

Cognitive Psychology, University of Massachusetts Boston

Cognitive Neuroscience seminar, University of Massachusetts Boston

Supervisory Roles

Postdoctoral Researchers

Dr. Tyler Santander, 2016 – present

Dr. Ben Turner, 2012 – 2017 (Nanyang Technoligcal University, Singapore, Assistant Professor)

Dr. Justin Kantner, 2011 – 2014 (California State University Northridge, Assistant Professor)

Dr. Craig Bennett, 2008 – 2012 (Wyatt Technologies)

Dr. Elissa Aminoff, 2008 – 2011 (Fordham University, Assistant Professor)

Dr. Elaine German, 2003/2004 (King's College Hospital, clinical neuropsychologist)

Graduate (Ph.D.) Students

Luna Li, 2020 – present

Henri Skinner, 2020 – present

Selin Bekir, 2020 – present

Courtney Durdle, 2018 – present

Sara Leslie, 2018 – present

Evan Layher, 2015 – present

Nicole Marinsek, 2012 – 2017 (Evidation Health)

Brian Lopez, 2009 – 2016 (Fullerton College, Assistant Professor)

Amy Frithsen, 2007 – 2015 (University of California, Irvine, postdoctoral researcher)

Danielle King, 2007 – 2013 (Exponent Inc)

Christa-Lynn Donovan, 2003 – 2009 (Actelion Pharmaceuticals US Inc.)

Scott Guerin, 2003 – 2009, (Stanford University, postdoctoral researcher)

Graduate (Masters) Students

Chloe Stendham, 2014 – 2016 (Wyatt Technologies)

Jing (Jeanne) Li, 2012 – 2015 (Cottage Hospital)

Meghan Roarty, 2004 – 2013 (Santa Barbara City College, lecturer)

Full-time Research Assistants

Alex Stuber, 2017 – 2020

Jamie Raymer, 2017 – 2019

Misty Schubert, 2012 – 2016

Tyler Santander, 2010 – 2012 (University of Virginia, graduate student)

Scott Freeman, 2009 – 2011 (University of California, San Diego, graduate student)

David Clewett, 2009 – 2010 (University of Southern California, graduate student)

Undergraduate Honors Students

Jessica Simonson, 2021

Ana Bobrycki, 2020/2021, "From mom to university: attachment style and autobiographical recall do not influence students' decisions"

Jason Dong, 2019/2020, "To shift or not to shift: can feedback alter criterion shifting?"

Matejas Mackin, 2019/2020, "Exploring the effects of social and payoff manipulations on criterion shifting"

Chinmayee Balachandra, 2018/2019, "Effects of stress on cognition and performance"

Will Mehring, 2017/2018, "High definition transcranial direct current stimulation and its effect on cognitive control"

Anjali Dixit, 2017/2018, "Long term criterion shifts and reliability"

Stephanie Leal, 2010/2011

Philip Montalbano, 2007/2008

Jessica Hammon, 2007/2008

Desiree Leek, 2004/2005

Yngve Monsson, 2003/2004

Scott Hubeny, University of Massachusetts Boston, 2001/2002

Heather Dumont, University of Massachusetts Boston. 2000/2001

Tara Chambers, University of Massachusetts Boston, 1999/2000

Media Events

July 2015, featured in The Atlantic in a feature article by Emily Esfanani Smith entitled, "One Head, Two Brains."

September 2012, awarded the IgNobel Award for Neuroscience at Harvard's Sanders Theater. The ceremony was broadcasted on NPR in November 2012.

September 2012, interviewed by Scott Simon on NPR. The title of the segment was "Study on Dead Fish's Thoughts Snags Ig Nobel Prize."

March 2012, featured in Nature in a feature article by David Wolman entitled, "A Tale of Two Halves."

January 1997, featured on *Scientific American Frontiers* on PBS testing a split-brain patient. The title of the segment was "The Man with Two Brains."

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