

TIMOTHY F. BRADY

curriculum vitae

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Education and Professional Experience

Full Professor	2023-present
Associate Professor	2021-2022
Assistant Professor	2015-2020
University of California, San Diego, Department of Psychology	
<i>Other affiliations:</i> Halicioğlu Data Science Institute, Computational Social Sciences	
Post-doctoral Fellow / Research Scientist, Harvard University	2011-2015
Department of Psychology	
Ph.D., Massachusetts Institute of Technology	2006-2011
Department of Brain and Cognitive Sciences	
B.A., Yale University	2002-2006
Cognitive Science, <i>cum laude</i>	

Research Interests

- Visual Cognitive Neuroscience
- Learning and Memory
- Computational Modeling

Awards and Fellowships

Society of Experimental Psychologists Early Investigator Award	2021
<i>given annually to one North American early-career researcher who has made the most significant contributions to the field</i>	
Vision Sciences Society Young Investigator Award	2020
<i>given annually to one early stage researcher who has already made significant contributions to the field</i>	
APA Distinguished Scientific Award for Early Career Contribution to Psychology	2020
<i>cognition and human learning (given once every 2 years)</i>	
Psychonomic Society Early Career Award	2019
<i>recognizes scientists who have made significant contributions to scientific psychology</i>	
Rising Star - Association for Psychological Science	2016
<i>recognizes outstanding psychological scientists in the earliest stages of their research career</i>	

Best Talk Award, Conference on Object Perception, Attention and Memory (OPAM) <i>for best talk/paper of the conference</i>	2014
New Investigator Award, American Psychological Association <i>division: experimental psychology</i>	2013
Postdoctoral Fellowship, Harvard Mind/Brain/Behavior Initiative <i>Advisors: George Alvarez, Daniel Schacter, Güven Güzeldere</i>	2013-2014
Robert J. Glushko Dissertation Prize, Cognitive Science Society <i>for best dissertations in Cognitive Science</i>	2012
Graduate Research Fellowship, National Science Foundation (NSF)	2007-2011
Rovereto Attention Workshop Travel Award	2011
Walle Nauta Award for Continued Dedication to Teaching <i>for role as teaching assistant of fMRI of High-Level Vision</i>	2010
Vision Sciences Society Travel Award	2010
Walle Nauta Award for Continued Dedication to Teaching <i>for role as teaching assistant of Laboratory in Visual Cognition</i>	2009
Angus MacDonald Award for Excellence in Undergraduate Teaching <i>for role as teaching assistant of Introduction to Psychology</i>	2008
European Conference on Visual Perception Travel Award	2008

Active and Recent Grant Support

Active:

- National Science Foundation, BCS-1653457 (2017-2023)
 “CAREER: Spatial Ensemble Structure in Visual Working Memory”
 Role: PI
- National Science Foundation, BCS- 2146988 (2022-2025)
 “Continuous strength, population-based representations in visual working memory”
 Role: PI
- National Science Foundation, BCS-2141189 (2022-2025):
 “Testing the role of learned regularities in visual working memory:
 The nature of chunking for continuous visual features”
 Role: PI

Recent:

National Science Foundation, BCS-1829434 (2018-2022)

“Familiarity and Meaning in Visual Working Memory”

Role: PI

National Science Foundation, DUE-1624958 (2016-2021)

“Collaborative Research: From knowledge consumers to knowledge producers: A scalable experiential learning approach for psychology and related disciplines”

Role: PI

National Science Foundation, BCS-1749551 (2018-2022)

“Intuitive Archeology in childhood: Detecting social transmission in the design of artifacts”

Role: Co-PI

Center for Open Science, #7976 (2019-2022)

Replication study for SCORE (‘Systematizing Confidence in Open Research and Evidence’)

Role: PI

Publications

PDFs on <https://bradylab.ucsd.edu>.

Data and code on <https://osf.io/jvfys/>

Edited Book

1. Brady, T.F., and Bainbridge, W.A. (Eds.) (2022). *Visual Memory*. Routledge.
Table of contents: <https://bradylab.ucsd.edu/VisualMemory/>

Preprints / Submitted Manuscripts

87. Khvostov, V.A., Markov, Y.A., Brady, T.F., and Utochkin, I.S. (in revision). Limitations on animacy categorization in ensemble perception. Preprint available on PsyArXiv: <https://doi.org/10.31234/osf.io/d4za6>
86. Urgolites, Z.J., Brady, T.F., and Wood, J.N. (in revision). Verbal interference suppresses object-scene binding in visual long-term memory. Preprint available: <https://doi.org/10.31234/osf.io/c9vue>
85. Brady, T. F., Schacter, D.L., and Alvarez, G.A. (in revision). The adaptive nature of false memories is revealed by gist-based distortion of true memories. Preprint available on PsyArXiv: <https://doi.org/10.31234/osf.io/zeg95>
84. Babic, Z., Schurgin, M.W., and Brady, T.F. (in revision). Is short-term storage correlated with fluid intelligence? Strategy use explains the apparent relationship between 'number of remembered items' and fluid intelligence. Preprint available on PsyArXiv: <https://doi.org/10.31234/osf.io/83ch4>

83. Chunharas, C., Brady, T.F., and Ramachandran, V.S. (in revision). Selective Amplification of Salient Features of Visual Memories During Early Memory Consolidation. PsyArXiv Preprint. <https://doi.org/10.31234/osf.io/5dcxa>
82. Fougne, D., Alvarez, G.A. and Brady, T.F. (in revision). If at first you don't succeed, try, try again: Second chances reveal more information in working memory. Preprint available on PsyArXiv: <https://psyarxiv.com/evqtn/>
81. Schurgin, M.W., Cunningham, C.A., Egeth, H.E. and Brady, T. F. (in revision). Episodic Memory Can Replace Active Maintenance in Working Memory When Available. Preprint available on bioRxiv: <https://doi.org/10.1101/381848>
80. Williams, L., Störmer, V.S., Brady, T.F. (submitted). The working memory advantage for meaningful stimuli persists under high levels of proactive interference. PsyArXiv preprint: <https://doi.org/10.31234/osf.io/e5fkz>
79. Tikhonenko, P.A., Brady, T.F., & Utochkin, I.S. (in revision). Independent storage of real-world object features is visual rather than verbal in nature.
78. Wang, Y., Brady, T.F. (in revision). Intuitive Global Mean Estimation in Scatterplots with Spatial Clusters. PsyArXiv: <https://doi.org/10.31219/osf.io/w4xq3>
77. Chunharas, C., Brady, T.F. (in revision). Chunking, attraction, repulsion and ensemble effects are ubiquitous in visual working memory. PsyArXiv: <https://doi.org/10.31234/osf.io/es3b8>
76. Robinson, M. M., Williams, J.R., Brady, T.F. (in revision). What does it take to falsify a psychological theory? A case study on recognition models of visual working-memory. PsyArXiv Preprint: <https://doi.org/10.31234/osf.io/7an3x>
75. Chung, Y.H., Brady, T.F., Störmer, V.S., (submitted). Meaningfulness and familiarity expand visual working memory capacity. PsyArXiv preprint: <https://doi.org/10.31234/osf.io/p8wne>

Published/in press

74. Chung, Y.H, Brady, T.F., and Störmer, V.S. (in press). Sequential encoding aids working memory for meaningful objects' identities but not for their colors. *Memory and Cognition*.
73. Jabar, S.B., Sreenivasan, K.K. Lentzou, S., Kanabar, A., Brady, T.F., and Fougne, D. (in press). Using a betting game to reveal the rich nature of visual working memories. *Scientific Reports*.
72. Bays, P.M., Schneegans, S., Ma, W.J., Brady, T.F. (in press). Representation and computation in working memory. *Nature Human Behaviour*.

71. Brady, T.F., Robinson, M. M., Williams, J.R. (in press). Noisy and hierarchical visual memory across time scales. *Nature Reviews Psychology*.
70. Brady, T.F. and Störmer, V.S. (in press). Comparing memory capacity across stimuli requires maximally dissimilar foils: Using deep convolutional neural networks to understand visual working memory capacity for real-world objects. *Memory and Cognition*.
69. Robinson, M. M., DeStefano, I., Brady, T.F., Vul, E. (in press). Local but not global graph theoretic measures of semantic networks generalize across tasks. *Behavior Research Methods*.
68. Robinson, M. M., DeStefano, I., Vul, E., Brady, T.F. (2023). How do people build up visual memory representations from sensory evidence? Revisiting two classic models of choice. *Journal of Mathematical Psychology*, 117, 102805.
67. Cohen, M., Keefe, J. M. and Brady, T.F. (2023). Perceptual awareness occurs along a graded continuum: No evidence of all-or-none failures in continuous reproduction tasks. *Psychological Science*, 34(9), 1033-1047.
66. Schill, H.M., Gray, S., and Brady, T.F. (2023). Visual Hindsight Bias for Abnormal Mammograms in Radiologists. *Journal of Medical Imaging*, 10(S1).
65. Wang, Y., Lew, T.F., Brady, T.F., Vul, E. (2023). Structured Visuospatial Representations Revealed through Serial Reproduction. *Journal of Experimental Psychology: Human Perception and Performance*, 10.1037/xhp0001086.
64. Chung, Y.H, Brady, T.F., and Störmer, V.S. (2023). No fixed limit for storing simple visual features: Realistic objects provide an efficient scaffold for holding features in mind. *Psychological Science*, <https://doi.org/10.31234/osf.io/bg4r5>
63. Robinson, M. M., Brady, T.F. (2023). A quantitative model of ensemble perception as summed activation in feature space. *Nature Human Behaviour*. <https://doi.org/10.31234/osf.io/k3d26>
62. Chung, Y.H, Schurgin, M.W. Brady, T.F. (2023). The role of motion in visual working memory for dynamic stimuli: more lagged but more precise representations of moving objects. *Attention, Perception & Psychophysics*, <https://doi.org/10.31234/osf.io/cu3zg>
61. Brady, T.F., Robinson, M. M., Williams, J. R., & Wixted, J. (2023). Measuring memory is harder than you think: How to avoid problematic measurement practices in memory research. *Psychonomic Bulletin & Review*, 30(2):421-449 <https://doi.org/10.31234/osf.io/qd75k>
60. Williams, J.R.*, Robinson, M. M.*, Brady, T.F. (2022). There is no theory-free measure of "swaps" in visual working memory experiments. *Computational Brain & Behavior*, <https://doi.org/10.1007/s42113-022-00150-5>

59. Williams, J. R., Robinson, M. M., Schurgin, M.W., Wixted, J.T., and Brady, T.F. (2022). You can't "count" how many items people remember in working memory: The importance of signal detection-based measures for understanding change detection performance. *Journal of Experimental Psychology: Human Perception and Performance*, 48(12):1390-1409. doi: 10.1037/xhp0001055.
58. Goldenberg, A., Schöne, J., Huang, Z., Sweeny, T., Ong, D. C., Brady, T.F., Robinson, M.M., Levari, D., Zaki, J., Gross, J. (2022). Amplification in the Evaluation of Emotional Expressions Over Time. *Nature Human Behaviour*, <https://doi.org/10.1038/s41562-022-01390-y>.
57. Chunharas, C., Rademaker, R. L., Brady, T.F., and Serences, J. (2022). An adaptive perspective on visual working memory distortions. *Journal of Experimental Psychology: General*.
56. Williams, J., Brady, T.F., and Störmer, V.S. (2022). Guidance of attention by working memory is a matter of representational fidelity. *Journal of Experimental Psychology: Human Perception and Performance*, 48(3) <https://doi.org/10.1037/xhp0000985>
55. McColeman, C. M., Yang, F., Brady, T. F., Franconeri, S. (2021). Rethinking the Ranks of Visual Channels. *IEEE Transactions on Visualization and Computer Graphics*.
54. O'Neill, K., Liu, A., Yin, S., Brady, T.F., and De Brigard, F. (2021). Effects of Category Learning Strategies on Recognition Memory. *Memory and Cognition*, 50, 512-526. <https://doi.org/10.3758/s13421-021-01207-9>.
53. DeStefano, I.C. and Brady, T.F., Vul. E. (2021). A Framework for Predicting Memory Errors with a Bayesian Model of Concept Generalization. *Proceedings of the Cognitive Science Society*.
52. Allen, M.G., DeStefano, I.C. and Brady, T.F. (2021). Chunks are not "Content-Free": Hierarchical Representations Preserve Perceptual Detail within Chunks. *Proceedings of the Cognitive Science Society*.
51. Schill, H.M., Wolfe, J.M., and Brady, T.F. (2021). Relationships between expertise and distinctiveness: abnormal medical images lead to enhanced memory performance only in experts. *Memory and Cognition*. Preprint: <https://doi.org/10.31234/osf.io/b4zv3>
50. Markov, Y., Utochkin, I.S., and Brady, T.F. (2021). Real-world objects are not stored in holistic representations in visual working memory. *Journal of Vision*. Preprint: <https://doi.org/10.31234/osf.io/rkpnq>
49. Brady, T.F. and Störmer, V.S. (2021). The role of meaning in visual working memory: Real-world objects, but not simple features, benefit from deeper processing. *Journal of Experimental Psychology: Learning, Memory and Cognition*. Preprint:

<https://doi.org/10.31234/osf.io/kzvdg>

48. Lau, J.S., Pashler, H., and Brady, T.F. (2021). Target Templates in Low Target-Distractor Discriminability Visual Search Have Higher Resolution, but the Advantage They Provide is Short-lived. *Attention, Perception & Psychophysics*. Preprint: <https://doi.org/10.31234/osf.io/ab8h2>
47. Asp, I.E., Störmer, V.S., and Brady, T.F. (2021). Greater visual working memory capacity for visually-matched stimuli when they are recognized as meaningful. *Journal of Cognitive Neuroscience*. Preprint: <https://doi.org/10.31234/osf.io/r6njf>
46. Schurgin, M. W., Wixted, J. T., and Brady, T.F. (2020). Psychophysical Scaling Reveals a Unified Theory of Visual Memory Strength. *Nature Human Behaviour*. <https://www.nature.com/articles/s41562-020-00938-0> Preprint: <https://doi.org/10.1101/325472>.
45. Lau, J.S., and Brady, T.F. (2020). Noisy Perceptual Expectations: Multiple Object Tracking Benefits When Objects Obey Features of Realistic Physics. *Journal of Experimental Psychology: Human Perception and Performance*. Preprint: <https://doi.org/10.31234/osf.io/6t859>
44. DeStefano, I., Vul, E., and Brady, T.F. (2020). Influences of both prior knowledge and recent history on visual working memory. *Proceedings of the Cognitive Science Society*. Preprint: <https://doi.org/10.31234/osf.io/ktrsj>
43. Miner, A., Schurgin, M.W., and Brady, T.F. (2020). Is working memory inherently more “precise” than long-term memory? Extremely precise visual long-term memories for frequently encountered objects. *Journal of Experimental Psychology: Human Perception and Performance*, 46(8), 813-830. Preprint: <https://doi.org/10.31234/osf.io/qr6b9>
42. Utochkin, I. S., & Brady, T. F. (2020). Individual representations in visual working memory inherit ensemble properties. *Journal of Experimental Psychology: Human Perception and Performance*, 46(5), 458-473. <https://doi.org/10.1037/xhp0000727>
41. Rahnev, D., Desender, K., Lee, A.L.F., and 80 alphabetical authors, including Brady, T.F. (2020). The confidence database. *Nature Human Behaviour*, <https://doi.org/10.1038/s41562-019-0813-1>.
40. Utochkin, I. S., & Brady, T. F. (2020). Independent storage of different features of real-world objects in long-term memory. *Journal of Experimental Psychology: General*, 149(3), 530-549.
39. Brady, T.F., and Utochkin, I. (2019). Entities also require relational coding and binding. *Brain and Behavioral Sciences*, 42, E285. doi:10.1017/S0140525X19001924
38. Yin, S., O’Neill, K., Brady, T.F., and De Brigard, F. (2019). The Effect for Category Learning on Recognition Memory: A Signal Detection Theory Analysis. *Proceedings of*

the Cognitive Science Society, pp. 3165-3169.

37. Hurwitz, E., Brady, T.F., Schachner, A. (2019). Detecting social transmission in the design of artifacts via inverse planning. *Proceedings of the Cognitive Science Society*, pp. 897-903.
36. Schurgin, M. W., and Brady, T.F. (2019). When “capacity” changes with set size: Ensemble representations support the detection of across-category changes in visual working memory. *Journal of Vision*, 19 (3), doi:10.1167/19.5.3.
35. Brady, T.F., Störmer, V.S., Shafer-Skelton, A., Williams, J.R., Chapman, A.F., Schill, H. (2019). Scaling up visual attention and visual working memory to the real world. *Psychology of Learning and Motivation*, 70.
34. Brady, T. F., Alvarez, G., and Störmer, V. (2019). The role of meaning in visual memory: Face-selective brain activity predicts memory for ambiguous face stimuli. *Journal of Neuroscience*, 39 (6) 1100-1108.
33. Shafer-Skelton, A. and Brady, T.F. (2019). Scene priming relies primarily on low-level features rather than scene layout. *Journal of Vision*, , 19 (14), doi:10.1167/19.1.14.
32. Chunharas, C., Rademaker, R. L., Sprague, T. C., Brady, T.F., and Serences, J. (2019). Separating memoranda in depth increases visual working memory performance. *Journal of Vision*, 19(4), doi:10.1167/19.1.4
31. Schachner, A., Brady, T.F., Oro, K., Lee, M. (2018). Intuitive Archeology: Detecting social transmission in the design of artifacts. In C. Kalisch, M. Rau, T. Rogers, & J. Zhu, *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Madison, WI: Cognitive Science Society.
30. Lau, J. S. and Brady, T.F. (2018). Ensemble Statistics Accessed through Proxies: Range Heuristic and Dependence on Low-Level Properties in Variability Discrimination. *Journal of Vision*, 18(3), doi:10.1167/18.9.3.
29. Carr, E.W., Brady, T.F., and Winkielman, P. (2017). Are you smiling or have I seen you before? Familiarity makes faces look happier. *Psychological Science*, 28(8), 1087-1102
28. Brady, T. F., Shafer-Skelton, A., and Alvarez, G.A. (2017). Global texture representations are critical to rapid scene perception. *Journal of Experimental Psychology: Human Perception and Performance*, 43(6), 1160-1176.
27. De Brigard, F., Brady, T.F., Ruzic, L. and Schacter, D.L. (2017). Tracking the emergence of memories: A category-learning paradigm to explore schema-driven recognition. *Memory and Cognition*, 45(1), 105-120.
26. Brady, T. F., Störmer, V., and Alvarez, G. A. (2016). Working memory is not fixed capacity: More active storage capacity for real-world objects than simple stimuli.

Proceedings of the National Academy of Sciences, 113(27), 7459-7464.

25. Brady, T. F. and Alvarez, G.A. (2015). Contextual effects in visual working memory reveal hierarchically structured memory representations. *Journal of Vision*, 15(15):6, 1-24.
24. Haberman, J., Brady, T.F., and Alvarez, G.A. (2015). Individual differences in ensemble perception reveal multiple, independent levels of ensemble representation. *Journal of Experimental Psychology: General*, 144(2), 432-446.
23. Brady, T. F. and Alvarez, G.A. (2015). No evidence for a fixed object limit in working memory: Ensemble representations inflate estimates of working memory capacity for complex objects. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 41(3), 921-929.
22. Suchow, J. W., Fougny, D., Brady, T. F., and Alvarez, G.A. (2014). Terms of the debate on the format and structure of visual working memory. *Attention, Perception & Psychophysics*, 76(7), 2071-2079.
21. Brady, T. F., Konkle, T., Alvarez, G.A., and Oliva, A. (2013). Real-world objects are not represented as bound units: Independent forgetting of different object details from visual memory. *Journal of Experimental Psychology: General*, 142(3), 791-808. *
20. Suchow, J. W. *, Brady, T. F.*, Fougny, D., and Alvarez, G. A. (2013). Modeling visual working memory with the MemToolbox. *Journal of Vision*, 13(1), 9. *equal contribution
19. Brady, T. F., Konkle, T.F., Gill, J., Oliva, A. and Alvarez, G.A. (2013). Visual long-term memory has the same limit on fidelity as visual working memory. *Psychological Science*, 24(6), 981-990.
18. Brady, T.F., and Tenenbaum, J.B. (2013). A probabilistic model of visual working memory: Incorporating higher-order regularities into working memory capacity estimates. *Psychological Review*, 120(1), 85-109.
17. Brady, T.F. and Oliva, A. (2012). Spatial frequency integration during active perception: Perceptual hysteresis when an object recedes. *Frontiers in Perception Science*, 3(462), doi: 10.3389/fpsyg.2012.00462.
16. Brady, T. F., Konkle, T, and Alvarez, G.A. (2011). A review of visual memory capacity: Beyond individual items and towards structured representations. *Journal of Vision*, 11(5):4, 1-34.
15. Brady, T.F. and Alvarez, G.A. (2011). Hierarchical encoding in visual working memory: ensemble statistics bias memory for individual items. *Psychological Science*, 22(3), 384-392.

14. Park, S., Brady, T.F., Greene, M.R., and Oliva, A. (2011). Disentangling scene content from spatial boundary: Complementary roles for the PPA and LOC in representing real-world scenes. *Journal of Neuroscience*, 31(4), 1333-1340.
13. Brady, T. F., Fournie, D., and Alvarez, G.A. (2011). Comparisons between different measures of working memory capacity must be made with estimates that are derived from independent data [Response to Anderson et al.] *Journal of Neuroscience*, Oct. 14th.
12. Konkle, T.*, Brady, T.F.*, Alvarez, G.A. and Oliva, A. (2010). Scene memory is more detailed than you think: the role of categories in visual long-term memory. *Psychological Science*, 21(11), 1551-1556. *equal contribution
11. Brady, T.F., and Alvarez, G.A. (2010). Ensemble statistics of a display influence the representation of items in visual working memory. *Visual Cognition*, 18 (1), 114-118.
10. Konkle, T., Brady, T.F., Alvarez, G.A. and Oliva, A. (2010). Conceptual distinctiveness supports detailed visual long-term memory for real-world objects. *Journal of Experimental Psychology: General*, 139(3), 558-578.
9. Brady, T.F. and Tenenbaum, J.B. (2010). Encoding higher-order structure in visual working memory: A probabilistic model. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Portland, OR: Cognitive Science.
8. Brady, T.F., Konkle, T., and Alvarez, G.A. (2009). Compression in visual short-term memory: using statistical regularities to form more efficient memory representations. *Journal of Experimental Psychology: General*, 138 (4), 487-502.
7. Schachner, A., Brady, T.F., Pepperberg, I.M. and Hauser, M.D. (2009). Spontaneous motor entrainment to music in multiple vocal-learning species. *Current Biology*, 19 (10), 831-836.
6. Junge, J.A., Brady, T.F. and Chun, M.M. (2009). The contents of perceptual hypotheses: evidence from rapid resumption of interrupted visual search. *Attention, Perception & Psychophysics*, 71, 681-689.
5. Brady, T.F., Konkle, T., Oliva, A. and Alvarez, G.A. (2009). Detecting changes in real-world objects: The relationship between visual long-term memory and change blindness. *Communicative & Integrative Biology*, 2 (1), 1-3.
4. Brady, T.F., Konkle, T., Alvarez, G. A. and Oliva, A. (2008). Visual long-term memory has a massive storage capacity for object details. *Proceedings of the National Academy of Sciences*, USA, 105 (38), 14325-14329.
3. Brady, T.F., Konkle, T., and Alvarez, G.A. (2008). Efficient Coding in Visual Short-Term Memory: Evidence for an Information-Limited Capacity. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science*

Society (pp. 887-892). Austin, TX: Cognitive Science Society.

2. Brady, T.F. and Oliva, A. (2008). Statistical learning using real-world scenes: extracting categorical regularities without conscious intent. *Psychological Science*, 19 (7), 678-685.
1. Brady, T.F., and Chun, M.M. (2007). Spatial constraints on learning in visual search: Modeling contextual cueing. *Journal of Experimental Psychology: Human Perception and Performance*, 33 (4), 798-815.

Conference Presentations

2023

P1. Cohen, M. Keefe, J., Brady, T.F. (2023). Perceptual awareness occurs along a graded continuum: No evidence of all-or-none failures in continuous reproduction tasks. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P2. Williams, J., Stormer, V., Brady, T.F. (2023). Precise Memories and Imprecise Guidance: Why attention is guided towards colors that I'm certain I didn't see. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P3. DeStefano, I., Brady, T.F. (2023). Object-based attention improves memory fidelity for unattended same-object stimulus, but at a cost to the attended stimulus. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P4. Robinson, M., DeStefano, I., Vul, E., Brady, T.F. (2023). Building up visual memories from sensory evidence. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P5. McPherson, M.J., Brady, T.F. (2023) When is it helpful to forget? Comparing the effects of forgetting on visual and auditory perceptual decisions. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P6. Wany, Y., Brady, T.F., (2023). Global Mean Position Perception of Multiple Spatially-Separated Ensembles. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P7. Brady, T.F. Robinson, M. (2023). Visual similarity structure predicts memory errors a priori. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

2022

P8. DeStefano, I., Allen, M., Brady, T.F. (2022). Detailed item-level information persists in visual working memory throughout chunk learning. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P9. Robinson, M. Williams, L., Brady, T.F. (2022). Evaluating models of visual working memory in change detection: Discrete-slots or non-diagnostic data? Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P10. Pallis-Hassani, N., Schill, H., Brady, T.F. (2022). Face Masks: Implications for Identity Face Processing in Ensemble Perception. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P11. Shafer-Skelton, A., Brady, T.F., Serences, J.T. (2022). Global and spatially specific representations of 3D scene surface configurations in scene-selective cortex. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P12. Williams, L. W., Stoermer, V.S., Brady, T.F. (2022). Hybrid search performance is better for target sets with greater memory strength. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P13. Schill, H., Gray, S., Brady, T.F. (2022). Meaningful numbers: Upright numbers are better remembered than rotated numbers regardless of encoding strategy. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P14. Brady, T.F. (2022). Visual Working Memory Performance With Just 1 Item Predicts Nearly All of the Variance in Performance with 5 Items. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P15. Chung, Y.H., Brady, T.F., Stoermer, V.S. (2022). Working Memory for Simple Features Benefits from Meaningful Stimuli. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P16. Williams, J., Robinson, M.M., Schurgin, M., Wixted, J., Brady, T.F. (2022). You can't "count" how many items people remember in working memory: The importance of signal detection-based measures for understanding change detection performance. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P17. Brady, T. F. (2022). Shared Constraints on Perceptual Detail in Visual Working and Visual Long-Term Memory. Talk presented at the Annual Meeting of the *Society for Experimental Psychology*, Chicago, IL.

P18. Brady, T. F. (2022). What limits visual long-term memory? Perceptual constraints on long-term memories. Talk presented at the Annual Meeting of the *Vision Sciences Society (virtual)*.

P19. DeStefano, I., Robinson, M.M., Brady, T.F., Vul, E. (2022). Robustness of graph theoretic representations of semantic networks. Poster presented at the Annual Meeting of the *Cognitive Sciences Society*, Toronto, Canada.

2021

P20. Brady, T. F., Allen, M., and DeStefano, I. (2021). Chunking is not all-or-none: hierarchical

representations preserve perceptual detail within chunks. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P21. Williams, L., Brady, T. F. and Stoermer, V.S. (2021). Category labels do not improve working memory performance for ambiguous shapes. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P22. Robinson, M.M. & Brady, T. F. (2021). A quantitative model of ensemble perception as summed patterns of activation in feature space. Talk presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P23. Schill, H.M. & Brady, T. F. (2021). Visual Hindsight Bias for Mammogram Abnormalities in Expert Radiologists. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P24. DeStefano, I. & Brady, T. F. (2021). Interactions between items within working memory overpower biases from recent history and long-term category priors. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P25. Abovian, A., Schill, H.M. & Brady, T. F. (2021). Encoding specificity in face memory: Face masks harm long-term memory for faces, but wearing the same (unique) mask each time is best. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P26. Tikhonenko, P., Brady, T. F. Utochkin, I.S. (2021). Independent storage of real-world object features is visual rather than verbal in nature. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P27. Khvostov, V., Markov, Y. & Brady, T. F. (2021). Limitations on animacy categorization in ensemble perception. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P28. Stoermer, V.S. & Brady, T. F. (2021). The role of meaning in visual working memory: Real-world objects, but not simple features, benefit from deeper processing. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P29. Shafer-Skelton, A.S., Brady, T. F. and Serences, J. (2021). Deep-net-derived surface estimations from natural scenes predict voxel responses in scene-selective cortex. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P30. Allen, M., DeStefano, I. & Brady, T. F. (2021). Remembering similar items results in better visual working memory performance due to chunking and not due to more detailed encoding. Talk presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P31. DeStefano, I.C., Brady, T.F., Vul. E. (2021). A Framework for Predicting Memory Errors with a Bayesian Model of Concept Generalization. Talk presented at the Annual Meeting of the *Cognitive Science Society* (Virtual).

P32. Allen, M.G., DeStefano, I.C. and Brady, T.F. (2021). Chunks are not "Content-Free":

Hierarchical Representations Preserve Perceptual Detail within Chunks. Talk presented at the Annual Meeting of the *Cognitive Science Society* (Virtual).

P33. Robinson, M.M., Destefano, I.C., Brady, T.F., and Vul, E. (2021). Revisiting the connection between Luce's choice axiom and Signal Detection Theory. Talk presented at the Annual Meeting of the *Society for Mathematical Psychology* (virtual).

P34. Brady, T.F. (2021). Visual Working Memory Performance With Just 1 Item Predicts Nearly All of the Variance in Performance with 5 Items. Talk presented at the Annual Meeting of the *Psychonomic Society* (virtual).

P35. Brady, T.F., Allen, M. & DeStefano, I. (2021). Improving working memory capacity through learned knowledge not via pointers to long-term memories, but rich, hierarchical memory traces. Talk presented at the Annual Meeting of the *Psychonomic Society* (virtual).

P36. Tikhonenko, P.A., Brady, T.F., & Utochkin, I.S. (2021). Independent storage of real-world object features is visual rather than verbal in nature. Talk presented at the Annual Meeting of the *Psychonomic Society* (virtual).

P37. Allen, M., DeStefano, I. & Brady, T. F (2021). Chunks are not "Content-Free": Hierarchical Representations Preserve Perceptual Detail within Chunks. Poster presented at the Annual Meeting of the *Psychonomic Society* (virtual).

2020

P38. Brady, T.F. and Stoermer, V.S. (2020). The Role of Meaning in Visual Working Memory Capacity. Presented at the Annual Meeting of *Psychonomics Society* (Virtual).

P39. DeStefano, I., Vul, E. and Brady, T. F (2020) Interactions between prior knowledge and contextual information in visual working memory. Presented at the Annual Meeting of the *Cognitive Sciences Society* (Virtual).

P40. Brady, T. F. Schurgin, M., Wixted, J. (2020). No distinction between 'capacity' and 'precision': Populations of noisy familiarity signals explain visual memory errors. Talk presented at the Annual Meeting of the *Society for Mathematical Psychology* (Virtual).

P41. Williams, J.R. & Brady, T. F. & Stormer, V.S. (2020). Natural variation between multiple working memory items causes only one item to guide attention. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P42. Chung, Y.H., Schurgin, M.W. & Brady, T. F (2020). The role of object files in visual working memory: Facilitating integration over longer timescales for moving objects. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P43. DeStefano, I., Vul, E. and Brady, T. F (2020) Interactions between prior knowledge and contextual information in visual working memory. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P44. Allen, M. & Brady, T. F (2020). Many exposures to a real-world object without knowing the details: The focus of attention does not include entire objects but only the relevant level of abstraction. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P45. Robinson, M.M., Wixted, J.T. & Brady, T. F (2020). Decision strategy matters: Different testing procedures can change decision strategies and lead to spurious effects on estimates of visual working memory sensitivity. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P46. Keefe, J., Utochkin, I.S., Lau, J.S-H., Brady, T. F, & Stormer, V.S. (2020). Information about all items is actively held in mind when computing ensemble statistics about a set. Talk presented at the *Virtual Working Memory Symposium, 2020*.

P47. Brady, T. F, Schurgin, M., Wixted, J. (2020). Psychophysical scaling and the nature of memory: Noisy familiarity signals explain visual memory errors. Talk presented at *Neuromatch 2.0 (Virtual)*.

P48. Brady, T. F, Schurgin, M., Wixted, J. (2020). No distinction between 'capacity' and 'precision': Continuous memory strength explains visual memory errors. Poster presented at the Annual Meeting of the *Cognitive Neuroscience Society (Virtual)*.

P49. Shafer-Skelton, A. & Brady, T. F (2020). Evaluating the independence of working memory for scene layout and simple features. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P50. Utochkin, I.S. & Brady, T. F (2020). Individual items in visual working memory inherit ensemble properties. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P51. DeStefano, I. & Brady, T. F (2020). Lingering population codes: Serial dependence in working memory reports as evidence for population-based memory representations. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P52. Williams, J.R. & Brady, T. F, & Stormer, V.S. (2020). Natural variation in the representational fidelity between multiple working memory items can explain which item guides attention. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P53. Keefe, J., Utochkin, I.S., Lau, J.S-H., Brady, T. F, & Stormer, V.S. (2020). Information about all items is actively held in mind when computing ensemble statistics about a set. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P54. Allen, M. & Brady, T. F (2020). Many exposures to a real-world object without knowing the details: The focus of attention does not include entire objects but only the relevant level of abstraction. Poster presented at the Annual Meeting of the *Vision Sciences Society (Virtual)*.

P55. Robinson, M.M., Wixted, J.T. & Brady, T. F (2020). Decision strategy matters: Different testing procedures can change decision strategies and lead to spurious effects on estimates of visual working memory sensitivity. Poster presented at the Annual Meeting of the *Vision Sciences*

Society (Virtual).

P56. Schill, H.M. & Brady, T. F (2020). Global scene similarity structure predicts memory performance. Talk presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P57. Khvostov, V.A., Utochkin, I.S. & Brady, T. F (2020). Hierarchical representations in visual working memory are space-based. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P58. Chung, Y.H., Schurgin, M.W. & Brady, T. F (2020). The role of object files in visual working memory: Facilitating integration over longer timescales for moving objects. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

P59. Markov, Y.A., Khvostov, V.A., Keefe, J.M., Stormer, V.S., Brady, T. F & Utochkin, I.S. (2020). Ensemble representation vs single item representation in visual working memory: a dual-task experiment. Poster presented at the Annual Meeting of the *Vision Sciences Society* (Virtual).

2019

P60. Brady, T. F, Miner, A.E., Wixted, J.T., Schurgin, M.W. (2019). Shared Constraints on the Precision of Visual Working vs. Visual Long-Term Memory. Talk presented at the Annual Meeting of the *Psychonomic Society*, Montreal, Canada.

P61. Allen, M.G. & Brady, T. F (2019). What is in the focus of attention? The role of conceptual activation in memory formation. Poster presented at the Annual Meeting of the *Psychonomic Society*, Montreal, Canada.

P62. Schill, H., Wolfe, J. & Brady, T. F (2019). The crowd-within effect in expert radiologists: independent ratings of the same case lead to better performance in mammography diagnosis. Poster presented at the *Radiological Society of North America*, Chicago, IL.

P63. Schill, H., Wolfe, J. & Brady, T. F (2019). Memory capacity for normal vs. abnormal mammograms. Talk presented at the *Annual Meeting of the Medical Image Perception Society*, Salt Lake City, UT.

P64. Allen, M.G. & Brady, T. F (2019). Attribute Amnesia Reveals a Dependency on Conceptual Activation for Memory Consolidation. Poster presented at the *2019 Meeting of the Society for Philosophy and Psychology*, San Diego, CA.

P65. Yin, S., O'Neill, K., Brady, T.F., and De Brigard, F. (2019). The Effect for Category Learning on Recognition Memory: A Signal Detection Theory Analysis. Poster presented at the *41st Annual Conference of the Cognitive Science Society*.

P66. Hurwitz, E., Brady, T.F., Schachner, A. (2019). Detecting social transmission in the design of artifacts via inverse planning. Talk presented at the *41st Annual Conference of the Cognitive Science Society*.

P67. Shafer-Skelton, A. & Brady, T. F (2019). Dissociating visual working memory for objects

and scene layout. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P68. Chunharas, C. & Brady, T. F. (2019). Is set size 6 really set size 6? Relational encoding in visual working memory. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P69. Schill, H., Wolfe, J. & Brady, T. F. (2019). Memory capacity meets expertise: increased capacity for abnormal images in expert radiologists. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P70. Lam, K., Schurgin, M.W., & Brady, T. F. (2019). The contributions of visual details vs semantic information to visual long-term memory. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P71. Allen, M.G. & Brady, T. F. (2019). Attribute Amnesia Reveals a Dependency on Conceptual Activation for Memory Consolidation. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P72. Brady, T. F., Schurgin, M.W., Wixted, J.T. (2019). The importance of distinguishing between subjective and objective guessing in visual working memory. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P73. Schurgin, M.W., Wixted, J.T. & Brady, T. F. (2019). Unambiguous evidence in favor of a signal detection model of visual working memory. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

2018

P74. Schurgin, M.W., & Brady, T. F. (2018). Isolating Visual Details in Memory via Texforms. Poster presented at the Annual Meeting of the *Psychonomic Society*, New Orleans, LA.

P75. Brady, T. F., Schurgin, M.W., & Wixted, J.T. (2018). Psychological Scaling Reveals a Single Parameter Framework For Visual Working Memory. Talk presented at the Annual Meeting of the *Psychonomic Society*, New Orleans, LA.

P76. Lau, J. S-H. & Brady, T. F. (2018). Intuitive physics in Multiple Object Tracking. Talk presented at the *Object, Perception, Attention and Memory conference (OPAM) preconference to Psychonomics*, New Orleans, LA.

P77. Schurgin, M.W., Wixted, J.T. & Brady, T. F. (2018). Psychological Scaling Reveals a Single Parameter Framework For Visual Working Memory. Poster presented at the *Object, Perception, Attention and Memory conference (OPAM) preconference to Psychonomics*, New Orleans, LA.

P78. Asp, I., Störmer, V., & Brady, T. F. (2018). Perceptually-matched images that are meaningful are remembered better and result in increased CDA in visual working memory. Poster presented at the *Society for Neuroscience*, San Diego, CA.

- P79. Williams, J., Brady, T. F. & Störmer, V. (2018). Multiple visual working memory items can guide attention and facilitate perceptual processing. Poster presented at the *Society for Neuroscience*, San Diego, CA.
- P80. Schurgin, M.W., Cunningham, C.A., Egeth, H.E. & Brady, T. F. (2018). Episodic memory can substitute for active storage in visual working memory. Talk presented at the *Society for Neuroscience*, San Diego, CA.
- P81. Coco, M.I., Brady, T.F., Merendino, G., Zapalla, G., Baddeley, A., & Della Salla, S. (2018). Forgetting in normal and pathological ageing as a function of semantic interference. Poster presented at the *Alzheimers' Association International Conference*, Chicago, IL.
- P82. Brady, T. F. (2018). Introduction to Amazon's Mechanical Turk. Talk presented at Big Data Symposium at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P83. Brady, T. F. (2018). Perceptual factors explain a huge number of results from visual working memory and visual long-term memory. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P84. Brady, T. F., Schurgin, M.W., Wixted, J.T. (2018). No distinction between capacity and resolution in working memory: A single memory strength parameter explains the shape of visual working memory response distributions. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P85. Shafer-Skelton, A. & Brady, T. F. (2018) "Scene layout" priming relies primarily on low-level features rather than scene layout. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P86. Miner, A. & Brady, T. F. (2018). Repetition allows for long-term memories that are as precise as the best working memories. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P87. Lau, J. S-H. & Brady, T. F. (2018). Ensemble Statistics are (only) Accessed through Proxies: Range and Spatial Texture Heuristics in Variability Discrimination. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P88. Schurgin, M.W., Cunningham, C.A., Egeth, H.E. & Brady, T. F. (2018). Episodic Memory Can Replace Active Maintenance in Working Memory When Available. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P89. Walter, R. & Brady, T. F. (2018). The minimal proactive interference observed with real-world objects in a visual working memory task is not location-specific. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- P90. Markov, Y., Utochkin, I. S., & Brady, T.F. (2018). Real-world objects are not stored in bound representations in visual working memory. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P91. Asp, I., Störmer, V., & Brady, T. F. (2018). Perceptually-matched images are remembered better in visual working memory and result in increased CDA when they are meaningful. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P92. Williams, J., Brady, T. F. & Störmer, V. (2018). Multiple visual working memory items can guide attention and facilitate perceptual processing. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P93. Chunharas, C., Brady, T. F., Rademaker, R.L., & Serences, J. (2018). Similar items repel each other in visual working memory. Poster presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P94. Carr, E.W., Oh, D., Brady, T. F., Winkielman, P., Todorov, A. (2018). Can average faces look happier? The seemingly counter-intuitive link between facial blending and emotion-perception. Talk presented at the Annual Meeting of the *Society for Affective Science*, Boston, MA.

2017

P95. Schurgin, M.W., Cunningham, C.A., Egeth, H.E. & Brady, T. F. (2017). The Effect of Episodic Memory on Active Storage in Visual Working Memory. Talk presented at *Object, Perception, Attention and Memory conference (OPAM) preconference to Psychonomics*, Vancouver, Canada.

P96. Shafer-Skelton, A. & Brady, T. F. (2017). How is scene layout information stored across brief delays? Poster presented at *Object, Perception, Attention and Memory conference (OPAM) preconference to Psychonomics*, Vancouver, Canada.

P97. Schachner, A., Brady, T. F. & Lee, M. (2017). Intuitive archeology in childhood: Detecting social transmission in the design of artifacts. Poster presented at the *2017 Cognitive Development Society Conference*, Portland, OR.

P98. Carr, E., Brady, T. F., & Winkielman, P. (2017). Are you smiling or have I seen you before? Familiarity makes faces look happier. Poster presented at the Annual Meeting of the *Society for Personality and Social Psychology*, San Antonio, TX.

P99. Brady, T. F. (2017). The role of spatial ensemble statistics in visual working memory and scene perception. Talk presented at the 17th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P100. Brady, T. F. (2017). Proactive interference results from visual working memory, not just traces left over in visual long-term memory. Talk presented at the 17th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P101. Sbeiti, M., Fougny, D., & Brady, T. F. (2017). Reconsidering the focus of attention: Cued items contain more information but are not more accessible. Poster presented at the 17th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P102. Chunharas, C., Rademaker, R.L., Sprague, T.C., Brady, T. F., & Serences, J. (2017). Remembering stimuli in different depth planes increases visual working memory precision and

reduces swap errors. Poster presented at the 17th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P103. Utochkin, I. & Brady, T. F. (2017). Binding errors in long-term memory: Independent storage of different features of real-world objects. Talk presented at the 17th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P104. Carr, E., Brady, T. F., & Winkielman, P. (2017). Are you smiling or have I seen you before? Familiarity makes faces look happier. Talk presented at the *Society for Affective Science*, Boston, MA.

2016

P105. Sbeiti, M., Brady, T. F., & Fougny, D. (2016). Reconsidering the focus of attention: Cued items contain more information but are not more accessible. Poster presented at *Object, Perception, Attention and Memory conference (OPAM) preconference to Psychonomics*, Boston, MA.

P106. Brady, T. F. (2016). Visual working memory relies on separate viewpoint-specific ensemble and viewpoint-invariant object representations in visual working memory. Talk presented at the 16th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P107. Fougny, D., Kanabar, A., Brady, T. F., & Alvarez, G. A. (2016). Asymmetric confidence judgements show hidden information in working memory. Talk presented at the 16th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

2015

P108. Brady, T. F., Störmer, V., & Alvarez, G. A. (2015). The Role of Meaning in Visual Memory: The N170 Predicts Memory for Ambiguous Mooney Faces. Talk presented at the Annual Meeting of the *Psychonomic Society*, Chicago, IL.

P109. Fougny, D., Kanabar, A., Brady, T. F., & Alvarez, G. A. (2015). Using a betting game to directly reveal the rich nature of visual working memories. Talk presented at the Annual Meeting of the *Psychonomic Society*, Chicago, IL.

P110. Brady, T. F., Schacter, D. L., & Alvarez, G. A. (2015). The adaptive nature of false memories is revealed by gist-based distortion of true memories. Poster presented at the 15th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P111. Fougny, D., Kanabar, A., Brady, T. F., & Alvarez, G. A. (2015). Using a betting game to directly reveal the rich nature of visual working memories. Talk presented at the 15th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

2014

P112. Brady, T. F., Shafer-Skelton, A., & Alvarez, G. A. (2014). Sensitivity to spatial ensemble statistics predicts rapid scene perception ability.* Talk presented at the Annual Workshop on *Object Perception, Attention and Memory Conference (OPAM) preconference to Psychonomics*, Long

Beach, CA. **won award for best talk of the conference

P113. Brady, T. F., Störmer, V., & Alvarez, G. A. (2014). Working memory accumulates more information from real-world objects than from simple stimuli: Evidence from contralateral delay activity. Talk presented at the 14th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P114. Fougny, D., Brady, T. F., & Alvarez, G. A. (2014). If at first you don't retrieve, try, try again: The role of retrieval failures in visual working memory. Poster presented at the 14th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P115. Shafer-Skelton, A., Brady, T. F., & Alvarez, G. A. (2014). Sensitivity to spatial ensemble statistics predicts rapid scene perception ability. Poster presented at the 14th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P116. Brady, T. F., Shafer-Skelton, A., & Alvarez, G. A. (2014). Sensitivity to spatial ensemble statistics predicts rapid scene perception ability. Talk presented at the Symposium on Individual Differences at the 14th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P117. Haberman, J., Brady, T. F., & Alvarez, G. A. (2014). Independent ensemble processing mechanisms for high-level and low-level perceptual features. Talk presented at the 14th Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

P118. Brady, T. F., Störmer, V., & Alvarez, G. A. (2014). Working memory accumulates more information from real-world objects than from simple stimuli: Evidence from contralateral delay activity. Poster presented at the Annual Meeting of the *Cognitive Neuroscience Society*, Boston, MA.

P119. Brady, T. F., Schacter, D. L., & Alvarez, G. A. (2014). The adaptive nature of false memories is revealed by gist-based distortion of true memories. Talk presented at the Annual Meeting of the *Psychonomic Society*, Long Beach, CA.

P120. Brady, T. F., Störmer, V., & Alvarez, G. A. (2014). Working memory accumulates more information from real-world objects than from simple stimuli: Evidence from contralateral delay activity. Presented at the Annual Meeting of the *Society for Neuroscience*, Washington, DC.

2013

P121. Brady, T. F., & Alvarez, G. A. (2013). Ensemble representations inflate estimates of working memory capacity. . Talk presented at the 13th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P122. Alvarez, G. A., Brady, T. F., Fougny, D. & Suchow, J. (2013). Beyond slots vs. resources. Talk presented at the 13th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

2012

P123. Rhee, J., Konkle, T., Brady, T. F. & Alvarez, G. A. (2012). Does memory enhancement

training alter perceptual representations? Poster presented at the 12th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P124. Brady, T. F., Suchow, J., Fournie, D. & Alvarez, G. A. (2012). MemToolbox: A MATLAB toolbox for analyzing visual working memory experiments. Poster presented at the *Portland Working Memory Conference*, Portland, OR.

P125. Brady, T. F. & Alvarez, G. A. (2012). The problem with slot and resource models: Visual working memory is not limited only by the number of individual items. Poster presented at the *Portland Working Memory Conference*, Portland, OR.

P126. Brady, T. F. & Alvarez, G. A. (2012). Structured representations in visual working memory: Using results from individual displays to constrain cognitive theory. Poster presented at the 12th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

2011

P127. Brady, T.F., Konkle, T., Alvarez, G. A., & Oliva, A. (2011). Are real-world objects represented as bound units? Independent decay of object details from short-term to long-term memory. Poster presented at the 11th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P128. Rhee, J., Konkle, T., Brady, T.F. & Alvarez, G. A. (2011). Learning statistical regularities speeds the encoding of information into working memory. Poster presented at the 11th Annual Meeting of the *Vision Sciences Society*, Naples, FL..

P129. Brady, T.F. (2011). Trial-by-trial variance in visual working memory capacity estimates as a window into the architecture of working memory. Poster presented at the 33rd Annual Meeting of the *Cognitive Sciences Society*, Boston, MA.

2010

P130. Brady, T.F. & Tenenbaum, J.B. (2010). Hierarchical encoding in visual working memory. Talk presented at 32nd Annual Conference of the *Cognitive Science Society*, Portland, OR.

P131. Alvarez, G.A. & Brady, T.F. (2010). Ensemble statistics influence the representation of items in visual working memory. Poster presented at the 10th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P132. Brady, T.F. & Tenenbaum, J.B. (2010). Hierarchical encoding in visual working memory. Talk presented at the 10th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

2009

P133. Brady, T.F. & Alvarez, G.A. (2009). Ensemble statistics of a display influence the representation of items in visual working memory. Talk presented at *Object Perception, Attention, and Memory (OPAM) 2009 preconference to Psychonomics*, Boston, MA.

P134. Brady, T.F., Vul, E., Tenenbaum, J.B. (2009). Probabilistic models of change detection and

multiple object tracking: How is working memory allocated in attentionally demanding tasks? Poster presented at the *Annual Meeting of the Psychonomic Society*, Boston, MA.

P135. Oliva, A., Brady, T.F., Konkle, T., & Alvarez, G.A. (2009). Remembering Thousands of Images with High Fidelity. Talk presented at the *Annual Meeting of the Psychonomic Society*, Boston, MA.

P136. Schachner, A., Brady, T.F., and Hauser, M.D. (2009). Good vocal mimics are also good entrainers: Individual differences suggest a shared mechanism for entrainment and vocal mimicry. Poster presented at the *Society for Music Perception and Cognition*, Indianapolis, IN.

P137. Brady, T.F., Konkle, T., and Oliva, A. (2009). Examining object representation via object memory: exemplar and state-level object properties are supported by the same underlying features. Poster presented at the 9th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P138. Park, S., Greene, M.R., Brady, T.F., and Oliva, A. (2009). Natural scene categorization by global scene properties: Evidence from patterns of fMRI activity. Talk presented at the 9th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P139. Alvarez, G.A., Konkle, T., Brady, T.F., Gill, J., and Oliva, A. (2009). Comparing the Fidelity of Perception, Short-term Memory, and Long-term Memory: Evidence for Highly Detailed Long-term Memory Representations. Talk presented at the 9th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

P140. Oliva, A., Konkle, T., Brady, T.F., and Alvarez, G.A. (2009). The high fidelity of scene representation in visual long-term memory. Talk presented at the 9th Annual Meeting of the *Vision Sciences Society*, Naples, FL.

2008

P141. Brady, T.F., Konkle, T., Alvarez, G.A. and Oliva, A. (2008). Remembering Thousands of Objects with High Fidelity. Poster presented at the *European Conference on Visual Perception*, Utrecht, the Netherlands.

P142. Oliva, A. and Brady, T.F. (2008). Perceptual organization across spatial scales in natural images: Seeing more high spatial frequency than meet the eyes. Talk presented at the 8th Annual Meeting of the *Vision Sciences Society*. Sarasota, FL.

P143. Brady, T.F., Konkle, T., Alvarez, G.A., and Oliva, A. (2008). Compression in Visual Short-term Memory: Using Statistical Regularities to Form More Efficient Memory Representations. Poster presented at the 8th Annual Meeting of the *Vision Sciences Society*. Sarasota, FL.

P144. Konkle, T., Brady, T.F., Alvarez, G.A. and Oliva, A. (2008). Remembering Thousands of Objects with High Fidelity. Talk presented at the 8th Annual Meeting of the *Vision Sciences Society*. Sarasota, FL.

P145. Brady, T.F., Konkle, T., & Alvarez, G.A. (2008). Efficient Coding in Visual Short-Term Memory: Evidence for an Information-Limited Capacity. Talk presented at the 30th Annual

Conference of the *Cognitive Science Society*. Washington, DC.

P146. Schachner, A., Brady, T.F., Pepperberg, I.M., & Hauser, M.D. (2008). Spontaneous entrainment to auditory rhythms in vocal-mimicking bird species. Talk presented at *Music, Language and the Mind*, Medford, MA.

P147. Schachner, A., Brady, T.F., Pepperberg, I.M., & Hauser, M.D. (2008). Spontaneous entrainment to auditory rhythms in vocal-learning bird species. Poster presented at *The Neurosciences and Music III*, Montreal, Canada.

P148. Oliva, A., Alvarez, G.A., Konkle, T., & Brady, T.F. (2008). Remembering Thousands of Natural Images With High Fidelity. Talk presented at the *Scene Understanding Symposium*, MIT, Spring 2008

P149. Konkle, T., Brady, T.F., Alvarez, G.A. and Oliva, A. (2008). Remembering Thousands of Objects with High Fidelity. Poster presented at the Second Annual Tufts University Conference on *Emerging Trends in Behavioral, Affective, Social, and Cognitive Neurosciences*, Medford, MA.

2007 and earlier

P150. Brady, T.F. and Oliva, A. (2007). Automatic and implicit encoding of scene gist. Talk presented at the *Scene Understanding Symposium, MIT*, Spring 2007.

P151. Brady, T.F. and Oliva, A. (2007). Statistical learning of temporal predictability in scene gist. Poster presented at the 7th Annual Meeting of the *Vision Sciences Society*, Sarasota, FL.

P152. Brady, T.F., Junge, J.A., & Chun, M.M. (2006) Local and global influences on hypothesis testing during rapid resumption of visual search. Poster presented at the 6th Annual Meeting of the *Vision Sciences Society*. Sarasota, FL.

P153. Brady, T.F., & Chun, M.M. (2005). The effects of local context in visual search: A connectionist model and behavioral study of contextual cueing. Poster presented at the 5th Annual Meeting of the *Vision Sciences Society*. Sarasota, FL.

Invited talks and colloquia

UC Davis, Neuroscience Speaker Series	2023
Northeastern University, Psychology Colloquium	2022
University of Washington, St. Louis, Psychological Science Colloquium	2022
Leibniz Research Centre Dortmund, Germany, Talk Series	2022
Goethe Universitat, Frankfurt Am Main, Germany, Cognitive Talk Series	2022
UC San Diego Psychology Colloquium (New student open house)	2022
Invited speaker, Virtual Vision Sciences Symposium on Memory	2022
Invited speaker, Psychonomics Symposium on Working/Long-term Memory	2022
AI Talk Series, Max Planck Institute for Biological Cybernetics in Tübingen, Germany	2022
Stanford Cognitive Area Talk Series (FriSem)	2021
UC Merced Mind, Technology, and Society talk series	2021
University of Toronto (Pratt lab)	2021
Stanford Memory Labs talk	2021

UCLA Cognitive Area Talk Series	2020
Special invited speaker, Psychonomics Society meeting	2020
Invited speaker, Infovis x Vision at IEEE VIS 2019, Visualization Research	2019
University of California, Santa Barbara Cognitive/Cog. Neuro colloquium	2019
Vision Sciences Society Symposium on Perception/Memory relationships	2018
Vision Sciences Society Workshop on Big Data	2018
Vision Sciences Society Symposium on Consciousness and Ensemble Repr.	2017
University of California, San Diego, Cogn. Science Colloq. (Cogs 200)	2017
Invited Keynote lecture, LMU Munich conference on Visual Working Memory	2017
National Academy of Sciences, Standing Committee on Reducing Counterfeiting Using the Behavioral Sciences	2017
University of California, Berkeley, Institute of Cog. and Brain Sciences Colloquium	2017
NYU Abu Dhabi, Psychology Dept. Colloquium	2016
Johns Hopkins University, Cognitive Science Colloquium	2016
Northwestern University, Cognitive Science Special Talk Series	2015
Northwestern University, Cognitive Science Colloquium	2015
University of California - Riverside, Cognitive Colloquium	2015
Harvard University, Cognition, Brain & Behavior Colloquium	2015
University of Michigan, Department of Psychology	2015
Vanderbilt University, Department of Psychological Sciences Colloquium	2015
Emory University, Department of Psychology Colloquium	2015
University of Illinois Urbana-Champaign, Department of Psychology Colloquium	2015
Rutgers University - Newark, Department of Psychology Colloquium	2015
University of California – San Diego, Department of Psychology Colloquium	2015
University of Toronto - Mississauga, Department of Psychology Colloquium	2015
Duke University, Cognitive Neuroscience Colloquium	2014
University of Chicago, Department of Psychology Colloquium	2014
MIT, Department of Brain and Cognitive Sciences Colloquium	2014
Harvard University, Cognition, Brain & Behavior Colloquium	2012
Harvard University, Cognition, Brain & Behavior Colloquium	2011
Harvard Medical School, Visual Attention Seminar Series	2011
Stanford University, Department of Psychology Colloquium	2011
MIT, Department of Brain and Cognitive Sciences Colloquium	2009
University of Liège (Belgium) Colloquium	2008
Harvard Medical School, Visual Attention Seminar Series	2008

Teaching

Current and recent courses:

PSYC 105, Cognitive Psychology	2015-pres.
PSYC 174, Visual Cognition	2017-pres.
PSYC 218, Cognitive Proseminar	2021-pres.
PSYC 241, Programming Web-Based Experiments for Psychology Research	2017-2020
PSYC 223, Current Directions in Vision (1 unit)	2018-pres.
PSYC 272, Models of Attention & Working Memory	2018

Previous teaching:

Instructor, <i>Running Experiments on Mechanical Turk</i> , Northwestern University	Nov. 2015
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Instructor, <i>Technical Tutorials in Psychology</i> , Harvard University	2012-2013
Instructor, <i>Philosophy of Cognitive Science</i> , MIT	Spring 2009
Assistant Instructor, <i>fMRI Visiting Fellowship Program</i> , Mass. General Hospital	2007-2010
Assistant Instructor, <i>Multi-Modality Short Course</i> , Mass. General Hospital	2007-2010
Teaching Assistant, <i>fMRI of High Level Vision</i> , MIT	Fall 2009
Teaching Assistant, <i>Laboratory in Visual Cognition</i> , MIT	Fall 2008
Teaching Assistant, <i>Introduction to Psychology</i> , MIT	Spring 2008

Guest Lectures:

Junior Honors (Psyc 110), Prof. Gail Heyman, UCSD	2015-2022
Cognitive proseminar (Psyc 218), Prof. John Wixted, UCSD	2015-2020
Cognitive Processes, Prof. Molly Potter, MIT	2011-2013
Laboratory in Visual Cognition, Prof. Aude Oliva, MIT	2008-2011
Cognitive Science Core Course, Prof. Edward Gibson, MIT	2010, 2011
Cognitive Neuroscience, Prof. Sue Corkin, MIT	2008, 2010
fMRI of High Level Vision, Prof. Nancy Kanwisher, MIT	2009
Computational Visual Perception, Prof. Aude Oliva, MIT	2009

Mentorship:

Postdocs:

Mark Schurgin (PhD, Johns Hopkins, postdoc 2017-2019)
 Maria Robinson (PhD, Univ. Illinois Urbana-Champaign, postdoc 2019-present)
 Jonas Sin-heng Lau (PhD, UC San Diego, postdoc 2019-2020)
 Lauren Williams (PhD, Univ. of Utah, postdoc 2020-2022)
 Malinda McPherson (PhD, MIT, postdoc 2022-present)

PhD students research (co-) advisor for (years advised):

Anna Shafer-Skelton (Psychology, 2016-2022), NSF GRF
 Chaipat Chunharas (Psychology, 2017-2019)
 Jonas Sin-heng Lau (Psychology, 2018-2019)
 Michael Allen (Cognitive Science, 2018-pres)
 Jamal Williams (Psychology, 2018-pres), NSF GRF
 Hayden Schill (Psychology, 2018-pres), NSF GRF
 Isabella DeStefano (Psychology, 2018-pres)
 Yang Wang (Psychology, 2022-pres)
 Dyllan Simpson (Psychology, 2023-pres.)
 Isabella Longoria-Valenzuela (Psychology, 2023-pres.).

Professional Service

Committees and leadership roles

Award Committee, Society of Experimental Psychologists (2023-present)
 Program Committee, Cognitive Science Society (2020)
 Travel Award Committee, Vision Sciences Society (2020)
 Abstract Review Committee, Vision Sciences Society (2020-present)
 Graduate Award Committee, Psychonomics Society (2023-present)
 Steering Committee, Computational Social Sciences, UCSD (2022-present)

Membership in Professional Organizations

Vision Sciences Society, Society for Neuroscience, Psychonomic Society, Cognitive Science Society, Society of Experimental Psychologists

Peer Reviewer

Editorial Board & Action Editor: Journal of Vision

Consulting editor: Attention, Perception & Psychophysics

Review for Grants: National Science Foundation Grant Review Panels (2016, 2018, 2020), Ad hoc for National Science Foundation, Ad hoc for Israeli Science Foundation, Ad hoc for European Research Council, Ad hoc for NSERC

Ad Hoc Review for Journals: Attention, Perception & Psychophysics, Autism Research, Brain Research, Cerebral Cortex, Cognitive Science, Cognitive Psychology, Cognition, Consciousness & Cognition, Current Biology, Experimental Psychology, Frontiers in Psychology, Journal of Cognitive Neuroscience, Journal of Cognitive Psychology, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning, Memory and Cognition, Journal of Neuroscience, Journal of Vision, Judgment and Decision Making, Memory, Memory and Cognition, Nature Communications, Nature Human Behaviour, Neuropsychologia, Perception, Perception & Psychophysics, PLOS Computational Biology, PLOS One, Proceedings of the National Academy of Sciences (PNAS), Psychological Science, Psychological Research, Psychonomic Bulletin & Review, Quarterly Journal of Experimental Psychology, Topics in Cognitive Science (topiCS), Vision Research, Visual Cognition

Review for Conferences: Cognitive Science Society, Neural Information Processing Systems (NIPS), Vision Sciences Society

Departmental and University Service

Department:

Computational Social Science Repres.	2022-
Leader, Vision Science Journal Club (weekly)	2019-
Diversity and Climate Committee	2022-
Graduate Admissions	2022-
Colloquium Committee	2018-
Convocation Representative	2016
Commencement Representative	2016, 2018
Undergrad Special Events Committee	2016-present
<i>Representative of Psych. at Transfer Triton Day 2017, '18, '19, '20</i>	

University:

Academic Senate Alternate	2022-
Panelist, UCSD STARS Faculty Panel	2022
Panelist, Triton Research Involvement Initiative at UCSD	2022
Emeriti Faculty Events	2019, 2020
Panelist, Office of Research Affairs - NSF Career Information session	2018
Participant, Triton Firsts Roundtable	2018
Outreach talk, UCSD STARS program research seminar	2016

Visual memory and the pathway to doing science research

During PhD and Postdoc:

Creator/Manager, On-line System for Participant Scheduling, MIT	2006-2015
Co-organizer, Vision Seminar Series, Harvard University	2010-2011
Organizer, Prospective Student Interview Day, MIT	2009
Graduate Student Representative, MIT	2007-2008
Co-organizer, Teuber Lecture Series, MIT	2007-2008

Science Outreach

Administrative Law Judges of California: Training Conf., San Diego, CA <i>3 hour presentation on Memory to all Administrative Law Judges of CA</i>	2018, 2023
Psi Chi Conference Keynote Speaker <i>Visual memory and the pathway to doing science research</i>	2019
Outreach Talk, AP Psychology High School Students <i>Visual memory and how to remember more</i>	2019
Outreach Talk, AP Psychology High School Students <i>Visual illusions and how the mind works</i>	2017, 2018
National Administrative Law Judge Training Conf., San Diego, CA <i>Presentation on Memory to conference of National Administrative Law Judges</i>	Oct. 2018
Psi Beta, Mesa Community College, Outreach talk <i>Visual memory and the pathway to doing science research</i>	April 2018
ComSciCon 2017 (Communicating Science Workshop) <i>Served on panel "Communicating to Develop Expertise"</i>	Sept 2017
UCSD STARS program research seminar <i>STARS is a program designed to involve students from underrepresented groups in science</i>	July 2016
Psi Beta, Mesa Community College, Outreach talk <i>Visual memory and the pathway to doing science research</i>	April 2016
Psi Chi, UC San Diego, Outreach talk <i>Visual memory and the pathway to doing science research</i>	2016, 2017
Author, Scientific American "Ask the Brains" Column <i>Why do we forget?</i>	July 2010
Instructor, Family Program, Harvard Museum of Natural History For middle school students and their families	Fall 2009
Exhibit Host, Cambridge Science Festival <i>What can visual illusions tell scientists about how the mind works?</i>	Fall 2009, 2010
Author, Scientific American "Mind Matters" Column <i>Blurring the boundaries between perception and memory</i>	Dec. 2008
Co-instructor, MIT Educational Studies Program, Weekend classes for high school students:	
<i>Awesome findings in psychology</i>	Fall 2011
<i>The development of the human mind</i>	Fall 2010
<i>How the mind works</i>	Fall 2009
<i>Cognitive Development: What do babies know?</i>	Spring 2009
<i>Genetic and environmental influences on the mind and brain</i>	Fall 2008
<i>How the mind works: a tour of awesome findings in psychology</i>	Spring 2008
<i>Subliminal influences on your decisions</i>	Fall 2007
<i>Uncovering human nature: evolution of the mind and brain</i>	Fall 2006