

Curriculum Vitae

Geoffrey Forrest Woodman

Department of Psychology
Vanderbilt University
PMB 407817
2301 Vanderbilt Place
Nashville, TN 37240-7817

Telephone: (615) 322-0049
Fax: (615) 343-8449
E-mail: geoffrey.f.woodman@vanderbilt.edu

Web site: <http://www.psy.vanderbilt.edu/faculty/woodman>

Education & Employment

B.S. 1993-1997
University of Iowa, Department of Psychology

Ph.D. 1997-2002
University of Iowa, Department of Psychology
Dissertation: "The involvement of visual working memory in visual search"
Mentors: Steven J. Luck & Shaun P. Vecera

Post-doctoral Fellow 2002-2006
Vanderbilt University, Department of Psychology
Mentors: Marvin M. Chun & Jeffrey D. Schall

Research Assistant Professor 2006-2007
Vanderbilt University, Department of Psychology

Assistant Professor 2007-2015
Vanderbilt University, Department of Psychology, Vanderbilt Vision Research Center, Center for Integrative & Cognitive Neuroscience

Associate Professor 2015-present
Vanderbilt University, Department of Psychology, Vanderbilt Vision Research Center, Center for Integrative & Cognitive Neuroscience, Co-Director of T32 from NEI, Director of Graduate Studies for the Department of Psychology

Publications

Thomson Reuters: H-index: 27, times cited: 3330 in 2242 articles

Google Scholar: H-index = 32; i10-index: 53; times cited: 5724 (as of Jan. 2016)

Journal Articles

1. Woodman, G.F., & Luck, S. J. (1999). Electrophysiological measurement of rapid shifts of attention during visual search. *Nature*, *400*, 867-869. PMID: 10476964.
2. Luck, S. J., Woodman, G. F., & Vogel, E. K. (2000). Event-related potential studies of attention. *Trends in Cognitive Sciences*, *4*, 432-440. PMID: 11058821.
3. Vogel, E. K., Woodman, G. F., & Luck, S. J. (2001). Storage of features, conjunctions, and objects in visual working memory. *Journal of Experimental Psychology: Human Perception and Performance*, *27*, 92-114. PMID: 11248943.
4. Woodman, G.F., Vogel, E.K., & Luck, S.J. (2001). Visual search remains efficient when visual working memory is full. *Psychological Science*, *12*, 219-224. PMID: 11437304.
5. Vecera, S.P., Vogel, E.K., & Woodman, G.F. (2002). Lower region: A new cue for figure-ground assignment. *Journal of Experimental Psychology: General*, *131*, 194-205. PMID: 12049239.
6. Schmidt, B.K., Vogel, E. K., Woodman, G. F., & Luck, S. J. (2002). Voluntary and automatic attentional control of visual working memory. *Perception & Psychophysics*, *64*, 754-763. PMID: 12201334.
7. Hopf, J.-M., Vogel, E.K., Woodman, G.F., Heinze, H.-J., & Luck, S.J. (2002). Localizing visual discrimination processes in time and space. *Journal of Neurophysiology*, *88*, 2088-2095. PMID: 12364530.
8. Woodman, G.F. & Luck, S.J. (2003). Serial deployment of attention during visual search. *Journal of Experimental Psychology: Human Perception and Performance*, *29*, 121-138. PMID: 12669572.
9. Woodman, G.F. Vecera, S.P., & Luck, S.J. (2003). Perceptual organization influences visual working memory. *Psychonomic Bulletin & Review*, *10*, 80-87. PMID: 12747493.
10. Woodman, G.F. & Luck, S.J. (2003). Dissociations among attention, perception, and awareness during object-substitution masking. *Psychological Science*, *14*, 605-611. PMID: 14629693.
11. Woodman, G.F. & Luck, S.J. (2004). Visual search is slowed when visuospatial working memory is occupied. *Psychonomic Bulletin & Review*, *11*, 269-274. PMID: 15260192.

12. Yi, D.-J., Woodman, G.F., Widders, D., Marios, R. & Chun, M.M. (2004, August 01). Neural fate of ignored stimuli: Dissociable effects of perceptual and working memory load. *Nature Neuroscience*, 7(9), 992-996. PMID: 15286791.
13. Woodman, G.F. & Vogel, E.K. (2005). Fractionating working memory: consolidation and maintenance are independent processes. *Psychological Science*, 16(2), 106-113. PMID: 15686576.
14. Vogel, E. K., Woodman, G.F. & Luck, S.J. (2006). Pushing around the locus of selection: Evidence for the flexible-selection hypothesis. *Journal of Cognitive Neuroscience*, 17(12), 1907-1922. PMID: 16356328.
15. Woodman, G.F. & Chun, M.M. (2006). The role of working memory and long-term memory in visual search. *Visual Cognition*, 14, 808-830.
16. Vogel, E. K., Woodman, G. F., & Luck, S. J. (2006). The time course of consolidation in visual working memory. *Journal of Experimental Psychology: Human Perception and Performance*, 32, 1436-1451. PMID: 17154783.
17. Woodman, G.F. & Yi, D.-J. (2007). Masked-target recovery requires focused attention on the target object. *Visual Cognition*, 15, 385-401.
18. Woodman, G.F. & Luck, S.J. (2007). Do the contents of visual working memory automatically influence attentional selection during visual search? *Journal of Experimental Psychology: Human Perception and Performance*, 33, 363-377. PMID: 17469973. PMC2048820.
19. Woodman, G.F., Luck, S.J., & Schall, J.D. (2007). The role of working memory representations in the control of attention. *Cerebral Cortex*, 17, 118-124. PMID: 17725994. PMC2094040.
20. Woodman, G.F., Kang, M.-S., Rossi, A.F., & Schall, J.D. (2007). Nonhuman primate event-related potentials indexing covert shifts of attention. *Proceedings of the National Academy of Sciences*, 104, 15111-15116. PMID: 17848520. PMCID: PMC1986621
21. Johnson, J.S., Woodman, G.F., Braun, E. & Luck, S.J. (2007). Implicit memory influences the allocation of attention in visual cortex. *Psychonomic Bulletin & Review*, 14(5), 834-839. PMID: 18087946.
22. Cohen, J.Y., Pouget, P., Woodman, G.F., Subraveti, C.R., Schall J.D. & Rossi, A.F. (2007). Difficulty of visual search modulates neural interactions and response variability in the Frontal Eye Field. *Journal of Neurophysiology*, 98, 2580-2587. PMID: 17855586.
23. Woodman, G.F., Kang, M.-S., Thompson, K., & Schall, J.D. (2008). The effect of visual search efficiency on response preparation: Neurophysiological evidence for discrete flow. *Psychological Science*, 19, 128-136. PMID: 18271860.

24. Woodman, G.F. & Vogel, E.K. (2008). Selective storage and maintenance of an object's features in visual working memory. *Psychonomic Bulletin & Review*, *15*, 223-229. PMID: 18605507.
25. Cohen, J.Y., Heitz, R.P., Schall J.D., & Woodman, G.F. (2009). On the origin of event-related potentials indexing covert attentional selection during visual search. *Journal of Neurophysiology*, *102*, 2375-2386. PMID: 19675287. PMCID: PMC2775385.
26. Woodman, G.F. Arita, J.T., & Luck, S.J. (2009). A cuing study of the N2pc component: An index of attentional deployment to objects rather than spatial locations. *Brain Research*, *1297*, 101-111. PMID: 19682440. PMCID: PMC2758329.
27. Hyun, J.-S., Woodman, G.F., Vogel, E.K., Hollingworth A. & Luck, S.J. (2009). The comparison of visual working memory representations with perceptual inputs. *Journal of Experimental Psychology: Human Perception and Performance*, *35*(4), 1140-1160. PMID: 19653755. PMCID: PMC2726625.
28. Cohen, J.Y., Heitz, R.P., Woodman, G.F., & Schall J.D. (2009). Neural basis of the set-size effect in frontal eye field: Timing of attention during visual search. *Journal of Neurophysiology*, *101*, 1699-1704. doi:10.1152/jn.00035.2009. PMID: 19176607. PMCID: PMC2695643.
29. Cohen, J.Y., Pouget, P., Heitz, R.P., Woodman, G.F., & Schall J.D. (2009). Biophysical support for functionally distinct cell types in the Frontal Eye Field. *Journal of Neurophysiology*, *101*, 912-916. PMID: 19052112. PMCID: PMC2657052.
30. Hyun, J.-S., Woodman, G.F. & Luck, S.J. (2009). The role of attention in the binding of surface features to locations. *Visual Cognition*, *17*, 10-24. PMCID: PMC3824248.
31. Cohen, J.Y., Crowder, E.A., Heitz, R.P., Subraveti, C.R., Thompson, K.G., Woodman, G.F., & Schall J.D. (2010). Cooperation and competition among frontal eye field neurons during visual target selection. *Journal of Neuroscience*, *30*, 3227-3238. PMID: 20203182. PMCID: PMC2844339.
32. Woodman, G.F. (2010). Masked targets trigger event-related potentials indexing shifts of attention but not error detection. *Psychophysiology*, *47*, 410-414. PMID: 20070578. PMCID: PMC2956465.
33. Woodman, G.F. & Luck, S.J. (2010). Why is information displaced from visual working memory during visual search? *Visual Cognition*, *18*, 275-295. doi:10.1080/13506280902734326. PMCID: PMC3817820.
34. Woodman, G.F. (2010). A brief introduction to the use of event-related potentials (ERPs) in studies of perception and attention. *Attention, Perception & Psychophysics*, *72*(8), 2131-2146. PMID: 21097848. PMCID: PMC3816929.

35. Heitz, R.P., Cohen, J.Y., Woodman, G.F. & Schall J.D. (2010). Neural correlates of correct and errant attentional selection revealed through N2pc and frontal eye field activity. *Journal of Neurophysiology*, *104*, 2433-2441. PMID: 20810692. PMCID: PMC2997024.
36. Woodman, G.F. & Vecera, S.P. (2011). The cost of accessing an object's feature stored in visual working memory. *Visual Cognition*, *19*, 1-12. PMID: 21221413. PMCID: PMC3017355.
37. Carlisle, N.B. & Woodman, G.F. (2011). Automatic and strategic effects in the guidance of attention by working memory representations. *Acta Psychologica*, *137*, 217-225. PMID: 20643386. PMCID: PMC2991492.
38. Woodman, G.F. & Arita, J.T. (2011). Direct electrophysiological measurement of attentional templates in visual working memory. *Psychological Science*, *22*, 212-215. PMID: 21193780. PMCID: PMC3816932.
39. Carlisle, N.B., Arita, J.T., Pardo, D., & Woodman, G.F. (2011). Attentional templates in visual working memory. *Journal of Neuroscience*, *35*(25), 9315-9322. PMID: 21697381. PMCID: PMC3147306.
40. Godlove, D.C., Garr, A.K., Woodman, G.F., & Schall, J.D. (2011). Measurement of the extraocular spike potential during saccade countermanding. *Journal Neurophysiology*, *106*, 104-114. PMID: 21490279. PMCID: PMC3129738.
41. Carlisle, N.B. & Woodman, G.F. (2011). When memory is not enough: Electrophysiological evidence for goal-dependent use of working memory representations in guiding visual attention. *Journal of Cognitive Neuroscience*, *23*, 2650-2664. PMCID: PMC3981747.
42. Kang, M.-S., Hong, S.W., Blake, R. & Woodman, G.F. (2011). Visual working memory contaminates perception. *Psychonomic Bulletin & Review*, *18*, 860-869. PMID: 21713369. PMCID: PMC3371032.
43. Kang, M.-S., Blake, R. & Woodman, G.F. (2011). Semantic analysis does not occur in the absence of awareness induced by interocular suppression. *Journal of Neuroscience*, *31*, 13535-13545. PMID: 21940445. PMCID: PMC3209531.
44. Godlove D.C., Emeric, E.E., Segovis, C.M., Young, M.S., Schall, J.D. & Woodman, G.F. (2011). Event-related potentials elicited by errors during the stop-signal task. I: Macaque monkeys. *Journal of Neuroscience*, *31*, 15640-15649. PMID: 22049407. PMCID: PMC3241968.
45. Woodman, G.F., Vogel, E.K. & Luck, S.J. (2012). Flexibility in visual working memory: Accurate change detection in the face of irrelevant variations in position. *Visual Cognition*, *20*, 1-28. PMCID: PMC3266348.

46. Williams, M. & Woodman, G.F. (2012). Directed forgetting and directed remembering in visual working memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *38*, 1206-1220. PMID: 22409182. PMCID: PMC3817833.
47. Reinhart R.M.G., Carlisle, N.B., Kang, M.-S. & Woodman, G.F. (2012). Event-related potentials elicited by errors during the stop-signal task. II: Human effector specific error responses. *Journal of Neurophysiology*, *107*, 2794-2807. PMCID: PMC3362284.
48. Arita, J.T., Carlisle, N.B., & Woodman, G.F. (2012). Templates for rejection: Configuring attention to ignore task-irrelevant features. *Journal of Experimental Psychology: Human Perception and Performance*, *38*, 580-584. PMID: 22468723. PMCID: PMC3817824.
49. Reinhart R.M.G., Heitz, R.P., Purcell, B.A., Weigand, P.K., Schall, J.D. & Woodman, G.F. (2012). Homologous mechanisms of visuospatial working memory maintenance in macaque and human: Properties and sources. *Journal of Neuroscience*, *32*, 7711-7722. PMCID: PMC3373257.
50. Purcell, B.A., Schall, J.D. & Woodman, G.F. (2013). Timing of attentional selection in frontal eye field and posterior event-related potentials during pop-out search. *Journal of Neurophysiology*, *109*, 557-569. PMCID: PMC3417208.
51. Williams, M., Hong, S.W., Carlisle, N.B., Kang, M.-S. & Woodman, G.F. (2013). The benefit of forgetting. *Psychonomic Bulletin & Review*, *20*, 348-355. PMCID: PMC3593955.
52. Woodman, G.F. (2013). Viewing the control and dynamics of visual attention through the lens of electrophysiology. *Vision Research*, *80*, 7-18. PMCID: PMC3594578.
53. Williams, M., Pouget, P., Boucher, L. & Woodman, G.F. (2013). Visual-spatial attention aids the maintenance of object representations in visual working memory. *Memory & Cognition*, *41*, 698-715. PMCID: PMC3655125.
54. Woodman, G.F., Carlisle, N.B. & Reinhart, R.M.G. (2013). Where do we store the memory representations that control attention? *Journal of Vision*, *13(1):1*, 1-17. doi: 10.1167/13.3.1. PMCID: PMC3590103.
55. Carlisle, N.B. & Woodman, G.F. (2013). Reconciling conflicting electrophysiological findings on the guidance of attention by working memory. *Attention, Perception & Psychophysics*, *75*, 1330-1335. PMCID: PMC3800228.
56. Reinhart, R.M.G. & Woodman, G.F. (2014). Oscillatory coupling reveals the dynamic reorganization of large-scale neural networks as cognitive demands change. *Journal of Cognitive Neuroscience*, *26*, 175-188. PMCID: PMC3990735.
57. Kang, M.-S. & Woodman, G.F. (2014). Probing the role of microsaccades in the generation of human neurophysiological index of visual working memory maintenance. *Neuropsychologia*, *56*, 63-72. PMCID: PMC3974880.

58. Kang, M.-S., DiRaddo, A., Logan, G.D. & Woodman, G.F. (2014). Electrophysiological evidence for preparatory reconfiguration before voluntary task switches but not cued task switches. *Psychonomic Bulletin & Review*, 21, 454-461. PMID: PMC3933470.
59. Reinhart, R.M.G. & Woodman, G.F. (2014). Causal control of medial-frontal cortex governs performance monitoring and learning. *Journal of Neuroscience*, 34, 4214-4227. PMID: PMC3960465.
60. Godlove, D.C., Maier, A., Woodman, G.F. & Schall, J.D. (2014). Microcircuitry of agranular frontal cortex relative to the canonical cortical microcircuit. *Journal of Neuroscience*, 34, 5355-5369. PMID: PMC3983808.
61. Maxcey, A.M. & Woodman, G.F. (2014). Can we throw information out of visual working memory and does this leave information residue in long-term memory? *Frontiers in Psychology*, 5, 294. doi: 10.3389/fpsyg.2014.00294
62. Reinhart, R.M.G. & Carlisle, N.B. & Woodman, G.F. (2014). Visual working memory gives up attentional control early in learning: Ruling out inter-hemispheric competition. *Psychophysiology*, 51, 800-804. PMID: PMC4107137.
63. Reinhart, R.M.G. & Woodman, G.F. (2014). High stakes trigger the use of multiple memories to enhance the control of attention. *Cerebral Cortex*, 24, 2022-2035. PMID: PMC4089381.
64. Ko, P.C., Duda, B., Hussey, E., Mason, E., Molitor, R., Woodman, G.F. & Ally, B.A. (2014) Understanding age-related reductions in visual working memory capacity: Examining the stages of change detection. *Attention, Perception & Psychophysics*, 76, 2015-2030. PMID: PMC4098047.
65. Wong, T.K., Peng, C., Fratus, K.N., Woodman, G.F. & Gauthier, I. (2014) Perceptual expertise for musical notation engages the primary visual cortex with top-down expectation. *Journal of Cognitive Neuroscience*, 26, 1629-1643. PMID: PMC4074229.
66. Maxcey, A.M. & Woodman, G.F. (2014). Forgetting induced by recognition of visual images. *Visual Cognition*, 22, 789-808. PMID: PMC4339795.
67. Reinhart, R.M.G. & Woodman, G.F. (2015). Enhancing long-term memory with stimulation tunes visual attention in one trial. *Proceedings of the National Academy of Sciences*, 112, 625-630. PMID: PMC4299199.
68. Fukuda, K. & Woodman, G.F. (2015). Predicting and improving recognition memory using single-trial electrophysiology. *Psychological Science*, 26, 1026-1037.
69. Maxcey, A.M., Fukuda, K., Song, W.S. & Woodman, G.F. (2015). Using electrophysiology to demonstrate that cueing affects long-term memory storage over the short term. *Psychonomic Bulletin & Review*. [Jan 21, Epub ahead of print] PMID: PMC4510034.

70. Reinhart, R.M.G. McClenahan, L.J. & Woodman, G.F. (2015). Visualizing trumps vision when training attention. *Psychological Science*, 26, 1114-1122. PMID: PMC4504754.
71. Reinhart, R.M.G. & Woodman, G.F. (2015). The surprising temporal specificity of direct-current stimulation. *Trends in Neurosciences*, 38, 459-461.
72. Reinhart, R.M.G., Zhu, J., Park, S. & Woodman, G.F. (2015). Synchronizing theta oscillations with direct-current stimulation restores adaptive control in schizophrenia. *Proceedings of the National Academy of Science*, 112(30), 9448-9453. PMID: PMC4522782.
73. Reinhart, R.M.G., Zhu, J., Park, S. & Woodman, G.F. (2015). Medial-frontal stimulation enhances learning in schizophrenia by restoring prediction-error signaling. *Journal of Neuroscience*, 35, 12232-12240. PMID: PMC4556788
74. Cosman, J.D., Atreya, P.V. & Woodman, G.F. (2015). Transient reduction of visual distraction following electrical stimulation of the prefrontal cortex. *Cognition*, 145, 73-76. PMID: In Process
75. Cosman, J.D., Arita, J.T. & Ianni, J.D. & Woodman, G.F. (2016). Electrophysiological measurement of information flow control in the human brain. *Psychophysiology*, 52, 535-543. PMID: In Process
76. Reinhart, R.M.G., McClenahan, L.J. & Woodman, G.F. (2016). Attention's accelerator. *Psychological Science*, 27, 790-798. PMID: PMC4899122
77. Reinhart, R.M.G., Xiao, W., McClenahan, L.J. & Woodman, G.F. (2016). Electrical stimulation of visual cortex can immediately improve spatial vision. *Current Biology*. NIHMSID 786795.
78. Fukuda, K., Kang, M.-S. & Woodman, G.F. (in press). Distinct neural mechanisms for spatially lateralized and spatially global working memory representations. *Journal of Neurophysiology*.

Books

1. Calkins, D., Casagrande, V., Schall, J.D. & Woodman, G.F. (Eds.) (under contract). *The Visual System*. Sunderland, MA: Sinauer Associates, Inc.

Chapters

1. Woodman, G.F. (2012). Homologues of human event-related potential components in nonhuman primates. In Luck, S.J. & Kappenman, E.S. (Eds.), *The Oxford Handbook of Event-Related Potential Components*. (pp. 611-625). New York: Oxford University Press.

2. Pouget, P., Arita, J., & Woodman, G.F. (2012). Primate visual attention: How studies of monkeys have shaped theories of selective processing. In Lazareva O., Shimizu T., & Wasserman E. (Eds.), *How Animals See the World: Behavior, Biology, and Evolution of Vision*. (pp. 335-350). New York: Oxford University Press.
3. Woodman, G.F. & Schroeder, C.E. (2012). Using nonhuman primates to study the micro- and macro-dynamics of neural mechanisms of attention. In Posner, M.I. (Ed.), *Cognitive Neuroscience of Attention*. (pp. 219-228). New York: Guilford Press.
4. Schall, J.D. & Woodman, G.F. (2012). A stage theory of attention and action. In Mangun, G.R. (Ed.), *Neuroscience of Attention*. (pp. 187-208). New York: Oxford University Press.
5. Zhang, W., Johnson, J.S., Woodman, G.F., & Luck, S.J. (2012). Features and conjunctions in visual working memory. In Wolfe, J. & Robertson, L. (Eds.), *Attention and Cognition*. (pp. 369-377). New York: Oxford University Press.
6. Woodman, G.F. & Luck, S.J. (2015). Using working memory to control attentional deployment to items in complex scenes. In Fawcett, J., Risko, E.F. & Kingstone, A. (Eds.), *The Handbook of Attention*. (pp. 173-197). Cambridge, MA: MIT Press.
7. Fukuda, K., Woodman, G.F. & Vogel, E.K. (2015). Individual differences in visual working memory capacity: Contributions of attentional control to storage. In Jolicoeur P., Lefebvre C., & Martinez-Trujillo J. (Eds.), *Mechanisms of Sensory Working Memory: Attention and Performance XXV* (pp. 105-120). New York: Academic Press.
8. Woodman, G.F. & Fukuda, K. (in press). Visual working memory and cognition. *Stevens' Handbook of Experimental Psychology and Cognitive Neuroscience, Fourth Edition*. Hoboken, New Jersey: John Wiley & Sons, Inc.

Commentaries

1. Kang, M.-S., Blake, R., & Woodman, G.F. (2012) The defining characteristics of visual awareness and event-related potentials indexing semantic processing [Response to Heyman & Moors]. *Journal of Neuroscience*.
2. Cohen, J.Y., Heitz, R.P., Woodman, G.F., & Schall J.D. (2009). Reply to Balan and Gottlieb [comment]. *Journal of Neurophysiology*, *102*, 1342-1343. doi:10.1152/jn.00403.2009.
3. Schall, J.D., Paré, M., & Woodman, G.F. (5 October 2007). Comment on "Top-down versus bottom-up control of attention in the prefrontal and posterior parietal cortices". *Science*, *318*, 44b. PMID: 17916712.
4. Woodman, G.F., Vogel, E.K., & Luck, S.J. (2001). Attention is not unitary: Response to Cowan (2001). *Behavioral and Brain Sciences*, *24*, 153-154.

Under Review or Revision

Carlisle, N.B. & Woodman, G.F. (under revision). Quantifying the attentional impact of working memory matching distractors. *Attention, Perception & Psychophysics*

Fukuda, K. & Woodman, G.F. (under revision). Working memory buffers information retrieved from human long-term memory. *Science*.

Fukuda, K., Schall, J.D. & Woodman, G.F. (submitted). Electrophysiology reveals reciprocity between proactive and reactive response inhibition. *Journal of Neuroscience*.

Reinhart, R.M.G., Cosman, J.D., Fukuda, K., & Woodman, G.F. (under revision). Using transcranial direct-current stimulation (tDCS) to understand cognitive processing. *Attention, Perception & Psychophysics*.

Funding

Current

NIH:NEI 2R01-EY019882, 12/1/2009-5/30/2018.

PI, total direct costs of \$2,151,864. "Comparative electrophysiology: Visual event-related potentials and oscillations."

NIH:NEI R01-EY025275, 4/1/2015-3/30/2019.

contact PI, \$960,665 total direct costs across 4 years. "Controlling visual cognition with working memory and long-term memory."

NIH:NIMH R01-MH110378, requested 1/1/2017-12/31/2022. Pending council, 7th percentile.

contact PI, \$1,961,602 total direct costs across 5 years requested. "Restoring oscillations underlying adaptive control in schizophrenia with direct current."

Vanderbilt University Discovery Grant, PI, 6/1/2014-6/1/2016

direct costs of \$50,000. "Using direct-current stimulation to manipulate learning and memory"

Previous

NSF BCS 09-57072, 7/15/2010-6/31/2014.

PI, total direct costs of \$500,000. "Interactions between visual working memory representations and mechanisms of perceptual selection."

Vanderbilt University Discovery Grant, Co-PI with Andrew Rossi, direct costs of \$50,000 over a two-year period beginning 2005. "Linking studies of attention in

humans and macaque monkeys using multiple electrophysiological techniques"

Postdoctoral Individual National Research Service Award, NEI fellowship grant, start date August 3, 2003, support for 27 months. "Neural correlates of visual object-substitution masking."

Predocotrual Individual National Research Service Award, NIMH fellowship grant, start date March 1, 2001, support for 27 months. "The involvement of visual working memory in visual search."

Intellectual Property

Patent filed with Keisuke Fukuda through Vanderbilt University:

Title: Online Electrophysiological Assessment of Learning

Filed: January 14, 2014

Application No.: 61/927,183

Client Ref. No.: VU14086P1

NDQ Ref. No.: 20004.015

Academic Service

Editorships

Journal of Experimental Psychology: Human Perception & Performance

Associate Editor 2014-present

Editorial Boards

Psychological Science

2004-present

Visual Cognition

2007-present

Psychonomic Bulletin & Review

2008-present

Journal of Experimental Psychology: Learning,

Memory & Cognition

2008-present

Journal of Experimental Psychology: Human

Perception & Performance

2010-2014 (ad hoc action editor, 2011-2014)

Attention, Perception & Psychophysics

2011-present

Ad hoc Reviewer

Representative Journals

Acta Psychologica; Brain and Cognition; Canadian Journal of Experimental Psychology; Cerebral Cortex; Cognition; CABN; Cognitive Brain Research; Cognitive Neuropsychology; Cognitive Neuroscience; Cognitive Psychology; Cognitive Science; Current Biology; Developmental Psychology; Experimental Psychology; European Journal of Cognitive Psychology; European Journal of Neuroscience; Frontiers in Neuroscience; Human Brain Mapping; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: General; Journal of Neurophysiology; Journal of Neuroscience; Journal of Vision; Learning & Memory; Memory & Cognition; Nature Communications; NeuroImage; Neuropsychologia; Neuroscience; Neuroscience Letters; PLOS: One; PLOS: Biology; PNAS; Psychophysiology; Quarterly Journal of Experimental Psychology; Trends in Cognitive Science; Visual Neuroscience; Vision Research

Granting agencies

NIH (National Institutes of Health)

NSF (National Science Foundation)

NSERC (National Sciences and Engineering Research Council of Canada)

NOW (Netherlands Organisation for Scientific Research)

USUHS (Department of Defense)

Community Outreach

Society for Neuroscience Neuroscientist-Teacher Partner Program 2009-present
 Speak to high school classes (e.g., Lebanon, TN, High School) regarding the value and rewards of neuroscience research.

Conference Presentations

1. Vogel, E. K., Woodman, G. F., Eads, A. C., & Luck, S. J. (1998). Masking in visual working memory: Evidence for a limited-capacity encoding mechanism. Poster presented at the 1998 meeting of the Cognitive Neuroscience Society. San Francisco, CA.
2. Luck, S. J., Vogel, E. K., Woodman, G. F., & Eads, A. C. (1998). Visual working memory for features, conjunctions, and objects. Poster presented at the 1998 meeting of the Cognitive Neuroscience Society. San Francisco, CA.
3. Woodman, G. F., & Luck, S. J. (1998). Electrophysiological measurement of rapid shifts of visual attention during search. Poster presented at the 1998 meeting of the Society for Neuroscience. Los Angeles, CA.
4. Woodman, G. F., & Luck, S. J. (1999). Evidence for rapid shifts of visual attention during search. Poster presented at the 1999 meeting of the Cognitive Neuroscience Society. Washington, D.C.

5. Woodman, G. F., Vogel, E.K., Vecera, S.P., & Luck, S. J. (1999). Evidence for the modulation of striate cortex during figure-ground segregation. Poster presented at the 1999 meeting of the Cognitive Neuroscience Society. Miami, FL.
6. Luck, S.J., & Woodman, G.F. (1999). Electrophysiological evidence for serial scanning in visual search. Symposium talk delivered at the Psychonomic Society Annual Meeting. Los Angeles, CA.
7. Woodman, G.F., & Luck, S.J. (2000). The effects of maintaining a concurrent visual working memory load during visual search. Poster presented at the 2000 meeting of the Cognitive Neuroscience Society. San Francisco, CA.
8. Woodman, G.F., Vogel, E.K., & Luck, S.J. (2000). Visual search remains efficient when visual working memory is full. Symposium talk delivered at the Psychonomic Society Annual Meeting. New Orleans, LA.
9. Woodman, G.F., & Luck, S.J. (2001). Serial deployment of attention during visual search. Paper delivered at the Vision Sciences Society Annual Meeting. Sarasota, FL. PMID: 12669752.
10. Hyun, J-S., Woodman, G.F., & Luck, S.J. (2001). The role of attention in localizing visual features. Poster presented at the 2001 meeting of the Society for Neuroscience. San Diego, CA.
11. Luck, S.J., Vogel, E.K., & Woodman, G.F. (2001). Pushing around the locus of selection. Symposium talk delivered at the Psychonomic Society Annual Meeting. Orlando, FL.
12. Vecera, S.P., Vogel, E.K., & Woodman, G.F. (2001). Lower region: A new cue for figure-ground segregation. Symposium talk delivered at the Psychonomic Society Annual Meeting. Orlando, FL.
13. Woodman, G.F., & Luck, S.J. (2002). Interactions between perceptual attention and visual working memory during object-substitution masking. Paper presented at the 2002 meeting of the Cognitive Neuroscience Society. San Francisco, CA.
14. Woodman, G.F. & Luck, S.J. (2002). Interactions between perception and working memory during visual search. Talk delivered at the Vision Sciences Society 2002 Annual Meeting. Sarasota, FL.
15. Luck, S.J., Woodman, G.F., Schmidt, B.K., Vogel, E.K., & Vecera, S.P. (2002). The effects of attentional capture on visual working memory. Paper delivered at the Vision Sciences Society 2002 Annual Meeting. Sarasota, FL.
16. Vogel, E. K., Woodman, G. F., & Luck, S. J. (2002). The rapid time-course of visual working memory consolidation. Paper delivered at the Vision Sciences Society 2002 Annual Meeting. Sarasota, FL.

17. Woodman, G.F. & Luck, S. J. (2002). Dissociations among attention, perception, and awareness in object-substitution masking. Symposium talk delivered at the Psychonomic Society Annual Meeting. Kansas City, MO.
18. Luck, S. J. & Woodman, G.F. (2002). Electrophysiological evidence for serial shifts of attention in demanding visual search tasks. Symposium talk delivered at the Psychonomic Society Annual Meeting. Kansas City, MO.
19. Luck, S.J., Vogel, E.K., Woodman, G.F. & Hyun, J.-S. (2003). Toward an embedded process metatheory of selective attention. Paper delivered at the Vision Sciences Society 2003 Annual Meeting. Sarasota, FL.
20. Hyun, J.-S., Woodman, G.F., Vogel, E.K., Niese, A.T., & Luck, S.J. (2003). How are visual inputs compared with memory representations in the change-detection paradigm? Paper delivered at the Vision Sciences Society 2003 Annual Meeting. Sarasota, FL.
21. Yi, D.-J., Chun, M.M., & Woodman, G.F. (2003). Object substitution masking does not spread within a perceptual group. Paper delivered at the Vision Sciences Society 2003 Annual Meeting. Sarasota, FL.
22. Woodman, G.F. & Chun, M.M. (2003). Access to visual working memory is required for contextual cueing in visual search. Paper delivered at the Vision Sciences Society 2003 Annual Meeting. Sarasota, FL.
23. Yi, D.-J., Woodman, G.F., Widders, D., Marois, R., & Chun, M.M. (2003). Dissociating the effects of perceptual and working memory load using fMRI. Paper delivered at the Psychonomic Society Annual Meeting. Vancouver, BC.
24. Woodman, G.F. & Vogel, E.K. (2003). Is visual working memory consolidation slower when it is already partially filled? Paper delivered at the Psychonomic Society Annual Meeting. Vancouver, BC.
25. Woodman, G.F., Yi, D.-J., Chun, M.M., & Schall, J.D. (2004). Masking the mask: Targets are recovered during pattern masking but not object-substitution masking. Paper delivered at the Vision Sciences Society 2004 Annual Meeting. Sarasota, FL.
26. Woodman, G.F. Boucher, L. Schall, J.D. & Luck, S.J. (2004). Do the contents of visual working memory automatically influence attentional selection during visual search? Poster presented at the Society for Neuroscience 2004 Annual Meeting. San Diego, CA.
27. Hyun, J.-S., Woodman, G. F., Vogel, E. K., & Luck, S. J. (2004). How are perceptual inputs compared with visual working memory representations? Poster presented at the Society for Neuroscience 2004 Annual Meeting. San Diego, CA.

28. Lee, J., Kwon, J.-S., Shin, Y.-W., Lee, K.-J., Woodman, G.F., & Park, S. (2005) Abstract published in *Schizophrenia Bulletin* 31(2), 366-366.
29. Woodman, G.F. & Vogel, E.K. (2005). Visual working memory consolidation is not slowed by concurrent maintenance. Paper delivered at the Vision Sciences Society 2005 Annual Meeting. Sarasota, FL.
30. Vogel, E.K., McCollough, A., Fair, J., & Woodman, G.F. (2005). Maintaining visual short-term memory representations across new object onsets. Paper delivered at the Vision Sciences Society 2005 Annual Meeting. Sarasota, FL.
31. Woodman, G.F. Kang, M.-S., Rossi, A.F., & Schall, J.D. (2005). Comparative psychophysiology: Macaque event-related potentials reveal anticipatory and stimulus-evoked components similar to those observed in humans. Talk delivered at the Society for Neuroscience 2005 Annual Meeting. Washington, D.C.
32. Boucher, L. & Woodman, G.F. (2005). Eye movements reveal strategic interactions between perceptual attention and visual working memory during visual search. Poster presented at the Psychonomic Society Annual Meeting. Toronto, Canada.
33. Woodman, G.F. Kang, M.-S., Rossi, A.F., & Schall, J.D. (2006). Bridging the gap between monkey and man: Event-related potentials reveal similarities to human indices of visual attention. Paper delivered at the Vision Sciences Society 2006 Annual Meeting. Sarasota, FL.
34. Woodman, G.F. & Boucher, L. (2006). Eye movements reveal strategic interactions between perceptual attention and visual working memory during visual search. Talk given at the Eleventh Annual Meeting of the Cognitive Science Association for Interdisciplinary Learning. Hood River, Oregon.
35. Cohen, J.Y., Pouget, P., Woodman, G.F. Rao, C., Schall, J.D., & Rossi, A.F. (2006). Multivariate analysis of Frontal Eye Field activity during visual search. Poster delivered at the Society for Neuroscience 2006 Annual Meeting. Atlanta, GA.
36. Woodman, G.F. Kang, M.-S., Sato, T., Thompson, K., & Schall, J.D. (2006). Visual search efficiency modulates the onset of response preparation: Neurophysiological evidence for discrete flow. Talk delivered at the Society for Neuroscience 2006 Annual Meeting. Atlanta, GA.
37. Kang, M.-S., Schall, J.D. & Woodman, G.F. (2006). Electroencephalographic and local-field potential gamma band activity is not reliably observed during spatial working memory maintenance in macaque monkeys. Poster delivered at the Society for Neuroscience 2006 Annual Meeting. Atlanta, GA.
38. Emeric, E.E., Pouget, P., Leslie, M., Woodman, G., Kang, M.-S., & Schall, J.D. (2006). Anterior cingulate local field potential delta and theta frequency bands are modulated by countermanding errors. Poster delivered at the Society for Neuroscience 2006 Annual Meeting. Atlanta, GA.

39. Woodman, G.F., Kang, M.-S., Sato, T., Thompson, K., & Schall, J.D. (2006). Neurophysiological evidence for discrete flow of information between stages of processing. Talk delivered at the Psychonomic Society Annual Meeting. Houston, TX.
40. Woodman, G.F., & Vogel, E.K. (2007). Top-down control of visual working memory consolidation. Talk delivered at the Psychonomic Society Annual Meeting. Long Beach, CA.
41. Cohen, J.Y., Pouget, P., Woodman, G.F., Rao, C., Schall, J.D., & Rossi, A.F. (2007). Visual search difficulty modulates the variability of spike timing in the frontal eye field. Poster presented at the Society for Neuroscience 2007 Annual Meeting. San Diego, CA.
42. Arita, J., & Woodman, G.F. (2008). Does gamma-band activity bind features when attention is focused on multiple-feature objects during visual search? Poster presented at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
43. Carlisle, N., Boucher, L., & Woodman, G.F. (2008). Strategic interactions between visual working memory and perceptual attention revealed by eye movements. Poster presented at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
44. Cohen, J.Y., Heitz, R.P., Schall, J.D., & Woodman, G.F. (2008). Attention in visual cortex occurs earlier than target selection in the frontal eye field. Talk delivered at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
45. Williams, M., & Woodman, G.F. (2008). Directed forgetting versus directed remembering in visual working memory. Poster presented at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
46. Heitz, R.P., Woodman, G.F., Pierre P., Cohen, J.Y., & Schall, J.D. (2008). Differences in response latency in the frontal eye field to luminance contrast indicate segregated processing of parvo- and magnocellular inputs. Poster presented at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
47. Woodman, G.F., Kang, M.-S., St. Clair, R., & Schall, J.D. (2008). Increases in gamma-band activity do not predict spatial working memory retention in macaque monkeys. Talk delivered at the Vision Sciences Society 2008 Annual Meeting. Naples, FL.
48. Cohen, J.Y., Heitz, R.P., Woodman, G.F., & Schall, J.D. (2008). Timing of target selection between visual cortex and frontal eye field. Talk delivered at the Society for Neuroscience 2008 Annual Meeting. Washington D.C.
49. Heitz, R.P., Cohen, J.Y., Woodman, G.F., & Schall, J.D. (2008). The effects of set size on neural selection time in frontal eye field. Poster presented at the Society for Neuroscience 2008 Annual Meeting. Washington D.C.

50. Williams, M., Pouget, P., Boucher, L., & Woodman, G.F. (2009). Indexing the maintenance of objects in visual working memory by spatial selection. Poster presented at the Vision Sciences Society 2009 Annual Meeting. Naples, FL.
51. Cohen, J.Y., Heitz, R.P., Woodman, G.F., & Schall, J.D. (2009). Frontal eye field activity before form visual search errors. Poster presented at the Vision Sciences Society 2009 Annual Meeting. Naples, FL.
52. Carlisle, N., & Woodman, G.F. (2009). Working memory guidance of attention depends on memory's relevance for search. Poster presented at the Vision Sciences Society 2009 Annual Meeting. Naples, FL.
53. Cohen, J.Y., Heitz, R.P., Woodman, G.F., & Schall, J.D. (2009). Neural variability in frontal eye field during visual search. Poster delivered at the Society for Neuroscience 2009 Annual Meeting. Chicago, IL.
54. Heitz, R.P., Nelson, M.J., Ferguson, K.E., Cohen, J.Y., Woodman, G.F., & Schall, J.D. (2009). Coherence of neurons and networks in frontal eye field. Poster delivered at the Society for Neuroscience 2009 Annual Meeting. Chicago, IL.
55. Ferguson, K.E., Heitz, R.P., Cohen, J.Y., Woodman, G.F., & Schall, J.D. (2009). Saccade endpoint scatter during form visual search. Poster presented at the Society for Neuroscience 2009 Annual Meeting. Chicago, IL.
56. Woodman, G.F., Heitz, R.P., Cohen, J.Y., Arita, J.T., Kang, M.-K., & Schall, J.D. (2009). Covert attentional selection in monkey and man: Bridging the gap reveals underlying neural circuitry. Talk delivered at the Psychonomic Society Annual Meeting. Boston, MA.
57. Carlisle, N., & Woodman, G.F. (2010). Do visual working memory representations automatically bias deployments of covert attention? Poster presented at the Vision Sciences Society 2010 Annual Meeting. Naples, FL.
58. Purcell, B., Heitz, R.P., Cohen, J.Y., Woodman, G.F., & Schall, J.D. (2010). Timing of attentional selection in frontal eye field and event-related potentials over visual cortex during pop-out search. Poster presented at the Vision Sciences Society 2010 Annual Meeting. Naples, FL.
59. Arita, J.T., & Woodman, G.F. (2010). Simultaneous neurophysiological measurement of perceptual and response selection stages of processing during visual search. Poster presented at the Vision Sciences Society 2010 Annual Meeting. Naples, FL.
60. Williams, M., & Woodman, G.F. (2010). Using eye movements to measure attention to objects and features in visual working memory. Poster presented at the Vision Sciences Society 2010 Annual Meeting. Naples, FL.

61. Kang, M.-S., & Woodman, G.F. (2010). Interactions between motion perception and visual working memory. Poster presented at the Vision Sciences Society 2010 Annual Meeting. Naples, FL.
62. Woodman, G.F. (2010). Direct electrophysiological measurement of the storage of attentional templates in visual working memory. Symposium talk delivered at the Psychonomic Society Annual Meeting. St. Louis, MO.
63. Carlisle, N.B. & Woodman, G.F. (2010). Event-related potentials demonstrate control over how the contents of working memory guide attention. Paper presented at the Psychonomic Society Annual Meeting. St. Louis, MO.
64. Segovis, C.M., Godlove, D.C., Young, M.H., Haitas, J., Woodman, G.F., & Schall, J.D. (2010). Cranial and cerebral locations of the 10/20 electrode system in the macaque. Poster presented at the Society for Neuroscience 2010 Annual Meeting. San Diego, CA.
65. Young, M.H., Heitz, R.P., Schall, J.D., & Woodman, G.F. (2010). Modeling the neural generators of monkey event-related potentials indexing covert shifts of attention. Poster presented at the Society for Neuroscience 2010 Annual Meeting. San Diego, CA.
66. Garr, A.K., Godlove, D.C., Woodman, G.F. & Schall, J.D. (2010). Pre-saccadic spike potentials in a saccade-countermanding task. Poster presented at the Society for Neuroscience 2010 Annual Meeting. San Diego, CA.
67. Woodman, G.F., Arita, J.T., Pardo, D., Carlisle, N.B., Williams, M. & Kang, M.-K. (2010). Direct electrophysiological measurement of the storage of attentional templates in human visual working memory. Paper presented at the Society for Neuroscience 2010 Annual Meeting. San Diego, CA.
68. Carlisle, N., & Woodman, G.F. (2011). Measuring the handoff of the attentional template from working memory to long-term memory. Talk delivered at the Vision Sciences Society 2011 Annual Meeting. Naples, FL.
69. Young, M.H., Heitz, R.P., Schall, J.D., & Woodman, G.F. (2011). Source localization of an event-related potential indexing covert shifts of attention in macaques. Poster presented at the Vision Sciences Society 2011 Annual Meeting. Naples, FL.
70. Kang, M.-S., Blake, R. & Woodman, G.F. (2011). Semantic analysis does not occur during interocular suppression in the absence of awareness. Poster presented at the Vision Sciences Society 2011 Annual Meeting. Naples, FL.
71. Williams, M., Hong, S. & Woodman, G.F. (2011). Forgetting in visual working memory. Poster presented at the Vision Sciences Society 2011 Annual Meeting. Naples, FL.

72. Carlisle, N.B. & Woodman, G.F. (2011). Is attention covertly shifted to an item matching a representation in working memory. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
73. Kim, N., Godlove, D.C., Woodman, G.F. & Schall, J.D. (2011). Current source density analysis of visual and saccadic activity in supplementary eye field during saccade countermanding. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
74. Godlove, D.C., Kim, N., Woodman, G.F. & Schall, J.D. (2011). Current source density analysis of error and feedback signals in supplementary eye field during saccade countermanding. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
75. Haitas, J., Godlove, D.C., Schall, J.D. & Woodman, G.F. (2011). Automated placement of cranial surface electrodes in the 10-20 system for macaque monkeys. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
76. Reinhart, R.M.G., Carlisle, N.B., Kang, M.-S. & Woodman, G.F. (2011). Error processing during saccade and manual stop-signal tasks in humans: Timing and source estimation. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
77. Howell Young, M.S., Godlove, D.C., Emeric, E.E., Segovis, C.M., Reinhart, R.M.G., Schall, J.D. & Woodman, G.F. (2011). Error processing during a saccade stop-signal task in macaque monkeys: Source estimation. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
78. Kang, M.-S., DiRaddo, A., Logan, G.D. & Woodman, G.F. (2011). Electrophysiological evidence for preparatory reconfiguration before voluntary-task switches but not cued-task switches. Poster presented at the Society for Neuroscience 2011 Annual Meeting. Washington, D.C.
79. Williams, M., Hong, S. & Woodman, G.F. (2011). Visual-spatial attention aids the maintenance of object representations in visual working memory. Poster presented at the Object Perception, Attention & Memory, Annual Meeting. Seattle, WA.
80. Arita, J.T., Carlisle, N.B. & Woodman, G.F. (2011). The dark side: Configuring attention to ignore task-irrelevant features. Poster presented at the Object Perception, Attention & Memory, Annual Meeting. Seattle, WA.
81. Williams, M. & Woodman, G.F. (2012). Forgetting in visual working memory. Poster presented at the Southeastern Psychological Association 2012 Annual Meeting. New Orleans, LA.
82. Ko, P., Duda, B., Hussey, E., Mason, E., Woodman, G.F., & Ally, B. (2012). The neural correlates of visual working memory decline in normal aging. Poster presented at the Vision Sciences Society 2012 Annual Meeting. Naples, FL.

83. Carlisle, N.B. & Woodman, G.F. (2012). The guidance of attention is dominated by task relevance and not simply maintenance in working memory. Talk delivered at the Vision Sciences Society 2012 Annual Meeting. Naples, FL.
84. Reinhart, R.M.G., Carlisle, N.B., Kang, M.-S. & Woodman, G.F. (2012). Homologous mechanisms of visuospatial working memory maintenance in macaque and human: Properties and sources. Talk delivered at the Vision Sciences Society 2012 Annual Meeting. Naples, FL.
85. Godlove, D.C., Maier, A.V., Woodman, G.F. & Schall, J.D. (2012). Laminar microcircuitry supporting error and reward processing in medial frontal cortex. Talk delivered at the Society for Neuroscience 2012 Annual Meeting. New Orleans, LA.
86. Carlisle, N.B., & Woodman, G.F. (2012). Electrophysiological measures of attentional enhancement and suppression of task-irrelevant working memory matches. Poster presented at the Society for Neuroscience 2012 Annual Meeting. New Orleans, LA.
87. Cosman, J.D., Woodman, G.F., & Vecera, S.P. (2012). Learned control over distraction is disrupted in medial temporal lobe amnesia. Poster presented at the Society for Neuroscience 2012 Annual Meeting, New Orleans, LA.
88. Reinhart, R.M.G., & Woodman, G.F. (2012). High stakes trigger the use of multiple memories to enhance cognitive control of attention. Poster presented at the Society for Neuroscience 2012 Annual Meeting, New Orleans, LA.
89. Kang, M.-K., & Woodman, G.F. (2012). Enhanced beta and gamma band phase coherence between hemispheres during visual working memory encoding. Poster presented at the Society for Neuroscience 2012 Annual Meeting, New Orleans, LA.
90. Fukuda, K., Woodman, G.F., & Vogel, E.K. (2012). Oscillatory mechanism underlying the VSTM capacity limit: In mind, out of phase. Poster presented at the Society for Neuroscience 2012 Annual Meeting, New Orleans, LA.
91. Kim, N., Schall, J.D. & Woodman, G.F. (2012). Nonhuman primate homologue of contingent negative variation. Poster presented at the Society for Neuroscience 2012 Annual Meeting, New Orleans, LA.
92. Woodman, G.F., Reinhart, R.M.G., & Carlisle, N.B. (2012). Handing off attentional templates from working memory to long-term memory. Talk delivered at the Psychonomic Society Annual Meeting. Minneapolis, MN.
93. Bilge, M.T., & Woodman, G.F. (2012). Location looks like any other feature during encoding into visual working memory. Poster presented at the Psychonomic Society Annual Meeting. Minneapolis, MN.

94. Reinhart, R.M.G. & Woodman, G.F. (2012). Oscillatory coupling reveals the dynamic reorganization of networks processing reward, maintaining working memory and controlling attention. Poster presented at the Vision Sciences Society 2013 Annual Meeting. Naples, FL.
95. Fukuda, K. & Woodman, G.F. (2012). Oscillatory correlates of uploading long-term memory into visual working memory. Poster presented at the Vision Sciences Society 2013 Annual Meeting. Naples, FL.
96. Kang, M.-S. & Woodman, G.F. (2012). The contralateral delay activity is insensitive to microsaccades induced by increasing number of items in visual working memory. Poster presented at the Vision Sciences Society 2013 Annual Meeting. Naples, FL.
97. Park, H., Woodman, G.F. & Seiffert, A.E. (2013). Changing a memory is dissociable from forming a new memory. Poster presented at the Vision Sciences Society 2013 Annual Meeting. Naples, FL.
98. Willams, M. & Woodman, G.F. (2013). Discarding information from visual working memory. Poster presented at the Vision Sciences Society 2013 Annual Meeting. Naples, FL.
99. Reinhart, R.M.G. & Woodman, G.F. (2013). Noninvasive stimulation of medial-prefrontal cortex controls learning and performance monitoring. Poster presented at the Society for Neuroscience 2013 Annual Meeting, San Diego, CA.
100. Reinhart, R.M.G. & Woodman, G.F. (2013). Pushing and pulling current through medial-prefrontal cortex provides causal control of the neural processing of errors and learning rate. Talk delivered at the Psychonomic Society Annual Meeting. Toronto, Canada.
101. Maxcey, A.M., Fukuda, K. & Woodman G.F. (2013). Electrophysiological evidence that cues presented during short retention intervals influence the storage of objects in long-term memory. Paper presented at the Psychonomic Society Annual Meeting. Toronto, Canada.
102. Maxcey, A.M. & Woodman, G.F. (2014). Forgetting induced by recognition of visual images. Poster presented at the Vision Sciences Society 2014 Annual Meeting. St. Pete, FL.
103. Reinhart, R.M.G. & Woodman, G.F. (2014). Electrical stimulation improves visual attention by speeding the shift to control by long-term memory representations. Poster presented at the Vision Sciences Society 2014 Annual Meeting. St. Pete, FL.
104. Cosman, J.D., Schall, J.D., & Woodman, G.F. (2014). Macaque monkeys exhibit event-related potentials indexing distractor suppression during visual search. Poster presented at the Vision Sciences Society 2014 Annual Meeting. St. Pete, FL.
105. Fukuda, K. & Woodman, G.F. (2014). Forecasting and improving recognition memory using single-trial electrophysiology. Poster presented at the Psychonomic Society Annual Meeting. Long Beach, CA. - **Winner of the APA Division 3 Award: "Best Poster at Psychonomics 2014"**.

106. Reinhart, R.M.G., Park, S., & Woodman, G.F. (2014). Medial-frontal stimulation controls action monitoring and learning in healthy and schizophrenia subjects. Talk delivered at the Object Perception, Attention & Memory, Annual Meeting. Long Beach, CA.
107. Fukuda, K., Schall, J.D., & Woodman, G.F. (2014). Event-related potentials and oscillatory activity indexing visual working memory capacity limits in nonhuman primates. Poster presented at the Society for Neuroscience 2014 Annual Meeting, Washington, D.C.
108. Cosman, J.D., Schall, J.D., & Woodman, G.F. (2014). Frontal eye field correlates of salient distractor suppression during visual search. Poster presented at the Society for Neuroscience 2014 Annual Meeting, Washington, D.C.
109. Reinhart, R.M.G., McClenahan, L.J. & Woodman, G.F. (2015). Visualizing trips vision when training attention. Talk delivered at the Vision Sciences Society 2015 Annual Meeting. St. Pete, FL.
110. Cosman, J.D. & Woodman, G.F. (2015). Electrophysiological indices of learned distractor suppression. Poster presented at the Vision Sciences Society 2015 Annual Meeting. St. Pete, FL.
111. Maxcey, A.M., Halvorson, K. & Woodman, G.F. (2015). Recognition-induced forgetting of objects is independent of remembering. Poster presented at the Vision Sciences Society 2015 Annual Meeting. St. Pete, FL.
112. Fukuda, K., Kang, M.-S. & Woodman, G.F. (2015). Electrophysiology reveals distinct neural mechanisms for lateralized and spatially global visual working memory representations. Poster presented at the Vision Sciences Society 2015 Annual Meeting. St. Pete, FL.
113. Maxcey, A.M., Dahab, R. & Woodman, G.F. (2015). Categorical and temporal grouping in recognition-induced forgetting. Poster presented at the Psychonomic Society 2015 Annual Meeting. Chicago, IL.
114. Cosman, J.D., Zinke, W., Woodman, G.F. & Schall, J.D. (2015). Comparison of saccade target selection in frontal and premotor eye fields of macaques. Poster presented at the Society for Neuroscience 2015 Annual Meeting, Chicago, IL.
115. Zinke, W., Cosman, J.D., Woodman, G.F. & Schall, J.D. (2015). A premotor eye field in the arcuate sulcus of macaque monkeys - comparison with frontal eye field. Poster presented at the Society for Neuroscience 2015 Annual Meeting, Chicago, IL.
116. Reinhart, R.M.G., Zhu, J., Park, S., & Woodman, G.F. (2015). Synchronizing brain rhythms with electrical stimulation improves adaptive control in healthy people and those with schizophrenia. Poster presented at the Society for Neuroscience 2015 Annual Meeting, Chicago, IL.

117. Schall, M.S., Zinke, W., Woodman, G.F. & Schall, J.D. (2015). Prevalence of an arcuate spur in macaques. Poster presented at the Society for Neuroscience 2015 Annual Meeting, Chicago, IL.
118. Fukuda, K., Schall, J.D. & Woodman, G.F. (2015). Dissociable electrophysiological correlates of proactive and reactive control during response inhibition. Poster presented at the Society for Neuroscience 2015 Annual Meeting, Chicago, IL.
119. Reinhart, R.M.G. & Woodman, G.F. (2015). Synchronizing brain rhythms with electrical stimulation improves adaptive control in healthy people and those with schizophrenia. Neurodiagnostic Society, Tennessee Chapter. Symposium Talk.
120. Xiao, W., Reinhart, R.M.G. & Woodman, G.F. (2015). Noninvasive brain stimulation improves visual hyperacuity in humans. Tennessee Psychological Association Annual Convention. Poster.
121. Reinhart, R.M.G., Logan, G.D. & Woodman, G.F. (2016). Attention's gas pedal. Symposium talk delivered at the international meeting of the Psychonomic Society. Granada, Spain.
122. Fukuda, K. & Woodman, G.F. (2016). Oscillatory correlates of visual working memory uploaded from long-term memory. Talk delivered at the international meeting of the Psychonomic Society. Granada, Spain.
123. Reinhart, R.M.G., Xiao, W., McClanahan, L., Woodman, G.F. (2016). Electrical stimulation over occipital cortex improves visual acuity. Poster presented at the international meeting of the Psychonomic Society. Granada, Spain.
124. Cosman, J.D., Schall, J.D. & Woodman, G.F. (2016). Frontal eye field sources of attentional suppression during visual search. Talk delivered at the Vision Sciences Society 2016 Annual Meeting. St. Pete, FL.
125. Weaver, T.P. & Woodman, G.F. (2016). Does attention look to visual working memory for guidance when we are about to search for something new? Poster presented at the Vision Sciences Society 2016 Annual Meeting. St. Pete, FL.
126. Fukuda, K. & Woodman, G.F. (2016). Oscillatory correlates of visual working memories uploaded from long-term memory. Talk delivered at the Vision Sciences Society 2016 Annual Meeting. St. Pete, FL.
127. Ko, P.C., Woodman, G.F., & Ally, B.A. (2016). Selective attention to visual working memory representations in older and younger adults. Talk delivered at the International Conference on Memory 6. Budapest, Hungary.
128. Woodman, G.F., & Reinhart, R.M.G. (2016). Measuring the interplay of long-term memory and working memory as they control attention. Abstract accepted for a talk at the International Conference on Memory 6. Budapest, Hungary.

129. Fukuda, K. & Woodman, G.F. (2016). Predicting and improving recognition memory using single-trial electrophysiology. Talk delivered at the International Conference on Memory 6. Budapest, Hungary.

Teaching

1995 to 1997, Honors Thesis Research, University of Iowa
with Dr. Thomas Spalding

1997 to 2002, Research Assistant, University of Iowa
with Dr. Steven J. Luck

Spring 1998, Teaching Assistant, University of Iowa
031:119 Memory & Cognition
031:012 Fundamentals of Behavioral Neuroscience

1998 to 2002, Research Assistant, University of Iowa
with Dr. Shaun P. Vecera

Spring 1999, Teaching Assistant, University of Iowa
031:133 Sensation & Perception

Summer 1999, Visiting Research Scientist, Universitat Otto-von-Guericke
Clinic of Neurology II
Magdeburg, Germany

Fall 1999, Guest Lecturer, University of Iowa
031:190 Senior Seminar: Attention - "Visual search and attention"

Summer 2000, Instructor, University of Iowa
031:016 Introduction to Cognitive Psychology

Spring 2001, Guest Lecturer, University of Iowa
031:016 Introduction to Cognitive Psychology - "The brain and attention: Deficits of attention"

Fall 2002 to current, Post-doctoral Fellow, Vanderbilt Vision Research Center and
Department of Psychology

Fall 2002, Guest Lecturer, Vanderbilt University
Psych:216 Movement - "The role of covert attention in determining where the eyes move"

Spring 2003, Guest Lecturer, Vanderbilt University
Psych:232 Cognitive Neuroscience - "The use of neuroscientific methods in the study of

attention"

Fall 2004, Guest Lecturer, Vanderbilt University
Psych:216 Movement - "Movement Disorders"

Fall 2004, Guest Lecturer, Vanderbilt University
Psych:241 The History of Neuroscience - "Brainwaves: The history of recorded scalp potentials"

Fall 2005, Guest Lecturer, Vanderbilt University
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Fall 2007, Guest Lecturer, Vanderbilt University
Psych:241 The History of Neuroscience - "Brainwaves: The history of scalp potentials"

Spring 2008, Instructor, Vanderbilt University
Psych:251 How the Mind Works

Spring 2009, Instructor, Vanderbilt University
Psych:344 Neuroscience Seminar: Electrophysiological Techniques

Fall 2009 - **present**, Instructor, Vanderbilt University
Psych:225 Cognitive Psychology (enrollment current capped at 175 per semester)

Spring 2011, Instructor, Vanderbilt University
Psych:344 Neuroscience Seminar: Electrophysiological Techniques

Spring 2011, Guest Lecturer, Vanderbilt University
Psych:236 Visual Systems - "Visual working memory for objects and locations" & "Object recognition"

Spring 2011, Guest Lecturer, Vanderbilt University
Psych:282 Foundations of Human Memory - "Neural networks underlying long-term memory"

Spring 2013, Instructor, Vanderbilt University
Psych:350 Scientific Writing in Psychology and Neuroscience

Fall 2013, Instructor, Vanderbilt University
Psych:344 Neuroscience Seminar: Electrophysiological Techniques

Spring 2015, Instructor, Vanderbilt University
Psych:236 Visual Systems

Departmental and Institutional Service

SONA (web-based experiment signup system) faculty supervisor, 2008-present

Colloquium Committee, Department of Psychology, 2008-present

Served on Neuroscience Faculty Search Committee, Department of Psychology, Vanderbilt University, 2012-2013.

Graduate Faculty Assembly Delegate, 2012-present

Psychology Department Library Representative, 2012-present

Alternate VUceptor for Vanderbilt Visions, 2013

Graduate Studies Committee, Department of Psychology, 2013-present

Committee on Graduate Education, Vanderbilt Graduate School, 2014-present

Director of Graduate Studies, Department of Psychology, 2015-present

Director of Vanderbilt Vision Research Center Training Grant (T32 from NEI) 2015-present

At the University of Iowa:

Served on Cognition & Perception Graduate Admissions Committee, 2000

Served on Cognition & Perception Faculty Search Committee, 2000-2001

Invited Talks

2003

Virje Universiteit, Amsterdam NL, "Converging evidence for independent visual working memory stores for object identity and location."

The University of Amsterdam NL, "Interactions between perception and working memory during visual search."

Munich Visual Search Symposium, Munich DE, "Event-related potentials reveal serial shifts of attention during inefficient visual search."

2004

Yale University, "Exploring visual working memory consolidation and maintenance."

2006

University of Oregon, "Visual search efficiency modulates the onset of response preparation: Neurophysiological evidence for discrete flow."

2007

National Central University of Taiwan, Cognitive Neuroscience Summer Workshop,
7/12 8:30-10 AM

"Using event-related potentials to study attentional deployment in monkey and man."

7/12 3:30-5 PM

"Selection for access to perception and working memory."

2008

University of Oregon, "Bridging the gap between monkey and human electrophysiology: Toward the localization of event-related potential components."

2011

Invited speaker, 5th International Congress on Memory (ICOM5), The University of York, England 7/31-8/5.

2012

Manchester University, "Measuring the use of visual working memory representations to guide attention."

Munich Visual Search Symposium III, Munich DE, 7/20-7/23.

Zif research group, Bielefeld DE, 10/9/2012 - 6/15/2013.

Indiana University, "Measuring the use of visual working memory representations to guide attention." 11/22/2012.

2013

Zif research group, Bielefeld DE, 5/5/2013 - 6/7/2013.

Virje Universiteit, Amsterdam NL, "Controlling cognitive control". 5/29/2013.

Johns Hopkins University, "Controlling mechanisms of cognitive control". 10/9/2013.

2014

University of Illinois, Urbana-Campaign, 3/5/2014.

Zif research group, Bielefeld DE, 3/17/2014 - 3/20/2014.

2015

University of Texas, Austin, 9/4/2015.

Mentoring

Current Lab Members:

Keisuke Fukuda (postdoc)
 Paul Middlebrooks (postdoc) - NRSA recipient
 Travis Weaver (graduate student)

Current Graduate Committees:

David Simon (Chair)
 M. Taha Bilge (Chair)
 Allan J. Heritage (Chair)
 Robert Reinhart (Chair)
 Anat Fintzi
 Josh McCluey
 Lauren Bryant
 Jean-Paul Noel
 Kristy Snyder
 Dakota Lindsey
 Kaitlin Ryan
 Travis Weaver
 Jianghong (May) Shen

Previous Trainees:

Min-Suk Kang, former postdoc (Tenure-track Faculty, Sungkyunkwan University, South Korea)
 Nancy Carlisle, former graduate student (Tenure-track Faculty, University of Leicester, UK)
 Melonie Williams, former graduate student (Professor, Valencia College) - NSF recipient
 Robert Reinhart, former graduate student (Tenure-track Faculty, Boston University) - NRSA recipient
 Keisuke Fukuda, former postdoc (Tenure-track Faculty, Toronto University)
 Josh Cosman, former postdoc (Associate Director, Translational Neuromedicine, Pfizer Inc.,
 Cambridge MA) - NRSA recipient

Former Undergrads and Research Assistants:

Deborah Pardo – Pharmacy Program, University of the Pacific
 Rachel Riti – Ph.D program in Biomedical Engineering, Clemson University
 Donald Bruce Ross III – graduate program in counseling, University of Maryland
 Mimi Zhang - Ph.D program in Clinical Psychology, University of Mississippi
 Julianna Ianni - Ph.D program in Biomedical Engineering, Vanderbilt University
 Adrienne DiRaddo - RN program in Psychiatric Nursing, Vanderbilt University
 Jennifer Hersh - Occupational Therapy Program, Tufts University
 Jamie Coffino - Masters in Public Health, Columbia University
 Laura McClanahan - PhD program in Clinical Psychology, University of Houston

Professional Organizations

American Psychological Association, member since 2014
American Physiological Society, member since 2009
Cognitive Neuroscience Society, member 1998-2002
Psychonomic Society, member since 2002
Society for Neuroscience, member since 2004
Society for Psychophysiological Research, member since 2014
Vision Sciences Society, member since 2000

Special Recognition

Phi Eta Sigma, Freshman Honors Society, University of Iowa, 1994

Psi Chi, Undergraduate Psychological Honors Society, inducted fall 1996

Tuition scholarships, Department of Psychology, University of Iowa, 1999 & 2000

Lewis Award, University of Iowa Graduate Student Award for Excellence in
Experimental Psychology, 2002

Young Investigator Award, Vision Sciences Society, 2012

Troland Award from the National Academy of Sciences, 2016