

**Bradford Z. Mahon, PhD**

Associate Professor

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E-mail: [mahon@rcbi.rochester.edu](mailto:mahon@rcbi.rochester.edu)**Lab Website:** [www.caoslab.bcs.rochester.edu](http://www.caoslab.bcs.rochester.edu)**University of Rochester Medical School:** [www.urmc.rochester.edu/people/27337790-bradford-mahon](http://www.urmc.rochester.edu/people/27337790-bradford-mahon)**Department of Brain and Cognitive Sciences:** [www.bcs.rochester.edu/people/bmahon/index.html](http://www.bcs.rochester.edu/people/bmahon/index.html)**Program for Translational Brain Mapping:** [tbm.urmc.edu](http://tbm.urmc.edu)**Google Scholar:** <https://scholar.google.com/citations?user=jA6kkvgAAAAJ&hl=en>**Education**

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**PhD, Psychology, 2009**

Harvard University, Cambridge, MA, USA. Dissertation: 'The representation of everyday objects in the brain' Committee: Alfonso Caramazza (Mentor); Marc Hauser, Alex Martin, Ken Nakayama.

**BS, Cognitive Neuroscience, 2002**

Harvard University, Cambridge, MA, USA.

Magna Cum Laude with Honors

Honors Thesis Committee: Alfonso Camarazza (Mentor); Susan Carey; David Caplan; Jesse Snedeker

**Academic Employment**

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**Effective July 1, 2018**

Associate Professor, Department of Psychology, Carnegie Mellon University

**July 2017– June, 2018**

Associate Professor (with tenure)

Primary Appointment, Department of Brain and Cognitive Sciences, University of Rochester

Primary Appointment, Department of Neurosurgery, University of Rochester

Secondary Appointment, Center for Visual Science, University of Rochester

Secondary Appointment, Center for Language Science, University of Rochester

Secondary Appointment, Dept. of Neurology, University of Rochester (Jan 2016 onward)

Scientific Director, Program for Translational Brain Mapping, University of Rochester

**Jan 2011– 2017**

Assistant Professor

Primary Appointment, Department of Brain and Cognitive Sciences, University of Rochester

Primary Appointment, Department of Neurosurgery, University of Rochester

**July 2009 – Dec 2010**

Post-Doctoral Fellow, Department of Brain and Cognitive Sciences, University of Rochester.

**Aug 2006 – May 2009**

Research Fellow, Center for Mind/Brain Sciences, University of Trento, Rovereto, Italy

**Sept 2003 – July 2004**

Research Fellow (Fulbright Full Grant)

Department of Psychology, University of Barcelona

**Sept 2002 – Aug 2003**

Research Associate / Laboratory Technician

Department of Psychology, Harvard University, Cambridge, MA., USA

## Peer Reviewed Publications

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- Prentiss, E.K., Schneider, C.L., Williams, Z.R., Sahin, B., and Mahon, B.Z. (in press). Spontaneous in-flight accommodation of hand orientation to unseen grasp targets: A case of action blindsight. *Cognitive Neuropsychology*.
- Garcea, F.E., Chen, Q., Vargas, R., Narayan, D.A., and Mahon, B.Z. (in press). Task- and domain-specific modulation of functional connectivity between and within the ventral and dorsal object processing pathways. In revision. *Brain Structure and Function*.
- Chernoff, B.L., Teghipco, A., Garcea, F.E., Sims, M., Paul, D.A., Tivarus, M., Smith, S.O., Pilcher, W.H., Mahon, B.Z. (in press). A role for the frontal aslant tract in speech planning: A neurosurgical case study. *Journal of Cognitive Neuroscience*.
- Chen, Q., Garcea, F.E., Jacobs, R.A., and Mahon, B.Z. (in press). Abstract representations of object directed action in the left inferior parietal lobule. *Cerebral Cortex*.
- Garcea, F.E., Chernoff, B.L., Diamond, B., Lewis, W., Sims, M.H., Tomlinson, S.B., Teghipco, A., Belkhir, R., Gannon, S.B., Erickson, S., Smith, S.O., Stone, J., Liu, L., Tollefson, T., Langfitt, J., Marvin, E., Pilcher, W.H., & Mahon, B.Z. (2017). Direct electrical stimulation in the human brain disrupts melody processing. *Current Biology*, 27, 17, p2684–2691.e7. [Video abstract: <https://www.youtube.com/watch?v=mwz2dEjLoH4&t=2s>]
- Chen, Q., Garcea, F.E., Almeida, J., & Mahon, B.Z. (2017). Connectivity-based constraints on category-specificity in the ventral object processing pathway. *Neuropsychologia*, 105, 184 - 196.
- Koopman, S.E., Mahon, B.Z., & Cantlon, J.F. (2017). Evolutionary constraints on human object perception. *Cognitive Science*, 41, 2126 - 2148.
- Alonso-Diaz, S. Gaffin, E., Mahon, B. Z., & Cantlon, J. F. (2017). What's in a reach? Domain-general modulations of reach by numerical value. *Journal of Numerical Cognition*, 3, 212-229.
- Mahon, B.Z. and Navarrete, E. (2016). Modeling lexical access in speech production as a ballistic process. *Language, Cognition and Neuroscience*. 31, 521-523.
- Mahon, B.Z. and Hickok, G. (2016). Arguments about the Nature of Concepts: Symbols, embodiment, and beyond. *Psychonomic Bulletin and Review*. 23, 941-958. [Introduction to a Special Issue by the same title, Edited by Mahon and Hickok]
- Amaral, L., Ganho, A., Osório, A., He, D., Chen, Q., Mahon, B.Z., Gonçalves, O.F., Sampaio, A., Fang, F., Bi, Y. & Almeida, J. (2016). Hemispheric asymmetries in subcortical visual and auditory relay structures in congenital deafness. *European Journal of Neuroscience*, 44, 2334-2339.
- Kristensen, S., Garcea, F.E., Mahon, B.Z., & Almeida, J. (2016). Temporal frequency tuning reveals interactions between dorsal and ventral visual streams. *Journal of Cognitive Neuroscience*. 28, 1295-1302.
- Kersey, A.J., Clark, T.S., Lussier, C.A., Mahon, B.Z., & Cantlon, J.F. (2016). Development of tool selectivity in the dorsal and ventral visual pathways. *Cerebral Cortex*. 26, 3135-3145.
- Vargas, R., Garcea, F.E., Mahon, B.Z., & Narayan, D. (2016). Refining the clustering coefficient for analysis of social and neural network data. *Social Network Analysis and Mining*, 6:49.
- Erdogan, G., Chen, Q., Garcea, F.E., Mahon, B.Z. & Jacobs, R. (2016). Multisensory part-based representations of objects in human lateral occipital complex. *Journal of Cognitive Neuroscience*. 26, 869-881.

- Navarrete, E., Mahon, B.Z., Lorenzoni, A., & Peressotti, F. (2016). What can written-words tell us about lexical retrieval in speech production? *Frontiers in Psychology*, 6, 1 - 12.
- Garcea, F.E., Kristensen, S., Almeida, J., & Mahon, B.Z. (2016). Resilience to the contralateral visual field bias as a window into object representations. *Cortex*, 81, 14-23.
- Chen, Q., Garcea, F.E., and Mahon, B.Z. (2016). The representation of object-directed action and function knowledge in the human brain. *Cerebral Cortex*, 26, 1609-1618.
- Mahon, B.Z. (2015). What is embodied about cognition? *Language, Cognition and Neuroscience*. 30, 420-429.
- Mahon, B.Z. (2015). Response to Glenberg: Conceptual content does not constrain the representational format of concepts. *Canadian Journal of Experimental Psychology*, 69, 179-180.
- Mahon, B.Z. (2015). The burden of embodied cognition. *Canadian Journal of Experimental Psychology*, 69, 172-178.
- Almeida, J., He, D., Chen, Q., Mahon, B.Z., Zhang, F., Gonçalves, O.F., Fang, F., & Bi, Y. (2015). Decoding visual location from neural patterns in the auditory cortex of the congenitally deaf. *Psychological Science*, 26, 1771-1782.
- Stasenko, A., Bonn, C., Teghipco, A., Garcea, F., Sweet, C., Dombovy, M., McDonough, J., and Mahon, B.Z. (2015). A causal test of the motor theory of speech perception: A case of impaired speech production and spared speech perception. *Cognitive Neuropsychology*, 32, 38-57.
- Navarrete, E., Caccaro, A., Pavani, F., Mahon, B.Z., and Peressotti, F. (2015). With or Without Semantic Mediation: Retrieval of Lexical Representations in Sign Production. *Journal of Deaf Studies and Deaf Education*, 20, 163-171.
- Paul, D. Gaffin-Cahn, E., Hintz, E., Adeclat, G., Zhu, T., Williams, Z.R., Vates, G.E., Mahon, B.Z. (2014). White Matter Changes Linked to Visual Recovery after Nerve Decompression in Humans. *Science Translational Medicine*, 6, 266ra173.
- Stasenko, A., Garcea, F.E., Dombovy, M., & Mahon, B.Z. (2014). When concepts lose their color: A case of selective loss of knowledge of object color. *Cortex*, 58, 217-238.
- Garcea, F.E. & Mahon, B.Z. (2014). Parcellation of left parietal tool representations by functional connectivity. *Neuropsychologia*, 60, 131-143.
- Navarrete, E., Del Prato, P., Peressotti, F., & Mahon, B.Z. (2014). Lexical retrieval is not by competition: evidence from the blocked naming paradigm. *Journal of Memory and Language*, 76, 253-272.
- Almeida, J., Mahon, B.Z., Zapater-Rabero, V., Dziuba, A., Cabaço, T., Marques, J.F., & Caramazza, A. (2014). Grasping with the eyes: the role of elongation in visual recognition of manipulable objects. *Cognitive, Affective, and Behavioral Neuroscience*, 14, 319-335.
- Fintzi, A.R. & Mahon, B.Z. (2014). A bimodal tuning curve for spatial frequency across left and right human orbital frontal cortex during object recognition. *Cerebral Cortex*, 24, 1311–1318.
- Mahon, B.Z. and Navarrete, E. (2014). The CRITICAL DIFFERENCE: Semantic interference and facilitation in speech production. A response to Roelofs and Piai. *Cortex*, 52, 123-127.

- Mahon, B.Z. (2013). Neuroscience: Watching the brain in action. eLIFE. <http://dx.doi.org/10.7554/eLife.00866>
- Stasenko, A., Garcea, F.E., & Mahon, B.Z. (2013). What happens to the motor theory of perception when the motor system is damaged? *Language and Cognition*, 5, 225-238.
- Almeida, J., Pajtas, P.E., Mahon, B.Z., Nakayama, K., & Caramazza, A. (2013). Affect of the unconscious: Visually suppressed angry faces modulate our decisions. *Cognitive, Affective and Behavioral Neuroscience*, 13, 94-101.
- Almeida, J., Fintzi, A.R., & Mahon, B.Z. (2013). Tool manipulation knowledge is retrieved by way of the ventral visual object processing pathway. *Cortex*, 49, 2334–2344.
- Mahon, B.Z., Kumar, N., & Almeida, J. (2013). Spatial frequency tuning reveals interactions between the dorsal and ventral visual systems. *Journal of Cognitive Neuroscience*, 25, 862-871.
- Navarrete, E., & Mahon, B.Z. (2013) A rose by any other name is still a rose: A reinterpretation of Hantsch and Mädebach. *Language and Cognitive Processes*, 28, 701-716.
- Garcea, F.E., & Mahon, B.Z. (2012). What is in a tool concept? Dissociating manipulation knowledge from function knowledge. *Memory and Cognition*, 40, 1303-1313.
- Garcea, F.E., Almeida, J., & Mahon, B.Z. (2012). A right visual field advantage for visual processing of manipulable objects. *Cognitive, Affective, and Behavioral Neuroscience*. 12, 813-25
- Navarrete, E. Del Prato, P., & Mahon, B.Z. (2012). Factors Determining Semantic Facilitation and Interference in the Cyclic Naming Paradigm. *Frontiers in Psychology*, 3, 38. 1-15.
- Mahon, B.Z., Garcea, F.E., & Navarrete, E. (2012). Picture-word interference and the response exclusion hypothesis: A response to Mulatti and Coltheart. *Cortex*, 48, 373-377.
- Mahon, B.Z. and Caramazza, A. (2011). What drives the organization of object knowledge in the brain? *Trends in Cognitive Sciences*. 15, 97-103.
- Mahon, B. Z., Cantlon, J. F. (2011). The specialization of function: cognitive and neural perspectives. *Cognitive Neuropsychology*, 28, 147-155.
- Anzellotti, S., Mahon, B.Z., Schwarzbach, J., & Caramazza, A. (2011). Differential activity for animals and manipulable objects in the anterior temporal lobes. *Journal of Cognitive Neuroscience*. 23, 2059-2067.
- Navarrete, E., Mahon, B.Z., & Caramazza, A. (2010). The cumulative semantic cost does not require lexical selection by competition. *Acta Psychologica*, 134, 279-289
- Mahon, B.Z. & Caramazza, A. (2010). Judging semantic similarity: An event-related fMRI study with auditory word stimuli. *Neuroscience*. 169, 279-286.
- Mahon, B.Z., Schwarzbach, J., & Caramazza, A. (2010). The representation of tools in left parietal cortex independent of visual experience. *Psychological Science*. 21(6), 764-771
- Almeida, J., Mahon, B.Z., & Caramazza, A. (2010). The role of the dorsal visual processing stream in tool identification. *Psychological Science*. 21(6), 772-778.

Mahon, B.Z and Caramazza, A. (2009). Concepts and Categories: A Cognitive Neuropsychological Perspective. *Annual Review of Psychology*, 60, 27–51.

Mahon, B.Z. and Caramazza, A. (2009). Why does lexical selection have to be so hard? Comment on Abdel Rahman and Melinger's Swinging Lexical Network Proposal. *Language and Cognitive Processes*, 24, 734-748.

Janssen, N. Melinger, A., Mahon, B. Z., Finkbeiner, M., & Caramazza, A. (2009). The word class effect in the picture-word interference paradigm. *Quarterly Journal of Experimental Psychology*, 63(6), 1233-1246.

Mahon, B.Z., Anzellotti, S., Schwarzbach, J., Zampini, M., and Caramazza, A. (2009). Category-specific organization in the human brain does not require visual experience. *Neuron*, 63, 397-405.

Finocchiaro, C., Mahon, B.Z., & Caramazza, A. (2008). Gender agreement and multiple referents. *Italian Journal of Linguistics*, 20, 285-307.

Almeida, J., Mahon, B.Z., Nakayama, K., & Caramazza, A. (2008). Unconscious processing dissociates along categorical lines. *Proceedings of the National Academy of Sciences*, 105, 5214–15218.

Janssen, N., Schirm, W., Mahon, B.Z., & Caramazza, A. (2008). The semantic interference effect in the picture-word interference paradigm: Evidence for the response selection hypothesis. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34, 249-256.

Mahon, B.Z. & Caramazza, A. (2008). A Critical Look at the Embodied Cognition Hypothesis and a New Proposal for Grounding Conceptual Content. *Journal of Physiology – Paris*, 102, 59-70.

Negri, G.A.L., Rumiati, R.I., Zadini, A., Ukmar, M., Mahon, B.Z., & Caramazza, A. (2007). What is the role of motor simulation in action and object recognition? Evidence from apraxia. *Cognitive Neuropsychology*, 24, 795-816.

Mahon, B.Z., Milleville, S., Negri, G.A.L., Rumiati, R.I., Caramazza, A., & Martin, A. (2007). Action-related properties of objects shape object representations in the ventral stream. *Neuron*, 55, 507-520.

Mahon, B.Z., Costa, A., Peterson, R., Vargas, K., & Caramazza, A. (2007). Lexical selection is not by competition: A reinterpretation of semantic interference and facilitation effects in the picture-word interference paradigm. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33, 503-535.

Caramazza, A. & Mahon, B.Z. (2006). The organization of conceptual knowledge in the brain: the future's past and some future directions. *Cognitive Neuropsychology*, 23, 13-38.

Mahon, B.Z. & Caramazza, A. (2005). The orchestration of the sensory-motor systems: Clues from neuropsychology. *Cognitive Neuropsychology*, 22, 480-494.

Mahon, B.Z. & Caramazza, A. (2004). Heterogeneity is a fact of category-specific semantic deficits. So? Comments on Rosazza, Imbornone, Zorzi, Farina, Chiavari, and Cappa (2003). *Neurocase*, 10, 78-83.

Mahon, B.Z. & Caramazza, A. (2003). Constraining questions about the organization and representation of conceptual knowledge. *Cognitive Neuropsychology*, 20, 433-450.

Costa, A., Mahon, B.Z., Savova, V., & Caramazza, A. (2003). Level of categorization effect: A novel effect in the picture-word interference paradigm. *Language and Cognitive Processes*, 18, 205-233.

Capitani, E., Laiacona, M., Mahon, B.Z., & Caramazza, A. (2003). What are the facts of category-specific deficits? A critical review of the clinical evidence. *Cognitive Neuropsychology*, 20, 213-261.

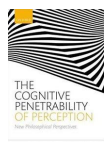
Mahon, B.Z. and Caramazza, A. (2003). There are facts...and then there are facts. Reply to Moss and Tyler. *Trends in Cognitive Sciences*, 7, 481-482.

Caramazza, A. & Mahon, B.Z. (2003). The organization of conceptual knowledge: the evidence from category-specific semantic deficits. *Trends in Cognitive Sciences*, 7, 325-374.

## Book Chapters

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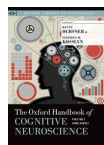
Garcea, F.E. and Mahon, B.Z. (*forthcoming*) The how and what of object knowledge in the human brain. *Oxford University Press Handbook of Neurolinguistics*.



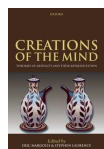
Mahon, B.Z. & Wu, W. (2015). Cognitive penetration of the dorsal visual stream? John Zeimbekis and Athanasios Raftopoulos (Eds.), *The Cognitive Penetration of Perception: New Philosophical Perspectives*. Oxford University Press.



Mahon, B.Z. (2015). Missed connections: A connectivity constrained account of the representation of object concepts. E. Margolis and S. Laurence (Eds.), *The Conceptual Mind: New Directions in the Study of Concepts*, MIT Press.



Mahon, B.Z. & Caramazza, A. (2014). The Organization of Conceptual Knowledge in the Brain. *The Oxford Handbook of Cognitive Neuroscience*. Kevin Ochsner and Stephen M. Kosslyn (Eds). Oxford University Press.



Mahon, B.Z. & Caramazza, A. (2007). The organization of conceptual knowledge in the brain: Living kinds and artifacts. E. Margolis and S. Laurence (Eds.), *Creations of the Mind: Essays on Artifacts and their Representation*. Oxford University Press.



Mahon, B.Z. & Caramazza, A. (2005). Category-specific knowledge, sensory modalities, and features: Clues from neuropsychology and functional neuroimaging. *The Encyclopedia of Language and Linguistics*, 2nd Edition. Elsevier Science, Amsterdam

## MS Under Peer Review/Revision

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Teghipco, A., Navarrete, E., & Mahon, B.Z. Verbal fluency as a window into the structure of lexical semantic representations. (revision invited, *Cognitive Neuropsychology*)

Chernoff, B.L., Teghipco, A., Garcea, F.E., Sims, M., Paul, D., Tivaris, M., Smith, S., Hintz, E. Pilcher, W., & Mahon, B.Z. Reorganized language network connectivity after left arcuate fasciculus resection: A case study. Under Review

Hirad, A., Bazarian, J.J., Merchant-Borna, K., Garcea, F.E., Heilbronner, S., Paul, D., Hintz, E.B., van Wijngaarden, E., Schifitto, G., Wright, D.W., Espinoza, T., and Mahon, B.Z. A neural signature of clinically silent brain injury in contact sports athletes. Under Review.

Almeida, J., Amaral, L., Garcea, F.E., Sousa, D., Xu, S., Mahon, B.Z., and Martins, I.P. Visual and visuomotor

processing of hands and tools as a study case for the cross talk between the dorsal and ventral streams. (revision invited, *Cognitive Neuropsychology*).

Navarrete, E., Peressotti, F., Mahon, B.Z. The relation between repetition priming and semantic context in picture naming: Implications for models of lexical access. Under Review.

Lee, D., Mahon, B.Z., and Almeida, J.A. Action at a distance on category-specific ventral temporal representations. Under Review.

Shay, E.A., Chen, Q., Garcea, F.E., and Mahon, B.Z. Decoding intransitive actions in primary motor cortex using fMRI. (revision invited, *Cognitive Neuroscience*)

Garcea, F.E., Almeida, J., Sims, M.H., Nunno, A., Meyers, S., Li, Y.M., Walter, K., Pilcher, W.H., and Mahon, B.Z. Domain-specific modulation of human visual cortex by parietal action systems

### **Poster Presentations**

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Chernoff, B.L., Teghipco, A., Garcea, F.E., Smith, S., Pilcher, W., & Mahon, B. A cognitive impairment for sentence planning after focal damage to the Frontal Aslant Tract. Poster presentation at the Cognitive Neuroscience Society meeting, San Francisco, CA. March 2017

Garcea, F.E., Chernoff, B.L., Diamond, B., Lewis, W., Tomlinson, S., Teghipco, A., Belkhir, R., Smith, S., Stone, J., Marvin, E., Pilcher, W., & Mahon, B.Z. Music and the brain: A Causal role for the right superior temporal gyrus in expert music ability Poster presentation at the Cognitive Neuroscience Society meeting, San Francisco, CA. March 2017

Diamond, B., Garcea, F.E., Chernoff, B.L., Belkhir, R., Teghipco, A., Smith, S., Navarrete, E., Pilcher, W., & Mahon, B.Z. Connectivity of the language system revealed by direct current stimulation during awake neurosurgery. Poster presentation at the Cognitive Neuroscience Society meeting, San Francisco, CA. March 2017

Adnan Hirad, Jeffrey Bazarian, Frank Garcea, Sarah Heilbronner, David Paul, Eric B. Hintz, Edwin van Wijngaarden, Bradford Mahon. MRI Signatures of Midbrain Trauma in Athletes with Repetitive Head Hits and Concussion. Poster presentation at the Annual Translational Biomedical Science Retreat. October 2017

Adnan Hirad, Jeffrey Bazarian, Frank Garcea, Sarah Heilbronner, David Paul, Eric B. Hintz, Edwin van Wijngaarden, Bradford Mahon. MRI Signatures of Midbrain Trauma in Athletes with Repetitive Head Hits and Concussion. (2016) University of Rochester Medical Scientist Research Symposium, Rochester, NY.

Chen, Q., Garcea, F.E., and Mahon, B.Z. Decoding object knowledge in the human brain during tool pantomiming and viewing. Poster presentation at the Gordon Research Conference on the Neurobiology of Cognition. July 2016.

Chernoff, B., Garcea, F.E., Teghipco, A., Smith, S.O., Pilcher, W.H., and Mahon, B.Z. A temporal-parietal pathway for accessing action knowledge from visual input. Poster presentation at the Gordon Research Conference on the Neurobiology of Cognition. July 2016.

Garcea, F.E., Teghipco, A., Tivarus, M.E., Smith, S.O., Pilcher, W.H., and Mahon, B.Z. The role of the right hemisphere in recovery from conduction aphasia: A neurosurgical case study. Poster presentation at the Gordon Research Conference on the Neurobiology of Cognition. July 2016.

Schneider, C.L., Williams, Z.R., Busza, A., Sahin, B., Mahon, B.Z. (2016) Visual Improvement and Changes in Visual Cortex Activity: A Pilot with Two Stroke Patients. University of Rochester Medical Scientist Research

Symposium, Rochester, NY.

Prentiss, E., Chen, Q., Schneider, C., and Mahon, B.Z. The Role of the Parvocellular Visual Pathway in Fast Visuomotor Updating. The Cognitive Neuroscience Society Annual Meeting, New York, NY. April 2016.

Garcea, F.E., Chen, Q., and Mahon, B.Z. Processing dynamics of tool representations in the human brain: Insights from fMRI-based functional connectivity. Rovereto Workshop on Concepts, Actions, and Objects: Functional and Neural Perspectives. Rovereto, IT. May 2016.

Garcea, F.E., Vargas, R., Chen, Q., Narayan, D., and Mahon, B.Z., Task-based modulation of functional connectivity in the human brain. The Cognitive Neuroscience Society Annual Meeting, New York, NY. April 2016.

Chen, Q., Garcea, F.E., Almeida, J., and Mahon, B.Z. Sharp category boundaries in the human brain revealed through multivariate analysis of functional connectivity and stimulus preferences. The Cognitive Neuroscience Society Annual Meeting, New York, NY. April 2016.

Teghipco, A., Garcea, F.E., Tivarus, M., Smith, S., Pilcher, W.H., and Mahon, B.Z. Recovery from conduction aphasia depends on contributions from the right hemisphere: A case study. The Cognitive Neuroscience Society Annual Meeting, New York, NY. April 2016.

-Winner of people's choice award: <http://www.cogneurosociety.org/brain-rewire-after-surgery/>

Vargas, R., Garcea, F.E., Mahon, B.Z., & Narayan, D. Analysis of graph theoretic functional connectivity in the human brain. The Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Washington, DC. October 2015.

Navarrete, E., Peressotti, F., & Mahon, B.Z. The origin of semantic context effects in the cyclic naming paradigm: Electrophysiological evidence. 19th Conference of the European Society for Cognitive Psychology (ESCP). 17 – 20 September, 2015 Paphos (Cyprus)

Garcea, F.E., and Mahon, B.Z. Pantomiming object use decouples functional connectivity between temporal and parietal tool-selective areas. Poster presentation at The Cognitive Neuroscience Society Annual Meeting, San Francisco, CA. March 2015.

Chen, Q., Garcea, F.E., and Mahon, B.Z. The representation of object-directed action and function knowledge in the human brain. Poster presentation at The Cognitive Neuroscience Society Annual Meeting, San Francisco, CA. March 2015.

Paul, D.A., Gaffin-Cahn, E., Hintz, E.B., Adeclat, G., Zhu, T., Williams, Z.R., Vates, G.E., & Mahon, B.Z. (2014). Rapid remyelination in the human brain. Poster presentation at Organization for Human Brain Mapping, Hamburg, Germany. [Poster/Travel Award]

Teghipco, A., Navarrete, E., & Mahon, B.Z. Verbal fluency as a window into the structure of lexical semantic representations. Poster presentation at Cognitive Neuroscience Society, Boston, MA.

Gaffin-Cahn, E., & Mahon, B.Z. (2014). Online corrective hand motions to suppressed visual information during saccades. Poster presentation at Cognitive Neuroscience Society, Boston, MA.

Stasenko, A., Bonn, C., Teghipco, A., Garcea, F., & Mahon, B. Speech perception without a motor system. Poster presentation at Cognitive Neuroscience Society, Boston, USA. April 2014.

Garcea, F.E., & Mahon, B.Z. Parcellation of left parietal tool representations by functional connectivity. Poster



presentation at The Cognitive Neuroscience Society Annual Meeting, Boston, USA. April, 2014.

Gaffin-Cahn, E., Hintz, E.B., Paul, D.A., Vates, G.E., Williams, Z.R., Fintzi, A.R., & Mahon B.Z. Inter-hemispheric plasticity in striate cortex. Brain Plasticity Symposium, Western Ontario University, London, Ontario, Canada. June 2013.

Roe, M.A, Stasenکو, A., Teghipco, A., Tivarus, M., Langfitt, J.T., & Mahon, B.Z. Functional and cognitive consequences of cortical thinning in patients with Mesial Temporal Sclerosis. University of Rochester Undergraduate Research Exposition, Rochester, New York. April 2013.

Garcea, F.E., Liao, D.A., & Mahon, B.Z. Parcellation of left parietal cortex by functional connectivity with the ventral and dorsal streams. Poster Presentation at Rovereto Workshop on Concepts, Actions, and Objects, Rovereto, IT. May 2013. [Poster/Travel Award]

Salazar, D., Stasenکو A., & Mahon, B.Z. A rehabilitative study of object-color knowledge in a patient with selective loss of object-color knowledge. University of Rochester Undergraduate Research Exposition, Rochester, New York. April 2013.

Stasenکو, A., Garcea, F.E., Dombovy, M., & Mahon, B.Z. When concepts lose their color: A case of selective loss of knowledge of object-color. Cognitive Neuroscience Society, San Francisco, California. April 2013.

Paul, D.A., Hintz, E.B.; Williams, Z.R.; Vates, G.E., & Mahon, B.Z. Using diffusion tensor imaging to study white matter changes in the visual pathway following decompression of the optic chiasm. 81<sup>st</sup> AANS Annual Scientific Meeting, New Orleans, Louisiana, April 2013.

Paul, D.A., Hintz, E.B., Gaffin-Cahn, E., Zhu, T., Vates, G.E., Williams, Z.R., & Mahon, B.Z.. Along-tract statistics diffusion tensor tractography of the optic tracts in patients with suprasellar tumors. National Clinical and Translational Sciences Predoctoral Programs Meeting, Rochester, Minnesota, May 2013.

Gaffin-Cahn, E., Hintz, E.B., Paul, D.A., Vates, G.E., Williams, Z.R., Fintzi, A.F., & Mahon, B.Z. (2013). Inter-hemispheric plasticity in striate cortex. Poster presentation at Society for Neuroscience, San Diego, CA.

DeRoma, J., Gaffin-Cahn, E., Garcea, F.G., & Mahon, B.Z. (2013). Is it true that a screwdriver is edible? Tracking the eyes while retrieving conceptual information. Poster presentation at Center for Visual Science Undergraduate Student Fellowship poster session, University of Rochester, NY.

Holcomb., M., Garcea, F.G., Gaffin-Cahn, E., & Mahon, B.Z. (2013). Manipulable object knowledge: What the eyes tell us about conceptual and motor information. Poster presentation at Center for Visual Science Undergraduate Student Fellowship poster session, University of Rochester, NY.

Alonso-Diaz, S., Gaffin-Cahn, E., Mahon, B.Z., & Cantlon, J.F. (2013). Spatial responses in the approximate number system. Poster presentation at Concepts, Actions, and Objects, University of Trento, Italy.

Shaw, C., Fintzi, A.F., Gaffin-Cahn, E., & Mahon, B.Z. (2012). The role of spatial frequency information in dorsal stream responses to tools. Poster presentation at Center for Visual Science Undergraduate Student Fellowship poster session, University of Rochester, NY.

Hintz, E.B, Paul, D.A, Gaffin-Cahn, E., Williams, Z.R., Vates, G.E., & Mahon. B.Z. Bilateral early retinotopic activation to unilateral stimulation in optic tract compression from pituitary adenoma. Neurosurgical Society of America meeting at Sea Island Georgia, April 2013.

Hintz, E.B, Paul, D.A, & Mahon, B.Z. Decreased functional connectivity in nonconcussed athletes following a

football season. Neurosurgical Society of America meeting at Sea Island Georgia, April 2013.

Garcea, F.E., & Mahon, B.Z. Relationships among action production, action recognition and semantics: Insights from apraxia. Cognitive Neuroscience Society, Chicago, Illinois, March 2012.

Fintzi, A.R., Eltman, B., and Mahon, B.Z. The role of spatial frequency in object recognition: evidence from backward masking and fMRI. Cognitive Neuroscience Society, Chicago, Illinois. March 2012.

Jovicich, J., Robinson, S., Basso, G., Ferrari, P., Papinutto, N. Mahon, B.Z., Schwarzbach J. Human functional neuroimaging at 4T: methods developments and applications in cognitive neuroscience. Italian Bruker Users' Meeting, Milan, June 2008.

Mahon, B.Z., Negri, G.A.L., Menichelli, A., Sverzut, A., Caramazza, A., & Rumiati, R.I. Dissociations between sensory, motor, and conceptual knowledge of manipulable objects. Cognitive Neuroscience Society, New York, May, 2007.

Almeida, J., Mahon, B.Z., & Caramazza, A. Motor facilitation under binocular rivalry: the effect of suppressed motor affordances. Vision Sciences Society, Sarasota, Florida, May 2007.

Battelli, L., Mahon, B.Z., & Thornton, I. Incidental processing of biological motion in parietal patients. Vision Sciences Society, Sarasota, Florida, May 2007.

Negri, G.A.L., Mahon, B.Z., Menichelli, A., Sverzut, A., Caramazza, A., & Rumiati, R.I. What is a concept without sensory-motor content? Evidence from apraxia. Poster presentation at the 25<sup>th</sup> European Workshop on Cognitive Neuropsychology. Bressanone, Italy, January, 2007.

Mahon, B.Z., Milleville, S.C., Gilbert, J., Caramazza, A., Martin, A. The domain-specific sensory-motor hypothesis. Cognitive Neuroscience Society. San Francisco, California, April 2006.

Mahon, B.Z., Costa, A., Shapiro, K., & Caramazza, A. Grammatical class constraints on lexical selection in speech production: functional and neuroanatomical considerations. Euresco: The Science of Aphasia. Maratea, Italy, June 2002.

### **Invited Talks**

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Pilcher, W.H., Marvin, E., and Mahon, B.Z. Mapping music during awake brain surgery. Meliora Weekend 'Mel Talk', University of Rochester. Oct 14, 2017.

Mahon, B.Z. Constraints on the neural organization of object concepts. Invited talk at American Psychological Association. May 27, 2017

Mahon, B.Z. Constraints on the neural organization of conceptual knowledge in humans. Colloquium, Carnegie Mellon University. April 28, 2017.

Mahon, B.Z. What is the format of thought? Clues from Cognitive Neuropsychology. Preconference on embodiment, Society for Personality and Social Psychology, San Antonio, Texas. Jan 18, 2017.

Mahon, B.Z. Mapping music during awake brain surgery. Music and Medicine Symposium, Eastman School of Music. Sept 24, 2016.

Mahon, B.Z. and Sahin, B. The human brain in health and disease -- Insights from the Laboratory and the Clinic. 3 part lecture series, University of Rochester Always Learning at the Highlands, Aug 22, 29, Sept 12.

Mahon, B.Z. Introduction to Rovereto Workshop in Honor of Alfonso Caramazza. Rovereto IT, May 10, 2016.

Mahon, B.Z. Functional specialization and neural plasticity. Gordon Research Conference, Neurobiology of Cognition. July 2016.

Mahon, B.Z. Neural Connectivity and Functional Specialization. Invited faculty lecture at Department of Neuroscience (Univ. of Rochester Medical School) Retreat. April 29, 2016.

Mahon, B.Z. Toward a new approach for using MRI in a neurosurgical context. Academic Conference, Dept. of Neurosurgery, Rochester NY. December 18, 2015

Mahon, B.Z. Using functional and structural MRI in neurosurgery patients: basic science and clinical implications. Academic Conference, Dept. of Neurosurgery, Rochester NY. April 17, 2015

Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. October 21, 2015.

Mahon, B.Z. Functional Magnetic Resonance Imaging in Neurosurgery Patients. *New York State PeriAnesthesia Nurses Association*, September, 26, 2015.

Pilcher, W. and Mahon, B.Z. Human Brain Mapping. Boston, Ma – Sept 10, 2014; Rochester, NY – Oct 8, 2014; Palo Alto, Ca – Nov. 5, 2014; Naples, Fl – January 23, 2015; Washington DC May 5, 2015; RochesterNY (Meliora Weekend), October 2015

Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. Series of 5 lectures (Feb-March, 2015).

Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. Oct 1, 2014.

Mahon, B.Z. Pathways of understanding. Cognitive Neuropsychology Laboratory, Harvard University (Caramazza Lab). September 11, 2014.

Mahon, B.Z. What is embodied about cognition? ‘Debate’ style forum with Art Glenberg, Organized by Steve Lupker and moderated by Mike Masson. Canadian Society for Brain, Behaviour, and cognitive Science. July 4, 2014.

Pilcher, W. and Mahon, B.Z. The new science of human brain mapping. Mini-Med School for an Evening—The University of Rochester Medical Center. May 28, 2014.

Mahon, B.Z. Objects and actions in the human brain. Grand Rounds, Department of Neurology, University of Rochester. April 18, 2014.

Mahon, B.Z. and Vates, G.E.V. Using MRI to predict visual recovery after tumor resection. March 11, 2014. UR Clinical and Translational Science Institute’s (CTSI) Spring Seminar “Crossing Elmwood: River Campus-Medical Center Research Collaborations.”

Mahon, B.Z. and Pilcher, W. The New Science of Human Brain Mapping. The Rochester Forum, The Memorial Art Gallery, June 20, 2013.

Mahon, B.Z. Using fMRI to map brain function in neurosurgery patients. Neurosurgery Academic Conference, University of Rochester Medical School. June 14, 2013.

Mahon, B.Z., How Action Shapes Tool Concepts. Rovereto Workshop on Concepts, Actions, and Objects – Rovereto, Italy. May 23, 2013

Mahon, B.Z. Action shapes the organization of artifact concepts. Colloquium. Department of Psychology, University of California, San Diego. January 17th, 2012.

Mahon, B.Z. Action shapes the organization of artifact concepts. Cowan Young Investigator Lecture, Center for the Neural Basis of Cognition, Carnegie Mellon. September 8, 2011.

Mahon, B.Z. Action shapes the organization of artifact concepts. Invited Speaker, 22nd Perceptual Expertise Network, Vanderbilt University, April 28, 2011.

Mahon, B.Z. The role of action is shaping the organization of artifact concepts. Colloquium. Department of Psychology, Purdue University, February 23, 2011

Mahon, B.Z. Connectivity Constrains the Organization of Object Knowledge in the Brain. Colloquium Department of Psychology, University of Western Ontario, Oct 15, 2010

Mahon, B.Z. The role of action in shaping the organization of artifact concepts. Lake Ontario Visionary Establishment (L.O.V.E. Conference), Niagara Falls, Canada, February 12<sup>th</sup>, 2010.

Mahon, B.Z. Form and function in the organization of artifact concepts. NeuroCog Collective, Bocas Del Toro, Panama, January 12<sup>th</sup>, 2010.

Mahon, B.Z. The representation of object knowledge in the brain. Department of Psychological and Brain Sciences, Dartmouth University. December 3, 2009.

Mahon, B.Z. Reorganization of cortical networks supporting object use after brain damage. Neurosurgery Grand Rounds, University of Rochester Medical School, Oct 2, 2009

Mahon, B.Z., Anzellotti, S., Schwarzbach, J., Zampini, M., and Caramazza, A. Category-specific organization in the human brain does not require visual experience. Graduate Student Presents Award. Presentation at Cognitive Neuroscience Society. San Francisco, March 24, 2009.

Mahon, B.Z. The representation of everyday objects: The distributed domain-specific hypothesis. Research seminar in cognition, brain and behavior, Department of Psychology, Harvard University. March 12, 2009.

Mahon, B.Z. Concepts and Categories: A Cognitive Neuroscience Approach. Neurosurgery Academic Conference. Depart. of Neurosurgery, University of Rochester Medical Center. September 5, 2008

Mahon, B.Z. The representation of everyday objects. University of Illinois, February 7, 2008; University of Rochester, February 20, 2008; University of Wisconsin, April 3, 2008

Navarrete, E., Mahon, B.Z., and Caramazza, A. Il costo cumulativo intracategoriale in compiti di denominazione di figure. AIP Congress, Padua, Italy. September, 18, 2008.

Navarrete, E., Mahon, B.Z., Finocchiaro, C. and Caramazza, A. Effetti di Distanza Semantica nella denominazione in blocchi: evidenze contrarie alla Selezione Lessicale per Competizione. AIP Congress, Como, Italy. September, 17, 2007.

Mahon, B.Z. Apraxia and the Structure of Concepts. VIII Corso di riabilitazione neurologica. Pergine Valsugana

(TN). October 6, 2007.

Mahon, B.Z., Costa, A. and Caramazza, A. Dynamics of Lexical Access: There is no lexical competition. ESCOP, Marseille, France, September 1, 2007

Mahon, B.Z. Dynamics of Lexical Access. Dipartimento di Psicologia dello Sviluppo e della Socializzazione, University of Padova, Italy. June 14, 2007.

Mahon, B.Z. Representing object concepts: the ghost in the motor system. Department of Psychology, University of Bologna, Italy. March 23, 2007.

Mahon, B.Z. & Caramazza, A. Concepts and Actions: The view from where? Discussion of symposium presentations on Concepts and Actions. Bressanone, Italy. January 26, 2007.

Mahon, B.Z. & Caramazza, A. The Dynamics of Lexical Access. Fondamenti Biologici e Psicologici del Linguaggio: Simposio in Ricordo di Marica De Vincenzi. Chieti, Italy. January 18-19, 2007.

Mahon, B.Z. & Caramazza, A. The Dynamics of Lexical Access. Center for Mind/Brain Sciences, Rovereto, Italy. January 12, 2007.

Mahon, B.Z. Action shapes object representations in the fusiform gyrus. Scuola Internazionale Superiore di Studi Avanzati; Cognitive Neuroscience Sector. October 25, 2006.

Mahon, B.Z. Action shapes object representations in the fusiform gyrus. Center for Mind/Brain Sciences, Rovereto, Italy. September 22, 2006.

Mahon, B.Z. Stroop-like interference effects: Implications for models of lexical access in speech production. Department of Psychology, Harvard University. Second year talk for PhD program. May 16, 2006.

Mahon, B.Z. The organization of conceptual knowledge of objects: Clues from cognitive neuropsychology and functional neuroimaging. Department of Psychology, University of Barcelona, June, 2004.

Navarrete, E. and Mahon, B.Z. La activación de lo que no decimos: ¿Hasta dónde salta la liebre? Bellvitge Hospital. May 5, 2004.

Caramazza, A. and Mahon, B. The organization of conceptual knowledge. Presentation at Cognitive Neuropsychology conference. Bressanone, Italy. January 25-31, 2004.

Mahon, B.Z., Costa, A., and Caramazza, A. (2000). Are phonemes represented in terms of their syllabic position? (see also Manuscript published in: *Proceedings of the 1<sup>st</sup> HUMIT Student Conference in Language Research*).

### **Guest Lectures**

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Mahon, B.Z. Using MRI to study brain organization. Rochester Institute of Technology, Guest lecture for Drs. Kudithipudi and Merkel, Feb. 17, 2015

Mahon, B.Z. Using MRI to predict recovery of function after brain injury. Seminar for PhD/MD students at the University of Rochester School of Medicine and Dentistry. March 28, 2014.

Mahon, B.Z. Applications of fMRI. Guest lecture in ECE452 Medical Imaging Systems, University of Rochester. Instructor Dr. Kevin Parker. Dec 4, 2012; Nov 25, 2013; Dec 1, 2014

Mahon, B.Z. Using Naming Latencies to study the dynamics of word retrieval from the mental lexicon. Guest Lecture in BCS 501 & 511. Instructor: Dr. Mike Tanenhaus. November 20, 2014

Mahon, B.Z. Current Topics in Cognitive Neuroscience. Faculty presentation hosted by the Brain and Cognitive Sciences and Neurosciences Student Council. May 2, 2013.

Mahon, B.Z. Perception Action Interactions in Object Categorization. Faculty Presentation to CVS Summer Scholars. June 13, 2012; July 23, 2013.

Mahon, B.Z. Intrinsic Correlations in fMRI Data. Presentation to functional connectivity reading group. February 15, 2012.

Mahon, B.Z. Action and Vision. Graduate Seminar, BCS 508. Oct 2010.

Mahon, B.Z. Concepts and Categories in the Human Brain. Guest Lecture in BCS 152, Instructor Dr. Florian Jaeger. Nov. 30, 2011; Dec. 10, 2012; Sept 22, 2014; Oct 21, 2015.

Mahon, B.Z. Demonstration of fMRI analysis methods, and led two groups of students through preprocessing and basic ROI analysis. Summer Camp in Cognitive Neuroscience. June, 2011.

Mahon, B.Z. How is conceptual knowledge organized and represented? Guest Lecture in BCS 261, 'Language Use and Understanding'

Mahon, B.Z. Language in the Brain. Guest Lecture in NSC 531, Instructor Dr. Tania Pasternak. April 20, 2011.

Mahon, B.Z. How is conceptual knowledge organized in the brain? Guest Lecture in NSC 531, Instructor Dr. Tania Pasternak. April 21, 2010; May 4, 2011.

Mahon, B.Z. and Hintz, E. fMRI as a tool to study brain organization before and after surgery. Presentation to Dr. Spencer, Visiting Professor in the Department of Neurosurgery. June 24, 2011

Mahon, B.Z. Category-Specific Organization: A case of nature vs. nurture? (October 21, 2009.); Cross-modal integration/multi-modal processing in the ventral stream (September 16, 2009); Guest Lectures BCS 508. Instructor Dr. Daphne Bavelier.

Mahon, B.Z. Cognitive Neuropsychology: The case of natural kind concepts. Guest lecture Dr. Dodge Fernald. Harvard University, August 2, 2006.

## Teaching

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Fall, 2017	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2016	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2016	Co-Instructor, Graduate Seminar, ' <i>Cognition</i> ' (BCS 502)
Fall, 2015	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2014	Co-Instructor, Graduate Seminar, ' <i>Cognition</i> ' (BCS 502)
Fall, 2014	Co-Instructor, Graduate Seminar ' <i>Cognitive Neuroscience</i> (BCS 508)
Fall, 2014	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2013	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2012	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2012	Instructor, Graduate Seminar ' <i>Plasticity</i> ' (BCS 508)
Fall, 2012	Co-Instructor, Graduate Seminar, ' <i>Cognition</i> ' (BCS 502)
Fall, 2011	Instructor, Undergraduate Laboratory Course, ' <i>Cognitive Neuroscience</i> ' (BCS 204)
Fall, 2010	Co-Instructor, Graduate Seminar, ' <i>Cognition</i> ' (BCS 502)

## Grants/Honors

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- 2017-2018 Wilmot Cancer Institute grant to spur NCI funding. Pilot study to demonstrate feasibility and preliminary efficacy of advanced MRI mapping in improving outcome in patients with Glioblastoma. \$50,000  
Role: PI; Co-I: Dr. Kevin Walter
- 2016- Department of Neurology and Department of Neurosurgery grant for FLOURESCENCE (Fluoxetine for visual recovery after acute ischemic stroke). \$60,000  
Role: Co-PI; PI Bogachan Sahin
- 2015-2020 R01-NINDS. Cortical organization of action knowledge before and after brain surgery. \$1,794,507.00 (\$1,174,812.00 direct). Functional MRI is used to test hypotheses about the cortical networks supporting object-directed action knowledge in neurosurgery patients with brain tumors. In addition, a prognostic metric that combines fMRI and neuropsychological data will be developed for planning the location of corticectomies.  
Role: PI
- 2015- Schmitt Program on Integrative Brain Research (University of Rochester) \$50,000.  
“A randomized pilot trial of fluoxetine in acute stroke.” The aim of this intramural award is to support a pilot clinical trial to evaluate whether fluoxetine accelerates the recovery from visual deficits after PCA stroke.  
Role: Co-PI. PI: Bogachan Sahin
- 2014- Schmitt Program on Integrative Brain Research (University of Rochester) \$40,000.  
“Visual and haptic representations of objects.” The aim of this intramural award is to support the acquisition of pilot MRI data on a study of visuo-haptic multisensory integration during object processing.  
Role: Co-PI. PI: Robert Jacobs
- 2014-2015 University of Rochester – Pump Primer II. “Visual, Haptic, and Visual-Haptic Object Perception.” \$30,000. This intramural award supports fMRI and behavioral experiments examining the neural basis for cross-modal integration of visual and haptic knowledge about object shape in the human brain.  
Role: Co-PI. PI: Robert Jacobs
- 2014-2017 NSF Linguistics, BCS. “Mechanisms of word retrieval in spoken language production.” \$230,158. This project studies the cognitive and neural mechanism supporting the retrieval of words from concepts in spoken language production.  
Role: PI. Co-PIs: Drs. Eduardo Navarrete and Francesca Peressotti, both at the University of Padova.
- 2014-2015 University of Rochester – Rochester Center for Brain Imaging. \$10,000. This intramural award provides funds for the purchase of fMRI scanning time. The aim of this award is to support the research efforts described in the current research proposal.  
Role: Co-PI; PI Jacobs
- 2012–2014 R21-NINDS “Cortical organization of object knowledge before and after brain surgery”. \$420,750 (275,000 Direct). The purpose of this grant is to use functional MRI to test hypotheses about plasticity in the cortical networks supporting object knowledge in neurosurgery patients with dominant hemisphere brain tumors. In addition to studying the constraints that shape brain organization, a prognostic metric will be developed for planning the location of corticectomies.

Role: PI

- 2013-2015 Foundation for Science and Technology – Portugal. Direct: €78,947; Indirect: €15,789. How low-level segregation within the visual system impacts high-level object recognition. The project tests hypotheses about how low-level subcortical and cortical visual pathways shape the way in which high-level object related information is processed and organized in the brain.  
Role: Co-PI. PI: Jorge Almeida.
- 2013-2015 BIAL Foundation. €45,000. “Retinotopic reorganization of the auditory cortex of congenitally deaf individuals due to neuroplasticity.” The project tests neuroplasticity within the auditory cortex in congenital deafness.  
Role: Co-PI. PI: Jorge Almeida.
- 2009-2010 Post-doctoral fellowship; Kirschstein-NRSA (Institutional Training Grant, Department of Brain and Cognitive Sciences, University of Rochester).
- 2009 Graduate Students Present Award, Cognitive Neuroscience Society
- 2008–2009 Harvard University Eliot Dissertation Completion Fellowship (Competitive grant for dissertation research)
- 2006-2009 Fondazione Cassa di Risparmio di Trento e Rovereto (Center for Mind/Brain Sciences, Italy) Competitive grant for functional magnetic resonance imaging research.
- 2004–2007 National Science Foundation Graduate Research Fellowship. Competitive grant to support PhD research (“The organization of object knowledge in the brain”)
- 2003–2004 Fulbright Grant. Barcelona, Spain (Universitat de Barcelona)
- 2002 Graduated Harvard University (BA) Magna Cum Laude with Highest Honors in Field.
- 1999–2002 Harvard College Research Program Grant Recipient (5x). Competitive undergraduate research grants.

#### **Ad hoc reviewer**

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Bilingualism: Language and Cognition | Brain | Brain Research | Brain and Language | Brain Structure and Function | Cerebral Cortex | Cognition | Cognitive, Affective and Behavioral | Neuroscience | Cognitive Neuroscience | Consciousness and Cognition | Cognitive Neuropsychology | Cortex | Current Biology | Elife | Experimental Brain Research | Frontiers in Neuroscience | Frontiers in Language Sciences | Journal of Neuroscience | Journal of Cognitive Neuroscience | Journal of Cognitive Psychology | Journal of Experimental Psychology: LMC | Journal of Experimental Psychology: General | Journal of Experimental Psychology: HPP | Journal of Physiology – Paris | Journal of the International Neuropsychological Society | Human Brain Mapping | Language and Cognitive Processes | Memory and Cognition | Nature Neuroscience | Neuroimage | Neuropsychologia | Neuroscience and Biobehavioral Reviews | Perceptual and Motor Skills | Perspectives in Psychological Science | Philosophical Psychology | Proceedings of the National Academy of Sciences | Psychological Bulletin and Review | Psychological Science | Quarterly Journal of Experimental Brain Research | Social, Cognitive, and Affective Neuroscience | Visual Cognition



## Editorial Positions

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*Cognitive Neuropsychology*

Co-Editor in Chief, Oct 2016 - Present  
Associate Editor, 2009-Sept 2016  
Assistant Editor, 2005-2009

*Frontiers of Language Sciences*

Action Editor (2010-2012)

## Edited Volumes

Cortical stimulation mapping as a tool to dissect the human mind (in process). *Cognitive Neuropsychology*. Edited by B.Z. Mahon, W. Pilcher, and M. Miozzo.

The face specificity of lifelong prosopagnosia. *Cognitive Neuropsychology*. Edited by B.Z. Mahon.

Theoretical and Methodological Issues for Twenty-First Century Cognitive Neuropsychology (2018). *Cognitive Neuropsychology*. Edited by B.Z. Mahon and A. Costa

Arguments about the Nature of Concepts: Symbols, embodiment, and beyond. (2016). *Psychonomic Bulletin and Review*. Edited by B.Z. Mahon and G. Hickok

The Specialization of Function: Functional and Neural Perspectives. 2011. *Cognitive Neuropsychology*. Edited by B.Z. Mahon and J.F. Cantlon

The Dynamics of Lexical Selection in Speech Production. 2012. *Frontiers in Language Sciences*. Edited by B.Z. Mahon, E. Navarrete, and N. Janssen

## Conference Organizing

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2016	Workshop in honor of Alfonso Caramazza, Rovereto Italy (May 10 <sup>th</sup> -11 <sup>th</sup> , 2016)
2016	Co-Organizer CONTE Symposium, University of Rochester
2007-present	Co-Organizer of CAOs (Concepts, Actions, and Objects): Functional and Neural Perspectives. Rovereto Italy. <a href="http://www.cimec.unitn.it/events/caos/index.htm">http://www.cimec.unitn.it/events/caos/index.htm</a>

## Departmental Committees

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Fall, 2011	Search Committee, UR, BCS Department
Fall, 2012	Search Committee, UR, BCS Department
Fall, 2014	Graduate Admissions Committee
Fall, 2015 - Present	Graduate Affairs Committee
Spring, 2016	Search Committee, URMC, Dept. of Neuroscience

## Graduate Thesis Committees

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### Completed

Cory Hussar (Chair, PhD, 2012)  
*Representation of Visual Motion in Prefrontal Cortex During Memory Guided Discriminations*

Kevin Deiter (Completed, PhD, 2013)  
*Influences of Selected Attention during Binocular Rivalry*

Robert Emerson (Chair, PhD, 2014)  
*Cognitive Neuroscience of Mathematics: Tuning up the Number System*

Cory Merkel (Committee Member, PhD, 2015)  
*Design Neuromemristive Systems for Visual Information Processing*

Jennifer Merickel (PhD, 2015)  
*Learning and Processing of Perceptual Confusability and the Mapping of Form to Meaning*

David Paul (Primary Mentor, MS, 2014)  
*White matter changes linked to visual recovery after nerve decompression*

Caleb Strait (Chair, PhD, 2015)

*Neural Mechanisms of Reward-Based Choice*

Keturah Bixby (Committee Member for MS, Phd ongoing)

Frank E. Garcea (Advisor, PhD, 2017)

*The Organization of Manipulable Object Concepts in the Human Brain*

### **Ongoing**

Quanjing Chen (Primary Mentor)

Colleen Schneider (Primary Mentor)

Ben Chernoff (Primary Mentor)

Adnan Hirad (Secondary Mentor)

Woon Ju Park (Chair)

Carol Jew (Chair)

Alyssa Kersey (Committee Member)

Santiago Alonso Diaz (Committee Member)

Matthew Cavanaugh (Committee Member)

Goker Erdogan (Committee Member)

Habiba Azab (Committee Member)

Aimee Morris (Committee Member)

Sarah Koopman (Committee Member)

### **Undergraduate Thesis Committees**

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#### **Completed**

Eshin Jolly (Committee Member, 2010)

*Testing domain specificity: Conceptual knowledge of living and non-living things*

Tyia Clark (Committee Member, 2012)

*The neural organization of tool knowledge in development*

Celia Litovsky (Committee Member, 2012)

*Evidence for the shape bias in rhesus macaques: Is language important for object categorization?*

Alisa Litan (Committee Member, 2011)

*The Effects of Donepezil on Perceptual Measures of Impairment in Alzheimer's Disease: A Pilot Study*

Paul Del Prato (Primary Mentor, 2012)

*The emergence of short- and long-term semantic effects in picture naming*

Alena Stasenko (Primary Mentor, 2012)

*When zebras have stripes but are blue: A semantic category-specific impairment for object-color knowledge*

Laurel Raymond (Committee Member, 2013)

*Manipulating relevance in scalar implicature generation*

Emily Prentiss (Primary Mentor, 2016)

*The Role of the Parvocellular Visual Pathway in Fast Visuomotor Updating*

Bram Diamond (Primary Mentor, 2017)

Chenxiao Guan (Primary Mentor, 2017)

### **Undergraduates Independent Study Courses**

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**Fall 2010** Theresa Kurtz, Nicholas Kumar, Samuel Weiller

**Spring 2011** Theresa Kurtz, Samuel Weiller

**Fall 2011** Paul Del Prato, Alexander Teghipco, Samuel Weiller

**Spring 2012** Paul Del Prato, Alexander Teghipco, Samuel Weiller

**Fall 2012** Paul Del Prato, Daniel Salazar, Alena Stasenko

**Spring 2013** Giscard Adeclat, Daniel Salazar

<b>Fall 2013</b>	Giscard Adeclat
<b>Spring 2014</b>	Matthew Mullen, Parth Trivedi
<b>Fall 2015</b>	Bram Diamond, Aishwarya Krishnamoorthy, Emily Prentiss, Anthony Vaccaro
<b>Spring 2016</b>	Bram Diamond, Gaya Golan, Chenxiao Guan, Danielle June, Wesley Lewis, Emily Prentiss, Maxwell Sims, Anthony Vaccaro
<b>Fall 2016</b>	Bram Diamond, Chenxiao Guan, Wesley Lewis
<b>Fall 2017</b>	Gauri Patil
<b>Spring 2018</b>	Gauri Patil, Carolyn Gershman, Sam Haber

### **Research Mentoring of Residents**

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Dr. Eric Hintz, Resident, Dept. of Neurosurgery, University of Rochester (Completed Residency 2015)

Dr. David A. Paul, Resident, Dept. of Neurosurgery, University of Rochester (Year 2)

### **Student Awards and Recognition**

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Paul Del Prato	2011	REACH/Discover Undergraduate Research Grant
Samuel Weiller	2011	Bilski-Mayer Fellowship
Frank Garcea	2010	Psi Chi Undergraduate Research Grant
	2013	Publication of Special Interest to Progress in the Field of Psychology. Exceptional publication award for "What is in a tool concept? Dissociating manipulation knowledge from function knowledge." (Garcea and Mahon, 2012, Memory and Cognition). ( <a href="https://www.psychologyprogress.com">https://www.psychologyprogress.com</a> ).
	2014	Honorable Mention National Science Foundation Graduate Student Research Fellowship
	2016	Kavli Summer Institute in Cognitive Neuroscience Fellow, UC Santa Barbara
	2013, 2016	Rovereto Workshop on Concepts, Action, and Objects Abstract/Travel Award
	2014-2016	University of Rochester Center for Visual Science Vision Training Fellowship (NIH Grant 5T32EY007125-24)
Alena Stasenko	2014	National Science Foundation Graduate Student Research Fellowship
Elon Gaffin-Cahn	2014	National Science Foundation Graduate Student Research Fellowship
Chenxiao Guan	2016	Bilski-Mayer Summer Research Fellowship
Emily Prentiss	2016	Makous Prize, <a href="http://www.cvs.rochester.edu/training/undergraduate/makous_prize.html">http://www.cvs.rochester.edu/training/undergraduate/makous_prize.html</a>
Alex Teghipco (w/ Frank Garcea)	2016	CNS People's Choice Award, <a href="https://www.cogneurosociety.org/brain-rewire-after-surgery/">https://www.cogneurosociety.org/brain-rewire-after-surgery/</a>
David Paul	2016	National Cadbury Award for Academic and Volunteer Achievements <a href="https://www.urmc.rochester.edu/news/story/4450/smd-student-david-paul-m.d.-16-wins-national-cadbury-award--for-academic-and-volunteer-achievements.aspx">https://www.urmc.rochester.edu/news/story/4450/smd-student-david-paul-m.d.-16-wins-national-cadbury-award--for-academic-and-volunteer-achievements.aspx</a>
Colleen Schneider	pending	Neurovascular and Neuroplastic Contributions to Visual Recovery in

Stroke currently under review at NEI through the F30 (PA-16-305) mechanism

Adnan Hirad                      2016                      National Center for Advancing Translational Science Pilot Funding  
    2016                      Burroughs Wellcome Fund Interdisciplinary Pilot Award

## Grants – Pending

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### R01 NIH NINDS

**Electrical brain stimulation in awake neurosurgery to study language processing.** This research activity breaks new ground by using the clinical preparation of awake language mapping during neurosurgery to test hypotheses about the neural basis of semantically driven word retrieval in speech production and how direct electrical brain stimulation affects broader language network function.

Role: PI

### R01 NIH NEI

**Visual Recovery after Ischemic Stroke Affecting Occipital Cortex.** A hypothesis driven program longitudinally studies visual ability, cortical organization, vascular hemodynamics and trans-synaptic retrograde degeneration of retinal ganglion cells in ischemic stroke patients with damage to early visual cortex to advance understanding of the factors mediating spontaneous vision recovery after stroke.

Role: Lead PI on a multi-PI grant (Dr. B. Sahin and Dr. Z. Williams are sub-PIs)

### R01 NIH NEI

**Access to parietal action representations after stroke lesions in visual cortex.** This project uses functional MRI and psychophysics to study the functional and anatomical pathways through which the brain computes action information for visually presented objects, using both healthy participants and patients with ischemic strokes affecting the visual system.

Role: PI

### R15 NIH NINDS

**Quantifying Functional Connectivity Disruption Due to Repetitive Non-Concussive Head Impacts in Athletes.** This project uses functional connectivity as measured with fMRI to assess the effects of repetitive subconcussive head impacts on whole brain network functional networks.

Role: Co-PI

PI Nathan Cahill

## Commentaries by Other Authors (Responses, News and Views)

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