

Talia Konkle

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Cambridge, MA 02138

Academic Appointments and Education

Assistant Professor

Department of Psychology & Center for Brain Science, Harvard University

July 2015-

Postdoctoral Fellow

Department of Psychology, Harvard University

2012 - 2015

Center for Mind/Brain Sciences, University of Trento, Italy

2011 - 2012

Supervisor: Professor Alfonso Caramazza

Ph.D. Brain and Cognitive Sciences

Massachusetts Institute of Technology

2005 - 2011

Advisor: Professor Aude Oliva

B.A. Applied Mathematics with Computer Science, B.A. Cognitive Science

University of California – Berkeley

2000 - 2004

Advisor: Professor Richard Ivry

Research and Scholarship

Preprints

- [1] Josephs, E. & **Konkle, T.** (*submitted*). Large-scale Neural Dissociations Between Views of Objects, Scenes, and Reachable Environments. *BioRxiv*.
- [2] Tarhan, L. & **Konkle, T.** (*in revision*). Sociality and Interaction Envelope Organize Visual Action Representation. *BioRxiv*.

Publications

- [3] Tarhan, L. & **Konkle, T.** (2020). Reliability-based Voxel Selection. *Neuroimage*. 207 (2020): 116350.
- [4] Long, B., Moher, M., Carey, S., & **Konkle, T.** (2019). Animacy and object size are reflected in perceptual similarity computations by the preschool years. *Visual Cognition*. 27(5-8), 435-451.
- [5] Janini, D. & **Konkle, T.** (2019). A Pokémon-sized window into the human brain. *Nature Human Behavior*. (Commentary). 3(6):552-553.
- [6] Josephs, E. & **Konkle, T.** (2019). Perceptual dissociations among views of objects, scenes, and reachable spaces. *Journal of Experimental Psychology: Human Perception & Performance*. 45(6):715-728.
- [7] Long, B. Yu, Moher, M., Carey, S. & **Konkle, T.** (2019). Real-world size is automatically encoded in preschoolers' object representations. *Journal of Experimental Psychology: Human Perception & Performance*. 45(7):863-876.
- [8] Long, B. Yu, C-P., & **Konkle, T.** (2018). Mid-level visual features underlie the high-level categorical organization in the ventral stream. *Proceedings of the National Academy of Sciences, USA*. 115(38), E9015-E9024.

- [9] Long, B. & **Konkle, T.** (2017). A familiar-size Stroop Effect in the absence of basic-level recognition. *Cognition*. 168, 234-242.
- [10] Cohen, M., Alvarez, G. A., Nakayama, K., & **Konkle, T.** (2017). Visual search for object categories is predicted by the representational architecture of high-level visual cortex. *Journal of Neurophysiology*. 117 (1), 388-402.
- [11] **Konkle, T.**, & Caramazza, A. (2016). The large-scale organization of object-responsive cortex is reflected in resting-state network architecture. *Cerebral Cortex*. 1-13.
- [12] Long, B., **Konkle, T.**, Cohen, M., & Alvarez, G. A. (2016). Mid-level perceptual features distinguish objects of different real-world sizes. *Journal of Experimental Psychology: General*. 154 (1), 95-109.
- [13] Cohen, M., **Konkle, T.**, Nakayama, K., & Alvarez, G. A. (2015). Visual awareness is constrained by the representational architecture of the visual system. *Journal of Cognitive Neuroscience*. 27 (11), 2240-52.
- [14] Park*, S. J., **Konkle***, T., & Oliva, A. (2015). Parametric Coding of the Size and Clutter of Natural Scenes in the Human Brain. *Cerebral Cortex*. 25(7):1792-805.
- [15] Cohen, M., **Konkle, T.**, Rhee, J., Nakayama, K., & Alvarez, G. A. (2014). Processing multiple visual objects is limited by overlap in neural channels. *Proceedings of the National Academy of Sciences*.
- [16] **Konkle, T.**, & Caramazza, A. (2013). Tripartite Organization of Object Responses by Animacy and Real-World Size. *Journal of Neuroscience*, 33 (25), 10235-42.
- [17] Brady, T. F., **Konkle, T.**, Gill, J., Oliva, A., & Alvarez, G. A. (2013). Long-term memory has the same limit on fidelity as working memory. *Psychological Science*, 24 (6), 981-990.
- [18] Brady, T. F., **Konkle, T.**, Alvarez, G. A., & 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.
- [19] **Konkle, T.**, & Oliva, A. (2012). A real-world size organization of object responses in occipito-temporal cortex. *Neuron*. 74(6), 1114-24.
- [20] **Konkle, T.**, & Oliva, A. (2012). A Familiar Size Stroop Effect: Real-world size is an automatic property of object representation. *Journal of Experimental Psychology: Human Perception & Performance*, 38, 561-9.
- [21] **Konkle, T.** & Oliva, A. (2011). Canonical visual size for real-world objects. *Journal of Experimental Psychology: Human Perception and Performance*. 37(1):23-37.
- [22] Brady, T. F., **Konkle, T.** & Alvarez, G. A. (2011). A review of visual memory capacity: Beyond individual items and toward structured representations. *Journal of Vision*. 11(5):4, 1-4.
- [23] **Konkle, T.**, Brady, T. F., Alvarez, G. A., & Oliva, A. (2010). Scene memory is more detailed than you think: the role of scene categories in visual long-term memory. *Psychological Science*, 21(11), 1551-1556.
- [24] **Konkle, T.**, Brady, T. F., Alvarez, G. A., & Oliva, A. (2010). Conceptual distinctiveness supports detailed visual long-term memory. *Journal of Experimental Psychology: General*. 139(3), 558-578.
- [25] Bedny, M., **Konkle, T.**, Pelphrey, K., Saxe, R., & Pascual-Leone, A. (2010). Sensitive period for a vision-dominated response in human MT/MST. *Current Biology*, 20(21),1900-6.

- [26] Oliva, A., Park, S., & **Konkle, T.** (2010). Representing, Perceiving and Remembering the Shape of Visual Space. *Computational Vision in Neural and Machine Systems*. Cambridge University Press, edited by Laurence R Harris and Michael Jenkin.
- [27] Brady, T. F., **Konkle, T.**, & 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.
- [28] **Konkle, T.** & Moore, C. I. (2009). What can crossmodal aftereffects reveal about neural representation and dynamics? *Communicative and Integrative Biology*, 2(6), 479-481.
- [29] **Konkle, T.**, Wang, Q., Hayward, V., & Moore, C. I. (2009). Motion Aftereffects Transfer Between Touch and Vision. *Current Biology*, 19, 745-750.
- [30] Brady, T. F., **Konkle, T.**, Oliva, A., & Alvarez, G. (2009). Detecting changes in real-world objects: The relationship between visual long-term memory and change blindness. *Communicative and Integrative Biology* 2:1, 1-3.
- [31] Brady, T. F., **Konkle, T.**, Alvarez, G. A. & 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), 14325-9.
- [32] Carter, O. L., **Konkle, T.**, Wang, Q., Hayward, V., & Moore, C. I. (2008). Tactile Rivalry Demonstrated with an Ambiguous Apparent-Motion Quartet. *Current Biology*, 18(14), 1050-4.
- [33] **Konkle, T.**, & Oliva, A. (2007). Normative representation of objects: Evidence for an ecological bias in perception and memory. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society*, (pp. 407-413), Austin, TX: Cognitive Science Society.
- [34] Alvarez, G. A., **Konkle, T.**, & Oliva, A. (2007). Searching in Dynamic Displays: Effects of configural predictability and spatio-temporal continuity. *Journal of Vision*, 7(14):12, 1-12.
- [35] Verstynen, T. D., Spencer, R., Stinear, C. M., **Konkle, T.**, Diedrichsen, J., Byblow, W. D., Ivry, R. B. (2007). Bilateral Pathways Do Not Predict Mirror Movements: A Case Report. *Neuropsychologia*, 45(4), 844-852.
- [36] Verstynen, T. D., **Konkle, T.**, & Ivry, R. B. (2006). Two types of TMS-induced Movement Variability After Stimulation of the Primary Motor Cortex. *Journal of Neurophysiology*. 96, 1018-1029.

Conference Presentations

2020

- [1] Deza, A., Konkle, T., (2020). Foveation induces Robustness to Scene Occlusion in Deep Neural Networks. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [2] Kallmayer, A., Prince, J., Konkle, T., (2020). Comparing representations that support object, scene, and face recognition using deepnet trajectory analysis. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [3] Magri, C., Konkle, T. (2020). Object-selective cortex shows distinct representational formats along the posterior-to-anterior axis: evidence from brain-behavior correlations. Talk to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [4] Janini, D., Konkle, T. (2020). Approximate number representations emerge in object-trained convolutional neural networks and show human-like signatures of number discrimination. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.

- [5] Josephs, E. Zhao, H., Konkle, T. (2020). Building the “Reachspace Database”: a large-scale stimulus set of reachable environments. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [6] Alvarez, G. A., Konkle, T. (2020). Integrating border-ownership computations into deep neural networks yields better fits to early visual cortex. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [7] Prince, J., Konkle, T. (2020). Computational evidence for integrated rather than specialized feature tuning in category-selective regions. Talk to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [8] Park, J., Josephs, E., Konkle, T. (2020). Neural representation of the visual environment along the continuum from objects to scenes. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [9] Tarhan, L., De Freitas, J., Alvarez, G. A., Konkle, T. (2020). Action similarity judgments are well-predicted with semantic embeddings of verbal descriptions. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [10] Wang, R., Janini, D., Kallmayer, A., Konkle, T. (2020). Mid-level feature differences support early EEG-decoding of familiarity and object size distinctions. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [11] Konkle, T., Alvarez, G. A. (2020). Deepnets do not need category supervision to predict visual system responses to objects. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [12] Chen, Y-C., Deza, A., Konkle, T. (2020). How big should this object be? Perceptual influences on viewing-size preferences. Poster to be presented at 20th annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.

2019

- [13] Janini, D., Konkle, T., (2019). Shape features learned for object classification can predict behavioral discrimination of written symbols. Poster presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [14] Prince, J., Konkle, T. (2019). Relating category-selective regions in biological and artificial neural networks. Poster presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [15] Park, J., Josephs, E., Konkle, T. (2019). Reachable or Not? Perceptual judgments of reachability along the object-scene continuum. Poster presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [16] Josephs, E., Konkle, T. (2019). Large-scale neural dissociations between views of objects, scenes, and reachable spaces. Poster presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [17] Magri, C., Long, B., Chiou, R., Konkle, T. (2019). Behavioral and Neural Associations between Object Size and Curvature. Poster presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [18] Tarhan, L., Konkle, T. (2019). Reliability-Based Voxel Selection for Condition-Rich Designs. Talk presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [19] Maltseva, M., Quinlan, D, Stubbs, K., Konkle, T., Culham, J.C. (2019). Which aspects of size and distance for real objects are coded through the hierarchy of visual areas?. Talk presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [20] Konkle, T. (2019). Emergence of Multiple Retinotopic Maps Without a Feature Hierarchy. Talk to be presented at 19th annual meeting of the *Vision Sciences Society*, May 17-22, St. Pete Beach, FL.
- [21] Deza, A., Chen, Y-C., Long, B., & Konkle, T. (2019). Accelerated Texforms: Alternative Methods for Generating Unrecognizable Object Images with Preserved Mid-Level Features. Poster to be presented at the 3rd annual *Computational Cognitive Neuroscience* conference, Berlin, Germany.
- [22] Magri, C. & Konkle, T. (2019). Comparing facets of behavioral object representation: implicit perceptual similarity matches brains and models. Poster to be presented at the 3rd annual *Computational Cognitive Neuroscience* conference, Berlin, Germany.

- [23] Maltseva, M., Quinlan, D. J., Stubbs, K. M., Konkle, T. A., Culham, J. C. (2019) Which aspects of size and distance for real objects are coded through the hierarchy of visual areas? Canadian Action and Perception-Network Symposium at the Canadian Association for Neuroscience (CAP-net at CAN-ACN), Toronto, ON.
- [24] Maltseva, M., Quinlan, D. J., Stubbs, K. M., Konkle, T. A., Culham, J. C. (2019) Real-world physical distance drives human fMRI activation throughout the visual hierarchy. Society for Neuroscience (SfN), Chicago, IL.

2018

- [25] Janini, D., Konkle, T. (2018). General Shape Features Allow for Categorization of Written Symbols Across Font Variation. Poster presented at the 2nd annual *Computational Cognitive Neuroscience* conference, Philadelphia, Pennsylvania, USA.
- [26] Josephs, E.L., Konkle, T. (2018). Neural and computational dissociations between objects, scenes, and near-scale reachspaces. Poster presented at the 2nd annual *Computational Cognitive Neuroscience* conference, Philadelphia, Pennsylvania, USA.
- [27] Long, B.L., Konkle, T. (2018). The role of textural statistics vs. outer contours in deep CNN and neural responses to objects. Poster presented at the 2nd annual *Computational Cognitive Neuroscience* conference, Philadelphia, Pennsylvania, USA.
- [28] Magri, C. Marantan, A., Mahadevan, L., Konkle, T. (2018). A mathematical model of real-world object shape predicts human perceptual judgments. Poster presented at the 2nd annual *Computational Cognitive Neuroscience* conference, Philadelphia, Pennsylvania, USA.
- [29] Tarhan, L., Konkle, T. (2018). High-Level Features Organize Perceived Action Similarities. Poster presented at the 2nd annual *Computational Cognitive Neuroscience* conference, Philadelphia, Pennsylvania, USA.
- [30] Magri, C. Marantan, A., Mahadevan, L., Konkle, T. (2018). Predicting object shape and curvature judgments with a new parameterization of shape. Poster presented at the 18th annual meeting of the *Vision Sciences Society*, May 18-23, St. Pete Beach, FL.
- [31] Targan, L., Konkle, T. (2018). Predicting the Behavioral Similarity Structure of Visual Actions. Poster presented at the 18th annual meeting of the *Vision Sciences Society*, May 18-23, St. Pete Beach, FL.
- [32] Josephs, E.L., Konkle, T. (2018). Neural representations of reachspaces dissociate from scenes and objects. Poster presented at the 18th annual meeting of the *Vision Sciences Society*, May 18-23, St. Pete Beach, FL.

2017

- [33] Josephs, E.L., Konkle, T. (2017). Dissociable representations of objects, scenes, and intermediate views. Poster presented at the 1st annual *Computational Cognitive Neuroscience* conference, New York, New York, USA.
- [34] Tarhan L, Konkle T. Modeling the Neural Structure Underlying Human Action Perception. Poster presented at the 1st annual *Cognitive Computational Neuroscience* conference, New York, NY. 2017.
- [35] Josephs, E. & Konkle, T. (2017). Object, scenes, and the spaces in between: Workspaces have distinctive perceptual and semantic content. Talk presented at the annual meeting of the *Vision Sciences Society*, May 19-24, St. Pete Beach, FL.
- [36] Long, B. & Konkle, T. (2017). Mid-level features are sufficient to drive the animacy and object size organization of the ventral stream. Talk presented at the annual meeting of the *Vision Sciences Society*, May 19-24, St. Pete Beach, FL.
- [37] Tarhan, L. & Konkle, T. (2017). Low and high level features explain neural response tuning during action observation. Poster presented at the annual meeting of the *Vision Sciences Society*, May 19-24, St. Pete Beach, FL.
- [38] Yu, C-P. & Konkle, T. (2017). Map-CNN: A Convolutional Neural Network with Map-like Organizations. Poster presented at the annual meeting of the *Vision Sciences Society*, May 19-24, St. Pete Beach, FL.

2016

- [39] Long, B. & Konkle, T. (2016). Mid-level features are sufficient to drive the animacy and object size organization of the ventral stream. Talk presented at the annual meeting of the *Society for Neuroscience*, November 12-16, San Diego, CA.
- [40] Long, B., Carey, S., & Konkle, T. (2016). Pre-verbal infants automatically activate real-world object size information. Poster presented at the annual meeting of the *Vision Sciences Society*, May 13-18, St. Pete Beach, FL.
- [41] Magri, C., Konkle, T., & Caramazza, A. (2016). Visual object responses of the ventral stream reflect both size and motor-relevance. Poster presented at the annual meeting of the *Vision Sciences Society*, May 13-18, St. Pete Beach, FL.

2015

- [42] Konkle, T., & Caramazza, A. (2015). Exploring the representational structure in visual object-responsive cortex. Poster presented at the annual meeting of the *Society for Neuroscience*, Oct 17-21, Chicago, IL.
- [43] Konkle, T., Wang, X., Peelen, M., Caramazza, A. Bi., Y. (2015). Convergence and divergence in the neural organization of object responses to pictures and words. Talk presented at the annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [44] Long, B., Konkle, T. & Alvarez, G. (2015). Real-world object size is automatically activated by mid-level shape features. Talk presented at the annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.
- [45] Long, B., Moher, M., Konkle, T., Alvarez, G.A., & Carey, S. (2015). Broad category membership guides visual attention in young children. Poster presented at the *Society for Research in Child Development*, March 19-21, Philadelphia, PA.
- [46] Long, B., Moher, M., Konkle, T., Alvarez, G.A., & Carey, S. (2015). Broad category membership guides visual attention in young children. Poster presented at 5th Annual *CEU Conference on Cognitive Development*, January 8-11, Budapest, Hungary.
- [47] Cohen, M., Nakayama, K., Konkle, T., Alvarez, G. (2015). Visual awareness is constrained by the functional organization of the higher-level visual system. Poster presented at the annual meeting of the *Vision Sciences Society*, May 15-20, St. Pete Beach, FL.

2014

- [48] Konkle, T., & Caramazza, A. (2014). Object gist features capture the structure of neural responses to objects. Poster presented at the annual meeting of the *Vision Sciences Society*, May 16-21, St. Pete Beach, FL.
- [49] Cohen, M., Konkle, T., Nakayama, K., & Alvarez, G. A. (2014). Exploring the representational geometry of object representation in the ventral stream using brain-behavior correlations Talk presented at the annual meeting of the *Vision Sciences Society*, May 16-21, St. Pete Beach, FL.
- [50] Cohen, M., Konkle, T., Nakayama, K., & Alvarez, G. A. (2014). Exploring the representational geometry of object representation in the ventral stream using brain-behavior correlations. Poster presented at the annual meeting of the *Cognitive Neuroscience Society*, April 5-8, Boston, MA.

2013

- [51] Konkle, T., & Caramazza, A. (2013). Macro-organization of object responses in occipito-temporal cortex. Symposium presentation at the annual meeting of the *Vision Sciences Society*, May 12-15, Naples, FL.
- [52] Konkle, T., & Caramazza, A. (2013). Large-scale functional distinctions in object cortex are reflected in resting state networks. Poster presented at the annual meeting of the *Vision Sciences Society*, May 12-15, Naples, FL.
- [53] Long, B., Konkle, T., Cohen, M., & Alvarez, G. A. (2013). Real-World Size Influences Visual Search Efficiency. Poster presented at the annual meeting of the *Vision Sciences Society*, May 12-15, Naples, FL.

2012

- [54] Konkle, T., & Caramazza, A. (2012). Large-Scale Object Topography In Occipito-Temporal Cortex. Poster presented at the Concepts, Actions, and Objects annual meeting, May 24-27, Rovereto, Italy.
- [55] Konkle, T., & Caramazza, A. (2012). Comparing Animacy and Real-World Size Object Topography In Occipito-Temporal Cortex: a "Coarse MVPA" approach. Talk presented at the annual meeting of the *Vision Sciences Society*, May 11-16, Naples, FL.

- [56] Cohen, M., Konkle, T., Rhee, J., Nakayama, K., & Alvarez, G. A. (2012). High-level neural similarity predicts perceptual competition during encoding of different object categories. Talk presented at the annual meeting of the Vision Sciences Society, May 11-16, Naples, FL
- [57] Rhee, J., Konkle, T., Brady, T. F., & Alvarez, G. A. (2012). Does memory enhancement training alter perceptual representations? Poster presented at the annual meeting of the Vision Sciences Society, May 11-16, Naples, FL.

2011

- [58] Konkle, T., & Oliva, A. (2011). Big and small objects are represented in a medial to lateral organization across ventral visual cortex. Talk presented at the Concepts, Actions, and Objects annual meeting, May 19-22, Rovereto, Italy.
- [59] Konkle, T., & Oliva, A. (2011). Organizing visual object knowledge by real-world size in ventral visual cortex. Poster presented at the annual meeting of the Vision Sciences Society, May 6-12, Naples, FL.
- [60] 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 annual meeting of the Vision Sciences Society, May 6-12, Naples, FL.
- [61] Cohen, M. A., Nakayama, K., Konkle, T., & Alvarez, G. A. (2011). Competition for working memory resources depends on the kind of stimuli being remembered. Poster presented at the annual meeting of the Vision Sciences Society, May 6-12, Naples, FL.
- [62] Park, S., Konkle, T., & Oliva, A. (2011). Neural coding of the size of space and the amount of clutter in a scene. Talk presented at the annual meeting of the Vision Sciences Society, May 6-12, Naples, FL.
- [63] Rhee, G., Konkle, T., Brady, T. F., & Alvarez, G. A. (2011). Learning statistical regularities can speed the encoding of information into working memory. Poster presented at the annual meeting of the Vision Sciences Society, May 6-12, Naples, FL.

2010

- [64] Konkle, T., & Oliva, A. (2010). Examining how objects of different real-world sizes are represented in ventral visual cortex. Talk presented at the annual meeting of the Society for Neuroscience, Nov 8-13, San Diego, CA.
- [65] Park, S., Konkle, T., & Oliva, A. (2010). Neural representation of the size of space and the amount of clutter in a scene. Talk presented at the annual meeting of the Society for Neuroscience, Nov 8-13, San Diego, CA.
- [66] Konkle, T., & Oliva, A. (2010). Examining how the real-world size of objects is represented in ventral visual cortex. Talk presented at the annual meeting of the Vision Sciences Society, May 7-12, Naples, FL.
- [67] Park, S., Konkle, T., & Oliva, A. (2010). Neural Coding of Scene Volume: the Size of Space Represented across the PPA and LOC. Poster presented at the annual meeting of the Vision Sciences Society, May 7-12, Naples, FL.

2009

- [68] Konkle, T., & Oliva, A. (2009). Reconstructive Memory Biases for Object and Scene Views. Poster presented at the 50th annual meeting of the *Psychonomic Society*, November 19-21, Boston, MA.
- [69] Oliva, A., Brady, T. F., Konkle, T., Alvarez, G. A., (2009). Remembering thousands of images with high fidelity. Talk presented at the 50th annual meeting of the *Psychonomic Society*, November 19-21, Boston, MA.
- [70] Bedny, M., Konkle, T., Saxe, R., Pascual-Leone, A., (2009). Plasticity in the visual motion system of congenitally and late blind adults. Talk presented at the annual meeting of *the Society for Neuroscience*, October 17-21, Chicago, IL.
- [71] Konkle, T., Wang, Q., Hayward, V., & Moore, C. I. (2009). Motion aftereffects transfer between vision and touch. Talk presented at the annual *International Multisensory Research Forum*, June 29 – July 2, 2009, New York, NY.
- [72] Konkle, T., & Oliva, A. (2009). Canonical visual sizes for real-world objects. Poster presented at the annual meeting of the *Vision Sciences Society*, May 8-13, Naples, FL.
- [73] Alvarez, G. A., Konkle, T., Brady, T. F., Gill, J., & 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 annual meeting of the *Vision Sciences Society*, May 8-13, Naples, FL.

- [74] Brady, T. F., Konkle, T., & Oliva, A. (2009). Examining object representation via object memory: exemplar and state-level object properties are supported by the same underlying features. Poster to be presented at the annual meeting of the *Vision Sciences Society*, May 8-13, Naples, FL.
- [75] Oliva, A., Konkle, T., Brady, T., F., & Alvarez, G., A. (2009). The high fidelity of scene representation in visual long-term memory. Talk presented at the annual meeting of the *Vision Sciences Society*, May 8-13, Naples, FL.
- [76] Bedny, M., Caramazza, A., Konkle, T., Pascual-Leone, A., Saxe, R. (2009). Effects of Visual Deprivation on Action Verb Representation in the Lateral-Temporal-Cortex: Evidence from congenitally blind adults. Talk presented at the annual meeting of the *Cognitive Neuroscience Society*, March 21-March 24, San Francisco, CA.

2008

- [77] Konkle, T., Bedny, M., Saxe, R., Moore, C. I. (2008). Motion-selective recruitment of MT+ by tactile apparent motion stimuli. Poster presented at the annual meeting of the *Society for Neuroscience*, November 15-19, Washington, D.C.
- [78] Carter, O., Konkle, T., Wang, Q., Hayward, V & Moore, C. (2008). Tactile rivalry demonstrated with ambiguous apparent motion quartet. Poster presented at the annual meeting of the *Society for Neuroscience*, November 15-19, Washington, D.C.
- [79] Brady, T. F., Konkle, T., & 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.
- [80] Konkle, T., & Oliva, A. Objects, Big and Small: Evidence for canonical visual size in object representation. Talk presented at the *European Conference for Visual Perception*, August 24-28, Utrecht, Netherlands.
- [81] 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.
- [82] Brady, T. F., Konkle, T., Alvarez, G. A., & Oliva, A. (2008). Compression in visual short-term memory: Using statistical regularities to form more efficient memory representations. *Poster presented at the annual meeting of the Vision Sciences Society*, May 9-14, Naples, FL.
- [83] Konkle, T., Brady, T. F., Alvarez, G., A., & Oliva, A. (2008). Remembering Thousands of Objects with High Fidelity. Talk presented at the annual meeting of the *Vision Sciences Society*, May 9-14, Naples, FL.

2007

- [84] Konkle, T. A., Wang, Q., Hayward, V., & Moore, C., I. (2007). Visual motion adaptation induces a tactile motion after effect. Talk presented at the annual meeting of the *Society for Neuroscience*, November 3-7, San Diego, CA.
- [85] Carter, O., Konkle, T., Snyder, J., Wang, Q., Hayward, V., Moore, C., & Nakayama, K. (2007). Bi-stable tactile stimulus shows perceptual rivalry exists across the senses. Poster presented at the *8th International Multisensory Research Forum*, July 5-7, Sydney, Australia.
- [86] Konkle, T., & Oliva, A. (2007). Normative representation of objects and scenes: Evidence from predictable biases in perception and memory. Poster presented at the annual meeting of the *Vision Sciences Society*, May 11-16, Sarasota, FL.

2006

- [87] Konkle, T., McDaniel, E., Greene, M., & Oliva, A. (2006). Constructing depth information in briefly presented scenes. Poster presented at the annual meeting of the *Vision Sciences Society*, May 5-10, Sarasota, FL.
- [88] Oliva, A., Konkle, T., Greene, M., & Torralba, A. (2006). Not all Scene Categories are Created Equal: The role of object and layout diagnosticity in scene gist understanding. Poster presented at the annual meeting of the *Vision Sciences Society*, May 5-10, Sarasota, FL.

- [89] Vul, E., Konkle, T., Love A., Williams, A., & Nieuwenstein, M. (2006). Quantitative prediction errors in RSVP: modeling the time course of suppression during the attentional blink. Poster presented at the annual meeting of the *European Conference of Visual Perception*, August 20-25, St Petersburg, Russia.

Pre 2006

- [90] Konkle, T., Marchant, N., Verstynen, T., Diedrichsen, J., & Ivry, R. B. (2005). Selection of action: Can transcranial magnetic stimulation bias hand choice in reaching? Poster presented at the annual meeting of the *Society for Neuroscience*, November 12-16, Washington, D.C.
- [91] Konkle, T., Verstynen, T. D., & Ivry, R. B. (2004). Response variability in a rhythmic tapping task during sub- and suprathreshold TMS over motor cortex. Poster presented at the annual meeting of the *Society for Neuroscience*, October 23-27, San Diego, CA.
- [92] Verstynen, T. D., Stinear, C. M., Konkle, T., Ivry, R. B., & Byblow, W. (2004). Asymmetries in motor cortex inhibition during bimanual isometric muscle activation. Poster presented at the annual meeting of the *Society for Neuroscience*, October 23-27, San Diego, CA.
- [93] Konkle, T., Jiang, N., Zhang, J., Gurel, F., Scheper, C., & Craciun, G. (2004). Image segmentation using neural oscillators. Technical Report No. 26. The Ohio State University: *Mathematical Biosciences Institute Technical Report Series*. Online.
- [94] Konkle, T., Verstynen, T. D., Diedrichsen, J., & Ivry, R. B. (2003). Sources of increased timing variability following TMS over motor cortex. Poster presented at the annual meeting of the *Society for Neuroscience*, November 8-12, New Orleans, LA.

Invited Talks

Science of Intelligence Distinguished Lecture Series, Berlin, Germany	2020 Dec
Neurobiology of Cognition, Gordon Research Conference, Discussion Leader	2020 July
MGH/Martinos Center, Brainmap Seminar, Cambridge, MA	2020 May
Concepts, Actions, and Objects Conference, Rovereto, Italy	2020 May
Cognition, AI, and Society: Status and Perspectives Workshop, Boston College	2020 April
Cognitive Neuroscience Society Symposium, Boston	2020 March
Janelia Research Farms	2020 March
University of California, Berkeley	2020 January
University of California, Davis	2020 January
Shared Visual Representations in Human and Machine Intelligence, NeurIPS	2019 December
Johns Hopkins University	2019 November
Harvard University	2019 November
Cognitive Computational Neuroscience Conference, Berlin, Germany	2019 September
The Algonauts Workshop: Explaining the Human Visual Brain, MIT	2019 July
International Neuropsychological Symposium, Vietri Sul Mar, Italy	2019 June
Arther M. Sackler Colloquium of the National Academy of Sciences	2019 May
Mathematical Biology Workshop, Harvard University	2019 April
University of Massachusetts, Amherst	2019 March
University of Reno	2019 March
Tufts University	2018 December
Columbia University	2018 October
Harvard Brain Initiative: Bridging Data and Theory Symposium	2018 October
Cognitive Computational Neuroscience Cross-collaborative Breakout session	2018 September
Visual Search and Selective Attention Conference, Munich, Germany	2018 July
Columbia University	2018 March
Harvard Brain Initiative: Mind, Brain, Behavior Neuroscience Symposium	2018 March
University of Pennsylvania	2018 March
Yale University	2018 February
Boston University	2017 October
Stony Brook University	2016 July
University of Western Ontario, Canada	2016 March

University of Cambridge, UK	2015 July
Johns Hopkins University	2015 Feb
Stanford University	2015 Jan
Harvard University – Visual Attention Lab Seminar	2014 Oct
NeuroCog Collective Conference on Levels of Analysis, Australia	2014 June
Harvard University	2014 March
Harvard University - Cognition Brain & Behavior Seminar Series	2012 March
NeuroCog Collective Conference on Representation, Costa Rica	2012 Jan
Harvard University - Graphics, Vision, and Interaction Seminar	2009 March
University of Liege, Belgium	2008 Aug

Scholarly Awards

Vision Sciences Society, Young Investigator Award	2019
APS Rising Star Award	2017
JEP:General Division 3 New Investigator Award	2013
Walle Nauta Award for Continuing Dedication to Teaching	2010
Singleton Presidential Scholar, MIT	2005-2009
Angus MacDonald Award for Excellence in Undergraduate Teaching	2008
Cognitive Science Departmental Citation, University of California Berkeley	2004
National Merit Scholar	2000-2004
Robert C. Byrd Scholarship	2000-2004

Grants

Amazon Web Services Cloud Credits (Co-PI, \$35,000)	2020
Harvard Brain Science Initiative Collaborative Seed Grant (Co-PI, \$69,350)	2018
MBB Faculty Research Award (\$15,000)	2016
Star Family Challenge Grant (\$100,000)	2016
Ruth L. Kirschstein Post-doctoral National Research Service Award	2013-2016
Concepts Actions Objects Symposium Travel Grant Award	2011
MIT Health Science and Technology Catalyst fund (50 fMRI hours)	2008
International Multisensory Research Forum Travel Award	2009
European Conference for Visual Perception Travel Award	2008
Cognitive Science Society Travel Award	2007
National Defense Science and Engineering Graduate Fellowship	2006 - 2009
National Science Foundation Scholarship	2006 - 2010

Teaching

Essentials of fMRI for Cognitive Neuroscientists (Harvard, Psych 1309)	2018, 2019
Brain Science for World Leaders (Harvard, Psych 1301)	2016, 2019
Current Topics in Vision and Sensory Processes (Harvard, Psych 3360)	Fall 2015-current
Lab on Cognitive and Neural Organization (Harvard, Psych 2355)	Fall 2015-current

Advising

Graduate Students

Daniel Janini	2016-
Emilie Josephs	2015-
Leyla Tarhan	2015-
Bria Long	2015-2017
Caterina Magri	2017-2019

Post-doctoral Fellows

Ruosi Wang	2019-
Jeongho Park	2018-
Arturo Deza	2019- 2020
Rocco Chiou	2017 - 2018
Chen Ping Yu	2016 - 2017
Xiuye Chen	2016 - 2017

Masters and Ph.D. Thesis Committees

John Mark Taylor, Psychology, Harvard University	May 2021
Category Magri, Psychology, Harvard University	September 2019
Thomas Hagen, Psychology, Oslo University	May 2019
Roger Strong, Psychology, Harvard University	May 2019
Xihan Zhang, Computational Biology and Quantitative Genetics, Harvard	May 2019
Ruosi Wang, Psychology Harvard University	Fall 2018
Mark Thornton, Psychology, Harvard University	Spring 2017
Bria Long, Psychology, Harvard University	Spring 2017
Chen Ping Yu, Computer Science, Stony Brook University	Summer 2016
Alex Walther, Cognitive Neuroscience, Cambridge University	Summer 2015

Service

Department Committees

Restricted Funds Committee, Psychology, Harvard University	2019-
Mind, Brain, and Behavior Head Tutor, Psychology, Harvard University	2018-
Faculty of Arts and Sciences Standing Committee on Mind, Brain, and Behavior	2018-
Cognition, Brain, & Behavior Seminar Organizer, Harvard	2016-2017
Harvard Psychology Departmental Colloquium Committee	2015-2017
Faculty Interest Group on Representation, Organizing Committee, Harvard	2013-2014
Cognitive Job Search Committee, Massachusetts Institute of Technology	2009-2010
Chair of Interview Weekend Committee, Massachusetts Institute of Technology	2007-2009
Interview Weekend Committee member, Massachusetts Institute of Technology	2006-2007

Outreach and Activities

Mathematical Biosciences Workshop, Harvard University Co-organizer, “Invariance and Geometry in Sensation, Action and Cognition”	April 2019
How to be a Successful Post-Doc, Harvard University Panel member, on how to approach a post-doc and the job market	June 2018
Center for Brains, Minds and Machines Panelist Discussion, MIT Panel member, discussing “Deep networks, the brain and AI”	October 2017
Women In Neuroscience Group Meeting, University of Western Ontario Met with a group of graduate students to discuss being a woman in this profession.	July 2016
NSF Center for Brains, Minds and Machines (CBMM) Summer Seminar Series Presented a lecture in this talk series, whose aim is to attract women and minorities into the field of brain science and the study of intelligence.	July 2015
“Taking the next steps as a woman in neuroscience” Panelist Organized by the Women in Neuroscience committee, Harvard University	March 2015

Co-Organizer of the Prehistory of the Brain Collective
Sponsored by the Mind, Brain, & Behavior Initiative, Harvard University

2013-2014

Peer Review

Ad Hoc Reviewer – Psychology:

Acta Psychologica
Attention, Perception, & Performance
Behavior Research Methods
Cognition
Cognitive Science Society
Computational Brain and Behavior
Experimental Psychology
Frontiers in Perception Science
iPerception
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of Motor Behavior
Journal of Vision
Memory & Cognition
Perception
Psychological Science
Psychonomic Bulletin & Review
PlosOne
Nature Human Behavior
Transactions in Applied Perception
Trends in Cognitive Sciences
Visual Cognition

Ad Hoc Reviewer – Neuroscience:

Brain Topography
Cerebral Cortex
Communications Biology
Cortex
eLife
European Journal of Neuroscience
Experimental Brain Research
Human Brain Mapping
Journal of Cognitive Neuroscience
Journal of Neuroscience
Journal of Neurophysiology
Nature
Nature Communications
Nature Communications Biology
Nature Neuroscience
Neuron
Neuroimage
Neuropsychologia

Ad Hoc Reviewer – Annual Conferences:

Vision Sciences Society
Cognitive Computational Neuroscience Conference