

CURRICULUM VITA

Michael B. Miller, Ph.D.

Professor
Department of Psychological & Brain Sciences
University of California
Santa Barbara, CA 93106-9660
(805) 893-7433
miller@psych.ucsb.edu
<https://labs.psych.ucsb.edu/miller/michael/>

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

Editor, The Year in Cognitive Neuroscience, an annual review by the Annals of the New York Academy of Sciences, 2007 – present.
Task Order Leader of the Cognitive Neuroscience Task Order, Institute for Collaborative Biotechnologies, UCSB.
Vice Director, The Sage Center for the Study of the Mind, UCSB, 2006-present.
Vice Chair, Department of Psychological & Brain Sciences, UCSB, 2012 – present
Member, Defense Science Study Group, 2016 – 2017

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, Contract W911NF-07-1-0072 with the Institute for Collaborative Biotechnologies
“Neural Indicators of Optimal and Adaptable Decision-Makers.” 10/01/08 – 11/30/18,
\$280,000/year; Role – Task Order Leader & Principal Investigator

Pending:

National Science Foundation: “Assessing the Laterality of Reasoning in Neurologically Normal Adults
with a Multifaceted Causal Approach” \$675,284, 09/01/15 – 08/30/18; Role – Principle
Investigator.

National Institute of Mental Health: “Summer Institute in Cognitive Neuroscience” 07/01/15 – 06/30/20,
\$1,064,089; Role – Co-Principle Investigator (PI: G.R. Mangun).

Completed:

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

2015 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)

- Gu, S., Pasqualetti, F., Cieslak, M., Miller, M.B., Grafton, S.T., & Bassett, D.S. (under review) Controllability of structural brain networks.
- Kantner, J., Vettel, J.M., & **Miller, M.B.** (under review) Dubious decision evidence and criterion flexibility in recognition memory.
- Telesford, Q.K., Lynall, M-E., Vettel, J., Miller, M.B., Grafton, S.T., & Bassett, D.S. (under review) Node dynamics in time-dependent brain networks: An analysis of network dynamics and task-driven cognitive states
- Turner, B.O., Marinsek, N., Ryhal, E., & **Miller, M.B.** (under review). Hemispheric Lateralization in Reasoning.
- King, D.R., Schubert, M.L., & **Miller, M.B.** (in press) Lateral posterior parietal activity during reality monitoring discriminations of memories of high and low perceptual vividness. *Cognitive, Affective, and Behavioral Neuroscience*.
- 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.
- Davidson, 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.
- 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.
- Freeman, S.M., Clewett, D.V., Bennett, C.M., Kiehl, K.A., Gazzaniga, M.S., & **Miller, M.B.** (2014). The posteromedial region of the default mode network shows attenuated task-induced deactivation in psychopathic prisoners. *Neuropsychology*.
- 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 paradigm. *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.
- Ortigue, 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 memory 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., Behnia, 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. (in press) Split-brain cases. In S. Schneider & M. Velmans (Eds.) *Blackwell Companion to Consciousness* 2nd edition, John Wiley & Sons Ltd., Hoboken, New Jersey.
- Marinsek, N., Gazzaniga, M.S., & **Miller, M.B.** (in press) Split-brains, split minds. In S. Laureys, G. Tononi, & O. Gosseries (Eds.) *The Neurology of Consciousness* 2nd edition, Elsevier Ltd., London.
- 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*.
- Wolford, 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.

Conference Abstracts and Presentations (last five years only – reverse chronological order)

Kantner, J., Vettel, J. M., Turner, B. O., Schubert, M. L., Elliott, J. C., Giesbrecht, B., & **Miller, M.B.** (2014, May). The extent and neural basis of inadequate criterion placement in recognition memory. Poster presented at the 26th Annual Meeting of the Association for Psychological Science, San Francisco, CA.

Turner, B.O., Nisbet, A., & **Miller, M.B.** (2014). Separating decisional and mnemonic contributions to criterion shift-related activity changes. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Frithsen, A., & **Miller, M.B.** (2014). Differences in criterion placement and the ventral parietal cortex. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Santander, T., Lopez, B.A., Schubert, M., Bennett, C., & **Miller, M.B.** (2014). Age-related compensatory over-recruitment during recognition memory: evidence from support vector machine pattern classification. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Marinsek, N., Turner, B.O., & **Miller, M.B.** (2014). A Bayesian approach to identifying the neural correlates of hypothesis formation and evaluation. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Li, J., Turner, B.O., Risko, E.F., Kingstone, A., & **Miller, M.B.** (2014). The "resting state": not rest, not a state. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Kantner, J., Vettel, J.M., Turner, B.O., Schubert, M.L., Bullock, T., Elliot, J.C., Giesbrecht, B., & **Miller, M.B.** (2014). Electrophysiological correlates of induced liberal vs. conservative decision states in recognition memory. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Kantner, J., Vettel, J.M., & **Miller, M.B.** (2013). Limits on criterion flexibility in recognition memory. Psychonomic Society Annual Meeting, Toronto, Canada.

Li, J., Turner, B. O., Risko, E. F., Kingstone, A., & **Miller, M. B.** (2013). Modulation of default mode network activity by the knowledge of observation. Poster presented at the 43rd annual meeting of the Society for Neuroscience, San Diego, CA.

Marinsek, N., Turner, B. O., & **Miller, M. B.** The neural correlates of hypothesis formation and evaluation. Presented at the annual meeting of the Society for Neuroscience, San Diego, CA, November 2013.

Santander, T., Lopez, B. A., Schubert, M., Bennett, C., & **Miller, M. B.** (2013, November). *Lifespan changes in the neural network architecture underlying criterion shifting during recognition memory*. Poster presented at the annual Society for Neuroscience Conference, San Diego, CA.

Kantner, J., Vettel, J. M., & **Miller, M. B.** (2013, November). Limits on criterion flexibility in recognition memory. Poster presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON, Canada.

- Li, J., Turner, B. O., Risko, E. F., Kingstone, A., & **Miller, M. B.** (2013). Modulation of default mode network activity by the knowledge of observation. Poster presented at the 10th annual meeting of the Bay Area Memory Meeting, San Francisco, CA.
- Marinsek, N., Turner, B. O., & **Miller, M. B.** The neural correlates of hypothesis formation and evaluation. Presented at the Bay Area Memory Meeting, San Francisco, CA, August 2013. BAMM Justin
- Kantner, J., Vettel, J. M., & **Miller, M. B.** (2013, August). What does it take to induce extreme criterion shifts in recognition memory? Talk given at the 10th Annual Bay Area Memory Meeting, San Francisco, CA.
- Kantner, J., Vettel, J. M., & **Miller, M. B.** (2013, June). Extreme criterion shifting: Not on your life. Talk given at the meeting of the USARL Translational Neuroscience Branch Technical Advisory Board, Aberdeen Proving Ground, MD.
- Turner, B.O., Donovan, CL., & **Miller, M.B.** (2013). Dissociating memory processes by their differences in neural stability. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- King, D.R., Schubert, M., Li, J., & **Miller, M.B.** (2013). Successful retrieval effects in lateral posterior parietal cortex during recognition of perceived and imagined events under high and low target probability conditions. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- Lopez, B.A., Santander, T., Schubert, M., Kantner, J., Bennett, C., & **Miller, M. B.** (2013). Individual differences in criterion shifting during recognition memory across the lifespan. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- Frithsen, A., & **Miller, M.B.** (2013). Differences in functional connectivity patterns in the lateral parietal cortex during a resting-state scan. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- Lopez, B.A., Bennett, C., Santander, T., & **Miller, M.B.** (2013). Individual variability underlying criterion shifting in recognition memory across the lifespan. Pacific Rim Neuroimaging Conference, Oahu, HI.
- Frithsen, A., & **Miller, M.B.** (2013). The lateral parietal cortex: neural correlates of recollection and familiarity depend on how they are defined. Pacific Rim Neuroimaging Conference, Oahu, HI.
- Kantner, J., Lopez, B. A., Frithsen, A., & **Miller, M. B.** (2012). Optimizing recognition decisions under uncertainty. Annual Meeting of Psychonomic Society, Minneapolis, MN.
- Vettel, J.M., Vindiola, M., Aminoff, E.M., Tipper, C.M., Frithsen, A., Johnson, A., Grafton, S.T., & **Miller, M.B.** (2012) Predicting individual differences in decision making based on structural, functional, and behavioral measures. Society of Neuroscience Abstracts, New Orleans, LA.
- King, D.R., & **Miller, M.B.** (2012) Lateral posterior parietal activity during reality monitoring judgments of memories high and low perceptual vividness. Society of Neuroscience Abstracts, New Orleans, LA.
- Frithsen, A., & **Miller, M.B.** (2012) Successful subsequent memory is associated with a deactivation of the right hemisphere during encoding. Society of Neuroscience Abstracts, New Orleans, LA.
- Kantner, J., Lopez, B. A., Frithsen, A., & **Miller, M. B.** (2012). Optimizing recognition decisions under uncertainty. Bay Area Memory Meeting, Davis, CA.
- King, D.R., & **Miller, M. B.** (2012). Lateral posterior parietal activity during source discrimination of memories of high and low perceptual vividness. Bay Area Memory Meeting, Davis, CA.
- Lopez, B., Bennett, C., Santander, T., & **Miller, M.B.** (2012). Inter-individual variability in criterion

- shifting across the lifespan. Bay Area Memory Meeting, Davis, CA.
- Frithsen, A., & **Miller, M.B.** (2012) Successful subsequent memory is associated with deactivation of the right hemisphere during encoding. Bay Area Memory Meeting, Davis, CA.
- Aminoff, E., **Miller, M.B.**, Grafton, S.T., & Tarr, M. (2012). Early visual areas recruited in automatic contextual processing of words. Vision Sciences Society, Florida.
- Frithsen, A. & **Miller, M.B.** (2012). Separating recollection and familiarity: Remember-know and source memory tests. Cognitive Neuroscience Society Annual Meeting, Chicago, IL.
- Lopez, B., Bennett, C., Santander, T., & **Miller, M.B.** (2012). Inter-individual variability in criterion shifting across the lifespan. Cognitive Neuroscience Society Annual Meeting, Chicago, IL.
- King, D. R., & **Miller, M. B.** (2012). Lateral posterior parietal activity during source discrimination of memories of high and low perceptual vividness. Cognitive Neuroscience Society Annual Meeting, Chicago, IL.
- Tipper, C. M., Bassett, D., Porter, M. A., Aminoff, E., Johnson, A., Frithsen, A., Datko, M., **Miller, M.**, & Grafton, S. T. (2012). A graph theoretic approach to network-level functional brain mapping: Systematic differences in functional architecture of the attention network are linked to specific patterns of strategic attentional control. Cognitive Neuroscience Society Annual Meeting, Chicago, IL.
- Frithsen, A.; Kantner, J.; Lopez, B.; Santander, T.; Aminoff, E.; Vettel, J.; Tipper, C.; Grafton, S. & **Miller, M.B.** (2012). Behavioral and neural components of flexible and optimal decision-making. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Lopez, B., Bennett, C., Santander, T., King, D., Aminoff, E., Frithsen, A., Tipper, C., Bassett, D., Vettel, J., Grafton, S., & **Miller, M.B.** (2012). Brainprints: Unique patterns of brain activity across individuals and across the lifespan. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Kantner, J., Lopez, B., Frithsen, A., Santander, T., Aminoff, E., Vettel, J., Tipper, C. M., Grafton, S. T., & **Miller, M. B.** (2012). Behavioral and neural components of flexible and optimal decision-making. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Frithsen, A. & **Miller, M.B.** (2011). Dissociating recollection and familiarity in the brain. Society for Neuroscience Abstracts, Washington, D.C.
- King, D. R., & **Miller, M. B.** (2011, November). Lateralization of successful retrieval effects in posterior parietal cortex during recognition of perceived compared to imagined events. Society for Neuroscience Abstracts, Washington, D.C.
- Tipper, C. M., Janusonis, S., Aminoff, E., Frithsen, A., Johnson, A., Datko, M., **Miller, M.**, & Grafton, S. T. (2011). Individual variation in strategic inhibitory control is linked to the presence of a 4-repeat allele on the DRD4 gene. Society for Neuroscience Abstracts, Washington, D.C.
- Frithsen, A. & **Miller, M.B.** (2011). Neural correlates of recollection and familiarity as defined by the remember-know and source memory tests. Bay Area Memory Meeting, Berkeley, CA.
- King, D. R., & **Miller, M. B.** (2011, August). Can individual differences in functional connectivity between default mode regions predict memory performance? Presented at the Annual Bay Area Memory Meeting, Berkeley, CA.
- King, D., & **Miller, M.B.** (2011). Can individual differences in functional connectivity predict memory performance? Cognitive Neuroscience Society Abstracts, San Francisco. CA.

- Cohen, A.S., Grafton, S.T., **Miller, M.B.**, & German, T.C. (2011). Repetition suppression fMRI reveals domain-specific and domain-general components of the theory of mind network. Cognitive Neuroscience Society Abstracts, San Francisco. CA.
- Freeman, S., Bennett, C., Kiehl, K., Gazzaniga, M., & **Miller, M.B.** (2011). The use of support vector machine pattern classification to distinguish psychopaths from non-psychopaths in a prison population. Cognitive Neuroscience Society Abstracts, San Francisco. CA.
- Bennett, C., & **Miller, M.B.** (2011). Identifying functional networks that give rise to inter-individual variability using ICA. Cognitive Neuroscience Society Abstracts, San Francisco. CA.
- Aminoff, E., Freeman, S., Clewett, D., Tipper, C., Frithsen, A., Johnson, A., Grafton, S., & **Miller, M.B.** (2011). Neural correlates of criterion shifting in memory. Cognitive Neuroscience Society Abstracts, San Francisco. CA.
- Bennett, C.M. and **Miller, M.B.** (2011). The contribution of specific functional networks to individual variability. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Aminoff, E., Freeman, S., Clewett, D., Tipper, C., Frithsen, A., Johnson, A., Grafton, S., & **Miller, M.B.** (2011) Some individuals are not cut out for leadership roles. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Tipper CM, Basset D, Aminoff E, Johnson A, Frithsen A, Datko M, Miller M, Grafton ST. Graph theoretic quantification of individual differences in functional brain networks. Institute for Collaborative Biotechnologies Army Industry Conference. Santa Barbara, CA 2011.
- Aminoff, E., Freeman, S., Clewett, D., Tipper, C., Frithsen, A., Johnson, A., Grafton, S., & **Miller, M.B.** (2010) Behavioral and neural factors that account for individual differences of criterion shifting during recognition memory. Society of Neuroscience Abstracts, San Diego, CA.
- Bennett, C., Donovan, CL., Guerin, S.G., Lopez, B., & **Miller, M.B.** (2010). How reliable are the results from fMRI? Human Brain Mapping conference, Barcelona, Spain.
- Aminoff, E., Tipper, C., Frithsen, A., Johnson, A., Freeman, S., Clewett, D., Grafton, S., & **Miller, M.B.** (2010). Individual variability in whole brain maps of task-related activity: what are the important factors. Human Brain Mapping conference, Barcelona, Spain.
- King, D.R., & **Miller, M.B.** (2010). Left parietal activation during retrieval of past perceived versus imagined events. Human Brain Mapping conference, Barcelona, Spain.
- Bennett, C., Guerin, S.G., Donovan, CL., Aminoff, E., King, D., Frithsen, A., Lopez, B., & **Miller, M.B.** (2010). How reliable are the results from fMRI? Cognitive Neuroscience Society Abstracts, Montreal, Canada.
- Bennett, C., Donovan, CL., Guerin, S.G., & **Miller, M.B.** (2010). How reliable are the results from functional magnetic resonance imaging? Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Aminoff, E., Tipper, C., Frithsen, A., Johnson, A., Freeman, S., Clewett, D., Grafton, S., & **Miller, M.B.** (2010). Individual differences in adaptive decision making: a cognitive neuroscience analysis of 95 officers and non-officers. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- King, D.R., & **Miller, M.B.** (2010). Individual differences in brain activity associated with memory for perceived and imagined events. Army-Industry Collaboration Conference, Institute of Collaborative Biotechnology, Santa Barbara, CA.
- Aminoff, E., Frithsen, A., Tipper, C., Johnson, A., Mendoza, M., Beach, P., Grafton, S., & **Miller, M.B.**

- (2009). Response criterion in recognition memory: an examination of individual differences. Presented at the annual meeting of the Society of Neuroscience, Chicago, IL.
- Aminoff, E., Frithsen, A., Tipper, C., Johnson, A., Datko, M., Mendoza, M., Beach, P., Grafton, S., & **Miller, M.B.** (August, 2009). Distinguishing the role of response criterion in memory retrieval processing. Presented at the annual Bay Area Memory Meeting, San Francisco, CA.
- Bennett, C.M., & **Miller, M.B.** (August, 2009). The impact of experimental design on the detection of individual variability in fMRI. Presented at the annual Bay Area Memory Meeting, San Francisco, CA.
- Bennett, C.M., **Miller, M.B.**, Wolford, G.L. (2009). Neural correlates of interspecies perspective taking in the post-mortem Atlantic Salmon: an argument for multiple comparisons correction. Human Brain Mapping conference, San Francisco.
- Donovan, C.L., & **Miller, M.B.** (2009). Individual differences in connectivity and learning strategy predict variability in whole brain activity during episodic encoding and retrieval. Human Brain Mapping conference, San Francisco.
- Bennett, C.M., Guerin, S.A., **Miller, M.B.** (2009). The impact of experimental design on the detection of individual variability in fMRI. Cognitive Neuroscience Society Abstracts, San Francisco.
- Aminoff, E., & **Miller, M.B.** (2009). Utilization of contextually generated expectations. Cognitive Neuroscience Society Abstracts, San Francisco.
- Guerin, S.A., Frithsen, A., & **Miller, M.B.** (2009). Parietal cortex tracks the amount of information retrieved from memory even when it is not the basis of a memory decision. Cognitive Neuroscience Society Abstracts, San Francisco.
- Donovan, C.L. & **Miller, M.B.** (2009). Individual variability in brain activity during episodic encoding and retrieval – within- and between-subjects variability over the course of one year. Cognitive Neuroscience Society Abstracts, San Francisco.

Invited Talks (reverse chronological order)

- 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,” 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,” Squaw Valley, 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," Santa Barbara, CA, June 2012.
- Human Dimension Workshop: Planning/Preparation for Maneuver Conference, "The Neural Biomarkers of Optimal and Adaptive Decision Making," 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," Oahu, Hawaii, December 2010.
- US Army IMT Research Workshop, "Individual Differences in Adaptive Decision-Making: a Cognitive Neuroscience Approach," Fort Jackson, SC, October 2010.
- Macarthur Foundation Law and Neuroscience Project Group-to-Individual Meeting, "The Individual Data Point in Neuroimaging," Chicago, IL., September 2010.
- CIMeC Colloquium, "Variations in Brain Activity Between Individuals," Trento, Italy, October 2009
- Summer Institute in Cognitive Neuroscience, "Sources of Intra- and Inter-Individual Variability in fMRI," 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." 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," Squaw Valley, California, July 2008.
- Air Force Research Laboratory Seminar: Readiness & Performance; Optimizing the 21st Century Warfighter, "Optimizing Human Performance with Neuroimaging," 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," Montreal, Canada, November 2007.
- Concordia University Psychology Department Colloquium, "Individual Variability in Brain Activity," 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." Irvine, CA, October 2007
- University of Dundee School of Psychology Visiting Speaker Programme, "Unique Patterns of Individual Brain Activity." Dundee, Scotland, October 2007.
- University of Aberdeen School of Psychology Research Seminar, "Extensive Individual Variability in Brain Activity During Episodic Memory." Aberdeen, Scotland, October 2007.
- University of London Goldsmiths Department of Psychology Seminar, "Unique Individual Brain Activity during Episodic Memory." London, October 2007.
- Universita Politecnica della Marche, Dipartimento di Scienze Neurologiche Mediche Seminario, "Split Decisions: insights into the mind from split-brain research." Ancona, Italy, October 2007.
- Summer Institute in Cognitive Neuroscience, "Individual variability in brain activity during memory decisions," 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," 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?" 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," Amherst, MA, June 2002.
- Tufts Medical School, Symposium on the Mind, "The neural correlates of false memories," 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," Magdeburg, Germany, Sept. 2000.
- Psychological Sciences Colloquium Series, Eunice Kennedy Shriver Center, "The reconstructive nature of memory," Waltham, MA, Jan. 2000.
- Tufts University Psychology Colloquium, "All memories are false, some just happen to be true," Medford, MA, Oct. 1999.

Eastern Psychological Association, "Investigating the source of false memories with signal detection analysis," 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

New York Academy of Sciences

Memory Disorders Research Society

Association for Psychological Science

Reviewer for the Following Journals

Brain & Cognition; Brain & Language; Brain Imaging & Behavior; Cerebral Cortex; Cognitive Neuroscience; 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; Proceedings of the National Academy of Sciences; Psychonomic Bulletin & Review

Other Reviewing Activities

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

Vice Chair, Department of Psychological & Brain Sciences, UCSB, 2012 - present

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. Ben Turner, 2012 – present

Dr. Justin Kantner, UCSB/ARL, 2011 – 2014 (Washington University)

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

Dr. Elissa Aminoff, 2008 – 2011 (University of Pittsburgh)

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

Graduate (Ph.D.) Students

Jing (Jeanne) Li, 2012 – present

Nicole Marinsek, 2012 – present

Brian Lopez, 2009 – present

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

Danielle King, 2007 – 2013 (University of Texas, Dallas)

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

Scott Guerin, 2003 – 2009, (Yale University)

Graduate (Masters) Students

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

Full-time Research Assistants

Misty Schubert, 2012 – present

Tyler Santander, 2010 – 2012 (University of Virginia)

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

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

Undergraduate Honors Students

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

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."

"the Dude abides"